

# My Kind of People? Perceptions About Wikipedia Contributors and Their Motivations

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## ABSTRACT

Perceptions of information products such as Wikipedia can depend on assumptions and stereotypes about the people who create them. As new Wikipedians consider contributing they are likely to apply such assumptions and ask themselves: “Are Wikipedia contributors my kind of people? Is this a group I’d like to belong to?” In this qualitative study I address the potential challenge of these questions by exploring readers and infrequent editors’ perceptions of Wikipedia contributors and their motivations. Through analysis of twenty semi-structured interviews, I find evidence of strong negative perceptions as well as positive ones which nonetheless prevent users from identifying with active Wikipedia contributors. I argue that these perceptions present a barrier to the progression of participation over time. I conclude by discussing the practical challenges of my findings for Wikipedia and other online collaborative systems.

## Author Keywords

Wikipedia, participation, community

## ACM Classification Keywords

H.5.m Information interfaces and presentation (e.g. HCI): Miscellaneous

## General Terms

Human Factors

## INTRODUCTION

*“I would never join a club that would have me as a member.” — Groucho Marx*

Wikipedia, “the free encyclopedia that anyone can edit,” is consistently held up to be a shining example of what online collaboration can accomplish. Since its founding in 2001, Wikipedia has become an essential source of

knowledge on the internet. However, recent analyses have suggested that Wikipedia’s growth may be slowing [2, 22]. A particular challenge has been maintaining the rate at which newcomers create Wikipedia accounts and progress towards fuller participation. Between July 2008 and July 2010, the growth in new Wikipedians making at least 10 edits slowed by more than 25%.<sup>1</sup> During the same period, the number of users making at least 25, 100, and 250 edits all dropped more than 15%. Of course, the number of users or editors is only one of many indicators of Wikipedia’s health and sustainability, and the meaning and potential consequences of these trends has been contested [20]. Still, the debate has highlighted the need to understand what draws users into the Wikipedia community and encourages them to progress towards more frequent and engaged participation.

Groucho Marx’s quote suggests one key factor which can affect such a progression: decisions about joining a group (i.e. the group of engaged Wikipedia contributors) can depend upon attitudes and perceptions about that group [7]. Marx succinctly captures the conventional wisdom — also substantiated by research — that individuals are unlikely to join a group when they cannot or do not want to identify with its members [29]. Formal group membership is not a prerequisite of participation on Wikipedia. Nonetheless, by engaging in behaviors that are associated with the group, individuals can perceive an association with the community of Wikipedia contributors. As a result, understanding perceptions of that community is key.

In this study I explore perceptions about Wikipedia’s contributors among readers and infrequent editors. Based on a series of twenty qualitative interviews I present an analysis of perceptions about what motivates active contributors to write, edit, and maintain Wikipedia. I then describe three recurring stereotypes about the characteristics of Wikipedia contributors as (1) “everyday folks,” (2) an “intellectual class,” and (3) “Wikipedia geeks.” Based on my findings I argue that perceptions of Wikipedians’ characteristics and motivations are indicative of a new orientation towards work which is encapsulated by the notion of the “Hacker Ethic” [12]. I also find evidence of many negative perceptions of Wikipedia contributors, as well as some positive perceptions which nonetheless prevent new Wikipedians from identifying with the group of active contributors. I argue these

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<sup>1</sup>According to <http://stats.wikimedia.org>.

perceptions — both positive and negative — can present a barrier to the progression towards fuller participation. I conclude by discussing the practical challenges of my findings for Wikipedia and other online collaborative systems.

## BACKGROUND & LITERATURE REVIEW

Wikipedia has been the subject of a great deal of research.<sup>2</sup> The attitudes and behaviors of active Wikipedians have been of particular interest to the HCI community (See, e.g., [5, 16]). As a result of the focus on active participants, however, the attitudes and behaviors of readers and infrequent editors are under-studied. Focusing on readers and infrequent editors is essential to understanding the progression of participation over time. After all, many heavy editors and administrators begin as readers [25]. Those who never invest in Wikipedia at so deep a level may nonetheless become relatively more active over time. Reading constitutes an important gateway activity through which new users gain entrée, learn about how the system works, and move towards deeper forms of participation [3].

A few studies have specifically examined the progression of participation on Wikipedia. Bryant and colleagues [4] interviewed active Wikipedians about their participation and the evolution of their attitudes and behaviors. A key finding of their study is that while casual contributors view Wikipedia as a collection of information and articles to which they might contribute, Wikipedians view the site as a community of contributors. In a quantitative study partially inspired by [4], Panciera and colleagues take a quantitative viewpoint on the progression of participation [24]. They argue that “Wikipedians are born, not made” and find that engaged participants tend to participate at a high level from their first experiences with the site. Finally, Antin & Cheshire [3] examined how “nuts and bolts” information about Wikipedia’s operations can be both an indicator and a driver of increased participation.

