The Authority of Wikipedia

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ABSTRACT: Philosophers of argumentation and of testimony suggest that we can rely on what someone says because of its epistemic merits. If so, then we should never credit Wikipedia, since we cannot assess what its anonymous contributors know. I propose instead that Wikipedia can have pragmatic merits, in that the contributors' passion for the project, and the emerging communicative design through which that passion is made manifest, provide a reason for trust.

KEYWORDS: Wikipedia, expert authority, epistemology of testimony, appeal to expert authority, social knowledge

1. I consult Wikipedia. I am, further, no epistemic slouch; in fact I consider myself prudent in deciding what to credit. The purpose of this paper is to reconcile these two facts, by articulating the rationale which will make my trust in Wikipedia not only reasonable, but manifestly so.

1.1 Since I am going to presume here that reliance on Wikipedia *is* reasonable, it's probably best to begin by sketching the nature and extent of that reliance. So I have compiled in the Appendix the history of my consultations of Wikipedia articles from late August to late November, 2008, as recorded by the primary web browser on my primary computer. I hadn't begun serious work on this paper during that period, and I believe that these records reflect my current ordinary usage of this site.

 Judging from this list, I check a Wikipedia article on the average of twice a day, although it's more likely that I browse a larger cluster of articles about once or twice a week. I remember scanning some of these items out of curiosity about Wikipedia itself: I wanted just to see what kind of information Wikipedia offered on topics related to my interests, scholarly (e.g., "Dramatistic Pentad") or personal (e.g., "Central Asian cuisine"). I consulted other articles for some quick background in preparing to teach (e.g., "The Roman Revolution"), or to find out more about something that was happening in the world (e.g., "List of Battlestar Galactica (reimagined series) episodes"). In a move which scandalized my students, I quoted the article on "Oil reserves" during a classroom debate. And for other items on the list: I have no idea why I was looking at them (e.g., "1997 Cleveland Indians season").

 I am not alone in turning to Wikipedia. According to Alexa.com, a leading internet rating agency, during any given day in the Fall of 2008, close to 9% of all internet users consulted Wikipedia. About one out of every two hundred pages anyone looked at online was a Wikipedia page. Wikipedia thus was (and still is, as of this

writing) ranked as the 7th or 8th most popular website worldwide (Alexa). A survey done by the Pew Research Center in 2007 showed that more than one third of American adults report using Wikipedia, with the most educated reporting the highest levels of use (Ranie and Tancer 2007). And like me, people are starting to publish to others what they have found in Wikipedia. Wikipedia is being cited in academic articles (Wikipedia: Wikipedia as an academic source 2009), drawn on by the press (Wikipedia: Wikipedia as a press source 2009; Shaw, 2008), and quoted during court proceedings (Wikipedia: Wikipedia as a court source, 2009; Richards 2008).

1.2 What credit do these popularity statistics suggest we are granting to Wikipedia? Making an assertion on the authority of Wikipedia obviously indicates a high degree of trust. But merely consulting Wikipedia does not. A reader could be examining and rejecting what is said in an article (and as I will argue later, I believe we often are). Nevertheless, the fact that we are turning to Wikipedia at all shows that we do count on it. When we routinely click on the link in a Google results list that will take us to the site, or search Wikipedia directly to find some information, we are demonstrating a commitment to the reliability of this source, taken as a whole. Whether or not we later determine that the information in a particular article tops some given epistemic measure, we act as if Wikipedia itself stands above some epistemic floor. We are presuming that Wikipedia is worth our attention.

In fact, we are presuming this even in the face of pressure not to. Whatever we may do on our own time, I suspect that many college teachers take public stands against students' use of Wikipedia. When a few years ago the History department at Middlebury College banned students from citing Wikipedia (Jaschik 2007), they were giving just the most conspicuous expression of what in my experience is a widespread attitude. I've heard my colleagues, and I've occasionally caught myself, cavilling against Wikipedia in terms like these:

> I stand up and applaud at the professors who discourage Wikipedia being used. They are NOT, repeat, NOT, a valid source! They are loaded with so much wrong information, you would stand a better chance asking a complete stranger on the street about the same topic--they have a good chance to know more than moderators who allow so much wrong information on the site! As my students will tell you, if you site Wikipedia on ANY assignment, you WILL receive an F! ... We need to stand together, and teach these kids not to believe what just ANYONE tells them, including Wikipedia articles! ("Jim" on May 6, 2008, from Jaschik 2007).

