Social Epistemology: Essential Readings

EDITED BY

Alvin I. Goldman and Dennis Whitcomb

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19 *Nolen v. State*, 872 S.W.2d 807, at 813 (Tex. App. 1994).
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Wikipistemology

Don Fallis

> Somebody who reads Wikipedia is "rather in the position of a visitor to a public restroom," says Mr. McHenry, Britannica's former editor. "It may be obviously dirty, so that he knows to exercise great care, or it may seem fairly clean, so that he may be lulled into a false sense of security. What he certainly does not know is who has used the facilities before him." One wonders whether people like Mr. McHenry would prefer there to be no public lavatories at all.
>
> —*Economist*

> Wikipedia is the best thing ever. Anyone in the world can write anything they want about any subject. So you know that you are getting the best possible information.
>
> —Michael Scott (*The Office*)

Mass collaboration is one of the newest trends in the creation and dissemination of knowledge and information. Several people working together to produce knowledge is nothing new, of course. But until recently, such projects have been limited in the number of collaborators who can participate and in the distance between them. It is now possible for millions of people separated by thousands of miles to collaborate on a single project. *Wikis*, which are Web sites that anyone with Internet access can edit, provide a popular medium for this sort of collaboration.

Such mass collaboration has often been extremely successful. A popular example is the development of open source software, such as the Linux operating system. However, it is not a foregone conclusion that such mass collaboration will be successful in all instances. For example, it seems unlikely that a million people working together would write a very good novel. But are a million people working together likely to compile a good *encyclopedia*? This essay will investigate the success of a notable example of mass collaboration on the Internet: the "free online encyclopedia that anyone can edit," Wikipedia.

AN EPISTEMIC EVALUATION OF WIKIPEDIA

There are actually a number of different ways a project like Wikipedia might (or might not) be successful. It might be successful at building a good encyclopedia. But it might also be successful at simply building an online community. And it is not completely clear which of these goals has priority. In fact, one of the founders of Wikipedia, Jimmy Wales, has said that "the goal of Wikipedia is *fun* for the contributors" (quoted in Poe 2006, emphasis added).

Even if the contributors to Wikipedia ultimately just want to have fun, however, building a good encyclopedia is still an important goal of this project. Similarly, even if the owners of *Encyclopedia Britannica* ultimately just want to make money, building a good encyclopedia is still an important goal that they have. And this goal is clearly *epistemic*. A good encyclopedia is a place where people can "acquire knowledge" and sometimes "share knowledge" ().[1] And, according to Alvin Goldman (1999), a primary task for the social epistemologist is to evaluate social institutions, such as Wikipedia, in terms of their epistemic consequences.[2]

Wikipedia certainly has the potential to have great epistemic benefits. By allowing anyone with Internet access to create and edit content (i.e., by taking advantage of what Chris Anderson calls "crowdsourcing"; 2006, 219), Wikipedia now includes millions of entries in many different languages.[3] Because all of this material is freely and easily accessible by anyone with Internet access, Wikipedia is now one of the top ten Internet domains in terms of Internet traffic along with Google, Yahoo, YouTube, and MySpace.[4] It essentially serves as an aggregation point for encyclopedic information in much the same way that the online auction Web site Ebay serves as an aggregation point for other goods (89).

The idea of Wikipedia is reminiscent of the World Encyclopedia or World Brain envisioned by the science fiction writer H. G. Wells (1971 [1938]). The World Encyclopedia was to be a compendium of all human knowledge, compiled by a decentralized network of contributors, and accessible to all people. And it is worth noting that the creation and dissemination of knowledge in general is very often such a collective activity.[5] For example, libraries, publishing companies, universities, search engine companies, and even dictionaries are typically large-scale collective endeavors. While early lexicographers, such as Samuel Johnson, worked largely on their own, subsequent dictionaries have always been produced by large teams. In fact, in its early days, the *Oxford English Dictionary*, in a strategy very similar to Wikipedia, solicited help from the general public (Winchester 1998, 101–14).

