SAME GAP, DIFFERENT EXPERIENCES

An Exploration of the Similarities and Differences Between the Gender Gap in the Indian Wikipedia Editor Community and the Gap in the General Editor Community

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EXECUTIVE SUMMARY

According to the second official Wikipedia Editor Survey conducted in December of 2011, female-identified editors comprise only 8.5% of contributors to Wikipedia’s contributor population (Glott & Ghosh, 2010). This significant lack of women and women’s voices in the Wikipedia community has led to systemic bias towards male histories and culturally “masculine” knowledge (Lam et al., 2011; Gardner, 2011; Reagle & Rhue, 2011; Wikimedia Meta-Wiki, 2013), and an editing environment that is often hostile and unwelcoming to women editors (Gardner, 2011; Lam et al., 2011; Wikimedia Meta-Wiki, 2013). The Wikipedia “gender gap”, as it has come to be known in Wikipedia circles, has increasingly become a large concern for the Wikimedia community, and a fair body of scholarly and non-scholarly work investigated and addressed the gender gap has materialized over the last few years.

However, as much of this research has been on the “general” Wikipedia editing community, the vast majority of the outputs and dialogue that have been generated by these endeavours revolves predominately around the experiences of Western women on the English-language Wikipedia, and there has been little to no discourse on the significantly larger gender gaps in editing communities in the developing world. According to the same editor survey of 2011, India’s editing community is only 3% female, but there has been little discussion on why the participation of women in India is markedly lower than that of the Wikipedian population on average. Further, no formal research of any kind has attempted to investigate this phenomenon. Because of this, it is unclear whether female-identified Indians are likely to face barriers to their ability to participate in Wikipedia that are similar or different than Western editors, meaning that it is unclear whether the initiatives that are currently being carried out to the bridge the gender gap in India are able to effective address the factors that are the most hindering for Indian women.

The purpose of this research thesis is to determine whether Indian female-identified editors of Wikipedia are likely to face barriers to their ability to fully participate in Wikipedia that are similar or different than those faced by Western female-identified editors. This report has two main objectives: to explore the experiences of current and past female-identified Indian editors of Wikipedia; and to compare and contrast these experiences and their associated barriers and challenges with the barriers and challenges identified in the relevant literature on the gender gap as the most hindering to female-identified individuals' participation in Wikipedia. It is my hope that in doing so, this research will also generate insight into the nature of the gender gap in the Indian editing population and lay ground for future research on this topic in this specific Wikipedian population.

Much of the data presented in this report was gathered through a qualitative case study on fifteen Indian, female-identified current and past contributors to Wikipedia carried out over a two-month period between May and June of 2013. The data was collected via semi-structured oral and email interviews, transcribed, coded and analyzed based on a variety of relevant experiential themes derived from the gender gap literature; the findings were then compared to the barriers that Western female-identified individuals and editors were likely to experience. In performing this comparative analysis, it became clear that Indian women and Western women were likely to face very different barriers to their ability to participate in Wikipedia, probably because Indian female editors were likely to have very different experiences throughout their time spent on Wikipedia.

While this research aimed to generate a better understanding of the challenges experienced by Indian women and Wikipedia editors and how those challenges differed from those experienced by Western women, considering the tremendous degree of socio-cultural variance within the Indian population, this study cannot realistically produce a complete account of the barriers that any one group of Indian woman may face to their participation in India, and therefore the comparative analysis and research findings are highly limited by their inapplicability to the vast majority of Indian women. However, as the goal of this research was to “break ground” on a previously unresearched topic by providing the research justification for future research on this area, this research project has succeeded in meeting its objectives. Recommendations of strategies and initiatives that may be useful in bridging the gender gap in India and, possibly, in the larger editing community have been put forth in the conclusion, as have a handful of avenues for more focused future research.
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CHAPTER 1: INTRODUCTION

In a moment of particular lucidity and with every ounce of the eloquence that has since been recognized as one of his defining personality traits, Jimmy Wales, in an online Q&A session on slashdot.org in 2004, had this to say about the then-fledgling Wikipedia project: “Imagine a world in which every single person on the planet is given free access to the sum of all human knowledge. That's what we're doing.”

The phrase gained almost overnight popularity across the Wikipedia communities, and has since been embraced as the online encyclopedia's unofficial mission statement, its informal manifesto. However, without delving into epistemological considerations and critiques, the goal of collecting and archiving the “sum” of all human knowledge is an extremely ambitious objective, and one whose practical realization has turned out to be problematic, to say the least. In particular, it is quite difficult to make a go at attempting to accumulate all of the knowledge possessed by humanity if the population of individuals building this repository are predominately representative of less than half of the world's population. Between 2010 and 2013, various editor surveys and studies estimated that female-identified individuals make up between 8.5-16.1% of Wikipedia's contributor community (Hill & Shaw, 2013; Glott et al., 2010; Wikimedia Foundation, 2011), meaning that Wikipedia is home to a significant gender gap.

Of course, this would not be an issue if Wikipedia's current editing population was able to both generate a wide range of content that is relevant to all genders and peoples and to organize and present it in such a way that is reflective of a wide variety of perspectives and worldviews; unfortunately, they are not, and by no fault of their own. Wikipedians are volunteers, meaning that they tend to add content directly related to their own interests and knowledge bases (Bauwens, 2005); in fact, this is one of the reasons that peer production projects such as Wikis can be so successful (Bruns, 2008)—individuals are motivated to contribute by their own interests and passions, so their

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1 That population of people that currently or have in the past edited and/or added to the content on Wikipedia.
labour is largely a work of heart. The downside to this individualized, interest-driven system of content production, however, is that content that is irrelevant to the interests of the contributor community ends up being woefully underrepresented. This is what has happened on Wikipedia: not only are female-identified individuals missing from the population, but female-interest and female-centric topics are significantly lacking in coverage on the encyclopaedia (Cohen, 2011; Collier & Bear, 2012; Wikimedia Meta-Wiki, 2013), and those Wikipedia articles that do include female-centric topics are often of lower quality than those of male-centric topics (Lam et al., 2011). This has led many academics and researchers alike to claim that Wikipedia possesses a “systemic bias” (Cohen, 2011; Collier & Bear, 2012; Lam et al., 2011; Limey, 2010) towards male-centric content and perspectives and against female-interest content and perspectives. As Sue Gardner, the former Executive Director of the Wikimedia Foundation (the non-profit organizational body that oversees the smooth functioning of the Wikipedia project, among others), stated in reference to the gender gap: “Everyone brings their crumb of information to the table; if they are not at the table, we don’t benefit from their crumb” (Cohen, 2011).

Considering that over the last decade, Wikipedia has grown to be the largest and most popular reference website in the world (Alexa, 2014), and it is increasingly being used as a reference by journalists at major newspapers (Messner & South, 2011), by courts and judicial bodies (Cohen, 2007; Peoples, 2009; Sunstein, 2007), and by academics in their scholarly works (Park, 2011), this systemic bias against female voices, perspectives, histories, experiences, and worldviews within the encyclopaedia’s content is extremely alarming. In its current form, not only does Wikipedia play an implicit role in reproducing the systemic exclusion of female-identified individuals from the production of knowledge (Thomas, 1992) and from participation in technological spaces and activities (Berner & Mallström, 1997; Webster, 2001), but the use of Wikipedia’s content to inform academic work, documents, research projects, court rulings, etc., is liable to contribute to the perpetuation of the systemic and historical omission of women’s stories, voices and perspectives from the humanity’s
knowledge of itself (Beard et al., 1977; Thomas 1992).

Increasing the amount of female-identified contributors to Wikipedia would not just help to bring about a gender balance in the encyclopaedia’s content and combat historical patterns of gendered exclusion, however. According to prior research on the subject, female-identified editors are more likely to edit articles on Wikipedia that are about People and the Arts (Lam et al., 2011), topic areas that are currently sorely under-covered on the encyclopaedia (Kohs, 2011). More significant, however, is the fact that female editors are more likely to contribute to contentious and controversial articles (Lam et al., 2011), where a variety of perspectives and worldviews are particularly important; moreover, according to Eckert and Steiner (2012), offline marginalization and subordination, which members of the female gender category are more likely to experience (Fukuda-Parr, 1999), make it “likely that marginalized people [...] will ask better questions, and will challenge received knowledge in ways not permitted through dominant perspectives” (6). Taken together, this means that increased female participation on Wikipedia may bring with it the increased inclusion of a wide range of content and perspectives that are unlikely to receive coverage currently.

Investigations into the nature of Wikipedia’s gender gap and its causal mechanisms began in about 2010, when it first became clear that there was a significant gender gap in Wikipedia’s editing population. Early research suggested that the problem did not appear to stem from a lack of access to or knowledge of Wikipedia—in the United States, about half of the people that read Wikipedia identify as female (Rainie & Zickuhr, 2011); instead, the problem seemed to arise, at least in part, from female individuals’ ability to make the jump from reader to contributor (Collier & Bear, 2012). Indeed, as further research was carried out, it became more and more clear that the cause of Wikipedia’s gender gap was a complex combination of gendered patterns of preference and behaviour (Cassell, 2011; Collier & Bear, 2012; Eckert & Stine, 2012; Gardner, 2011) and the editing population’s either implicit, and sometimes explicit, resistance to female participation and female-centric content (Collier & Bear, 2012; Eckert & Steiner, 2012; Stierch, 2011; Wikimedia Foundation, 2011)
However, while a fair body of work has emerged on the causal mechanisms of the gender gap, efforts to bridge the gender gap have been largely ineffective at significantly increasing female participation (Lam et al., 2011). This may be due, in part, to the fact that concerted efforts to bridge the gender gap began less than five years ago and that uptake has just been slow to get going. There may, however, be another factor at play here. Wikipedia is inherently international—theoretically, anybody anywhere in the world can edit Wikipedia as long as they have access to the Internet—and indeed, the editing community does include individuals from more than 200 countries (Glott et al., 2010). Many whom also belong to their own local and/or linguistic Wikipedia sub-communities (smaller communities within the larger editing population). The gender gap, therefore, is likely to be similarly international—though due a paucity of research on sub-community populations, the extent to which female-identified individuals are excluded in smaller Wikipedian populations is largely unclear. There is one hint, however: according to an editor survey carried out in 2011, three percent of the respondents were Indian nationals—and three percent of those Indians identified as female (Wikimedia Foundation, 2011). Considering that the Indian editing community is one of the largest and most active sub-population editing communities (Wikimedia Foundation, 2011), their three percent female participation rate is likely to be higher than that of most other sub-community populations.

Accordingly, Wikipedia is probably lacking women within their editing populations the world over, and across various societal contexts. However, virtually all of the research that has been done on the gender gap have been carried out on majority English-speaking, Global North-dwelling sample populations, meaning that all of the causal mechanisms that have been identified for the gap largely reflect the experiences, perspectives and opinions of Western female-identified individuals and editors. This, in turn, means that any efforts and initiatives based on the findings of this body of research that are being carried out in the sub-community populations to bridge their gender gaps are likely not catering to the specificities of the contexts in which they are operating, which brings into
question their ability to actually address the most pertinent and restrictive barriers that female-
identified individuals in that context may be facing. Ineffective attempts at bridging the gap in the sub-
communities may be one of the reasons that the gender gap has remained largely unchanged over the
last couple of years.

The problem with the largely Western-centric focus of the gender gap research to date is not
simply that the research findings may lead to slow and shallow bridging strategies in non-Western
contexts, however; the real issue is that the prior research not only predominately reflects the
experiences of women from the English-speaking Western world, but also the experiences of mostly
middle class, formally-educated female-identified individuals (Stierch, 2011)—demographic details
that are already likely to be possessed by the majority of the editors of any contributor community,
Western or otherwise (Rask, 2008; Schroer & Hertel, 2008; Wikimedia Foundation, 2011). Any
attempts to bridge the gap in non-Western sub-populations that relies on data that largely reflects the
middle class side of the gender gap story is likely to recreate the same socio-cultural exclusionary
trends that already exist in these editor populations. This is very significant when considering the
gender gap in Wikipedia, as, across the world and in almost every culture and society, women are
usually those persons that are most likely to live in poverty and belong to lower income brackets
(Chant 2006; Chen et al., 2005), meaning that Wikipedic outreach efforts that are ignorant of lower
class experiences and barriers to participation are likely to be inaccessible to the majority of the
world’s female-identified population.

Overall, relying on conceptualizations of the gender gap in Wikipedia that is largely based
in the lived realities and experiences of Western, middle-class female-identified individuals to inform
outreach strategies and initiatives in non-Western contexts may, eventually, attract more female
editors to Wikipedia, but these efforts will be unlikely to bridge the class (and gender-class) gap, which
means that Wikipedia’s content will likely continue to be unrepresentative of the full spectrum of
human knowledge and experience, and particularly that knowledge that is associated with female
experiences, interests, histories, stories and perspective, regardless of the resulting increase in female participation.

This pessimistic prediction need not become reality, however. If research was to be carried out on experiences, realities, and associated barriers and challenges that non-Western female-identified individuals faced to their ability to participate in Wikipedia, future outreach initiatives could be effectively catered to the needs and wants of a broad spectrum of women across class and socio-cultural divides. It would also help to provide further insight into the nature of both the gender gap in Wikipedia as well as into the nature of the encyclopaedia itself and the position that it currently occupies along intersections of class, gender, socio-cultural context.

However, no research on the gender gap has ever been carried out on a sub-community of editors or in a particular regional, national or socio-cultural context. Research in the area, therefore, needs a starting point, a “first step” that will justify all of the future explorations and investigations. This is the aim of this research project. Through an exploration of the Wikipedic experiences of a sample of current and past female-identified Indian contributors to Wikipedia, the purpose of this research is to answer the primary and most significant question at this stage in researching the gender gap in the Indian and other similar non-Western Wikipedian populations: are Indian female-identified individuals likely to face barriers to their ability to fully and successfully participate in Wikipedia that are similar or different than those faced by Western female-identified persons? The answer to this question will lay the foundation for all future research on the gender gap in India's editing population.

As this is the first research project that looks at the gender gap in the Indian editing population, it is a cursory exploration, a brief foray, and a speculation. I am not aiming to generate highly representative or generalizable results; indeed, considering the tremendous degree of culture, ethnic, linguistic and socio-economic diversity found within the Indian population, this study cannot realistically produce a complete account of the barriers that any one group of Indian woman face to their participation in India, nor can it hope to generate a highly nuanced and sophisticated exploration
of the complexities and causal mechanisms that contextualize those barriers within the Indian society. Accordingly, the main goal of this research is to perform an initial exploration of the themes that may characterize the gender gap in the Indian Wikipedia editor community and their similarities and differences to the nature of the gender gap in the larger community in hopes that it will “break ground” for more extensive and focused research on the topic in the future.

Furthermore, as any efforts to resolve the gender gap in the Indian contributor communities that do not address the context-specific barriers and challenges faced by Indian female-identified individuals are likely to recreate the same exclusionary trends that already exist within these groups, the outputs of this study, though not entirely focused on the contextual nature of the hindrances experienced by Indian women, will still be useful in the creation of more effective efforts and projects to attract and retain female editors in India. Finally, the findings may also help the Wikipedia community at large to better understand the complexities of the gender gap in Wikipedia.

1.1: RESEARCH QUESTION, OBJECTIVES AND ARGUMENT

The research question that will be addressed in this research project is the following: Are female-identified Indian women likely to face barriers to their ability to participate in Wikipedia that are similar or different than those barriers faced by Western women?

In order to effectively address this question, this research has two specific objectives:

1. Explore the experiences of current and past female-identified Indian editors of Wikipedia, with a particular focus on any factors that they may have faced that prevented or made it difficult for them to fully and successfully participate in Wikipedia and its various related activities

2. Compare and contrast these experiences and their associated barriers and challenges with the barriers and challenges identified in the literature review as the most hindering to female-identified individuals’ participation in Wikipedia
Throughout this research report, I will make the argument that while there is some overlap between the experiences and barriers faced by Indian women those faced by Western women (based on the relevant literature), Indian women are likely to face a unique set of barriers and challenges that are largely different from those faced by Western women. The reasons for this are likely more complex and nuanced than this research project is able to reflect; nevertheless, based on the research findings, I will speculate that many of these differences stem from the fact that female Indian editors tend to inhabit very different Wikipedic contexts\(^2\) which in turn tend to produce different experiences with regards to Wikipedia. These differences in experiences are likely to generate more positive experiences overall, and in particular with regards to female-identified Indian editors' interactions with other editors, but also make it likely that Indian women will struggle to build reputation within their community, avoid participating in and contributing to contentious spaces and articles, and possess a potentially uncomfortably high level of visibility within their respective communities.

### 1.2: BRIEF NOTE ON TERMINOLOGY

There are a handful of key terms that appear frequently within this paper whose denotations may be unclear in context. For the sake of clarity, these words have been defined below. Please note that these definitions have been tailored to suit the needs and purposes of this report and do not necessarily reflect the meanings that these terms may have when used in other contexts.

- **Women/woman**: While I am aware of the multiple connotations of the word “woman”, particularly when it is used to draw a distinction between an individual's biological sex and their gender identity, for the purposes of this paper, the terms “women” and “woman” will be

\(^2\) A “Wikipedic context” refers to the specific nature of part of Wikipedia that a particular editor inhabits, belongs to, and spends most of their time. It is made up of the specific Wikipedia projects they contribute to, the structures, forms and functions of those Wikipedias (which is often connected to the offline contexts and personal characteristics of its editors), the Wikipedians that make up the associated editor communities, and the behaviours and Wikipedia-related activities that the specific editor in question undertakes.
used to refer to any individual or groups of individuals that self-identify as belonging to the female gender category in their own particular socio-cultural contexts.

- **Indian women/woman**: As the scope of this research is not wide enough to include an exploration of Indian women's barriers to participating in Wikipedia in general and will likely generate data that is only insightful and useful when applied to the investigation of the barriers and challenges faced by female-identified Indians who are able and willing to attempt to become involved in Wikipedia, the terms “Indian women” and “Indian woman” will be used to refer to those female-identified Indian individuals who do not face systemic socio-cultural, economic and infrastructural barriers to their ability and capacity to access the Internet at their own leisure and successfully navigate digital technology.

- **Full and/or successful participation**: As the goals of this research are to investigate those barriers and challenges faced by female-identified Indians who are able and willing to participate in Wikipedia as well as those challenges and barriers faced by female-identified Indians who already participate in Wikipedia, and as involvement in Wikipedia can often encompass a wide range of activities above and beyond contributing and editing content, “full and/or successful participation” in Wikipedia refers to the ability of an individual to be involved in and carry out any and all of the Wikipedic-related activities that they so desire at any point in their editing career to a reasonable extent and in keeping with the encyclopaedia's goals and user guidelines and policies. “Full participation” does not imply, therefore, the freedom to vandalize articles, contribute biased or incorrectly-sourced content, create articles about one's own research, harass other editors, etc., as all of these would be contrary to Wikipedia's guidelines and policies; instead, full and successful participation takes place when an individual with a specific goal or set of goals that are in line with the purposes, structures and policies of Wikipedia are able to realize or take steps to realize those goals without facing arbitrary or unreasonable restrictions on or hindrances to their abilities to do so. As each
individual editor will have different goals and desires, the specific details of what “full and successful participation” in Wikipedia implies will differ from editor to editor. For some editors, this may mean being able to contribute suitable content without experiencing an unreasonable amount of molestation from other editors; for others, full and successful participation may imply being able actively participate and contribute to discussions on whichever mailing lists, village pumps, chats, etc., they see fit without being shouted down, called derogatory names or having to suffer personal attacks or sexual- or gender-based harassment, etc.

- **Sub-population/sub-community:** Both terms should be taken to mean: a smaller population, group or community of editors that exists within the larger international editing community. For example, the Hindi editing community would be considered a sub-population editing community made up of editors who belong to both the Hindi Wikipedia editing community as well as, by virtue of them being editors, the general Wikipedia editing community.

- **Sub-language:** Related to the above term, a sub-language community is a smaller population, group or community of editors within the larger Indian editing community who all primarily contribute to the same Indic-language Wikipedia project. For example, the Malayalam editing community would be considered a sub-language community.
CHAPTER 2: LITERATURE REVIEW

2.1: CONTEXT: WIKIPEDIA

2.1.1: The Nature of the Wikipedia and Its Peer Production Structure

Wikipedia is collaborative, peer-produced encyclopaedia, and it is also the world’s largest online encyclopaedia (Wikipedia, 2014a). It is also, by virtue of being a peer production project, an encyclopaedia that anyone (in theory) can edit. Radical openness is one of its most basic tenets, as well as its most fundamental function; without contributors, the content would not exist, and if those contributors and their content had to go through a lengthy vetting period, the encyclopaedia would not have grown to its current-day enormous proportions. This is precisely why, after nearly three years of stagnate growth, the creators of Wikipedia’s predecessor, Nupedia, an academically-run, peer-reviewed database that garnered only 21 articles in its first year, decided to embrace the “wiki” structure and technology. One year after the change, Wikipedia contained 18,000 articles (Sanger, 2005).

Since then, Wikipedia has developed into a massive transnational project that houses contributions from hundreds of thousands of people from all over the globe. It has also, over the years, developed a highly complex, multi-tiered system of governance, hierarchy, and content generation. Similar to other online peer production initiatives (Kostakis, 2010), the Wikipedia project is the product of various small- and large-scale interactions and cooperations between a community of individual volunteers who have come together in the pursuit of a common goal. Because peer production projects are largely based in volunteerism and the principles of “equipotentiality” (every person has an equal opportunity to potentially participate) (Bauwens 2005a, 2005b), their successful functioning, particularly as they grow and become more complex, is contingent on the continued free

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3 “Wiki” was originally invented by Ward Cunningham in 1995 as a communication mechanisms that groups of individuals could use to produce web-based content in a collaborative fashion. Subsequent “Wiki” technology was developed to allow users to create, edit, and distribute content via a web browser, change text written by others, and view and revert to former versions of the content, if necessary (Emigh & Herring, 2005)
engagement and cooperation of the members of the community (Benkler, 2006), and they therefore tend to construct bottom-up self-governance mechanisms and participatory decision-making apparatuses (Bauwens, 2005a, 2005b).

However, as these projects tend to start out with loose structures of horizontal governance whose main purposes are to facilitate the individual community members’ ability to pursue those activities which they are most interested in within the framework of the larger, participants self-select themselves to the sections that they want to contribute to (Bauwens, 2005b) in a manner that often generates the “existence of multiple teams of participants working simultaneously in a verity of possibly opposing directions” (Bruns, 2008: 28). This “heterarchy” (Bruns, 2008) is both a virtue of the Wikipedia project, as it allows for the efficient production of massive quantities of hugely diverse bodies of content (Butler et al., 2008), as well as a drawback, as not only do the vast majority of community disagreements and conflicts tend to take place along the frontiers of these heterogenous groups and their own personal understandings of what the project should be like (Kostakis, 2010), but the lack of a clear, centralized leadership structure has given rise to the “tyranny of the structureless”. According to Freeman (1970), “structureless” groups do not exist; instead, any “group of people [...] coming together for any length of time [...] will inevitably structure itself in some fashion”, and that will, while doing so, create a system of elites.

This has happened on Wikipedia. The nature of the philosophy of peer production is that while everyone is indeed free to propose a contribution, participations are also “equally free to reject [a] contribution outright” (Stadler, 2008: n.p.), and the community has recognized the need a system of rules and regulations (control mechanisms) as well as for a “class of people who apply the control mechanisms for the group” (Butler et al., 2008: 1107); the result of this has been the construction of a complex ad hoc meritocracy, where contributors gain status and position within the community based on their ability to understand, adhere and contribute to the philosophy and goals of the encyclopaedia and the underlying control mechanisms, and the creation of a class of “administrators” (Butler et al.,
2008) who are elected by the community and who have various privileged abilities, including final say
over whether certain content belongs on Wikipedia and the ability to police, and punish, other editors'
behaviours (Wikipedia, 2014b).

Such are the most fundamental structures and philosophies of the Wikipedia movement and
project.

2.1.2: The Editing Culture

In extension to the basic “cultural” functions and structures that it gets from its wiki and peer-
production roots, Wikipedia has developed a unique editing culture, complete with its own tendencies
and standard practices. In fact, Wikipedia has even constructed, through elongated community
deliberation and discussion, a complex system of more than 300 rules, policies, processes and
guidelines that serve to, at least in theory, guide and direct the behaviours of editors, interactions, and
the various functions of the community.

Many of these rules, etc., have the goal of keeping the interactions between editors cordial,
collaborative, and productive, and this aim is usually achieved. The majority of the interactions
between editors within Wikipedia have either a neutral or positive tone (Laniado et al., 2012;
Wikimedia Foundation, 2011), and editors tend to approach one another using a positive tone
(Laniado et al., 2012). However, Wikipedia's community has often been criticized as being conflictual,
fighty, and prone to negative interactions (Gardner, 2011), and a recent survey found that almost a
quarter of Wikipedians have experienced negative interactions with or been harassed by other editors
(Wikimedia Foundation, 2011).

As for the manner in which content comes to appear on the encyclopaedia, most articles are
created through a process of constructive collaboration—one or a few editors begin an article, and
other editors add content, structure, fact-check and correct mistakes overtime until a consensual
article emerges (Wilkinson & Huberman, 2007); however, highly contentious debates between large
groups of editors with different, and often opposing, opinions over the content of an article (called “edit wars”) do take often take place (Schneider et al., 2010), and they tend to consume a relatively large amount of editor attention, time and effort (Yasseri et al., 2012). These edit wars most commonly arise over the content of articles that are most edited and most viewed (which tend to go hand-in-hand [Ratkiewicz, 2010]), which suggests that creation process for articles on topics that are highly visible, contentious or controversial or for which there is a large amount of public and Wikipedic interest tends to include high levels of conflict (Schneider et al., 2010).

