Defining Notability:

On Wikipedia's Approach to the Inclusion and Exclusion of Content

A thesis presented

by

Daniel Lorenzo Leonard

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ABSTRACT

Name: Daniel Leonard

Title: Defining Notability: On Wikipedia's Approach to the Inclusion and Exclusion of Content

Abstract: Wikipedia is perhaps the most widely-read source of knowledge on the internet today. But how is it that the Wikipedia community decides which facts to include and exclude from Wikipedia articles, and which topics are worthy of their own articles in the first place? I argue that Wikipedia's policies on "neutral point of view," "reliable sources," and "notability" play a major role in determining what content is included and excluded from the site. I also contend that these policies are overly restrictive, which leads to epistemically detrimental content gaps in Wikipedia's scholarship. Women and people of color make up a small percent of Wikipedia's editor base; I assert that this has contributed to Wikipedia's restrictive policies and the continued presence of content gaps on the site. I conclude by describing some efforts to fill the gaps in Wikipedia's content by people both within and outside of the Wikipedia community.

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I am also grateful to Professor James Doyle, who helped me refine the philosophy-oriented sections of this thesis. Additionally, I would like to thank Professor Nadine Weidman for her excellent guidance on how to manage the thesis process, and her practical advice on issues like formatting and interviewing.

I'd also like to acknowledge the many Wikipedians who gave up their time to speak with me, as well as those I interviewed outside the Wikipedia community. I remain very impressed by the people who volunteer to create a free source of knowledge on the internet, and those who are working to improve that source.

Additionally, I'd like to thank my mom and my dad for their guidance — both directly related to this thesis and to educational pursuits more broadly. I attribute my curiosity and drive to their influence. Likewise, I'm extremely grateful to my grandmother, aunts, and uncles who have helped finance my education since childhood. I'd also like to thank Nathânia for her advice and motivation throughout this process, and I wish her luck on her own thesis. Finally, I appreciate my friends from SJP who helped me de-stress with movies and games over the past year.

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Introduction

As of 2021, Wikipedia is celebrating its 20th birthday; in January, its logo was temporarily updated to read "20 years of WIKIPEDIA: Over One Billion Edits."[1] Wikipedia was founded in 2001, and in the two decades of its existence, it has grown to become one of the most popular sites on the internet. According to Alexa's website rankings, Wikipedia is the 13th most visited website in the world, ranking just below Amazon.com.[2] Per its own data, Wikipedia was visited by two billion unique devices in February 2021 alone; how many unique readers this translates to is unclear, but even a conservative estimate would still be in the hundreds of millions.[3] For many of us, visiting Wikipedia is a weekly — if not daily — occurrence.

From this popularity, it's evident that Wikipedia shapes how millions of people perceive and understand thousands of different topics. Thus, it's critical for both historians and philosophers to consider how Wikipedia approaches the communication of information; what factors among the Wikipedia community (like formal Wikipedia policies) determine what content will end up on a Wikipedia page? Many attempts to answer this question have focused on studying Wikipedia's accuracy. My focus will be on a different topic — that of inclusion and exclusion.

Specifically, I ask: How does the Wikipedia community determine what content to include and exclude from the site? This is a critical and understudied question; what Wikipedia decides to say and not say about a given topic will shape how members of its massive reader base perceive that topic.[4] Embedded in my research was a secondary, more philosophical,

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[1] *Wikipedia*, s.v. "Wikipedia:Wikipedia logos," https://en.wikipedia.org/wiki/Wikipedia:Wikipedia_logos (accessed March 1, 2021).

[2] "The top 500 sites on the web," *Alexa*, https://www.alexa.com/topsites (accessed March 1, 2021).

[3] "Wikimedia statistics," *Wikimedia Foundation*, https://stats.wikimedia.org/#/all-wikipedia-projects (accessed March 1, 2021).

[4] Occasionally, I'll use the term "Wikipedia" as a stand-in for "the Wikipedia community."

question: Has Wikipedia been able to strike a balance between including relevant information and excluding extraneous content? Based on my research, I'll argue (with the help of virtue epistemology) that Wikipedia tends to err on the side of excessive exclusion, which has created deleterious gaps in its content. I'll also assert that, besides the website's policies, Wikipedia's demographic homogeneity is one of the primary reasons for its content gaps.

In researching Wikipedia's inclusion and exclusion, I relied on a number of primary sources. Foremost among these were extant Wikipedia pages. On Wikipedia, every article comes with a tab labelled "Edit history" where any user can view the history of changes to that article, dating back to its inception; likewise, each article has a "Talk" page where users can debate potential changes. I relied on both of these in my research. While I looked at many articles, I focused my attention on Wikipedia's policy pages — especially the ones on neutrality, sourcing, and notability.

Interviews are also central to my analysis. Over the course of my research, I interviewed three active editors of Wikipedia's "Climate change" article and four active editors of the "COVID-19 pandemic" article (see Chapter 1); I interviewed two Wikipedia editors who identify as "deletionists" and two who identify as "inclusionists" (see Chapter 2); and I interviewed the founder of WikiProject Women Scientists, the founder of WikiProject Women in Red, two leaders of the initiative *Whose Knowledge?*, and one other long-time Wikipedia editor (see Chapter 3). I also utilized some recorded interviews of the founder of Wikipedia, Jimmy Wales, that I was able to find online.

Wikipedia articles and interviews were the foundation of my primary source research, but I relied on several others besides these. For example, to gain insight into the historical context for

the concept of "notability," I looked at encyclopedias and biographical dictionaries from the 18th, 19th, and 20th centuries — particularly examining their prefaces.

Secondary sources on the history and makeup of the Wikipedia community were also critical. As I mentioned, few studies have been conducted into how Wikipedia includes and excludes content; far more have centered around the website's accuracy. I do engage with some of these accuracy-oriented studies in Chapter 1. More central to my research, though, were secondary sources about how the Wikipedia community carries out its intended functions. These include Andrew Lih's overview of the history of early Wikipedia, and Piotr Konieczny's analysis of Wikipedia's hierarchical structure, among others.[5][6] One study I rely on in particular was conducted by Aaron Halfaker et. al.; these researchers found that Wikipedia's formation of strict policies in response to its surge of popularity in 2006-2007 caused its editor base to shrink as a result.[7] I also draw upon several articles from *Critical Point of View: A Wikipedia Reader* — a compendium of essays on various facets of Wikipedia's culture and methodology.[8] None of these sources explicitly centered around Wikipedia's approach to the inclusion and exclusion of content; this is my thesis' unique contribution.

As for my secondary question on whether or not Wikipedia has struck an appropriate balance between inclusion and exclusion, I reference a few sources from the field of virtue epistemology; Alvin Goldman's essay "Foundations of Social Epistemics" is most central.[9] I also directly respond to a piece by Don Fallis which asserts that Wikipedia's epistemic virtues

[5] Andrew Lih, *The Wikipedia Revolution: How a Bunch of Nobodies Created the World's Greatest Encyclopedia* (1st ed. New York: Hyperion, 2009).
[6] Piotr Konieczny, "Adhocratic Governance in the Internet Age: A Case of Wikipedia," *Journal of Information Technology & Politics* 7, no. 4 (2010): 263-83.
[7] Aaron Halfaker, R. Stuart Geiger, Jonathan T. Morgan, and John Riedl, "The Rise and Decline of an Open Collaboration System: How Wikipedia's Reaction to Popularity Is Causing Its Decline," *The American Behavioral Scientist* (Beverly Hills) 57, no. 5 (2013): 664-88.
[8] Geert Lovink and Nathaniel Tkacz, *Critical Point of View: A Wikipedia Reader* (INC Reader; 7. Amsterdam: Institute of Network Cultures, 2011).
[9] Alvin I. Goldman, "Foundations of Social Epistemics," *Synthese* (Dordrecht) 73, no. 1 (1987): 109-144.

outweigh its vices; I argue that Fallis ignores the fact that Wikipedia's unhelpful omissions of content are a major epistemic vice preventing the website from becoming as epistemically valuable as it could otherwise be.[10]

Chapter 1 of this thesis begins with some background about how Wikipedia was founded and how the site functions today. In particular, I hope to highlight some of the shortcomings of Wikipedia's approach to spreading knowledge that have been present from the site's beginning; the website's homogeneity has long been one of its most glaring concerns. Then, I'll introduce the concept of "virtue epistemology," and attempt to argue that — while Wikipedia does possess a number of epistemic virtues — its excessive omission of content is a major epistemic vice. Next, I'll examine Wikipedia's policies that govern what information ought to be included and excluded from existing articles. I'll finally turn to interviews with active editors of the "Climate change" and "COVID-19 pandemic" Wikipedia articles to get a sense for how that inclusion and exclusion plays out in practice.

Chapter 2 focuses on a similar, but distinct, question — how does Wikipedia determine what topics are worthy of gaining their own articles? I've found that "notability" is the concept that Wikipedia relies upon in making these judgments. So, Chapter 2 will begin by considering the historical context for notability; I'll specifically examine how encyclopedias and biographical dictionaries determined what content was "notable" enough for inclusion. I'll argue that Wikipedia is unique in having clearly-defined standards for notability, as few of the reference works that predated Wikipedia had such standards. I'll then examine Wikipedia's notability policies themselves, considering both what they say and how they were developed. Finally, I'll look at the debate between "inclusionists" and "deletionists" that has played out on Wikipedia

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[10] Don Fallis, "Toward an Epistemology of Wikipedia," *Journal of the American Society for Information Science and Technology* 59, no. 10 (2008): 1662-74.

since the mid-2000s. I hope to show that deletionist concerns over excessive inclusion are overblown, while inclusionist concerns over excessive deletion ought to be given more attention by the Wikipedia community at large.

Chapter 3 examines the efforts that people and groups have taken to address the gaps in Wikipedia's content. I'll start by analyzing these gaps, providing a bit of quantitative data on the areas of Wikipedia that are lacking.[11] I'll then consider how "insiders" — members of the Wikipedia community — have had some success in addressing these gaps. I'll contrast this with the efforts of "outsiders," who see a much higher rate of having their edits overturned.

Ultimately, I hope to show that Wikipedia's formal policies play an outsize role in determining what content ends up on the site; the policies on "neutral point of view" and "reliable sources" govern what is included and excluded from existing articles, while the policy on "notability" determines what topics warrant new articles. My thesis will demonstrate how these policies emerged and how they're enforced today; I'll argue that both processes are biased in favor of majority viewpoints, which leads to greater exclusion of content relevant to minority groups. Ultimately, I'll suggest that changing these policies would be helpful to Wikipedia's epistemic goals, but that many groups have had some success addressing Wikipedia's content gaps by working around the policies that currently exist. I'll also assert that Wikipedia should take steps to diversify its largely white, largely male editor base, as this homogeneity directly leads to gaps in Wikipedia's content.

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[11] Unfortunately, as you'll see, few quantitative analyses of Wikipedia exist, so the data is scant.

Chapter 1: On "neutrality" and "reliable sources" — How Wikipedians determine what facts to include and exclude from articles

In constructing a digital encyclopedia, the editors of Wikipedia have had to make many conscious decisions about what content should be included on the site and what content should be excluded. In Chapter 2, we'll look at Wikipedia's policies governing what topics are "notable" enough to warrant new articles. In this chapter, we'll consider how Wikipedians decide what facts to include and exclude from *existing* Wikipedia articles.

This chapter will begin with a brief summary of the history of Wikipedia's founding, as well as a discussion of how the Wikipedia model works. I will then attempt to use virtue epistemology to demonstrate that excluding too much content from Wikipedia can have detrimental epistemic effects. Following this, I will analyze two central policy areas that govern Wikipedias' content: its policies on "neutral point of view" and its policies on "reliable sources." I will conclude the chapter by discussing my interviews with Wikipedians who actively edit two case-study articles: "Climate change" and "COVID-19 pandemic."

I hope to demonstrate that many active Wikipedians rely heavily on the website's neutrality and sourcing policies in making decisions about what content to include and exclude. Throughout this thesis, I also hope to demonstrate that these policies are overly restrictive in their implementation, which makes Wikipedia less epistemically valuable than it could be — particularly in regards to the "content gaps" that form as a result.

1.1 Background on the Wikipedia project

This thesis is focused on the history of Wikipedia's approach to the inclusion and exclusion of content. To contextualize how this approach has shifted over time, it's important to

first understand the events that led up to the creation of Wikipedia in 2001. Likewise, it's critical

to grasp how Wikipedia functions behind the scenes — what its policies are, how its users are

organized, etc. Thus, this section will provide a short history of Wikipedia's founding, as well as

an overview of how the website functions. I hope to show that some of Wikipedia's epistemic

failings — particularly its lack of a diverse editor base — have been present from the very start.

1.1.1 The failure of Nupedia, and the founding of Wikipedia

Wikipedia was launched in 2001 by founder Jimmy Wales.[12] Wales was born in

Huntsville, Alabama in 1966; his house was often stocked with encyclopedias due to his

mother's job as a schoolteacher.[13] Wales received a Master's in Finance from the University of

Alabama, but dropped out of his PhD program in order to begin his professional career.[14] In

1994, he began working at Chicago Options Associates.[15] Two years later — seeing the vast

money-making potential of the early internet — Wales and a colleague founded a dot-com

start-up known as "Bomis."[16] Wales has described Bomis as a "guy-oriented search engine" with

"a market similar to Maxim magazine."[17] Bomis was a web portal which included, among other

things, an erotic photograph subscription called "Bomis Babes."[18]

Towards the end of the 1990s, Wales used the revenue he had acquired from Bomis to

pursue a project he had been considering for years: a digital encyclopedia.[19] Wales' online

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[12] There has been controversy over whether Wales deserves the title of "sole founder" of Wikipedia, or if he and
Larry Sanger both deserve the titles of "co-founder." I won't weigh in on that, but will be referring to Jimmy Wales
as the founder for convenience; he has also played a much more active role in Wikipedia's story than Sanger has.
[13] Andrew Lih, *The Wikipedia Revolution: How a Bunch of Nobodies Created the World's Greatest Encyclopedia*
(1st ed. New York: Hyperion, 2009), 18.
[14] Ibid, 19.
[15] Ibid, 20.
[16] Ibid, 21.
[17] "Q&A with Jimmy Wales," C-SPAN video, September 12, 2005,
https://www.c-span.org/video/?188855-1/qa-jimmy-wales (accessed March 1, 2021).
[18] Lih, *The Wikipedia Revolution*, 31.
[19] Ibid, 32.

encyclopedia would not be the first of its kind; Microsoft had already released the digital

"Microsoft Encarta" encyclopedia in 1993.[20] But Encarta was a yearly subscription service, and

Wales wanted to create an encyclopedia that would be free to all users.

Nupedia, Wales' first attempt, was a failure. Nupedia launched in March of 2000, and

was an online, freely-accessible encyclopedia — much like Wikipedia, which would be founded

a year later.[21] But there were two fundamental differences between Nupedia and its successor.

First, Nupedia was designed to run advertisements.[22] While Wales wanted Nupedia to be free to

all users, he also started the project with the intention of turning a profit by selling ad-space on

Nupedia's articles.

Second, Nupedia was envisioned as a more academic undertaking than what would later

become Wikipedia. Unlike Wikipedia, which is written by anonymous contributors, Nupedia was

edited by experts with credentials in their fields. There was a strict hierarchy among users; while

anyone could apply to be a Nupedia article writer, they would have to submit each article for

review to one of Nupedia's credentialed experts.[23] After modifications and a stage of open peer

review, those experts would send each article to Nupedia's chief copy editor, who in turn would

submit them to Larry Sanger for final approval.[24]

Larry Sanger was Nupedia's editor-in-chief; at the time, he was in the final year of his

philosophy PhD program.[25] Larry Sanger had met Jimmy Wales on an online discussion board

[20] Randall Stross, "Encyclopedic Knowledge, Then vs. Now," *New York Times*, May 2, 2009,
https://www.nytimes.com/2009/05/03/business/03digi.html (accessed March 1, 2021).
[21] Liane Gouthro, "Building the world's biggest encyclopedia," *CNN*, March 14, 2000,
https://www.cnn.com/2000/TECH/computing/03/14/nupedia.idg/index.html (accessed March 1, 2021).
[22] Mark Frauenfelder, "The next generation of line encyclopedias," *CNN*, November 21, 2000,
https://www.cnn.com/2000/TECH/computing/11/21/net.gen.encyclopedias.idg/index.html (accessed March 1, 2021).
[23] Lih, *The Wikipedia Revolution*, 38.
[24] Lih, *The Wikipedia Revolution*, 39.
[25] Ibid, 32.

dedicated to Ayn-Randian "Objectivist" philosophy.[26] Since Wales wanted Nupedia to be an

academic undertaking, he chose Sanger to be the academic who would run the enterprise.[27]

The process of a Nupedia article going from the draft stage to Sanger's "desk" would take

weeks, if not months. Jimmy Wales once tried to write a Nupedia article of his own, and later

reported that he hated the experience, comparing it to being forced to do homework.[28] Due to its

strict and lengthy process, Nupedia only released about two dozen completed articles in its first

year.[29] Nupedia was a failure, both as a financial venture and as a source of knowledge.

But Jimmy Wales' vision of a digital encyclopedia would be saved by the "wiki" model,

a system designed by Ward Cunningham in 1995.[30] When deployed on a website, the

"UseModWiki" software allows any internet user to edit any page of that site.[31] Obviously,

allowing anyone to edit anything was a radical deviation from Nupedia's strict standards, so

Wales launched Wikipedia as a side experiment in January of 2001.

Wales recalls being surprised by how much attention Wikipedia received from early

internet communities.[32] Many of the first Wikipedians came from Slashdot.org, a user-

contributed news site much like today's more famous Reddit.[33] Slashdot was primarily a place

for tech geeks to meet and discuss tech-related news. When news of Wikipedia hit Slashdot in

February of 2001, many Slashdotters excitedly flocked to the site, forming Wikipedia's first core

editor base.[34] In subsequent weeks, other early internet users joined in as well. By the end of its

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[26] Ibid.
[27] Ibid, 33.
[28] Ibid, 41.
[29] Larry Sanger, "The Early History of Nupedia and Wikipedia: A Memoir," *Slashdot*, April 18, 2005, https://features.slashdot.org/story/05/04/18/164213/the-early-history-of-nupedia-and-wikipedia-a-memoir (accessed March 1, 2021).
[30] Lih, *The Wikipedia Revolution*, 44.
[31] Ibid.
[32] Jimmy Wales, "Jimmy Wales: The Story of Wikipedia," YouTube video, *Foundation for Economic Education*, June 19, 2017, https://www.youtube.com/watch?v=KwAku7YcVIU (accessed March 1, 2021).
[33] Lih, *The Wikipedia Revolution*, 68.
[34] Ibid, 69.

first month, Wikipedia already had around 600 articles, demonstrating the project's tremendous potential.[35]

Since Wikipedia drew its first editors from tech-oriented communities on the early internet, Wikipedia's editor base has long possessed a similar demographic to those groups: young, white, educated, and male. There's no demographic data from the earliest days of Wikipedia, but in a 2011 survey by the Wikimedia Community, 91% of Wikipedia editors self-identified as male.[36] Per the same survey, a large majority of Wikipedians live in the United States and Europe, a majority have at least a Bachelor's degree, and 72% of Wikipedians are under 40 years of age.[37] In later sections, I hope to demonstrate that Wikipedia's homogeneity has adversely affected both its content and its policies. When asked about Wikipedia's demographics in more recent interviews, Wales has suggested that addressing the gender imbalance among editors should be one of the Wikimedia Foundation's top priorities, but there's not much evidence to suggest that the project's homogeneity bothered him much in Wikipedia's early days; Bomis proves that Wales had no qualms about using the internet to market exclusively to males.[38]

Larry Sanger stuck around to help run Wikipedia, but not for long; he quickly became frustrated by Wikipedia's chaotic nature.[39] Sanger spent just one year at the project, but in that year, he helped to form some of Wikipedia's foundational policies; Sanger viewed formal,

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[35] Ibid, 67.

[36] "Wikipedia Editors Survey 2011 April: Women Editors," *Wikimedia Foundation*, April 2011, https://meta.wikimedia.org/wiki/Editor_Survey_2011/Women_Editors (accessed March 1, 2021).

[37] "Wikipedia Editors Survey 2011 April: Profiles," *Wikimedia Foundation*, April 2011, https://meta.wikimedia.org/wiki/Editor_Survey_2011/Profiles (accessed March 1, 2021).

[38] For examples of these recent interviews, see Jimmy Wales, "Russian Blackouts, Neutrality and Trusting Wikipedia," YouTube video, *PBS NewsHour*, July 10, 2012, https://www.youtube.com/watch?v=95vh19qctwY (accessed March 1, 2021) and Jimmy Wales, "Jimmy Wales interview for #WikipediaDay 2019," YouTube video, *Wikimedia UK*, January 15, 2019, https://www.youtube.com/watch?v=Lqrz1BRRPWk (accessed March 1, 2021).

[39] Lih, *The Wikipedia Revolution*, 171.

enforced rules as a critical step for an entity as large as Wikipedia.[40] Ultimately, Sanger couldn't

tolerate what he perceived as a lack of respect for expertise (and excessive leniency towards

trolls) among the Wikipedia community.[41] So, in 2002, Sanger abandoned the Wikipedia

project.[42] In 2006, Sanger would create a competing digital encyclopedia, "Citizendium," which

returned to Nupedia's roots by recruiting credentialed experts to oversee the project.[43] But, much

like Nupedia, Citizendium failed; by 2011, it had fewer than 100 active contributors.[44]

1.1.2 How the Wikipedia model works

In the 20 years since its founding, Wikipedia has become a go-to source of knowledge for

millions (if not billions) of internet users across the globe.[45] But few Wikipedia readers know

how Wikipedia's articles are actually produced. To ground our discussion of Wikipedia's

approach to selecting content, let's consider a brief overview of the Wikipedia model.

First, a point of clarification: distinct "Wikipedias" exist across 306 languages.[46] Each of

these are edited by unique communities of users (with some crossover), and all are coordinated

by the Wikimedia Foundation. The English Wikipedia is just one of these 306. That said, to

maintain a reasonable scope, this thesis will focus *only* on the English Wikipedia — which is

also the oldest and largest of them all.[47]

Behind the layer of Wikipedia's "finished" articles is a vast network of policy pages,

essays, "Talk" page debates, and user hierarchy. We'll return to a number of Wikipedia's core

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[40] Ibid, 112.
[41] Ibid, 173-74.
[42] Ibid, 175.
[43] *Citizendium*, s.v. "CZ:Policies," https://en.citizendium.org/wiki/CZ:Policies (accessed March 1, 2021).
[44] Timothy Lee, "Citizendium turns five, but the Wikipedia fork is dead in the water," *Ars Technica,* October 27, 2011, https://arstechnica.com/tech-policy/2011/10/five-year-old-wikipedia-fork-is-dead-in-the-water/ (accessed March 1, 2021).
[45] "Wikimedia statistics," *Wikimedia Foundation*, Wikimedia.org, https://stats.wikimedia.org/#/all-wikipedia-projects (accessed March 1, 2021).
[46] *Wikipedia*, s.v. "List of Wikipedias," https://en.wikipedia.org/wiki/List_of_Wikipedias (accessed March 1, 2021).
[47] Ibid. See table labeled "Edition details" for the article count of the various language Wikipedias.

policies later in this thesis, introducing them in the sections where they become relevant. For now, let's look at the basics of Wikipedia's crowdsourced approach to the formation of an encyclopedia.

As we've seen, Wikipedia calls itself "the free encyclopedia that anyone can edit." This is, for the most part, true. Wikipedia is indeed "free" to anyone with an internet connection; Additionally, Wikipedia is a nonprofit (unlike Nupedia), and has never run ads.[48] In 2002, Jimmy Wales openly considered the possibility of running ads on Wikipedia, but this angered many editors, some of whom abandoned the project entirely.[49] In fact, the entire Spanish Wikipedia broke off to form a new project, the "Enciclopedia Libre."[50] Realizing how central the non-profit issue is to many of the people who volunteer to edit Wikipedia, Wales has never openly suggested running ads again. Of course, Wikipedia still needs money to remain in operation, and it gains that money through donations. This includes donations from individuals, but also from companies; Google, for example, gave $2 million to the Wikimedia Foundation in 2019.[51]

The "anyone can edit" part of Wikipedia's tagline is also true, at least in theory. Anyone, whether or not they've officially registered a user account, can hit the "Edit source" button on any Wikipedia page and add or delete content. There are some exceptions to this; some vandals have been IP-blocked from ever editing Wikipedia again, and certain pages are put in "protected" mode requiring specific user credentials in order to edit them.[52][53] But, in general, any internet

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[48] "About," *Wikimedia Foundation*, https://wikimediafoundation.org/about/ (accessed March 1, 2021).
[49] Edgar Enyedy and Nathaniel Tkacz, "'Good luck with your wikiPAIDia': Reflections on the 2002 Fork of the Spanish Wikipedia," in *Critical Point of View: A Wikipedia Reader* (Amsterdam: Institute of Network Cultures, 2011), 110.
[50] Ibid.
[51] Megan Rose Dickey, "Google.org donates $2 million to Wikipedia's parent org," *Tech Crunch*, January 22, 2019, https://techcrunch.com/2019/01/22/google-org-donates-2-million-to-wikipedias-parent-org/ (accessed March 1, 2021).
[52] *Wikipedia*, s.v. "Wikipedia:Blocking policy," https://en.wikipedia.org/wiki/Wikipedia:Blocking_policy (accessed March 1, 2021).
[53] *Wikipedia*, s.v. "Wikipedia:Protection policy," https://en.wikipedia.org/wiki/Wikipedia:Protection_policy (accessed March 1, 2021).

user can edit any page of Wikipedia. (Additionally, anyone can create a *new* article on

Wikipedia, but we'll examine the logistics of that in Chapter 2.)

That said, in practice, there's a good chance your edit to Wikipedia will be "reverted," or

undone. Wikipedia has bots that automatically flag and revert edits that have telltale signs of

vandalism.[54] Recently, scholars have debated whether or not Wikipedia's use of bots is helpful,

both in terms of fostering a healthy community and meeting Wikipedia's epistemic goals.[55] Yet

bots are typically only triggered by obvious indicators of vandalism, such as certain keywords or

IP address activity; rarely would a bot make a more impactful decision about what content

should remain or be removed from a Wikipedia article.[56]

We'll assume that you haven't set off Wikipedia's vandalism detection bots. In that case,

your edit to a Wikipedia page will be manually reviewed by any human editor who has that page

on their "Watch" list — that is, Wikipedians who dedicate their time to editing and maintaining

the page in question. Many of these active editors will have been editing Wikipedia for years. If

your edit breaks any of Wikipedia's policies or guidelines — if it's not properly sourced, isn't

written in a "neutral" tone, etc. — it will almost certainly be reverted by one of these users.

As you'll see later in this thesis, many of the Wikipedians I've interviewed have lamented

the high degree of institutional knowledge required for a newcomer to get their edit to remain on

Wikipedia.[57] As Wikipedia's bureaucracy has expanded and its policies have grown in both

length and number since the mid-2000s, this knowledge barrier has increased over time. At the

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[54] Paul B. de Laat, "The Use of Software Tools and Autonomous Bots against Vandalism: Eroding Wikipedia's Moral Order?," *Ethics and Information Technology 17*, no. 3 (2015): 175-88.