Other research has examined the nature of motivation for active Wikipedians. In a study of students at New York University, Kuznetsov found that civic engagement and the perceived benefits to society were key motivations [17]. In a survey of heavy Wikipedia users, participants reported that fun, a belief in Wikipedia’s ideology, and general beliefs about helping others were the most important motivations for participation [21]. Rafaeli and colleagues report similar results suggesting that learning and having fun are among the most important motivators for Wikipedians [26]. While these and other studies have provided a strong base of knowledge about active contributors, their characteristics, and their self-reported motivations, we know relatively little about how the bulk of Wikipedia’s users (i.e., readers and infrequent editors) *perceive* active contributors.

When individuals consider whether to become more active contributors, they are likely to make implicit or explicit

<sup>2</sup>It is beyond the scope of this paper to present a full review of this research. However, Wikipedia itself maintains a list of research about Wikipedia at [http://en.wikipedia.org/wiki/Wikipedia:Academic\\_studies\\_of\\_Wikipedia](http://en.wikipedia.org/wiki/Wikipedia:Academic_studies_of_Wikipedia).

comparisons between their own attributes, attitudes, and motivations and those of others who are already active contributors. Because the characteristics of contributors are not always known, “vocational stereotypes” [13] — preconceptions about specific jobs and the characteristics of the people who do them — can shape perceptions in positive and negative ways. By contributing an individual may perceive that she becomes a part of the group labeled “contributors” and therefore associated with its characteristics. Importantly, if an individual perceives herself as a group member, she is likely to feel favorably towards other members [31], while the perception of being an outsider can lead to unfavorable feelings. In-group identification [7] and perceiving that one is a part of a community [10] have also been shown to encourage cooperation in social dilemmas. Of course, an individual’s beliefs about contributors are just one of many factors that influence participation. However, the above research indicates that positive perceptions of Wikipedia contributors can encourage participation while negative perceptions can discourage it.

Importantly, the social process of comparison between individual and group is unlikely to happen all at once. While some active Wikipedians are active from the start [24], theories such as Legitimate Peripheral Participation [18] suggest that many start participating in small ways and grow their engagement gradually over time. Negative stereotypes can introduce a threshold beyond which participation is impeded. Positive perceptions, on the other hand, can encourage fuller participation and convey perceived status rewards and other benefits from increased participation.

I focus on perceptions of contributors and their characteristics in order to address some basic questions about identity and group membership on Wikipedia. Who do my participants imagine contributors are? What assumptions do they make about contributors’ characteristics? What do they think motivates contributors? What kinds of implicit or explicit judgements do my participants make about contributors and their motivations? These questions are important because they inform the comparison between individual and group when a potential contributor implicitly or explicitly asks herself, “Am I the kind of person who could become a contributor? Is this a group I want to be a part of, and are these my kind of people?”

## METHODS

Data were collected through twenty semi-structured interviews with Wikipedia readers and casual contributors. Semi-structured interviews provide a framework to direct interviews towards desired topics, but are flexible and employ open-ended questions to avoid leading participants or determining the flow of conversation [27]. The interviewer’s role is to avoid asking leading questions and to be ready with appropriate follow-up questions as discussion topics shift.

## Recruitment

Potential interviewees were recruited through an advertisement placed on the classified ad website Craigslist<sup>3</sup>

<sup>3</sup>See <http://craigslist.org>.

in the San Francisco Bay Area. Individuals who were interested in an interview were directed to a web-based screening survey. The survey asked participants about their interest in and knowledge about Wikipedia, as well as their patterns of use. To select potential interviewees from among survey respondents, I first eliminated those who reported never editing Wikipedia and those who reported not being interested in Wikipedia. Only 12% of respondents survived this cut. I then contacted potential participants in chronological order based on their survey completion time. In the latter half of the interview period, the order was slightly altered to balance gender and age. Interviews were scheduled at mutually convenient times and places. The interview process relied on an interview protocol to set out the basic structure of topics [27]. Based on themes of theoretical interest, I generated a list of open-ended interview questions and follow-ups. The protocol was tested during two pilot interviews and was revised several times as new themes emerged from concurrent analysis. The process of iterative analysis, data collection, and focal shifting occurred implicitly over the course of the research period [19]. I reached the point of theme “saturation” [19] at approximately 17 interviews and completed a total of 20.

### Qualitative Analysis

Most qualitative analytic techniques such as case-method, grounded theory, and taxonomic analysis focus on “categorizing the different segments of talk” [1] by extracting shared ideas, meanings, and symbols from interview transcripts. I followed a similar technique based on iterative coding. During the first phase of coding, short passages were tagged with codes that loosely followed themes such as “motivation” and “perceptions of contributors” but which were also inductively generated based on participants’ own descriptions. In the second phase of coding, overlapping codes were disambiguated or combined. Once all transcripts had been coded, qualitative analysis proceeded by comparing and contrasting passages within and between participants and identifying broader conceptual categories. At each step, my goal was to identify common themes, examine the subtle variations in meaning across participants, and identify potential tensions and contradictions.