2.1.3: The Community

The editing community is the lifeblood of Wikipedia—without it, Wikipedia would fall into irrelevancy and disrepair. Interestingly, however, Wikipedia is run nearly entirely on voluntary labour—that it, the vast majority of Wikipedians are volunteers who contribute to Wikipedia in their free time (Wikipedia, 2014c). Contributing to Wikipedia for monetary gain—called “paid editing”—is actively discouraged (Chang, 2013). Despite the fact that Wikipedia’s existence is largely dependent on personal interest and a sufficient amount of free time on the part of its individual editors, since its formal release on January 15th, 2001, Wikipedia’s content and editing community has swelled to massive proportions. The community currently encompasses more than 131,000 active editors—though the number of named accounts is nearer to 22 million (Wikipedia, 2014d)—and the English Language Wikipedia Project (ENWP) alone includes more than 4.5 million articles (Wikipedia, 2014e).

Building an encyclopedia of this proportion requires an immense amount of labour input from the volunteers. In 2008, it was estimated that total amount of effort that had gone into Wikipedia up to that moment in time was equivalent to approximately 100 million hours of human labour (Shirky, 2008); more recently, Tom Simonite (2013) estimated that around half of active editors spend at least one hour a day and a fifth spend more than three hours a day editing Wikipedia. This requires a substantial amount of dedication and motivation, and indeed, research has shown that Wikipedians
CHAPTER 2: LITERATURE REVIEW

garner their motivation from a wide variety of factors, including enhancing self-efficacy, self-confidence, personal satisfaction and fun, reciprocity, reputation, ideological commitment to its open source model, a sense of community, giving back to Wikipedia, developing skills, and intellectual stimulation, intrinsic drive to acquire knowledge (Cifolilli, 2003; Johnson, 2008; Kuznetsov, 2006; Nov, 2007; Rafaeli et al., 2005; Yang & Lai, 2010).

Moreover, possibly due to its online existence and radical embracement of free and open standards, the Wikipedia community has become markedly International. The current active editor population possesses more than 200 ethnic and/or national identities (Wikipedia, 2013a), contributes in 287 languages (Wikimedia Meta-Wiki, 2014), and resides in approximately 165 different countries or regions (Wikipedia, 2014f). However, despite its transnational nature, Wikipedia's active editing population is largely homogenous. The vast majority of Wikipedians are between the ages of 18 to 30, identify as male, speak English, live in a developed majority-Christian country in the Global North (likely the United States), have some form of post-secondary education, and are likely to be either students or white-collar workers (Glott et al., 2010; Schroer & Hertel, 2009; Wikimedia Foundation, 2011). The majority of editors contribute to the English Language Wikipedia Project (ENWP), which is the largest Wikipedia Language project by leaps and bounds (both in terms of the number of editors, administrators, and articles) (Wikimedia Meta-Wiki, 2014), and even editors whose primary languages are not English are fairly likely to contribute to ENWP (Wikimedia Foundation, 2011).

This lack of diversity within the editing community is likely due, in part, to the fact that contributing to Wikipedia is a pastime that is generally much more accessible to individuals living in the developed world (Rask, 2008). This is because demographics play an important role in determining an individual’s ability to access and participate in Wikipedia. Multiple studies have shown that those with higher levels of education, literacy, household income and standard of living are more likely to access Wikipedia and contribute to Wikipedia, as are those who live in areas with higher levels of Internet penetration (Rask, 2008) and who have broadband Internet connections (Rainie &
Zickuhr, 2011); however, as Rask’s study made clear, level of human development is a stronger predictor of ability to contribute to Wikipedia than infrastructural access.

**ii) Wikipedia In India**

Wikipedia.org is the 6th most accessed website amongst the Indian population, and Indians are the second largest population of people who access Wikipedia, at 8.4% of its monthly visitors (the largest population being Americans) (Alexa, 2014). Not only do Indians read Wikipedia, however; editors from India make up approximately 3% of the editing community overall—which makes them one of the top ten largest groups by nationality within the community (Wikimedia Foundation, 2011). In fact, there is so much interest in Wikipedia and its sister projects4 that efforts to establish an Indian chapter of the Wikimedia Foundation began in 2004, though the actual chapter did not become an official part of the Foundation until 2010 (John, 2011).

Approximately 2,714 Wikipedians identify as being of Indian nationality (Wikipedia, 2013b), and 724 Wikipedians have specified that they live in India across 34 different regions (Wikipedia, 2013c). Of this community, 39 ethnic and/or linguistic identities have been identified (Wikipedia, 2013b). Furthermore, there are currently 20 Indic-language5 Wikipedia projects with nearly 300 active editors between them, the largest editing community being that of the Malayalam Wikipedia project (Wikimedia Meta-Wiki, 2013). The majority of active Indian editors, however, likely contribute most frequently to in English, likely because English is a significant “bridging language” between different linguistic groups in India (Alex & Prabhala, 2010).

Very little is known about the Indian editing population, as no specific survey or research project has been done on the Indian editing communities. Anecdotal data suggests that Indian editors tend to be very active in outreach activities, and tend to meet fairly frequently in the offline world (John, 2011). The Wikimedia Foundation’s 2011 editor survey also found that of the Indian respondents, only

4 Wikipedia is not the only project that the Wikimedia Foundation oversees. The Foundation currently manages 16 projects, which are often referred to as the Wikimedia “sister-projects”

5 “Indic” or “Indo-Aryan” languages are the dominant language of the Indian sub-continent
3% identified as female. Research on the level of Internet penetration, and particularly the use of broadband connectivity (IAMAI, 2013), in India and the nation's rating on the Human Development Index (UNDP, 2013) suggest that the majority of Indians likely do not have access to Wikipedia in a manner that would allow them to become successful contributors. This problem is compounded by the significant lack of easily accessible and appropriate hardware and software for Indic fonts and scripts (John, 2011), which is likely a significant barrier for most of the Indian population because the majority of Indians are not English-literate (Census of India, 2001).

2.1.4: Important Critiques of Wikipedia

As Wikipedia has grown in size, both in terms of its editing population and its content, it has become more and more clear that despite its continued emphasis on the dogma of openness and equal opportunity, the encyclopaedia is an exclusive space. The majority of its editing population is extremely similar—male, middle class, Western, English—and the content on ENWP (the largest and most read of the Wikipedia language projects [Wikipedia, 2013d] suffers from a systemic bias towards Western-centric, male-centric content (Wikipedia, 2014g). Over the last five years or so, Wikipedia's exclusivity has become increasingly problematic, as beginning in 2007, the size of Wikipedia's editing population and its rate of content growth have been decreasing (Wikimedia Strategic Planning, 2011; Wikipedia, 2014h)—if these trends continue, Wikipedia is at risk of losing its relevancy and being replaced by an encyclopaedia project that is able to more effectively meet the goal of archiving the “sum of all human knowledge.”

Accordingly, much research investigating these patterns of exclusion has been carried out over the last couple of years, and this literature has produced various important critiques of the nature and structure of the encyclopaedia and the editing behaviour that these structures have produced.

i) Systemic Exclusion

Since 2007, Wikipedia has struggled to retain new editors (Halfaker et al., 2011); however, since even
before that, it has largely failed to attract and retain editors whose personal characteristics are different Wikipedia's editor status quo. As was mentioned earlier in this section, Wikipedia's contributor population is largely made up of one “type” of editor, meaning that the perspective, experiences and opinions and their resulting influences on the structures, functions and content of Wikipedia are largely homogenous and tend to cyclically reproduce themselves. A diversity of different voices, and especially voices that challenge the Wikipedic mainstream, are missing on Wikipedia—or more appropriately, only one particular voice tends to be heard.

Why is this? To begin, as was pointed out earlier in this section, due to the reality of global Internet access and patterns of human development, the ability to contribute to Wikipedia is predominately only available to middle and upper class individuals. This already limits the pool of potential editors to a fairly small, relatively homogenous population, and this group is further limited by individual interest—many people may just not be interested in contributing to Wikipedia.

Wikipedia's homogeneity is not just caused by restrictions the supply side of the equation, though. Barriers related to access could possibly be overcome through the adoption of various specialized attraction and retention strategies; however, the sometimes radical adherence to the principles of equal opportunity (sometimes called Wikipedia's “emancipation ideology” [Stegbauer & Currie, 2011]) can often discourage the peer community from adopting measures that would facilitate the participation of particular groups of individuals by labelling those strategies as preferential, and inherently unequal, treatment and framing the lack of participation as a matter of preference and personal choice (Reagle, 2013).

Furthermore, Wikipedia's editing community can often be unwelcoming to new and minority editors. As Jennifer J. Henderson (2013) has pointed out, flourishing participatory cultures require more than universal access and an equal ability to contribute to rule making; members must feel connected to the community and respected for their contributions. Members of participatory online cultures are more likely to become deeply engaged with the community's projects if they feel valued by
the community and have largely positive, or at least non-negative, interactions with other members. This is particularly true for Wikipedia, as research shows that community-based interactions within Wikipedia are central in attracting and retaining active contributors (Rafaeli & Ariel, 2008; Wikimedia Foundation, 2011). Unfortunately, Wikipedia’s editing community can be conflictual and prone to antagonistic exchanges (Schneider et al., 2010; Wikimedia Foundation, 2011), which can serve to make editors feel undervalued and unwelcome and deter them from further engagement in the project.

However, negative interactions between editors are not just caused by random bouts of bad behaviour; negative interactions, or at least interactions that potential editors appear to find off-putting, tend to more often take place between certain “types” of editors. These interaction “trends” appear to be at least partly related to Wikipedia’s internal structure and meritocratic distribution of power. In particular, due to the community’s continued insistence that they are embracing the principles of openness and equipotentiality, the power structure within Wikipedia is largely “invisible, vague and opaque” (Kostakis, 2010). The issue which this, as Freeman (1970) points out, is that hidden power structures can result in differential treatment across the “ranks” of the community. Indeed, as Forte and Bruckman (2008), the vagueness of the social and technical powers of the administrators, and particularly the ambiguous limits of these powers, has allowed Wikipedia administrators to make “more and more interpretive and ‘moral’ decisions” (8) about user behaviour and article content. The direct result of this is that vast majority of the newer policies and rules on the encyclopaedia only apply to editors and not to administrators (Butler et al., 2008), which have led some Wikipedians and theorists to argue that authority over the encyclopaedia and its community has become increasingly consolidated in the hands of one small population of Wikipedia (Forte & Bruckman, 2008).

This particular hierarchal structure place certain “types” of editors, or potential editors, at a disadvantage. Editors who do not create new articles and instead attempt to add to or change the content of an existing article are more likely to have their edits reverted (Viégas et al., 2004), often
because editors that create articles tend to be fairly protective of those articles and resistant to other editors' attempts to change it (O'Neil, 2011). These problems are also compounded when editors “have access to administrative tools and/or belong to friendship cliques” (O'Neil, 2011), as they may have vested interests in an article on behalf of a friend and the tools to change the content of the article. Further, editors with less reputation and who are newer tend to have their edits reverted at a higher rate than those of editors who are well-established and/or who have administrative status (Suh et al., 2009). New editors also have less say over Wikipedia's policies, guidelines and rules (Halfacker et al., 2011). These types of interactions with other Wikipedians—having their edits deleted and being looked down upon by more experienced editors—has been shown to produce editor dissatisfaction with the nature of the editing community (Wikimedia Foundation, 2011) and acts as a deterrent to further and/or deeper involvement in the project (Halfacker et al., 2011).

**ii) Systemic Bias and “The Battle for Wikipedia’s Soul”**

Deeply related to the homogeneity of Wikipedia's editing population is its systemic bias towards Western-centric and male-centric perspectives, histories, stories and knowledge (Bellomi & Bonato, 2005; Ford, 2011; Graham, 2009; Graham et al., 2011; Wikipedia, 2014g). According to Halavais and Lackaff (2008), Wikipedia's “topical coverage is driven by the interests of its users, and as a result, the reliability and completeness of Wikipedia is likely to be different depending on the subject-area of the article” (429); this means that the majority of the content that is added to Wikipedia, and the lens through which that content is evaluated, is deeply rooted in the socio-cultural realities, perspectives and experiences of the editing population. A direct result of this is that the encyclopaedia contains much more information on topics and knowledge that is of interest to and considered to be pertinent by the majority of the editing population, which has led to a systemic discrimination against the knowledge and interests of lesser-represented demographic groups (Ford, 2011; Zuckerman, 2010; Wikipedia, 2009).

How systemic is the bias? Prior research has suggested that approximately one per cent of
Wikipedian community has produced half of the content on ENWP (Rafaeli et al., 2005), meaning that at least half of the information on ENWP is being reported from a Western, male-centric perspective. In fact, if EN Wikipedians were to give other continents and places the same coverage as the Western world has on the encyclopaedia, the amount of information available of Wikipedia would expand exponentially (Graham, 2009).

The bias in Wikipedia's content is not simply manifested through the focus on some topics and perspectives over others, however. As Graham (2011) points out: “power-relations in Wikipedia debates often mirror the exclusion of alternative narratives offline”. This phenomenon can be directly observed in the editing community's active resistant to new content, and especially to content that is not clearly related to the Western world (Ford, 2011) and content that is strongly associated with stereotypically and/or traditionally female interests (Bosch, 2012; Cohen, 2011).

This active resistance is often both a function of and achieved via Wikipedia's reliance on the “wisdom of the crowd” to determine what is “notable” and what is not. A topic is considered to be notable enough to have its own article on Wikipedia if it has “gained significant attention by the world at large and over a large period of time as evidenced by significant coverage in reliable secondary sources that are independent on the topic” (Wikipedia, 2014i). However, in practice, this guideline is subject to a fair amount of interpretation, particularly with regards to what is considered a “reliable secondary source”, and the result of a notability debate is often determined by whether the topic could be considered by the majority of the population to be notable to the majority of the population (Ford, 2011; Zuckerman, 2010)⁶. This problem is compounded by the fact that Wikipedians with more experience have more power over interpretation of the rules (Kriplean et al., 2007), which places new, less experienced editors trying to add new content that may not be entirely relevant to Western male interests at a particular disadvantage.

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⁶ A good example of this is the “Makmende” controversy, when, in 2010, a group of Kenyan Wikipedians attempted to create a Wikipedia page on ENWP about Makmende, a Kenyan cultural meme. Despite the fact that it was a very well-sourced article, it was nominated for deletion three times for three different reasons (Ford, 2011). Editors that supported its deletion claimed that it was not notable enough to appear on ENWP, though it was certainly notable in Kenya and met the ENWP community's standards for notability (Ford, 2011; Zuckerman, 2010).
Closely related to this issue of whose standards are used to determine whether a topic is sufficiently notable enough to appear on ENWP is the “Battle of Wikipedia’s Soul” (The Economist, 2008)—or, as it has come to be known, the Inclusionist versus Deletionist debate. Within Wikipedia, Inclusionists and Deletionists are two different and opposing sides of a fundamental debate over Wikipedia’s content and the extent to which the notability guideline should be applied (Wikipedia, 2014j).

Inclusionists argue that as there is no limit to the encyclopaedia's size and no incremental cost to including more information, Wikipedia should strive to include as much information as possible, even if it is considered trivial or the articles on the topics are sub-standard. They argue that most content on the encyclopaedia starts out poor and is improved over time, and it is impossible to tell what knowledge may be useful or valuable for readers. Some Inclusionists also argue that this goes hand-in-hand with considering a wider range of sources as reliable.

Deletionists, on the other hand, support the selective coverage of topics and advocate for the removal of articles that are “unnecessary” or highly substandard, arguing that a high incidence of trivial or substandard articles will severely decrease the encyclopaedia’s relevance and reputation. Most Deletionists believe that articles on the encyclopedia should meet a certain threshold of quality.

While not all Wikipedians have chosen a “side”, many identify as leaning towards one side another (Wikipedia, 2014j), meaning that the debate provides significant insight into the current content production process on Wikipedia and its related philosophies and goals. In particular, it has become apparent that certain editors have taken it upon themselves to behave as “self-appointed Deletionist guardians”, and spend much of their time policing new content and engaging editors in Inclusionists/Deletionists debates (The Economist, 2008). This makes them appear hostile and discourages people from contributing to the encyclopaedia (The Economist, 2008). Further, Deletionists' activities are much more detrimental on the short-term, as content can be deleted much more quickly than it can be added, and the deletion of non-status quo content added by non-status quo
editors can eventual result in the systematic deterrence of individuals who would bring new content and perspectives onto ENWP (Ford, 2011; Zuckerman, 2010).

2.2: GENDER AND TECHNOLOGY

2.2.1: Gender and Context

An enormous body of work spanning across a multitude of academic disciplines has been done on the meanings, experiences and implications of gender, among various other considerations. For the purposes of this paper, however, only a very brief sampling of the most relevant and fundamental findings on the phenomenon of gender will be presented.

The use of the term “gender” to distinguish biological sex from the subjective experience associated with belonging both privately and publicly to a certain gender category first emerged in the mid-1950s, when the sexologist John Money (1955) used it to draw a distinction between one’s biologically-dictated sex and the feelings, assertions and behaviours connected to the male and female identities. However, more sophisticated explorations of gender did not begin to emerge until the 1960s and 70s, when 2nd wave feminist scholars began to look towards the processes and mechanisms of gender differentiation as possible explanations for the systematic and historic oppression of women. Subsequent philosophical, sociological and anthropologic feminist critiques produced the understanding that the distinctive psychological and behavioural characteristics associated with a particular gender category are not inherent, but instead learned through complex social mechanisms that produce and reproduce understandings and expectations of gender roles and gendered ways of being throughout a person’s life (de Beauvoir, 1952; Connell, 1987; Fishman et al., 1999; Gershman, 1968; Rubin, 1975; West & Zimmerman, 1987)—in short, from birth onwards (Renzetti & Curran, 1992; Chodorow, 1978, 1995), one is socialized to think, behave and identify as predominately either male or female.

One particularly useful model of this phenomenon is Sandra L. Bem’s “Gender Schema Theory”
(1981, 1993), in which she proposed that individuals learn to cognitively process (perceive, organize, make meaning of and situate themselves within) the world around them through gendered lenses. She refers to this as “gender-based schematic processing” (1981: 355), and argues that the matrices along which gender role and identity are configured and evaluated are defined by society’s imagined ideals of femaleness and maleness and its “ubiquitous insistence” (1981: 362) on the functional importance of the differences between them. These processes of sex-typing not only generate internal regulatory mechanisms of gender polarization (unconscious self-policing of behaviour and choices to conform to society’s definitions of male and female), but also external social and structural regulatory mechanisms that serve to limit the choices and experiences that are made available to men and women (Bandura & Bussey, 1999; Bem, 1993; Coltrane & Adams, 2008; Rubin, 1975; Tenenbaum & Leaper, 2003). In this fashion, gender differentiation becomes a self-fulfilling prophecy (Bem, 1981, 1993; Coltrane & Adams, 2008), as society’s insistence on the inherent differences between maleness and femaleness creates a closed feedback loop in which the gendered status quo is reinforced and reproduced by individuals’ internalizations of the appropriate gender schemas and the limited opportunities and experiences that are made available to them based on the preconceived norms of those gendered schemas.

Situating gender within a social constructionist framework has allowed feminist scholars to deeply examine the structural and psychological processes through which gender differences are imagined, produced and internalized, the result of which has been the generation of profound insights into the social and structural mechanisms that create and perpetuate gendered patterns of oppression and exclusion. One of the core understandings that has emerged from these critiques is that societal narratives that stress the inherent differences between the male and female gender have led to the organization of social, political and economic life according to rigid conceptualizations of predisposed gender norms and proclivities, which in turn have been used to justify the distribution of resources, power and agency along gender lines (Connell, 1987; Friedan, 1963; Glenn, 2000).

However, as anthropologic critiques of second wave feminism began to point out in the mid-to-
late 1970s, context matters. Because gender is socially-constructed, the societal and individual
variables that frame and guide gender socialization processes will strongly determine the nature,
experiences and expressions of gender in a particular place at a specific point in time—meaning that
the identities, roles, etc., associated with each gender category, and indeed even the categories
themselves, will differ between different social and cultural contexts (Butler, 1990; Ortner &
Whitehead, 1981; Rosaldo, 1974; Spelman, 1988).

Discussions of the cultural dimensions of gender were closely accompanied by explorations of
the intersectional aspects of the experience of gender. Many feminist scholars began to argue that
gender is only one of many biological, social, cultural identities and experiential categories along
which individuals experience injustice and oppression (Collins, 2000; hooks, 1981; Spelman, 1988),
and that one's social location is therefore characterized by the complex interplay between these
systems of identity and belonging (Collins, 2000). The experience of gender and gender-based
discrimination, therefore, cannot be fully understood without taking into account how it is influenced
and bounded by its intersection with various other socially-constructed identities and forms of
oppression experienced by the individual (Butler, 1990; Collins, 2000; Crenshaw, 1989).

More recently, in an exploration of the processes through which social position informs the
development of specifically gendered identities, Laura Alcoff (2006) described gender as a product of
one's positionality when she eloquently stated that the “very subjectivity (or subjective experience of
being a woman) and the very identity of women are constituted by women's position” (148). This
understanding of the nature of gender and gendered experiences effectively captures the theoretical
stances that I have briefly summarized in this section, and shall act as the conceptual framework
within which I will situate my discussions and analysis of gender.

2.2.2: Gender and Technology

According to Judy Wajcman (1991), technology is a “cultural product which is historically constituted
by certain sorts of knowledge and social practices as well as other forms of representation” (158), meaning that what is understood as “technology” is subjective, and dependent on the positionality of the actor perceiving the object whose status is being evaluated within their larger social context (Bijker, 1995; Bijker & Pinch, 1987; Latour, 1999). Therefore, like so many other things in human life, technology has historically intersected and continues to intersect with gender in complex and changeable ways, and in ways that are not simply descriptive, but are shaped by and reflect the structural and social realities of a society stratified, at least in part, along gender lines (Lerman et al., 2003).

Likely because of this, feminist and sociological analyses of technology and technological systems have been able to trace complex connections and interplays between gender and technology throughout history, particularly with regards to how technologies can shape and represent gender categories and how gender can, in turn, shape and categorize technologies to the point that technologies themselves become gendered (Lerman et al., 2003). It has become clear that technology is not just socially constructed—it is imbued with and serves to further embed the political and social relations from whence it was born, and its form at any given point is a direct outcome on the distribution of power and resources within a particular society (Wajcman, 1991); the result is that in the West, and in other contexts where technological advancement is highly valued, society has drawn a clear association between masculinity and technological prowess (Lerman et al., 2003). From at least the late 20th century onwards (McGaw, 2003), technology, its definitions and its accepted forms and functions have largely been perceived and tacitly connected to hegemonic conceptualizations of masculinity and the male gender (Stalker 1983; Sanders 1985; Thurston 1990; Lage 1991), though in a manner that is less a reflection of inherent male traits and more a reflection of the male domination of public institutions and societal structures (Wajcman, 1991). Technical skills and domains of “technical” expertise have been divided between and within the sexes in a manner that defines and codes what is considered to be technology in terms of male-ness and male activities (Schwartz-Cowan,
In turn, women's creation and use of technology has gone largely unnoticed, as that technology is coded as feminine or female and is therefore not understood to be "technology". The result of this is that women have been historically written out of the definition of technology (Lerman et al., 2003).

Women's relationship with the mainstream understandings of technology, therefore, has been characterized by separation and exclusion (Berner & Mallström, 1997; Webster, 1997). Because society tends to categorize what is and what is not technology based on its association with the "male" domain, which makes invisible women's involvement in technological spaces, activities and productions, male-identified individuals are believed to be inherently attracted to and predisposed towards "technological" pursuits (Margolis & Fisher, 2003), and women often are believed to be intrinsically resistant to technology and all its forms (Bray, 2007). In this way, "doing technology" becomes a function of "doing gender" (Gill & Grint, 1995), and the resulting social constructions of gender serve to perpetuate women's alienation from technology.

### 2.2.3: Gender and the Internet

The gendered patterns of exclusion from technological activities and domains that result from these complex intersections and interplays between societal conceptualizations of the nature of gender and technology are particularly pronounced in the age of the Internet. Women the world over, and especially in the developing world, has less access in general to ICTs7 (Hafkin, 2003)—in fact, on average, female-identified individuals are 25% less likely to be online than male-identified individuals (Intel, 2013). Furthermore, women are much less likely than male individuals to pursue computer- and digital technology-related post-secondary degrees and careers (Zweben, 2011; Melkymuka, 2001; Stross, 2008). Accordingly, female-identified individuals are highly under-represented in the computing and computer programming workforce (Foust-Cummings et al., 2008; Misa, 2010).

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7 Information and Communication Technologies, of which the Internet is one
This gendered exclusion is the result of the usual intersections of gendered norms and technology. The Internet itself was borne out of the coupling of multiple fields of technological labour and processes—including the military, engineering, mathematics, hard sciences, computer sciences and programming, communications, and industry—all of which have been, historically, strongly coded as male (Berner & Mellström, 1997; Boden, 1977; Collier & Bear, 2012; Cukier et al., 2002; Edwards, 1994; Wajcman, 1991), meaning that the Internet and many of its associated activities and spaces have received a similar coding. The result of this is that male- and female-identified individuals tend to access, perceive, and interact with digital technologies and computers, and therefore the Internet, in very different ways, and in ways that tend to exclude women from participation in leisure, labour and learning pursuits that are associated with the Internet.

There are a variety of mechanisms through which these gendered tendencies towards asymmetrical interactions with the Internet come into being. One of the main ways this is produced is, of course, through the institutionalization and socialization of gendered norms of behaviour. Because male values have been institutionalized within digital technologies and the Internet by their creators, society tends to associate digital and online activities with the masculine identity, which signals that those pursuits are more appropriate for male-identified individuals than female-identified individuals (Cockburn, 1985; Gill and Grint, 1995; Faulkner & Arnold, 1985; Fletcher-Flinn & Suddendorf, 1996; Reinen & Plomp, 1997; Kramarae, 1988; Sutton, 1991). Female children and women perceive this, and associate most computation and digital activities as “male” interests (Berner & Mellström, 1997; Culley, 1988; Eastman & Krendl, 1987; Thurston, 1990); they then self-police their behavioural patterns and the behaviours of others in a manner that is incompatible with the qualities associated with predisposition towards maths, sciences, computers, and the Internet (Edwards, 1994; Margolis & Fisher, 2003; Wajcman, 1991).