[55] For a piece highlighting the ethical concerns of Wikipedia's bots, see Paul B. de Laat, "The Use of Software Tools and Autonomous Bots against Vandalism: Eroding Wikipedia's Moral Order?," *Ethics and Information Technology 17*, no. 3 (2015): 175-88. Alternately, for a piece that shows the helpful role that bots can play, see R. Stuart Geiger and David Ribes, "The Work of Sustaining Order in Wikipedia," *Proceedings of the 2010 ACM Conference on Computer Supported Cooperative Work* (2010): 117-26.

[56] Ibid — specifically, the Geiger and Ribes piece.

[57] See, in particular, my interviews with Emily Temple-Wood, Rosie Stephenson-Goodknight, and Jessamyn West in Chapter 3.

same time, Wikipedia's number of newcomer editors has declined. Per Aaron Halfaker et. al., Wikipedia's number of active contributors increased during the early 2000s, peaked in March of 2007 (at 56,400 active editors), then entered a period of significant decline.[58] Wikipedia's number of active editors has flatlined since Halfaker's paper, increasing slightly in the late 2010s, but has never again come close to its 2007 peak.[59]

Halfaker et. al. attribute Wikipedia's decline in popularity to its *reaction* to popularity. When Wikipedia saw an influx of new contributors around 2007, the community developed a new "set of policies, and a suite of algorithmic tools" to enforce community norms.[60] "Over time, these changes resulted in a new Wikipedia, in which newcomers are rudely greeted by automated quality control systems and are overwhelmed by the complexity of the rule system," Halfaker et. al. write.[61] From their research, Halfaker et. al. conclude that this growing complexity is a major reason for the decline in new editors on Wikipedia.[62] As we'll see, Wikipedia's inability to be welcoming towards newcomers has prevented its community from growing large and diverse, which in turn contributes to several of the epistemic shortcomings of the website — most notably, its glaring content gaps.

Now, if you do have one of your edits reverted on Wikipedia, the editor who performed the revert will ideally leave a comment saying why he or she did so; it's generally considered bad practice to revert with no explanation. Technically, you could then decide to revert the other editor's revert, reinstating your initial edit. But, to avoid situations like this, Wikipedia has implemented the "three-revert rule," or 3RR:

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[58] Aaron Halfaker, R. Stuart Geiger, Jonathan T. Morgan, and John Riedl, "The Rise and Decline of an Open Collaboration System: How Wikipedia's Reaction to Popularity Is Causing Its Decline," *The American Behavioral Scientist* (Beverly Hills) 57, no. 5 (2013): 665.
[59] *Wikipedia*, s.v. "Wikipedia:Wikipedians," https://en.wikipedia.org/wiki/Wikipedia:Wikipedians (accessed March 1, 2021).
[60] Halfaker et. al., "The Rise and Decline of an Open Collaboration System," 666.
[61] Ibid.
[62] Ibid.

> An editor must not perform more than three reverts on a single page—whether involving the same or different material—within a 24-hour period. An edit or a series of consecutive edits that undoes other editors' actions—whether in whole or in part—counts as a revert. Violations of the rule often attract blocks of at least 24 hours. Fourth reverts just outside the 24-hour period may also be taken as evidence of edit-warring, especially if repeated or combined with other edit-warring behavior.[63]

On that same page on "Edit Warring," Wikipedia encourages its users to resolve disputes peacefully and via consensus. But, as a last resort, users can also request the attention of the Arbitration Committee.[64] After hearing both sides of a dispute, the Wikipedia administrators that make up the Arbitration Committee will issue a binding judgment — and, in extreme cases, issue a ban on one of the users.[65]

Every Wikipedia article has an "Edit history" page — where you can view (and revert) every edit that has been made to that page, by every user, since the page was created. Additionally, every article has a "Talk" page. This is where users can discuss potential changes to the article, and ideally resolve any disputes that they may have. "Talk" page debates are common, and generally center around larger potential changes to articles; smaller changes are made without the need for discussion.

In this thesis, I'll refer to Wikipedia editors as "Wikipedians," as they also refer to themselves. This is a broad term; you and I can become "Wikipedians" as soon as we make our first edit to any Wikipedia page. That said, the term generally refers to someone who is more committed to the Wikipedia project — someone who edits Wikipedia frequently, or at least periodically. My use of the term "Wikipedian" will generally carry this stronger connotation.

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[63] *Wikipedia*, s.v. "Wikipedia:Edit warring," https://en.wikipedia.org/wiki/Wikipedia:Edit_warring (accessed March 1, 2021).

[64] *Wikipedia*, s.v. "Wikipedia:Arbitration Committee," https://en.wikipedia.org/wiki/Wikipedia:Arbitration_Committee (accessed March 1, 2021).

[65] *Wikipedia*, s.v. "Wikipedia:Dispute resolution," https://en.wikipedia.org/wiki/Wikipedia:Dispute_resolution (accessed March 1, 2021).

There is a hierarchy among Wikipedians, both informally and formally. Informally, the

longer you've been a Wikipedian, the more sway your opinions have over other members of the

community. But, formally, there are:

> **Unregistered users:** Editors who have not officially created accounts with Wikipedia. These editors can edit most, but not all, Wikipedia articles.
> **Autoconfirmed users:** Editors who have set up accounts and have made at least 10 edits. Autoconfirmed users are divided into many sub-categories with varying privileges. For example, "Patrollers" are given access to a list of all the newly-created articles on Wikipedia, and they can mark these articles as "patrolled" if they think they're worthy of remaining on Wikipedia.[66]
> **Administrators:** These Wikipedians can delete pages, block users, resolve disputes in the Arbitration Committee, and more. Admins are selected via a vote among users on the "Requests for adminship" forum.[67]

And many more designations besides these. (The list above is my rough summary of the page

"Wikipedia:User access levels."[68]) All of the Wikipedians in this list perform their work on a

volunteer basis. The only salaried "Wikipedians" are the employees of the Wikimedia

Foundation — 450 in all — and they're typically more involved with logistics and fundraising

than overseeing the editing process.[69]

Wikipedia's organizational model has been called many things. Some scholars have

described Wikipedia as anarchic.[70] Others have emphasized the surprisingly extensive

bureaucracy and hierarchy that grounds Wikipedia. Piotr Konieczy has argued that the best term

for Wikipedia's structure is an "adhocracy" — a flexible semi-bureaucracy where the governing

policies are formed and dissolved as the community sees fit.[71] This, to me, also seems to be the

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[66] *Wikipedia*, s.v. "Wikipedia:New pages patrol/Reviewers," https://en.wikipedia.org/wiki/Wikipedia:New_pages_patrol/Reviewers (accessed March 1, 2021).
[67] *Wikipedia*, s.v. "Wikipedia:Requests for adminship," https://en.wikipedia.org/wiki/Wikipedia:Requests_for_adminship (accessed March 1, 2021).
[68] *Wikipedia*, s.v. "Wikipedia:User access levels," https://en.wikipedia.org/wiki/Wikipedia:User_access_levels (accessed March 1, 2021).
[69] "Staff and Contractors," *Wikimedia Foundation*, https://wikimediafoundation.org/role/staff-contractors/ (accessed March 1, 2021).
[70] Joseph Reagle, "A Case of Mutual Aid: Wikipedia, Politeness, and Perspective Taking," *Wikimania 2005*, Frankfurt, Germany, July 5, 2005.
[71] Piotr Konieczny, "Adhocratic Governance in the Internet Age: A Case of Wikipedia," *Journal of Information Technology & Politics* 7, no. 4 (2010): 263-83.

most appropriate term for Wikipedia's organizational structure, and it's a term that has been adopted by other analysts of Wikipedia as well.[72]

As you'll soon discover, there's far more going on at Wikipedia than what I've mentioned here. But, for now, these are the basics that will help you to better understand how Wikipedia approaches inclusion and exclusion.

1.2 Wikipedia and virtue epistemology

Before we can explore how Wikipedia determines what does and does not belong on the site, it's helpful to ground our analysis of Wikipedia through the lens of epistemology (i.e. the study of knowledge).

Wikipedia's "prime objective" expresses the project's desire to give "every single person on the planet … free access to the sum of all human knowledge."[73] But, naturally, there are many epistemologically relevant questions that one could ask about Wikipedia and its approach to the spread of knowledge. Deborah Tollefsen, for example, has considered the nature of Wikipedia as a source of testimony; are individual editors testifying, or is "Wikipedia"?[74] Further, P.D. Magnus analyzed whether Wikipedia is a *reliable* source of knowledge — and whether such a judgment can even be formed about Wikipedia as a whole, or only discrete parts of Wikipedia.[75]

Here, I'm hoping to consider a distinct question — one that has not yet been considered by epistemologists. Namely, are Wikipedia's strict standards for the inclusion of content doing

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[72] See, for example: Mathieu O'Neil, "Wikipedia and Authority," in *Critical Point of View: A Wikipedia Reader* (Amsterdam: Institute of Network Cultures, 2011), 309.

[73] *Wikipedia*, s.v. "Wikipedia:Prime objective," https://en.wikipedia.org/wiki/Wikipedia:Prime_objective (accessed March 1, 2021). Jimmy Wales called it the "Prime Directive."

[74] Deborah Tollefson, "Wikipedia and the Epistemology of Testimony," *Episteme* 6 (1) (2009): 8-24.

[75] P. D. Magnus, "Epistemology and the Wikipedia," *North American Computing and Philosophy Conference* (2006).

more epistemic harm than good? To answer this, the most relevant subfield of epistemology we can turn to is that of "virtue epistemology."

Virtue epistemology is a relatively new discipline. One of the foundational works in virtue epistemology was Ernest Sosa's 1980 essay "The Raft and the Pyramid: Coherence versus Foundations in the Theory of Knowledge."[76] In that essay, Sosa pointed out the shortcomings of two of epistemology's dominant frameworks ("foundationalism" and "coherentism"), and suggested that a focus on "intellectual virtues" might offer a better path forward.[77]

Since then, a number of epistemologists have advanced the field of virtue epistemology. These philosophers are unified in their belief that epistemology is an inherently normative discipline, and, as such, normative concepts like "virtues" and "vices" can apply to sources of knowledge. A general definition for "epistemic virtues" comes from Lorraine Daston and Peter Galison's book *Objectivity*: "Epistemic virtues are virtues properly so-called: they are norms that are internalized and enforced by appeal to ethical values, as well as to pragmatic efficacy in securing knowledge."[78] One major task of virtue epistemologists has been to identify what exactly these "epistemic virtues" are.[79]

In his article "Foundations of Social Epistemics," epistemologist Alvin Goldman offers five central epistemic virtues which "can be used to appraise social institutions and practices" that seek to spread knowledge: reliability, power, fecundity, speed, and efficiency.[80] Reliability

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[76] Ernest Sosa, "The Raft and the Pyramid: Coherence versus Foundations in the Theory of Knowledge," *Midwest Studies in Philosophy* 5, no. 1 (1980): 3-26.
[77] Ibid.
[78] Lorraine Daston and Peter Galison, *Objectivity* (New York: Cambridge, Mass: Zone Books; Distributed by the MIT Press, 2007): 40.
[79] Note that there is a bit of discrepancy between how the concept of "epistemic virtues" has been applied in the past. Some use "epistemic virtues" to refer only to traits of individual actors — like "curiosity" — while others have used it to refer to characteristics of larger institutions / sources of knowledge. It is this latter usage that I'll be relying upon; as you'll see, it's also the one that Alvin Goldman uses.
[80] Alvin I. Goldman, "Foundations of Social Epistemics," *Synthese* (Dordrecht) 73, no. 1 (1987): 128.

refs to "the ratio of truths to total number of beliefs" an institution would foster.[81] Power refers

to the total number of "answers to questions of interest" that a source is able to provide.[82]

Fecundity describes the number of people that a source is able to reach. Speed describes how

quickly a source is able to offer correct answers, and efficiency considers the *costs* that come

with those answers.[83]

 In 2008, epistemologist Dan Fallis applied Goldman's epistemic virtues to Wikipedia.[84]

Fallis hoped that, in doing so, he could help elucidate "whether people are more (or less) likely

to acquire knowledge as a result" of Wikipedia's existence.[85] To Fallis, this was the question of

greatest epistemic pertinence when analyzing Wikipedia (or any such source).[86]

 Fallis argued that Wikipedia demonstrates most of Goldman's core virtues. Since the

English Wikipedia has a tremendously large catalogue of articles — over 6 million as of 2021 —

Fallis argues that Wikipedia is far more "powerful" than other sources of its kind.[87] Likewise,

Wikipedia reaches millions of readers, making the site extremely "fecund."[88] Additionally, Fallis

concludes that Wikipedia is "speedy"; looking up a desired fact or topic on Wikipedia is typically

an extremely fast process.[89] Fallis doesn't address "efficiency," but given that Wikipedia is free

to anyone with an internet connection, it's reasonable to conclude that Wikipedia is an efficient

source as well. On these points, I mostly agree with Fallis — though I soon hope to show that

Wikipedia is less powerful than it could be (and ought to be).

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[81] Ibid.
[82] Ibid.
[83] Ibid, 129.
[84] Don Fallis, "Toward an Epistemology of Wikipedia," *Journal of the American Society for Information Science and Technology* 59, no. 10 (2008): 1662-74.
[85] Ibid, 1663.
[86] Ibid.
[87] Ibid, 1669. For Wikipedia's current article count, see https://en.wikipedia.org/wiki/Wikipedia:Statistics.
[88] Ibid.
[89] Ibid.

Fallis also goes into detail considering whether Wikipedia is "reliable" or not. When most people think about potential epistemic problems with Wikipedia's approach, a lack of reliability is often the primary concern. After all, Wikipedia, unlike other encyclopedias, can be written by anyone — experts and anonymous novices alike. Thus, how can we be sure that the information on Wikipedia is reliable — in other words, that its articles accurately reflect the truth? If Wikipedia's articles are *inaccurate*, that would be a major epistemic failure; "Inaccurate information can easily lead people to acquire false beliefs," Fallis writes, and "epistemologists typically consider falling into error to be the most adverse epistemic consequence."[90]

Yet Fallis points out that the empirical evidence shows that Wikipedia is indeed reliable. One key study into Wikipedia's accuracy was published by *Nature* in 2005.[91] That study compared the accuracy of a variety of Wikipedia articles on scientific subjects to *Encyclopedia Britannica* articles on those same subjects. The researchers found that the two sources were comparable in quality, with Wikipedia articles including only a marginally higher rate of misleading or false statements.[92] Per Andrew Lih, this study was actually a significant point of pride for the early Wikipedia community; many Wikipedians viewed it as a vindication of their efforts.[93]

There's also no reason to assume that Wikipedia's accuracy is limited to its scientific content. In 2006, historian Roy Rosenzweig examined 25 Wikipedia articles on topics in U.S. history, and found that only four of the articles had errors; "most [of the errors] were small and inconsequential" at that.[94] In 2007, George Bragues performed a similar study into Wikipedia's

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[90] Ibid, 1664.
[91] Jim Giles, "Internet encyclopedias go head to head," *Nature*, December 14, 2005, https://www.nature.com/articles/438900a (accessed March 1, 2021).
[92] Ibid.
[93] Lih, *The Wikipedia Revolution*, 208.
[94] Roy Rosenzweig, "Can History Be Open Source? Wikipedia and the Future of the Past," *The Journal of American History* (Bloomington, Ind.) 93, no. 1 (2006): 117-46.

articles on top Western philosophers; his research found "no outright errors, though there were

significant omissions."[95] In 2012, a study again compared Wikipedia to the *Encyclopedia*

Britannica, this time on articles related to mental health; the researchers found that Wikipedia

scored higher across all domains (accuracy, up-to-dateness, breadth of coverage, referencing)

except one (readability).[96] More recent studies into Wikipedia's accuracy are scarce, but given

the increase in Wikipedia's rule-enforcement and automated screening practices that we

considered earlier, it's difficult to imagine that Wikipedia has gotten *less* accurate over time.

Besides, Fallis makes the convincing claim that the reliability of Wikipedia should not

necessarily be compared to other encyclopedias, but instead to other sources that Wikipedia's

readers would likely turn to if Wikipedia did not exist — blogs, internet forums, digital news

sites, and other free, online sources.[97] When held against these other sources, Wikipedia

generally appears even more accurate in comparison. Fallis spends some time examining *why*

Wikipedia is as accurate and reliable as it is — but I hope that this thesis, with its thorough

discussion of Wikipedia's strict policies and organizational structure, will help make that

apparent on its own.

Overall, then, I agree with Fallis' main assertions: Wikipedia is mostly accurate (per

empirical evidence), and on top of that, it's "powerful," "speedy," and "fecund." As a result,

Fallis suggests that "the epistemic consequences of people using Wikipedia as a source of

information are likely to be quite good"; Wikipedia's "epistemic virtues … arguably outweigh

any deficiencies in terms of reliability," he concludes.[98] But Fallis' analysis overlooks a major

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[95] George Bragues, "Wiki-Philosophizing in a Marketplace of Ideas: Evaluating Wikipedia's Entries on Seven Great Minds," *SSRN Electronic Journal*, April 2007, https://ssrn.com/abstract=978177 (accessed March 1, 2021).
[96] N. J Reavely, A. J. Mackinnon, A. J. Morgan, M. Alvarez-Jimenez, S. E. Hetrick, E. Killackey, B. Nelson, R. Purcell, M. B. H. Yap, and A. F. Jorm, "Quality of Information Sources about Mental Disorders: A Comparison of Wikipedia with Centrally Controlled Web and Printed Sources," *Psychological Medicine* 42, no. 8 (2012): 1753-762.
[97] Fallis, "Toward an Epistemology of Wikipedia," 1667.
[98] Ibid, 1662.

epistemic shortcoming of Wikipedia — its omission of relevant information. It is this shortcoming that I'm hoping to critique throughout my thesis.

The fact that Wikipedia articles are full of notable omissions has been proven in numerous studies. As mentioned, George Bragues found that Wikipedia's articles on philosophers were accurate, but that they only covered "consensus topics" "elicited from four academic reference works" at a rate of 52%.[99] Likewise, when Adam Brown analyzed "thousands of Wikipedia articles about candidates, elections, and officeholders" in 2011, he found few clear inaccuracies, but concluded that "errors of omission are extremely frequent."[100]

Wikipedia's so-called "errors of omission" are perhaps most obvious from the studies that have been conducted on its medical articles. In 2014, Thomas Hwang et. al. found that, among Wikipedia's articles about drugs, 41% were updated to reflect new warnings from the U.S. Food and Drug Administration within two weeks of those warnings' announcement — but "36% of pages remained unchanged more than 1 year later."[101] Whether this counts as an omission or an outright inaccuracy may be a matter of debate, so let's consider some other cases. Another 2014 study examined 19 Wikipedia articles on herbal supplements, and found that "several lacked information on drug interactions, pregnancy, and contraindications."[102] A third study from 2014 found that the "accuracy of drug information [on] Wikipedia was 99.7%" when compared to pharmacology textbooks, but that the Wikipedia articles were only 83.8% as complete overall.[103]

[99] Bragues, "Wiki-Philosophizing in a Marketplace of Ideas."
[100] Adam R. Brown, "Wikipedia as a Data Source for Political Scientists: Accuracy and Completeness of Coverage," *Political Science & Politics* 44, no. 2 (2011): 339-43.
[101] Thomas J. Hwang, Florence T. Bourgeois, and John D. Seeger, "Drug Safety in the Digital Age," *The New England Journal of Medicine* 370, no. 26 (2014): 2460-462.
[102] Jennifer Phillips, Connie Lam, and Lisa Palmisano, "Analysis of the Accuracy and Readability of Herbal Supplement Information on Wikipedia," *Journal of the American Pharmacists Association* 54, no. 4 (2014): 406-14.
[103] Jona Kräenbring, Tika Monzon Penza, Joanna Gutmann, Susanne Muehlich, Oliver Zolk, Leszek Wojnowski, Renke Maas, Stefan Engelhardt, and Antonio Sarikas, "Accuracy and Completeness of Drug Information in Wikipedia: A Comparison with Standard Textbooks of Pharmacology," *PloS One* 9, no. 9 (2014): e106930.

Fallis does hint at Wikipedia's omissions in his article; one of his final suggestions is that "those pundits who want to warn people about the dangers of Wikipedia should probably not be focusing on the (alleged) inaccuracy of the information … but rather on the incompleteness of the information."[104] Clearly, Fallis perceives Wikipedia's incompleteness as a problem — but he doesn't seem to view it as a pressing epistemic problem. Earlier in his piece, Fallis writes:

> Wikipedia is not as comprehensible and complete as we might expect an encyclopedia to be. It is clear that such failings can adversely affect people's ability to acquire knowledge from Wikipedia. However, inaccurate information can easily lead people to acquire false beliefs. In other words, inaccurate information can make people epistemically worse off instead of just failing to make them epistemically better off.[105]

Here, Fallis seems to suggest that omitting information (unlike including inaccurate information) simply fails to make readers epistemically better off, but doesn't make them any worse off. This is mistaken.

Wikipedia's omissions of content can actually make the website's readers epistemically worse off. Right now, if a person were to read a Wikipedia article from top to bottom, they might be led to believe that they understood all the basics of that article's topic. That would be rational, given that Wikipedia portrays itself as an authoritative source offering relevant information. But, if it turns out (as it often does) that that particular Wikipedia article is *omitting* a good deal of relevant information, that reader's confidence in their own beliefs would be unwarranted. In fact, they may be left with a very skewed understanding of a subject.

As a prime example, consider Wikipedia's medical omissions. Imagine a Wikipedia article (like the ones analyzed in the studies above) that contains information on a drug, all of which is 100% accurate, yet the article *omits* information on the drug's harmful side effects for pregnant women. If a pregnant woman were to read that article, then (even though she wasn't

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[104] Fallis, "Toward an Epistemology of Wikipedia," 1672.
[105] Ibid, 1664.

directly fed any lies) she may very well come away from the article thinking that the drug in question is safe for her consumption. That is, the article would have led her to form a false belief. In this way, it appears that the woman is epistemically worse off after reading the article (now believing the drug to be safe for her) than she was before she read it (when she was unsure about whether she could take the drug or not). There are plenty of other example cases where Wikipedia's omission of content could lead people to form false beliefs that outweigh the true beliefs the article offered them.

But, besides that, even if some of Wikipedia's omissions don't actively lead to the formation of false beliefs, these omissions still make Wikipedia less epistemically valuable than it could otherwise be. To return to Goldman's epistemic virtues, Wikipedia should seek to maximize its "power" by providing as much accurate information to its readers as possible.[106] Instead, Wikipedia leaves out a great deal of accurate information — either because no editor has added that information yet, or because that information has been removed under Wikipedia's restrictive policies on neutrality, sourcing, and notability. We'll look more at these policies in the following sections; notability in particular will be the focus of Chapter 2.

To summarize, Wikipedia's content gaps can make people epistemically worse off on balance. Additionally, these content gaps make Wikipedia a less "powerful" source, depriving people of accurate information that they might find valuable. As my thesis will continue to demonstrate, addressing prominent omissions ought to be one of Wikipedia's top priorities. In Chapter 3, we'll look at some of the people and groups who have dedicated their time to filling in Wikipedia's content gaps.

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[106] Goldman, "Foundations of Social Epistemics."

1.3 Wikipedia's policies on the inclusion and exclusion of facts

As we've seen, Wikipedia is proud to call itself the "free encyclopedia that anyone can edit." But we've also noted that Wikipedia has a strict hierarchical structure to ensure that every article is held to a high standard. A major element of Wikipedia's institutionalized system of checks-and-balances is the website's official policy pages. Wikipedia has dozens of pages — and tens of thousands of words — laying out its policies and guidelines. Chief among these policies is Wikipedia's set of "Five pillars":

1. Wikipedia is an encyclopedia
2. Wikipedia is written from a neutral point of view
3. Wikipedia is free content that anyone can use, edit, and distribute
4. Wikipedia's editors should treat each other with respect and civility
5. Wikipedia has no firm rules[107]

These pillars — and their accompanying policy pages — are frequently referenced in discussions and debates between Wikipedians.

But what policies govern what belongs and does not belong in a Wikipedia article? Note that this is a distinct question from the following one: What topics deserve their own Wikipedia articles? As I'll show in Chapter 2, Wikipedia actually has a fairly specific policy — the "notability" policy — that answers this second question. But the first question, regarding what facts belong in *existing* articles, does not have a single Wikipedia policy page to answer it.

However, there are a few key policy pages that Wikipedians reference when debating what does and does not belong in an article. As part of my research, I spoke to a number of Wikipedia editors; my interviews with them are discussed in Section 4 of this chapter. From my interviews, I've identified two main policy areas that Wikipedians rely upon when determining

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[107] *Wikipedia*, s.v. "Wikipedia:Five pillars," https://en.wikipedia.org/wiki/Wikipedia:Five_pillars (accessed March 1, 2021).

what to include and exclude from articles: the policies on neutrality, and the policies on sourcing. I'll discuss each of these below.

Before that, however, it's important to understand how Wikipedia's policies are formed in the first place, and how they evolve over time. As we'll see with the example of the "neutral point of view" policy below, Wikipedia policies generally begin as policy proposals written by some member of the community. If a critical mass of Wikipedians agree that the proposal in question should be turned into an official policy, then it is. Both before and after that happens, Wikipedians can propose adjustments and modifications to the policy. These modifications also become official if they reach a significant amount of support; Wikipedia refers to this approach as a "consensus" model, and it has been around since the website's beginning.[108]

Wikipedians are generally proud of this system; an early Wikipedia guideline stated "Don't vote on everything, and if you can help it, don't vote on anything."[109] Wikipedia's current policy page on "Consensus" suggests a similar stance:

> *Consensus* on Wikipedia does not mean unanimity (which is ideal but not always achievable), nor is it the result of a vote. Decision making and reaching consensus involve an effort to incorporate all editors' legitimate concerns, while respecting Wikipedia's policies and guidelines.[110]

This is a somewhat recursive framing; consensus is carried out while respecting Wikipedia's policies and guidelines, but is also the practice whereby those policies are formed and updated. In general, though, consensus on Wikipedia involves a group of contributors coming together, having a discussion, and eventually reaching some collective decision.[111]

But some Wikipedians have pointed out that a "rough consensus" approach among a group that's largely homogenous (i.e. young, educated, white, and male) can lead to the voices of

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[108] Lih, *The Wikipedia Revolution*, 119.
[109] Ibid.
[110] *Wikipedia*, s.v. "Wikipedia:Consensus," https://en.wikipedia.org/wiki/Wikipedia:Consensus (accessed March 1, 2021).
[111] Ibid.

minority groups being ignored.[112] While Wikipedia's "Consensus" page suggests that "The

quality of an argument is more important than whether it represents a minority or a majority

view," it's no secret that a consensus approach will typically result in a decision favorable to the

majority.[113] As a result, certain editors from groups that are underrepresented on Wikipedia (i.e.

women and people of color) believe that Wikipedia's policies have been formed in a way that

unfairly excludes their concerns, and that those same policies exclude the knowledge of

marginalized communities as a result.[114] Additionally, several of the Wikipedians I interviewed

suggested that Wikipedia's policies evolved a great deal during its first decade, but have become

much more resistant to change in recent years.[115] We'll talk more about these developments in

subsequent sections. For now, we'll examine two specific policy areas on Wikipedia.