Serious concerns have been raised, however, about the quality (accuracy, completeness, comprehensibility, etc.) of the information on Wikipedia. Entries in traditional encyclopedias are often written by people with expertise on the topic in question. In addition, these entries are checked for accuracy by experienced editors before they are published. However, because Wikipedia allows anyone with Internet access to create and modify content, Wikipedia lacks these sorts of quality control mechanisms. In fact, "no one stands officially behind the authenticity and accuracy of any information in [Wikipedia]" (Denning et al. 2005). As a result, it has been suggested that "it's the blind leading the blind—infinite monkeys providing infinite information for infinite readers, perpetuating the cycle of misinformation and ignorance" (Keen 2007, 4).

In this essay, I discuss the various concerns that have been raised about the quality of the information on Wikipedia. Despite these concerns, I will argue, the epistemic consequences of people using Wikipedia as a source of information are actually likely to be quite good.

EPISTEMIC CONCERNS ABOUT WIKIPEDIA

Several different epistemic concerns have been raised about Wikipedia. For example, it has been pointed out that Wikipedia entries are often badly written and that important topics are not always covered.[6] 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. And epistemologists (e.g., Hume 1977 [1748], 111, Descartes 1996 [1641], 12) typically consider falling into *error* to be the most adverse epistemic consequence. Thus, the principal epistemic concern that has been raised about Wikipedia is whether people are likely to get *accurate* information from it. In other words, is Wikipedia a reliable source of information? (An information source is *reliable* if most of the information that it contains is accurate.)

As noted, more and more people are using Wikipedia as a source of information. It has even been cited in court cases (Cohen 2007). But concerns about its reliability in particular have led many people to suggest that Wikipedia should not be used as a source of information. In fact, the history department at Middlebury College has forbidden its students to cite Wikipedia (Read 2007).

Concerns about Reliability

Wikipedia differs from many other collaborative projects in that it does not directly bump up against reality. For example, in order for software to be added to the Linux operating system, the software actually has to work. By contrast, information can be added to Wikipedia and remain on Wikipedia indefinitely regardless of whether or not it is accurate.

There are several reasons to think that a significant amount of information on Wikipedia will be inaccurate. First, since anyone can contribute to Wikipedia, many of these contributors will not have much expertise in the topics they write about. As a result, they may inadvertently add inaccurate information to Wikipedia.[7] In addition, they may inadvertently remove accurate information. Thus, there will be some amount of *misinformation* on Wikipedia.

And the problem is not just that Wikipedia allows people who lack expertise to contribute. It has been suggested that Wikipedia exhibits *anti-intellectualism* and actively deters people with expertise from contributing. For example, experts rarely receive any deference from other contributors to Wikipedia as a result of their expertise.[8] Since they cannot simply appeal to their authority, experts have to fight it out just like anyone else to get their views to stick in the encyclopedia. Many experts are understandably unwilling to put in the effort to create content that might simply be removed by an unqualified individual with an axe to grind.[9] Furthermore, academics and other experts who create information and knowledge typically want to get credit for their work. But since Wikipedia entries are the creation of multiple (often anonymous) authors and editors, no one person can claim credit for the result.

Second, since anyone can contribute to Wikipedia, some of these contributors may try to deceive the readers of Wikipedia.[10] For example, the entry on the journalist John Siegenthaler was famously modified to falsely claim that he was involved in the Kennedy assassinations.[11] And this inaccurate information was on the Web site for over four months. In another case, University of Minnesota professor Taner Akcam was detained at the Canadian border because his Wikipedia entry had been changed to say that he was a terrorist (Fisk, 2007).). Thus, there will be some amount of *disinformation* on Wikipedia.

Whenever someone has an interest in convincing other people to believe something even if it is not true, there is reason to worry about the accuracy of the information she provides. For example, it is worrying when prominent individuals (e.g., members of Congress) and large organizations have been caught changing their own Wikipedia entries (Borland 2007). And even if someone is not engaged in outright deception, there is still potential for inaccurate information to be introduced as a result of unintentional bias.