This self-policing plays an important role in producing the digital divide. Women and female-identified individuals also tend to socialize themselves against the pursuit of computer-related and
Internet-related activities, often in a manner that disadvantages them from being able to successfully participate in online spaces, which Judy Wajcman refers to as “difference lived as inferiority” (Wajcman, 1991: 152). Female-identified children are often disinclined to participate in computer-related activities (Wajcman, 1991), so boys appear to be more interested in computers (Levin & Gordon, 1989; Shashaani, 1994) and have more positive attitudes towards computers (Collis, 1985; Comber et al., 1997; Miura, 1986), which makes them more motivated to learn to use the computer and allows them to build more computer-related experience (Bannert & Arbinger, 1996; Chen, 1987; Clarke, 1990). This helps them to build confidence in their computer skills (Schumacher & Morahan-Martin, 2001). Women, on the other hand, appear to be more intimidated by computers (Reinen & Plomp, 1997), report higher levels of computer-related anxiety than men (Sherman et al., 2000; Corston & Colman, 1996; Martin, 1991), and often perceive themselves to have less computer ability than boys (Boser et al., 1996; Durndell et al., 1995; Hodes, 1995).

Gender socialization does not just take place at an individual level, however; it is also achieved through external interactions with the structures of the societies in which one inhabits, and two of the most important “sites” of external socialization are the classroom and the home. Educational and parental practices (both explicit and implicit) can help to create and reproduce gendered ideologies in which certain technologies and technologically-related activities are coded as masculine (Wajcman, 1991), and this has happened with regards with computer sciences and the Internet. Not only are teachers and parents more likely to perceive male children as being “magnetically attracted” to technological pursuits (Margolis & Fisher, 2003), but research has shown that instructors tend to implicitly communicate to their students that girls do not need to participate in computer technology and computer-related pursuits (Durndell et al., 1995; Hanson, 1997; Koch, 1994; Reinen & Plomp, 1993), and parents tend to provide male children with more opportunities to “play” with computers and related technological objects (Margolis & Fisher, 2003; Miura, 1986; Turkle, 1984). The result of this is that the way in which computer programming and computer science is taught across all levels of
education is often largely inaccessible and frustrating to women (Edwards, 1994; Frenkel, 1990; Margolis & Fisher, 2003), and women are more likely to explicit and implicit discouragement and mistreatment on the basis of their gender when they do attempt to participate in these educational spaces (Margolis & Fisher, 2003), including verbal putdowns by peers, educators and mentors (Wajcman, 1991), and having their achievements and ideas overlooked while those of their male peers are praised and encouraged (Edwards, 1994).

The result of all of these socialization processes is that despite the fact that girls and boys appear to be equally interested in computers and computer-related skills in the primary grades, girls' enrolments in computer courses begins to drop by age 11 or 12 (Edwards, 1994). This downward trend continues throughout school (AAUW, 1999), until women represent a tiny minority in computer programming and science courses at the higher educational levels (Hanson 1997; Durndell et al., 1995) and in computer technology careers (Hanson, 1997). Further, research shows that women are particularly likely to experience the “imposter phenomenon”—when minority individuals do not feel themselves to be “real” members of a dominant group and begin to distrust their own skills and abilities through which they earned membership to that dominant group—once they begin to gain positions of prestige in the computer science (Leveson, 1989; Pearl et al., 1990; Weinberg, 1990) and digital technology fields, which further prevents them from getting more deeply involved in the field and seeking out positions of higher and higher authority and participating in many of the fundamental labour processes regarding the production of digital and computer technologies.

Aside from the socialization of gendered norms and behaviours, access to computer and online technologies plays a very large role in dictating whether or not female-identified individuals are able to participate in online spaces and activities. Much research has shown that socio-economic status, and particularly level of educational attainment and household income, is a strong predictor of one's ability to access digital technologies and the Internet (Bimber, 2000; Zickuhr, 2013), as well as to participate in creative and participatory pursuits online (Hargittai & Walejko, 2008). Furthermore,
Hassani’s (2006) research suggests that those with more access points to the Internet are able to engage in more online activities from which they may benefit, which is especially relevant when it comes to time-intensive activities such as content creation, programming, and active participation in online cultures.

Female-identified individuals are, the world over, much more likely to live in poverty and have lower socio-economic status than male-identified individuals, particularly with regards to educational attainment (Chant, 2006; Chen et al., 2005), meaning that they are much less likely to be able to have access to digital technologies and the Internet. Furthermore, women tend to have less leisure and free time than men do (Aguiar & Hurst, 2007)—largely because they continue to bear a larger burden of household labour (OECD, 2009)—which has been shown to affect their ability to participate in digital activities (Nafus et al., 2006; Winn & Heeter, 2009).

2.2.4: Gender and Participation in Online Participatory Communities

In regions where access to the infrastructural means of being online is less of an issue, such as in more industrialized or post-industrial nations, the gender gap in computer and Internet use has all but disappeared (Bikson & Panis, 1995; NTIA, 2002). However, differences between frequency of use and type of use (called differentiated use) between female- and male-identified individuals continue to exist, and have the potential to contribute to the perpetuation of social inequality (DiMaggio et al., 2004; Hargittai, 2008; Mossberger et al., 2003; Warschauer, 2004) by making exposure to experiences that increase ones’ digital literacy, digital skills and ability to participate in online participatory cultures and activities unequally available to users regardless of their technological access (Jenkins et al., 2006). This differentiated use of digital media often manifests in a “participation gap” (Jenkins et al., 2006), where certain Internet users are, by virtue of their online experiences and skills sets, unable to successfully navigate and participate in spaces and activities where advanced uses and forms of information and communication digital technologies take place and are produced (Bunz,
2004; Hargittai, 2002; Mossberger et al., 2003).

This participation gap has taken on a gendered aspect, as female-identified users tend to be disproportionately represented in those groups of Internet users who are largely unable to access and successfully participate in more advanced online spaces and more sophisticated collaborative online communities, which in turn tends to perpetuate the exclusion of female individuals from influencing the structures and processes of the existing digital landscape and contributing to the creation of new digital media. This is something that is clearly visible in the offline world in employment fields related to the production of digital media and software programming (Foust-Cummings et al., 2008; Misa, 2010), but can also be seen in the general death of female-identified members of complex online peer production communities such as various F/LOSS\(^8\) groups and, of course, Wikipedia, whose female membership makes up 1.5\% (Ghosh et al., 2002) and 8.5-16.1\% of the total contributor population, respectively.

Female- and male-identified individuals' tendency to use and perceive the Internet and online spaces may help to shed some light on why women are largely absent in the more sophisticated online communities, and particularly peer-production communities. To begin, female-identified individuals are less frequent users of the Internet, and their use is less intense and more casual (Bimber, 2000; Ono & Zavodny, 2003). They also appear to prefer personalized activities that are deeply connected to their offline realities and identity, and they therefore tend towards online spaces that allow them to display and explore personal, familial and/or social themes, to connect with others, and to express their identity and a positive self-image (Bond, 2009; Correa et al., 2010; Shade, 2008). This may help to explain why in the American Internet user population (a population where access to the technological means to connect to the Internet is nearly equally distributed by gender), women are significantly more likely than men to use the social media sites Facebook, Pinterest, and Instagram, while men are twice as likely to use reddit (Duggan, 2013).

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\(^8\) Free/Libre and Open Source Software
Online hacker and software programming communities (which are, largely, Wikipedia's predecessors [Reagle & Rhue, 2011]) may also function in ways that discourage women from participating based on their preferences for online spaces and activities. The nature of hacking and programming itself is reported to be highly competitive (Turkle, 1984; Lin, 2005), individualized (Nafus et al., 2006), about a sense of control and power (Weizenbaum, 1976; Hafner & Markoff, 1991), and often antagonistic (Nafus et al., 2006) all of which have been reported to be deter female participants.

Furthermore, it takes a particular level of skill, and often a highly particular skillset, to successfully participate in many of these communities (Bunz, 2004; Hargittai, 2002; Hargittai & Walejko, 2008; Mossberger et al., 2003; Reinen & Plomp, 1997), which women often do not have (and have not been given the opportunity to develop). In particular, Hargittai & Walejko (2008) found that due to skill differences, women Internet users were much less likely to share their creative creations online, but that this gender gap disappeared when controlled for skill level, meaning that women and men are just as likely to participate in the production and sharing of creative content on the web if they have been given the opportunities to develop a similar level of online skill and ability.

However, even if they do have the ability, they often do not perceive that they do. More recent research findings on the skill levels of male- and female-identified Internet users suggest that while women and men do not tend to differ greatly in their online abilities, women's self-assessed/self-perceived skill level is often significantly lower than that of men (Hargittai & Shafer, 2006; Hargittai & Walejko, 2008; Todman, 2000), and women continue to report higher levels of computer anxiety even at high skill levels (Broos, 2005). This lack of self confidence could have a “negative impact upon their drive to communicate their opinion to the wider world” (Etzkowitz & Ranga, 2011), which could work to discourage them from participating in online activities that require a fair amount of confidence in one's abilities (Lam et al., 2011).

There do appear to be, however, other reasons aside from preference and differentiated
Internet use that serve to keep female-identified individuals out of online participatory communities, and in particular those collaborative communities related to software programming and hacking. Research suggests that hacker and programming cultures can be explicitly or implicitly hostile to female participation and highly unwelcoming to women (Nafus et al., 2006; Lin, 2005; Reagle, 2010). To begin, these communities have, at least in the past, practiced direct avoidance and exclusion of women (Levy, 1984; Turkle, 1984) largely because they were explicitly male-only domains. The result of this at current day is that women participants are often treated as “others” or “outsiders, and are treated as either invisible or receive an overabundance of attention (which is sometimes sexual in nature), both of which can act as deterrents to female participation (Nafus et al., 2006). Furthermore, because these communities are largely made up of male members and assume male interests as default, the needs of female programmers and contributors are often not respected and consulted (Levesque & Wilson, 2004), and the software/product outputs are often male-centric in nature (Lin, 2005), meaning that female-identified participants may both be unable to see a place for themselves in these communities and may feel that their current activities in them are not making a difference. All of these factors can serve to further discourage women from participating in online collaborative and peer-production communities.

2.3: GENDER AND THE INTERNET IN INDIA

As this research project does not aim to explicitly investigate the causes of the gender gap in the Indian editing community, I will not be delving into a deep exploration of the extensive and highly complex manners through which gender interacts with the various socio-cultural, economic, geographical, and political aspects of India to produce deeply entrenched and asymmetrical patterns of inclusion and exclusion across the Indian society along technological lines. However, for the purposes of providing context and some fodder for shallow analysis, a brief overview of the intersections of gender and technology in India is included.
India is a country that is characterized by a profound lack of access to the Internet amongst its population, and particularly amongst those Indians that live in rural areas, who constitute a majority of the population (The World Bank, 2012). Less than 16% of all Indians living in India have regular access to the Internet (IAMAI, 2013), but only 4.6% of rural Indians are online (IAMAI, 2012), likely because the lower population densities and unfavourable geographic and climatic conditions across most of the rural areas make it very difficult and expensive to provide the infrastructure needed for stable and regular access to the Internet (Sambasiva Rao, 2007). For those that do not face these infrastructural barriers, however, access to the Internet usually takes place in their homes, at their workplaces, or, most commonly, via public Internet access spots like cybercafés (Haseloff, 2005). Less than 10% of all Indian households possess either a laptop or desktop computer, and only 3% of these homes have Internet connection (Census of India, 2011). 1.1% of Indian Internet users have broadband access (ITU, 2013a).

Within this context of low Internet connectivity, women and female-identified Indians tend to have, on average, extremely limited access to the Internet. Only about a third of those Indians that are regular Internet users are women and/or female-identified (ITU, 2013b), and only about 14% of these women use live in rural areas. In 2010, it was estimated that working women made up approximately 8% of India’s Internet users, and non-working women accounted for about 7% of online Indians (IAMAI, 2010); and of those Indian families that had a family or household computer, male family members and children are much more likely to use the computer than adult female family members (Johnson, 2010). Only 8% of female Indian homemakers use the Internet (Internet and Mobile Association of India Statistics, 2007b).

So, while there is a significant gap between the Internet haves and have-nots within the Indian population, its digital divide becomes particularly pronounced along the lines of gender. Unfortunately, to date, very little research has been done on the gendered nature of the inaccessibility to digital technology in India, largely because very little focus has been put the role that gender and its
related dimensions play in predicting global, national and individual access to ICT overall (Hafkin, 2003). However, as Nancy Hafkin pointed out in her brief discussion on the intersections of gender and ICT indicators, the direct connections between gender and access to ICTs are quite obvious, particularly in India: as socio-economic status, and in particular one’s level of education, is a strong predictor of one’s ability to access technology and the Internet (Bimber, 2000; Hafkin, 2003; Hargittai & Walejko, 2008; Zickuhr, 2013), then it should come as no surprise that Indian women, who are, on average, less likely to be literate (particularly if they are from rural areas) (Census of India, 2011), less likely to be enrolled in schools and more likely to drop out across the educational levels (Menon-Sen & Shiva Kumar, 2001; Saraswathi & Verma, 2002), and more likely to live in relative poverty (Sharma, 2012) have less ability to regularly access the Internet than their male counterparts.

However, gendered exclusion from the technological sphere in India also takes place through more tacit, complex mechanisms often related to socio-cultural and gender norms and contextual constructions of gendered behaviour and preferences. Indian women often do not have enough time to use the Internet, as they often bear a larger burden of household work (Johnson, 2010). Furthermore, due to their own self-perceptions of their abilities and desires, female-identified Indians have been reported to feel that they did not have the ability to learn to use the Internet and computers, and that even if they did, they did not see it as a necessary skill; it has been suggested that this may be because Indian women are generally not encouraged to fulfill their individual need and pursue personal growth, so they are rarely motivated to use computers for themselves (Johnson, 2010).

Additionally, the Internet is often perceived by both men and women to be an unsafe space—a place where drugs and porn could be easily accessed, and sexual predators lurked—and that women in particular have to be “protected” from its dangers (Johnson, 2011), which is often achieved through the restriction and surveillance of their time spent online and the policing of their online behaviours by their parents, spouses and (often male) friends (Bhattarcharjiya & Ganesh, 2011). Moreover, cybercafés, which have been described as one of the keys to bridging the digital divide in India (Haseloff, 2005)
and are increasingly becoming important sites of socialization and identity construction for young people in India (Gupta, 2000; Parekh & Sawant, 2000; Joshi, 2011; Nisbett, 2006), are largely considered to be inappropriate and unsafe spaces for women (Johnson, 2011; Purushothaman, 2011), and it has been reported that Indian women themselves often do not feel comfortable in these spaces (Bhattacharjya & Ganesh, 2011).

Finally, female-identified persons are also highly under-represented in STEM-related fields of employment and education in India (WISAT, 2011), and particularly in fields related to IT (Sharma, 2012), computer sciences, and software production (Arun & Arun, 2001). It has been argued that this exclusion of women is largely due to asymmetrical socioeconomic power relationships, social norms, gender roles, and labour roles in both the labour market and in the household that serve to prevent or discourage Indian women from choosing these educational and employment paths, and make it difficult for them to achieve high levels of authority and responsibility when they do (Arun & Arun, 2002; WISAT, 2011). The result of this is that Indian women are largely excluded from both access to and the ability to participate in and successfully navigate digital technologies and the Internet in India.

2.4: GENDER AND CULTURE ON WIKIPEDIA

As will become clear over the following two sections, culture and gender matter on Wikipedia. One's gender and socio-cultural (linguistic, ethnic, racial, national) identity does appear to exert some amount of influence over one's patterns of behaviour as an editor and, more importantly and particularly with regards to gender, the extent to which one is able to successfully participate in Wikipedia.

2.4.1: Cultural Differences Within the Community

For the purpose of this research, culture will be defined as “patterns, explicit and implicit, of and for
behaviour acquired and transmitted by symbols, constituting the distinctive achievements of human groups” (Kroeber & Kulckhohn, 1952: 357); in this definition, the core elements of culture are derived from traditional (i.e., historically derived and selected) ideas and their attached values, which are interpreted and reinterpreted over time in a manner that generates specific cultural systems that “may, on the one hand, be considered as products of action, on the other, as conditional elements of future action” (357).

Cultural differences exist in online spaces and across online actives. Prior research shows that members of different cultural groups prefer different ascetic characteristics (Barber & Badre, 1998) and layouts (Schmid-Isler, 2000) of websites, and particularly favour websites that display or contain some of the cultural markers associated with their cultural group (Chua et al., 2002; Singh et al., 2003). Cultural differences have been found to account for some differences in styles of email communication (Cakir et al., 2005), and, more relevantly, culture has been shown to influence the processes through which online groups carry out collaborative work (Wilson et al., 2005).

Similarly, Wikipedia is not a culturally-neutral space. As was discussed in the Context section of this report, Wikipedia's editing population is fairly internationally diverse. Editors of Wikipedia come from many different geographical places, and possess a diverse range of socio-cultural identities and experiences, many of which influence the way in which they participate in Wikipedia. Differences in editor behaviour and content creation can be observed across cultures, and specifically between different language groups and their associated language Wikipedia projects.

In particular, research has shown that different language projects consider different people (or at least their biographical articles) to be more significant and “central”, but that similarities could be found between geographically and/or linguistically similar Wikipedias (Aragon et al., 2012). Further, researchers have used Geert Hofstede’s central dimensions of cultural diversity to analyze the cultural differences in editor behaviour across five different language Wikipedias; the findings clearly showed that editors that belonged to cultural groups that placed differently along the cultural diversity indexes
exhibited different editing activities and interacted with other editors in different ways (Ulrike et al., 2006).

Interestingly, however, marked differences in the factors that motivate individuals to contribute to Wikipedia has not yet been observed between Wikipedians from different cultural groups yet been observed (Auray et al., 2007; Rafaeli & Ariel, 2008; Schroer & Hertel, 2009), though a recent study on Persian Wikipedians has found that finding new friends is a motivating factor for Persian editors (Asadi et al., 2013)—a motivation that had not, to date, been explicitly observed for other editors, no matter what their socio-cultural background.

2.4.2: Gender on Wikipedia

Female-identified individuals make up between 8.5% and 16% of Wikipedia's editing population (Hill & Shaw, 2013; Wikimedia Foundation, 2011), a small minority. Since the first official editor survey, the UNU-MERIT study of 2010, made it strikingly clear that there is a significant gender gap in Wikipedia’s editing community, discussions of the nature of the gap and the causal mechanisms involved in discouraging or preventing women-identified individuals from participating in Wikipedia have become fairly wide-spread both within Wikipedic spaces and in other online spaces, as well. Further, beginning in 2010, a small body of both academic and non-academic research investigating the gender gap, and the intersections of gender and Wikipedia in general, has begun to emerge. This work has generated some important insights into nature of the gender gap and why female-identified individuals continue to be a minority in the community.

However, before discussing the relevant gender gap literature, a brief comment on the sample populations of virtually all of the previous research on the gender gap must be made. Likely due to the fact that vast majority of the research was carried out in English and that the researchers tended to either rely on self-selection surveys (which tend to attract the most active editors [Collier & Bear, 2012]), or seek out editors who identified as female on their userpages or in some other capacity
(which not all editors do), all of the sample populations that appear in the gender gap research are predominately made up of editors from the Global North. There is no one sample population where at least half of the respondents are from regions/countries outside of the Global North, and a majority of the sample populations featured in the research consist entirely of Western editors. This means that the current explorations and explanations of the gender gap are strongly skewed towards the experiences and lived realities of women from the Western world, and likely do not accurately reflect the whole spectrum of barriers and challenges that women and female-identified individuals from non-Western regions and contexts could possibly experience or face when they attempt to participate in Wikipedia.

i) Women on Wikipedia: A Brief Overview
While an official survey of female Wikipedians has never been done, an unofficial survey was carried out in 2011 by Sarah Stierch. This survey found that the average woman on Wikipedia was from the USA, 31 years old, white, straight, single and had a degree in higher education (59% of the respondents had a bachelors degree or higher, and 21% were currently attending college or had some college level experience) (Stierch, 2011).

This survey also found that the respondents were unlikely to be active in offline outreach, local chapters or social activities outside of Wikipedia (Stierch, 2011). This is an important finding, as those editors that respond to survey invitations are likely to be some of the more active, involved editors (Collier & Bear, 2012), meaning that the most active female editors on Wikipedia may be unlikely to be involved in offline outreach or socialize with other editors outside of the Wikipedic sphere.

ii) Gendered Patterns of Behaviour
While not directly related to the preventative mechanisms associated with the intersections of gender and Wikipedia, recent research has shown that gender identity appears to affect the way in which male- and female-identified individuals behave as editors and which type of wiki-work they choose to be involved in.
To begin, recent research suggests that female- and male-identified editors may have different editing patterns. According to a study by Lam et al. (2011), male-identified editors make almost twice as many edits as female editors; however, women are more likely to edit articles that are contentious or controversial. Women are more likely to edit articles on topics related to People and the Arts, while men are more likely to edit Geography and Science topics (Lam et al., 2011). However, a different study carried out around the same time found that male and female editors had rather similar editing behaviours across all levels of involvement in the encyclopaedia except for within the sample of the most active editors—in this population, female-identified editors only made 27% of the revisions (Antin et al., 2011).

Other research has investigated differences and preference in styles of communication between male and female editors. Female-identified editors tend to work in Wikipedic spaces and on articles for which the associated editor discussions have a more positive tone, and tend to write more positive comments and messages (Laniado et al., 2012). Furthermore, as editors with similar communication and emotional styles tend to interact with one another more frequently, female editors tend to interact with other female editors with a higher frequency (Laniado et al., 2012).

Furthermore, gender identity appears to affect more than just how one behaves as editor. According to a study on American university students, women and men appear to have different perceptions of the encyclopaedia. In particular, male individuals appear to have a more positive perception of both the quality of the content on Wikipedia as well as the Wikipedia movement overall (Lim & Kwon, 2010).

\[\text{iii) Gendered Patterns of Exclusion}\]

Gender also appears to play a role in determining the extent to which one is likely to be excluded from Wikipedia, both in terms of one's ability to successfully participate in Wikipedia as well as in terms of the likelihood that content related to one's interests is available on the encyclopaedia. Taken together, these patterns of exclusion provide us with a more detailed understanding of the nature of the gender
a) In Terms of Editors

Female-identified individuals not only make up a minority of the established editing population; they are also a minority within the cohorts of new editors. Between 2009 and 2011, women accounted for between 16.1-18% of the new editors on Wikipedia (Antin et al., 2011; Lam et al., 2011). Female editors are also much more likely to stop editing Wikipedia earlier than male-identified editors, and they are much more likely to leave before they have accumulated a large amount of edits (Lam et al., 2011).

Moreover, male editors are more likely to become administrators than female editors (Lam et al., 2011), despite the fact that female editors are more likely to behave like administrators (Laniado et al., 2012).

b) In Terms of Content

Female-identified editors also appear to contribute less edits overall, particularly when they are new. In a cohort of new editors that came onto the encyclopaedia between 2009 and 2010, the female-identified Wikipedians only accounted for 9% of the edits made by this population (Lam et al., 2011). Further, edits made by newer female editors are much more likely to be reverted than edits made by newer male-identified editors (Lam et al., 2011).

Research also points to the fact that there is likely a systemic bias against female-centric content on Wikipedia. In general, articles about female-interest topics tend to be shorter and of lesser quality compared to articles on male-interest topics (Lam et al., 2011), possibly because the editing community may generally have less concern for the accuracy or quality of articles related to female-centric topics and interests (Wikimedia Meta-Wiki, 2013). Furthermore, female-interest topics also appear to be considered as less notable than male-centric content. A recent example of this phenomenon is the “Kate Middleton's Wedding Dress” controversy, where an article on Kate Middleton's wedding dress was flagged for deletion due to its lack of notability despite its cultural significance (Bosch, 2012). Similar, but less publicized, examples of this have been pointed out.
elsewhere, including the observation that there was, in 2011, five biographical articles on Mexican Feminist writers but 45 articles on characters from the cartoon television show “The Simpsons” (Cohen, 2011).

Information regarding women’s lives and achievements throughout history are also significantly lacking on Wikipedia. In a study that was performed on the similarities and differences between some of the most central biographies across various language projects, very few females individuals were found to be treated as significant persons on the Wikipedias (Aragon et al., 2012). In fact, in a random sample of 200 biographies from ENWP, over 80% were about men (Kohs, 2011). Biographical articles about women are more likely to be missing on Wikipedia compared to Encyclopaedia Britannica (Reagle & Rhue, 2011); in fact, when compared to an online biographical database, the difference in percentage between the number of female biographies in the database and female biographies on Wikipedia was so stark that the author of the study described Wikipedia's content as being “highly suggestive” of bias (Limey, 2010).

**iv) Identified Barriers to Women’s Participation**

As more and more research on the gender gap is carried out, it is becoming increasingly clear that the gender gap in Wikipedia’s editing population is more than just a matter of personal choice and a general lack of interest from female-identified individuals (Reagle, 2010). Academics and Wikipedians alike have begun to look more closely at the causal mechanisms of the gap in an attempt to pinpoint the factors that are preventing and/or discouraging women from contributing to Wikipedia and/or becoming more involved once they have begun, and these investigations have identified a variety of direct or indirect barriers and challenges that female-identified individuals have faced or are likely to face when attempting to participate in Wikipedia.

Some of these barriers are related to the internal mechanisms and realities of Wikipedia and the experiences that these factors tends to create for female individuals; other are related to challenges and hindrances that women face that are external, but still indirectly related to, Wikipedia.
a) External Barriers and Challenges

According to the literature, the majority of the external constraints that female-identified individuals tend to face or experience with regards to their ability to participate in Wikipedia are related to the nature of the female gender and/or female ways of being. Various studies have suggested that differences in confidence in one’s own knowledge and ability between men and women may help to explain why women are less likely to contribute to Wikipedia, as women, on average, are more likely to report feeling like they do not have enough knowledge, expertise or information to contribute to Wikipedia (Collier & Bear, 2012; Eckert & Stine, 2012; Gardner, 2011). Furthermore, some anecdotal evidence from a sample of non-contributors points to the fact that women prefer to participate in spaces and communities where they feel welcome and where they have the ability to have and build friendships with other members of the community, which draws them away from Wikipedia and onto other online spaces (Gardner, 2011).