1.3.1 Wikipedia's policies on neutrality

As mentioned above, the second of Wikipedia's "Five pillars" is the notion that

Wikipedia must be written from a "neutral point of view." The policy page corresponding to this

pillar can be found on the page "Wikipedia:Neutral point of view," with the shortcut

"WP:NPOV."[116] This page offers a brief summary of its own history:

> 'Neutral Point Of View' is one of the oldest governing concepts on Wikipedia. Originally appearing
> within Nupedia titled 'Non-bias policy', it was drafted by Larry Sanger in 2000. Sanger in 2001
> suggested avoiding bias as one of Wikipedia's 'rules to consider'. This was codified with the objective
> of the NPOV policy to produce an unbiased encyclopedia. The original NPOV policy statement on
> Wikipedia was added by Sanger on December 26, 2001. Jimmy Wales has qualified NPOV as
> 'non-negotiable', consistently, throughout various discussions.[117]

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[112] See my interview with the leaders of *Whose Knowledge?* in Chapter 3.
[113] *Wikipedia*, s.v. "Wikipedia:Consensus."
[114] This concern will be made more clear when we discuss "notability" in Chapter 2. Again, it's especially central to the interview I conducted with Adele Vrana and Mariana Fossatti of *Whose Knowledge.*
[115] See, in particular, my interviews with Emily Temple-Wood and *Whose Knowledge?* leadership in Chapter 3.
[116] *Wikipedia*, s.v. "Wikipedia:Neutral point of view,"
https://en.wikipedia.org/wiki/Wikipedia:Neutral_point_of_view (accessed March 1, 2021).
[117] Ibid. See section on "History."

This passage shows that "neutral point of view" has been a core element of Wikipedia since its inception, having been originally implemented as a Nupedia policy by Larry Sanger.

Andrew Lih suggests that Sanger's and Wales' extreme emphasis on the notion of "neutrality" arose from their shared belief in Randian "Objectivism." As Lih puts it, Objectivism asserts that "there is a reality of objects and facts independent of the individual mind," and that "a body of knowledge could be assembled that was considered representative of this single reality."[118] Per Lih, Sanger and Wales hoped that strict neutrality policies would help Wikipedia reflect objective reality.[119]

In 2005, Sanger wrote about his discussions with Wales, and recalled that "Neutrality, we agreed, required that articles should not represent any one point of view on controversial subjects, but instead fairly represent all sides."[120] Sanger also described rejecting one proposal which suggested that Wikipedia should produce "a series of different articles" on any given topic, "each written from a different point of view."[121] Sanger suggests that this proposal was fairly popular among early Nupedians; his writing did not offer a reason for its rejection.

The current iteration of "Wikipedia:Neutral point of view" page is topped with a summary: "Articles must not *take* sides, but should *explain* the sides, fairly and without editorial bias. This applies to both what you say and how you say it."[122] The page then goes on to provide several guiding principles, with a brief explanation of each: "Avoid stating opinions as facts," "Avoid stating seriously contested assertions as facts," "Avoid stating facts as opinions," "Prefer nonjudgmental language," and "Indicate the relative prominence of opposing views."[123]

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[118] Lih, *The Wikipedia Revolution*, 36.
[119] Ibid.
[120] Sanger, "The Early History of Nupedia and Wikipedia."
[121] Ibid.
[122] *Wikipedia*, s.v. "Wikipedia:Neutral point of view."
[123] Ibid. See section on "Explanation of the neutral point of view."

On the surface, Wikipedia's "Neutral point of view" policy seems to be more concerned with tone than anything else; it tells editors *how* to present the facts, not *what* facts to present. But a closer look reveals that several subsections of "WP:NPOV" do weigh in on what to include and exclude from Wikipedia articles.

For example, under "Article structure," there's the subsection "Due and undue weight." The section begins:

> Neutrality requires that each article or other page in the mainspace fairly represent all significant viewpoints that have been published by reliable sources, in proportion to the prominence of each viewpoint in the published, reliable sources. Giving due weight and avoiding giving undue weight means articles should not give minority views or aspects as much of or as detailed a description as more widely held views or widely supported aspects.… For example, the article on the Earth does not directly mention modern support for the flat Earth concept, the view of a distinct (and minuscule) minority; to do so would give *undue weight* to it.[124]

In other words, Wikipedians are encouraged to present facts and theories in proportion to how often those facts and theories appear in "published, reliable sources." (We'll discuss what Wikipedia considers a "reliable source" in the next section.) The "Neutral point of view" page further adds that "in determining proper weight, we consider a viewpoint's prevalence in reliable sources, *not* its prevalence among Wikipedia editors or the general public."[125]

To that end, the "WP:NPOV" page tells Wikipedians to avoid presenting fringe beliefs as if they were equally prominent as mainstream ones, and that doing so would create a "false balance."[126] The page goes on to explain that fringe theories can sometimes be given their own articles (rather than taking up space in more central articles), but even those articles ought to contextualize the theories and make it clear that they are, indeed, on the fringe.[127]

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[124] Ibid. See subsection on "Due and undue weight."
[125] Ibid.
[126] Ibid. See sub-subsection called "Giving 'equal validity' can create a false balance."
[127] Wikipedia even has a separate, lengthy policy page on "Fringe theories" themselves, which one user directed me to when I asked him about how Wikipedia handles coverage of climate change denialism. See *Wikipedia*, s.v. "Wikipedia:Fringe theories," https://en.wikipedia.org/wiki/Wikipedia:Fringe_theories (accessed March 1, 2021).

In short, Wikipedia's policy page on "Neutral point of view" reflects a desire that Wikipedia will summarize the facts and theories presented by reliable sources, in proportion to their prevalence in reliable sources. This seems like a reasonable requirement on the whole, but one potential epistemic concern is immediately clear. If there's a fact or theory that appears in *some* reliable source or sources, but not many, Wikipedians may avoid putting that information onto an existing article for fear of violating the website's neutrality policies — even if that information turns out to be highly critical to the subject at hand.

For example, if the majority of reliable sources on World War II focus on the war as it played out in Europe, Wikipedians might be tempted to exclude many relevant facts about the war in other parts of the world; including too many of these would violate the neutrality policy's requirement that Wikipedia articles present facts in proportion to how often they appear in reliable sources. Thus, in Chapter 3, we'll directly consider how Wikipedia's neutrality principles can lead to the exclusion of information relevant to marginalized communities.

1.3.2 Wikipedia's policies on sourcing

Per my interviews with Wikipedians, Wikipedia's policy pages on reliable sources are another oft-referenced factor in how Wikipedians decide what to add and delete from articles. As we've seen from its neutrality pages, Wikipedia hopes to report on the facts offered in "reliable sources." But what, exactly, is a "reliable" source?

One would expect to find an answer to that question on Wikipedia's policy page "Reliable sources."[128] Instead, one finds a lengthy list of subsections describing different kinds of sources,

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[128] *Wikipedia*, s.v. "Wikipedia:Reliable sources," https://en.wikipedia.org/wiki/Wikipedia:Reliable_sources (accessed March 1, 2021).

without much to clarify what might make these sources reliable or not. Here's an example

excerpt from the subsection on "News organizations":

> News sources often contain both factual content and opinion content. News reporting from
> well-established news outlets is generally considered to be reliable for statements of fact (though even
> the most reputable reporting sometimes contains errors). News reporting from less-established outlets
> is generally considered less reliable for statements of fact. … Human interest reporting is generally
> not as reliable as news reporting, and may not be subject to the same rigorous standards of
> fact-checking and accuracy.[129]

As a potential Wikipedia editor, I find these sentences confusing on a number of levels. What

qualifies as a "less-established" outlet, and why exactly are these outlets "less reliable"? Does

being "less reliable" mean that these should be avoided altogether, or can they still be referenced

on occasion? Likewise, if human interest reporting is "generally not as reliable as news

reporting," can I rely on human interest reporting as a source or not?

Overall, the "Reliable sources" page makes it clear that reliability is a key issue; it uses

the word "reliable" nearly 100 times.[130] But not once does the page offer a definition for the term

"reliable." (The page does mention a few sources that are certainly *not* reliable, including,

interestingly, Wikipedia articles themselves.[131]) To the right side of the policy page is an image of

a spectrum with the following label: "Source reliability falls on a spectrum: highly reliable

sources, clearly unreliable sources, and many in the middle. Editors must use their judgment to

draw the line between usable and unreliable sources."[132]

It would seem, then, that despite the presence of a "Reliable source" policy page on

Wikipedia, reliability remains something that Wikipedians must determine using "their [own]

judgment." Thus, we must assume that the "Reliable source" page is really meant as a tool to

assist Wikipedians in making that judgment. In fact, the top of the page offers this prompt: "For

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[129] Ibid.
[130] Ibid.
[131] Ibid. See subsection on "Primary, secondary, and tertiary sources."
[132] Ibid. See "Overview" section.

questions about the reliability of particular sources, see Wikipedia:Reliable sources/Noticeboard."[133] On this board, Wikipedians can post a particular source that they're considering using, and other users weigh in on whether they think it's reliable or not.[134] Once again, we see Wikipedia's "rough consensus" model at work — this time attempting to form a consensus around what sources are and are not reliable.

Wikipedia does a few policy pages on sourcing that are more specific, such as "Identifying reliable sources (science)" and "Identifying reliable sources (medicine)."[135][136] These pages, too, avoid offering a concrete definition for "reliable," but they do provide some more specific criteria that Wikipedians can use to narrow down whether a source is reliable or not. We'll take a closer look at "Identifying reliable sources (medicine)" in the following section, as it has become a key policy page for the editors of the "COVID-19 pandemic" page.

Overall, Wikipedia's sourcing policies seem woefully inadequate for any newcomers trying to figure out what exact sources are considered acceptable on Wikipedia. Despite this vagueness, Wikipedia's sourcing policies are still frequently referenced by Wikipedia's editors; if nothing else, they at least offer some starting points for users to further discuss what is and is not reliable.

That said, this vagueness is somewhat concerning. As we've seen, Wikipedia's policy page on "Neutral point of view" is defined around the notion of "reliable sources."[137] As we'll

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[133] Ibid.

[134] *Wikipedia*, s.v. "Wikipedia:Reliable sources/Noticeboard," https://en.wikipedia.org/wiki/Wikipedia:Reliable_sources/Noticeboard (accessed March 1, 2021).

[135] *Wikipedia*, s.v. "Wikipedia:Identifying reliable sources (science)," https://en.wikipedia.org/wiki/Wikipedia:Identifying_reliable_sources_(science) (accessed March 1, 2021).

[136] *Wikipedia*, s.v. "Wikipedia:Identifying reliable sources (medicine)," https://en.wikipedia.org/wiki/Wikipedia:Identifying_reliable_sources_(medicine) (accessed March 1, 2021).

[137] *Wikipedia*, s.v. "Wikipedia:Neutral point of view." Recall that the NPOV's sub-policy regarding "Due and undue weight" requires that "each article or other page in the mainspace fairly represent all significant viewpoints that have been published by **reliable sources**, in proportion to the prominence of each viewpoint in the published, **reliable sources**" (emphasis added).

see in Chapter 2, its policy page on "Notability" is as well. For Wikipedia to lack a concrete definition for reliability means that all these other policies are equally ill-defined. And, while keeping policies vague and open to interpretation may sometimes work out okay, we've also shown that a "rough consensus" community decision about what Wikipedia's policies mean will almost always side with the views held by the majority. Thus, yet again, vagueness around "reliability" can lead to minority groups having their contributions overturned by members of the majority, as that majority can deem their sources "unreliable." We'll look at this phenomenon in greater detail in Chapter 3.

1.4 Two case studies: "Climate change" and "COVID-19 pandemic"

We've now looked at several policy pages that help Wikipedians determine what belongs and does not belong in a Wikipedia article. But deciding whether or not to adhere to these policies — and, if so, how strictly — is a decision that each Wikipedian must make for themself. (After all, one of Wikipedia's five pillars is that there are "no firm rules."[138] As we'll see, many editors are drawn to Wikipedia for the flexibility that it offers.) Even Wikipedias who favor strict adherence to policy will find that the existing policies are vague enough to require interpretation. Ultimately, the creation and maintenance of every Wikipedia article relies on the same "rough consensus" model that has grounded the Wikipedia project from the very beginning.

To see how Wikipedians collectively decide what belongs and does not belong in Wikipedia articles, let's consider two case studies: the article on "Climate change," and the article on the "COVID-19 pandemic."

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[138] *Wikipedia*, s.v. "Wikipedia:Five pillars,"

1.4.1 Editing the Wikipedia article on "Climate change"

We'll start our analysis with the Wikipedia article on "Climate change."[139] This particular

article has been utilized by YouTube (a subsidiary of Google) as part of a campaign to combat

misinformation. Since 2018, YouTube has implemented a system of "information cues":

text-boxes under videos on controversial topics like the moon landing, chemtrails, school

shootings, and more.[140] Depending on the particular topic, the textbox will link to a relevant

"neutral" article under the label "Context" — Wikipedia and *Encyclopedia Britannica* articles

most commonly — suggesting that YouTube's viewers should turn to those articles to learn the

true, unbiased truth about the subject.[141] Today, nearly every YouTube video related to climate

change has a large, blue text box linking to the Wikipedia article on "Climate change"

underneath it. This is not just the case for videos made by conspiracy theorists; it applies even to

videos released by reputable news agencies like CNBC and CNN.[142]

Thus, Wikipedia's "Climate change" article has become a key part of YouTube's

campaign against misinformation. But, as we know, the article — like all of Wikipedia's articles

— is written by a collective of anonymous editors. Setting aside the question of accuracy, how is

it that the editors of Wikipedia's "Climate change" article decide what things the article should

report on, and what things it should ignore? To help answer this question, I reached out to a

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[139] *Wikipedia*, s.v. "Climate change," https://en.wikipedia.org/wiki/Climate_change (accessed March 1, 2021)
[140] Jillian D'Onfro, "YouTube will add Wikipedia links debunking conspiracy theory videos," *CNBC*, March 13, 2018, https://www.cnbc.com/2018/03/13/youtube-wikipedia-links-debunk-conspiracy.html (accessed March 1, 2021).
[141] Ibid. This is also true for searches, not just videos. See this YouTube search for "climate change": https://www.youtube.com/results?search_query=climate+change.
[142] See, for example, the warnings under CNBC's video "Why Climate Change Denial Still Exists in the U.S." (https://www.youtube.com/watch?v=f1rxv1yPQrc) and CNN's video "Climate change is making this country disappear" (https://www.youtube.com/watch?v=_neGOQ8oLCo).

number of the most active editors (as of early 2021) of Wikipedia's "Climate change" article.[143]

Below, I'll discuss what they had to say.

Wikipedian Femkemilene has been editing the Dutch Wikipedia since 2013, the English Wikipedia since 2018, and the English Wikipedia article on "Climate change" for about as long.[144] When I asked Femkemilene to identify any official Wikipedia policies that inform his editing practices, he pointed to a specific policy page: "Identifying reliable sources (science)."[145] Since so much is published about climate change — including both "alarmist" and "underplaying" statements, Femkemilene told me — he finds it highly important that the editors of the "Climate change" article distinguish between reliable and unreliable sources. "I mostly rely on tertiary sources for that: books about climate change, the international part of the US National climate assessment and the IPCC reports," Femkemilene said.[146]

But besides Wikipedia policy on sourcing, Femkemilene says that the policies on neutrality are often also brought up among discussions between editors. You'll recall that Wikipedia's "Due and undue weight" guideline, under its "Neutral point of view" policy page, suggested that Wikipedia articles ought to report on facts and theories roughly proportionally to how often they appear in reliable sources.[147] Femkemilene appears to have taken this policy to heart; without directly referencing the policy, he told me that he tries "to make sure that sections in the Wikipedia article get about as much space proportionally as in the sources."[148] This sometimes means removing or editing down the contributions of others; "We often have people

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[143] To do so, I looked at the "Edit history" for the "Climate change" article, and scrolled through to find the users who had contributed the highest numbers of individual edits over the past 3 months. I reached out to these users either through their personal "Talk" pages, or via email.

[144] Femkemilene, interview with Daniel Leonard via email, January 2021. Also, note that I will be referring to all Wikipedians by their usernames, except those who have asked to remain anonymous.

[145] *Wikipedia*, s.v. "Wikipedia:Identifying reliable sources (science)."

[146] Femkemilene, interview with Daniel Leonard.

[147] *Wikipedia*, s.v. "Wikipedia:Neutral point of view."

[148] Femkemilene, interview with Daniel Leonard.

with a passion for certain subtopics that they want included," Femkemilene said.[149] But if these passion issues aren't actually that well-covered in reliable sources writ large, then they don't belong in the "Climate change" article — or instead should be relegated to a few sentences, rather than a paragraph, said Femkemilene.[150]

Femkemilene identified himself as "the shepherd" of the "Climate change" article, and suggested that his editing work frequently brings him into conflict with other editors — but that these conflicts are almost invariably resolved peacefully, quickly, and without an admin needing to arbitrate.[151] Still, there are some long-running disputes, like between Femkemilene and another editor, Bogazicili. Bogazicili wants the "Climate change" article to include a greater emphasis on climate change's impact on human societies; Femkemilene disagrees.[152] While not hostile, these differences in beliefs about what ought to be emphasized play out in how the editors add to and remove from the page.

Overall, Femkemilene believes in brevity. "I'm a strong believer in summary style and making sure the article doesn't get too long," he told me. "Quality suffers if articles get too long, especially for a topic where the science and the politics are still in progress. There are always sub-articles to move content to."[153]

Another active editor of the "Climate change" article, Efbrazil, shares Femkemilene's fondness for the removal of "unnecessary" content. "Content that's alarmist or repetitive or ideological I try to purge," Efbrazil told me.[154] "I also look for content that seems really forced, like there was a thing about how clean energy empowers women, and it used really tortured

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[149] Ibid.
[150] Ibid.
[151] Ibid.
[152] Ibid.
[153] Ibid.
[154] Efbrazil, interview with Daniel Leonard via Wikipedia talk page, January 2021, https://en.wikipedia.org/wiki/User_talk:Efbrazil#Interview_request (accessed March 1, 2021).

liberal reasoning to get there that didn't make rational sense, so I cut that."[155] (Efbrazil's choice

of example is interesting here, given that Wikipedia has long been criticized as a site that's

unfriendly towards both women editors and content relevant to women.[156]) In Efbrazil's eyes,

removing "alarmist," "repetitive," and "ideological" content is critical to preserving the

neutrality of the "Climate change" article.

Efbrazil has been editing that article since early 2019. He told me that, to bolster his work

as a Wikipedian, he tries to read and listen to climate-change-related media from "a wide range

of sources" — climate science and climate denial alike. "I find that's the best way to figure out

the dialogue around the issue and to know what we need to address," Efbrazil said.[157] Yet when

choosing what sources to use as references for the "Climate change" article, Efbrazil relies solely

on more reputable institutions: NASA, the World Health Organization, the Intergovernmental

Panel on Climate Change, and other governmental agencies.[158]

Like Femkemilene, Efbrazil also values ensuring that no topic is receiving undue weight.

"I'll also look for balance, so that if somebody has a pet issue and all they want to talk about is

geoengineering, I'll look to turn 4 sentences on the topic into 1 sentence."[159] While Efbrazil will

sometimes delete other people's contributions outright, he generally prefers cutting these

contributions down to fit the relative prominence of each subject in the secondary sources. That

said, Efbrazil admitted that he (like other users) has a unique perspective on what the "Climate

change" article ought to emphasize: "I try to keep the focus on the impact on the natural world,

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[155] Ibid.
[156] For just one example of this long-running critique, see Emma Paling, "Wikipedia's Hostility Towards Women," *The Atlantic*, October 21, 2015, https://www.theatlantic.com/technology/archive/2015/10/how-wikipedia-is-hostile-to-women/411619/ (accessed March 1, 2021).
[157] Efbrazil, interview with Daniel Leonard.
[158] Ibid.
[159] Ibid.

because ecosystems are more fragile and cannot be reconstructed like the human world can."[160]

Additionally, like Femkemilene, Efbrazil said that the disputes he has with other editors are typically resolved quickly and without devolving into personal attacks.

Another user I spoke to asked to remain anonymous. He's been editing Wikipedia for 12 years, including two in the climate change area.[161] When I asked him how he decides what content to add to the "Climate change" article, he pointed specifically to Wikipedia's policies on reliable sources.[162] "Mainly, I strive to concisely express what is stated in reliable sources, though paraphrasing is often needed," he said.[163] "Some judgment is involved, but as one becomes more familiar with a topic, one gets a feel for what experts in the field are concerned with, what is important, and what is a majority opinion versus what is fringe," he added.[164]

As for how he decides to delete content from the "Climate change" article, this Wikipedian again referenced the reliable source policies; if an addition to the article isn't backed up with a reliable source, then it has no place on Wikipedia, he asserted.[165] That said, per this editor, "I've seen very little deleted from [the "Climate change"] article … which explains its huge length! Over the years, content is updated, but the trend in most articles is toward greater length."[166]

For success as a Wikipedia editor, this Wikipedian believes that strict adherence to policy is critical. "No one 'ignores' policies and guidelines and gets away with it; their work is reverted, usually quite quickly," he said. "Actually, one must curb any impulse to be 'creative,' and instead be more objective, much like a (respectable) journalist."[167] This Wikipedian told me that he

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[160] Ibid.
[161] Anonymous Wikipedia editor, interview with Daniel Leonard via email, January 2021.
[162] *Wikipedia*, s.v. "Wikipedia:Reliable sources."
[163] Anonymous Wikipedia editor, interview with Daniel Leonard.
[164] Ibid.
[165] Ibid.
[166] Ibid.
[167] Ibid.

believes most editors of the "Climate change" article understand the importance of policy, and this has allowed the editing of the page to be relatively conflict-free; most conflict comes from newcomers to the page, he said.[168]

This Wikipedian and I also had a brief discussion about how the editors of the "Climate change" article tackle the presentation of fringe views, like climate denialism. For context, the "Denial and misinformation" subsection of the "Climate change" article takes up 208 words; the full article is over 9,000 words.[169] "Wikipedia can cover fringe views as long as they are presented as fringe views," the anonymous Wikipedian said, referencing the "Fringe theories" policy page specifically.[170] On the reverse, he told me, Wikipedia does not have to prove facts that are "solidly established in science."[171]

To that end, he added, "There has recently been discussion on the 'Climate change' talk page about whether scientific consensus even needs to be discussed *at all* on the main 'Climate change' page" — with some viewing the climate change consensus as comparable to the consensus that the Earth is round.[172] "However, because there is still public disagreement among English-language Wikipedia readers (mainly in the U.S. and Australia), there is reason to include discussion of the scientific consensus, and so it remains for the foreseeable future."[173]

1.4.2 Editing the Wikipedia article on "COVID-19 pandemic"

Next, let's examine the Wikipedia article on the "COVID-19 pandemic" — one of Wikipedia's most widely-read articles.[174] Per Wikipedia's page on multi-year article rankings, the

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[168] Ibid.
[169] *Wikipedia*, s.v. "Climate change."
[170] *Wikipedia*, s.v. "Wikipedia:Fringe theories."
[171] Anonymous Wikipedia editor, interview with Daniel Leonard.
[172] Ibid.
[173] Ibid.
[174] *Wikipedia*, s.v. "COVID-19 pandemic," https://en.wikipedia.org/wiki/COVID-19_pandemic (accessed March 1, 2021)

"COVID-19 pandemic" article has jumped onto Wikipedia's list of the 100 most viewed articles of all time (where it currently remains), despite only being created in January of 2020.[175] "In this aspect, Covid-19 is the biggest phenomenon Wikipedia has ever known," the page reports.[176] Thus, for my research, I also reached out to some of the most active editors (as of early 2021) of the "COVID-19 pandemic" article.[177] Here's what they shared with me.

Gtoffoletto has been editing Wikipedia for 12 years — first the Italian Wikipedia, and now the English one.[178] "I'm from Milan so COVID-19 hit pretty early here and I quickly realised it was a world altering event," Gtoffoletto told me; he's been editing the "COVID-19 pandemic" article since March of 2020.[179] When asked what guides his editing work, Gtoffoletto referenced Wikipedia's policies on reliable sources. More specifically, Gtoffoletto mentioned one specific policy page: "Identifying reliable sources (medicine)", or WP:MEDRS.[180] As you'll soon see, this policy page is of particular importance to the editors of the "COVID-19 pandemic" article; nearly every editor that I spoke to referenced it as a guideline that they strictly adhere to. Per WP:MEDRS' "nutshell" summary:

> "Ideal sources for biomedical material include literature reviews or systematic reviews in reliable, third-party, published secondary sources (such as reputable medical journals), recognised standard textbooks by experts in a field, or medical guidelines and position statements from national or international expert bodies."[181]

Gtoffoletto uses this guideline to help him decide both what to add and what to remove from the "COVID-19 pandemic" article.[182]

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[175] *Wikipedia*, s.v. "Wikipedia:Multiyear ranking of most viewed pages," https://en.wikipedia.org/wiki/Wikipedia:Multiyear_ranking_of_most_viewed_pages (accessed March 1, 2021).
[176] Ibid.
[177] My method for selecting and contacting the editors of this article was the same as for the "Climate change" article above.
[178] Gtoffoletto, interview with Daniel Leonard via Wikipedia talk page, January 2021, https://en.wikipedia.org/wiki/User_talk:Gtoffoletto#Interview_request (accessed March 1, 2021).
[179] Ibid.
[180] *Wikipedia*, s.v. "Wikipedia:Identifying reliable sources (medicine)."
[181] Ibid.
[182] Gtoffoletto, interview with Daniel Leonard.

More broadly, Gtoffoletto told me that he views Wikipedia's policies as "absolutely crucial." "Without the guidelines adopted by the community Wikipedia would descend into chaos," he stated.[183] And, while "nobody can ignore" the policies, "anybody can propose to edit them!", Gtoffoletto said.[184] This is a bit misleading, though; as I've hinted at, many other Wikipedians that I spoke to acknowledged that modifying Wikipedia's policies has become quite difficult in recent years.

Gtoffoletto reports that conflicts between himself and other users are rare. Additionally, he hopes to see new editors coming to Wikipedia. "The community should do everything in its power to become more inclusive and welcoming towards new users," he said, while also suggesting that Wikipedia's current heavy reliance on long-time editors is a "grave existential threat" to the project.[185] Gtoffoletto suggested that many other Wikipedians believe that Wikipedia is fine — or even better off — being relatively exclusive towards newcomers. "This is a grave mistake. The overall environment has definitely become more toxic since I joined over 10 years ago and something must be done to change this."[186]

Another Wikipedian I spoke to, Sdkb, made his first edit to Wikipedia in 2012, "but I became active and started to think of myself as a Wikipedian around summer 2018."[187] Sdkb has been editing the "COVID-19 pandemic" article since March of 2020; he told me he prefers working on that article as opposed to one like "Coronavirus disease 2019" because he lacks medical expertise.[188]

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[183] Ibid.
[184] Ibid.
[185] Ibid.
[186] Ibid.
[187] Sdkb, interview with Daniel Leonard via Wikipedia talk page, January 2021, https://en.wikipedia.org/wiki/User_talk:Sdkb#Interview_request (accessed March 1, 2021).
[188] Ibid. That is to say, the "COVID-19 pandemic" article is more centered around the history, politics, and economic effects of the pandemic, while the "Coronavirus disease 2019" article centers around the disease itself.