Now, such public professions are out of line with what statistically speaking is likely our private conduct. The friction between the norms we practice and the norms we preach invites investigation, and perhaps rationalization. I will not here try to persuade you to join the ever-increasing crowd of those checking Wikipedia; I doubt if I need to. What I want to do instead is to help you, and me, formulate a justification for our behaviour. The existence of the now-ordinary epistemic practice of consulting this online encyclopedia is the starting point of this paper. We do at the moment trust Wikipedia. My purpose here is to say why.

1.3 In section two of this paper, I will consider a series of possible rationales for trusting Wikipedia, before proposing my own in section three. Some of these possibilities I draw from discussion of the Wikipedia phenomenon in the general culture. Two are from lines of theorizing relevant to the interests of this conference: work on expert authority from within argumentation theory, and work from the debates on the epistemology of testimony. I will be taking up views from these two bodies of scholarship in part to see what light they can cast on our reliance on Wikipedia. But I will also take them up to see what light our reliance on Wikipedia can cast on them. For theorists, Wikipedia offers a usefully extreme case against which to test prevailing conceptions of why we trust what experts, or indeed anyone, says. I suspect that any plausible theory of expert authority, or testimony, can justify our run-of-the-mill trust, say in our doctor's advice delivered face to face. Wikipedia is not run-of-the mill; in part because it is so new, in part because its communicative design is so unusual. It provides a good test of any theory; and any theory which passes its test would have to be quite robust. So I will close the paper with a few remarks about what theorists can learn from Wikipedia.

2. Let us consider then a series of possible rationales for trusting Wikipedia: based on the expertise of individual authors; based on the collective knowledge emerging from the interactions of its many authors; and based on our experience of its reliability.

2.1 When we consult Wikipedia, we may be trusting it for the same reasons we trust expert authority more generally. Argumentation and debate textbooks in the Communication/rhetoric tradition have long classified the argument from expert authority as one of the core set of forms students are expected to master (e.g., Rieke, Sillars and Peterson 2005). The informal logic tradition has moved in a similar direction, transferring the *argumentum ad verecundiam* from the category of "fallacy" to the category of potentially legitimate argument scheme (e.g., Govier 2005). Our textbooks are correctly treating arguments based on expert authority as defeasible, and the pointers they are providing students would be familiar to any skilled practitioner. One of the tasks of argumentation theory, however, must be to provide a full account of why the textbook advice (e.g. about the "critical questions" appropriate to the scheme) is sound. Significant work by Douglas Walton in particular has begun to do this. According to Walton, "the basic rule" for the appeal to authority "is that if E [the person making an assertion] is an expert...then A [his assertion] ought to be accepted....The basic pattern of the argument from expert opinion stems from E being an expert (having knowledge) and from E's giving testimony that A is true" (Walton 1997, p. 103). Transferred to Wikipedia, this account would suggest that we are justified in consulting the website because of the knowledge of those who contribute to it. In consulting Wikipedia, we are counting on its editors--the "Wikipedians"--to know what they are talking about.

It seems apparent, however, that this account will not work when applied to Wikipedia. Let me briefly review three reasons why.

First, we generally are unable to assess the knowledge of those who contributed to any given Wikipedia page. Wikipedia does save and make available a record of every change to every article. But it is ordinarily impossible to track these changes back to a specific person whose knowledge can be assessed. Wikipedia is (as it's slogan says) "the free encyclopedia that anyone can edit." As a matter of basic policy, Wikipedia does "not