Finally, there is a third category of inaccurate information that may be found on Wikipedia. Since we can all edit Wikipedia, Stephen Colbert (host of the television news satire *The Colbert Report*) has suggested that we should just construct the reality we collectively want. For example, since we are all concerned with the survival of endangered species, Colbert encouraged his viewers to edit the entry on African elephants to say that their numbers had tripled in the last six months ().This type of inaccurate information is arguably distinct from both disinformation and misinformation. Unlike someone who intends to deceive or who makes an honest

mistake, the television host Colbert (or the character he is pretending to be) shows no concern for the *truth* of this Wikipedia entry. (Someone who intends to deceive not only shows no concern but is *concerned to avoid* the truth.) Several philosophers (e.g., Black 1983, Cohen 2002, Frankfurt 2005) have offered analyses of *humbug* or *bullshit*. And, according to Harry Frankfurt (2005, 33–34), it is "this lack of connection to a concern with truth—this indifference to how things really are—that I regard as of the essence of bullshit." Thus, there may also be some amount of bullshit on Wikipedia.[12]

Concerns about Verifiability

The main reason that the reliability of Wikipedia is a concern is that people can be misled by inaccurate information. And being misled can often lead to serious harm. But inaccurate information is not so serious a problem if it is possible for people to determine that this information is (or is very likely to be) inaccurate. In other words, if people are in a position to verify the accuracy of information, they are less likely to be misled by inaccurate information. Thus, we need to consider the verifiability as well as the reliability of an information source.[13] (An information source is *verifiable* if people can easily determine whether the information it contains is accurate.)

Furthermore, it is important to note that people can avoid the potential epistemic costs of inaccurate information even if they are not able to determine with absolute certainty that a particular piece of information is inaccurate. It is often sufficient for people to have a reasonable estimate of the reliability of the source of the information.[14] As Goldman (1999, 121) has established, if we have the right amount of faith in them, even fairly unreliable sources can be useful. For example, we might simply raise our degree of confidence in claims made by such sources without fully accepting that these claims are true.

However, P. D. Magnus (2006) has raised concerns about the verifiability of Wikipedia entries. He points out that we can try to verify the accuracy of a particular claim (that we are uncertain about) by considering both the *presentation* and the *content* of the information. For example, if an author makes numerous spelling and grammatical mistakes or makes other claims that are clearly false, then we have reason to be cautious about the accuracy of this particular claim. However, these are just the sorts of features that contributors to Wikipedia typically remove when they edit entries that other people have written. That is, they quickly remove spelling mistakes, grammatical mistakes, and clearly implausible claims. Thus, these features will no longer be available to someone trying to estimate the reliability of these entries. To use Mr. McHenry's analogy, the concern is that people cannot tell how dirty a restroom really is because others have come through ahead of them, picked up the trash, and wiped off the counters.

We can also try to verify the accuracy of a piece of information by considering the identity of the source of that information. For example, does this source have any *conflict of interest* that might lead her to intentionally disseminate inaccurate information on this topic? In addition, is this source sufficiently *qualified* (or does she have a good enough *track record*) on this topic that she would be unlikely to unintentionally disseminate inaccurate information? But, in the case of Wikipedia, it is somewhat difficult to determine exactly who the source of a particular piece of information is. Any given entry may have been edited by several different contributors and Wikipedia allows these contributors to remain anonymous if they wish.