However, other findings suggest that a lack of free time is the largest barriers to women’s participation (Gardner, 2011). Other studies found that women and men were just as likely to face barriers related to a lack of free time, but that more men than women predicated that they would be able to find the time to contribute in the future (Eckert & Steiner, 2012), hinting that the equal likelihood of a lack of free time between the male and female respondents was a product of the personal realities of the sample population at that particular time in their life and that women were still more likely to have less free time overall.

b) Internal Barriers and Challenges

Female-identified individuals are also likely to face a variety of barriers and hindering factors that either deter them from becoming more actively involved in Wikipedia or that discourage them ever getting involved in the first place. Taken together, this research hints at the possibility that Wikipedia’s culture and community may be resistant to female participation. It is unclear at this point in time whether this resistance has to due with the nature of Wikipedia and the inherent influence that the
majority population has over the structure and function of the encyclopaedia, or whether it reflects the independent actions of a community of individuals that are, as a group, explicitly resistant to female participation; though in reality, it is likely a mixture of both of these and other factors, and in particular the fact that both Wikipedia's structure and community originated in the hacker and free/libre open source software culture (F/LOSS) (Lih, 2009; Reagle, 2010), which both implicitly and explicitly excludes women. Either way, despite the lack of a clear central cause, various parts of Wikipedia have been found to be hindering and/or discouraging to women's participation.

To begin, women have often reported finding the wiki mark-up language (the syntax and keywords used to create content and format a wiki page) to be restrictive and difficult to learn (Eckert & Steiner, 2012; Gardner, 2011)—though this has been found to be a barrier to participation for many potential editors, and not just women (Wikipedia, 2014). In fact, the vast majority of the barriers and challenges that women are likely to face to their ability to participate in Wikipedia appear to be related to interactions with other editors. Herring (2011) has suggested that women may be turned off by Wikipedia's standard style of editor communication, which stresses a “neutral” point of view and is often perceived by women to have a critical tone. Other research suggests that women and female editors are more likely to be deterred by conflict and antagonistic interactions with other editors than men and male editors (Collier & Bear, 2012; Eckert & Steiner, 2012; Herring, 2011). In fact, in Collier and Bear's study (2012), women were 31% more likely to cite fear of criticism from other editors as a major deterrent from being more involved in Wikipedia. This is an important observation, as female-identified editors were more likely to report more negative interactions with other editors than male-identified editors, meaning that female editors are much more likely to feel dissatisfied with the nature of the community (Wikimedia Foundation, 2011).

Moreover, even if they did not feel put-off by conflictual exchanges themselves, some women have reported being turned off of by the time and effort that they need to expend on defending their edits and point-of-view on top of the time and effort they have already spent on the editing itself
Other research, however, suggests that women may actually be purposively avoiding Wikipedia because they perceive it as a misogynistic and/or sexist space (Gardner, 2011; Wikimedia Foundation, 2011). Unfortunately, for many female Wikipedians, this perception may have some truth to it: not only are female editors more likely to receive messages from other editors that are paternalistic in voice and tone (Laniado, 2012), but between 7% and 33% of female editors experience negative or inappropriate treatment from other editors (Stierch, 2011; Wikimedia Foundation, 2011), with name-calling being one of the most common occurrences. The most frequent insult that these women received was “bitch”, with the other inherently gendered terms “cunt” and “witch” also appearing with a relatively high frequency (Stierch, 2011).
CHAPTER 3: RESEARCH DESIGN & METHODOLOGY

3.1: RESEARCH SCOPE

India is an extremely large country whose socio-cultural, economic, political, and gendered realities vary monumentally within its highly linguistic and geographically diverse population. Attempting to identify a set of generalizable barriers and challenges that Indian women, in all their plurality, face in their ability to participate in Wikipedia greatly exceeded the scope of my research as well as the resources and time allocated for my research, as it would require research subjects from a wide variety of different groups of women across the country. I therefore chose to perform a small-scale case study on a group of women that I had direct access to: current female-identified Indian editors of Wikipedia.

This is certainly a very small and specific sample, and one that, by virtue of being predominately made up of current editors, is not a sample of women that have experienced challenges to their participation to the extent that they were entirely hindered from becoming established contributors. However, as no prior academic research has been done on the gender gap in the Indian editing community, I believe that this is an appropriate and useful sample population within which to start the exploration of those phenomena and factors that serve to exclude Indian women from full and equal participation in the editing of Wikipedia for three reasons. Firstly, just because my research subjects have not been entirely excluded, in one way or another, from becoming editors of Wikipedia, this does not mean that they have not experienced obstacles or challenges along the way, or that they do not continue to face barriers currently. Any insights that their experiences can provide into the nature of Indian women's interactions with Wikipedia can behave as valuable starting points for future research into the Wikipedic gender gap in India. Secondly, specific characteristics of this population, such as their demographic or socio-economic status, may help to shed light on relevant patterns of exclusion and inclusion in the Indian context be providing insight into which social and/or demographic groups are more likely to be able to participate in Wikipedia, and which are more likely to be missing. Thirdly, as a good portion of the prior academic research on the gender gap on
Wikipedia has been done using sample populations of individuals that were editors at the time of the research, drawing on the experiences of a current editor population to perform a comparison between the barriers and challenges identified for a sample population of Indian women and those identified in the research is appropriate and in line with prior research practices.

Furthermore, I did attempt to include a comparative mechanism within my case study through the inclusion of research subjects that had been editors of Wikipedia in the past, but had not, at the time of the field research, contributed to Wikipedia in the last six months (which I will refer to as a “non-contributor” population). I had hoped that the analysis of the differences and similarities between the experiences those women who were current editors and those that had been in the past but has since ceased their involvement in the encyclopaedia would add a particular depth and nuance to the research findings, but unfortunately, I was unable to gain access to a large sample of non-contributors within the time I had allotted for my field research. Nevertheless, I was able to get in contact with one such research subject, and their contributions have helped flesh out the research findings.

3.2: RESEARCH METHODS

In order to effectively investigate whether Indian women are likely to face barriers and challenges to their participation in the editing of Wikipedia that are similar or different than those experienced by Western women, I chose to pursue a qualitative research methodology that would generate deep insights into those obstacles and struggles that had been or are continuously faced by current female-identified Indian editors. In order to do so, I designed a qualitative case study that relied on semi-structured interviews to generate high-quality anecdotal, opinion and experiential data through a profound exploration of the lived experiences and realities of each research subject. A semi-structured approach was chosen to allow for unplanned questions, the pursuit of relevant but unforeseen lines of inquiry, and to encourage the women to freely expand on their thoughts and discuss related topics.
This, in turn, led to a more conversational, free-flowing interaction between myself and the interviewees, which helped make the women feel more comfortable during the interview process.

Between May and July of 2013, I carried out 15 one-on-one interviews with current or past female-identified editors across India, all of whom identified as women. When possible, I attempted to carry out the interview either in person, over the phone, or over Skype in order to observe the emotive responses of my research subjects for the purposes of generating further insight into the barriers that were the most hindering and discouraging for my respondents. Ten of the interviews took place in person between myself and the interviewee, and five were carried out via email. Out of the ten oral interviews, six took place in person at either the research subject's home or in a location chosen by the interviewee (either a public space, workspace, or a friend's home), and four took place over Skype. Further, out of the fifteen research subjects, fourteen were current contributors to Wikipedia and one was a non-contributor.

Research subjects were solicited through various online and offline means. A generalized message requesting participants was submitted to the Wikimedia India Mailing list, the most widely used English-language mailing list in the Indic Wikimedian sphere. I then compiled a list of the Wikimedians who had put their usernames on the Wikipedia and/or Meta-Wiki pages for all of the women-related Wikimedian events/activities (Edit-a-thons, workshops, etc.) that had taken place in India over the last calendar year (May 2012–May 2013), and left messages on the talk pages10 of the users who identified as women on their user pages11. In the offline world, I asked various friends, colleagues and Wikimedians whom I was acquainted with to help put me in touch with female contributors and non-contributors who may be willing to participate in an interview.

As Wikipedia is an online platform that is not situated in one specific physical place, my research subjects tended to reside in various different geographical regions across India. With a

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10 “Talk pages” or “discussions pages” are webpages that Wikimedia contributors can use to discuss Wikimedia-related subjects and, in the case of user-specific talk pages, interact with and send messages to one another

11 “User pages” are webpages on Wikimedia projects that are assigned specifically to contributors once they have created a contributor account and username (also called “namespaces”). Users can use the pages to display their editing activities and accomplishments, biographical and personal information, interests, beliefs, etc.
limited budget and a set time period for my field research, I was only able to carry out a handful of my interviews in person—the majority of the interviews had to be done via electronic means, and many interviewees preferred to answer questions over email rather than over Skype or via cellphone conversation.

While the interviews were semi-structured, I did rely on a series of guiding questions/themes that helped to direct my exploration of the research subjects' experiences and the similarities and differences between those experiences and the experiences of Western female editors. In order to design an interview programme that would accomplish this, I used the small body of research that had already been performed with regards to the gender gap on Wikipedia to synthesize a list of the barriers and challenges that had been identified for Western women and Western female editors. I then used this list to create a series of questions and discussion topics that sought to either directly or indirectly compare the experiences of my research subjects with the barriers and challenges identified in the literature. Lists of the guiding questions for the oral interviews and the questions for the email interviews with contributors and the non-contributor can be found in Appendix 1.

3.2.1: Discrepancies Between Proposed and Actual Research Methods

Unfortunately, due to restrictions on my time and resources and certain unforeseeable delays on the part of colleagues and insiders that I had hoped to collaborate with, the scope and type of the data-gathering activities that I was able to perform differed significantly from the research design that I had outlined in my research proposal. I had originally proposed a mixed methodological approach that would gather both quantitative and qualitative data on three sample populations—the Indian editing community at large, current female Indian editors, and female Indian non-contributors. I had planned to use an electronic population survey to gather empirical demographic data from a self-selected sample of twenty Indian editing populations (English and nineteen of the Indic-language communities); semi-structured one-on-one and group interviews to gather predominately qualitative
data from English-speaking female editors; and an electronic questionnaire to gather quantitative and qualitative data from the female non-contributor population.

While this may appear quite ambitious, the research design was (and, I believe, still is) justified by its utility to my research objectives. As demographics play such an important role in the dynamics and outputs of an editing population, and as very little demographic information was known about the Indian editing community in particular, I felt that a demographic survey of both the English and Indic-language editing populations would provide me with crucial information about the inclusionary or exclusionary nature of the editing of Wikipedia in the Indian context and the potential differences/similarities between language communities. It was my hope that this would provide me with valuable insight into the barriers to female participation in Wikipedia across India, which would in turn help to guide my data-gathering activities with female editors. I had also hoped to use this survey to recruit potential research subjects for my interviews. I had planned to carry out this survey in collaboration with the Centre for Internet and Society's team of Wikimedia consultants.

Furthermore, the data gathered from the non-contributor population was to be used to generate a more nuanced understanding of the factors that discouraged Indian women from participating in the editing of Wikipedia even when they did not face systemic infrastructural and/or accessibility barriers, insights that would have greatly contributed to my analysis of the similarities and differences between the challenges faced by Indian and Western women when they attempt to contribute to Wikipedia.

However, while I was confident that my proposed research methodology was achievable—the majority of the fieldwork would take place on online spaces through online means, and I had access to the administrators and prominent editors of the majority of the Indian editing communities as well as to a large population of female Indian non-contributors—the individuals through whom I had planned to gain access to these populations became unexpectedly involved in a separate project and were unable to offer me assistance until late into my research schedule when it was too late to pursue these
data-gathering activities. I therefore was unable to pursue the full research strategy I had put forth in my research proposal within the time period that I had allotted for my field research.

3.3: RESEARCH LIMITATIONS

While I have attempted to the best of my ability to design and execute this research project in a manner that aims to maximize the full utility and applicability of the research outputs, my research findings are subject to various limitations. The vast majority of these limitations are directly related to my research design, and in particular my data-gathering activities and my sampling methods, the latter of which resulted in a highly homogeneous sample population.

Firstly, as I myself identify as an intersectional feminist and I have approached this research using a critical feminist conceptual framework, the data-gathering methods were heavily based in intersectional feminist theory and guided by my own positionality and personal bias. The interview questions were designed to tease out the role that the respondents' gender identities played in their interactions with Wikipedia, and I myself also encouraged and pursued these lines of thought and dialogue during the interviews. On reflection, it is very possible that I unconsciously led the interviewees towards providing certain answers or framing something in a gendered light when gender did not actually play a role. Further, in my data analysis, I may have interpreted an interviewee's experience or statement as being about or relating to gender when it was, in reality, unrelated to gender. I have attempted to offset this bias and its resulting limitations on the applicability of the research outputs by pointing out when the respondents' experiences were likely unrelated to gender and their own gender identities, and by being as transparent as possible in my research methodology.

Secondly, the research population that I chose to work with was very small to begin with; however, due to the nature of Wikipedia as an online community and my position as an outsider to the Indian editing community, I often had to rely on various non-probability sampling methods, including convenience and snowball sampling, in order to simply get in contact with a large enough pool of
potential respondents. Unfortunately, this restricted my sample population to currently active, English-speaking editors or past editors that were or had been visible within and known to other members of their respective editing communities.

The result of these restrictions on my ability to interact with a diverse range of female editors is that the research had to be limited to a case study of a small group of extremely similar individuals whose experiences as editors and Indian women on the Internet are unlikely to be generalizable across the highly diverse range of lived realities and experiences associated with the female gender in India. Unfortunately, it is extremely difficult to assess just how limiting this reliance on the experiences of a homogenous research population is, as due to the nature of Wikipedia's semi-anonymous editing community, it is unclear whether this sample population is representative of the female Indian editing population at large or whether it more strongly reflects the experiences of those female editors who are simply the most visible and accessible. However, for the sake of prudence, I will argue that this case study is likely an unrepresentative sample of both Indian female editors and Indian women.

The uniformity of my sample population, therefore, significantly skews my results towards the experiences and realities of both a very specific type of female Indian editor as well as a very specific socio-economic category of Indian women. Consequently, in a country as socially, economically and geographically diverse as India, it is extremely unlikely that the experiences, barriers and challenges that have been identified for and based on this particular group of editors are reflective of the whole range of factors that could be acting to exclude and/or deter Indian women from full and active participation in Wikipedia. This limitation is particularly significant when one considers that due to their positionality both within and outside of Wikipedia, it is very possible that the majority of my research subjects have simply not faced many of the barriers and challenges that would act as significant deterrents/obstacles to Indian women's ability to contribute to Wikipedia—hence why the majority of my respondents are still active, involved editors.

As my research findings regarding the experiences of current, active, English-speaking Indian
female editors on Wikipedia are not generalizable across the highly diverse range of lived realities and experiences associated with the female gender within India, the demographic and Wikipedic homogeneity of my sample population severely narrows the scope and applicability of the research outputs. As I mainly attempted to perform a comparative analysis of the differences and similarities between those factors that serve to restrict Western women's ability to participate in the editing of Wikipedia and those that hinder Indian women from doing the same, my research findings are significantly bounded by the set of barriers and challenges that I have identified; as this “package” of hindrances is only applicable to a population of female Indian editors and women that would in, in theory, be extremely similar to my sample population, so to are my research findings regarding the similarities and differences between Western and Indian female editors.

In sum, none of the findings put forth in this research paper should be taken to be representative of all of the challenges faced by female Indian editors or Indian women, nor of the all of the potential differences and similarities between those barriers faced by Western women and those faced by Indian women when they attempt to participate in Wikipedia. This is particularly important to keep in mind when attempting to use these research findings to inform initiatives aimed at bridging the gender gap in India.

However, while my research is significantly limited, as very little academic research has been done on Wikipedia's gender gap in India, my findings are still useful in that they provide a possible starting place for future research projects of a similar nature. Further, as long as the restrictions on the generalizability of the research outputs are well-understood and accounted for, current and future initiatives aimed at bridging the gender gap in India may also gain some nuance and direction from the speculations put forth in this research paper.
CHAPTER 4: RESEARCH FINDINGS

The research findings are presented in the following chapter. Before they are presented, however, a brief note must be included on the structure of how the findings are presented. As the data needed to be organized in a manner that displayed and facilitated the analysis of the findings related to the experiences of the research subjects themselves, the insights generated by those experiences, and how they compared to the barriers and challenges identified in the literature, I found it most useful to divide the data into four sets of relevant experiences: Direct Hindrances; Interaction with Other Editors; Reputation and Experience; and Identifying as Female on Wikipedia. These categories were chosen for the purposes of presenting the major trends and subsets of trends that emerged in the research, and are not explicitly organized either by the barriers and challenges experienced by the research subjects or by how their experiences compare to those identified by Western women in the literature. Indeed, when working with the data, it become clear that the research findings overlapped in complex and unpredictable ways, and that attempting to present the data within only one of the two potential frameworks would result in the omission of some of the most important insights from the research. I therefore sought to design a presentational methodology that would be able to logically and usefully reflect the full spectrum of the relevant data; the result of this attempt are the four experiential categories presented in the following sections.

Furthermore, as the data is made up of complex, raw experiences that could have been organized and presented in a variety of different ways, there is a significant amount of overlap and interplay between many of the trend subsets that constitute each experiential category. Some of these will be presented as findings, when appropriate; others will be discussed, or expanded upon, in the Discussion section.

Finally, the presentation of the findings will be organized in the following way: the “basic” (i.e. generalized) findings for each set of experiences will be presented at the beginning of each sub-section, followed by a brief discussion of the details of each finding and the presentation of more individualized
or sub-trends of experiences. Most of the basic data is presented in tables, but quotes from the interviews have also been used to illustrate or detail a particular trend or finding; when using direct quotes from the interviews, I include the code each research subject was assigned at the time of data processing (a randomly-generated letter of the alphabet) and the type of interview that took place (email or oral).

4.1: THE SAMPLE POPULATION

While not a main focus of the data gathering activities, the research did produce some interesting and relevant information on the demographic and Wikipedic-related details of my sample population. Taken together, the data reflects some insightful trends with regards to the social and economic categories that Indian women who edit Wikipedia are likely to belong to, and the forms and sites of activities and interactions that have informed and produced their experiences and positionalities as Wikipedians.

It is important to point out, however, that as collecting this type of data was not one of the main objectives of the research at the time when the research was being designed, and as the semi-structured interview approach allowed for a fair amount of variation in conversational topics between the interviews, personal and editing-related data could not be gathered for all of the respondents. Further, exact information, such as a respondent’s age at the time of the interview, was often not provided during the interview, but can be relatively accurately inferred from their responses to other questions as well as from my personal knowledge of the research subjects. Therefore, the data presented in the following section reflects information from the relevant responses of the majority, but not all, of the research subjects. The total number of respondents for each finding will be included when possible.
4.1.1: Demographic Trends

The age of the respondents ranged from 20 to 38, but the vast majority of the research subjects were in their early and mid-twenties. Very few were married, and while it was difficult to determine from the interviews, at least one but at most two of the respondents had children. The majority lived at home in households that were managed by their parents. All of the respondents could speak, understand, and write in English as well as at least one other Indic language.

Out of the fourteen respondents for which the data was provided or could be determined, half of the respondents were students (college or university) and half were professionally employed\textsuperscript{12}—in fact, one respondent was working professionally while she was studying. All fourteen were highly educated: seven had completed or were the process of completing an undergraduate degree and seven had completed or were in the process of completing a graduate degree.

4.1.2: Editing Trends

As can be viewed in Fig. 1 on the following page, the majority of the respondents used a personal computer, and usually a laptop, to contribute to Wikipedia. None of the respondents reported having to share this computer with a sibling or other family member. The research subject who used a family computer to edit did not face a significant amount of competition from her siblings or family members for the use of the computer, meaning that she largely had unfettered access to the computer for long periods of time. Further, the respondent who used a work computer to edit reported that it was a joint personal-professional laptop, meaning that she faced no restrictions on her ability to use the computer for personal use outside of her working hours. All thirteen respondents had wireless Internet connectivity in their homes, and many had broadband connections.

\textsuperscript{12} Held a position of employment that required advanced training
CHAPTER 4: RESEARCH FINDINGS

**Figure 1: Editing-Related Data**

When the respondents edited, they used a...

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Computer</td>
<td>11</td>
</tr>
<tr>
<td>Family Computer</td>
<td>1</td>
</tr>
<tr>
<td>Work Computer</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

Their primary language project was...

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>English-Language Wikipedia (ENWP)</td>
<td>8</td>
</tr>
<tr>
<td>An Indic-Language Wikipedia</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

Their secondary language project was...

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENWP</td>
<td>1</td>
</tr>
<tr>
<td>An Indic-Language Wikipedia</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2</strong></td>
</tr>
</tbody>
</table>

Of those individuals with both a primary and secondary language project...

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>The primary was ENWP and the secondary was an Indic-language project</td>
<td>1</td>
</tr>
<tr>
<td>The primary was an Indic-Language project and the secondary was ENWP</td>
<td>1</td>
</tr>
<tr>
<td>Both the primary and secondary were Indic-Language projects</td>
<td>0</td>
</tr>
</tbody>
</table>

The most common Wikipedia-related activities were (from most common to least common):

<table>
<thead>
<tr>
<th>Activity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Editing Activities</td>
<td>14</td>
</tr>
<tr>
<td>Offline Outreach</td>
<td></td>
</tr>
<tr>
<td>Translating Articles</td>
<td></td>
</tr>
<tr>
<td>Contributing to other WikiProjects (Commons, WikiSource, etc.)</td>
<td></td>
</tr>
</tbody>
</table>

While all of the respondents spoke English and the majority (including the non-contributor) primarily contributed to ENWP, a fair number of them spent most of their editing time contributing to an Indic-Language Wikipedia project rather than the English-Language project. This did not mean that they

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13 A respondent was considering to have a “secondary” language project when they contributed to another language project as frequently or almost as frequently as they did their primary language project, but did not define that project as their main language project.

14 All those activities related to general article upkeep, including adding content, editing grammar, categorizing articles, structuring and re-structuring articles, etc.
only contributed to this project; most respondents stated that they did contribute to ENWP (and, in some cases, other language projects), but that the contributions were usually small and infrequent.

Furthermore, those editors who primarily edited Indic-Language projects tended to be more active and involved in the editing community associated with that language project than with the larger English-language Indian editing community—though as we shall see in other findings, language was not the only predictor of active involvement in a local/regional/linguistic sub-population of editors. Out of the five individuals who primarily contributed to an Indic-Language project, two contributed to the Malayalam project, one to the Assamese project, one to the Kannada project, and one to the Odia (Oriya) project. This group tended to contribute in the language that they spoke “at home”—usually their mother-tongue and/or the language of their region or socio-cultural group—meaning that they largely only contributed to one Indic language project. This trend is further supported by the fact that no individual who primarily contributed to an Indic-language project also reported contributing to another Indic-language project on a comparatively frequent basis.

The majority of the respondents tended to participate in typical editing activities, with the most popular activities being editing grammar and adding content. A fair number were also involved in article translation, and usually, but not always, from English into an Indic-language. More significantly, nearly half of the respondents were involved in offline outreach, including raising awareness about Wikipedia in their communities, organizing and running workshops and Wikipedia-related events, and helping to coordinate supra-regional/linguistic and pan-Indian events and activities. Two respondents in particular appeared to be more involved in offline activities than they were in the actual editing of Wikipedia's content.

Further, one editor was more involved in contributing to Commons than Wikipedia, though she had contributed to Wikipedia in the past and continued to do so infrequently at the time of the interview.
4.2: DIRECT HINDRANCES

Early on in the interviews, respondents were asked to identify specific factors and/or circumstances that had made it difficult or challenging to participate in both the editing of Wikipedia and in interacting with the editing community at any time during their editing career. Most, but not all, of the research subjects did report that they had experienced difficulties at one point or another, and when asked to describe them, all of these respondents reported having experienced at least one of three factors that had worked to hinder them, at some point or another, from fully participating in Wikipedia. The basic findings are presented in Fig. 2.

**Figure 2: Factors that Directly Hindered the Respondents' Ability to Participate in Wikipedia**

<table>
<thead>
<tr>
<th>Hindering Factor</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>They didn’t know Wikipedia was an editable space</td>
<td>5</td>
</tr>
<tr>
<td>The didn’t know how to edit and/or the editing interface was hard to use/understand</td>
<td>6</td>
</tr>
<tr>
<td>Not enough free time</td>
<td>11</td>
</tr>
</tbody>
</table>

4.2.1: Did Not Know that Wikipedia was an Editable Space

Before they became editors, many respondents had not known that they could edit Wikipedia. This usually wasn’t because they didn’t know about or use Wikipedia, but simply because they didn’t know about the Wikimedia movement or that Wikipedia was an openly editable space. Many actually found out that they could edit at editing workshops. In fact, a good number of the respondents overall had learned to edit at workshops geared towards teaching women how to edit.

4.2.2: Editing Was Difficult

At least six respondents stated that one of their largest challenges to becoming editors was learning how to edit Wikipedia using the editing interface and understanding how to use the Wiki markup language. Some respondents even reported that they had attempted to edit in the past before they became regular contributors, but had been intimidated by and/or unable to do so because of the
interface and mark-up language. Some were able to teach themselves to edit, though most learned through a combination of support from friends and other editors and editing workshops.

Interestingly, many respondents described their problems with Wiki markup as stemming from their general inexperience with technology. In fact, one editor who did not report having ever had problems with Wikipedia’s editing interface said that this was because she was “from an IT background” (Subject D, oral interview).

4.2.3: Time

The most common and clear barrier that the respondents faced to their ability to participate in Wikipedia was a lack of enough free time to put towards Wikipedia-related activities. This was also the most pervasive barrier, as unlike not knowing how to edit or that one could even edit, not having enough time to participate was a difficulty that the respondents often regularly faced throughout their editing careers. The respondents who did not describe themselves as “active” editors often reported that free time was the largest barrier to their ability to contribute more frequently and consistently.

The lack of free time manifested as a hindrance in a couple of important ways. To begin, the respondents often found “wiki-work” to be extremely labour-intensive and difficult to break up into small tasks that could be performed in a short time period. As one respondent described it:

“It is almost like writing an academic paper: you need a lot of focus, a lot of attention, and it's a chain of thought [...] so you need a lot of focus, and you need to put in those any hours, at least for me. I do it in a stretch, I can't like break it up.”