require editors to register with a project. Anyone can edit without logging in" (Privacy Policy 2008). And according to statistics from 2007, about 40% of all edits to Wikipedia articles come from those choosing anonymity (Wikipedia Article Edits 2007). Further, even those who do register are not required to do so under their real name. Further, despite repeated internal debates of this topic, Wikipedia has decided to do nothing to verify the credentials registered users may claim, for example on their User page (Wikipedia: There is no credential policy 2009). But if we don't know who a contributor is, we cannot assess her expertise. She may be an expert on the subject she's writing about, or not. Wikipedia's own page on "Criticisms of Wikipedia" (2009) quotes British commentator Paul Vallely as summing up this point: "'Using [Wikipedia] is like asking questions of a bloke you met in the pub. He might be a nuclear physicist. Or he might be a fruitcake.'" Wikipedia's commitment to anonymity/pseudonymity thus imposes a sort of epistemic agnosticism on its readers: we cannot judge the author's knowledge one way or the other.

Even if we could pick out the person responsible for a Wikipedia article, the identification might not make us confident about Wikipedia. Wikipedia, remember, experienced its spectacular expansion just after the "Dot Com" bust had thrown many people out of work. So my personal suspicion is that the average Wikipedian is in their mid-20s, underemployed or unemployed in a tech field. That, at least, was the demographic of the Wikipedians interviewed by Andrew Lih in his recent history of Wikipedia (2009). The same generalization is also suggested by the "Essjay" controversy in 2007, when a well-respected and active Wikipedia editor who had claimed to be a tenured professor of theology turned out to be 24 year old community college dropout (Essjay controversy 2009). Although I don't want to impugn the knowledge of these young people, I doubt if they have the expertise to construct a universal encyclopedia.

Finally, we cannot be reassured when we find that the culture of Wikipedia has a somewhat "anti-expert" tone. Many credentialed experts do contribute to Wikipedia, and their contributions are valued (Wikipedia: Expert retention 2009). At the same time, there are strong indications of a quite different attitude. Some of these reports come from critics of Wikipedia; chief among these is Wikipedia co-founder Larry Sanger, who has left the project to found a more expert-focused online encyclopedia, Citizendium. Based on his experience, Sanger (2004) has asserted that

> as a community, Wikipedia lacks the habit or tradition of respect for expertise. As a community, far from being elitist (which would, in this context, mean excluding the unwashed masses), it is anti-elitist (which, in this context, means that expertise is not accorded any special respect, and snubs and disrespect of expertise is tolerated).

Sanger's sentiment is echoed by some who have remained in the community. They admit that "Wikipedia [does not] grant users privileges or respect based on subject-matter expertise. Quite the contrary, many in Wikipedia view experts with suspicion if not outright contempt" (Wikipedia: Expert editors 2009). In such an environment, it is unlikely that Wikipedia will develop policies or practices which would allow readers to assess the knowledge of those who contribute to articles.

In sum, the anonymity or pseudonymity of Wikipedia editors prevents us from assessing their knowledge; what we do know of these editors does not make us confident; and the anti-expert culture of Wikipedia doesn't give us reason to believe that these

conditions will change. The knowledge of individual contributors does not appear to justify our practice of consulting Wikipedia.

2.2 But perhaps we are wrong to look for the expertise of individual contributors. Perhaps instead reliance on Wikipedia is justified by the "wisdom of crowds" (Surowiecki 2004)--by the collective knowledge of all those contributing to Wikipedia. That is indeed a "crowd": Wikipedia has over nine million registered users, over 160,000 of whom have been active within the thirty days prior to this writing (Statistics 2009). It's very likely that there is at least some knowledge on most subjects somewhere within so large a group. If Wikipedia can aggregate this scattered knowledge, then we could be justified in consulting its articles. As the hacker maxim puts it, "given enough eyeballs, all bugs are shallow"--that is, any errors will likely be corrected. Wikipedia's reliability, in this view, is a property which emerges from the interactions of many, many individually unreliable editors, even as optimal prices emerge from market interactions, and fair and beneficial decisions emerge from the democratic practices of negotiation, deliberation, and voting.