WIKIPEDIA IS NOT ALL THAT BAD

Wikipedia Is Not All That Unreliable

But despite legitimate concerns about its reliability, empirical evidence actually suggests that Wikipedia is not all that unreliable. For instance, researchers have tested Wikipedia by inserting plausible errors and seeing how long it takes for the errors to be corrected (Read 2006). Such vandalism is typically corrected in just a few minutes. In addition, blind comparisons by experts of Wikipedia entries and entries in a traditional encyclopedia have been carried out. For example, a study by the journal *Nature* (Giles 2005) found that Wikipedia was only slightly less reliable than *Encyclopedia Britannica*.[15]

To be fair, it should be noted that the *Nature* study focused specifically on entries on scientific topics. Results have been more mixed when it comes to other topics. For example, in a blind comparison of Wikipedia and *Britannica* with respect to a small selection of entries on *philosophical* topics, Magnus (2006) found that "Wikipedia entries vary widely in quality." George Bragues (2009), who evaluated the Wikipedia entries on seven great philosophers using authoritative reference works on these philosophers, reached the same conclusion. Nevertheless, even on such nonscientific topics, the *reliability* of Wikipedia still seems to be comparable to that of *Britannica*. For example, Magnus found that, while Wikipedia had more "major errors," *Britannica* had many more "minor errors and infelicities." And, in fact, Bragues was "unable to uncover any outright errors [in Wikipedia]. The sins of Wikipedia are more of omission than commission."

While these empirical studies suggest that Wikipedia *is* fairly reliable, we might reasonably wonder *why* it is as reliable as it is. As Chris Anderson (2006, 71) puts it, "the true miracle of Wikipedia is that this open system of amateur user contributions and edits doesn't simply collapse into anarchy." In particular, why do contributors make Wikipedia better more often than they make it worse? One popular suggestion is that

Wikipedia is an example of the so-called Wisdom of Crowds (see Surowiecki 2004). *Large* and *decentralized* groups made up of *diverse* and *independent* members seem to be very good at getting the right answer to many questions.[16]

But whatever the explanation for it might be, the evidence does indicate that Wikipedia is fairly reliable. Several investigators have established this simply by rating the quality of the information on Wikipedia as Bragues has done (by consulting authorities or authoritative sources). However, as Goldman (1999, 92–93) points out, it is often more appropriate to carry out a *relative* rather than an *absolute* epistemic evaluation of some institution. That is, rather than simply determining exactly how reliable an information source is, we should determine how reliable it is compared to the available alternatives.

Thus, instead of comparing Wikipedia to *Britannica*, we should really be comparing the reliability of Wikipedia against the reliability of the information sources that people would likely be using if Wikipedia were not available: namely, the freely available Web sites on their topic of interest returned by their favorite search engine (Meyer 2006). It is this comparison that will tell us whether it is, as a matter of fact, epistemically better that people have access to Wikipedia. And, if the reliability of Wikipedia is comparable to the reliability of traditional encyclopedias, then it presumably compares even more favorably to the reliability of randomly chosen Web sites. Empirical studies (e.g., Fallis and Frické 2002) have found significant amounts of inaccurate information on the Internet. And Web sites in general are not checked as quickly (or by as many people) as is Wikipedia.

In addition, it is important to note that the degree of reliability we demand of an information source often depends on the circumstances.[17] For example, when we are seeking information out of pure curiosity, it may not be a big deal if some of this information turns out to be inaccurate. But when we are seeking information in order to decide on a medical treatment or a large investment, we would like to be sure that the information is accurate. And if reliability is sufficiently important, we should probably double check the information (e.g., by consulting an independent source of information). It is often suggested that encyclopedias should be a starting point rather than an ending point for research (Anderson 2006, 69).

Of course, people will not always double check information even when the stakes are reasonably high. In other words, people are subject to the so-called principle of least effort. As Thomas Mann (1993, 91) reports, empirical studies have found that "most researchers (even "serious" scholars) will tend to choose easily available information sources, even when they are objectively of low quality." As a result, the easy availability of low-quality information sources can certainly have bad epistemic consequences in actual practice. But it is also important to note that people do not just have *epistemic* interests. And given that people have many

nonepistemic interests (e.g., they want to save time and money), it may sometimes be rational not to seek more knowledge or greater justification (Hardin 2003).[18]