When asked how he decides what to add and remove from the "COVID-19 pandemic" article, Sdkb referenced the guideline on "Due and undue weight"; he believes that the "COVID-19 pandemic" page should be a reflection of what reputable sources are reporting on.[189] As one example, towards the start of the pandemic, Sdkb argued that COVID-19's effects on xenophobia should be referenced in the lead of the article, as the *New York Times* and other sources reported on xenophobia frequently. But as the pandemic progressed, and the sources began to focus primarily on COVID-19's effects on health and the economy, Sdkb withdrew his emphasis on xenophobia.[190] This is a striking example of how Wikipedia's neutrality policies ensure that the website faithfully recreates what mainstream, "reliable" sources are reporting on, while ignoring any details that mainstream sources choose to ignore.

In terms of deletions, Sdkb mainly reverts edits "from new editors who haven't checked the 'Talk' page and don't realize that the topic they're editing about has already been discussed at length."[191] In fact, the editors of the "COVID-19 pandemic" article have created a "current consensus list" so that all the editors — old and new — are on the same page about certain issues, like how to describe the coronavirus' origins.[192] This "current consensus list" is unusual for a Wikipedia article to have, Sdkb told me; the editors of the "COVID-19 pandemic" article were inspired to create one by the editors of the "Donald Trump" page (Wikipedia's second most-viewed article).[193]

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[189] Ibid.
[190] Ibid.
[191] Ibid.
[192] For the "COVID-19 pandemic" article's "current consensus list," see this section of the talk page: https://en.wikipedia.org/wiki/Talk:COVID-19_pandemic#Current_consensus (accessed March 1, 2021).
[193] For the "Donald Trump" article's "current consensus list," see this section of the talk page: https://en.wikipedia.org/wiki/Talk:Donald_Trump#Current_consensus (accessed March 1, 2021). For the claim that this is the second most viewed article on Wikipedia, see *Wikipedia*, s.v. "Wikipedia:Multiyear ranking of most viewed pages."

Sdkb told me that he prefers to stick fairly closely to Wikipedia's guidelines, yet he does sometimes propose changes to them; he didn't suggest that any of his proposed changes have actually taken hold.[194] For the sake of newcomer editors, Sdkb wishes that Wikipedia's guidelines were more concise, "but there's a limit to the amount it'd be possible to condense them," he said.[195] Sdkb told me that he's gotten to know the Wikipedians who frequent the "COVID-19 pandemic" article fairly well — and, partly as a result, most of the disputes he's gotten into about the article have been peacefully resolved on the "Talk" page.[196]

I also spoke to Gerald_Waldo_Luis, who has been a Wikipedian for a far shorter amount of time than the other active editors interviewed. Specifically, Gerald_Waldo_Luis has been editing Wikipedia since May of 2020, and the "COVID-19 pandemic" article since June of 2020.[197] When asked what guides his editing work, Gerald_Waldo_Luis (like Gtoffoletto) referenced the page on "Identifying reliable sources (medicine)."[198] "For claims talking about scientific things," Gerald_Waldo_Luis said, "I rely upon medical sources" — like the CDC and *Nature.* For other sorts of claims, "generic newspapers or magazines can do."[199]

Much of Gerald_Waldo_Luis's editing work has involved trimming down the "COVID-19 pandemic" article. Gerald_Waldo_Luis expressed his initial frustration with the overly-detailed lead, which was the first thing he cut down.[200] Gerald_Waldo_Luis also told me that Wikipedia articles can reach a "size limit" where the page takes longer to render.[201] At that point, content from articles are generally cut, then pasted into more specific articles — like

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[194] Sdkb, interview with Daniel Leonard.
[195] Ibid.
[196] Ibid.
[197] Gerald_Waldo_Luis, interview with Daniel Leonard via Wikipedia talk page, January 2021, https://en.wikipedia.org/wiki/User_talk:Gerald_Waldo_Luis/Archive_7#Interview_request (accessed March 1, 2021).
[198] *Wikipedia*, s.v. "Wikipedia:Identifying reliable sources (medicine)."
[199] Gerald_Waldo_Luis, interview with Daniel Leonard.
[200] Ibid.
[201] Ibid.

"COVID-19 pandemic in India,"for example. The "COVID-19 pandemic" article may reach that splitting point soon, Gerald_Waldo_Luis believes.[202]

Gerald_Waldo_Luis believes in following Wikipedia guidelines, but he does sometimes invoke "WP:IAR" — Wikipedia's policy page called "Ignore all rules."[203] "If a rule prevents you from improving or maintaining Wikipedia, ignore it," the page reads.[204] Sdkb had also mentioned WP:IAR in our interview; he told me that it rarely, if ever, successfully works in an editor's defense.[205] Likewise, Gerald_Waldo_Luis admitted that WP:IAR doesn't apply to everything; copyright policies and an expectation of civility are non-negotiable among the Wikipedia community, he said.[206] The expectation of civility is particularly important for the successful resolution of disputes (especially on "Talk" pages), according to Gerald_Waldo_Luis.[207]

A final editor of the "COVID-19 pandemic" article I spoke to is Tenryuu, who told me he identifies more so as a copy editor (editing for clarity and grammar) than someone who adds content to Wikipedia.[208] But Tenryuu said that he does delete content sometimes, primarily when he feels that it's lacking proper sources. As for adding content, Tenryuu told me that the "WP:MEDRS" policy has dissuaded him from doing so; "Identifying reliable sources (medicine)" is very specific about the sorts of sources that are appropriate for medically-oriented articles, and Tenryuu doesn't feel confident in his ability to meet its strict standards.[209] To that

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[202] Ibid.
[203] *Wikipedia*, s.v. "Wikipedia:Ignore all rules," https://en.wikipedia.org/wiki/Wikipedia:Ignore_all_rules (accessed March 1, 2021).
[204] Ibid.
[205] Sdkb, interview with Daniel Leonard.
[206] Gerald_Waldo_Luis, interview with Daniel Leonard.
[207] Ibid.
[208] Tenryuu, interview with Daniel Leonard via Wikipedia talk page, January 2021, https://en.wikipedia.org/wiki/User_talk:Tenryuu#Interview_request (accessed March 1, 2021).
[209] Ibid.

end, Tenryuu told me that he follows Wikipedia's rules and guidelines, "though I don't necessarily agree with all of them."[210]

On the occasions that Tenryuu does add content to Wikipedia, he told me considers the precedent that he's setting. Tenryuu asks himself, "If I include this, how many more similar events would have to be added, and would that dilute [the article's] presumed notability?"[211] This question suggests that Tenryuu has a different conception of notability than Wikipedia at large; as we'll see in the next chapter, nothing in Wikipedia's definition of "notability" suggests that a topic's notability would be "diluted" by including too many details on its article.

Regardless, if Tenryuu believes that his edit would open a floodgate to too many other edits of low significance, he doesn't make it. For example, "At the beginning of the pandemic I did add the first few weeks of new cases and deaths in the article because at the time they were notable. Now that it's become commonplace I've stopped."[212] Tenryuu has even deleted other people's edits related to "record-breaking numbers of new cases/deaths"; while these figures are indeed reported in reliable sources, they're quickly overturned, and thus not particularly useful in Tenryuu's eyes.[213] However, there doesn't seem to be anything in Wikipedia's policies that suggests short-term facts should be omitted, rather than just updated periodically — suggesting that this is just a personal preference on Tenryuu's part.

1.4.3 Some takeaways from these case studies

These case studies offer us a number of insights on the editing behaviors of Wikipedians. In particular, it's striking to see what was common across the responses of different users — including users who primarily edit different pages. That said, it's also worth noting that these

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[210] Ibid.
[211] Ibid.
[212] Ibid.
[213] Ibid.

responses may not represent the perspectives of the *average* Wikipedian, but are more in line with the perspectives of the average *highly active* Wikipedian. It's also worth noting that all of the Wikipedians I spoke to were male — though, given the 2011 survey that found that 91% of Wikipedians are male, this isn't particularly surprising.[214]

From my interviews, it's clear that most active Wikipedia editors are highly familiar with Wikipedia's policies on "Neutral point of view" and "Reliable sources." Additionally, most editors suggested that they rely on these policies to guide their editing practices — though one or two admitted that they prefer to forge their own path without much regard for Wikipedia's policies. In general, the "Neutral point of view" article's subsection on "Due and undue weight" seemed to be particularly key for most editors. It's also clear that some policy pages are of particular importance to the editors of certain articles — like how most of the editors of the "COVID-19 pandemic" referenced Wikipedia's policies on "Identifying reliable sources (medicine)." Overall, it's quite obvious that Wikipedia's policies on neutrality and sourcing play a large role in determining what content winds up in the site's articles.

But, while policy does seem to be central, many decisions about what to include in Wikipedia articles are also formed based on the personal preference of active editors. For example, Efbrazil criticized editors who seek to add their "pet issues" to Wikipedia pages, but told me that he thinks that the "Climate change" page should emphasize climate change's effects on the natural world "because ecosystems are more fragile and cannot be reconstructed like the human world can."[215] This statement is not grounded in Wikipedia's policies, nor in any particular logic at all; why should the fragility of ecosystems bear on how central they should be on the "Climate change" article? This is just one example, of course. While claiming to adhere to

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[214] *Wikimedia Foundation*, "Wikipedia Editors Survey 2011 April: Women Editors."
[215] Efbrazil, interview with Daniel Leonard.

strict neutrality, many of the Wikipedians I interviewed admitted to adding and removing content based on their own preferences. This is not surprising; no one can ever be truly free from bias. But acknowledging this bias seems to be a sticking point for Wikipedians.

Additionally, most active editors told me that the disputes they have with other Wikipedians are almost always resolved peacefully, typically via "Talk" page discussions. Editors mentioned a few factors that allow for this peaceful resolution: foremost among them were personal relationships with other editors, and familiarity with policy among both parties in the dispute. As a result, several editors (Efbrazil, the anonymous one, and Sdkb) suggested that disputes are more common, and more intense, when a newcomer is involved. Gtoffoletto was the only editor I spoke to who suggested that welcoming newcomers should be one of the top priorities of the Wikipedia community.[216] In Chapter 3, I'll show that Gtoffoletto's concerns are important, as a lack of new editors has contributed to major gaps in Wikipedia's scholarship.

By now, we have a solid understanding of how Wikipedians decide what to include and exclude from existing Wikipedia articles. In the next chapter, we'll consider how Wikipedians determine what topics are worthy of having their own articles in the first place.

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[216] Gtoffoletto, interview with Daniel Leonard.

Chapter 2: On "notability" — How Wikipedians determine what topics deserve their own articles

In the previous chapter, we examined how Wikipedians form decisions regarding what facts to include and exclude from particular articles. In this chapter, we'll consider a related — but distinct — question: how do Wikipedians decide which topics deserve their own articles on Wikipedia, and which do not? As we'll see, decisions regarding inclusion and exclusion of particular topics from Wikipedia typically boil down to debates regarding "notability."

This chapter will begin by analyzing the historical context for notability across certain forerunners of Wikipedia — namely, encyclopedias and biographical dictionaries. In the following section, we'll look at Wikipedia's own notability policies, examining what they say and how they were formed. Finally, we'll examine how debates around notability — especially the "inclusionist vs. exclusionist" debate — have played out among Wikipedians. I'll suggest that inclusionist concerns are more worthy of Wikipedia's attention.

In theory, if a topic is non-notable, then it doesn't get a Wikipedia page. But given Wikipedia's centrality as a source of knowledge today, internet users may start to believe the reverse: that if a topic doesn't have a Wikipedia page, it must be non-notable.[217] In other words, Wikipedians' decisions regarding what is and is not notable can affect what other members of the public consider to be notable. Thus, it's critical to understand how Wikipedians make their decisions about notability in the first place. I hope to show that Wikipedia's existing notability policies err on the side of being overly restrictive, preventing certain epistemologically useful content from being included on the site.

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[217] A few studies have found that Wikipedia's content can influence public opinion. These include: Sanmay Das, Allen Lavoie, and Malik Magdon-Ismail, "Manipulation among the Arbiters of Collective Intelligence," *Proceedings of the 22nd ACM International Conference on Information & Knowledge Management* (2013): 1097-106 and Anna Samoilenko and Taha Yasseri, "The Distorted Mirror of Wikipedia: A Quantitative Analysis of Wikipedia Coverage of Academics." *EPJ Data Science* 3, no. 1 (2014): 1-11.

2.1 Historical context for the concept of notability

Most of the debates among Wikipedians regarding what should and should not get an article center around the concept of "notability." This is a concept with a long history, especially among the reference works that predated Wikipedia. Print sources in particular had to carefully consider what would and would not make it into the final version of their product; producing an excessively-long, many-volume work would be unmanageable for both the producers and consumers of that work.

In this section, we'll look at how both encyclopedias and biographical dictionaries — sources quite similar to Wikipedia — have attempted to determine what is and is not notable. Ultimately, I hope to show that Wikipedia's detailed notability policies are unusual; print reference works rarely had such well-defined standards for notability. Even so, encyclopedias and biographical dictionaries remained highly selective with what they included, and this practice carried over to Wikipedia — despite the fact that Wikipedia has no physical limitations on its size.

2.1.1 Notability in encyclopedias

If we want to better understand Wikipedia ("the free encyclopedia that anyone can edit"), it's critical to study the encyclopedic tradition from which it arose. Wikipedians are proud of the ways that Wikipedia has "improved" on other encyclopedias — most centrally, in being free and further-reaching in its scope — but the site still borrowed heavily from the general model laid out by the centuries-old tradition of print encyclopedias. Thus, to better understand how

Wikipedia has determined which topics are worthy of inclusion, we ought to consider how earlier encyclopedias approached this same question.

In his book *Encyclopaedic Visions*, historian Richard Yeo explains that early encyclopedias had a different focus than most modern ones. "Today most readers probably go to encyclopaedias for biographical and historical, rather than for scientific, information," Yeo writes. "In the 1700s, the reverse was the case: the works that assumed the title of encyclopaedia were the dictionaries of arts and sciences, and these excluded historical and biographical material."[218] Focusing on art and science helped prevent early encyclopedias from becoming unmanageably large — but even this limitation, of course, was nowhere near sufficient for creating reasonably-sized encyclopedia.

Part of the solution, according to Yeo, came down to a matter of definition; encyclopedias "avoided... loss of control by defining arts and sciences in a particular way, and then by making further restrictions within these parameters."[219] This required encyclopedists to decide on a specific list of fields and subfields that would be covered in their work, excluding everything else. But, again, this was still not enough of a limitation of content. Within each field, it was still critical to determine which concepts were notable enough for inclusion and which were not.

How was this notability determined? Per Yeo, a proposal for one encyclopedia suggested that it was necessary "to exclude obsolete science, to retrench superfluous matter, [and] to abridge articles that are needlessly diffuse."[220] But what subjects count as "superfluous"? The writer left this unclear. Notability (or at least non-superfluity) was apparently a relevant standard for inclusion, but there was no formal explanation of what notability entailed.

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[218] Richard Yeo. *Encyclopaedic Visions: Scientific Dictionaries and Enlightenment Culture* (Cambridge; New York: Cambridge University Press, 2001), 14.
[219] Ibid, 61.
[220] Ibid, 67.

The Encyclopedia Britannica — a foundational work in the encyclopedia genre — was among the first reference works forced to consider the notability question. Consider the Preface to the first edition of the Encyclopedia Britannica written in 1768. The Preface begins:

> UTILITY ought to be the principal intention of every publication. Wherever this intention does not plainly appear, neither the books nor their authors have the smallest claim to the approbation of mankind.[221]

To that end, the editors of the Britannica profess to have taken "the best books upon almost every subject, extracted the useful parts, and rejected whatever appeared trifling or less interesting."[222] Apparently, the early Britannica equated notability with usefulness; non-notability was tied to both what is non-useful and non-interesting. Of course, this raises the question of what sort of knowledge counts as "useful" or not; the Preface provides no such definition. As a result, the first edition of the Encyclopedia Britannica offers us the rather vague notion that "notability equals utility." As we'll later see, Wikipedia's guidelines for notability make no such claims regarding utility.

A few centuries later, in 1910, the first volume of the celebrated eleventh edition of the Encyclopedia Britannica was published; this edition included articles not just on art and science, but biographical information as well. The eleventh edition included an "Editorial Introduction" far longer than the first edition's original preface — nearly 10,000 words in all.[223] This introduction lays out how the eleventh edition differs from previous versions of the Britannica; it explains how the editors decided to order articles under their particular categories; it elaborates on the use of statistics and illustrations; it even dedicates a few paragraphs to explaining the English transliteration of words in other languages. And yet, nowhere in this introduction does

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[221] Society of Gentlemen in Scotland, *Encyclopaedia Britannica; Or, A Dictionary of Arts and Sciences, Compiled upon a New Plan in Which the Different Sciences and Arts Are Digested into Distinct Treatises or Systems; and the Various Technical Terms, Etc., Are Explained as They Occur in the Order of the Alphabet* (p. v. Chicago: Encyclopaedia Britannica, 1968; originally published 1768), v.

[222] Ibid.

[223] Hugh Chisholm, *The Encyclopedia Britannica: a dictionary of arts, sciences, literature and general information* (11th ed. New York: The Encyclopedia Britannica Co, 1910-11), v-ix.

the Britannica lay out its standards for inclusion and exclusion of topics; nowhere does it define notability.

This lack of well-defined standards for notability is not unique to the Encyclopedia Britannica; many print encyclopedias seem to lack clear notability policies. The preface to the 1918 edition of the Encyclopedia Americana makes no mention of specific standards for inclusion.[224] Likewise, the preface to the first edition of the World Book, published in 1917, emphasizes the work's accessibility yet ignores notability altogether.[225]

While "notability" is obviously central to determining what gets included in an encyclopedia, most encyclopedias seem to avoid providing a specific definition for notability. Wikipedia, as we'll see, is a major exception; Wikipedia's notability guidelines are thousands of words long and take up numerous policy pages and sub-pages. This difference in policy between Wikipedia and older print encyclopedias is likely due to the way that the two types of sources are compiled. Print encyclopedias are generally pieced together by a small team of editors; such a team can come to a consensus regarding what is and is not notable without needing a specific definition for "notability." Wikipedia, on the other hand, is made up of thousands of editors. For such a large group to reach a meaningful consensus, Wikipedians decided early on that strict notability guidelines would be critical. In the following sections, we'll examine how Wikipedians reached this conclusion, and what exact guidelines they decided to implement.

2.1.2 Notability in biographical dictionaries

Encyclopedias are clearly one source that directly impacted Wikipedia's development. But if we want to better understand Wikipedia, we should also look to the heritage of

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[224] *The Encyclopedia Americana: a Library of Universal Knowledge* (New York: Encyclopedia Americana Corp., 1918-20), i-iii.

[225] George Herbert Locke, Ellsworth D. Foster, and Michael Vincent O'Shea. *The World Book: Organized Knowledge In Story And Picture* (Chicago: Hanson-Roach-Fowler company, 1917-18), ii-iv.

"biographical dictionaries." A biographical dictionary is any reference work that contains mostly (or entirely) biographical articles. Biographical dictionaries function much like encyclopedias, but limit their scope exclusively to biographical content; many biographical dictionaries (generally called "national biographies") further limit themselves to discussing notable individuals from one particular nation. We'll discuss one such source below.

Wikipedia, of course, is not biography-only, but a random sample from December 2015 found that roughly 28% of Wikipedia's articles are biographic — a higher portion than any other category of article (including "science," "history," "society," "culture & arts," and others).[226] Thus, looking at how biographical dictionaries have determined which people are "notable" and which are not can help contextualize how Wikipedia approaches this same question.

One of the most well-known biographical dictionaries is the Dictionary of National Biography (DNB) from the United Kingdom. The DNB was compiled by publisher George Smith and editor Leslie Stephen in 1884.[227] The two men sought to compile a dictionary describing the lives of notable individuals from both the UK and its territories abroad — specifically, one more fact-focused and less hagiographic than similar projects at the time.[228] Additionally, the DNB, like most biographical dictionaries, only included articles about subjects who were already deceased.

The initial volumes of the Dictionary of National Biography had no preface, leaving it unclear what standards Smith and Stephen used to determine which Britons were notable enough to include in the DNB.[229] But, some years later, a 1901 supplement to the DNB offered the first

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[226] Smallbones, "User:Smallbones/1000 random results," https://en.wikipedia.org/wiki/User:Smallbones/1000_random_results (accessed March 1, 2021).
[227] David Cannadine, "BRITISH NATIONAL BIOGRAPHY AND GLOBAL BRITISH LIVES: FROM THE DNB TO THE ODNB—AND BEYOND?" in *True Biographies of Nations?: The Cultural Journeys of Dictionaries of National Biography* (Acton ACT, Australia: ANU Press, 2019), 194.
[228] Ibid.
[229] Ibid, 195.

explicit explanation of how the dictionary determines notability. The 1901 supplement's preface includes the following passage:

> Every suggestion has been carefully considered, and, although the rejections have been numerous, the Editor hopes that he has not excluded any name about which information is likely to be sought in the future by serious students. Reputations that might reasonably be regarded as ephemeral have alone been consciously ignored. The right of a person to notice in the Dictionary has been held to depend on the probability that his career would be the object of intelligent inquiry on the part of an appreciable number of persons a generation or more hence.[230]

There are several things of note regarding the conception of notability laid out above. Clearly, the Dictionary of National Biography is concerned with being practically useful; notability, for the DNB, comes down to whether or not a subject is likely to be studied by students for years into the future.

Likewise, the DNB's intention to only include content that would be relevant into the future represents a major concern for all encyclopedias and national biographies at the time; for people to purchase these reference texts, they'd likely have to believe that those texts would be relevant for quite some time. We saw this same concern with utility in the Encyclopedia Britannica, mentioned above. But Wikipedia, as we'll see, does not share this utilitarian concern. This is attributable to several factors. First, no one is paying for Wikipedia. And second, Wikipedia can constantly change, add, and remove content; it doesn't have to worry about whether the content it's adding now will be relevant to readers two decades from now.

But — as we saw with encyclopedias — the DNB's clearly-stated consideration of notability is rare for sources of this type. The updated version of the DNB, the Oxford Dictionary of National Biography (ODNB) was published both in print and online in 2004. Per historian James Raven, the ODNB included biographies of 54,922 UK-related individuals upon its release,

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[230] George Smith and Sidney Lee, *The Dictionary of National Biography: Supplement, Volume 1* (London: Oxford University Press, 1901), v-vi.

written by 12,550 different authors.[231] The ODNB continues to update its list of biographies since

2005, and now boasts having documented over 60,000 lives.[232]

When I attempted to figure out how the ODNB decides which individuals are notable

enough to include, I was unable to find any such explanation on its site. There was no discussion

of notability on its "About" page, "FAQ" page, or its many other meta pages.[233] I was, however,

able to find a 2012 YouTube video in which the editor of the ODNB, Lawrence Goldman, states

that the people written about in the dictionary...

> ...Are chosen by more than 450 advisors to the dictionary; men and women who are experts in their
> different fields... Together, they help us choose the most notable figures from different areas of national life.
> The main criteria for inclusion in the dictionary is notability. We're looking for notable figures from all
> these different areas of human endeavor.[234]

Yet never in the clip does Lawrence Goldman elaborate on the ODNB's definition of notability.

The same conspicuous lack of a clearly-defined notability policy can be found on the website of

the American National Biography — another prominent biographical dictionary run by the

Oxford University Press.[235]

This vagueness is not particularly surprising. As we've seen, clearly stated standards for

notability seem to be the exception, not the norm, for both encyclopedias and biographical

dictionaries. To reiterate, this is likely because these sources are traditionally compiled by a

small group of experts who can form a consensus around notability without the need for a

specific definition of the term. But forming a consensus among a large group is more difficult.

Thus, as we'll see in the next section, Wikipedia's status as a crowd-produced encyclopedia

[231] James Raven, "The Oxford Dictionary of National Biography: Dictionary or Encyclopaedia?" *The Historical Journal* 50, no. 4 (2007), 993.

[232] *Oxford Dictionary of National Biography*, s.v. "About," https://www.oxforddnb.com/page/about (accessed March 1, 2021).

[233] See the *ODNB* pages "About," https://www.oxforddnb.com/page/about, and "FAQ," https://www.oxforddnb.com/page/faq, among other meta pages (accessed March 1, 2021).

[234] "(2012) What is the Oxford Dictionary of National Biography (ODNB)?" *Oxford Academic*, YouTube video, December 27, 2012, https://www.youtube.com/watch?v=hMy7stFwdYA (accessed March 1, 2021).

[235] See the *ANB* pages "About," https://www.anb.org/page/about, and "FAQs," https://www.anb.org/page/faqs, among other meta pages (accessed March 1, 2021).

forced the site to make explicit what had typically remained implicit in print reference works —

namely, specific standards for notability. We'll also consider how Wikipedians decided on their

definition of notability, given that "notability" had been left undefined by most of the reference

works that predated the site.

2.2 Wikipedia's notability policies

We've looked at how sources which predate Wikipedia — encyclopedias and

biographical dictionaries — have approached the question of notability. Next, we'll examine the

guidelines that Wikipedia has formed regarding what is and is not notable. In this section, we'll

critically examine what Wikipedia's notability policies say. In the next, we'll attempt to track the

history of those policies.

Wikipedia's notability guidelines play a central role in determining which topics

"deserve" having their own articles on Wikipedia and which do not. But, before we can analyze

the guidelines themselves, it's critical to understand how new articles get added to Wikipedia, as

well as how they can be deleted.

2.2.1 How new articles are added to Wikipedia, and the "Articles for Deletion" forum

Wikipedia prides itself on being the encyclopedia that anyone can edit. Not only can

anyone with internet access modify an existing Wikipedia article, but anyone can also create a

new article at any time. That said, the process of creating a new article is relatively opaque,

especially to first-timers; Wikipedia has no clearly-marked button labelled "Create a page."

Instead, in order to create a new article, a person must first type in their intended article topic

into Wikipedia's search box. If no such page exists, users will get two different responses

depending on whether they have a registered account or not.

If you're not a registered editor of Wikipedia, you will be prompted to "Ask for [a page

on your topic] to be created," alongside a link that redirects to the "Articles for Creation" page.

At "Articles for Creation," unregistered users can draft new articles for inclusion onto Wikipedia,

but they won't automatically appear on the website until they have been reviewed and approved

by experienced editors.[236]

On the other hand, if you do have a registered account (which is relatively simple to set

up), Wikipedia will tell you that "You may create the page" you had in mind, and provides you

with a link to do so. Wikipedia still encourages registered users to begin by working on their

articles in the unpublished "draft space," but registered users can also create new pages that will

immediately appear on Wikipedia for others to view.[237]

Once you've published your new article, it's theoretically possible for any Wikipedia user

to find it, but that's unlikely to happen early on. Few (if any) of Wikipedia's other articles will

link to your new page, so it would probably only be accessible via the "Search" feature; even

then, unless someone searches for the exact name of your topic, your article would probably be

listed below older articles with similar titles. As a result, the first person who will see your article

is likely to be one of Wikipedia patrollers. Patrollers are typically long-time Wikipedia editors

who have been given the privilege (and responsibility) of watching a constantly-updated list of

the newest articles to be added to Wikipedia.[238] After looking through each new article, a

patroller can give it their stamp of approval by marking it as "patrolled"; this makes it far more

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[236] *Wikipedia*, s.v. "Wikipedia:Articles for creation," https://en.wikipedia.org/wiki/Wikipedia:Articles_for_creation (accessed March 1, 2021).