-Subject F, oral interview

Other respondents reported similar experiences when working on articles—they could not just do small bits at a time, and often said that they needed to put large chunks of time aside solely for editing work. Another respondent said that at one point in time when she was working on a particular article, she had felt obligated to put in at least one hour of work on that article a day, which she would complete after her working hours.

Furthermore, those respondents who struggled the most with issues related to a lack of free
time were those who described their professional or educational work as being very similar to their wiki-work. This was a particular issue for the students, who often stated that a lack of enough free time outside of their schoolwork to put towards editing was the only restriction that they had ever experienced with regards to their ability to participate in Wikipedia. In fact, the reason that the non-contributor gave for having stopped contributing to Wikipedia was lack of free time, and particularly leisure time. As she said:

“Frankly speaking, the last thing I want to do after burying my face into a book all day is burying my face into a laptop/tab.”

-Subject K, email interview

The intensity of the editing work was not the only time-consuming part of participating in Wikipedia, however; respondents also reported finding the “other parts” of being an active Wikipedian to be very labour and time intensive, as well. In particular, many research subjects said that they found having to defend and discuss their edits to be a very timely process, and one that they were often not willing to participate in, prompting them to edit articles that would not receive a lot of attention from other editors or, in one respondent's case, to avoid editing entirely. Being active and present in the community and regularly interacting with other editors for purposes other than article editing was also perceived to require a lot of time and labour; one editor described it as “very draining” (Subject F, oral interview).

Finally, time was a big issue when it came to balancing online wiki-work with offline outreach work. A fair number of respondents described having to make a trade-off between contributing to articles and being involved in offline activities such as workshops and edit-a-thons, as they simply did not have enough time to be actively involved in both.

4.3: REPUTATION AND EXPERIENCE

In the interviews, discussions of whether the respondents had ever faced any barriers or challenges related to their gender often led to conversations about other facets of their identities as editors that
the respondents felt had a large impact on their identities as editors, and that, in many of the respondents' experiences, played a significant role in shaping how, to what extent and in what capacity they could participate in Wikipedia at various points in their editing career. These two characteristics of the editors' identities were their reputation and standing within the editing community and the breadth of their experience as editors, and the research subjects often felt that these aspects had much more influence over their ability to fully and successfully participate in the editing of Wikipedia than gender.

This is not to say that these two significant characteristics of their editing identities and the effect that they had on the respondents' editing careers and experiences were completely unrelated to gender; many of the respondents acknowledged that they did intersect with gender in ways that did, or could, work to prevent the female-identified Indian editors from fully participating in the Wikipedia. However, the respondents were careful to point out that gender was only one of the many aspects of their individual editing careers and personal realities that intersected with Wikipedic reputation and editing experience in a manner that could, and did, hinder editors from successfully and fully participating in all of the Wikipedia-related activities that they desired to be involved in and in the capacity that they aspired to do so.

The findings related to the respondents' experiences with editor reputation and experience and the various ways that they intersected with other parts of the respondents' identities and realities are presented below. The findings have been broken up into three separate sub-sections: Reputation; Experience; and the intersection of the two (titled “Gaining Experience and Building Reputation”). Further, rather than presenting the data in a table, the findings have been illustrated with the use of direct quotes from the interviews.
4.3.1: Reputation

“See, Wikipedia is not a social networking website; it works in pretty much the same way that a society offline would work. If you've seen its dynamic, all the rules of social and community behaviour apply to Wikipedia [...] you do good work, you gain good reputation; you do malicious stuff, and you get bad rep.”

-Subject F, oral interview

“I think it has to do with more than [gender], to be honest. I think that it also is: What’s your handle? How are you positioned in the community?”

-Subject E, oral interview

Many of the research subjects felt that reputation played a much larger role in influencing how an editor was positioned in the community and how they were perceived and treated by other editors than gender did. According to the respondents, the likelihood that an editor's edits, opinions and inputs would be positively received by other editors within a community was highly dependent on how well-known that editor was within that community and to what extent the editor was perceived to be an accomplished and experienced editor—basically, the extent to which they could be considered an “insider” within that particular population. On the other hand, other editors were less likely to consider an editor's inputs, edits, and opinions as credible and valuable if that editor was less well-known within the community and less experienced overall. An editor's legitimacy as a Wikipedian and, by extension, their ability to contribute to Wikipedia's content and society was therefore deeply intertwined with their reputation within their editing community.

4.3.2: Experience

“Most of my difficulties came to me as a newbie rather than as a woman.”

-Subject F, oral interview

“I would say every new editor is treated harshly because the community is so close knot and they don't want more people to come on board. They think that a new person is going to ruin their project, and Wikipedia is their baby and it shouldn’t be exposed to more people.”

-Subject I, oral interview

Experience, too, appeared to play a large role in an editors' ability to successfully and fully participate in Wikipedia, and in particular the editing of Wikipedia. In particular, being a “new” editor appeared
to put an editor as a disadvantage, especially if an editor wanted to keep their edits up on Wikipedia. The respondents described multiple instances where they either experienced or observed the targeting of newer editors and their contributions by older, more-established editors who may have felt threatened by the newer editor and their potential to “change” Wikipedia. Personally, a handful of respondents also reported feeling that some of their newer edits were reverted and/or attacked for inappropriate or unwarranted reasons, and that the larger underlying issue was that they were new. One editor in particular had a very difficult time attempting to keep her edits up on Wikipedia as a new editor, and often had conflictual exchanges with other editors when trying to defend her content and edits.

Interestingly, in one editors' experience as new editor learning to edit at an editing workshop, she was told that she “may not go to some controversial topic when [she was] a new editor” (Subject P, email interview). At the time of the interview, she had still never attempted to edit any controversial articles.

Due to many of the respondents involvement in outreach activities, most of the research subjects observed many more incidents of implicit or explicit discrimination against new editors than they personally experienced. In particular, a handful of editors who had been involved in organizing and/or running workshop and edit-a-thons for new female editors reported observing some extremely negative treatment of new editors' contributions during the events. One editor in particular who often conducted these types of events described multiple instances where the contributions of the new editors were reverted/deleted or flagged for speedy deletion almost as soon as they were added to ENWP, and with no comments or feedback from the reverting editors or administrators on why the articles and/or edit were being deleted or flagged. The respondent could not determine whether this was because the editors were new or female, but suggested that it was likely more strongly related to their newness than their gender. In fact, from her standpoint, it appeared that many of the articles being flagged for non-notability were not being labeled in that way based on their content, but rather
due to the fact that they had been written by new editors. The respondent stated that this was extremely discouraging for the new editors, particularly because they often did not understand what they had done incorrectly or inadequately to warrant the speedy deletion.

As an interesting side note, this editor also pointed out that the vast majority of the editors and administrators who were reverting the new edits were male, non-Indian English-language Wikipedians, as far as the editor could tell based on the personal details that the reverting editors had chosen to provide on their userpages.

In addition, two editors also described facing issues related to confidence in their own abilities and knowledge:

“Things like: I am contributing to an encyclopaedia, it is being referred to by a large number of people, and if I go wrong, people will be getting wrong information [...] Such thoughts prevented me from editing.”

-Subject X, oral interview

“Yes, a little bit of nervousness is there.”

-Subject H, oral interview

However, both of these editors described these issues as short-lived barriers that they experienced only at the very beginning of their editing careers.

4.3.3: Gaining Experience and Building Reputation

According to the research subjects' opinions and experiences, the manner in which experience was gained and reputation was earned within Wikipedia intersected with one another and other aspects of an editors' career and identity in ways that produced particular patterns and levels of inclusion and exclusion within the Wikipedic communities. The majority of the mechanisms through which this stratification manifested were related to the processes through which editors garnered reputation and achieved a higher standing within the community, which in turn were often profoundly connected to an editors' ability to gain and display experience; and according to the research subjects, “edit count” was often perceived as the most authoritative indicators of an editor's experience and ability.
CHAPTER 4: RESEARCH FINDINGS

An editor's edit count is a “number stored for each user tallying the total times they have saved a change or changes to a Wikipedia page” (Wikipedia, 2014). It is a completely publicly-accessible value that can be viewed by anyone at anytime via a simple user search. In many of the respondents' experiences, a high edit count is often understood as being demonstrative of both an editors' experience on Wikipedia as well as their grasp of the general ethos and functioning of the encyclopaedia and its community. Those with higher edit counts were often perceived as being more knowledgeable about Wikipedia in general, which in turn meant that they were often perceived as possessing more authority and legitimacy than editors who had lower edit counts and, by extension, less insight into the inner workings and goals of Wikipedia. Editors with higher edit counts, therefore, are likely to have higher reputation within their respective editing communities than editors with lower edit counts.

Because of this, many research subjects felt that a lot of implicit discrimination took place along edit count lines. Respondents reported feeling that editors with lower edit counts were often treated with less respect and were perceived to have less legitimacy and authority than editors with higher edit counts, which often prevented those editors with lower edit counts from contributing to articles and being involved in important discussions and activities. A handful of respondents both observed this phenomenon:

“I mean, I’m not trying to portray it as bad. It’s nice to have so many edits. But it’s okay if you have it and if the other person does not have it. You should not make him look inferior or something.”

-Subject A, oral interview

And experienced it personally:

“Someone would base a question like: 'Hey, you only have 800 edits; who are you to see how Wikipedia has been progressing in India? I have 10,000 edits.' That kind of thing.”

-Subject I, oral interview

“My relative inexperience (read: edit count) meant that I needed to be told what to do. So, whenever I have a disagreement or wanted to do things my way, I was simply told that I am an outsider and this is not how things work.”

-Subject T, email interview
Unfortunately, Subject T also found that due to the community’s perception of her as an “outsider”, experienced community members would not cooperate with her in outreach.

i) Time

A lack of free time appeared to affect some editors' abilities to build reputation in their respective communities. When editors did not have enough free time to put towards online editing activities or to edit on a relatively regular basis, their reputation appeared to suffer. As one editor observed:

“They [editors] tend to be judged by how active they are on the particular Wikipedia: 'Okay, you’ve not edited since one week. Okay, you’ve not edited for one month.'”

-Subject A, oral interview

This editor in particular also described how her heavy involvement in offline Wikipedia actually decreased her ability to build reputation via edit count and editing experience because she did not have enough free time to put towards being both active in offline activities and a regular contributor online. In her words:

“Offline Wikipedia takes a lot of your time and attention. In online Wikipedia, everything is at least documented. Offline, whatever work you do, how many people you inspire, it’s not documented anywhere, unless you write about it in a blog or something. But that’s different, you know? That sometimes can be taken as bragging about yourself.”

-Subject A, oral interview

This respondent appeared to feel that due to her inability to document her offline work, and therefore display that she was, in fact, actively involved in the Wikipedia project, her wiki-work was largely invisible to the community. This made her appear to be less active in online Wikipedia, which she described as a barrier to her ability to increase her standing in her editing community. While she was not explicit, it is possible that her deep involvement in offline activities may have been limiting her ability to garner a large edit count, which may have been the main factor contributing to the perception amongst other editors that she was an inactive Wikipedian.

ii) Gender

Some respondents did actually point out that gender could and did play a direct role in making it
CHAPTER 4: RESEARCH FINDINGS

difficult for certain editors to build reputation and increase their standing in their editing community.

Some characterized it as an issue of inherent differences between male- and female-identified individuals. As one respondent described it:

“I think by nature—I think that men are more competitive, so for many Wikipedians I've spoken to, it's all about edit count for them. So some would say: I have 10,000 edits and I have 12,000 edits and they're very proud of it. I don't think women want to compete with that kind of form [...] but with a lot of men Wikipedians, it's like: 'Okay, I have to increase my edit count, and that's my motive.'”

-Subject I, oral interview

Women, in this respondent's experience, simply had less interest in increasing their edit count, which served to hinder their ability to build up their reputation.

Others respondents approached the intersections between gender and reputation through a more critical lens, and pointed out that if gender did play any role in limiting female-identified editors' abilities to garner reputation within the community, it was likely in tandem with other characteristics of the editors' identities and editing activities. Consequently, the one editor that did personally experience issues related to her reputation as an editor that she did feel was caused, in part, by her gender, characterized the situation in the following way:

“Since I chose to reveal my gender, I was heavily patronized because of my gender and age. My relative inexperience (read: edit count) meant that I needed to be told what to do [...] The corollary: woman-inexperienced-feminist-outsider-less knowledgeable manifests in many ways.”

-Subject T, email interview

As this editor describes it, the intersection between gender and reputation on Wikipedia was extremely subtle and complex. Being a female-identified editor made her a minority in the editing population, and her feminist opinions likely pushed her farther into the minority margins. This, coupled with her lower edit count and her age, which allowed other editors to perceive her as inexperienced overall, allowed other editors to perceive her as an outsider, which limited her ability to increase her reputation as an authoritative and legitimate editor (read: insider), which in turn restricted the extent to which she could increase her standing in the community and earn that “insider” label.
4.4: INTERACTION WITH OTHER EDITORS

While the extent to which a Wikipedian interacts with other members of their editing community and the editing community at large depends on the individual editor and their interests and Wikipedic-related activities, at some point or another during their editing career, most editors will have to interact with other Wikipedians. Interaction between editors takes place for a variety of reasons, and while the most common form of interaction is likely for purposes of discussing the content of a Wikipedia article, a large number of editors choose to take part in more macro discussions related to debates about the structure and function of the encyclopaedia, its guidelines and policies, relevant current events, new pieces of research, etc. on the various Wikipedic mailing lists, village pumps, chat rooms, and other similar forums for discussions. Many Wikipedians also choose to form and/or be part of sub-community groups centred around specific activities or goals, such as those that belong to specific WikiProjects or those that come together to design and carry out specific events and workshops. Further, large numbers of Wikipedians also choose to be involved in offline activities, including outreach events, workshops, and meet-ups, many of which often necessitate profound and extended engagement with other Wikipedians.

There are, therefore, many opportunities for editors to interact with other Wikipedians; and just like in the offline world, the nature of one’s interactions with other members of the community can deeply influence the extent to which one feels safe, accepted, free to voice an opinion, etc., within that particular community and its community spaces. Accordingly, a large focus of the interviews was the exploration of the research respondents’ interactions with other editors throughout their editing careers, with a particular focus on when they first began to edit. The basic findings are displayed in Fig. 3. The respondents’ interactions with other editors generated a spectrum of different experiences; however, a few pertinent trends did emerge, and are presented below alongside the relative frequency with which the experience trend was reported. The data has also been divided into two main
categories: their interactions with other editors when they were new editors, and their interactions generally throughout their editing career.

Despite reporting that they had not faced any challenges as new editors, many respondents did get their first couple of edits reverted. However, this did not seem to discourage them—instead, they were often able to learn from these instances because the editors who had reverted or flagged their edits for deletion took the time to explain to the respondent why the edit had been inadequate. This was one of the major trends in the research with regards to the experiences that the respondents had as new editors interacting with other, more experienced and established Wikipedians: the vast majority received a lot of support and help from other editors when they were first learning to edit. They described many incidences where editors took the time to provide feedback and guidance, to answer questions, to help explain why their edits were getting reverted and how they could improve their contributions, etc. However, they were more likely to receive help from editors from Indian or within their own language communities rather than from editors from the international English-Language community—though a few respondents, and particularly those that contributed in English, did receive more help from non-Indian editors than from members of the Indian community (from what they could tell based on what they knew about these editors).

Furthermore, the editors were much more likely to have received most of their help from one editor in particular, and that editor was more likely to be someone that they knew from before they started editing than someone that they had met and befriended within Wikipedia. In fact, at least five of the respondents described relying on one editor in particular to help them learn the ropes, and three of those editors had been friends they had made before becoming Wikipedians. Often, these friends had actually played a significant role in getting them involved in Wikipedia in the first place.
### Figure 3: Trends in Experiences of Interacting with Other Editors

<table>
<thead>
<tr>
<th>Nature of Interaction</th>
<th>Trends in Experiences</th>
<th>Frequency of Experience</th>
<th>Quoted Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>As New Editors</strong></td>
<td>Received help and support from multiple editors from the general/international community</td>
<td>Frequent</td>
<td>“Many other Wikipedians randomly helped me at the time of my first editing.”&lt;br&gt;“There were people helping me from within Wikipedia, like if at all I get a mark-up wrong, or if I make a wrong word into bold, or if I make the wrong formatting, there would be people who would help.”</td>
</tr>
<tr>
<td></td>
<td>Received help and support from multiple editors from the Indian community and/or Indic-language community in particular</td>
<td>Very Frequent</td>
<td>“Yeah, a lot of them [members of the editing community in India] helped me.”&lt;br&gt;“Yes, of course other members always helped us. I never faced any trouble while I was a new editor.”&lt;br&gt;“They used to teach me. They used to tell me: no, this, you go like this, you go like that. It helped me a lot.”</td>
</tr>
<tr>
<td></td>
<td>Received help and support from one editor in particular...</td>
<td>Frequent</td>
<td>“All it took was patiently explaining to him about my background and my situation. Thereafter, he held my hand (virtually!) and helped me.”</td>
</tr>
<tr>
<td></td>
<td>...whom they were not acquainted with before becoming an editor</td>
<td>Frequent</td>
<td>“As I had been introduced to editing by a friend, I could always bank on him for any help or guidance.”&lt;br&gt;“I learned that editing Wikipedia was possible from my friend who is a very active editor [...] I actually never had much interaction with the editing community as I relied on her for all.”</td>
</tr>
<tr>
<td></td>
<td>...whom they were friends with in the offline world/outside of Wikipedia before they began to edit</td>
<td>Very Frequent</td>
<td>“I didn’t have the help of anybody.”&lt;br&gt;“I have had fights, especially while making new articles as a new editor.”</td>
</tr>
<tr>
<td><strong>Other editors were not supportive</strong></td>
<td>Largely learned to edit by themselves</td>
<td>Infrequent</td>
<td>“I found them [the editing community in Mumbai] very welcoming.”&lt;br&gt;“The people who write on Wikipedia are very good.”</td>
</tr>
<tr>
<td></td>
<td>Had fights with other editors</td>
<td>Very Infrequent</td>
<td></td>
</tr>
<tr>
<td>Interaction Description</td>
<td>Frequency</td>
<td>Comments</td>
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</tbody>
</table>
| They have never had a bad interaction with another editor                                | Very Frequent | “I have not experienced any difficulty.”  
“Such issues were not faced by me.” |
| They are very close-knit with other members of their Indic-language editing community  | Frequent    | “We have a very family kind of relationship.”  
“All of us sort of know each other and are hanging out and doing stuff and all.” |
| Mostly Positive                                                                        | Frequent    | “And once or twice I’ve had [someone make a negative comment] on one of my articles.”  
“Sure, it did [become personal], lots of times. Not only on Wikipedia talk pages but also on the mailing list.” |
| They have observed and been affected by negative interactions between other editors, but have not had any such interactions personally | Very Frequent | “the male Wikipedia admins, English admins, were very quick in adding the speedy deletion tabs on the notable subjects. They were not even patient enough to wait and let us append it.”  
“Women used to post messages regarding the way they were harshly treated and called derogatory words, even on their talk pages.” |
| Neutral15                                                                               | Infrequent  | “They could correct me at times, but not in a very social way, or not in a friendly way.”  
“If somebody leaves a message on my talk page which comes across as harsh to me, I probably would not come back to that place because it’s not comforting to me.” |
| They have had multiple negative interactions with other editors                          | Very Infrequent | “I have entered into disagreements on Wikipedia and mailing lists. I have been stalked, and verbally abused online by other editors.” |
4.4.2: Interaction with Other Editors in General

Most of the respondents were not very active on community mailing lists and village pumps, and very few had ever posted to the wider Indian community mailing list or mailing lists frequented by members of the international community. Nevertheless, the majority of the research subjects were, at the times of the interviews, quite actively involved in their language and/or regional communities, some were fairly active engaged with the Indian community in general, and most had relatively frequent interactions with other editors. Many of the editors described using other online tools such as email or social networking sites to connect with other editors, and many of the respondents had previously or regularly met up with other editors from their communities in the offline world.

Overall, the respondents appeared to have had predominately positive interactions with other editors throughout their editing careers. In fact, the respondents were extremely likely to have never been involved in what they would characterize a negative interaction with another editor, even if they frequented Wikipedic spaces in which negative interactions did take place. Only one research subject described having multiple negative interactions with other editors, and she was also the only editor who reported having had explicitly antagonistic exchanges with other editors.

However, while the respondents did have mostly positive experiences with other editors, there was still a fair amount of variation across the experiences. In analyzing these variations, four important sub-trends emerged. These sub-trends are presented below. When reading them, it is important to keep in mind that many of experiences that constitute these sub-trends are related to the same or similar phenomena, and there is therefore a fair amount of interrelation and overlap between many of the sub-trend findings.

i) Friendship and Interpersonal Relationships

For the majority of my sample population, being friends with other editors was an extremely significant part of being a Wikipedian. Not only did many of the respondents state that making and having friendships with other editors was an extremely valuable and important part of being a
Wikipedian, but those respondents who reported that they had cultivated a network of friends within Wikipedia almost always had the most positive experiences with other editors as well as the most positive experiences within Wikipedia overall (across all their activities and experiences related to Wikipedia). This was particularly true for the editors that had or were able to make friends early on in their editing careers, as well as for those editors who had formed strong friendships with editors in their immediate language and/or regional editing communities.

Furthermore, having and making friends was an extremely important motivating factor for my respondents. Editors with multiple Wikipedian friends often reported that the maintenance of these friendships, as well as the friends themselves, often helped to encourage the respondents to continue to be involved and engaged in the Wikipedia project. Additionally, the potential to make new friends through their Wikipedia-related activities was also cited as a being one of the foremost reasons that many of the editors enjoyed being active Wikipedians.

Making or having friends in the early stages of one’s editing career appeared to play a particularly significant role in encouraging the women to become more deeply involved in the Wikipedia project. At least five editors stated that building friendships with other editors was an important factor in their becoming more active and engaged in the Wikipedia project when they were newer editors. In fact, a few editors actually reported having felt extremely discouraged and disconnected from Wikipedia when they were first beginning to edit because they had not yet cultivated any friendly relationships with other editors and they were unable to interact in a sociable and friendly manner with other editors. One editor in particular, who went on to become a highly active and involved editor in the Indian editing community, actually stated that the beginning of her editing career, she found that the highly formal and de-personalized manner in which other editors were interacting with her to be so off-putting that it made her “want to quit Wikipedia”—it was not until she began to build friendships with other editors that she really started to become involved in Wikipedia.
The reason that those respondents who had reported having multiple Wikipedian friends, and particularly having friends when they first started to editing and having friends within their immediate editing communities, appeared to have had the most positive experiences with other editors and with Wikipedia in general may be rooted in the fact that those editors who reported having a lot of friends on Wikipedia often stated that these friends behaved as a support structure for the respondents throughout their editing career. Furthermore, the respondents often felt that being friends with other editors decreased the amount of conflict that took place within a particular Wikipedic space, be it on an article, within community discussions, or in outreach activities. As one editor pointed out:

“You won't be entering into conflict when the other person is your friend.”

-Subject X, oral interview

Further, most respondents perceived that having close interpersonal ties with other editors often affected how those editors evaluated and responded to their edits. According to one respondent:

“When I add some content, the other person who knows me can defend or reject, and it depends on personal acceptance or personal grudge.”

-Subject D, oral interview

Many of these respondents reported that while the dynamics of their personal interactions with other editors had positively affected them and their contributions, it could potentially back-fire, and other editors could develop “grudges” that would lead them to treat certain editors and their edits badly. Two editors in particular had first-hand experiences of this: one editor reported that the disagreements she had with other editors “became personal” (Subject I, oral interview), which led to other editors responding critically to her edits and opinions; the other editor reported having been on the receiving end of one editor's personal vendetta against her, and described being “stalked” (Subject T, email interview) by this particular editor both within and outside of Wikipedia and having her edits and behaviours publicly attacked and criticized by this particular editor on mailing lists, discussion boards, etc. The latter editor’s experience of being acutely harassed by one editor in particular appeared to stem from the fact that she had politely expressed disinterest in befriending that editor—
further supporting the fact that friendship is indeed and very important part of Wikipedia for a lot of Wikipedians.

\textit{ii) Being Part of an Indic-Language or Regional Community\textsuperscript{16}}

Those editors who edited primarily in an Indic language were highly likely to interact with the active members of their sub-language community on a relatively frequent basis. Further, editors who edited in English and/or an Indic language but were in close geographical proximity to one another also reported high levels of interaction with another other. Interestingly enough, these editors that were quite active in their regional/linguistic communities were the editors who reported having the most positive interactions with other editors overall.

There were a couple reasons for why this may have been. To begin, the number of active editors in each linguistic and/or regional community was quite small, so there was very little Wikipedic anonymity (in the sense that one's username and general editing activities would be very visible rather than that other editors would be able to find out personal information about the editor in question). Being an active editor on a very small Indic language Wikipedia made one very visible, meaning that it was very likely that would “see” and interact with one another. This was particularly likely if one identified as a female editor, according to many of the respondents, as there were so few female editors and the existing community would likely want to make a “good impression” (Subject X, oral interview) on any female editors that joined. Because of this, many respondents felt that they had been quickly identified and warmly embraced by the existing editing community when they first began to edit; since then, they had been able to establish multiple friendships and friendly relationships with other editors within their community.

Other respondents had been brought into the community by a friend, but had a similar experience of receiving a warm welcome and a lot of help from the already-established editors. Others

\textsuperscript{16} Many of the influential dynamics related to being part of a sub-population editing community are closely related to or are the same as those associated with being friends with other Wikipedians; however, as the goals of this report require a particular focus on the context-specific experiences of the research subjects, it is still useful to look at them separately. Nevertheless, there is a large amount of overlap between the findings in sub-section \textit{i} and sub-section \textit{ii}.
still, and in particular those who reported having close friendships with editors in their geographic region that was not always based on a shared linguistic Wikipedia project, described meeting active editors from the local regional community at offline events, which helped them to build rapport with the community before they attempted to edit. In all of these cases, the respondents reported that they had been able to cultivate if not friendships than at least friendly ties with many of the members of their respective editing community, which in turn allowed them to receive a lot of support from their community throughout their editing career. This allowed them to receive support from and build very strong connections with many of the active editors in their respective communities.