Wikipedia Is Not All That Unverifiable

People may not always verify the accuracy of information on Wikipedia when they ought to. But it is not clear that Magnus is correct that the tools that they need to do so are not available. First of all, empirical studies (e.g., Fallis and Frické 2002) indicate that spelling and grammatical mistakes are not correlated with inaccuracy. So when such mistakes are removed from a Wikipedia entry, it is not clear that people have been deprived of a useful indicator of accuracy. With regard to the removal of implausible claims, some people probably are being deprived of a useful indicator of accuracy. However, claims that are clearly implausible to one person may not be clearly implausible to another. Thus, we have to weigh the epistemic cost of a loss of verifiability for some people against the epistemic benefit of removing information that will be misleading to other people.[19]

It is certainly not easy to determine the real-life identity of the author of a specific Wikipedia entry. But it is not clear that this seriously impedes our ability to verify the accuracy of the entry. First, it should be noted that it is also not very easy to determine the real-life identity of the author of a specific entry in a traditional encyclopedia.[20] Second, unlike a traditional encyclopedia, readers of Wikipedia can easily look at all the contributions a particular author has made and can evaluate the quality of these contributions. In any event, even if we could easily determine the real-life identity of an author, it would still be much too time-consuming to research her qualifications and potential biases. We typically trust a particular encyclopedia entry not because we trust its author but because we trust the process by which the entries in the encyclopedia are produced. And the process by which entries in Wikipedia are produced seems to be fairly reliable.

Admittedly, the process may not be as reliable as the process used by traditional encyclopedias. But Wikipedia warns readers about the fact that it may contain inaccurate information (Wikipedia 2010a).[21] And most people seem to be aware of this fact. By contrast, traditional encyclopedias often insist on their high level of accuracy. But the empirical studies discussed above suggest that there are many errors in traditional encyclopedias as well as in Wikipedia. As a result, there is reason to think that people are more likely to overestimate the reliability of traditional encyclopedias than the reliability of Wikipedia. As Eli Guinnee (2007) puts it, "an inaccuracy in Britannica is (mis)taken as fact, an inaccuracy in Wikipedia is taken with a grain of salt, easily confirmed or proved wrong."

Finally, in many respects, Wikipedia is actually more verifiable than most other information sources. For example, in addition to general

disclaimers, "warnings" are placed at the top of Wikipedia entries whose accuracy or neutrality has been disputed. In addition, unlike traditional encyclopedias, Wikipedia is not a black box. Readers of Wikipedia have easy access to the entire editing history of every entry. In addition, readers have access to the *talk pages* that contributors use to discuss how entries should be changed. Admittedly, most readers are only going to consult the current entry itself. But if someone is particularly interested in a topic, the editing history and the talk pages can be invaluable resources. For example, one can look to see if there were any dissenting opinions, what these different viewpoints were, and what arguments have ultimately carried the day. This is right in line with John Stuart Mill's claim (1978 [1859]) that exposure to different viewpoints is the best way to learn the truth about a topic.

New technologies are also being developed that have the potential to increase the verifiability of Wikipedia. For example, Virgil Griffith has created a searchable database (Wikiscanner) that allows readers to connect specific contributions to Wikipedia with the organization that owns the Internet provider addresses from which those contributions originated (Borland 2007). So, for example, readers can easily find out if employees of the Diebold Corporation have been editing the Wikipedia entry on it.[22]

Wikipedia Has Many Other Epistemic Virtues

Concerns about Wikipedia usually focus on its reliability (or lack thereof). But there are many other epistemic virtues beyond reliability. For example, in addition to reliability, Goldman has discussed the epistemic values of *power*, *speed*, and *fecundity* (Goldman 1987, Thagard 1997). That is, we are also concerned with *how much* knowledge can be acquired from an information source, *how fast* that knowledge can be acquired, and *how many* people can acquire it. In fact, as noted, fecundity is of particular importance for an encyclopedia.