[237] *Wikipedia*, s.v. "Help:Your first article," https://en.wikipedia.org/wiki/Help:Your_first_article (accessed March 1, 2021).

[238] *Wikipedia*, s.v. "Wikipedia:New pages patrol," https://en.wikipedia.org/wiki/Wikipedia:New_pages_patrol (accessed March 1, 2021).

likely that the page will be allowed to remain on Wikipedia. If, on the other hand, they think that the article isn't appropriate for Wikipedia, they can nominate it to "Articles for deletion."

"Articles for deletion" (AfD) is where Wikipedians meet to discuss whether or not an article that currently exists on Wikipedia ought to be removed from the site.[239] Any Wikipedian can nominate any article for deletion, regardless of how long it's been on the site, simply by adding a new entry to the constantly-updating "Articles for deletion" log. Newer articles (added to AfD by either patrollers or regular users) are often at particular risk of deletion, but the AfD log includes plenty of old articles, too.[240] Per data from 2018, around 1,000 pages are deleted from Wikipedia each day.[241] However, Wikipedia is structured such that only admins have the formal power to remove an article once it has been posted on Wikipedia.

Thus, "Articles for deletion" is simply a place for average users of Wikipedia to opine on whether or not they think an article belongs on the site. Whenever someone nominates an article for deletion, they are expected to say why they nominated it; typically, this involves pointing out that the article failed to meet one or more of Wikipedia's guidelines — perhaps on notability, neutrality, or reliable sources, among others. Then, other users will comment on the entry, explaining why they think Wikipedia ought to "Delete" or "Keep" the article. Typically, at the end of a week or so, an admin will step in to see what general consensus the Wikipedia community has formed on that topic. The admin will then proceed to keep the article (removing it from AfD), or delete the article from the site. Depending on the nature of the community

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[239] *Wikipedia*, s.v. "Wikipedia:Articles for deletion," https://en.wikipedia.org/wiki/Wikipedia:Articles_for_deletion (accessed March 1, 2021).
[240] As an example, see *Wikipedia,* s.v. "Wikipedia:Articles for deletion/Log/2020 November 23," https://en.wikipedia.org/wiki/Wikipedia:Articles_for_deletion/Log/2020_November_23 (accessed March 1, 2021).
[241] *Wikipedia*, s.v. "Wikipedia:Statistics," https://en.wikipedia.org/wiki/Wikipedia:Statistics (accessed March 1, 2021).

consensus, they may also choose to redirect the article, merge it with an existing article, or send it back to the draft space for improvement.[242]

Often, someone will create a new article on Wikipedia that is particularly poor in quality; maybe it's badly written, lacks sources, or is straight-up vandalism. But generally, articles like these meet Wikipedia's "Criteria for speedy deletion" ("WP:CSD") and can be removed by Wikipedia admins automatically, without the need for discussion on AfD.[243] As a result, the most common type of debate on the AfD centers around whether a given article's topic is notable or not. Users who choose to engage in these debates often make frequent references to Wikipedia's existing notability guidelines. So, let's now examine the guidelines that Wikipedia has established regarding notability.

2.2.2 Wikipedia's "general notability guideline"

Today, Wikipedia's formal notability policies can be found on the page "Wikipedia:Notability."[244] The "Notability" page is roughly 4,000 words in length, and it also links to dozens of other policy pages that expand upon more specific facets of Wikipedia's standards for notability. Yet there are two central facets to Wikipedia's notability policy: the "general notability guideline" and the "subject-specific notability guidelines." We'll examine the former here, and the latter next.

As the "Notability" page explains, the crux of Wikipedia's current notability policy is the "general notability guideline," or GNG. As we'll see in the next section, Wikipedia's GNG has remained largely unchanged since November of 2006, when it was called "The Primary

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[242] *Wikipedia,* s.v. "Articles for deletion."
[243] *Wikipedia*, s.v. "Wikipedia:Criteria for speedy deletion," https://en.wikipedia.org/wiki/Wikipedia:Criteria_for_speedy_deletion (accessed March 1, 2021).
[244] *Wikipedia*, s.v. "Wikipedia:Notability," https://en.wikipedia.org/wiki/Wikipedia:Notability (accessed March 1, 2021).

Notability Criterion" and given slightly different wording.[245] The most recent iteration of the

GNG states:

> If a topic has received **significant coverage** in **reliable sources** that are **independent of the subject**, it is **presumed** to be suitable for a stand-alone article or list.[246]

The "Notability" page then goes on to define each of the words and phrases in bold. "Significant

coverage" is explained as "more than a trivial mention, but it does not need to be the main topic

of the source material." "Reliable" links to the policy page on "Reliable sources" which we

discussed in the previous chapter. "Sources" is said to refer to secondary sources, "as those

provide the most objective evidence of notability." There is no fixed number of sources required

for an article to be considered notable, "but multiple sources are generally expected."

"Independent of the subject" means that the secondary sources about an article's subject

must not be written by the subject itself or someone closely affiliated with the subject. Lastly,

"Presumed to be suitable" indicates that a topic may meet all the above criteria (significant

coverage in reliable sources that are independent of the subject) and *still* not merit its own article.

For an article like this, Wikipedia encourages "a more in-depth discussion" between editors.[247]

That said, if a topic does meet the general notability guideline (GNG), it's generally

considered worthy of inclusion on Wikipedia. The one main exception is when a topic falls under

"What Wikipedia is not" ("WP:NOT"), another policy page that elucidates the type of content

that Wikipedia is certainly *not* a home for.[248] This page includes statements such as "Wikipedia is

not a dictionary," "Wikipedia is not a publisher of original thought," "Wikipedia is not a blog,

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[245] See the November 20, 2006 version of the "Notability/Historical/Arguments" page here: https://en.wikipedia.org/w/index.php?title=Wikipedia:Notability&oldid=89001442 (accessed March 1, 2021).
[246] *Wikipedia*, s.v. "Wikipedia:Notability."
[247] Ibid.
[248] *Wikipedia*, s.v. "Wikipedia:What Wikipedia is not," https://en.wikipedia.org/wiki/Wikipedia:What_Wikipedia_is_not (accessed March 1, 2021).

web hosting service, social networking service, or memorial site," and "Wikipedia is not a newspaper," among others.

So, if a topic meets Wikipedia's general notability guideline and does *not* fall under "What Wikipedia is not," it is considered notable enough for inclusion on Wikipedia. Of course, this is far easier said than done; the general notability guideline's (intentionally) vague definitions for concepts like "significant coverage" and "reliable sources" can often lead to lengthy debates about which topics *actually* meet the GNG and which do not. We'll look at some of these debates in greater detail in the following sections.

But what happens if a topic certainly *fails* to meet the GNG? Is it immediately considered non-notable and excluded from the sight? No — not automatically. When possible, topics that fail to meet the GNG are then examined under the "subject-specific notability guidelines."

2.2.3 Wikipedia's "subject-specific notability guidelines"

On Wikipedia, the subjects that currently have their own "subject-specific notability guidelines" (SNGs) are "academics," "astronomical objects," "books," "events," "films," "geographic features," "media," "music," "numbers," "organizations and companies," "people," "sports," and "web."[249] Rather than examine the notability guidelines for each of these subjects — which all exist on their own lengthy policy pages — let's look at two: the SNGs for "academics" and for "books."

Wikipedia's policy page for "Notability:Academics" lays out eight specific criteria; if an academic meets any one of the eight, they are considered notable.[250] (Even if they meet *none* of the eight, they may still be considered notable under the broader SNGs for "people.") The eight

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[249] *Wikipedia*, s.v. "Category:Wikipedia notability guidelines,"
https://en.wikipedia.org/wiki/Category:Wikipedia_notability_guidelines (accessed March 1, 2021).
[250] *Wikipedia*, s.v. "Wikipedia:Notability (academics),"
https://en.wikipedia.org/wiki/Wikipedia:Notability_(academics) (accessed March 1, 2021).

criteria include some that are vague — "1. The person's research has had a significant impact in their scholarly discipline, broadly construed, as demonstrated by independent reliable sources" — and others that are more specific — "8. The person has been the head or chief editor of a major, well-established academic journal in their subject area." All eight criteria for academic notability are clarified in the later section "Specific criteria notes."[251] Even so, many remain broad enough to be open to interpretation, much like the GNG.

Like the SNGs for academics, the SNGs for "books" includes a list of criteria; meet any one of the five criteria, and a book is presumed to be notable.[252] Again, like with academics, these criteria range in their specificity; they include "2. The book has won a major literary award," "3. The book has been considered by reliable sources to have made a significant contribution to a notable or significant ... art form, or event, or political or religious movement." and "4. The book is, or has been, the subject of instruction at two or more schools," among others.[253]

The lack of specificity of the criteria laid out by many of the SNGs — from academics to books to numbers — is certainly by design. Wikipedia prefers openness, both in terms of how its content is displayed but also how it's produced. This is why Wikipedia refers to its notability policies as "guidelines" rather than "rules"; it allows users to implement these guidelines how they see fit, or even ignore them altogether. In fact, as we've seen, one of the five central pillars of Wikipedia is the assertion that "Wikipedia has no firm rules"; "Wikipedia has policies and guidelines, but they are not carved in stone," it states.[254] We'll look more at this flexibility in the following sections, as well as some of the disputes it has caused.

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[251] Ibid.

[252] *Wikipedia*, s.v. "Wikipedia:Notability (books)," https://en.wikipedia.org/wiki/Wikipedia:Notability_(books) (accessed March 1, 2021).

[253] Ibid.

[254] *Wikipedia*, s.v. "Wikipedia:Five pillars," https://en.wikipedia.org/wiki/Wikipedia:Five_pillars (accessed March 1, 2021).

2.3 The history of Wikipedia's approach to notability

We've now examined the content of Wikipedia's notability policies — specifically, its

"general notability guideline" and the "subject-specific notability guidelines." It's clear that

Wikipedia is far more thorough in its conception of notability than the encyclopedias and

biographical dictionaries that preceded it — most of which never laid out clear standards for

what did and did not belong in their sources at all.

Given that the encyclopedic tradition does not have a long history of carefully defined

notability standards, where did Wikipedia's vision of notability originate? Additionally, given

that Wikipedia is a digital encyclopedia with no theoretical limit on its size, *why* did Wikipedia

decide to implement such strict standards for inclusion in the first place? In this section, we'll

attempt to answer these questions, tracing the history of Wikipedia's conception of notability.

Per its "View history" tab, the Wikipedia policy page for "Notability" was created on

September 7th, 2006.[255] Prior to that, discussions surrounding notability took place on the

"Notability/Arguments" page. This page was created in 2004 by the Wikipedia user Gracefool,

but remained mostly blank until May 19th, 2005.[256] On that day, user Neutrality added the

following text to the page:

> "Notability is something which is known outside of a narrow interest group or constituency, or should be
> because of its particular importance or impact. It's an extension of the notion of 'notoriety' for biographical
> articles...
>
> It has been argued that "notability" is not a criterion for deletion, because (among other things) this isn't
> specifically stated in the deletion policy; and since Wikipedia is not paper with (in theory) no size limits,

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[255] *Wikipedia*, s.v. "Wikipedia:Notability: Revision history,"
https://en.wikipedia.org/w/index.php?title=Wikipedia:Notability&dir=prev&action=history (accessed March 1, 2021).
[256] *Wikipedia*, s.v. "Wikipedia:Notability/Historical/Arguments: Revision history,"
https://en.wikipedia.org/w/index.php?title=Wikipedia:Notability/Historical/Arguments&dir=prev&action=history (accessed March 1, 2021).

there's no reason why wikipedia shouldn't include "everything" that fits in with our other criteria, such as verifiability and no original research.

Since Wikipedia is not a primary or secondary source—much less a vehicle for publication of direct observation—non-notable subjects do not belong in it..."[257]

Along with his edits, Neutrality left a comment explaining that he had borrowed this conception of notability from an essay which had been written by the user Demi in April of 2005. In that essay, Demi seems to be the first Wikipedian to define a notable topic as "something which is known outside of a narrow interest group or constituency, or [something with] particular importance or impact."[258]

The "Notability/Arguments" page evolved over time via user contributions, especially between 2005 and 2007. Yet, over all those years (and into the present), the definition added by Neutrality, and authored by Demi, remained at the top of the page: "A topic has notability if it is known outside a narrow interest group or constituency, or should be because of its particular importance or impact."[259] The early Wikipedia community had apparently landed on a definition for notability it was happy with. And yet, where Demi came up with this definition is unclear; Demi's original 2005 essay on notability offers no origin or explanation for the definition. In fact, Demi's essay acknowledges its own subjectivity, beginning: "To me, notable means..."[260]

In June of 2005, the "Notability/Arguments" page was updated to begin with the disclaimer "There is no Wikipedia policy for notability, nor is this a proposal for one."[261] But in March of 2006, after hundreds of edits from dozens of users, that disclaimer was replaced with a

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[257] See the May 19, 2005 version of the "Wikipedia:Notability/Historical/Arguments" page here: https://en.wikipedia.org/w/index.php?title=Wikipedia:Notability/Historical/Arguments&oldid=43614698 (accessed March 1, 2021).

[258] *Wikipedia*, s.v. "User:Demi/Notability," https://en.wikipedia.org/wiki/User:Demi/Notability (accessed March 1, 2021).

[259] For the most recent version of the page: *Wikipedia*, s.v. "Wikipedia:Notability/Historical/Arguments," https://en.wikipedia.org/wiki/Wikipedia:Notability/Historical/Arguments (accessed March 1, 2021).

[260] *Wikipedia*, s.v. "User:Demi/Notability."

[261] See the June 13, 2005 version of the "Wikipedia:Notability/Historical/Arguments" page here: https://en.wikipedia.org/w/index.php?title=Wikipedia:Notability/Historical/Arguments&oldid=16735592 (accessed March 1, 2021).

text box reading "This page is a *proposed* Wikipedia policy, guideline, or process. The proposal may still be in development, under discussion, or in the process of gathering consensus for adoption. References or links to this page should not describe it as 'policy.'"[262] While the Wikipedia community had once been comfortable discussing notability freely, the community now believed that Wikipedia needed formal policies to govern notability. What accounts for this shift towards bureaucracy?

As Aaron Halfaker et. al. discovered in the paper I referenced in Chapter 1, Wikipedia's policies became far more formalized and enforced in the period around 2006-2007.[263] This was when Wikipedia saw an explosion in both readership and editorship; the existing community decided that more formal policies would be critical for the project to continue to be successful with such an influx of newcomers.[264] It is during this period that Wikipedia's set of guidelines on notability transitioned from being a potential/proposed policy to an actual one.

I spoke to Emily Temple-Wood, who has been an active editor of Wikipedia since 2007. Temple-Wood was named Wikipedian of the Year in 2016 for her efforts to fight systemic bias on Wikipedia; we'll look more at the work she's done in that regard in the next chapter.[265] Temple-Wood informed me that Wikipedia's policies regarding topics like notability were fairly lax until 2006 or 2007 — around the time that she arrived to the site. But by 2007, Wikipedia was on the brink of a major boost in popularity. Knowing they were about to receive a great deal of public scrutiny, Temple-Wood told me, Wikipedians decided that it was time to formalize

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[262] See the March 13, 2006 version of the "Wikipedia:Notability/Historical/Arguments" page here: https://en.wikipedia.org/w/index.php?title=Wikipedia:Notability/Historical/Arguments&oldid=43614698 (accessed March 1, 2021).
[263] Halfaker et. al, "The Rise and Decline of an Open Collaboration System."
[264] Ibid.
[265] Ed Erhart, "Jimmy Wales Names Emily Temple-Wood and Rosie Stephenson-Goodknight as Wikipedians of the Year," *Wikimedia Foundation News*, December 12, 2018, https://wikimediafoundation.org/news/2016/06/24/wikipedians-of-the-year/ (accessed March 1, 2021).

certain site-wide policies in order to give the website a greater air of credibility.[266] This is when

Wikipedia's notability guidelines became more set-in-stone.

Furthermore, Temple-Wood suggested that the "Pokémon controversy" was a particular

incident that drove the desire for more concrete notability guidelines. In 2005, a group of

Pokémon fans banded together to create "WikiProject Pokémon," an initiative "to improve

Wikipedia's encyclopedic coverage of all Pokémon related articles."[267] Part of this initiative

involved creating a unique Wikipedia article for each unique species of Pokémon. This led to

controversy, and in March of 2007, a lengthy discussion erupted on WikiProject Pokémon's

"Talk" page.[268] Numerous users weighed in on whether or not each individual Pokémon was

truly notable enough to warrant its own Wikipedia page. "Cruft, cruft, cruft. Wikipedia is not a

gameguide. We've got Bulbapedia for that sort of stuff," one user wrote.[269] "One man's 'cruft' is

another man's information," another user retorted.[270] In many ways, the Pokémon controversy

was part of the greater debate between inclusionists and deletionists which was raging at the

time; we'll examine this debate in greater detail in the following section.

At this time, Wikipedia had not yet formalized its notability guidelines, so the matter was

open to debate; numerous proposals sprung up which tried to settle the dispute. The winning

"Poképrosal" determined that all underdeveloped Pokémon were to be combined into a single

list, though some special Pokémon were allowed to keep their individual articles.[271] More

importantly, the Pokémon controversy shed a light on the need for a more institutionalized

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[266] Emily Temple-Wood, interview with Daniel Leonard via Zoom, November 2020.
[267] *Wikipedia*, s.v. "Wikipedia:WikiProject Pokémon,"
https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Pok%C3%A9mon (accessed March 1, 2021).
[268] *Wikipedia*, s.v. "Wikipedia talk:WikiProject Pokémon/Archive 14,"
https://en.wikipedia.org/wiki/Wikipedia_talk:WikiProject_Pok%C3%A9mon/Archive_14#Is_there_any_reason_why_all_Pokemon_are_necessarily_notable? (accessed March 1, 2021).
[269] Ibid.
[270] Ibid.
[271] *Wikipedia*, s.v. "Wikipedia:Poképrosal," https://en.wikipedia.org/wiki/Wikipedia:Pok%C3%A9prosal (accessed March 1, 2021).

definition for "notability," especially at a time when so many Wikipedians were concerned with the site's public image.

With a large segment of the Wikipedia community in agreement regarding the need for formalized notability guidelines, the official "Notability" policy page was created. While the page has evolved somewhat over the years, the essence of Wikipedia's notability standards has remained quite consistent. In May of 2007, for example, the "Notability" policy page already distinguished between a "general notability" guideline and "subject-specific" guidelines.[272] May 2007's version of the general notability guideline stated that "A topic is presumed to be notable if it has received significant coverage in reliable sources that are independent of the subject and each other." [273] Compare this to the GNG's 2021 iteration — "A topic is presumed to be suitable for a stand-alone article or list when it has received significant coverage in reliable sources that are independent of the subject" — and you'll see that there is almost no substantive difference whatsoever.[274] Wikipedia's consistency is somewhat remarkable, given how much the rest of the internet has changed since 2007. Yet many Wikipedians I interviewed have lamented the stagnation of Wikipedia's policies, viewing change as essential for Wikipedia to remain relevant and become more inclusive. I'll elaborate on this concern in Chapter 3.

2.4 Inclusionism versus deletionism on Wikipedia

Wikipedia's notability guidelines were the product of much debate, and have certainly caused further debate since they were introduced. In this section, we'll look at one particularly influential debate in Wikipedia's history: the debate between inclusionists and deletionists. This

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[272] *Wikipedia*, s.v. "Wikipedia:Notability,"
https://en.wikipedia.org/w/index.php?title=Wikipedia:Notability&oldid=131979833 (accessed March 1, 2021).
[273] Ibid.
[274] *Wikipedia*, s.v. "Wikipedia:Notability."

debate began before the formalization of Wikipedia's notability guidelines, and has remained active since. In the sections below, I'll lay out how this debate played out on early Wikipedia, as well as the Wikipedia of today. I'll then argue that this debate is rooted in epistemic virtues; deletionists prefer "speed" and "efficiency," while inclusionists focus on "power." I'll suggest that inclusionist concerns are targeted towards deeper-rooted issues in the Wikipedia model, and are more worthy of Wikipedia's attention.

2.4.1 Inclusionism versus deletionism on Wikipedia in the mid-2000s

One of the biggest debates that has played out in Wikipedia's history has been between the self-identified "inclusionists" and their opposing faction, the "deletionists" (sometimes referred to as "exclusionists"). This is a debate that has received some attention from outsiders studying Wikipedia, as it's central to understanding how Wikipedians approach the inclusion and exclusion of topics from the site.

In his history of Wikipedia, researcher and Wikipedian Andrew Lih summarizes the dispute as a debate over notability. Inclusionists, he writes, are those who believe that Wikipedia "should contain pretty much everything, as long as it's factual and verifiable."[275] Inclusionist Wikipedians are far more lax in their understanding of notability; since there's no physical limit on the size of Wikipedia, why not include as much information as possible? "Deletionism" is the opposing viewpoint — the belief that "selectivity equals quality," and that "stringent standards provides for a more useful encyclopedia," per Lih.[276] After all, if one does a search for "John Brown" on Wikipedia, it's far more cumbersome to find the person you're looking for if the site is full of thousands of articles named "John Brown." Of course, there are plenty of topics that

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[275] Lih, *The Wikipedia Revolution*, 116.
[276] Ibid.

exist on the borderline of notability; one prominent example, according to Lih, was the dispute over whether or not every elementary school should have its own page.[277]

On the Wikimedia Meta Wiki (a site for users to coordinate across all of the Wikimedia Foundation's projects), one can find an official page for both the "Association of Inclusionist Wikipedians" and the "Association of Deletionist Wikipedians." These pages — which the members of each faction collaborated to produce — provide an inside-look into the specific viewpoints of the two groups.

The page for the Association of Inclusionist Wikipedians states that the Association was founded on April 19th, 2004, although the page itself was created on October 27th, 2004.[278] Per their page, the official motto of the Association of Inclusionists is "Conservata veritate" — "With truth preserved" — which expresses their desire "to change Wikipedia only when no knowledge would be lost as a result."[279] Depending on their level of commitment to the inclusionist cause, members of the Association can earn awards which range from "Defensor of Inclusionism" to "Master of Inclusionism." Merit for these awards is apparently based on one's level of engagement in debates on the Articles for Deletion forum, where inclusionists sometimes gather to defend articles from being deleted.

Besides "Conservata veritate," an even more popular inclusionist phrase is "Wikipedia is not paper." This expresses their belief that, as a digital platform, there is really no limit to the number of topics that Wikipedia can (and ought to) cover.[280] In this way, they argue, Wikipedia is inherently different from previous paper encyclopedias, which were limited in what they could cover by their print-and-paper medium. Inclusionists view the idea of a digital encyclopedia with

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[277] Ibid, 117.
[278] *Wikimedia Meta-Wiki*, s.v. "Association of Inclusionist Wikipedians,"
https://meta.wikimedia.org/wiki/Association_of_Inclusionist_Wikipedians (accessed March 1, 2021).
[279] Ibid.
[280] *Wikimedia Meta-Wiki*, s.v. "Wikipedia is not paper," https://meta.wikimedia.org/wiki/Wikipedia_is_not_paper
(accessed March 1, 2021).

no size limit as an exciting new opportunity to cover topics that have received little attention

elsewhere. In fact, Wikipedia has actually built this inclusionist notion into its policy page on

"What Wikipedia is not" ("WP:NOT"), but with a caveat:

> Wikipedia is not a paper encyclopedia, but a digital encyclopedia project. Other than verifiability and the
> other points presented on this page, there is no practical limit to the number of topics Wikipedia can cover
> or the total amount of content. However, there is an important distinction between what *can* be done, and
> what *should* be done…[281]

On the other side of the debate are the deletionists. The official page for the Association

of Deletionist Wikipedians was founded a few days prior to that of the Inclusionists, on October

24th, 2004.[282] This Association's page lists two main goals:

> 1. Outpace rampant inclusionism
> 2. Further our goal of a quality encyclopedia containing as little junk as possible

In addition to these, the page includes links to brief essays users have written defending

deletionism, as well as a list of deletionism "Quotes and Arguments." The first, from user

Improv, says "*Wikipedia is not a junkyard*, counter to the inclusionist quote, *Wikipedia is not

paper*."[283] The Association's page also lists a ten-point "Code of Deletionism" modeled after the

biblical Ten Commandments; these include "1. Thou shalt not knowingly create an article that

violates WP:NOT, WP:N, WP:V, WP:OR, or WP:NPOV," "2. Thou shalt not tolerate an

Inclusionist to include worthless screed, lest we become Uncyclopedia," and "8. Thou shalt not

bite the newbies, even if they are creating inferior articles, for they are the future."[284]

The pages of these two Associations offer helpful insight into the viewpoints of the

inclusionist and exclusionist movements in their earliest days. However, both pages are relatively

defunct today, having received minimal edits since the late 2000s. Likewise, new membership in

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[281] *Wikipedia*, s.v. "What Wikipedia is not."
[282] *Wikimedia Meta-Wiki*, s.v. "Association of Deletionist Wikipedians,"
https://meta.wikimedia.org/wiki/Association_of_Deletionist_Wikipedians (accessed March 1, 2021).
[283] Ibid.
[284] Ibid.

both groups has plummeted. Wikipedia users are able to join the Association of Deletionist Wikipedians by editing the "Members" page and adding their name; of the 160 total members, 110 joined between 2004 and 2010, and only three new members joined in 2020.[285] The Association of Inclusionist Wikipedians, despite having greater membership overall, has seen a similar drop-off in newcomers.[286] Likewise, many of the early members of both groups are no longer active editors of Wikipedia.

Per Emily Temple-Wood, 2006-2007 was a period in which Wikipedians became very concerned with how "outsiders" would view their project, as the website received an influx of attention.[287] As a result, inclusionist vs. deletionist debates peaked in that era; the great "Pokémon controversy" of 2007 that we examined is just one such example. Andrew Lih suggests that Wikipedia's notability guidelines emerged as a direct result of the debates between inclusionists and deletionists; both sides wanted Wikipedia to implement some notability standards, but disagreed on what those standards should look like.[288]

With more lax notability policies, deletionists feared that outsiders would take one look at Wikipedia and view it as a "junkyard" rather than a legitimate, curated collection of information. On the other hand, inclusionists hoped that the inclusion of all sorts of articles — from individual Pokémon to Star Trek characters — would fascinate newcomers and bring more active editors into the community. Temple-Wood suggests that neither of these concerns are particularly relevant today, as most internet users already know Wikipedia and have formed opinions about it. As a result, the debate surrounding inclusionism and deletionism has become less relevant.