### SAMPLE

Over the course of approximately 8 weeks, 310 people responded to Craigslist advertisements. I contacted a total of 32 potential participants, 12 of whom failed to respond to the interview request. The remaining 20 interview participants came from all walks of life and brought a variety of different backgrounds and narratives to their use of Wikipedia. I interviewed several technologically adept college students and recent college graduates in high-paying techno-centric jobs. I also spoke with individuals such as Russell, a 47 year-old probation officer on disability leave, Roger, a rock photographer who also works at a public health non-profit, and Candace, a stay-at-home mother in her 40’s who manages her children’s home schooling. The average age of participants was 34 — 30% were younger than 25, 30% were between 25 and 35, and 40% were older than 35. 60% of participants were male. Table 1

illustrates participants’ responses to a series of agreement statements about Wikipedia attitudes as well as self-reported frequencies of reading and editing Wikipedia.<sup>4</sup>

### WHO WRITES WIKIPEDIA?

In 2006, when Aaron Swartz wrote his analysis of the question “Who writes Wikipedia?”, he did so primarily to bolster his case for becoming one of Wikipedia’s administrators [30]. Swartz used a detailed analysis of Wikipedia’s edit histories to make what was then a surprising argument: the largest quantity of Wikipedia’s article edits come from a small group of active core contributors, but most of Wikipedia’s raw content comes from outside that close-knit group. Researchers have since devoted attention to variations on the question of who writes Wikipedia (See, e.g., [15, 23]). In this section I organize my analysis of participants’ perceptions and beliefs about who writes Wikipedia around two sub-questions: (1) What do readers and casual contributors believe motivates active contributors to write, edit, and maintain Wikipedia? and (2) Who are those contributors and what are their characteristics?

### What Motivates Contribution?

Beliefs and assumptions about motivation play a central role in vocational stereotypes [13]. As a result of social influences and personal preferences an individual may assume, for example, that the kind of person who becomes a soldier is motivated by a patriotic sense of duty or that the kind of person who becomes a hedge-fund manager is motivated by greed. Whether or not those assumptions are accurate, they can influence perceptions of those groups and the desire to be associated with them.

The distinction between pro-social and self-interested motivations has been a focus of many studies on cooperation and contribution in social dilemmas (See, e.g. [8]). Pro-social motivations are based on rewards that are provided for others while self-interested motivations are based on rewards provided to the contributor. My analysis quickly revealed a bias towards perceptions of pro-social motivations. Many emphasized their belief in the desire to “give back” and to make a difference in the lives of others. Jeff, a graduate student in his early 20’s, went further and suggested that the relative rarity of contributors versus readers could make giving back an even more powerful motivator:

**Jeff:** “It’s actually an incentive for the 1 or 2% who want to edit. Because, you know, there are millions of people who are reading your page, right? And if you’re that 1 or 2% wanting to give back, that can really make big difference there, right?”<sup>5</sup>

Jeff portrays Wikipedia as a particularly fertile ground for

<sup>4</sup>While survey data were invaluable for recruitment, they are of questionable accuracy. For example, several participants whose survey responses indicated that they edit Wikipedia several times per week said they had actually never done so. Similarly, although 50% of participants reported having edited a Talk page at least once, most participants were not aware that Wikipedia’s discussion pages go by that name.

<sup>5</sup>Note that all participants are referred to by pseudonyms.

Self-reported attitudes and behaviors about Wikipedia							
	Strongly Disagree	Disagree	Slightly Disagree	Undecided	Slightly Agree	Agree	Strongly Agree
I have a lot of experience with Wikipedia.	0	0	0	5%	15%	40%	40%
I know a lot about Wikipedia.	0	0	5%	10%	25%	35%	25%
I am interested in Wikipedia.	0	0	0	5%	0	40%	55%
Self-reported Frequency of Use of Wikipedia (per week)							
	Less than 1	1-3 Times	4-6 Times	7-9 Times	10+ Times		
Read an Article	0	15%	5%	15%	65%		
Edit an Article	20%	40%	20%	10%	10%		
Read a Talk Page	25%	15%	25%	5%	30%		
Edit a Talk Page	50%	15%	0	10%	25%		

**Table 1.** Most participants reported a high level of experience, knowledge, and interest in Wikipedia. All participants reported reading Wikipedia articles frequently, editing them infrequently, and rarely reading or editing Talk pages.

pro-social endeavors because an individual's effort can be shared with a wide audience. Rather than describing the desire to give back as a rare and special trait, as Jeff did, many portrayed it as a natural phenomenon, "just the good nature of people," or "the nature of humankind." One participant described Wikipedia itself as a "goodwill project," and others characterized contributing to Wikipedia as similar to volunteering for community service. Donald, a 62 year-old retired truck-driver, summed up the perceptions of many by saying "I think most people are doing it because they just actually love doing it."