This at least is the rationale asserted by many Wikipedia "boosters." In one discussion on the Wikipedia listserv, prominent Wikipedian Andrew Lih commented that the recent book on *The Wisdom of Crowds:*

> to Wikipedians, this merely reinforces what we've all know and have experienced firsthand. But it is interesting that the theme of the "power of many" is being picked up by the mainstream and it may prove a useful reference for folks who just "don't get wiki." ... Surowiecki's "Wise crowds" are described as having (1) diversity of opinion; (2) independence of members from one another; (3) decentralization; and (4) a good method for aggregating opinions. ... I'm sure Wikipedians will find these concepts quite familiar (Lih 2004).

Another Wikipedian later added "so after finishing this book I have been thinking a lot about emergence in general. Wikipedia displays emergent properties because each article is better than the contribution of each individual" (Krupps 2005). Similar observations have been made more publicly in the spate of books foreseeing the cultural revolutions that "Web 2.0" is about to bring to us. In this literature, Wikipedia is praised for its model of "peer production" (Tapscott and Williams 2006) organized in decentralized "starfish" fashion (Brafman and Beckstrom 2006). From the interactions among this anonymous yet self-organizing mass of contributors, such works argue, a new kind of knowledge--"social knowing" (Weinberger 2007)--is being created.

Interestingly enough, this is also the rationale often asserted, lampooned and critiqued, by Wikipedia "knockers." Stephen Colbert's well-known satirical account purports to laud Wikipedia for "bring[ing] democracy to information," overthrowing the "elite who study things and got to say what is or is not real." "Any user can change any entry, and if enough users agree with them, it becomes true," Colbert explains, with the result that "together we can create a reality that we all agree on--the reality we just agreed on" (The Colbert Report 2009). Arguing more directly, one former editor of *Encyclopedia Britannica* argued that to trust Wikipedia, we must take it on faith that "some unspecified quasi-Darwinian process will assure that those writings and editings by contributors of greatest expertise will survive; [that] articles will eventually reach a steady state that corresponds to the highest degree of accuracy" (McHenry 2004; see also

Keen 2007; Lanier 2006). Although such critics reach the opposite conclusion, they share with the "boosters" the sense that a collective knowledge must be central to Wikipedia's project.

But unfortunately for both "boosters" and "knockers," it appears to be hard to defend the idea that a Wikipedia article is the outcome of some sort of epistemic democracy. Consider again three reasons.

First, although the site is open to editing by all, there is some evidence that only a few actually take up the challenge. It's my impression that many articles have been attended to by only a few editors--or in other words, they haven't been touched by "many eyeballs." Conversely, a relatively small group of editors appears to be responsible for a disproportionately large number of edits to the site as a whole. Several Wikipedia watchers have characterized Wikipedia as an "oligarchy" (Wilson 2008) dominated by "über-Wikipedians" (Poe 2006a). This is one of the most active areas of research into Wikipedia (see Reagle 2008, pp. 67-68), and so I cannot offer a definitive answer. But one study argued that in any given month, the most active 1% of Wikipedia editors are responsible for about half the total edits, and the top 5%, for nearly three-quarters (Chi 2007, confirmed by Priedhorsky et al. 2007, challenged by Kittur 2007). From these figures, it would seem that Wikipedia must rest on the wisdom (if any) of an elite, not of a "crowd" (see further Fallis 2008).

But let's assume that Wikipedia is much more democratic than these studies suggest. Still, we have to notice that unlike markets, deliberative processes, or voting systems, Wikipedia does not necessarily aggregate the views of those who do contribute. Some articles may be the outcome of a long process of argument taking place on the "Talk" page that accompanies each one. But what actually appears in an article does not have to be the result of a process like negotiation, deliberation or voting; instead, it can be whatever the most recent editor decided to say and to leave alone. The last person to write before you looked may have trashed the entire article, with all its patiently accumulated improvements, and replaced it with a new one of his own composition. Or by small modifications he may have disrupted a text that had been agreed to by contending parties after long negotiations. As Marshall Poe put it, "such negotiations never really end. As new participants enter the fray, the struggle always begins anew" (Poe 2006b). In short, Wikipedia does not require collective authorship of articles, but rather what could better be called serial authorship; at any one time, an article is not the product of a "hive" or "swarm intelligence," but of the last intelligence which touched it.