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[285] *Wikimedia Meta-Wiki*, s.v. "Association of Deletionist Wikipedians/Members," https://meta.wikimedia.org/wiki/Association_of_Deletionist_Wikipedians/Members (accessed March 1, 2021).
[286] See both the "Association of Inclusionist Wikipedians/Members" (now defunct) at https://meta.wikimedia.org/wiki/Association_of_Inclusionist_Wikipedians/Members#Old_list_of_members, and the newer "Category:Inclusionist Wikipedians" at https://meta.wikimedia.org/wiki/Category:Inclusionist_Wikipedians (accessed March 1, 2021).
[287] Temple-Wood, interview with Daniel Leonard.
[288] Lih, *The Wikipedia Revolution*, 116.

2.4.2 Inclusionism and deletionism on Wikipedia today

That said, concepts of "inclusionism" and "deletionism" still play a role among the modern-day Wikipedia community. In some sense, the establishment of formal notability policies helped to "settle" the debate regarding what does and does not belong on Wikipedia. But, at the same time, new debates have emerged regarding how best to interpret the existing guidelines. This is where most of the discussion surrounding inclusionism and deletionism falls today. (There are, of course, separate disputes regarding *changing* the guidelines themselves, but these appear to be far rarer; most Wikipedians have accepted the guidelines as they stand, likely due to how static Wikipedia's policies have become.)

Without formally joining either "Association," modern Wikipedians often label themselves as an "inclusionist" or a "deletionist" via a small icon on their user pages. A sizable portion of Wikipedia's active editors have adopted one of these two labels; "inclusionist" appears to be far more common than "deletionist."[289] Via their "Talk" pages, I reached out to a few of these inclusionist and deletionist Wikipedians. More specifically, I reached out to Wikipedians who were passionate enough about inclusionism or deletionism to formally list themselves as members of one of the two Associations mentioned above.

User Utcursch has been a member of the Association of Deletionist Wikipedians since November of 2004 — making him one of the Association's original members, and one of the few that's still active today. Utcursch told me that he "started identifying as a 'deletionist' to distinguish myself from editors who interpreted the words 'the sum of all human knowledge'

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[289] Compare the 1,718 entries of "Category:Inclusionist Wikipedians" at https://en.wikipedia.org/wiki/Category:Inclusionist_Wikipedians to the 304 entries of "Category:Deletionist Wikipedians" at https://en.wikipedia.org/wiki/Category:Deletionist_Wikipedians (accessed March 1, 2021).

quite liberally."[290] He recalls being particularly annoyed by self-promotional content, like articles about garage bands that were clearly written by one of the members. Utcursch supports Wikipedia's notability guidelines as they're currently written; he suggests that using vague terms like "significant coverage" and "reliable sources" is unavoidable, and can actually lead to useful debates.[291] Utcursch further identifies his own standards for notability in a way that's quite similar to that of the Dictionary of National Biography; "50 years from now, would people like this to be included in a general reference compendium?", he asks himself.[292] Utcursch is occasionally active on the Articles for Deletion forum, arguing for the removal of articles he considers non-notable under Wikipedia's current policies.[293]

User ShadowCyclone is a newcomer to the Association of Deletionist Wikipedians; he's been editing Wikipedia since 2018, and has been a member of the Association since January of 2020. ShadowCyclone's personal views on notability seem to align well with Wikipedia's formal notability guidelines: "I believe that the topic should be well-covered by reliable, independent sources for inclusion in Wikipedia. I think that too many obscure, under-sourced, unnoteworthy articles make it difficult to find high-quality, relevant articles, which doesn't do well for the site's reputation."[294] (Concerns about navigability and Wikipedia's overall reputation seem to unite many deletionists.) ShadowCyclone told me that he wishes fewer Wikipedia editors would "ignore" the current notability guidelines. ShadowCyclone also participates in Articles for Deletion from time to time, nominating "non-notable" articles for deletion, but not ones that could be improved "by adding reliable sources and trimming irrelevant information," he states.[295]

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[290] Utcursch, interview with Daniel Leonard via Wikipedia talk page, November 2020, https://en.wikipedia.org/wiki/User_talk:Utcursch/archive/45#Interview_request (accessed March 1, 2021).
[291] Ibid.
[292] Ibid.
[293] Ibid.
[294] ShadowCyclone, interview with Daniel Leonard via Wikipedia talk page, November 2020, https://en.wikipedia.org/wiki/User_talk:ShadowCyclone/Archives/2020/November (accessed March 1, 2021).
[295] Ibid.

On the inclusionist side, I spoke to user Ssr. Ssr has been editing the Russian Wikipedia since 2005 and the English Wikipedia since 2006; he has been a member of the Association of Inclusionist Wikipedians since 2007. Ssr ties inclusionism to freedom — a value he believes is at the core of Wikipedia; Ssr believes that Wikipedia competitor projects (like Larry Sanger's Citizendium) failed because they were not inclusionist enough.[296] Additionally, Ssr professes that he rarely pays close attention to Wikipedia's guidelines and policies at all; "I NEVER CAREFULLY READ WP:GNG AND ALMOST ALL OTHER RULES," he told me, in all-caps.[297] Ssr appreciates that Wikipedia gives him the flexibility to do what he likes, and he's familiar enough with the community to know what he can get away with doing. (Per Ssr, the English Wikipedia is far more flexible than the Russian one, though.) Ssr rarely participates in Articles for Deletion, but does sometimes defend articles there. Additionally, Ssr occasionally argues in favor of an article's *deletion*, he told me, but primarily only if he views the article as spam or vandalism.[298]

Assem_Khidr is another self-identified inclusionist; he's been an active editor of Wikipedia since the end of 2019. Assem_Khidr told me that one reason he favors inclusion is that letting an article remain on Wikipedia is a "revocable act," while deleting an article is "irrevocable."[299] Plus, he believes that deleting articles can be discouraging to their authors — potentially leading new editors to abandon the site. Yet Assem_Khidr recognizes that there are downsides to inclusionism: "The foremost consequence of adopting inclusionism is a heavier reliance on cleanup and tagging salvageable content," he stated.[300] Additionally, Assem_Khidr notes that words like "significant" in the existing notability guidelines make those policies

[296] Ssr, interview with Daniel Leonard via Wikipedia talk page, November 2020, https://en.wikipedia.org/wiki/User_talk:Ssr (accessed March 1, 2021).
[297] Ibid.
[298] Ibid.
[299] Assem_Khidr, interview with Daniel Leonard via email, November 2020.
[300] Ibid.

"inherently subjective." Thus, he believes that Wikipedia's "rough consensus" model is the best way to put its vague notability policies into practice. To that end, Assem_Khidr spends some of his editing work arguing in favor of inclusionism, primarily on article "Talk" pages.[301]

While self-identified deletionists seem to have an overall smaller presence among Wikipedia's active editors, a common talking point among Wikipedians and outside observers alike is that the deletionists have "won over" the site. American author Nicholas Carr wrote about Wikipedia (from the point of view of an outside critic) throughout the mid-2000s.[302] In a blog post from September of 2006, Carr described the ongoing debate between the "two warring camps" of inclusionists and deletionists. By the following year — August of 2007 — Carr no longer viewed it as a debate. "It's over," his blog post began. "The Deletionists won."[303] Carr based that opinion on, among other things, an essay by Andrew Lih, who became disaffected by the increased bureaucracy on Wikipedia. While the Wikimedia Foundation will never formally align itself with either faction, Carr argues that the high level of bureaucracy described by Lih (especially when it comes to the creation of new articles) makes Wikipedia deletionist in practice. Lih's own writings suggest the same. Lih had once identified as a deletionist, but left that group, describing them as "deletion happy" gatekeepers with a "Soup Nazi" culture.[304]

Besides the increased bureaucracy surrounding the creation and maintenance of new articles that Lih describes, others point to the very formulation of Wikipedia's notability guidelines as evidence that the deletionists have "won." Wikipedia co-founder Larry Sanger — who left the project in the early 2000s — said this to me in an email: "I usually (if not always) fell down on the side of the inclusionists, but the deletionists won in the end, which is why

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[301] Ibid.
[302] Nicholas Carr, "Questioning Wikipedia" in *Critical Point of View: a Wikipedia Reader* (Amsterdam: Institute of Network Cultures, 2011), 191.
[303] Ibid, 199.
[304] Ibid, 200.

Wikipedia has its indefensibly restrictive notability policies today."[305] Wikipedia's current

notability policies (and the strict enforcement of those policies) are evidence that deletionists

have "won," per Sanger.

There's no doubt that the early debate between inclusionists and deletionists played a

central role in how Wikipedia continues to think about notability. Even so, not every modern

Wikipedian views this particular debate as a helpful one to continue engaging in. "I generally

reject that binary," Emily Temple-Wood told me. "I think it's more of a spectrum of where your

focus is and how stridently you follow certain notability criteria. And everybody's at a different

point on that."[306] (Though Temple-Wood admits to falling more on the inclusionist side.)

Likewise, others have rejected the binary by forming new labels. There's the

"Association of Mergist Wikipedians," who believe that most non-notable topics ought to be

merged with existing articles rather than deleted.[307] There's also the "Association of Eventualist

Wikipedians," who oppose deletion out of the belief that most bad articles will become good if

given enough time to develop.[308] (Eventualism is a relatively popular belief among modern

Wikipedians; Jimmy Wales has spoken in favor of eventualism.[309]) Yet other Wikipedians find all

the labels and groups counterproductive — or even ridiculous. On that point, there also exists an

"Association of Wikipedians Who Dislike Making Broad Judgments About the Worthiness of a

General Category of Article, and Who Are in Favor of the Deletion of Some Particularly Bad

Articles, but That Doesn't Mean They Are Deletionists." [310] It's evident that the Wikipedia

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[305] Larry Sanger, interview with Daniel Leonard via email, October 2020.
[306] Temple-Wood, interview with Daniel Leonard.
[307] *Wikimedia Meta-Wiki*, s.v. "Association of Mergist Wikipedians,"
https://meta.wikimedia.org/wiki/Association_of_Mergist_Wikipedians (accessed March 1, 2021).
[308] *Wikimedia Meta-Wiki*, s.v. "Association of Eventualist Wikipedians,"
https://meta.wikimedia.org/wiki/Association_of_Eventualist_Wikipedians (accessed March 1, 2021).
[309] Lih, *The Wikipedia Revolution*, 120.
[310] *Wikimedia Meta-Wiki*, s.v. "Association of Wikipedians Who Dislike Making Broad Judgments About the
Worthiness of a General Category of Article, and Who Are in Favor of the Deletion of Some Particularly Bad
Articles, but That Doesn't Mean They Are Deletionists,"

community is — and has always been — extremely opinionated regarding what does and does not belong on the site, though some clearly find the meta-debates unhelpful.

2.4.3 So who's right? A return to epistemic virtues

We've now spent some time examining the debate between inclusionists and deletionists, both in the early 2000s and into the modern era. So... which side is correct? Naturally, this might seem like a silly question. As we've seen, both inclusionists and deletionists have put forward sound arguments supporting their side of the debate. But I believe that one faction has much stronger concerns.

First, I should clarify that it's difficult to articulate "*the* deletionist position" and "*the* inclusionist position"; as we've seen, both deletionism and inclusionism have long functioned as broad umbrella labels for loose coalitions of Wikipedians holding many different viewpoints. Still, there are certainly some beliefs that unify both deletionists and inclusionists. Per the Wikipedia article on "Deletionism and inclusionism on Wikipedia," deletionists…

> ...are commonly motivated by a desire that Wikipedia be focused on and cover significant topics – along with the desire to place a firm cap upon ... articles which are, in their opinion, of no general interest, lack suitable source material for high-quality coverage, or are too short or otherwise unacceptably poor in quality.[311]

Inclusionists, on the other hand...

> ...are proponents of broad retention, including retention of "harmless" articles and articles otherwise deemed substandard to allow for future improvement. Inclusionist viewpoints are commonly motivated by a desire to keep Wikipedia broad in coverage with a much lower entry barrier for topics covered.[312]

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https://meta.wikimedia.org/wiki/Association_of_Wikipedians_Who_Dislike_Making_Broad_Judgments_About_the _Worthiness_of_a_General_Category_of_Article,_and_Who_Are_in_Favor_of_the_Deletion_of_Some_Particularly _Bad_Articles,_but_That_Doesn%27t_Mean_They_Are_Deletionists (accessed March 1, 2021).
[311] *Wikipedia*, s.v. "Deletionism and inclusionism in Wikipedia," https://en.wikipedia.org/wiki/Deletionism_and_inclusionism_in_Wikipedia (accessed March 1, 2021).
[312] Ibid.

I hope to show that the inclusionism versus deletionism debate ultimately boils down to a dispute over epistemic virtues of the sort put forward by Alvin Goldman. Deletionists tend to prioritize the virtues of "speed" and "efficiency," while inclusionists are more concerned with "power." I also hope to prove that deletionist concerns actually have relatively simple technical solutions, whereas inclusionist concerns require fundamental changes to Wikipedia's current policies and content. For that reason, I believe that inclusionist concerns are more worthy of the time and attention of the Wikipedia community.

While deletionism is broad, deletionists are generally unified in their belief that Wikipedia should avoid growing too large in terms of its number of articles.[313] In the era of print encyclopedias, this particular deletinist concern would have carried more weight. A 10,000-page encyclopedia would be difficult for printers to make and expensive for readers to buy; returning to Goldman's epistemic values, such an encyclopedia would be "inefficient."[314] Yet Wikipedia is fully digital, meaning that there's no functional limit to its size. Here, deletionists might point out that Wikipedia's servers will be unable to store and load a digital encyclopedia that's excessively large. But advancements in information storage technology have made this an increasingly irrelevant concern. Plus, Wikipedia can afford to run more servers if need be; in 2014, one day of fundraising provided Wikipedia enough money to run its existing servers for 66 weeks.[315]

So why shouldn't Wikipedia include as many articles as possible — especially if the website wanted to maximize its "power"?[316] Well, deletionists might point out that adding too

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[313] This is implied throughout the webpage for the "Association of Deletionist Wikipedians" at https://meta.wikimedia.org/wiki/Association_of_Deletionist_Wikipedians (accessed March 1, 2021). See, for example, the Antoine de Saint-Exupery quote at the top of the page.
[314] Alvin I. Goldman, "Foundations of Social Epistemics," *Synthese* (Dordrecht) 73, no. 1 (1987): 129.
[315] Caitlin Dewey, "Wikipedia has a ton of money. So why is it begging you to donate yours?," *The Washington Post*, December 2, 2015, https://www.washingtonpost.com/news/the-intersect/wp/2015/12/02/wikipedia-has-a-ton-of-money-so-why-is-it-begging-you-to-donate-yours/ (March 1, 2021).
[316] Goldman, "Foundations of Social Epistemics," 128.

many articles on people named "Adam Smith" will make it extremely difficult for people to find the article on the "Adam Smith" they're looking for. This is an appeal to the epistemic virtue of "speed."

But, in reality, Wikipedia is already addressing problems like this. If you type "Adam Smith" into the Wikipedia search bar, the page on the philosopher will pop up automatically.[317] But in case that wasn't who you were looking for, the top of the page prompts you to click on the "Adam Smith (disambiguation)" link, where you can see the almost two-dozen other articles on "Adam Smith"s.[318] In other words, Wikipedia already knows which articles its readers are probably looking for, and makes it quick and easy to find those articles — while still accommodating more obscure pages. If there were one day 300 articles on "Adam Smith"s, this wouldn't really be a problem, as long as the most popular "Adam Smith"s appeared at the top of the disambiguation page for ease-of-access. Plus, we should note that the English Wikipedia *already* has 6.3 million articles — far more than any other encyclopedia — but few Wikipedia readers express difficulty finding what they're looking for.[319] Thus, the deletionist fear about navigability is flimsy.

The final main argument from deletionists relates to Wikipedia's prestige. As the deletionist slogan states, "Wikipedia is not a junkyard"; Wikipedians don't want their website to be viewed as a pile of "useless" information by the public, but rather as a reputable academic source.[320] "Prestige" is not an epistemic virtue that we've yet considered — if it's an epistemic virtue at all. But it's still a reasonable concern; if readers don't view Wikipedia as prestigious, some will stop reading it altogether, decreasing the source's "fecundity."[321]

[317] *Wikipedia*, s.v. "Adam Smith," https://en.wikipedia.org/wiki/Adam_Smith (accessed March 1, 2021).
[318] *Wikipedia*, s.v. "Adam Smith (disambiguation)," https://en.wikipedia.org/wiki/Adam_Smith_(disambiguation) (accessed March 1, 2021).
[319] *Wikipedia*, s.v. "Wikipedia," https://en.wikipedia.org/wiki/Wikipedia (accessed March 1, 2021).
[320] See https://meta.wikimedia.org/wiki/Association_of_Deletionist_Wikipedians
[321] Goldman, "Foundations of Social Epistemics," 128-129.

Even so, this concern falls short. Nearly every modern internet user has already formed an opinion about Wikipedia. These opinions are unlikely to be changed by the presence of articles on obscure topics — primarily because, given how Wikipedia's search function works, only the people actively seeking information on the obscure topics in question are likely to find those articles in the first place. Unless you've either performed a Google search or a Wikipedia search for the phrase "My postillion has been struck by lightning," it's highly unlikely that you'll ever come across the (real) Wikipedia article of the same name.[322] The same is true for the Wikipedia article on the Pokémon "Jigglypuff"; unless you're a Pokémon fan performing active research (or if you're reading this thesis), it's unlikely that you'd ever discover that this article existed in the first place.[323] Thus, the existence of articles on obscure topics is unlikely to lessen the perceived prestige of Wikipedia among average readers, and may even boost the prestige of Wikipedia among those who had been looking for information on unusual topics.

Well, what if one day Wikipedia's articles on niche topics were to vastly outnumber its articles on general interest topics? I would argue that that time has already come; again, the English Wikipedia has well over 6 million articles, and only a fraction of those are likely to be relevant to a significant number of people.[324] A huge portion of Wikipedia's articles are already only relevant to people with specific interests; sports biographies, for example, are the largest sub-category on the site.[325] Despite its propensity to cover the niche, most of us use Wikipedia regardless; I'd imagine that few of us would report that the presence of obscure articles has ever prevented us from finding what we're looking for on Wikipedia.

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[322] *Wikipedia*, s.v. "My postillion has been struck by lightning,"
https://en.wikipedia.org/wiki/My_postillion_has_been_struck_by_lightning (accessed March 1, 2021).
[323] *Wikipedia*, s.v. "Jigglypuff," https://en.wikipedia.org/wiki/Jigglypuff (accessed March 1, 2021).
[324] *Wikipedia*, s.v. "Wikipedia."
[325] Smallbones, "User:Smallbones/1000 random results,"
https://en.wikipedia.org/wiki/User:Smallbones/1000_random_results (accessed March 1, 2021).

As we've seen, most deletionist concerns have simple, practical solutions — or they're not particularly worrying in the first place. Inclusionist fears, on the other hand, are directed at deeper-rooted issues with how Wikipedia handles the exclusion of content. Inclusionism, like deletionism, is a bit of a nebulous category. But inclusionists generally maintain that Wikipedia should include articles on as many relevant topics as possible, and that the website's current notability policies are overly restrictive.[326] In this way, inclusionists are particularly concerned with Wikipedia's "power"; inclusionists want Wikipedia to offer its readers as much information as it can.[327]

To prove that inclusionist concerns are warranted, I'd like to defend the most extreme form of inclusionism — one that maintains that Wikipedia should have *no* notability policies whatsoever. Under this view, Wikipedia should allow articles on any topic, as long as the content of those articles is accurate and backed up with sources. This would allow for Wikipedia to include articles on many topics currently banned under its notability policies — articles with information that many readers may find extremely valuable. In particular, Wikipedia's would likely gain more content relevant to the global south; under Wikipedia's current policies, a great deal of this information is banned under the requirement that notability requires "significant coverage in reliable sources."[328]

Of course, abolishing Wikiedia's notability policies would also allow for many articles without much epistemic value. That said, these articles don't pose any real epistemic *harm*. Take, for example, a well-written and well-sourced article on "Michelle Obama's Breakfast on June

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[326] See https://meta.wikimedia.org/wiki/Association_of_Inclusionist_Wikipedians
[327] Goldman, "Foundations of Social Epistemics," 128
[328] The gaps in Wikipedia's coverage of topics related to the global south will be made more clear in Chapter 3. In particular, see my interview with Adele Vrana and Mariana Fossatti from *Whose Knowledge?*. Vrana pointed out that most of the sources that Wikipedia considers reliable are Western, and many topics related to the global south fail to receive "significant coverage" in Western sources — thus excluding these topics under the current notability policy. Furthermore, many sources from the global south aren't considered "reliable" in the first place; Vrana referred to the example of oral testimony, which is considered unreliable under Wikipedia's sourcing policies.

12th, 2017." While there are very few readers who would find this article to be epistemically useful, there's no harm in letting it remain on the site, provided that it's accurate. As I've mentioned, the only people who are likely to encounter this article in the first place are those directly searching for it; given how Wikipedia's search function works, a search for "Michelle Obama" would leave this article buried under more relevant results, but a search for "Michelle Obama breakfast" may bring it closer to the top. One concern, however, is that the labor power it would require for other Wikipedians to proofread the "Michelle Obama's Breakfast on June 12th, 2017" article is time that would be better spent on more valuable tasks.

This leads to a different concern — the concern that manpower is critical for Wikipedia to be able to carry out its epistemic goals. A large number of editors allows for the production of more content and the upkeep of existing articles. In addition to that, it's been shown that a "Wisdom of Crowds" approach to the production of knowledge — the exact model that Wikipedia relies upon — can only produce reliable results if the crowd is "large, independent, and diverse."[329] But strict enforcement of Wikipedia's current notability policies can actually stifle the growth of Wikipedia's community (as well as the boost in diversity that that growth would bring). From my interviews, I've noticed that one of the first actions of many newcomers to Wikipedia is to create a new article on some pet interest. At the same time, however, it's common for newcomers to have their pages revoked for not meeting Wikipedia's notability standards. This can have major adverse effects on the retention of newcomers on Wikipedia; as Aaron Halfaker et. al. argue, Wikipedia community's strict enforcement of policy is one of the reasons that the website has seen a dropoff in new editors.[330] Thus, an ethos of inclusionism — especially what I've termed "radical inclusionism" — would likely lead to growth among

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[329] Don Fallis, "Toward an Epistemology of Wikipedia," *Journal of the American Society for Information Science and Technology* 59, no. 10 (2008): 1670.
[330] Halfaker et. al., "The Rise and Decline of an Open Collaboration System."

Wikipedia's editor base, as more newcomers would find that their contributions are allowed to remain on the site. This growth would likely make up for the increase in labor power necessary to maintain a larger number of obscure articles.

Now, I'm not necessarily arguing in favor of the outright abolition of Wikipedia's notability policies. But I do believe — as I hope I've shown — that abolishing the policies would have significant epistemic benefits with very few epistemic harms. Of course, there may be a way for Wikipedia to instead *update* its notability policies to allow for the inclusion of articles that readers will find useful, without necessarily opening the door to articles that would be useless to all but a select few. For example, Wikipedia could consider modifying its notability policy to be more like the one put forward by the 1901 Dictionary of National Biography, which held that a person would only be included if that person "would be the object of intelligent inquiry on the part of an appreciable number of persons…."[331] As one possible way to make this work, Wikipedia could try surveying its readers to see what topics people are hoping to learn more about, and use this to determine what subjects are notable enough for future entries. Naturally, this approach would come with its own downsides (once again equating "notability" with the epistemic desires of the majority). Thus, it may turn out that abolishing its notability policies is the best epistemic option for Wikipedia after all.

Self-identified "inclusionists" have two primary courses of action with which to address the gaps in Wikipedia's content. First, as I've discussed, they could try to change Wikipedia's notability policies. However, most of the Wikipedians I've interviewed have suggested that this would be an extremely difficult process, and that Wikipedia's policies have remained static for several years. Thus, the second approach is for Wikipedians to add more content to the site while working around the policies that already exist; as we'll see, this has become a far more popular

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[331] George Smith and Sidney Lee, *The Dictionary of National Biography: Supplement, Volume 1.*

tactic. The next chapter will be dedicated to analyzing people and groups who have worked to

address Wikipedia's content gaps using one (or both) of these strategies.

Chapter 3 — Attempts to fill Wikipedia's content gaps

We've now looked at two forms of inclusion and exclusion on Wikipedia — the inclusion and exclusion of facts from Wikipedia's articles, and the inclusion and exclusion of topics from gaining articles in the first place.

As we've seen, some Wikipedians favor Wikipedia's strict rules when it comes to what belongs on the site. Yet others have been disappointed by what they view as overly-restrictive barriers to inclusion. One attempt to overcome Wikipedia's exclusion was the creation of the website "WikiAlpha," a Wikipedia clone "where the main difference is that our deletion policy is far more lenient with regard to notability requirements."[332] As long as an article doesn't fall under WikiAlpha's criteria for speedy deletion (mainly related to spam and copyright infringement), "it will likely remain on the site forever!"[333] WikiAlpha, however, has garnered very little interest. Instead, most internet encyclopedists are interested in contributing to Wikipedia, even if they disagree with Wikipedia's restrictive policies. One core reason for this is likely Wikipedia's massive popularity as a source of knowledge; Wikipedia received almost 100 billion page views in 2015.[334] If you want your volunteer edits to be read by as many people as possible, then Wikipedia is the best place for you.

But, unsurprisingly, Wikipedia's policies (and its demographics) have led to some areas being better covered than others. Wikipedia's "content gaps" — areas that are significantly under-written about — have received critical attention in recent years; these content gaps, as we've suggested, restrict Wikipedia's epistemic usefulness. So, in this chapter, we'll look at the

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[332] *WikiAlpha*, s.v. "Main Page," https://en.wikialpha.org/wiki/Main_Page (accessed March 1, 2021).
[333] Ibid.
[334] Monica Anderson, Paul Hitlin, and Michelle Atkinson, "Wikipedia at 15: Millions of readers in scores of languages," *Pew Research*, January 14, 2016, https://www.pewresearch.org/fact-tank/2016/01/14/wikipedia-at-15/ (accessed March 1, 2021).

attempts by "insiders" to address Wikipedia's content gaps, and compare these to parallel attempts by "outsiders." But, before that, let's look in greater detail about the content gaps that exist on Wikipedia today.

3.1 Examining Wikipedia's content gaps

Per its "Statistics" page, the English Wikipedia has nearly 6.2 million articles and counting.[335] But, unlike traditional print encyclopedias, no one is telling Wikipedia's editors what they must and must not write about; instead, users are free to create articles on what they find most interesting, and are equally free to nominate other users' articles for deletion. Naturally, this results in a digital encyclopedia that covers some subjects more than others. Unfortunately, Wikipedia doesn't publish data regarding the number of articles it has across different fields, so it's hard to quantify the extent to which its content is unbalanced. As a simple example, though, Wikipedia's "List of British scientists" is over twice as long as its "List of Chinese scientists."[336]

In Chapter 2, I also briefly mentioned a December 2015 random sample of 1,000 articles by user Smallbones. Smallbones found that 27.8% of Wikipedia's content is biographical (with sports biographies as the largest sub-category), followed by 17.7% on geography, and 15.9% on culture and arts.[337] "Society, sports [non-biography], religion, philosophy, and social science" collectively took up 12.7% of Wikipedia, while history weighed in at 9.9%, and "hard sciences, technology, and math" came last at 3.5%.[338] It's hard to identify specific "content gaps" from

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[335] *Wikipedia*, s.v. "Special:Statistics," https://en.wikipedia.org/wiki/Special:Statistics (accessed March 1, 2021).
[336] Compare the 75 entries of "List of Chinese scientists" at https://en.wikipedia.org/wiki/List_of_Chinese_scientists to the 159 entries of "List of British scientists" at https://en.wikipedia.org/wiki/List_of_British_scientists (accessed March 1, 2021).
[337] Smallbones, "User:Smallbones/1000 random results," https://en.wikipedia.org/wiki/User:Smallbones/1000_random_results (accessed March 1, 2021).
[338] Ibid.

these broad statistics, but this study does help us determine where the Wikipedia community

leans in terms of its encyclopedic interests.