In many of the respondents’ experiences, having a small community where many of the editors knew and frequently interacted with one another helped to keep the incidence of conflict and antagonistic exchanges to a minimum, which further increased the likelihood that everyone would treat each other in a friendly and respectful manner. The lack of Wikipedic anonymity also helped to increase editor accountability, as misbehaviour could easily be traced back to the committer. As one editor described it:

“We don’t really fight, we don’t use harsh arguments, so everybody is sort of friendly with each other because the community is small [...] People police each other because they know if you are acting badly, they know who that [person] is.”

-Subject X, oral interview

Furthermore, the lack of anonymity in the sub-population communities coupled with the friendly relations most editors had with the other active and well-established editors in their communities helped them to build reputation, which in turn helped them to avoid having memorably negative interactions with other editors. For example, one editor in particular reported that despite the fact that there was a high frequency of antagonistic and conflictual exchanges in the online spaces associated with her particular editing community, she herself had mostly had very positive interactions with other editors because she was very well established within the community. In her experience, because she was recognized as a very strong editor and one of the oldest editors in her community, she received a lot of support and respect from her fellow editors and was able to avoid much of the contention that
characterized many of the interactions between other editors within her community.

Finally, being a part of a very active community and having good relationships with the editors in that community could also be very motivating for the editors. As one editor described:

“I got involved with the community in Bombay, from that time it was fantastically vibrant [...] I liked interacting with them and being in their company also motivated me to edit.”

-Subject F, oral interview

There could be downsides, however, to the lack of anonymity within the sub-population communities. A few editors described how it was difficult to be invisible within the smaller editing communities, particularly if you identified as a female editor. While only two editors had ever experienced being personally singled out by other editors, a handful of editors pointed out that the potential for becoming a target of another editor's personal dislike was always there, particularly when editors interacted with each other as frequently as they did in smaller communities.

iii) Offline Interaction

Wikipedians that met with other Wikipedians in the offline world often reported some of the most positive experiences with other editors. In fact, one editor stated that she felt that she actually had better interactions with Wikipedians in offline spaces than in online ones, and was able to make more and better friends amongst the editing community when she encountered them offline. In her words:

“If I’ve met them in one-on-one community meetings, or if I’ve met them at Wikimania, it’s a more personal interaction. That’s where they’re a little hesitant to talk outright, in your face, and that’s when they’re very sweet to you, so it just differs, you know [...] When I met them one-on-one, that’s when I made better friends with them [rather than] on the mailing lists or on talk pages.”

-Subject I, oral Interview

In addition, editors that belonged to sub-language and/or regional editing communities that often met offline appeared to have strong connections with other editors within their editing communities. Members of the editing community in Mumbai in particular appeared to meet frequently offline, relative to the other communities that the research subjects were a part of. This was extremely effective at building a strong editing community—of the four editors I spoke to from the Mumbai
community, all reported very positive experiences with Wikipedia and were very active and engaged in the Wikipedia movement. Further, many of the Mumbai respondents reported getting involved in editing because they came in contact with the community offline and were extremely motivated by the editors they met. In fact, one editor had such a positive experience with the community at an offline event that she is now extremely involved in the Wikipedia movement—almost entirely in the offline world! This editor described feeling so passionate about the Wikipedia movement after the event that she wanted to be involved in a capacity that she felt would be most useful for the community and in a manner that best fit her skillset, which she felt she could accomplish by raising awareness and carrying out workshops and training events in the offline world rather than actually contributing regularly to the encyclopaedia.

iv) Non-Indian English-Language Editors and Administrators

Interestingly enough, the majority of the negative interactions that the respondents either had or observed involved non-Indian, English-language editors or administrators. These interactions often were not antagonistic or contentious, and sometimes did not even involve a conversation or discussion between the respondent or the editor the respondent was observing and the non-Indian editor; instead, the respondents often described situations where their work or the work of others was deleted or flagged for deletion with little or no explanation for why the edits were unsatisfactory, or with an explanation that the respondents felt was inadequate or inappropriate. One editor who worked very often with new, female editors had observed this phenomenon on multiple occasions, and felt that it was likely one of the reasons why the gender gap existed. As she framed it:

“Wikipedia exists to include more and more editors, not to give them the signal that Wikipedia is not your cup of tea, and come with an army of admins and scare them off to the hell that they don't come back again.”

-Subject A, oral interview

Other respondents described observing what they considered to be the harassment and mistreatment of female editors and their contributions on ENWP by non-Indian English editors and administrators; this was often accompanied by an example of when they had observed an English-Language
administrator either commit or support an opinion or edit that the respondents deemed to be inappropriate and/or biased. These types of interactions between editors, while not personally experienced by the research subject, nevertheless often left a very bad impression on the respondents, and often caused them to be wary and suspicious of non-Indian English-Language administrators’ abilities to be fair and unbiased. Many respondents argued that Wikipedia’s gender gap problems, as well as other issues related to its systemic bias, could likely be at least partly solved by attracting “more admins and better admins” (Subject F, oral interview; Subject A, oral interview), and preferably female-identified admins (Subject X, oral interview) on ENWP.

4.5: IDENTIFYING AS FEMALE ON WIKIPEDIA

As the Discussion section of this paper will show, gender may implicitly play a role in how and the extent to which individuals are able to participate in Wikipedia and its various activities; however, prior research on the gender gap on Wikipedia suggests that one’s gender identity can also explicitly or directly affect how one engages with the editing of Wikipedia and the Wikipedia community. Gender-based discrimination and, at times, mistreatment that is explicitly gendered (such as the use of gendered slurs and insults) does take place on Wikipedia, and while Wikipedians of all gender-identities have likely experienced it in some form or another, gender-based discrimination appears to be disproportionately experienced by female-identified editors (Collier & Bear, 2012; Lam et al., 2011; Wikimedia Foundation, 2011).

Yet the experiences directly associated with identifying as a female Wikipedian are likely as varied, individualized and complex as the experiences of identifying as female in the offline world, and any research methodology that attempts to investigate explicitly gender-based barriers and challenges faced by female-identified editors must provide space for the sample populations’ subjective and novel (as compared to the literature) experiences of gender on Wikipedia. I therefore designed a set of investigative questions that aimed to gather data on two main phenomena: whether the respondents had personally experienced any form of gender-based discrimination (including experiences that they
described as neutral or positive); and whether they felt that gender-based discrimination did actually take place on Wikipedia.

The basic findings are displayed in Fig. 4. The former phenomenon was measured using questions pertaining to whether or not the respondents had gender-based experiences that they would characterize as negative, but produced findings on experiences that were both negative and positive. The latter phenomenon was measured through the respondents responses to two particular, and at times interrelated, questions/topics that were directly synthesized from findings from the literature review: whether they felt that there was a systemic bias towards stereotypically and/or traditionally male-centric knowledge on the encyclopaedia, and whether they believed that women's contributions received harsher treatment or criticism from the editing community.

### 4.5.1: Gender-Based Discrimination on Wikipedia

Overall, the vast majority of the respondents did not feel that they had ever been discriminated against or treated badly on Wikipedia because they identified as women. Only one contributor reported having ever had a negative experience on Wikipedia that was related to her gender, and she was particularly careful to point out her identity as a woman was only part of the reason why she felt that she was being discriminated against (the entirety of her response will be discussed later on in this section).

The non-contributor did not report having any experiences that were related to her gender identify on Wikipedia.

When asked why they believed they had not experienced gender-based discrimination on Wikipedia, the respondents pointed out that this was likely because they were “low visibility” editors. They often described their editing interests and activities as “small-time”, “non-controversial”, “marginal” and/or largely irrelevant and insignificant to the interests of the editing community at large, and particularly the English Language editing community—meaning that they felt that they simply did not attract a lot of attention from individuals in the community who would challenge their
contributions. Even the editors who were extremely visible and well-known to the Indian editing community felt that their actual editing work was rather insignificant to the editing community at large, which they seemed to view as more of an advantage rather than a disadvantage.

**Figure 4: Gender-Based Discrimination on Wikipedia**

<table>
<thead>
<tr>
<th></th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever personally experienced negative discrimination on Wikipedia because of your gender?</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>14</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
<tr>
<td>Have you ever felt like you were treated differently because of your gender?</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>12</td>
</tr>
<tr>
<td>Yes, and the experience was positive</td>
<td>1</td>
</tr>
<tr>
<td>Yes, and the experience was negative</td>
<td>1</td>
</tr>
<tr>
<td>Yes, and the experience was neither positive nor negative</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
<tr>
<td>Does gender-based discrimination take place on Wikipedia?</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>2</td>
</tr>
<tr>
<td>Yes, and I have personally experienced it</td>
<td>1</td>
</tr>
<tr>
<td>Yes, but I have never personally experienced it</td>
<td>7</td>
</tr>
<tr>
<td>Neutral</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

They also, both by virtue of their alleged positions as “low-visibility” editors and by choice, tended to avoid conflict and activities that would generate conflict by refraining from editing highly controversial topics.

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17 Not all respondents provided responses to the questions related to this topic
articles, getting involved in edit wars or conflictual discussions on mailing lists, and posting controversial and/or opinionated posts to mailing lists, discussion boards, etc.

4.5.2: Gender-Based Differential Treatment on Wikipedia

As is displayed in Fig. 4, the respondents often drew a distinction between being negatively discriminated against based on their gender identities and receiving different treatment from other editors because they visibly identified as women. While only one respondent reported ever feeling that they were discriminated against because of their gender, at least three respondents did feel that they were treated differently because they were women. Each of these respondents had different, but equally significant, experiences which warrant a brief discussion.

The editor who reported that she had received negative treatment from other editors based on her gender identity was the same editor who reported having experienced gender-based discrimination on Wikipedia. This research subject, however, made it clear that she did not feel that the discrimination and negative treatment from other editors was entirely due to the fact that she was known to be a female editor, but pointed out that it likely stemmed from a complex interplay between her identity as a female editor, her Wikipedic activities and her resulting position within the community, all of which intersected in such a way as to allow other editors to view her as an “outsider” within the community:

“I think a lot of sexism is covert and manifests in other ways. The corollary: woman-inexperienced-feminist-outsider-less knowledgeable manifests in many ways. So I have seen and experienced criticism but not for being a woman but in other related ways.”
-Subject T, email interview

On the other hand, the editor who reported largely positive treatment on the basis of her gender described having received “special treatment” because she was a woman. In her experience, the other editors in her community (which was a very small Indic-Language editing community) were extremely helpful, supportive of and friendly to her because Indian men tend to view their female friends as “sisters” and treat them as such. Because of this, she felt that she had gotten the “privilege of being a
woman” (Subject B, oral interview).

As for the editor who reported that the different treatment had neither a positive nor negative impact on her experience, she reported that the differential treatment did exert a large amount of influence over her identity as an editor. Identifying as female in the Indian editing community, she explained, made one extremely visible, as there were so few female-identified editors; and because there were so few female editors, the editing community in India is particularly concerned with increasing female editorship, meaning that they were likely to approach those female editors they had to try to get them involved in outreach activities and to get their input and opinions on issues and discussions taking place within the larger community. This editor in particular was an extremely visible and well-known editor, both in her sub-language community and well as within the wider Indian editing community, and while she did not feel that she had ever been treated negatively because of her gender, she did lament the fact that she was often unable to act or be perceived as separate from her gender. She often felt pressured to represent the “female voice” on Wikipedia instead of her own opinions, to comment on all sorts of issues and discussions that may or may not be relevant to her actual interests and opinions, and to support other female editors even if she did not agree with their stances or activities.

4.5.3: Perception of Gender-Based Discrimination

While the majority of the respondents did not personally experience many incidents of gender-based discrimination or mistreatment, this did not mean that they did not believe that it did not happen. More than half of the respondents felt that gender-based discrimination did take place on Wikipedia in one form or another, and particularly through the disproportionately harsh treatment of female editors and their contributions and through a systemic bias against traditionally or stereotypically female-centric content. In fact, only two editors out of the thirteen strongly felt that gender-based discrimination did not take place on Wikipedia. The respondents whose responses were categorized as
neutral were not sure whether gender-based discrimination took place on Wikipedia.

However, while most respondents believed that discrimination against female editors and female-centric content was a reality on Wikipedia, the majority of these editors stated that the cause of this discrimination was not directly or entirely related to gender in itself, but instead to the complex interplay between gender, the realities of the offline world and the nature of Wikipedia. As two of the respondents astutely observed:

“It is not true in the absolute sense because gender on Wikipedia is as complicated as it is everywhere [...] Yes, there is sexism and misogyny and a lot of trivializing of women and things, but that is something that you’ll find in every online forum. Since it’s an open space, it’s like being out on the street.”

-Subject F, oral interview

“I’m not so sure that it’s the world of sexism so much as the world of andro-centrism [...] It’s more a reproduction of offline structures, and those offline structures tend to assume the male as default.”

-Subject E, oral interview

This perception that gender-based discrimination did take place on Wikipedia but that Wikipedia itself was not, in structure or by intent, explicitly sexist was a stance that reproduced in most of the interviews, though the explanations for which mechanisms, in particular, created the gender bias varied. The respondents’ particular perceptions of nature of gender-based discrimination are presented in the following sections.

However, in order to present the remaining data in an organized manner, the respondents' opinions have been separated into two separate sub-categories: opinions on whether or not there is a systemic bias within Wikipedia's content towards male-centric knowledge; and opinions on whether the contributions of female- and male-identified editors are received differently by the editing community. In reality, there was a significant amount of overlap between the two discussion topics, and those respondents that believed that one phenomenon took place more often than not believed that the other did, too. In fact, at least three respondents argued that part of the reason why there was more male-centric content on Wikipedia than female-centric content was because the content added by female-identified editors was met with harsher criticism and was less likely to be notable to the
community. The overlap will be discussed, when applicable, in the sub-sections below.

i) Systemic Content Bias Towards Male-Centric Knowledge

The majority of the respondents agreed that there was a systemic bias within Wikipedia’s content towards traditionally and/or stereotypically male-centric content, but they differed on what the root cause of this bias was. A small minority did not believe that gender played a role, and argued that the lack of female-centric knowledge on the encyclopaedia stemmed not from the negative reception of female-centric content but instead from forces external to Wikipedia that resulted in a majority-male editing population whose interests simply did not overlap with much stereotypically “female” knowledge. Basically, these editors felt that the bias was not caused by active deletion of female-centric knowledge, but instead by the fact that there simply were not enough editors contributing this type of knowledge. As one editor summed up:

“The reason is nothing but the fact that the majority of editors are males, hence 'male knowledge' is more.”

-Subject G, email interview

Interestingly, the larger group of respondents who believed that gender played a role in the bias against female-centric content on Wikipedia also felt that it was largely due to the fact that the editing community consisted predominately of male-identified individuals. However, these respondents tended to point to the internal structures of Wikipedia and their intersections with the opinions and interests of the majority of the editing community and the gendered nature of knowledge as being the main causes of the bias against women-centric knowledge on Wikipedia. Many of these respondents felt that some of Wikipedia’s policies and guidelines, and in particular the notability guidelines, could be used to actively exclude women-centric topics and information from the encyclopaedia by allowing editors to label them as non-notable or irrelevant. These respondents felt like this likely happened fairly often, as Wikipedia’s guidelines were designed by a majority male, Western population for a majority male, Western editing community, meaning that what they tend to find notable is often different from what female and non-Westerner editors find notable. One editor found this particularly
frustrating, as while she had tried to initiate dialogues about Wikipedia's policies and their potential to act as barriers for editors and new content, she felt that she had to “play by the existing rules to keep [her] content up on English Wikipedia” (Subject T, email interview).

**ii) Harsher Treatment of Female-Identified Editors' Contributions**

A fair number of respondents also reported that they believed that the contributions of female editors were more often negatively received and criticized than the contributions of male editors. Most often, this was not because they had personally experienced any such treatment, but instead seemed to stem from their general knowledge of Wikipedia and, in some cases, from their observation of the harsh treatment of female editors and their contributions on article and user talk pages, mailing lists, villages pumps, etc.

Further, there was a handful of women who had experienced the unfavourable treatment and revision of female editors' contributions, but not of their own edits—instead, they observed this phenomenon at multiple edit-a-thons and workshops for new female editors that they either oversaw or supported. Interestingly enough, these respondents reported that the harsh treatment of the edits of the women participating in these editing events was, from what they could tell, mostly or entirely carried out by non-Indian editors and administrators on English Language Wikipedia. One editor in particular felt that while discrimination against female-identified editors and the extremely negative treatment of women on Wikipedia absolutely existed, it predominately only happened on English Language Wikipedia.

Finally, while many of these research subjects tended to believe that this negative treatment of female editors' contributions did play a role in limiting the amount of female-centric content that was currently available on Wikipedia, a particular trend emerged. Although the respondents tended to feel like women’s editors were more negatively received by the community, they tended to point out that this largely happened when women edited controversial and/or highly-visible topics. When asked for examples, the respondents would usually point out that women received a lot of criticism and bad
treatment from other editors when they contributed to articles related to gender and feminism. This finding was further supported by the respondent who had experienced negative treatment because of her gender when she pointed out that “those [editors] who go after my edits don’t bother when I create articles on women’s novels, female authors or arts and crafts” (Subject T, email interview). Even one of the respondents who was not sure whether gender-based discrimination took place on Wikipedia did feel that women editors were more likely to receive harsher treatment when they edited “sensitive” issues related to gender and women or were vocal about gender gap issues, particularly when these issues had the potential to be interpreted as challenging or criticizing male dominance over the encyclopaedia and its content.

One editor also pointed out that the systemic bias against female-interest topics and content and the resulting harsh treatment of many female-identified editors was due, in part, because male editors and administrators on ENWP were inherently unsupportive of female editors and their female-related Wikipedic activities, which created an environment which was resistant to female participation overall. In her words:

“Even in that extent, even if it’s not on the talkpages or anywhere or directly, but those male editors, they’re not very eager to support the female or to encourage them to write about the sensitive issues.”

-Subject A, oral interview
5.1: COMPARATIVE ANALYSIS

In the following sections, I will compare the research findings on the respondents' experiences and challenges to those experiences and challenges that have been identified for Western female editors in the gender gap literature. When appropriate, I will also draw a comparison between the respondents' experiences and some of the phenomena and editor experiences discussed in the Context section of the literature review. The relevant demographic and editor behaviour-related aspects of my sample population have also been compared to similar data on both the general editing population and the Western female editor population.

Specific focus has been given to the similarities and differences between the barriers that have been identified in the relevant literature as being those that Western women and female-identified are likely to face when they attempt to participate in Wikipedia and the experiences and challenges of my research subjects. Accordingly, the organizational structure of this sub-section is similar to that of the “Gender and Culture on Wikipedia” sub-section of the literature review, and should proceed in a manner that is comparably logical; however, it may be useful to refer to that particular section in the literature review when reading the follow discussions (the sub-section in question begins on page 37).

Furthermore, a discussion of the unique barriers and challenges that either did or had the potential to hinder the research subjects' ability to fully and successfully participate in Wikipedia appears at the end of this particular sub-section.

5.1.1: Demographic Information and Editor Behaviour

i) Demographic Information

Demographically, “my” sample population was quite similar to both the general editing population as well as the average female editor (according to Stierch's unofficial survey); the only stark difference was that the majority of my respondents were in their early-to-mid twenties whereas the average age
of the women surveyed by Stierch (2011) was 31.

Comparable to Stierch’s and prior survey findings (Glott et al., 2010; Schroer & Hertel, 2009; Wikimedia Foundation, 2011), the majority of my respondents were single, had or were in the process of completing a post-secondary degree, and all of them spoke English—markers that placed them firmly in the Indian middle class, which in turn underscores the probably validity of Rask’s (2008) finding that those with higher levels of human development are more likely to contribute to Wikipedia. The fact that the majority of them were also students supports prior findings in the UNU-MERIT study, which found that students were one of two demographic groups that were most likely to contribute to Wikipedia (the other being retired individuals) (Glott et al., 2010).

Furthermore, the fact that the majority of my respondents had near unrestricted access to a computer and Internet connectivity in their homes (and often broadband connections) corresponds with the research that suggests that those with Internet access are much more likely to be able to edit Wikipedia (Rainie & Zickuhr, 2011; Rask, 2008). That almost all of my respondents had their own laptop and/or free access to a computer also suggests that this is may be an important factor in an Indian woman’s ability to access and contribute to Wikipedia. As a side note, considering that less than 10% of all Indian households have computers or laptops and only about 3% of these homes have Internet connectivity, these two factors strongly underline the high significance of infrastructural access with regards to an Indian women’s ability to successfully participate in Wikipedia.

Taken together, the demographic details of my editor population, and in particular their similarities with the general editing population as well as the Western female editing population, underscore the fact that across national and socio-cultural contexts, certain groups of people are much more likely to contribute to Wikipedia. This means that at least in India and in the Western world, different Wikipedia editing communities are still likely to possess the same patterns of exclusion and inclusion.
ii) Editor Behaviour

“My” editors also tended to behave somewhat similarly to other female-identified editors from the general editing population, particularly in terms of how and with whom they interacted. Just like in prior findings on female Wikipedians (Laniado et al., 2012), my respondents preferred to be involved in Wikipedic spaces that were friendly and welcoming and to interact with other editors in a positive and friendly way. However, while my sample population was much more likely to interact with other editors who had similar emotional and communication styles (i.e. who were also friendly), this did not manifest a tendency to interact more often with other female editors—in fact, the vast majority of my respondents likely interacted most frequently with male editors, largely due to the fact that their interactions with male editors were predominately friendly, and possibly because there were so few other female editors to interact with, particularly in the smaller editing communities.

However, the differences between the behaviour of Western female-identified editors and my editors were significant. Contrary to Lam et al.’s (2011) findings, my respondents were very unlikely to edit or contribute controversial or contentious articles. Moreover, unlike the editors in Stierch’s survey, my editors tended to be highly involved in their respective editing communities, and met up offline with other editors fairly often, confirming prior findings about Indian Wikipedians and the nature of their involvement in Wikipedia (John, 2011). My respondents were also fairly likely to be highly involved in offline outreach, and as they are likely some of the most highly active female editors in the Indian community, this means that the most active female Western editors and the most active female Indian editors are likely to be involved in quite different Wikipedic-related activities.

5.1.2: External Barriers

i) Time

Similar to some of the findings from the gender gap research (Gardner, 2011), the biggest barrier that my respondents faced was a lack of free time to put towards Wikipedia-related activities. In fact, the
reason that the one non-contributor in the sample stopped editing Wikipedia was her lack of free time outside of her studies.

However, my respondents' experiences regarding the intersections of time restrictions and Wiki-work provide a much more nuanced perspective on the role that a lack of free time can play in influencing an editor's ability to successfully participate in a wide range Wikipedic activities than what has been discerned in the literature to date. In particular, the respondents had a limited amount of time to put towards Wikipedia, so they often preferred or chose to do certain types of wiki-work and avoid others. Being active and involved in the larger editing community, getting involved in discussions on mailing lists, and editing articles where they would have to engage in debate and discussion to defend their edits (which were likely to be more contentious or controversial articles [Lam et al., 2011]) were activities that were avoided as they were considered to be highly time and labour-intensive. In the literature, time only appeared to act as a barrier for female editors' involvement in defending their edits (Cassell, 2011; Gardner, 2011; Wikimedia Meta-Wiki, 2013; Yasseri et al., 2012), and this barrier appeared to be more strongly related to restrictions on their labour rather than a limited amount of free time.

Further, while the respondents found being involved in offline activities preferable to other types of wiki-labour, they often found that it left little time to be involved in other activities, such as general editing, which limited their ability to build their edit counts and presence as an active online editor and ultimately damaged their reputation (particularly if they were more active on ENWP).

ii) Confidence
While two of the respondents did exhibit a lack of confidence in their own abilities and knowledge, it was not as limiting for these respondents as it appeared to be for some Western women editors (Collier & Bear, 2012; Eckert & Stine, 2012; Gardner, 2011)—my respondents appeared to have overcome their self-confidence issues early on in their editing careers. The other respondents did not report experiences related to their self-confidence.
Interestingly, though, a lack of self-confidence did manifest as a barrier for one of the editors in an indirect way. One editor who was very active in offline outreach described being frustrated with an inability to be garner recognition for her offline work via any Wikipedic mechanism, but said that writing a blog about the labour could be perceived by other editors as “bragging”. This appeared to ultimately deter her from seeking recognition for her offline outreach work, despite the fact that it took away from her ability to participate in online Wikipedia (which, in turn, likely limited her ability to build reputation in the community). Considering that most Western women Wikipedians are uninvolved in offline outreach work (Stierch, 2011), this is unlikely to be a challenge that is faced by Western female editors.

**iii) Need for Social Connections**

Interestingly enough, my respondents’ experiences actually confirmed prior findings in the research that suggest that women prefer to participate in online spaces where they feel welcome and where they will have the ability to make friends (Gardner, 2011)—they were just able to do that on Wikipedia within their own communities. The vast majority of the respondents reported having felt welcomed by their respective editing communities and were able to make friends and having friendly interactions with other editors at all stages of their editing careers. Furthermore, almost across the board, the research subjects reported that having and making friends with other editors was a significant motivational factor for their active and continued involvement in Wikipedia, so much that one of the most active female editors in the Indian community almost left Wikipedia because she had trouble making friends with other Wikipedians and the beginning of her editing career.

**5.2.3: Internal Barriers**

**i) Wiki Syntax**

Similarly to the findings in the gender gap literature (Eckert & Steiner, 2012; Gardner, 2011), my respondents were likely to have difficulty with the wiki markup language when they were first
beginning to edit, which prevented some of them from getting involved in Wikipedia.

**ii) Style of Communication**

Unlike the findings from prior research (Herring, 2011), barely any of my respondents reported having issues with the standard “neutral” style of communication used by editors of Wikipedia. In fact, many actually embraced it and described it as a positive aspect of the encyclopaedia.

**iii) Negative Interactions with other Editors**

Unlike many Western women who have attempted to edit Wikipedia and been deterred by negative interactions with members of the editing community (Collier & Bear, 2012; Eckert & Steiner, 2012; Herring, 2011), the vast majority of the respondents in this study had only ever had positive interactions with other editors. A handful had experienced a few negative interactions, though they did not appear to be deterred by them.