Wikipedia seems to do pretty well with regard to these other epistemic values. Because it has a huge amount of free labor working around the clock, it is likely to be very powerful.[23] Because there is no delay for new content to go through an editorial filter and because the content can be accessed quickly over the Internet, acquisition of knowledge via Wikipedia is likely to be very speedy. And because it is free to anyone with Internet access, it is likely to be very fecund.[24]

Thus, Wikipedia provides a nice example of how epistemic values can come into conflict. In particular, while Wikipedia may be slightly less reliable than *Britannica*, it is arguably much more powerful, speedy, and fecund. When there is such a conflict, we need to determine what the appropriate trade-off is.[25] And just as when reliability comes into conflict with nonepistemic interests, the relative importance of different epistemic values will often depend on the circumstances. For example, speed

is often extremely important in our fast-paced world. It is sufficiently important to physicists that many of them use preprint archives that provide quick access to unpublished articles that have not been checked for accuracy by anyone other than the author (Thagard 1997). Furthermore, William James (1979 [1896], 31–32) famously claimed that the value of power can sometimes outweigh the value of reliability. According to James, "a rule of thinking which would absolutely prevent me from acknowledging certain kinds of truth if those kinds of truth were really there, would be an irrational rule." Thus, in many circumstances, the epistemic benefits of Wikipedia (in terms of greater power, speed, fecundity, and even verifiability) may very well outweigh the epistemic costs (in terms of somewhat less reliability).

Finally, as any user of Wikipedia knows (and as the empirical studies cited above suggest), it is not just a mass of misinformation and disinformation. Wikipedia contains quite a lot of accurate, high-quality information. So this is not simply a case of disseminating low quality information faster and to more people. Thus, despite legitimate concerns about its reliability, it probably is *epistemically* better that people have access to this information source.

HOW WIKIPEDIA CAN BE IMPROVED

In any event, Wikipedia seems to be here to stay. Given that fact, what epistemologists can do is try to figure out how to *improve* Wikipedia. For instance, as noted, there are new projects (e.g., Wikiscanner) that have the potential to increase the reliability and verifiability of Wikipedia.[26] Such projects fall under the so-called *ameliorative* project in epistemology, which focuses on how we can modify our institutions and practices to better achieve our epistemic goals (Kitcher 1992, 64).

In addition to improving Wikipedia, epistemologists can also try to figure out how to improve *on* Wikipedia. For example, Larry Sanger is working to create a more reliable alternative to Wikipedia (Citizendium 2010).[27] Citizendium.org welcomes experts to contribute as authors and as editors, and entries that meet certain standards of quality are officially "approved" by such qualified editors. And contributors to Citizendium are not allowed to remain anonymous. In addition, Veropedia.com is an attempt to create a more reliable extension of Wikipedia. This Web site will host stable versions of Wikipedia entries that have been approved by experts in the relevant subject areas.

However, it is important to keep in mind that any proposed changes to Wikipedia are likely to have epistemic costs as well as benefits. For example, if we try to improve its reliability by giving experts more editorial control, we might end up decreasing its power since other people might be deterred from contributing.[28] In addition, if we try to improve its reliability by only including entries approved by experts, we might end up decreasing its speed since it will take longer to add and update entries.[29] So, in order to evaluate any proposed changes, we need to be clear about exactly what our epistemic values are and what the appropriate trade-offs are when there are conflicts.[30]

CONCLUSION

Like the Internet itself, Wikipedia is having a huge impact on how a great many people gather information about the world. So it is important for epistemologists to ask what the epistemic consequences are of people having access to this information source. While there are legitimate concerns about its reliability (since anyone can edit it), the empirical evidence suggests that Wikipedia is fairly reliable (especially compared to those information sources that are as easily accessible). In addition, it has a number of other epistemic virtues (e.g., power, speed, and fecundity) that arguably outweigh any deficiency in terms of reliability. Even so, epistemologists should be trying to identify changes (or alternatives) to Wikipedia that will bring about even better epistemic consequences. In order to do that, we need to know what our epistemic values are, and we need a better understanding of why Wikipedia works as well as it does.

Notes

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1 Encyclopedias are intended to disseminate existing knowledge rather than to produce new knowledge. Thus, the epistemology of encyclopedias falls within the scope of the *epistemology of testimony*. See Lackey and Sosa (2006) for recent work on the epistemology of testimony.