Additionally, one concrete data point that we *do* have is the Wikipedia community's bias

in favor of biographing the lives of men. A study from 2014 found that only 15.5% of

Wikipedia's biographical articles were written about women.[339] As of 2020, that percent has

grown somewhat, to an estimated 18.4%.[340]

When Wikipedia founder Jimmy Wales is asked about these gaps in Wikipedia's content,

his response is generally consistent. When the subject came up on a 2012 PBS NewsHour

interview, Wales had this to say:

> One of the things that we know about our community is that we tend to be tech-geek males. And that does
> have some side effects for the content — not so much in terms of a bias; our community is quite strongly
> aware and really thoughtful about trying to avoid bias. But, inherently, it means that there's topics that
> we're really really good at... And other topics where we have less coverage, because the people who are
> writing Wikipedia — it's not their field of expertise, it's not something that they're passionately interested
> in.[341]

Here, Wales suggests that Wikipedia's community of "tech-geek males" tends to cover certain

subjects better than others, all the while avoiding bias. This seems like a contradictory notion —

most would agree that content gaps constitute a *form* of bias — but we'll consider the rest of his

argument regardless. To Wales, Wikipedia's content gaps are attributable to its gaps in

representation among its contributor base. People will naturally write about what interests them,

so if Wikipedia's contributors skew towards one demographic, articles relevant to that

demographic will appear more frequently. Wales has reiterated this notion many times, from a

2017 presentation at the Foundation for Economic Education to a 2019 interview with

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[339] Eduardo Graells-Garrido, Mounia Lalmas, and Filippo Menczer, "First Women, Second Sex," *Proceedings of the 26th ACM Conference on Hypertext & Social Media*, 2015, 165-74.
[340] *Wikipedia*, s.v. "Wikipedia:WikiProject Women in Red,"
https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Women_in_Red (accessed March 1, 2021).
[341] Jimmy Wales, "Russian Blackouts, Neutrality and Trusting Wikipedia," YouTube video, *PBS NewsHour*, July 10, 2012, https://www.youtube.com/watch?v=95vh19qctwY (accessed March 1, 2021).

Wikimedia UK.[342][343] To fix Wikipedia's gaps, then, Wales wants the Wikimedia Foundation to recruit more diverse editors — especially women. This seems rational enough. So, then, let's consider what Wikipedia's demographic makeup looks like now.

The 2020 Community Insights Report published by the Wikimedia Foundation offers the most updated look into the demographics of contributors to Wikimedia projects. Of the Wikimedians surveyed, 86.9% identified as male, 11.6% as female, and 1.5% identified with a different gender identity.[344] In terms of nationality, the majority of Wikimedia contributors came from Europe or North America, at 55.9% and 12.1%, respectively.[345] This data was collected via a survey of participants across *all* of the Wikimedia Foundation's projects, not just the English Wikipedia. But a 2013 study, "The Wikipedia Gender Gap Revisited," found a similar gender-based imbalance among the English Wikipedia specifically; the study estimated that only 16.1% of English Wikipedia's editors were female.[346]

To address this, Jimmy Wales says that the Wikimedia Foundation has launched outreach campaigns oriented towards welcoming more women to Wikipedia; additionally, the site hopes to make the Wikipedia editing platform more user-friendly to newcomer editors.[347] The Wikimedia Foundation's page on "Our Work" indicates that "Grow[ing] community around the world" is one of the Foundation's main goals.[348] Likewise, a subpage on "What Wikipedia is

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[342] Jimmy Wales, "Jimmy Wales: The Story of Wikipedia," YouTube video, *Foundation for Economic Education*, June 19, 2017, https://www.youtube.com/watch?v=KwAku7YcVIU (accessed March 1, 2021).

[343] Jimmy Wales, "Jimmy Wales interview for #WikipediaDay 2019," YouTube video, *Wikimedia UK*, January 15, 2019, https://www.youtube.com/watch?v=Lqrz1BRRPWk (accessed March 1, 2021).

[344] *Wikimedia Meta-Wiki*, "Community Insights 2020 Report/Aggregate Data," https://meta.wikimedia.org/wiki/Community_Insights/Community_Insights_2020_Report/Aggregate_Data (accessed March 1, 2021).

[345] Ibid.

[346] Benjamin Mako Hill and Aaron Shaw, "The Wikipedia Gender Gap Revisited: Characterizing Survey Response Bias with Propensity Score Estimation," *PLOS ONE* 8(6): e65782, June 26, 2013, https://doi.org/10.1371/journal.pone.0065782 (accessed March 1, 2021).

[347] Jimmy Wales, "Russian Blackouts, Neutrality and Trusting Wikipedia."

[348] "Our Work," *Wikimedia Foundation*, https://wikimediafoundation.org/our-work/ (accessed March 1, 2021).

doing about gender diversity" suggests that the Foundation occasionally organizes events to recruit new woman editors.[349]

While recruiting newcomers is a critical step for Wikipedia, some of the most successful initiatives to fill Wikipedia's content gaps have been established by long-time editors of the site, as we'll see later in this chapter. (In fact, being a long-time editor is in some ways a necessity to enact meaningful change on Wikipedia; newcomers have their contributions revoked at a much higher rate.)

Through arguments in Chapters 1 and 2, I've argued why Wikipedia's content gaps are some of the website's most glaring epistemic shortcomings, and that filling in these gaps helps make Wikipedia a more "powerful" source of information, among other benefits. Let me mention one final downside of Wikipedia's content gaps. Right now, if someone searches for a specific topic on Wikipedia and finds no article dedicated to that topic, they might conclude that that topic isn't important at all. In that sense, just as the biases of Wikipedia editors create gaps in the website's content, so too can those gaps create biases in the minds of Wikipedia's readers. As Mark Graham argues, "how places are represented and made visible (or invisible) in Wikipedia has a potentially immense bearing on the ways that people interact with those same places culturally, economically, and politically."[350] This is true not just for Wikipedia's articles on physical places, but for its content more broadly.

Excluding content on any topic can give Wikipedia's readers the impression that the given topic doesn't matter; if Google doesn't offer up a Wikipedia article on it, how important can it be? And, since many of Wikipedia's most glaring content gaps are in areas related to

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[349] "What Wikipedia is doing about gender diversity," *Wikimedia Foundation*, https://wikimediafoundation.org/our-work/what-wikipedia-is-doing-about-gender-diversity/ (accessed March 1, 2021).

[350] Mark Graham, "Wiki Space: Palimpsests and the Politics of Exclusion," in *Critical Point of View: A Wikipedia Reader* (Amsterdam: Institute of Network Cultures, 2011), 269.

women and people of color, Wikipedia readers may conclude that those content areas must be less notable and/or less worthy of attention. This is a highly negative epistemic effect, and not one many researchers have considered. So, for the rest of this chapter, let's consider the people and groups who are working to address Wikipedia's content gaps.

3.2 Addressing Wikipedia's content gaps from the inside

We've noted that Wikipedia does indeed have content gaps, and I've argued that filling those gaps is an epistemically useful undertaking. Any of us can start filling Wikipedia's gaps by editing a page or creating a new one — though that's not to say that we'll all have the same success in getting our edits to stick.

Many people — individuals and groups, "insiders" and "outsiders" alike — have already started the valuable work of filling in Wikipedia's gaps. In this section, we'll look at efforts by insiders — long-time members of the Wikipedia community — to address Wikipedia's content gaps. We'll start by looking at the work of two prominent groups of Wikipedians, WikiProject Women Scientists and WikiProject Women in Red. We'll then briefly consider a couple other groups, and how individual Wikipedians can contribute to the filling in of content gaps.

3.2.1 WikiProject Women Scientists

Of the many initiatives aimed at filling Wikipedia's apparent content gaps, some of the most successful have been the ones targeted at creating new articles about women. Two such initiatives include "WikiProject Women Scientists," founded by Emily Temple-Wood, and the

broader "WikiProject Women in Red," co-founded by Rosie Stephenson-Goodknight.[351][352] We'll start with the former.

Emily Temple-Wood has been editing Wikipedia since she was in the sixth grade. Her earliest Wikipedia entries, she told me, were acts of vandalism — "You know, making pages about how my sister was a butthead or whatever."[353] (Vandalism, she suggested, is a fairly common entry point for people who later become active Wikipedia editors.) When Temple-Wood received a warning message for her vandalism, she realized she was wasting real peoples' time, so she decided to make up for it by becoming a productive editor. Much of her early work involved habitually organizing and categorizing articles; as someone with autism, she referred to the site as "a honeypot for autistics."[354] By 2007 (at the age of 12 or 13), Temple-Wood was already chosen by members of the Wikipedia community to become an admin.[355]

WikiProject Women Scientists is an initiative Temple-Wood created in 2012. On Ada Lovelace Day of that year, the Royal Society (a partner of Wikipedia) gave Wikipedians access to biographies of women fellows of the Society — as part of an early push to add more women scientists to the site.[356] Emily Temple-Wood excitedly created a few articles for missing Royal Society fellows, but soon realized that there were far more missing women fellows than she could handle herself. "And that natural Wikipedian response... I was like, 'Oh, I should just make a project.'"[357] So, Temple-Wood established WikiProject Women Scientists; the initiative seeks to allow Wikipedians to come together to fill the gaps in coverage around women scientists,

[351] *Wikipedia*, s.v. "Wikipedia:WikiProject Women Scientists," https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Women_scientists (accessed March 1, 2021).
[352] *Wikipedia*, s.v. "Wikipedia:WikiProject Women in Red," https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Women_in_Red (accessed March 1, 2021).
[353] Emily Temple-Wood, interview with Daniel Leonard via Zoom, November 2020.
[354] Ibid.
[355] Ibid.
[356] Ibid.
[357] Ibid.

mainly by creating new articles but also through improving old ones. The core of the project

(like most WikiProjects) is a Wikipedia page where Wikipedians can meet up to coordinate their

efforts towards the collective goal of adding more content related to women scientists.[358]

Since its inception, WikiProject Women Scientists has helped bring the total number of

articles about women scientists on Wikipedia from an estimated 1,600 to well over 5,000

today.[359] But besides the articles that it has created, Temple-Wood is proud of the project's

legacy. "It's not just, 'Oh, I want to write about women in science.' It's, 'I want to change

people's attitudes towards systemic bias. Like, when we started, we had to start by convincing

people that it was a problem... And now, you know, eight years later, everybody agrees that it's a

problem."[360] It's certainly interesting to consider how the Wikipedia community has become

aware of its own bias over time; much of this awareness seems to have emerged in the early

2010s as new editors joined the project. It is around this time that a number of WikiProjects

aimed at addressing Wikipedia's content gaps emerged; many of these groups helped lead the

push for the Wikipedia community to become more aware of biases.[361]

However, to say that "everybody" on Wikipedia agrees that bias is a problem is an

overstatement. Temple-Wood told me that the people working on WikiProject Women Scientists

have sometimes received backlash from other members of the Wikipedia community.

Temple-Wood herself has often been accused of "editing with an agenda" — but she believes

that this is something that everyone does, whether they know it or not, casting doubt on whether

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[358] *Wikipedia*, s.v. "Wikipedia:WikiProject Women Scientists."

[359] Jason Daley, "How a College Student Led the WikiProject Women Scientists," *Smithsonian Magazine*, March 15, 2016, www.smithsonianmag.com/smart-news/how-college-student-led-wikiproject-women-scientists-180958423/ (accessed March 1, 2021).

[360] Temple-Wood, interview with Daniel Leonard.

[361] Besides Temple-Wood, Rosie Stephenson-Goodknight also prides herself on the way her project has helped Wikipedia come to terms with its bias. As you'll see in the next section, Stephenson-Goodknight's "WikiProject Women in Red" was actually formally launched during a Wikimania talk about gender bias.

genuine "neutrality" is even possible in practice.[362] Additionally, Temple-Wood has received

outright harassment from other members of the community; other female editors report the same,

which demonstrates how hostile Wikipedia's male-dominated culture can become. However,

Temple-Wood's articles are rarely nominated for deletion, as "there's a certain amount of

political social capital that I've built" from being a prominent member of the Wikipedia

community for so long.[363]

While the project is mainly made up of long-time Wikipedians, WikiProject Women

Scientists also hopes to recruit new members and train them how to write effective biographies

on par with Wikipedia's standards. These newer contributors typically encounter more

difficulties than long-time editors; due to lack of familiarity with Wikipedia's policies, their

articles are frequently sent to Articles for Deletion by other Wikipedians, Temple-Wood told

me.[364] When this happens, other members of WikiProject Women Scientists typically head to

AfD to argue why the article does indeed pass the notability criteria. When engaging in these

debates, Temple-Wood often cites the subject-specific notability guidelines for academics.

"There's definitely an aspect of arguing on Wikipedia that's like, 'He who can cite the most

policy wins'"; being closely familiar with Wikipedia's policies offers a huge argumentative

advantage, Temple-Wood explains.[365] In other cases, where articles have been nominated for

deletion because they're simply not up to Wikipedia's standards of quality — they're poorly

written, they lack proper formatting, etc. — members of WikiProject Women Scientists rush in to

improve them before they can be deleted.[366]

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[362] Temple-Wood, interview with Daniel Leonard.
[363] Ibid.
[364] Ibid.
[365] Ibid.
[366] Ibid.

WikiProject Women Scientists was one of the first such "WikiProjects" aimed at filling in Wikipedia's gaps in content related to women. In the early 2010s, other related projects emerged, and WikiProject Women Scientists was subsumed by the broader umbrella project "WikiProject Women."[367] In the section below, we'll consider a similar, but distinct, project: WikiProject Women in Red. While some WikiProjects have seen a decline in interest over time, WikiProject Women in Red remains quite popular today.[368]

3.2.2 WikiProject Women in Red

WikiProject Women in Red was co-founded by Rosie Stephenson-Goodknight in 2015. Stephenson-Goodknight is about a generation older than Temple-Wood; like Temple-Wood, she's been editing Wikipedia since 2007, when she discovered that there was no Wikipedia page for the "Book League of America" and decided to create one.[369][370] Stephenson-Goodknight credits her passion for Wikipedia with her early interest in cultural anthropology. Stephenson-Goodknight had wanted to study cultural anthropology in college, but her father wouldn't let her, so she studied business instead.[371] Wikipedia allowed Stephenson-Goodknight to channel her anthropological passion without needing a formal degree; she became hooked on the site when an article she wrote about an Amazonian ethnic group appeared on Wikipedia's Main Page.[372]

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[367] *Wikipedia*, s.v. "Wikipedia:WikiProject Women," https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Women (accessed March 1, 2021).
[368] To gauge a project's level of activity, you can turn to the "Talk" pages. Since the start of 2021, there have been dozens of edits on the Talk page of WikiProject Women in Red, https://en.wikipedia.org/wiki/Wikipedia_talk:WikiProject_Women_in_Red, but only a handful of edits to the Talk page of WikiProject Women, https://en.wikipedia.org/wiki/Wikipedia_talk:WikiProject_Women (both accessed March 1, 2021).
[369] Rosie Stephenson-Goodknight, interview with Daniel Leonard via Zoom, November 2020.
[370] The extant article can be found at *Wikipedia*, s.v. "Book League of America," https://en.wikipedia.org/wiki/Book_League_of_America (accessed March 1, 2021).
[371] Stephenson-Goodknight, interview with Daniel Leonard.
[372] Ibid.

By her own admission, Stephenson-Goodknight's early editing work had nothing to do with women's biographies. But starting in March of 2012, a group of Wikipedians made a pact to drop whatever they were doing and focus on creating women's biographies for the rest of the month; it quickly turned into a yearly tradition, Stephenson-Goodknight reports.[373] Then, in December of 2014, an independent study of Wikipedia content offered Stephenson-Goodknight and her colleagues the first formal figure for what percent of Wikipedia's biographies were about women: 15.5%.[374] Stephenson-Goodknight recalls being shocked that the problem was even bigger than she had realized.[375]

With this new information, in February of 2015, a Wikipedia editor named Roger Bamkin contacted Stephenson-Goodknight in advance of Wikipedia's yearly Wikimania conference; per Stephenson-Goodknight, he said "Hey, Rosie, how about if we write up a proposal to go to this international conference... and talk about the content gender gap."[376] Their proposal was accepted, and at Wikimania 2015, Bamkin and Stephenson-Goodknight described Wikipedia's severe gender imbalance in biographical content.[377] But they didn't want to just point out a problem, they also wanted to create a solution. So, Bamkin and Stephenson-Goodknight proposed "WikiProject Women in Red."

What differentiated Women in Red from other WikiProjects was not just its broader scope, but also its specific goals. While other projects were interested in improving old articles, or recruiting new editors, WikiProject Women in Red has just one priority: the creation of new articles about women.[378] The name, "Women in Red," comes from the fact that Wikipedia links

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[373] Ibid.
[374] Graells-Garrido et. al., "First Women, Second Sex."
[375] Stephenson-Goodknight, interview with Daniel Leonard.
[376] Ibid.
[377] Ibid.
[378] *Wikipedia*, s.v. "Wikipedia:WikiProject Women in Red."

are red if a page does not exist yet (and blue if it does).[379] Bamkin and Stephenson-Goodknight

encouraged all Wikipedia editors to become involved with the project — regardless of their own

gender. Still, Stephenson-Goodknight suspected that interest in the initiative would wane out

almost immediately.[380] She was wrong.

Stephenson-Goodknight informed me that over a thousand new biographies of women

were completed the same month the project was announced, and over 11,000 new articles were

produced by the end of the year.[381] Every year since then, WikiProject Women in Red's yearly

output of new articles has hovered around 26- to 27,000.[382] Its grand total of new articles,

through September of 2020, is 131,473.[383] Additionally — while WikiProject Women in Red

can't take all the credit — the project's main page boasts that the percent of Wikipedia's

biographies which are about women rose has risen from 15.5% in October 2014 to 18.7% in

February 2021.[384]

WikiProject Women in Red has a more formalized organizational structure than

WikiProject Women Scientists, but similar tactics: training Wikipedians how to produce quality

biographies of women, coming to editors' aid if their articles are nominated for deletion, and

occasionally recruiting non-Wikipedians to join the team.[385] Like Temple-Wood,

Stephenson-Goodknight tells me that being nominated for deletion is a problem that many newer

editors face, but she personally has enough institutional credibility to rarely have her

contributions thwarted.[386] WikiProject Women in Red's "Talk" page is where the group's

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[379] Ibid.
[380] Stephenson-Goodknight, interview with Daniel Leonard.
[381] Ibid.
[382] *Wikipedia*, s.v. "Wikipedia:WikiProject Women in Red/Metrics,"
https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Women_in_Red/Metrics (accessed March 1, 2021).
[383] Ibid.
[384] *Wikipedia*, s.v. "Wikipedia:WikiProject Women in Red."
[385] Stephenson-Goodknight, interview with Daniel Leonard.
[386] Ibid.

members typically meet to coordinate their efforts; new editors can post there to request help

with the articles that they're working on.[387]

There are a few things that make WikiProject Women in Red stand out from similar

projects, though. Every month, Women in Red hosts several editing events promoting the

creation of articles under a specific topic. For example, January 2020 had "Geofocus: Central

America," "Women entering the public domain," and "Activists," while February 2020 had

"Women in horror," "Black women," and "Explorers."[388] Additionally, Women in Red constantly

updates a lengthy set of "Redlists" — lists of women across different subjects that don't yet have

pages written about them.[389] These lists are formed through a combination of tactics,

Stephenson-Goodknight told me: taking name suggestions from editors, using bots that scrape

Wikipedia to find women who are referenced but haven't been written about, and manually

entering women's names from various biographical dictionaries.[390]

Stephenson-Goodknight is critical of Wikipedia's notability policies, which she believes

were created through an unhelpful consensus process which drowns out minority voices.[391]

(Members of the project *Whose Knowledge?* are even more openly critical of Wikipedia's

approach to forming and enforcing policies; my interview with them is later in this chapter.) That

said, Women in Red has found a way to be productive even under guidelines that many of its

contributors might reject. Furthermore, the project itself coordinates and plans events based on a

system of consensus. I asked Stephenson-Goodknight why she thought rough consensus worked

for Women in Red, but not for Wikipedia at large. She told me that consensus works best in

[387] *Wikipedia*, s.v. "Wikipedia talk:WikiProject Women in Red,"
https://en.wikipedia.org/wiki/Wikipedia_talk:WikiProject_Women_in_Red (accessed March 1, 2021).
[388] *Wikipedia*, s.v. "Wikipedia:WikiProject Women in Red/Events,"
https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Women_in_Red/Events (accessed March 1, 2021).
[389] *Wikipedia*, s.v. "Wikipedia:WikiProject Women in Red/Redlist index,"
https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Women_in_Red/Redlist_index (accessed March 1, 2021).
[390] Stephenson-Goodknight, interview with Daniel Leonard.
[391] Ibid.

small groups with a specific focus — like Women in Red. For an institution as large as Wikipedia itself, Stephenson-Goodknight is skeptical that a consensus model will do enough to ensure that minority voices are being heard.[392]

3.2.3 Other groups, and individual Wikipedians

WikiProject Women Scientists and WikiProject Women in Red are far from the only groups attempting to address perceived gaps in Wikipedia's content. In fact, many such groups were created throughout the first half of the 2010s; this seems to be the period that large segments of the Wikipedia community first became concerned about the website's content gaps. One such group is AfroCrowd — a Wikimedia initiative founded in 2015 seeking to improve and expand upon Wikipedia's articles on black history and culture.[393] While mostly made up of long-time Wikipedians, AfroCrowd also hopes to recruit more people of African descent to edit Wikipedia.[394] Additionally, there's Art+Feminism, "an international community that strives to close the information gap about gender, feminism, and the arts on the internet."[395] Art+Feminism was established in 2014; the initiative's main strategy is to coordinate in-person events where people (from communities around the world) meet at community centers and coffee shops to edit Wikipedia.[396]

The size of these groups varies greatly. WikiProject Women in Red, for example, reports having created 131,473 articles as part of the project, while Art+Feminism has resulted "in the creation *and improvement* of more than 84,000 articles on Wikipedia and its sister projects

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[392] Ibid.
[393] "About," *AfroCrowd*, https://afrocrowd.org/about/ (accessed March 1, 2021).
[394] Ibid.
[395] "About," *Art+Feminism*, https://artandfeminism.org/about/ (accessed March 1, 2021).
[396] "Events," *Art+Feminism*, https://artandfeminism.org/events/ (accessed March 1, 2021).

(emphasis added)."[397][398] Art+Feminism's smaller impact is likely due to its narrower focus (i.e. women in the arts), which draws in fewer contributors. AfroCrowd doesn't report on how many articles it has created, but appears to be smaller than both these other organizations.[399] Both the size and sheer number of WikiProjects related to women's issues, as compared to the relative dearth of projects related to racial issues, may suggest a greater interest in the Wikipedia community to fill gender-based content gaps rather than racial and/or cultural ones. Even so, each one of these groups has had some success in filling in the content gap that it's targeting.

But not every attempt to fill the holes in Wikipedia has been as organized, centralized, or coordinated as the groups that we've looked at so far. In fact, much of the work done to add new articles to Wikipedia is performed by individual Wikipedians acting independently. For just one example, we can consider Jessamyn West. West has been editing Wikipedia since 2004 — a total of seventeen years.[400] West's contributions to the site often center around issues of representation; she's especially interested in adding or improving articles about women and African Americans.[401] Yet West rarely relies on the organizational apparatus of large groups like Women in Red. Instead, West generally prefers to create small projects for herself, and see them to completion. For example, West's current focus is on adding and improving articles related to African Americans affiliated with the U.S. Postal Service.[402]

But, like Temple-Wood and Stephenson-Goodknight, West has a high level of institutional authority given her long tenure editing Wikipedia. "I'm high profile enough that

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[397] *Wikipedia*, s.v. "Wikipedia:WikiProject Women in Red/Metrics."
[398] "About," *Art+Feminism*.
[399] This is difficult to quantify without self-reported article or membership data, but here's one metric: WikiProject Women in Red's Twitter account (@WikiWomenInRed) has over 9,600 followers, Art+Feminism's Twitter account (@artandfeminism) has over 15,800 followers, and AfroCrowd's Twitter account (@afroCROWDit) has over 1,500 followers.
[400] Jessamyn West, interview with Daniel Leonard via Zoom, November 2020.
[401] Ibid.
[402] Ibid.

people won't fuck around with me because it's not worth your time," West told me.[403] West's

familiarity with Wikipedia's extensive policies makes her a difficult person to pick a fight with;

plus, like most long-time editors, she's generally respected by the community (with the exception

of some annoying harassers, she tells me).[404] So, overall, West's contributions rarely get

removed.

Yet West is an exception; the average Wikipedia editor does not have much, if any,

authority within the community. Wikipedia "outsiders" — first time editors, and those unfamiliar

with the culture and policies of Wikipedia — can have a much harder time getting their edits to

remain on the site. So, in the next section, let's examine the efforts of outsiders to address

Wikipedia's content gaps.

3.3 Addressing Wikipedia's content gaps from the "outside"

First, I should clarify what exactly I mean by an "insider" and an "outsider." Since

anyone can edit Wikipedia, anyone can be a "Wikipedian." But, as I mentioned in the first

chapter, the term "Wikipedian" often carries a stronger connotation; it typically refers to

someone who actively and periodically contributes to Wikipedia, feels immersed in the

community, and has at least some familiarity with Wikipedia's policies. Thus, first-time editors

and those who only contribute to Wikipedia on rare occasions are generally not considered

"Wikipedians" by the community. It is these individuals that I will refer to as outsiders.

When it comes to groups, I'll use the label "outsider" to describe any group that isn't

coordinated from within Wikipedia itself. (WikiProjects are obviously "insider" groups; *Whose*

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[403] Ibid.
[404] Ibid.

Knowledge?, as we'll see, is arguably not.) In this section, we'll consider the effectiveness of the contributions of "outsiders" as they attempt to address perceived gaps in Wikipedia's content.

3.3.1 Outsider editors and volunteer "Edit-a-Thons"

At any time, any internet user can identify that there is something "missing" on Wikipedia, and decide to personally address that gap. In fact, my interviews suggest that this act of filling a gap is what initially drew many long-time Wikipedians onto the website. But all of the interviewees I've mentioned in this chapter also told me that the barriers to entry for newcomers have risen on Wikipedia over the years, and that it's commonplace for the contributions of novices to be overturned quite quickly. Thus, while editing events (known as "edit-a-thons") supported by well-established groups like Women in Red are often successful, edit-a-thons coordinated by outsiders can frequently see high levels of rejection.