The use of the words such as love, care, and especially *passion* to describe others' motivations for contributing was extremely common. Many said they believe that contributing comes from genuine passion about a particular topic:

**Jimmy:** "...it comes down to if you're passionate about it, if you enjoy the topic. It comes down to personal preference of what you really feel is important."

Allie, a bio-tech worker in her mid 40's, also suggested that the passion that can drive contribution is contagious and can promote a kind of virtuous cycle:

**Allie:** "Yeah. I think there's something about people contributing for free that appeals to other people. I think it's people [getting] involved. I do believe that the more people that you get involved they feel an ownership of it. Being active and passionate... there's something to be said for that."

Maria, a public health worker in her 20's, described how Wikipedia provided a vehicle for her neighbor to take a topic she was passionate about and "get it out to the world":

**Maria:** "There are some people who write about really local things that they're passionate about. Like my

neighbor... she was really into how Northern California tried to become its own state... She had really no forum to share this with the world... and then we told her about Wikipedia. [She] took a lot of time and drafted it out. She was really passionate about wanting to share this little bit of history."

Other participants discussed the intrinsic rewards that come from sharing knowledge. Roger, a rock photographer in his 50's exemplified this point of view while describing a friend who is an active Wikipedia contributor:

**Roger:** "A lot of people are highly invested in history or historical things, you know. Like my friend who writes his [open-source] software. His whole idea is 'save something for the next generation.' He's actually interested in helping other people, [and] he wants to share with other people. I think a lot people are like that. I actually think most people are good."

Though each of the motivations described above was framed as primarily pro-social, many participants revealed their perception of a domain where self-interest and pro-sociality overlap. Many were particularly conflicted over the motivation to "be heard," which meant both sharing what one has to say for others' benefit and speaking up in order to gain attention. One participant noted the tension between sharing information to benefit everyone and the "catharsis" that can come from that same act. Participants also discussed what they felt were purely self-interested motivations, albeit much less frequently. Several participants suggested that seeking attention is important for some Wikipedia contributors. Russell captured the reactions of several others by saying: "maybe [contributors are] doing that out of the sense of wanting to have a little fame or even feel a little power from it." In the minds of several participants, recognition drawn from "seeing their name out there" was also key to contributors' "feeling good about themselves." One

participant labeled this brand of contributor a “busybody” — someone who needs to be heard, to put his “two-cents out there whether people want to hear it or not.”

These comments highlight an interesting gray area in which self-interest and pro-sociality coexist and are in tension with each other. In many ways the contrast appeared to be between the long-term pro-social goal of writing Wikipedia and the shorter-term personal rewards that could come from that behavior. The complex and occasionally contradictory descriptions of contributors’ motivations mesh well with the notion of “selfish altruism” in which an individual contributes for the benefit of others but at the same time gains important social psychological rewards for himself. Ultimately, that Wikipedians could be both pro-social and self-interested was unproblematic for my participants.

### Monetary and Non-Monetary Incentives

The distinction between monetary and non-monetary incentives has also been a focus of discussions about motivation for online participation. The distinction is of great practical importance because of conditions in which the presence of monetary incentives can deter participation. Because of the focus on others’ motivations, I did not look for specific evidence of “crowding out” [9]. Rather, I aimed to uncover how individuals perceive the influences of monetary and non-monetary incentives in the context of Wikipedia.

All but two of my participants expressed a belief that the lack of monetary incentives for writing Wikipedia is desirable, admirable, and beneficial for Wikipedia, while a system of cash payments would be detrimental and undesirable. Many participants expressed the explicit or implicit notion that “Wikipedia wouldn’t be Wikipedia if people were being paid for it.” One participant envisioned the new ecosystem that he thought would emerge with the introduction of cash:

**Roger:** “. . . I think that generally they would have to start regulating information because if you’re paying people to write, then quite clearly sooner or later you’re going to have to use pop ups and/or commercials to pay those people. If you’re going to pay the people to [enter] the information then there’s going to have to be some type of regulated and/or confirmed information. Which would cut out a good half of their writers. . .”

Some worried that introducing cash into the Wikipedia ecosystem would attract a different and undesirable group of contributors who would provide lower quality information in the pursuit of a quick buck:

**Interviewer:** “Do you think Wikipedia would be different if people got paid?”

**Donald:** “Oh yeah, I think there’d be a lot of bullshit in there. I think people would just throw a lot of stuff in there thinking, ‘I’m getting paid so it really doesn’t matter what I’m putting down!’ [The way it is now] I think people really put their heart and soul into it because they like doing it.”

If people were drawn to Wikipedia for the money, another participant worried that the strong sense of Wikipedia community might be lost. Indeed, intrinsic motivations for participation were widely viewed as an integral element of Wikipedia’s identity. Many participants were overtly appreciative that Wikipedia’s contributors are unpaid and drew confidence from the belief that passion and a desire to share are the principal drivers of participation.