Finally, even assuming that the contributions of many editors have been aggregated into one article, it is also the case that having more contributors can make an article worse (Sanger 2009). In my experience, many Wikipedia articles appear disjointed; as one librarian remarked, "with several authors contributing a paragraph here and there, the text can become an assembly of loosely connected topics rather than a coherent article" (Miller, Helicher and Berry 2006; see also McHenry 2004). And this is not just a stylistic flaw. In a detailed reconstruction of how more contributions made one Wikipedia article worse, Paul Duguid (2006) notes that apparently small changes in wording can often change the meaning of the assertion in context, and also distort the overall "balance, proportion, and trajectory of an article" as a whole. If no one takes responsibility for making the article cohere, the fragments contributed by however many editors will in the best case be an incomprehensible jumble, or worse, mislead or conflict.

Another danger of "many eyes" is that collaborative editing can make the worser article appear the better (Magnus 2009). At least a jumbled or self-contradictory article signals its untrustworthiness to the attentive reader. But if Wikipedia editors who have voluntarily undertaken maintenance tasks come in and clean it up, the signs of carelessness and inexperience will be removed. The article will appear smooth and well-written, and its possibly faulty content will be more likely to persuade the reader (see Fallis 2008 for a discussion of this issue).

I've argued that the editing of Wikipedia may largely be confined to an elite; that the site does not require aggregation of individual knowledge into a higher "wisdom of crowds;" and that in some cases, such aggregations only serves to lower the quality of articles. So we may follow Jimmy Wales, one of the founders of and still spokesperson for Wikipedia, when he commented in response to the listserve post quoted above:

> It's probably interesting to note that a central theme when I give public talks is precisely that Wikipedia is _not_ run this way, and that wikipedia is _not_ an instance of "The Wisdom of Crowds". . . . I'm not convinced that "swarm intelligence" is very helpful in understanding how Wikipedia works (Wales 2004).

Pace the Wikipedia "knockers," it is not that Wikipedia fails to live up to the standards of "emergent social knowledge;" it is instead that these standards simply do not apply.

2.3 It appears that neither the epistemic qualities of the individual author (2.1) or collective author (2.2) of a Wikipedia article can justify our consulting the website. Perhaps then the mistake is focusing on authorship at all--on the relationship between Wikipedia and those who created it. Instead, we may find a rationale for trusting Wikipedia in the practices of readership--the relationship between Wikipedia and those of us who use it.

Something like this would be the proposal of those philosophers who have given "reductionist" accounts of the epistemology of testimony. To oversimplify, this approach suggests that we credit testimony by induction. We are licensed to trust what a person says based on our experiences with that person. We are, in this view, followers of Hume:

> There is no species of reasoning more common, more useful, and even necessary to human life than that which is derived from the testimony of men and the reports of eyewitnesses and spectators. . . . Our assurance . . . is derived from no other principle than our observation of the veracity of human testimony and of the usual conformity of facts to the report of witnesses (Hume 1955; see also Fricker 1995).

Applied to Wikipedia, this rationale would suggest that we consult the site because we've found it useful and reliable in the past. Based on this experience, we are licensed in giving it the benefit of the doubt and in coming back to it with new questions, as long as we maintain a reasonable vigilance against being misled.

This eminently empirical account, however, does not seem to apply to the observable facts about the online encyclopedia. Again, I'll propose three reasons.

First: as with many forms of testimony, it is difficult, or at least impractical, to test Wikipedia's assertions against the facts. In general, we consult Wikipedia precisely because we do not know something--and because we want to find it out quickly. Focused

on incorporating some piece of information into our thinking, it is unlikely that we are going to take a time out and explore whether Wikipedia's details are correct. And without some such exploration, at least occasionally, our reliance on Wikipedia would not seem to be justified by experience. Instead, we ought to adopt an agnostic stance, withholding judgment until more facts come in.