2 Goldman (2008) has recently evaluated the epistemic consequences of *blogging* (as compared to the epistemic consequences of the conventional news media).

3 See Broughton (2008) or Wikipedia (2010b) for further details about how Wikipedia works.

4 Over a third of Internet users in the United States have consulted Wikipedia, and almost 10 percent consult it every day; see Rainie and Tancer (2007).

5 Philosophical work on how people come together to collaboratively create information and knowledge goes back to Aristotle (Waldron 1995). But there has been renewed interest in this topic over the last few years (see, e.g., Smith 2002,

Wray 2002, Mathiesen 2006, Tollefsen 2007, and the journal issue "The Epistemology of Mass Collaboration" (2009).

6 Not everybody criticizes the coverage of Wikipedia. Stephen Colbert, for example, thinks that "any site that's got a longer entry on truthiness than on Lutherans has its priorities straight." All joking aside, I think that he has a point.

7 Simson Garfinkel (2008) has criticized Wikipedia by pointing to a case where the subject of an article was not able to correct a statement about himself that he very well knew to be false. His attempts to correct the inaccuracy would quickly be reversed because he could not cite a published source that supported his position. Although this may sound problematic on the face of it, it is not clear that this is really a serious problem or that it is unique to Wikipedia. Most encyclopedias stick to published sources, and are arguably more reliable for doing so. But published sources will not always have the most current or most accurate information in particular cases.

8 In fact, people who claim expertise are sometimes greeted quite rudely. For example, the noted philosopher of mind David Chalmers had some trouble getting some mistakes corrected in the Wikipedia entry "Consciousness" (Healy, 2007).

9 A scholar recently revised the Wikipedia entry on the noted political philosopher Martha Nussbaum, only to have the work immediately undone by an anonymous administrator; see Leiter (2007).

10 In addition to people who intentionally add inaccurate or misleading information, there are people who intentionally remove content and/or replace it with obscenities (Wikipedia 2010c). If it removes *true* content, such vandalism also reduces the reliability of Wikipedia.

11 In a similar vein, a *Penny Arcade* comic strip shows Skeletor changing the He-Man entry, which originally read "He-Man is the most powerful man in the universe" to read "He-Man is actually a tremendous jackass and not all that powerful" (Krahulik and Holkins 2005). In another recent case, a college student inserted a fake quote into the Wikipedia entry for the composer Maurice Jarre, who had just died. Wikipedia editors quickly removed the quote because no source was cited. However, several journalists had already found the quote, and it appeared in obituaries of Jarre in several newspapers (Cohen 2009).

12 Of course, some bullshit might turn out to be true. In fact, some information that is intended to be false might accidentally turn out to be true. And if it is true, then there is not much of an epistemic cost to having it in Wikipedia. However, it seems safe to say that any given instance of bullshit or disinformation is unlikely to true. For example, it seems rather unlikely that the number of African elephants has recently tripled.

13 Fallis (2004b) discusses how people can verify that the accuracy of information and how information can be made easier to verify.

14 There can certainly be bad epistemic consequences if one's estimate of the reliability of a source does not match its actual reliability. For example, relevant evidence is often withheld from juries when it is thought that they are likely to overestimate its probative value (Goldman 1999, 294–95).

15 Encyclopedia Britannica has criticized the methodology of this study, but *Nature* has defended its methodology (*Nature* 2006). The bottom line is that there is no reason to think that any methodological failings of the study would favor Wikipedia over *Britannica* (Magnus 2006). See Wikipedia (2010d) for an extensive survey of empirical studies and expert opinions on the reliability of Wikipedia.

16 This explanation is not completely satisfying. For example, it is not clear how many contributors work on any particular Wikipedia entry or how diverse these contributors are (Wilson 2008).