**Interviewer:** “How do you feel about the fact that Wikipedia thrives even though no one gets paid to contribute?”

**Gigi:** “That’s awesome. I love that. I like the idea of doing things because people want to do them and have some other motivations besides [needing] to pay more rent, which is a fine motivation — I mean it’s necessary. But it’s so nice and fulfilling that it makes me so happy to do things because I want to and to find out about things because I want to and that information changes are happening just because people want it.”

A large part of the appreciation that many expressed seemed to come from the belief that intrinsic motivations lead to higher quality, more trustworthy information. The notion of *purity* was often invoked by participants who extolled the virtues of writing Wikipedia “from the heart.” Those who have a genuine interest in a given topic could use Wikipedia as a tool to indulge their interest. A strong personal commitment to the topic combined with a lack of ulterior motives was seen as a driver of purity. Some also believed that the introduction of money would professionalize writing Wikipedia in a way that would detract from the freedom and openness of an encyclopedia that truly anyone can edit.

**Mike:** “You know if it went to the professional community then it’d just change it. . . It would be totally different. It would be written by professionals, but what will happen to the freedom of adding and taking away it all? That’s the best thing. That’s what makes it so beautiful. . . the freedom to do that and knowing up front this is written by Joe from Idaho.”

While the majority of comments portrayed the introduction of money as a bad thing for Wikipedia, it is important to avoid the perception of false consensus. Several participants believed that adding monetary incentives would likely draw in a larger number of contributors, which could have a net-positive effect on Wikipedia. In contrast to the attitudes of many, one participant suggested that paying contributors could actually improve the quality and reliability of Wikipedia content because there would be “more incentive to actually have the right sources and have the right information.” Two participants also expressed some internal conflict about whether Wikipedians should be paid because of the belief that people should be paid for doing useful work. One went so far as to invoke the work of Karl Marx, saying “I think that it shows that capitalism has really reached a new level. . . that capital is extracting labor value from us when we don’t even know that we’re working anymore.”

In sum, my participants largely viewed the absence of monetary incentives on Wikipedia as a virtue and as a key factor in maintaining its genuine and pure nature. Cash, on the other hand, was portrayed as a kind of pollutant which could sour and soil the passionate, caring, community-oriented motivations which they believed drive contribution and constitute a significant part of Wikipedia's identity.

### Who are Contributors?

While motivation is important to perceptions of others and their work, mental models of Wikipedia contributors included much more detail. My participants had much to say about contributors and their characteristics. There were three primary stereotypes which participants used to describe the members of Wikipedia's contributing group.

#### *Everyday Folks*

First, participants described Wikipedia's contributors as "average people" or "regular folks." Statements like "it could be anyone" were indicative of many participants' attitudes. These did not appear to be dismissive responses driven by a lack of thought or a lack of interest. Rather, the notion of Wikipedia as an open, democratic, and egalitarian institution encouraged the perception of Wikipedia's contributors as anyone and everyone:

**Donald:** "... just everyday people... we've got our geniuses, or lawyers, or scientists, or you, or journalists, or me. I'm just an old man who doesn't know much but I know a little bit. You know it's just people asking people. People just working with people that know... or know somebody that might know."

For Donald, Wikipedia's contributors are active in their pursuit of questions and answers, and they are a fundamentally diverse group. Donald's description also emphasizes the common belief that, as long as a contributor has something to offer Wikipedia, who he or she is doesn't matter. One participant mentioned, for example, that when she reads Wikipedia she is aware that the author of a particular article could very well be in grammar school, but she noted that "as long as it was accurate, I couldn't care less."

These descriptions also convey the conviction that Wikipedia has a place for everybody and that everybody knows something. One participant, for example, described his belief that contributors come from many different backgrounds and draw from many different experiences:

**Russell:** "... for every little thing on the internet there's somebody out there. There's somebody sitting in Birmingham or Belize, wherever... [or fixing] punctuation is what they were born to give. And by God, I'm going to let them have it. Why do I need to eat off their plate? I've got a thing about rivers in Iowa."

#### *Wikipedia's Intellectual Class*

Secondly, many participants described Wikipedia's writers and editors as a well educated, credentialed group. The assumption of expertise or education was almost entirely

abstract: none of my participants reported ever trying to identify the author of a particular article or passage on Wikipedia. Nonetheless Selene, a 21 year-old recent college graduate, confidently described contributors as "intellectual internet junky types." Some seemed to draw their inferences directly from the quality of Wikipedia's writing and organization. Allie, a bio-technology worker in her 40's, said "... yeah, it's well written, respectable, and then you know a lot of people that post are extremely well educated." For others, the in-depth nature of many Wikipedia articles encouraged them to think of it as the product of dedicated research for another purpose:

**Gigi:** "I *have* thought about this, they must be PhD students or somebody who's just done a bunch of research. Sometimes it reads like somebody just wrote a paper on these and they decided to put it on Wikipedia."