However, the editors did appear to be put-off by the possibility that they may receive criticism from or engage in negative interactions with other editors, as many chose to actively avoid Wikipedic spaces where they may be at risk of experiencing these kind of interactions. Further, the one editor in the sample population who had experienced multiple negative interactions with other editors, including having her edits deleted and feeling like she was being looked down upon by more experienced editors, characterized her overall experience with Wikipedia and the editing community in particular in more negative terms than the other respondents, supporting prior findings in the research that suggest that editors who experience multiple negative interactions with other editors are more likely to exhibit dissatisfaction with the nature of the editing community (Wikimedia Foundation, 2011).

**iv) Sexism**

Contrary to findings in the literature review that suggest that female editors are at risk of being on the receiving end of editor harassment and mistreatment that is sexist or misogynistic in nature (Stierch, 2011; Wikimedia Foundation, 2011), only one of the respondents experienced such treatment, and she
described this as an isolated incident that had more to do with the individual editor who perpetrated the harassment than the nature of Wikipedia itself. Interestingly, and unprecedented in the literature to date, some of the respondents actually described experiencing beneficial sexism—they were treated better by other editors because of their gender identity!

However, despite not having personally experienced sexist or negatively discriminatory treatment based on their gender, the majority of the respondents did perceive Wikipedia as inherently discriminatory against female-identified individuals, particularly in terms of the retention of female-centric content, and especially controversial female-centric content, on the encyclopaedia. Many had also observed harsh treatment and mistreatment of female editors in ENWikipedic spaces, which led some to claim that most of the sexism in Wikipedia took place within ENWP. However, while the respondents did not explicitly describe being deterred by Wikipedia's inherent discrimination against women, many appeared to purposefully avoid spaces and activities that would put them at risk of experiencing this kind of treatment.

v) Experience-ism (or Discrimination When They Were New)

Overall, my respondents had largely positive experiences with other editors and with Wikipedia when they were new editors, contrary to past findings that suggest that new editors (O’Neil, 2011; Suh et al., 2009), and particularly new female editors (Lam et al., 2011), are likely to experience harsh treatment from other editors. The majority of my respondents actually described receiving a large amount of support and help from other editors, and particularly editors from their particular editing communities.

Furthermore, a few of my editors did experience getting their edits reverted when they were new editors, but they did not appear to have felt very discouraged by this, as other editors almost always took the time to explain to them why their edits were inadequate. Many did, however, observe the harsh treatment of other new, female Indian editors and their contributions to ENWP, which they described as being highly discouraging for those editors.
5.2.4: Unique Barriers and Challenges

When analyzing the research findings, it became clear that many of the respondents had, over their editing careers, experienced or faced a series of factors and challenges that either directly or indirectly prevented them from participating and/or becoming more involved in Wikipedia that did not explicitly appear in the relevant literature. These barriers, or the phenomena that have the potential to act as barriers for Indian women, are presented in the following sections.

i) Not Knowing Wikipedia was Editable

At least a third of my research respondents reported that before they had been explicitly introduced to the editing of Wikipedia either through an editing workshop, a friend, or some other promotional mechanisms, they did not know that Wikipedia was an editable space. Many of these respondents stated that they had been aware that Wikipedia existed, and some had even used it in the past, but none had known that they could actually contribute to the encyclopaedia. This was, obviously, a major barrier to the respondents’ ability to participate in Wikipedia.

ii) High Visibility as a Female-Identified Editor

As many of the respondents pointed out, because the active editing population in India is relatively small to begin with, and the active Indic-language communities are miniscule by Wikipedic standards, it is very difficult to remain anonymous in the Indian community and the sub-language communities if you are an active editor, and especially if you are an active editor that explicitly identifies as female. In fact, identifying oneself as female may actually make one even more visible, as, according to some of the respondents, most active Indian editors are very aware that there are very, very few female editors in their midst\(^{18}\), and they are very eager to make sure that female editors have positive experiences with Wikipedia from the moment they first join, and to try to get them involved in activities related to attracting other female editors. One editor in particular both personally experienced and has since observed multiple iterations of this “welcoming committee” phenomenon—she described being both

\(^{18}\) In fact, in the interviews, respondents would often count, off the top of their head, the number of active female editors they could think of—the number was often around 20
very warmly welcomed by her Indic language community as well as being approached early on in her editing career to become involved in outreach activities geared towards engaging young women. Being a female editor in India, she stated, made one “extremely visible” (Subject x, oral interview) within the community.

There are a couple of reasons why this could potentially behave as a hindrance to Indian women’s participation in Wikipedia and particularly for women who feeling strongly about displaying their gender identity in online spaces. Firstly, women who choose to make their gender identify public are likely to receive a lot of attention from other editors, and this may be off-putting from some women who just want to edit in peace; secondly, as some of the respondents experienced, other editors are likely to approach female editors to try to get them engaged in outreach activities\(^{19}\), which can take their focus away from online activities and make it more difficult for them to build an online presence; thirdly, because identifying as a female makes one very visible within one’s respective editing population, female-identified editors are at a higher risk of becoming the target of another editors’ gender-related personal prejudices, grudges, and/or harassment.

\(\text{iii) Offline Work, Building Reputation and The “Outsider” Effect}\)

While only one of the respondents reported having explicitly experienced being treated as an “outsider” by other members of the community, issues with one’s reputation and experience, particularly when it was based on edit count, and how it could limit the extent to which one’s opinions and edits were treated as legitimate by other editors came up again and again in the interviews. As some of the respondents pointed out, their propensity to be highly involved in offline work could potentially interact with their ability to build reputation by decreasing the amount of time that they were able to put towards building their online presence and, in particular, their edit count, which in turn caused other editors to, at some points, treat my respondents’ inputs or the inputs of other female Indian editors (as observed by my respondents) as less legitimate.

\(^{19}\) As a side note, this may be why so many of the respondents were involved in offline outreach activities
Many of the respondents described either observing or experiencing a direct relationship between an editor’s edit count and the way that they were perceived and treated by other editors. The number of edits that a contributor had “racked up” appeared to be understood as a marker of experience, and not just of editing experience, but of experience with the encyclopaedia overall—more experience appeared to be equated with more insight into the processes, rules, policies, ethos, philosophies and goals of Wikipedia. The more experience an editor was perceived to have, according to the respondents, the more that editor was understood to be and treated as an “insider”, a legitimate and accepted member of the community; and the extent to which an editor was perceived to be an insider appeared to directly correspond with the likelihood that an editor’s opinions and edits would be perceived as legitimate and worthy of consideration by other editors in the community, which in turn would affect both the way that other editors interacted with them (less experienced editors tend to receive worse treatment from the community [O’Neil, 2011; Suh et al., 2009]) and their ability to have a say in the development, form and function of Wikipedia’s internal structure and content (Halfaker et al., 2011; Kriplean et al., 2007).

An editor’s “insider-ness”, the extent to which they were perceived to be and treated as an insider, was often referred to by the respondents as an editor’s “reputation”. Possessing high or good reputation in a particular community meant that one was likely to receive better treatment from other editors, particularly with the regard to the legitimacy of one's inputs. Reputation on Wikipedia appeared to be intimately connected to insider-ness, which is strongly associated with an editor's edit count. According to the experiences of my sample population, one's Wikipedic reputation was, therefore, deeply linked to one's edit count. This corresponds to prior findings on the mechanisms of Wikipedia's meritocratic governance system (O'Neil, 2011).

According to one of the respondents in particular, however, the extent to which one was considered an insider within the community could be influenced by other factors, including an editor's personal details and particularly if those personal details predisposed that editor to be part of a
minority group within the editing community—such as identifying as female in a majority male-identified population. As my editor experienced, being female, being younger than many of the other editors and having feminist opinions were parts of her personal characteristics that acted to set her apart from the other editors in her community and marked her as a minority within the population. These individual details, when combined with her lower edit count and Wikipedic experience, accentuated her lack of “insider” knowledge and insight, and allowed other editors to label her as an “outsider” and treat her inputs accordingly.

It is difficult to say just how much of an issue this was for most of the respondents, as despite appearing to perceive that their lower edit count put them at a disadvantage within the community, most did not explicitly report having experienced this particular dimension of the intersections of spending more time offline, identifying as female and being treated as an outsider. The “outsider” effect is, however, worth mentioning as it hints at a possible, and maybe even probable, barrier that many female-identified editors in India could experience based on the high likelihood that they’ll be involved in offline outreach work and likely face issues with both having enough free time to cultivate both an offline and online presence and being recognized for any offline work that they do. This, when combined with their gender identities, could further underscore their outsider status, which could lead other editors to treat them in ways that have been shown to deter individuals from participating in Wikipedia (Wikimedia Foundation, 2011).

iv) The Perception of Conflict/Criticism

Despite not having actually experienced a lot of conflict with or criticism from other editors, a lot of my editors felt that Wikipedia could be a conflictual space where antagonistic exchanges and harsh treatment did take place—particularly if you spent most of your time in ENWikipedic spaces, and even more so if you were a female-identified ENWikipedia trying to edit controversial or contentious articles and those articles were related to gender or feminism. My editors, however, chalked up their lack of personal experience with this particular part of Wikipedia to intentional or unintentional
avoidance—either by explicit choice or by indirectly via their editing and Wikipedia-related interests—which helped the respondents to stay well away from spaces and activities that could potentially make them a target for other editors' harsh treatment and criticisms.

It is difficult to determine to what extent the perception of conflict and negative treatment from other editors served to actively deter the respondents from being involved in and contributing to certain Wikipedic spaces and activities, as most explained their lack of participation in these parts of Wikipedia as having to do with their lack of interest in participating in these spaces. Only a few respondents reported that they actively avoided activities that would make them visible in ways that were likely to result in their mistreatment. However, it is more than possible there was some implicit deterrence was taking place—to begin, my editors already faced issues with a lack of enough free time, and were quite aware that contributing to articles for which their edits were likely to be challenged would likely require a lot more time and labour input than contributing topics and edits that were largely irrelevant and invisible to most of the editing community. My editors also preferred to have friendly interactions with other editors and participate in spaces that were amicable, so they likely had very little interest in getting involved in spaces and activities that carried with them a high potential for inter-editor hostility and conflict. Moreover, most of my respondents were quite aware that as a female-identified editor, contributing to articles that were highly visible, contentious and/or controversial, and particularly topics related to feminism or women's interests, would make them a target for mistreatment and, possibly, harassment, which they did not want to experience. In fact, one editor stated that she actually avoided most Wikipedic spaces and edited as infrequently as possible for the explicit purpose of maintaining her good impression of and positive experiences with Wikipedia.

All of these factors could have contributed to my editors' unconscious or indirect decision to avoid spaces and activities that would make them highly visible to the editing community at large. While it did not seem to bother my respondents all that much, the perception that they could possibly become targets should they become visible enough editors, particularly on ENWP and on controversial
and/or female-interest articles\textsuperscript{20}, has the potential to act as a significant barriers to women's full participation in Wikipedia by deterring them from getting involved in editing activities that they might be interested in and relegating them to small, less visible areas of Wikipedia. This barrier does not just have negative ramifications for Wikipedia's gender gap, however—by discouraging women, and particularly non-Western women, from contributing their voices and perspectives to contentious and highly visible articles, Wikipedia further entrenches and reproduces its systemic bias on the exact articles where a multitude of diverse stances and worldviews (and particular those of groups that are minorities within the larger community) are especially important should the encyclopaedia wish to portray a neutral point-of-view and continue to grow in relevancy and utility.

\textit{v) Non-Indian, English-Language Administrators and Editors}

The role that non-Indian, English-language administrators and well-established editors played in many of my respondents' editing careers was very interesting. Very few had ever experienced negative interactions with or treatments from these editors, aside from, on occasion, having their edits reverted without explanation or for reasons that, in some of the respondents' opinions, were arbitrary or unjustified. Many of the respondents, though, had observed the mistreatment of female editors and/or new female editors and their edits at the hands non-Indian, EN editors and administrators, and this tended to leave them with an overall bad impression of both many of current ENWP administrators and of many ENWP spaces; the unjustly negative treatment and sometimes harassment of female-identified editors, and particularly new, Indian female-identified editors, and their content was being carried out on ENWP, and many ENWP administrators did not appear to be willing to stop it.

This led many of the respondents to claim that ENWP and its community was largely unwelcoming to new editors, female editors, and female-centric content. One editor actually explicitly claimed that female editors were likely to experience gender-based discrimination and mistreatment

\textsuperscript{20} This phenomenon could also apply to notability issues—based on this case study, non-Western women may be particularly less likely to add content that is relevant to their cultural and geographical contexts on ENWP if they perceive that they may have to suffer the slings and arrows of attempting to defend that content against a group of hostile Western editors who do not consider it sufficiently notable
on Wikipedia, but predominately only on ENWP and predominately only from non-Indian EN Wikipedians. In fact, many of my respondents were so put-off by the behaviour of non-Indian EN Wikipedians and administrators that they claimed that one of the keys to overcoming the gender gap was electing new and better, and preferably female, administrators on ENWP who would be less biased against female editors and female-centric content.

The manner in which these editors and administrators could have worked as a barrier to my editors' full participation in Wikipedia is closely related to the “outsider” effect discussed in the sub-section above. Considering that the majority of my editors appeared to receive very good treatment from other editors but perceived that editors outside of their own editing communities and from ENWP were likely to be more judgemental with regards to their editing experience and knowledge, the “outsider” effect could have been a factor in keeping my editors out of non-Indian ENWP spaces, as they knew that their editor details and accomplishments could cause them to be viewed as an outsider by non-Indian ENWikipedians and treated as such. They had anecdotal proof that this happened to new, female Indian editors—many of them had observed it themselves.

Moreover, according to the respondents, EN editors' harsh treatment of new, female Indian editors' content and EN administrators' disinterest in attempting to either take the time to figure out if the edits warranted being reverted or to explain to the new editors why their content was going to be reverted did actively deter Indian women from contributing to Wikipedia. Many of my respondents directly observed this process taking place, and often pointed out that this was one of the direct and current barrier to Indian women's ability to fully participate in Wikipedia.

5.2: DISCUSSION: WHAT COULD ACCOUNT FOR THESE DIFFERENCES?
Based on the experiences of the respondents in this case study, Indian female-identified editors and potential editors of Wikipedia are unlikely to face many of the same barriers and challenges that Western female-identified individuals are likely to experience when they attempt to fully and
successfully participate in Wikipedia. Interestingly, this is not because they are likely to be deterred by different factors or to behave in radically different ways—in fact, in terms of preferences, behaviours, deterrents, and even demographic characteristics, Western and Indian women editors are likely to be quite similar. What, then, explains the differences between the barriers identified in the literature for Western women and the barriers that I have identified for Indian women based on the experiences of my respondents?

The answer is both simple and complex. Most of the differences between the challenges and barriers that Indian women and Western women are likely to face stem from the fact that they tend to occupy very different Wikipedic spaces and contexts, and these spaces and contexts are likely to produce very different experiences when navigating and engaging with the various structures and realities of the encyclopaedia and the Wikipedia movement. The mechanisms that create these particular spaces and contexts are inherently tied to the individual characteristics and identities of the community members that inhabit and give meaning to them, as are the individual experiences of each member. This makes it very difficult, and certainly beyond the scope of this research, to determine the causal mechanisms that have produced the differences in experiences between these two groups of Wikipedians.

We can, however, identify and describe some of the manifestations of the Wikipedic spaces that may play a role in generating these experiences, and speculate on the offline factors that may also have some influence. In the following section, I will engage in a brief exploration of some of the factors that may help to explain why my respondents had experiences that were different than those of many of the Western women in the relevant literature. It is my hope that this will help to shed some light on why Western and Indian women are likely to face different barriers and challenges to their ability to fully and successfully participate in Wikipedia, as well as tease out some avenues for future research.
5.2.1: Friends, Smaller Editing Communities, and Offline Meet-ups

Contrary to many other women’s experiences with Wikipedia, my respondents had almost entirely positive experiences in their interactions with other editors; in fact, the vast majority had actually never had even one bad interaction with another editor. In fact, many of the respondents could not explicitly describe a time when they had a bad experience with Wikipedia, period.

When looking at the data, it became apparent that the editors who had had the best experiences throughout their editing careers, not just in their interactions with other editors but throughout all of their Wikipedia-related activities had three things in common: they were friends with other editors in their community, they belonged to a small Indic-language or regional community, and they met up with the members in their community offline on a relatively regular basis. Separately, these three factors produced good experiences with Wikipedia overall; together, they produced overwhelming positive experiences through the entirety of the respondents’ editing careers.

Making friends with other Wikipedians and having friends within the Wikipedia communities was extremely important to most of my Wikipedians. Being friends with the editors in their communities and having the potential to make new friends through their Wikipedic activities were both highly motivating factors for my editors, and helped to keep them actively involved in the project. Despite prior research that shows that Western women do prefer to participate in online spaces that are welcoming and in which they can make friends (Gardner, 2011), having and making friends did not appear in the relevant literature an important part of Wikipedia for Western women.

Having friendly connections with other editors also appeared to decrease the likelihood of having negative interactions with other editors for my respondents, as editors were unlikely to fight with their friends. This is where the importance of being part of a small editing community comes in: small editing communities meant an editor was likely to be fairly visible and interact with most of the other active editors in the community on a relatively frequent basis, which in turn probably helped to facilitate the building of friendships between these editors. Indeed, most of my respondents were most
active and interacted most frequently with the active editors in their own regional or Indic-language community, which tended to be a relatively small group of individuals, meaning that they were likely friends with, or at least had friendly relationships with, the most active editors in their communities. In the respondents’ experiences, smaller editing communities tended to lead to better interactions because everyone was so visible, and it was difficult to misbehave anonymously and without consequence; being friends with the most active and well-established editors that likely had very good reputation within the community likely helped to further insulate my respondents from bad interactions with other editors by increasing their reputation and standing by association and by providing them with a strong support system that would “back them up” if a conflict or disagreement arose.

Furthermore, visibly identifying as women in these communities, which were small and likely wanted to attract and retain female editors, likely decreased my respondents’ likelihood of having negative interactions with other editors in their communities, especially when they were new, as the established editors within their community appeared to go out of their way to make sure that their new female recruits had particularly positive experiences with Wikipedia and the community.

The “small sub-population community” dimension in the respondents’ positive experiences actually corresponds with some fairly recent findings for Persian Wikipedians. Interactions between community members in the Persian community, which is also a relatively small editing community, were also very positive, on average (Asadi et al., 2013). This further supports the possibility that smaller editing communities do, in fact, tend to produce better interactions between editors.

Finally, meeting offline with other Wikipedians appeared to play a significant role in helping the respondents build and maintain strong friendships. Many found that it was easier to build friendships with other Wikipedians in offline spaces rather than in online ones. Further, community members that met offline often appeared to have the strongest friendships, and this helped to keep the members particularly engaged and motivated in the Wikipedia project.
5.2.2: Support From Older Editors When They Were New

Another factor that played an important role in generating an overall positive experience with Wikipedia for my editors was receiving support from other editors when they were first learning how to edit. Those respondents that received help from older editors had more positive experiences overall throughout their editing careers, even if the support was just the correction of a mistake and/or taking the time to explain why they had flagged their edits for reversion.

There are a few reasons for why this may be. Firstly, interactions between established editors and new editors are pivotal interactions, as the nature of these interactions can deeply affect how the newer editor comes to interpret the working environment (Laniado et al., 2012). The majority of my respondents had interactions that were friendly, welcoming, or at least helpful in nature when they first got engaged in the Wikipedia project, and all of these editors still appeared to view the working environment on Wikipedia as welcoming, supportive and helpful even though, for many respondents, many years had passed since they first began editing. On the other hand, the one editor who reported having negative interactions with other editors at the beginning of her editing career exhibited a negative perception of the Wikipedic working environment overall.

Secondly, while some of my editors did get their edits reverted as new editors, each of these respondents reported that the editor who had reverted their edits (or flagged them for reversion) took the time to explain to them why their edits were inadequate. Because of this, none of the editors who had experienced getting their edits reverted appeared to have been very discouraged by these reversions, which supports the Wikimedia Foundation’s (2011) survey finding that reverted edits are not as discouraging for new editors if there is an explanation for the reversal.

Thirdly, many of my respondents had one particular editor that they could depend on for help and support when they ran into trouble or did not know how to do something. Having one particular editor who could act as a support structure appeared be to quite helpful for my editors, which suggests that personal connections between editors, just like friendships, may be extremely helpful for retaining
female Indian editors.

Fourthly, and finally, friendship and small communities also play a role. Some of my editors were actually brought onto Wikipedia by a friend, whom they then relied upon for help and support when learning to edit. Other editors who did not start out with friends were often able to make some within their editing community, particularly if the community was a smaller Indic-language community. Furthermore, those Wikipedians who had the best experiences with Wikipedia overall were those that received a friendly and warm welcome from the editors in their editing community when they first starting editing, and these communities were usually the smaller Indic-language communities. This corresponds to similar findings, again, on the Persian Wikipedian community, where it was observed that established Wikipedians were likely to welcome new members with friendly behaviour (Asadi et al., 2013). Moreover, the respectful behaviour of the members of the Persian editors helped to encourage the individual editors in the community to “continue their work and to share their experience with less experienced members” (Asadi et al., 2013: 247), which may help to explain why the smaller Indic-editing communities were much more likely to be welcoming and helpful to new editors—respectful, friendly interactions may be more likely in smaller communities, as there is less anonymity, and when these interactions take place between more experienced and less experienced editors, it sets the tone of the working environment, as Laniado et al. (2012) suggest, which leads the less experienced editors to, in turn, share their experiences with newer editors in the same manner.

5.2.3: Conflict Avoidance

Despite the fact that the avoidance of conflict and activities and spaces that would put them at risk for conflict was likely a barrier to my respondents full participation in Wikipedia, it also likely helped to generate a more positive experience with Wikipedia overall. My respondents appeared to prefer to stay far away from activities that would potentially bring them into conflict with other editors, including
refraining from getting involved in discussions on international mailing lists, contributing to contentious or high-visibility articles, and basically just staying in their own little “corner” of Wikipedia when they were editing. This kept them out of activities and spaces where they were more likely, as female editors, to receive harsher treatment from other editors (Lam et al., 2011), which in turn would have likely resulted in the respondents’ having more negative interactions with other editors, and a more negative perception of the encyclopædia overall (Laniado et al., 2012).

5.2.4: Culture

Past research on Wikipedia has shown that there are differences in the behaviour of editors from different cultural groups (Aragon et al., 2012; Ulrike et al., 2006), and cultural context likely plays a very large role in influencing both the structure and function of the editing communities across India as well as the patterns of inclusion and exclusion that are present in the current editing community. Further, cultural barriers are likely the most significant barriers that Indian women face to their ability to contribute to Wikipedia.

However, I could not, within the scope of this research, perform an investigation of the causal mechanisms of the gender gap in India, and I therefore cannot get into an elongated or nuanced discussion of all of the possible cultural factors that could act to prevent female-identified Indian individuals from participating in Wikipedia. Instead, what I can provide is a brief overview of where, within the context of this particular research project, culture could possibly have played a role in producing the experiences that my respondents had with regard to Wikipedia.

Firstly, culture may possibly have played a role in producing some of my respondents' positive experiences with regards to their interactions with other editors. Specifically, at one point in the interviews, one respondent pointed out that because of the way that Indian men “are”, the male editors in her small Indic-language editing community treated her as a “sister” when she was a new editor, and were incredibly attentive to her and offered her a lot of support while she was first learning how to
This “privilege”, as she described it, came from her position as a female-identified older-ish (early-to-mid 30s—older than the average Wikipedian) individual in her particular cultural context.

Furthermore, there may be a connection between culture and editing motivations.

Interestingly, being motivated to participate in Wikipedia by the potential to make and maintain friendships was inconsistent with prior findings on the most common motivational factors for Wikipedians (Johnson, 2008; Rafael & Ariel, 2008; Nov, 2007; Yang & Lai, 2010), but consistent with findings on smaller Wikipedia communities, in particular the Persian Wikipedian community (Asadi et al., 2013). In short, making new friends appears to be an important motivational factor for some non-Western editors but does not appear to be very important for Western editors. The cultural causal mechanisms related to this phenomenon, if there are any, are unclear, but there does appear to be some factor, or a variety of factors, that are causing similarly-sized non-Western editing communities to behave in ways that are similar to one another and different from Western communities.

Overall, it is largely unclear what role culture could or does play in influencing an editor’s experiences and motivations with regards to Wikipedia, but it does appear likely that it does, at least, exert some form of influence. Future research on the subject will likely provide more insights.

5.2.5: Gender

Throughout this research report, and particularly this chapter, I have attempted to outline the role that gender plays in the experiences of my research subjects, the Indian editing community and the nature of Wikipedia in India. However, similarly to the role that culture may play in influencing the behaviour, form and function of the Indian Wikipedian community, as investigating the causal mechanisms of the paucity of female Indian editors was not an objective of this research project in particular, my investigation of the role that gender could play in both determining how and if Indian women are able to participate in Wikipedia is woefully shallow and inadequate; I cannot even begin to delve into the many ways that culture, infrastructural access, sexuality, class, caste, geographical
location, and many other aspects of the Indian society could intersect with gender to prevent female-identified individuals from being able to fully and successfully participate in Wikipedia.

I can, however, speculate on the role that gender could possibly play based on and in direct relation to the experiences of the research subjects. In performing this shallow gender analysis, I have been able to determine two dimensions along which gender could possibly play a role in limiting the ability of Indian women who are highly similar to my research subjects to fully participate in Wikipedia. These dimensions are: education and building reputation.