17 Fallis (2006) discusses how nonepistemic interests can influence one's epistemic interests.

18 While it may be rational *all things considered* not to seek more knowledge in such cases, it is not necessarily *epistemically* rational (Kelly 2003).

19 In addition, contributors to Wikipedia do not just remove the *blatantly* implausible claims. They remove any claims that they know to be false and that other people might not recognize as being false.

20 With the exception of those encyclopedias that focus on a particular subject area, such as the *Routledge Encyclopedia of Philosophy*, traditional encyclopedias rarely list the authors of each entry.

21 Traditional encyclopedias often do have similar disclaimers. But they are rarely displayed as prominently as those in Wikipedia.

22 Wikiscanner may also increase the reliability of Wikipedia by deterring people from editing entries when they have an obvious conflict of interest. However, it should be noted that there are some epistemic benefits to anonymity that we might lose as a result of tools like Wikiscanner. In particular, if people cannot disseminate information anonymously, they may be deterred from disseminating valuable information. For example, suppose that I have something critical to say about a person or an organization. If the target of my criticism can find out that I am the source (and might come after me), I may very well decide that I am better off not saying anything (Kronick 1988, 225).

23 Timothy Noah (2007) has suggested that Wikipedia could be even more powerful than it currently is. At the moment, only topics that are sufficiently *notable* are allowed to have their own entries (Wikipedia 2010e). This sort of notability constraint makes perfect sense in the context of traditional print encyclopedias, which have limited space in which to print entries and limited staff to write entries. After all, people usually prefer to acquire *significant* knowledge rather than *trivial* knowledge (Fallis 2006, 180–81; Goldman 1999, 88–89; Paterson 1979, 95). However, since Wikipedia is not limited in terms of space or staff, it is not immediately clear why its scope should be constrained in this way. It may be difficult to find authoritative and verifiable sources to cite in an entry on a fairly trivial subject, such as your next-door neighbor's dog. But entries that fail to cite authoritative and verifiable sources are already proscribed by another Wikipedia policy (Wikipedia 2010f). Without a notability constraint, it may be slightly more difficult for readers to find the entry on, for example, *the* Jack Nicholson. But an effective search tool can easily ameliorate that difficulty. Finally, the fact that a topic is covered in a traditional print encyclopedia can be a useful indicator to people that the topic is significant. But it is probably better to come up with new ways of indicating importance in our new information environment rather than unnecessarily imposing constraints on ourselves. (This final point applies to indicators of accuracy and authority as well as to indicators of importance and significance.)

24 In addition to Wikipedia being freely accessible, anyone is allowed to make copies of its content for free, and many websites do. This further increases the fecundity of Wikipedia.

25 Fallis (2004a) discusses how epistemic values can come into conflict and how such conflicts can be resolved.

26 At least one peer reviewed journal is now requiring authors of accepted articles to submit summaries of their articles to Wikipedia (Butler 2008). This strategy has the potential to increase the reliability of Wikipedia by encouraging the participation of experts.

27 It should be noted that whereas several online encyclopedias are trying to provide an alternative to Wikipedia, it is not clear that they are all trying to provide a more reliable alternative. For example, according to Andy Schlafly, founder of Conservapedia.com, "we have certain principles we adhere to . . . beyond that we welcome the facts."

28 In fact, even if contributors to Citizendium have greater expertise, Citizendium might turn out to be less reliable than Wikipedia because it has fewer contributors to look for and correct errors.

29 In order to increase the reliability of Wikipedia, users will no longer be able to make immediate changes to entries about living people. Changes to such entries will only show up in the encyclopedia after being vetted by experienced editors (Cohen 2009). Critics of this policy worry that it will drastically slow the pace at which the encyclopedia is updated.

30 With respect to information on philosophical topics, another notable alternative to Wikipedia is the *Stanford Encyclopedia of Philosophy*, an online only publication (http://plato.stanford.edu). Because its editorial policies are similar to those of traditional encyclopedias, it is probably more reliable than Wikipedia, but it is also less speedy and less powerful. However, because it is freely available over the Internet, it may be just as fecund.

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