Some participants drew confidence from the assumption that Wikipedia information might have been checked or vetted by some other institution. Several college age participants mentioned knowing professors who talked about contributing. Other perceptions of Wikipedia's intellectual class were much more elaborate:

**Maria:** "I guess I kind of always imagined people with a bunch of books in their house and they're old men with tweed jackets with circles on their elbows."

In addition to the recurring theme of a college education, others described Wikipedia contributors as older, wise, or "seasoned travelers."

#### *Wikipedia's Geek Stereotype*

By far the most common image that participants invoked to describe Wikipedia's contributors was that of the solitary techno-geek.

**Lee:** "I'm sure they're locked up in a room... and Wikipedia is the ultimate thing for them... people in their room alone, playing World of Warcraft and things like that."

**Roger:** "Maybe they're home-bound people, or people who have no life..."

**Neil:** "... a bunch of nerds sitting around updating things every second... the nerdy technical guy sitting around in his mother's basement..."

**Russell:** "There are people that live for [Wikipedia]... I imagine them sitting on a chair in their boxer shorts with a catheter and a feeding tube."

These quotations paint an unflattering picture of Wikipedia's contributors. In the imaginations of many participants they are "geeky" or "nerdy," technologically adept, unkempt, unhealthily obsessive, and absorbed with online life. These assertions of obsession share much in common with Sherry Turkle's description of a computer's "holding power" in her seminal book about online identity, *Life on the Screen* [32].

Turkle ultimately finds that “seduction” is an appropriate term when her participants discussed their own obsessions. When my participants focused on the obsessions of others, however, their descriptions were tinged with negative connotations or outright distasteful imagery, as in the case of Russell, who vividly described the medical equipment he imagined kept some Wikipedia contributors at their posts.

## DISCUSSION

### Wikipedia & The Hacker Ethic

In his book *The Hacker Ethic and the Spirit of the Information Age* [12], Pekka Himanen argues that the emerging “Network Society” [6] of the 21<sup>st</sup> century is engendering a new attitude towards work and collaborative effort which he calls *The Hacker Ethic*. As the foil for his description Himanen uses Weber’s notion of The Protestant Ethic [34]. Weber’s seminal piece of social theory argues that the Protestant Work Ethic prescribes work as a duty and dedication towards work as an end in itself. Weber’s central thesis is that this work ethic was a key to the development of a capitalist obsession with profit as a virtuous end in itself.

Himanen contrasts this notion of work with the Hacker Ethic. By tracing the development of “hackerism” and open-source software from the 1960’s onward, Himanen argues that the Hacker Ethic embodies distinctly different attitudes towards work, time, and profit. Himanen paints the picture of passionate, joyful, and creative workers who tackle intrinsically interesting problems with gusto. These hackers work hard, but not because they believe it is their duty or because there is some inherent purpose to work. Rather, they find the challenge to be fun, interesting, and exciting. They eschew profit and freely distribute the fruits of their labor because of their passion and desire to share with the community. Just as Weber argues that The Protestant Ethic was captured in “The Spirit of Capitalism,” Himanen argues that The Hacker Ethic is captured by the “alternative spirit of informationalism” [12] that is invading the Information Age and the Network Society [6].<sup>6</sup>

There are many similarities between Himanen’s notion and the attitudes about motivation that I have presented in the previous sections. My participants believe that Wikipedians are passionate, caring, and interested in the topics they write about or oversee. They believe that contributors share a deep desire to share what they know, to express themselves creatively, and to be actively involved with doing something good for the world. Like Himanen’s hackers, my participants argued that monetary rewards would be bad for Wikipedia, despite the belief that people should be paid for doing good work. They expressed the notion that the pursuit of profit can pollute a system based on intrinsic motivations. My participants believed that individuals are motivated by openness, passion, and creativity, and that they do their best work when they write from the heart.

<sup>6</sup>Himanen himself admits that it is difficult to argue that a notion like The Hacker Ethic could “describe the dominant spirit of a time.” [12] Nonetheless, drawing on Castells, Himanen argues that an ethic which began with a small group of computer programmers is expanding to characterize a new societal attitude towards work.

It is particularly notable that The Hacker Ethic appears not in the discussion of my participants’ own motivations but in motivations they ascribe to others. A key unanswered question is how these attitudes about Wikipedia contributors are formed — my data provides little insight on this question. And yet the assumption that Wikipedia’s editors act on the basis of this new orientation towards work, time, and profit supports Himanen and Castells’ arguments about the re-organization of work in a networked society.