Before I begin, however, I’d like to point out that gender does not work in isolation but instead intersects with various social and societal factors to produce particular gendered patterns of inclusion and exclusion. As some of my research respondents astutely pointed out, Wikipedia intersects with both offline structures of exclusion as well as the other social and societal factors in a manner that both reproduces and complexifies gendered patterns of exclusion. I am therefore not attempting to claim that gender is the only, or even the most important, factor at play in this hindering mechanisms; I am merely fleshing out where gender could, in connection with other societal realities, play a role.

i) Education
One of the most surprising research findings was that at least five of the research respondents—a third of the sample population—had not known that they could edit Wikipedia before they were explicitly introduced to it by a third party, usually through a friend or through outreach initiative. Wikipedia is the largest and most popular reference website in the world (Alexa Internet, 2014a), and Wikipedia pages appear on the first page of a Google search return in 99 out of 100 searches (Silverwood-Cope, 2012). Considering that Google.co.in is not only the most used search engine in India (Alexa Internet, 2014b) but also the most frequently-accessed website in India, it is very unlikely that those Indians with access to the Internet do not know about Wikipedia. It is possible that many Wikipedian readers may just be missing the “Edit” button, but considering how popular Wikipedia is, most individuals who spend a fair amount of time on the Internet and are generally Internet-literate are fairly likely to
There therefore appears to be an underlying mechanism that is making so that some Indian women, and particularly women who are highly educated and likely have fairly regular access to technology, are failing to navigate the online sphere in a way that allows them to gain a deeper understanding of and sense of engagement with the mainstream Internet cultures. Gender norms and roles in the Indian context may play at least a partial role in this phenomenon. Intersectional critical theory and feminist examinations of technology allow us to understand that in many socio-cultural contexts, gender, ethnicity, and socio-economic status and technology intersect in ways that restrict women’s abilities to access digital technologies, develop digital literacy and computer skills, and successfully navigate technological interfaces (Hargattai & Walejko, 2008; Jenkins et al., 2006; Reinen & Plomp, 1997), largely through the systematic exclusion of women from technological “play” and computer-related educational and labour pursuits (Foust-Cummings et al., 2008; Margolis & Fisher, 2005; Melkymuka, 2001; Miura, 1986; Misa, 2010; Stross, 2008; Turkle, 1984; Wajcman, 1991). In India, it has been shown that women are less likely to have access to digital technologies (IAMAI, 2010), as well as to educational training in computer-related fields (Arun & Arun, 2001; Sharma, 2012; WISAT, 2011), meaning that Indian women are, on average, less likely to be able to successfully interact with, understand, and feel comfortable in technological spaces and while performing tasks that take place in online spaces via technological means. This may help to explain at least part of the puzzle as to why Indian women, and particularly middle class women, are fairly likely to be unaware that Wikipedia is an editable space—they may avoid, or be unable to successfully access, technological and digital activities, which would make them less knowledgeable about the Internet and its mainstream cultures overall.

Furthermore, according to Lim and Kwon (2010), female American University students appear to have a worse perception of Wikipedia and the accuracy of its information, likely due to the fact that they have less confidence in their online abilities (Boser et al., 1996; Durndell et al., 1995; Hargittai &
Shafer, 2006; Hargittai & Walejko, 2008; Hodes, 1995; Todman, 2000) and in particular their ability to determine the accuracy of information that is available online, which is, in turn, related to a lack of opportunity to freely interact with and learn about digital technology (Hargittai & Walejko, 2008). A similar phenomenon may be affecting Indian women, who may be more sceptical of Wikipedia than male-identified Indians and may therefore choose to avoid using, and therefore learning more about, Wikipedia.

The most significant aspect to this barrier, however, is that at this point, as no prior research has been done on this barrier in particular, it is impossible to tell just how limiting of a factor this is to female-identified Indians’ ability to participate in Wikipedia. More research on this topic would likely provide more insight.

ii) Building Reputation

As has been amply discussed in this paper, the ability to build reputation within the Wikipedia community is both a very important part of being able to successfully participate in the editing of Wikipedia, as well as an aspect of the encyclopaedia’s editing culture that may put my respondents, or Indian women in general, at a disadvantage, particular with regards to the restrictions that they already face on their free time. It is possible that identifying as female, and having internalized the lived realities associated with identifying as that gender identity over a lifetime, could act to further hinder Indian women from being able to successfully build up their reputation within Wikipedia.

To begin, some research suggests that women may be at a disadvantage with regards to their interest in building edit counts. Male-identified individuals may be, on average, more competitive (Campbell, 2002), and therefore more interested in “competing” for edit counts (Collier & Bear, 2012). This may allow them to build reputation at a faster and more successful rate than female editors, who may be less interesting in building their edit count. This was reflected in the experiences of some of my research subjects, who found that male Indian editors were generally much more competitive with regards to their edit count whereas female Indian editors were more interested in just being involved
Another way that one’s gender identity could work to hinder one’s ability to build reputation in Wikipedia, and particularly in an Indian editing community, is confidence. Female-identified individuals have been reported to have, on average, less confidence in their abilities and knowledge, and often feel that it would be presumptuous of them to attempt to contribute to discussions, etc., when they are not experts (Herring, 2011; Niederle & Vesterlund, 2007). This may play a role in discouraging female Indian editors from claiming recognition for their offline work, which many of them spend more time doing than online editing work. As one research subject described it, writing a blog or a similar report of one’s offline work could be interpreted as “bragging” (Subject A, oral interview), which discouraged her from doing so. This feeling that they would be presumptuous to try to claim recognition for the work that they are doing may make them appear to have less of an online presence by decreasing their time spent online and making it more difficult for them to build up a high edit count, which in turn can damage their editor reputation.

Further, as has been discussed earlier on in this section, it is possible that this lack of online presence and resulting standing in the community could interact with one’s gender identity to produce the “outsider” effect: the intersection of a variety of Wikipedic identity markers (age, gender, experience, editing activities) that make one a minority within the community in a such a way that they make an editor appear to be, across many dimensions, an outsider within the community.
CHAPTER 6: CONCLUSION

In this research project, I set out to investigate the gender gap in the Indian Wikipedian community in order to determine whether or not its causal mechanisms were likely to be similar or different to those that have been hypothesized as contributing to the gender gap in the general contributor population. As no prior research on the Wikipedic gender gap had ever been carried out on a sub-population of editors, and particularly not on the Indian community, there was very little data available that could provide insight into whether female-identified who were dissimilar to the majority of female editors on Wikipedia were likely to face barriers to their ability to participate in Wikipedia that were similar to those faced by Western women, or different. This question—whether female individuals that likely possessed much different socio-cultural experiences, identities and realities were likely to also experience much different hindrances or limitations on their ability to become fully and successfully involved in Wikipedia—is quite significant, as not only are female voices, perspectives and interests largely underrepresented on Wikipedia, but so too are those of non-Western individuals and of individuals whose demographic characteristics are different than those of the majority of the population. Initiatives and strategies to bridge the gender gap in non-Western contexts that cannot effectively address the barriers and challenges that are unique to that particular societal context are at risk of not only reproducing the same or similar patterns of inclusion and exclusion that likely already exist within the local editing populations, but of failing to reach out to the individuals that Wikipedia needs the most should it ever hope to truly aspire towards being the “sum of all human knowledge.”

It was with this goal in mind—to generate insight into the nature of the gender gap in non-Western Wikipedian populations so that future efforts to address the gap could be more effective and contextually-appropriate—that I set out to perform this research. However, with almost no prior research to guide my explorations, I realized that my investigations would be breaking ground. With no body of work to act as a starting point and to guide my research, I decided that attempting to
perform a deep analysis of the causal mechanisms of the gender gap in India would be outside of the scope of my particular research project, and that my research would be most useful if it was been largely cursory—a brief foray to lay ground where there was none before, in hopes that it would act as a starting place for more profound, directed research in the future. I therefore decided to attempt to address what is likely the most important question at this stage in the explorations of the gender gap in India and other similar non-Western contexts, and whose answer will set the scene for all future research on this topic: whether Indian women are likely to face barriers that are similar or different that those that have been identified in the gender gap research, which are largely based on the experiences and realities of Western female-identified individuals.

The research results were quite telling. Not only do they show that Indian women are likely to face barriers that quite different from those that are faced by Western women when they attempt to fully and successfully participate in Wikipedia, but the findings provide some interesting insights into the factors that may help to generate positive editor, and particularly female-identified editor, experiences, as well as insights on the nature of Wikipedia as a global project.

In particular, the differences between the potential hindrances likely to be faced by Western women and those likely to be faced by Indian women did not appear to stem directly from differences between the personal characteristics of Western and Indian female editors, but rather from the manner in which those personal characteristics intersected with differences in their Wikipedic contexts to generate a very different set of experiences. Taken in isolation from their particular Wikipedian communities and activities, Indian and Western women Wikipedians are fairly similar. Both are likely to have comparable demographic characteristics, and are likely to prefer to have friendly interactions with other editors and to be put-off by negative interactions. They are also likely to face barriers related to a lack of free time, issues with the Wiki markup language, and their own sense of self-confidence. It is unclear from this research whether Indian women are likely to experience disproportionately harsh treatment when they are new editors, as while most the
respondents did not personally experience this kind of treatment, they did observe it, and described it as a barrier to Indian women’s participation, meaning that Indian and Western female editors are likely to be similarly deterred by this phenomenon.

However, within their particular Wikipedias (with their related communities, spaces, activities, etc.), Indian female-identified editors are more likely to have experiences that are different rather than similar to those of Western female editors. Female Indian editors are unlikely to get into conflict with other editors or to have negative or antagonistic interactions with other editors. Interestingly, they are fairly likely to feel like they are treated differently because of their gender, but are overall unlikely to experience negative forms of gender-based discrimination or harassment. They are unlikely to have trouble with the neutral style of communication that is standard on Wikipedia, and they are also unlikely to seek out other online communities for the purposes of making friends, as they are likely to feel that can make friends with their fellow editors. They are also much more likely than Western female editors to be involved in offline outreach activities, and much less likely to contribute to contentious or controversial articles.

These differences in Indian editors’ experiences produce a different set of potential barriers and challenges. Female-identified Indians are more likely to be unaware that Wikipedia is editable, a barrier that did not appear to be applicable to Western female editors. Potential female Indian editors are also likely to face issues with identifying as female in Indian Wikipedic spaces, as they are likely to be highly visible to other editors in their respective communities, which could produce a slew of experiences and factors that could deter them from further involvement. They are also more likely to have trouble building Wikipedic reputation and more likely to avoid contributing to contentious articles, discussions and activities, particularly on non-Indian, ENWikipedic spaces where non-Indian ENWikipedians are likely to lurk.

Moreover, even the barriers that Indian and Western women appear to have in common are likely to manifest in different ways. While time is a barrier in general for Western women, for Indian
editors, a lack of free time is likely to behave as both a barrier in itself as well as a variable that intersects with various other aspects of the Indian female Wikipedic experience and offline realities in a manner to produce a variety of separate barriers, including the avoidance of highly contentious articles and the limiting of their ability to build reputation within their communities. Self-confidence, too, is a barrier that both Western and Indian female-identified individuals are likely to face, but self-confidence is likely to be more of a barrier for Indian women in conjunction with their lack of free time and propensity to be involved in offline outreach.

So Indian women and Western women are likely to face different barriers to their ability to participate in Wikipedia, and these differences largely stem from their different experiences with Wikipedia, which in turn are caused by dissimilar Wikipedic contexts. The question, however, still remains: What makes their Wikipedic contexts—the behaviour of editors around them, the manner in which their communities tend to function and interaction, their own personal editing preferences, etc.—so different? Culture? The general nature of smaller editing communities? The intersectional nature of gender across India and its intersections with technology? Within the confines of this research, it is extremely difficult to say. Much, much more research must be done on the causal mechanisms of the gender gap in the Indian editing population, as well as into the natures of the Indian Wikipedian communities across the various Indian linguistic, socio-cultural and economic contexts, before we can even begin to suggest explanations for this phenomenon.

However, while my research may not be able to explain why the Western and Indian Wikipedic contexts are different, it has generated some important and interesting insights into the nature of Wikipedia and, by extension, into some of the factors that may be helpful or hindering when it comes to female participation in Wikipedia (and particularly participation from Indian women that are very similar to the women in the sample population).

To begin, the research findings and comparative analysis has generated some important insights into some of the factors that could possibly serve to increase female editor satisfaction and
female editor retention, particularly in India (but possibly in other contexts, as similarities with Asadi et al.’s [2013] work suggests). In particular, smaller editing communities appear to play an important role in generating supportive working environments and positive editor interactions, and they can provide the right atmosphere for building friendships. Smaller communities also appear to be better at providing help and support to new editors, which is an extremely important factor in generating positive experiences with Wikipedia overall.

On the other hand, the research has also generated insight into the factors that tend to produce negative experiences with Wikipedia, particularly among female-identified editors, and deters new editors from getting further involved. These factors are multiple negative interactions with other editors, the mistreatment of female editors and female-interest content (editors do not even have to experience this—just observing it is enough to be off-putting for some female individuals), and Deletionist attitudes towards new content created by new editors amongst ENWikipedians and, especially, EN administrators.

Finally, this research project has not only generated some interesting perspectives on the nature of Wikipedia's gender gap; it has also produced an important insight into Wikipedia's class divide, which suggests that the problematic aspects of Wikipedia's a homogenous editing population are much more complex and insidious than originally believed. Demographically, my sample population was both quite homogenous and very similar to the majority-Western editing population as well as the majority-Western female editing population. Considering that my research subjects were likely representative of the majority of the most active female editors in India, the fact that this population reproduces similar, if not identical, demographic patterns as those observed for the general Wikipedian population, is rather telling. In both the Western and Indian Wikipedian population, the same patterns of inclusion and exclusion appear, meaning that the same voices, perspectives and worldviews are likely to be missing both within the general population and in the sub-populations, or at least in the Indian sub-populations. This is particularly troubling, as it suggests that simply
attracting and retaining editors from socio-cultural and regional populations that are underrepresented in the current editing population is likely not enough to address the entirety of the bias in Wikipedia’s content; while it might diversify the content somewhat, the contributions will continue to largely reflect the interests and perspectives of the global middle class, and will further limit Wikipedia’s ability to cut across class divides and reflect the full spectrum of human knowledge.

6.1: RECOMMENDATIONS

While this research project has been fairly brief and shallow and has produced findings that are largely based on the experiences of current female-identified editors in India, it has produced some insights into the nature of the gender gap in India and in particular into some of the factors that may be acting as barriers to female participation in Wikipedia in India. As these insights are, despite their shallowness, quite important, as they do demonstrate that there is a difference between those barriers that Indian women are likely to experience and those that Western women are likely to face, I would like to put forth some recommendations on some strategies and focuses that the Indian Wikipedian community could adopt in future outreach activities and initiatives geared towards bridging the gender gap. Many of these recommendations may also be useful for the editing community at large.

• **Actively Welcome and Support New Editors:** Both in this research project and in prior research, it has been shown that the welcoming and supportive reception of new editors and their contributions produces more positive experiences with Wikipedia overall. In particular, being able to receive a lot of support and help from more established editors when editors are first learning how to edit is especially beneficial. More established editors in the Indian community and in the separate Indic-language communities should strive to directly approach and offer support and guidance to new editors and particularly new female editors, and to be accepting and friendly towards new editors in general. In addition, based on the research
finding that the respondents often received most of their support from one editor in particular when they were new, the Indian Wikipedian community may benefit overall if the local Wikimedia chapter was to adopt an “adopt-a-newbie” program that would facilitate the pairing of an established editor with a new editor. This would encourage the creation of a one-on-one relationship which could help to quicken and consolidate the new editors’ editing abilities and their engagement in the Wikipedia project.

- **Create Wikipedic Spaces for Interactions that are Predominately Social**: Despite some claims to the contrary, Wikipedia can be a very friendly space where social interactions do take place, and friendly, social relationships between editors can be extremely motivating and valuable to female Indian editors. In the experiences of my sample population, most of the interactions that they had with other editors that were not directly related to Wikipedia took place in other online spaces, such as on Facebook or via Twitter. However, as connecting with other editors via non-Wikipedic means often requires some knowledge of the other editor beforehand (name, Twitter handle, etc.), and some editors in the sample population did find it difficult to make friends and have social interactions with other editors at the beginning of their editing careers, Wikipedia in India may benefit from the creation of spaces within Wikipedia where predominately social interactions between editors can take place, and particularly social interactions between new editors and more experienced editors. These spaces do not have to provide the means for or encourage elongated conversations, but should allow for enough interaction to build the sufficient rapport and familiarity that precludes connecting via non-Wikipedia means. Examples of these spaces or applications could be entirely social-oriented mailing lists, a Wikipedia chat room, or spaces on village pumps for social interactions.

- **Hold More Offline Meet-Ups**: Related to the point made above, building friendships and
having good rapport with other editors within one’s community is a very important part of having an overall positive experience with Wikipedia and staying motivated and engaged in the project, especially for female editors. A significant way of building strong friendships with other editors was meeting with them regularly in the offline world. However, Indian editing populations are already rather good at this (John, 2011); but other Wikipedian communities looking to attract and retain new female editors may also highly benefit from holding more offline activities and opportunities for editors to meet and interact in the offline world.

- **Combat the Deletionist Culture:** One of the things that the research subjects found extremely off-putting was their observance of the harsh treatment of new content and edits from new, female-identified Indian editors. It was not seeing the edits get reverted that appeared to bother many of the respondents, either—the reversion of the edits of new editors was something many had experienced themselves, and often described as a valuable learning experiences—it was what they perceived to be the deletion of edits because those edits were contributed by new editors and/or were often of lower quality because they had been contributed by new editors and were often new articles or new topics within articles. Instead of providing feedback and support to the new editors, contributing to their edits to make them better, or at least letting the edits stay up for a short period of time to allow for other editors to improve on them, more established editors and administrators were flagging the edits for reversion/deletion and deleting them very quickly, sometimes as soon as the edits went up. This kind of deletion/reversion behaviour is in line with the Deletionist school of thought within Wikipedia (Wikipedia, 2014), and it was very off-putting for both the new editors and the editors observing this happening. Therefore, in order to attract and retain new female editors and their content, the Wikipedia community at large should work to combat the Deletionist attitudes on Wikipedia, as it is working to restrict the amount of new content that is
able to appear on the encyclopaedia as well as actively deterring new editors from getting involved in the project. This may require the election of new administrators on ENWP, and particularly administrators who are Inclusionists or at least have a proven track record of being more considerate of new, non-Western and/or female editors and their content.

- Combat the External Barriers: Considering that this research shows that the editing of Wikipedia is likely mostly accessible to middle class women in India, which is very similar to the patterns of accessibility in the Western world, the findings in this research suggest that there are likely many systemic societal barriers that are preventing people and especially women from non-middle class groups from successfully becoming contributors. This suggests that simply attracting and retaining more editors from different cultural and regional contexts may not be sufficient to overcome Wikipedia's systemic content bias—if the editing community wants to see a wider array of voices and perspectives represented on the encyclopaedia, they may have to start focusing more of their outreach efforts on overcoming the more systemic barriers to participation in Wikipedia, including infrastructural barriers, cultural barriers, economic barriers, etc. For India in particular, if the Wikipedian community could get involved in outreach activities and initiatives that worked to provide Indian women with better access to laptops or computers and the Internet in their homes, the community may see a large jump in participation from female-identified individuals.

6.2: AVENUES FOR FUTURE RESEARCH

As this research was a brief and introductory foray into the nature of the gender gap in India, one of its main goals was to provide direction for future research on the topic. Below are some suggestions for the focuses of future research projects:
• **Comparative Studies on Female-Identified Non-Contributors:** Research on populations of women who had, at some point in the past, contributed to Wikipedia but have since stopped contributing will likely help to shed light on those Wikipedic-related factors which are most exclusionary and deterring for Indian women. As was pointed out in the Methods section of this research report, there is a fairly large population of accessible female non-contributors in India which could be approached for this purpose.

• **Patterns of Exclusion:** Further research needs to be done on investigating why the current most active Indian women Wikipedians are so similar, demographically. Research of this nature will likely need to focus on the different levels of participation from different sub-populations of women within India (ethnic, linguistic, geographical, etc.) in order to determine the underlying societal mechanisms that work to prevent large amounts of Indian women from becoming involved in Wikipedia.

• **The Role of Gender in the Indian Context:** It is highly likely that the different construction of gender across India and their associated norms, roles and patterns of inclusion and exclusion play a role in preventing most Indian women from becoming successful contributors to Wikipedia. More and much research should be done to investigate the role of gender in the gender gap in India.

• **The Role of Culture:** Related to the role of gender, it is also very likely that culture, and socio-cultural differences across India, plays a significant role in influencing the forms and functions of the various Indic-language Wikipedia projects and their associated editing communities, which in turn could have a large impact on how those editing communities and Wikipedias interact with female editors and whether or not they are welcoming and supportive spaces for
female editors. Cultural context likely intersects with gender across India to produce various complex gender norms and patterns of inclusion and exclusion which affect that way in which female-identified women interact with and access Wikipedia. The gender gap in the Indian editing community will never be truly understood without an investigation of the role that cultural context plays in nature of Indian Wikipedias and the construction of the lived realities of gender across India.
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EXECUTIVE SUMMARY


1: INTRODUCTION


2: LITERATURE REVIEW


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4: RESEARCH FINDINGS


5: DISCUSSION


6: CONCLUSION


APPENDIX 1:
INTERVIEW QUESTIONS

App. 1.1: Guiding Questions for Semi-Structured Interviews

1. (warm-up questions) Can you tell me a bit about yourself? How old are you? What do you do (employment)? What kind of certificates do you hold (level of education)? Are you married? Do you have children?
2. When did you start editing Wikipedia?
3. Why did you become involved in the editing of Wikipedia? Why have you continued to be involved?
4. Tell me a bit about your editing experiences:
   i) When you first started editing:
      Was it challenging? Was it difficult to learn how to edit? Were there any outside restrictions to your editing [no access to a computer with Internet, not enough free time, etc.]? Were there any Wikipedia-related challenges to your editing [edits kept getting reverted, hostility from other editors, etc.]? What other kinds of barriers, obstacles or challenges did you face to your participation? Did you find that the editing community was helpful or hindering?
   ii) As a current editor:
      How has your experience as an editor changed since you first began? If you faced any challenges or obstacles to your participation in editing when you began editing, do you feel that you still face those challenges? Have you encountered any new challenges or barriers that you can think of?
5. Are you active in the editing community [mailing list discussions, Village Pump posts, IRC chats, etc.]? Why or why not?
   i) If you are, how do you feel that you are received by the editing community? Do you feel like your voice is heard? Do you feel like your inputs are considered?
6. Do you currently or have you in the past faced barriers or adversity to your involvement with the editing community? If so, what were/are they?
7. Have you ever felt like you've been treated differently on Wikipedia because of your gender, either in your editing and the content of your editing, during your participation in the community, from other editors, from non-editors, from the general public, etc.?
8. It has often been argued that women's contributions to Wikipedia are treated more harshly than men's contributions. What is your opinion on this? Do you agree or disagree? Why do you think this may be?
9. Do you feel that there is more space on Wikipedia for traditionally “male” knowledge than traditionally “female” knowledge? Is this problematic? Why or why not?
10. Do you feel that there are any barriers and challenges to women's participation in editing that women who are already editors may experience, even if you yourself haven't
11. In your opinion, what would be the barriers and challenges that women who don’t currently edit Wikipedia face to their participation? What would be the barriers and challenges that an average Indian women would face?

12. What do you feel could be done to improve the experiences of women editors, and bring in more editors?
App. 1.2: Questions for Email Interviews (Contributors)

1. What is your age?

2. What is your level of education?

3. Do you use a personal computer, family computer, or public computer (like in an internet café or a school computer) to edit?

4. What kind of editing activities are you involved in (adding information, editing grammar and/or article structure, categorizing articles, translating articles, etc.)? Which activities do you do most frequently?

5. Why did you become involved in the editing of Wikipedia?

6. When you first started editing, what kind of support structures were there for you? Did other members of the community help you find your way? Did you find that the editing community was helpful or hindering in the challenges that you faced as a new editor?

7. When you first began editing, were there any non Wikipedia-related restrictions to your editing [no access to a computer with Internet, not enough free time, etc.]?

8. When you first started editing, were there any Wikipedia-related challenges to your editing [edits kept getting reverted, hostility from other editors, etc.]?

9. How do you feel you are received by the community? Do you feel like your voice is heard? Do you feel like your inputs are considered?

10. Have you ever felt like you've been treated differently on Wikipedia because of your gender, either in your editing and the content of your editing, during your participation in the community, from other editors, from non-editors, from the general public, etc.?

11. It has often been argued that women's contributions to Wikipedia are treated more harshly than men's contributions. What is your opinion on this? Do you agree or disagree? Why do you think this may be?

12. Do you feel that there is more space on Wikipedia for traditionally “male” knowledge than traditionally “female” knowledge? Why or why not?

13. In your opinion, what would be the barriers and challenges that an average Indian women would face to their participation in the editing of Wikipedia?

14. What do you feel could be done to improve the experiences of women editors, and bring in more editors?
App. 1.3: Questions for Email Interviews (Non-Contributor)

1. How old are you?

2. What is your current level of education?

At one point in the past, you were a participant in the Indian Education Program.

3. Before the Program, were you an editor on Wikipedia?

4. Had you ever been interested in editing Wikipedia? Why or why not?
   i) If you had been interested, what prevented you from becoming an editor?

5. While you were actively editing Wikipedia (during the Indian Education Program and, if applicable, afterwards):
   i) What kind of editing activities were you involved in (adding content, fixing grammar, translating, re-structuring articles, etc.)?

   ii) Did you interact with other editors? Were you active on the mailing lists and/or IRC chats?

   iii) If you interacted with other editors, how would you describe the interactions? Mostly friendly? Formal? Cold? Contentious? Did you have mostly positive experiences interacting with other editors or mostly negative?

6. Do you feel that you faced any specific challenges or obstacles to your participation in editing Wikipedia? Were there any outside restrictions to your editing [no access to a computer with Internet, not enough free time, etc.]? Were there any Wikipedia-related challenges to your editing [edits kept getting reverted, hostility from other editors, etc.]?

7. At any time during this period of your activity on Wikipedia, did you ever have any negative experiences? Was there anything about Wikipedia that you didn’t like, or found difficult or off-putting? (For example, you may have had a negative experience interacting with another editor, or you felt frustrated with the reversion of some of your edits. Please describe anything that comes to mind!)

8. At any time during this period, did you ever feel that you were treated differently on Wikipedia because of your gender?

9. Why did you stop editing Wikipedia?

10. Do you plan to start editing again in the future? Why or why not?