As one recent example, a group of Emory students coordinated an edit-a-thon to add more female neuroscientists to Wikipedia. One of the organizers of the group, Laura Mariani, recalls being "DMed by a gatekeeper within an hour or so of starting because he disagreed with the very concept of the "list of female neuroscientists" page (which already existed, but we expanded)."[405][406] Mariani informed me that her group was able to get some of their edits to stick, despite pushback from more well-established editors in the community.[407] She also stated that she and another co-organizer spent some time before the event figuring out which female neuroscientists "fit Wikipedia's notability criterion" yet still lacked their own pages; I would

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[405] Laura Mariani, *Twitter* post, October 17, 2020, https://twitter.com/lauramariani/status/1317648340084002816 (accessed March 1, 2021).

[406] "Gatekeeper," we should note, is a term frequently used by critics of Wikipedia culture; the term typically describes those who actively try to limit the content being added to Wikipedia, and is sometimes used to connote that they may be doing so out of personal bias. See, for example, this blog post, as well as the comments: https://suegardner.org/2011/02/19/nine-reasons-why-women-dont-edit-wikipedia-in-their-own-words/ (accessed March 1, 2021).

[407] Laura Mariani, interview with Daniel Leonard via email, February 2021.

argue that taking the time to read up on Wikipedia policies is what allowed this outsider group to achieve success on Wikipedia (despite some backlash).[408] Mariani is also happy that her editing event has inspired some groups at other universities to coordinate similar events — but whether these groups will have similar success addressing Wikipedia's gaps is uncertain.[409]

Emily Temple-Wood, Rosie Stephenson-Goodknight, and Jessamyn West all told me that Wikipedia has seen an increase in the amount of institutional knowledge a person needs in order to get their contributions to stick. That knowledge ranges from familiarity with Wikipedia's policies to a basic understanding of how Wikipedia's formatting language works. This was a shift that they all lamented; West, for example, viewed it as antithetical to Wikipedia's goal of being the encyclopedia *anyone* can edit — not just anyone with enough time to read dozens of policy pages.[410] And, as Aaron Halfaker et. al. have argued, Wikipedia's decline in editorship since 2007 is at least partly attributable to its increasingly complex system of policies.[411] If Jimmy Wales is confident in his assertion that recruiting new editors is the central solution to Wikipedia's content gaps, then making it easier for new editors to join the site should likely be one of the Wikimedia Foundation's top priorities. This requires more than just editor recruitment events; it necessitates a shift in Wikipedia's policies to make them more concise and clear.

When I first registered a Wikipedia account, I was automatically messaged with a link to a page called "Help:Getting started."[412] The page itself doesn't say much, but links to over 40 other Wikipedia pages that function as tutorials and guides to various features of the website.[413] The majority of these pages center around Wikipedia's style and formatting; Wikipedia's policies

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[408] Ibid.
[409] Ibid.
[410] West, interview with Daniel Leonard.
[411] Halfaker et. al., "The Rise and Decline of an Open Collaboration System," 666.
[412] *Wikipedia*, s.v. "Help:Getting started," https://en.wikipedia.org/wiki/Help:Getting_started (accessed March 1, 2021).
[413] Ibid.

on neutrality, sourcing, and notability were not among those linked.[414] Thus, even if I did peruse

all the links Wikipedia offered, I still wouldn't be in a position to get my edit to remain on

Wikipedia; it's quite possible I would accidentally violate one of those content policies, and have

my edit removed as a result. This helps to illustrate just how high the barriers to entry are to

become a genuine "Wikipedian."

3.3.2 *Whose Knowledge?*

As we've seen, many of the initiatives aimed at filling Wikipedia's gaps are focused on

gender equity. Yet others center around broader issues of representation. *Whose Knowledge?* is

an organization aimed at "center[ing] the knowledge of marginalized communities (the majority

of the world) on the internet."[415] *Whose Knowledge?* focuses much of its attention on Wikipedia,

where it hopes to add more content about women and topics related to the Global South.

Classifying *Whose Knowledge?* as "insider" or "outsider" is difficult; its founders, Adele

Vrana and Anasuya Sengupta, are both former employees of the Wikimedia Foundation.[416] That

said, I've decided to classify *Whose Knowledge?* as an "outsider" group, as it is not coordinated

within Wikipedia itself (unlike the WikiProjects I've mentioned), and many of its members are

far less immersed in the Wikipedia community than its founders. Likewise, *Whose Knowledge?*

seeks to change many elements of the internet, not just Wikipedia.

I spoke to two leaders of *Whose Knowledge?*: Adele Vrana — one of the organization's

co-founders — and Mariana Fossatti — leader of *Whose Knowledge?*'s #VisibleWikiWomen

campaign. Vrana is from Brazil, and Fossatti lives in Uruguay.[417] In our interview, Vrana

emphasized the fact that the majority of the world lives in the Global South, and yet Wikipedia is

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[414] Ibid.

[415] "About us," *Whose Knowledge?*, https://whoseknowledge.org/about-us/ (accessed March 1, 2021).

[416] Adele Vrana and Mariana Fossatti, Interview with Daniel Leonard via Zoom, February 2021.

[417] Ibid.

almost entirely composed of editors from the Global North; she referred to this as the "20% …

writing about the 80%."[418] Vrana suggested that, during her time at the Wikimedia Foundation,

she became increasingly aware of how little representation women and people of color had on

Wikipedia — both among its editor-base and in its encyclopedic content. Thus, she and her

colleague Anasuya Sengupta left the Foundation and established *Whose Knowledge?* in 2016 in

an effort to pressure Wikipedia (and other websites) to include more content relevant to

communities of the Global South and other underrepresented groups.[419]

While the Wikipedia "insiders" that I interviewed were primarily interested in adding

content to Wikipedia by working around the policies that currently exist, Vrana and Fossatti were

more openly critical of the policies themselves, suggesting that they ought to be changed. Take,

for example, Wikipedia's policy on "neutral point of view," which suggests that topics should be

covered on Wikipedia in proportion to their prevalence in "reliable sources." Vrana argued that

this is not true "neutrality" at all, as the sources that the Wikipedia community considers

"reliable" skew heavily towards coverage of the Global North.[420] In particular, Vrana emphasized

that oral testimony — a central form of knowledge in many parts of the world — is generally not

considered reliable under Wikipedia's guidelines on "reliable sources."[421] Thus, the knowledge

of many communities is prevented from appearing on Wikipedia.

Likewise, Vrana is critical of the notability policy, and offered a particular case that

called it into question. Around 2017, Brazilian activist Marielle Franco had her article removed

from the Portuguese-language Wikipedia for failing to receive "significant coverage" in

independent, reliable sources. But, when Franco was assassinated in 2018, she received an influx

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[418] Ibid.
[419] Ibid.
[420] Ibid.
[421] Ibid.

of media attention; thus, her article was reinstated on the site.[422] "So, what does this say? Do we have to die?", Vrana asked. "[Franco] lost her life to become notable enough to be on Wikipedia."[423] Certainly, there seems to be something morbidly wrong about a policy that requires someone to die to receive significant enough media attention to become posthumously "notable."

When considering Wikipedia's content gaps on topics relevant to the Global South, Vrana attributes this bias in no small part to the site's homogeneity.[424] Wikipedia's policies were formed via consensus — a consensus among its overwhelmingly white, Western, and male editor-base. Naturally, this community saw no problems with equating both neutrality and notability to a subject's prevalence in "reliable sources," and then associating "reliability" primarily with Western academia and media outlets. But Vrana's testimony demonstrates that this represents a major bias against topics related to minority groups. It appears that only in the past decade have large numbers of Wikipedians, through the influence of groups like *Whose Knowledge?*, come to acknowledge this bias and seek to change it.

However, despite their critiques of Wikipedia's policies, Vrana and Fossatti both suggested that it's quite unlikely those policies will change anytime soon — due, among other things, to the fact that Wikipedia's demographics haven't changed much either.[425] Thus, *Whose Knowledge?* — much like the other initiatives we've seen — has sought ways to fill Wikipedia's content gaps by working around the existing policies. Fossatti, for example, leads *Whose Knowledge?*'s #VisibleWikiWomen campaign. Per Fossatti, this campaign has a specific goal: to upload as many photographs of notable women (particularly women of color) as possible to

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[422] Ibid.
[423] Ibid. See also the essay that Adele Vrana published following the incident: Adele Vrana, "The Life and Death of Marielle Franco," *Whose Knowledge?*, March 26, 2018, https://whoseknowledge.org/the-life-and-death-of-marielle-franco-on-wikipedia/ (accessed March 1, 2021).
[424] Ibid.
[425] Ibid.

Wikimedia Commons.[426] Once there, those images can be used to illustrate Wikipedia articles about women that currently rely heavily or entirely on text. Fossatti described this as making women more "visible," in a literal sense.[427] Vrana added that this initiative is something that lots of people can contribute to with little institutional knowledge required; the rules regarding what images can and can't be uploaded to Wikimedia Commons are not particularly opaque.[428]

Additionally, *Whose Knowledge?* has worked directly with marginalized ethnic groups from the Global South — such as the Dalit-Bahujan community of India — to get their knowledge onto Wikipedia.[429] Sometimes, this involves training individuals on how to edit Wikipedia. More commonly, *Whose Knowledge?* will interview members of these communities and try to update Wikipedia to reflect their knowledge.[430] Again, the frequently-encountered problem is that Wikipedia generally does not consider oral testimony "reliable." Thus, one particularly interesting strategy *Whose Knowledge?* has developed is to work with partners in academia to publish articles about the marginalized communities in question, utilizing direct testimony.[431] Once oral testimony is embedded in a professional journal article, *then* it becomes reliable in the eyes of the Wikipedia community, and can be included on the site.

Vrana and Fossatti are hopeful that Wikipedia will shift towards greater inclusion of minority groups in the years ahead; Vrana describes herself as "cautiously optimistic."[432] But, for real change to happen, both agree that Wikipedia's formal policies will have to change. For that to occur, given Wikipedia's consensus model, there most likely needs to be a critical mass of Wikipedians pushing for a policy change, it's unclear if that will happen any time soon.

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[426] The Wikimedia Commons is another of the Wikimedia Foundation's projects; it stores copyright-free files that anyone can use. Many of these files — images in particular — are used to supplement Wikipedia articles.
[427] Vrana and Fossatti, interview with Daniel Leonard.
[428] Ibid.
[429] Ibid.
[430] Ibid.
[431] Ibid.
[432] Ibid.

Conclusion

In this thesis, I've argued that Wikipedia's content gaps are a major impediment to the website's goal of spreading free knowledge; among other issues, Wikipedia's gaps prevent the site from being as "powerful" as it could otherwise be. As a result, I've suggested that addressing content gaps should be one of the Wikipedia community's top priorities. Additionally, I've considered two main reasons that these content gaps emerged in the first place.

The first reason for Wikipedia's gaps is the website's set of restrictive policies. Wikipedia has determined that a "neutral point of view" means reporting on facts "in proportion" to their prominence in "published, reliable sources," and that notability requires "significant coverage in reliable sources."[433][434] As a result, Wikipedia is likely to underreport on topics that are likewise underreported upon in the sources that the community deems "reliable." At the same time, sources relevant to groups that fall outside the interests and expertise of Wikipedia's overwhelmingly white and overwhelmingly male editorial community are more likely to be deemed "unreliable" by that community.

Besides these policies themselves, a second core reason for Wikipedia's content gaps is its homogenous editor base. As Wales has pointed out, a largely "tech-geek male" community will tend to write about topics relevant to tech-geek males.[435] Additionally, it is this homogenous community that developed Wikipedia's content policies (via "rough consensus") in the first place, and many of these long-time editors are the ones enforcing these policies. Newcomers, many of whom may be from more diverse backgrounds, often find their contributions overturned

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[433] *Wikipedia*, s.v. "Wikipedia:Neutral point of view."
[434] *Wikipedia*, s.v. "Wikipedia:Notability."
[435] Jimmy Wales, "Russian Blackouts, Neutrality and Trusting Wikipedia."

by Wikipedia "gatekeepers" seeking to preserve the website's narrow conceptions of neutrality, reliability, and notability.

Despite these issues, many people and groups are already working to address Wikipedia's content gaps. But if the larger Wikipedia community wants to take more active, fundamental steps to closing Wikipedia's gaps, it ought to consider modifying its policies to be less restrictive, and it should definitely attempt to diversify itself. These two adjustments go hand in hand; changing Wikipedia's policies might draw in new editors from diverse backgrounds, and drawing in more diverse editors might lead the community to rethink its policies.

There is evidence to suggest that Wikipedia is becoming more aware of its biases, both in terms of its content, its demographics, and how the two are intertwined. In early March of 2021, in honor of Women's Month, Wikipedia added a banner above all its articles which reads "Celebrate International Women's Day: Help close the knowledge gender gap on Wikipedia this March. Join us."[436] Clicking that banner redirects the reader to a page acknowledging that less than 20% of Wikipedia's biographies are about women; the page encourages each Wikipedia reader to get involved.[437] "1. Create a Wikipedia account, 2. Read through the Five Pillars, 3. Look for an event that you want to take part in," the page prompts, and links readers to WikiProject Women in Red, Art+Feminism, and other similar initiatives.[438]

Likewise, in February of 2021, the Wikimedia Foundation implemented a new Universal Code of Conduct which centralizes standards "for an inclusive, welcoming, safe, and harassment-free environment."[439] If the Wikimedia Foundation takes what it is saying seriously, then these are steps in the right direction; fostering a safer community for editors from all sorts

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[436] Here is a link to a screenshot I took of the banner: https://imgur.com/a/QABtkWu (accessed March 8, 2021).
[437] *Wikimedia Meta-Wiki*, s.v. "Gender gap/International Women's Day,"
https://meta.wikimedia.org/wiki/Gender_gap/International_Women%27s_Day (accessed March 8, 2021).
[438] Ibid.
[439] *Wikimedia Meta-Wiki*, s.v. "Universal Code of Conduct,"
https://meta.wikimedia.org/wiki/Universal_Code_of_Conduct (accessed March 8, 2021).

of backgrounds will make the Wikipedia community stronger in a number of ways. Most centrally to this thesis, a diverse editor base will allow Wikipedia to fill in the gaps in its content, as new editors will bring their unique interests and areas of expertise.

But one stumbling block worth noting is that there is still not much concrete data on where Wikipedia's content gaps exist. Wikipedia's biographical gender imbalance is the one main exception; we know that only 18.4% of Wikipedia's biographies are about women.[440] But there is no such data on, say, how well-covered African history, culture, and politics is on Wikipedia, or any similar topic area. Thus, it would be helpful for researchers to perform more quantitative analyses of Wikipedia's content, specifically considering content which areas seem underdeveloped. These studies would help the Wikipedia community understand where its content gaps exist, and hopefully stir the community to create and develop more articles to fill those gaps.

Since Wikipedia is "the free encyclopedia that anyone can edit," it should be the case that anyone — you or I included — could one day decide to join in the effort to fill Wikipedia's content gaps. But, as we've noted throughout this thesis, the contributions of newcomers are often overturned; Wikipedia has seen a major increase in the amount of institutional knowledge required to get your contributions to stick, starting especially in the late 2000s.[441]

Thus, if the Wikipedia community wants to diversify itself, and to draw in newcomers to help address its less-developed content areas, it needs to become more welcoming towards new editors. That may involve a shift in community culture towards one more supportive of newcomers; long-time editors can revert newcomers' mistakes while politely explaining how to avoid those mistakes in the future. Additionally, helping newcomers to become productive

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[440] *Wikipedia*, s.v. "Wikipedia:WikiProject Women in Red."
[441] Halfaker et. al., "The Rise and Decline of an Open Collaboration System."

members of the site requires the Wikipedia community to develop more concise and straightforward policies. Even after months of studying the website, I still find Wikipedia's policy landscape difficult to navigate, and there are dozens of policy pages I haven't even had the chance to look at.

Wikipedia has garnered a massive reader base over the course of its 20 year history — a testament to the power of its volunteer-based approach to the dissemination of knowledge. But, for Wikipedia to remain relevant into the future, and for it to become as epistemically valuable as possible, it ought to work to address the gaps in its content. Rethinking its policies, welcoming new editors, and in particular welcoming editors from underrepresented backgrounds are three concrete steps that Wikipedia can — and should — take.

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In this interview, Wikipedia founder Jimmy Wales suggests that the website's content gaps are a direct result of its homogenous editor base, as "tech-geek males" will choose to write about topics relevant to tech-geek males. He has echoed this sentiment a number of times; similar sentiments are expressed in the other interviews above.

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This study found that Wikipedia articles on philosophers were mostly accurate, but that they only covered "consensus topics" from academic reference works at a rate of 52%.

Brown, Adam R. "Wikipedia as a Data Source for Political Scientists: Accuracy and Completeness of Coverage." *Political Science & Politics* 44, no. 2 (2011): 339-43.

This study looked at Wikipedia articles on politicians, elections, and candidates, and found few inaccuracies, but asserted that "errors of omission are extremely frequent."

Carr, Nicholas. "Questioning Wikipedia" in *Critical Point of View: a Wikipedia Reader*. INC Reader; 7. Amsterdam: Institute of Network Cultures, 2011: 191-202.

In this set of essays from the early and mid-2000s, Nicholas Carr writes about the Wikipedia project from the perspective of an outside observer. He documents the debate between inclusionists and deletionists, and ultimately concludes that the deletionists "have won."

Das, Sanmay, Allen Lavoie, and Malik Magdon-Ismail. "Manipulation among the Arbiters of Collective Intelligence." *Proceedings of the 22nd ACM International Conference on Information & Knowledge Management* (2013): 1097-106.

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Enyedy, Edgar and Nathaniel Tkacz. "'Good luck with your wikiPAIDia': Reflections on the 2002 Fork of the Spanish Wikipedia" in *Critical Point of View: A Wikipedia Reader*. INC Reader; 7. Amsterdam: Institute of Network Cultures, 2011: 110-18.

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In this study, Aaron Halfaker et. al. describe the high levels of bureaucratization and rule-enforcement that Wikipedia implemented in response to its rise in popularity circa 2017. Halfaker et. al. conclude that these strict policies actually *stifled* Wikipedia's growth, leading to a period of decline in the number of new editors.

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Hwang, Thomas J., Florence T. Bourgeois, and John D. Seeger. "Drug Safety in the Digital Age." *The New England Journal of Medicine* 370, no. 26 (2014): 2460-462.

This study found that 36% of a sample of Wikipedia's medical articles did not reflect new warnings from the U.S. Food and Drug Administration more than one year after those warnings were announced.

Konieczny, Piotr. "Adhocratic Governance in the Internet Age: A Case of Wikipedia." *Journal of Information Technology & Politics* 7, no. 4 (2010): 263-83.

In this essay, Piotr Konieczny appears to be the first person to apply the term "adhocratic" to describe Wikipedia's model; this emphasizes that elements of Wikipedia are indeed bureaucratic, but that it's a flexible bureaucracy that shifts as the community sees fit. Other scholars have since adopted this term to describe Wikipedia.

Kräenbring, Jona, Tika Monzon Penza, Joanna Gutmann, Susanne Muehlich, Oliver Zolk, Leszek Wojnowski, Renke Maas, Stefan Engelhardt, and Antonio Sarikas. "Accuracy and Completeness of Drug Information in Wikipedia: A Comparison with Standard Textbooks of Pharmacology." *PloS One* 9, no. 9 (2014): e106930.

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Lih, Andrew. *The Wikipedia Revolution: How a Bunch of Nobodies Created the World's Greatest Encyclopedia*. 1st ed. New York: Hyperion, 2009.

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Lovink, Geert and Nathaniel Tkacz. *Critical Point of View: A Wikipedia Reader*. INC Reader; 7. Amsterdam: Institute of Network Cultures, 2011.

> I relied on a number of essays from this compendium for background information and analyses on Wikipedia's model; some of these chapters are listed separately in this bibliography.

O'Neil, Mathieu. "Wikipedia and Authority" in *Critical Point of View: A Wikipedia Reader. INC Reader*; 7. Amsterdam: Institute of Network Cultures, 2011: 309-24.

Phillips, Jennifer, Connie Lam, and Lisa Palmisano. "Analysis of the Accuracy and Readability of Herbal Supplement Information on Wikipedia." *Journal of the American Pharmacists Association* 54, no. 4 (2014): 406-14.

> This study examined 19 Wikipedia articles on herbal supplements, and found that "several lacked information on drug interactions, pregnancy, and contraindications."

Reagle, Joseph. "A Case of Mutual Aid: Wikipedia, Politeness, and Perspective Taking." *Wikimania 2005*. Frankfurt, Germany. July 5, 2005.

> In contrast to the Konieczny study, this essay described Wikipedia's model as "anarchic" (in a positive way).

Reavely, N. J., A. J. Mackinnon, A. J. Morgan, M. Alvarez-Jimenez, S. E. Hetrick, E. Killackey, B. Nelson, R. Purcell, M. B. H. Yap, and A. F. Jorm. "Quality of Information Sources about Mental Disorders: A Comparison of Wikipedia with Centrally Controlled Web and Printed Sources." *Psychological Medicine* 42, no. 8 (2012): 1753-762.

> This study found that Wikipedia's articles on mental disorders were of comparable quality to articles on the same topics in the *Encyclopedia Britannica*.

Rosenzweig, Roy. "Can History Be Open Source? Wikipedia and the Future of the Past." *The Journal of American History* (Bloomington, Ind.) 93, no. 1 (2006): 117-46.

> Historian Roy Rosenzweig examined 25 Wikipedia articles related to U.S. history, and found that only four had errors — primarily "small and inconsequential" ones.

Samoilenko, Anna, and Taha Yasseri. "The Distorted Mirror of Wikipedia: A Quantitative Analysis of Wikipedia Coverage of Academics." *EPJ Data Science* 3, no. 1 (2014): 1-11.

B) News articles about Wikipedia

Anderson, Monica, Paul Hitlin, and Michelle Atkinson. "Wikipedia at 15: Millions of readers in scores of languages." *Pew Research*. January 14, 2016.

https://www.pewresearch.org/fact-tank/2016/01/14/wikipedia-at-15/ (accessed March 1, 2021).

Daley, Jason. "How a College Student Led the WikiProject Women Scientists." *Smithsonian Magazine*. March 15, 2016. www.smithsonianmag.com/smart-news/how-college-student-led-wikiproject-women-scientists-180958423/ (accessed March 1, 2021).

Dewey, Caitlin. "Wikipedia has a ton of money. So why is it begging you to donate yours?" *The Washington Post*. December 2, 2015. https://www.washingtonpost.com/news/the-intersect/wp/2015/12/02/wikipedia-has-a-ton-of-money-so-why-is-it-begging-you-to-donate-yours/ (March 1, 2021).

This article highlights the success that the Wikimedia Foundation has had in fundraising.

Dickey, Megan Rose. "Google.org donates $2 million to Wikipedia's parent org." *Tech Crunch*. January 22, 2019. https://techcrunch.com/2019/01/22/google-org-donates-2-million-to-wikipedias-parent-org/ (accessed March 1, 2021).

D'Onfro, Jillian. "YouTube will add Wikipedia links debunking conspiracy theory videos." *CNBC*. March 13, 2018. https://www.cnbc.com/2018/03/13/youtube-wikipedia-links-debunk-conspiracy.html (accessed March 1, 2021).

This article describes the recent phenomenon whereby YouTube links to Wikipedia articles (among a few other sources) below its videos on controversial topics — even when those videos are from well-established news agencies like CNN.

Frauenfelder, Mark. "The next generation of line encyclopedias." *CNN*. November 21, 2000. https://www.cnn.com/2000/TECH/computing/11/21/net.gen.encyclopedias.idg/index.html (accessed March 1, 2021).

Gouthro, Liane. "Building the world's biggest encyclopedia." *CNN*. March 14, 2000. https://www.cnn.com/2000/TECH/computing/03/14/nupedia.idg/index.html /(accessed March 1, 2021).

Lee, Timothy. "Citizendium turns five, but the Wikipedia fork is dead in the water." *Ars Technica*. October 27, 2011. https://arstechnica.com/tech-policy/2011/10/five-year-old-wikipedia-fork-is-dead-in-the-water/ (accessed March 1, 2021).

This article details the decline of "Citizendium" — Larry Sanger's spin-off project that attempted to be a more academic undertaking than Wikipedia.

Paling, Emma. "Wikipedia's Hostility Towards Women." *The Atlantic*. October 21, 2015. https://www.theatlantic.com/technology/archive/2015/10/how-wikipedia-is-hostile-to-women/411619/ (accessed March 1, 2021).

This study describes the many ways that Wikipedia's male-dominated community has been hostile to female editors in the past, from "gatekeeping" their contributions to sending them outright harassment.

Stross, Randall. "Encyclopedic Knowledge, Then vs. Now." *New York Times*. May 2, 2009. https://www.nytimes.com/2009/05/03/business/03digi.html (accessed March 1, 2021).

C) Sources about social epistemology / epistemic virtues

Daston, Lorraine and Peter Galison. *Objectivity*. New York: Cambridge, Mass: Zone Books; Distributed by the MIT Press, 2007: 40.

> I rely on this book for a working definition of the notion of "epistemic virtues."

Fallis, Don. "Toward an Epistemology of Wikipedia." *Journal of the American Society for Information Science and Technology* 59, no. 10 (2008): 1662-74.

> Don Fallis applies Alvin Goldman's epistemic virtues (see below) to Wikipedia, and argues that the website's epistemic virtues outweigh its deficiencies; he asserts that Wikipedia is powerful, speedy, fecund, and mostly accurate. I point out that Fallis glosses over the fact that Wikipedia's content gaps are a major epistemic deficiency.

Goldman, Alvin I. "Foundations of Social Epistemics." *Synthese* (Dordrecht) 73, no. 1 (1987): 109-144.

> In this article, Alvin Goldman lays out a number of epistemic virtues which he argues can be used to "appraise social institutions and practices"; this include reliability, power, fecundity, speed, and efficiency. Like Fallis, I attempt to apply these to Wikipedia.

Magnus, P. D. "Epistemology and the Wikipedia." *North American Computing and Philosophy Conference* (2006).

Sosa, Ernest. "The Raft and the Pyramid: Coherence versus Foundations in the Theory of Knowledge." *Midwest Studies in Philosophy* 5, no. 1 (1980): 3-26.

> In this foundational work, Ernest Sosa lays out some of the initial tenets of the subfield of "virtue epistemology."

Tollefson, Deborah. "Wikipedia and the Epistemology of Testimony." *Episteme* 6 (1) (2009): 8-24.

D) Sources about encyclopedias / biographical dictionaries

Yeo, Richard. *Encyclopaedic Visions: Scientific Dictionaries and Enlightenment Culture.* Cambridge; New York: Cambridge University Press, 2001.

> In this book, Richard Yeo lays out the early history and development of encyclopedias as a medium. In particular, he points out that encyclopedias began with a strict focus on the arts and sciences — not history and biography — and that they relied on strict definitions and sub-classifications to determine what material to include.

Cannadine, David. "British National Biography and Global British Lives: From the DNB to the ODNB—and beyond?" in *True Biographies of Nations?: The Cultural Journeys of Dictionaries of National Biography*. Acton ACT, Australia: ANU Press, (2019): 193-208.

This work provides an overview of the history of the Dictionary of National Biography, which has evolved into the Oxford Dictionary of National Biography.

Raven, James. "The Oxford Dictionary of National Biography: Dictionary or Encyclopaedia?" *The Historical Journal* 50, no. 4 (2007), 991-1006.