The above discussion suggests several insights about the enabling or constraining influence of perceptions of Wikipedia contributors. First, for my participants the themes of passion and pro-social motivations supported other positive attitudes. For example, perceptions of information quality appeared to be more favorable under the assumption that contributors are intrinsically motivated, benevolent sharers. Certainly passionate and interested people can be wrong and biased — several of my participants explicitly added this caveat — but many who believed that intrinsic motivations are the primary driver of participation drew confidence from that fact. They assumed that contributors working in a system of joyous and creative collaboration provide more reliable information, especially when they are also motivated by the sincere desire to share what they know with the world.

The broad consensus with respect to the detrimental effects of monetary incentives was also notable. Many parts of the the internet are (perhaps by necessity) colored with the faint green tinge of money, a fact which could encourage some to assume self-interested, profit-seeking motives in others. Wikipedia, on the other hand, appears in my participants’ minds to be a kind of hallowed ground, an environment whose intrinsic social and personal rewards are so strong and self-evident that monetary rewards do not even enter into the picture. Several participants made mention of the need to “keep the lights on,” and recognized the importance of the donation-drives that occasionally appear on Wikipedia. And yet the question of who pays for running Wikipedia’s servers seemed to be secondary to the question of who creates the knowledge. As Wikipedia’s stock and trade, knowledge enjoyed an unrivaled status of purity and honor in my participants’ minds. This may partly explain the strong negative reactions to the idea of introducing monetary incentives.

Understanding the group of active Wikipedians through the lens of the Hacker Ethic leads to some potentially negative outcomes as well. While my participants’ descriptions of the expertise, passion, and generosity embodied in the Hacker Ethic were largely positive, they were also descriptions of people who were distinctly “the other.” This was not an orientation towards work that my participants said they shared. Indeed, casting contributors as intellectuals and hackers seemed to communicate that these are not the sorts of people that my participants imagine themselves as — despite overt statements that Wikipedia is for anyone and everyone. So, while there were positive consequences for seeing active Wikipedians in this light, my participants’ view of the Hacker Ethic as foreign and held by an “out-group”

[31] could discourage positive associations and block the positive influences of in-group identification [7, 10].

### Tensions Between Theory & Practice

This analysis reveals some significant tensions in my participants' perceptions. One way to describe these tensions is as a tug of war between the theory of Wikipedia and its real life incarnation. Tensions were particularly evident in discussions about the characteristics of the individuals who write Wikipedia. In the abstract many participants emphasized their perception that Wikipedians could be anyone with information to share and a willingness to contribute. In practice, however, the prevailing perception was that although anyone *could* contribute, it is specific types of people who actually *do*. My participants identified intellectuals and geeks as the primary contributors who keep Wikipedia humming, and in doing so illustrated a tension between the theory of open content creation and their belief that in reality a small number of specially qualified individuals tend to do most of the work. The assumption that special skills or degrees are required could present a real barrier to future participation if potential participants feel they lack those skills or degrees. Furthermore, my participants' belief that active Wikipedians have higher education or special skills could set up an implicit status hierarchy which deters them from progressing towards fuller participation. Interestingly, though my participants discussed Wikipedia topics from burritos to soccer, from local geography to comic books, there was no discussion of the different types of individuals who might contribute to one topic or another. There was even more explicit discussion of the different types of contributors (e.g. spell-checkers versus content creators), but no one suggested that contribution type influenced their perceptions or stereotypes about contributors. Here again the tension between abstract / theoretical and concrete / practical perceptions was evident.

While information quality was not a primary focus of this study, interviews revealed significant tensions on that topic. Many participants said they liked the idea that anyone could write Wikipedia, and were supportive of Wikipedia's open model on an abstract level. Those same people, however, turned quickly to the practical challenges of information quality, coordination, and bias which they believed come from an open model. Many worried about how individual agendas could shape editing behaviors, and reported that their view towards Wikipedia information was deeply influenced by their understanding of how Wikipedia is created and maintained. Put differently, participants liked the idea that Wikipedia could be written by "Joe Schmo" next door, but they were skeptical about Joe himself. Much more investigation is needed to uncover how, exactly, these tensions may manifest themselves in behavior on Wikipedia and influence decisions about participation.

### The Challenge of Negative Stereotypes

One of the most robust findings of this study is my participants' prevalent stereotype of Wikipedians as individuals with negative personal characteristics — closeted obsessives, the real-life hackers who fill their dark and lonely

hours with Wiki-work. It is particularly surprising that negative associations with Wikipedia contributors persisted despite common positive ideas about generosity, the human spirit, and the love of knowledge and sharing. Certainly some of my participants' descriptions were made in jest. Many were accompanied by wry smiles and laughter. Yet behind them is a very real stereotype which has its roots in media and popular culture [11]. The image of the geek, nerd, or hacker has been socially constructed to incorporate nearly all of the qualities my participants ascribed to Wikipedia's contributors: predominantly male, anti-social, unkempt, and essentially autistic [14]. Research on the actual qualities of heavy computer and internet users, much of it conducted in schools, has found that these stereotypes are largely inaccurate [28], yet the prevalence of the stereotype among my sample raises questions about its prevalence more generally.

Negative stereotypes appear to be a significant barrier to the progression of participation for my participants. Put simply, for many the group of engaged Wikipedians has a variety of undesirable characteristics with which some users may not want to be associated. Leaving aside these overt negative associations, my participants were still unlikely to identify with active contributors because of the belief that group membership would require special qualifications or a work ethic which they could appreciate but not share. Looking at my participants' perceptions from either angle, with respect to active Wikipedians the answer to the question "Are these my kind of people?" appears often to be a resounding "No."

### IMPLICATIONS & FUTURE WORK

The above discussion of the Hacker Ethic is not merely philosophical. If there is an ongoing shift in the perception of online work, and if Wikipedia is an epicenter of that shift, this study provides clear directions for future theoretical and design-oriented research. At the highest level, these results imply that Wikipedia would benefit from acting to maintain itself as a paradigmatic example of the "alternative spirit of informationalism" [12]. Indeed, the fact that cultural attitudes about Wikipedia are so clearly group-focused may help to explain its success. In order to protect this valuable resource, future research should carefully consider the design of Wikipedia fund-raising campaigns. For example, Wikipedia may investigate targeting its fund-raising campaigns towards more active users who have a better sense of why fund-raising is necessary and on what the money will be spent. Most of my participants understood the need to "keep the lights on." However, a prevailing opinion that it is relatively free from the biases and pollution of monetary concerns benefits Wikipedia. Future research should also investigate the influences of Wikipedia's unique position on perceptions of information quality.

This study has also illustrated that the challenge of negative stereotypes of contributors is worthy of serious scrutiny. Wikipedia is similar to other online collaborative systems (e.g. other wikis, open-source software) in that it embodies a deliberate design decision to hide the identities of individual authors in favor of a kind of collective authorship. This decision in favor of collective authorship has

consequences which are to date insufficiently investigated. One consequence in need of future study is the potential that removing individual attribution allows users to start with their assumptions about other contributors and then engage in a kind of free association. In the absence of other specific information, this process may have encouraged my participants to fill in the gaps with stereotypes such as the “geek” or the “hacker” which are common in popular media and associated with the domain of the web [13]. The fact that my participants had robust assumptions about active contributors despite the fact that few knew any personally provides some evidence of this. Theories of computer-mediated communication such as “hyper-personal communication” [33] suggest this process occurs often in online interaction, but we know little about its operation in online collaborative communities such as Wikipedia.

Revealing individual authorship could help combat negative stereotypes but would also fundamentally change the nature of Wikipedia. However, my results imply that Wikipedia could investigate less drastic design solutions. For example, Wikipedia’s ongoing educational efforts could include “meet the author” informational campaigns which highlight the identities of heavy contributors and emphasize their pro-social motivations. In other words, Wikipedia can combat speculative answers to the question “Who writes Wikipedia?” by explicitly revealing and promoting that information to its users. Bringing potential contributors closer to actual contributors — especially when newcomers can personally identify with already active Wikipedians — might encourage them to make positive rather than negative attributions given incomplete information, and to identify with them more strongly.

Few online collaborative systems enjoy Wikipedia’s status as a cultural icon. However, in any online system potential contributors are likely to construct a mental model of who contributors are and then compare themselves to it. The specific challenge of Wikipedia’s decision to hide individual authorship might give other systems reason to think twice before making a similar decision. Individual attribution not only provides a status and reputation incentive for many contributors but also a plethora of information about who contributors actually are. Furthermore, when systems design for many types of participation at many different levels of investment they can avoid the potentially stark distinction between contributor and non-contributor that new Wikipedia users face. As newcomers participate in increasingly involved ways, their sense of the identification with the product and its community of creators is likely to deepen and grow [18] until stereotypes of contributors are less relevant and identification as a group member occurs organically. These issues are certainly worthy of future study.

## CONCLUSION

In this study I have focused attention on potential contributors’ assumptions about active contributors. These assumptions, I have argued, can constrain or enable users from progressing to richer forms of participation. My

results constitute evidence that at least some potential contributors tell themselves “active contributors are not my kind of people.” Whether positive (the Hacker Ethic) or negative (the Wikipedia “geek” stereotype), most of my participants concluded that they either could not identify as an active contributor or would not want to. However, much future research remains. This study has focused on a deep exploration of meaning in an interview setting. The consistent repetition of ideas and themes within my sample lends weight to the results. However, future research should establish representativeness beyond my sample and beyond Wikipedia. Having identified some potentially problematic stereotypes, survey research in particular would help determine how widespread such stereotypes might be. Armed with this information, Wikipedia could design an informed strategy for cultivating new users over time, reinvigorating its user base and drawing in a more diverse array of invested users. Furthermore, understanding the kinds of stories people tell themselves about their own place in complex collaborative communities will improve our ability to design and maintain sustainable online collaboration.

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