But worse, it seems likely that the experience we do have of Wikipedia's accuracy is often bad--or at least disappointing. As above, I do consult Wikipedia occasionally on topics I know something about--out of curiosity, to see what it has to say on "Informal Logic" or "Argumentation Theory". In many cases I've found the article almost entirely undeveloped (it's a "stub"). Where there is some substance, the treatment of the topic is generally fragmentary and uneven, conveying an inaccurate idea of the relative importance of different topics (Duguid 2006; McHenry 2004). Parts of the article may be incomprehensible, and some things just wrong.

My disappointing experiences are confirmed by some of the empirical studies of Wikipedia's accuracy now coming out. One recent survey of articles on prescription drugs found that "Wikipedia has a more narrow scope, is less complete, and has more errors of omission" than another online database (Clauson, Polen, Boulos and Dzenowagis 2008). Another examination of history articles found an 80% accuracy rate-- significantly lower than print sources--with major flaws in two of the nine articles studied (Rector 2008). An earlier study by the journal *Nature* (2005) purported to find Wikipedia only slightly less accurate than Encyclopedia Britannica, but its methodology has been extensively criticized (Encyclopedia Britannica 2006; for more, see Wikipedia: External peer review 2009).

In confirmation of these focused studies of specific articles, all accounts of the history of Wikipedia are filled with stories of incidents in which the site has gone dramatically wrong. Infamous events include the Seigenthaler scandal, in which the biography of a well-known journalist was vandalized with allegations linking him to the Kennedy assassination, and the discovery that Congressional aides were touching up Wikipedia articles to make their employers look good (Lih 2009; for a longer list see Reliability of Wikipedia 2009).

For the unwary reader who may not have experienced Wikipedia's weaknesses or know of Wikipedia's history, Wikipedia helpfully flags problems on its own pages. Drawing from a set of standardized "templates," any editor can place a warning on an article or section. There are dozens of flags available, in a listing that bears a more than casual resemblance to the lists of fallacies standard in critical thinking textbooks. Wikipedia self-warnings include:

- This article does not cite any references or sources. Please help improve this article by adding citations to reliable sources. Unverifiable material may be challenged and removed.
- This is written like an advertisement. Please help rewrite this from a neutral point of view.
- This is written in an informal style and with a personally invested tone. It reads more like a story than an encyclopedia entry. To meet Wikipedia's quality standards and conform with our Neutral Point of View policy, this may require cleanup. The talk page may have more details. Editing help is available.

- This article requires authentication or verification by an expert. Please assist in recruiting an expert or improve this article yourself. See the talk page for details.
- This article or section appears to contradict itself. Please help fix this problem.
- Some parts of this article may be misleading. Please help clarify this article. Suggestions may be on the talk page.
- The neutrality of this article is disputed. Please see the discussion on the talk page. Please do not remove this message until the dispute is resolved.
- This article contains weasel words, vague phrasing that often accompanies biased or unverifiable information. Such statements should be clarified or removed.
- A major contributor to this article appears to have a conflict of interest with its subject. It may require cleanup to comply with Wikipedia's content policies, particularly neutral point of view. Please discuss further on the talk page. (Wikipedia: Template messages 2009).

These and similar flags provide the reader good reasons not to trust the articles they are attached to.

So personal experience, academic studies, institutional history and the site's own warnings--all point to the conclusion that Wikipedia is not, in general, reliable. Before concluding this discussion of the "reductionist" or "inductive" approach to justifying trust in Wikipedia, let me note one final consideration. Even if our experiences with Wikipedia were satisfactory, the "reductionist" approach cannot account for why it was legitimate for any of us to start consulting Wikipedia in the first place. *Encyclopedia Britannica* has been flourishing for well over two centuries. Like many others, I grew up schooled in its use, forced to gain evidence its reliability whether I wanted to or not. So when I now turn to *Britannica*, I can reasonably rely on long personal and cultural experience. Wikipedia, as the boosters and knockers insist, is entirely novel: its ambitions, its organization, its medium are all new things, only a bit more than eight years old. Even the name "encyclopedia" may be applied to it only metaphorically (Magnus 2009). What reason could I have had for turning to it for the first time? While experience now may justify continued consultation, it cannot explain why my earliest clicks were reasonable.

2.4 In this section, I have tried three ways of justifying trust in Wikipedia: by the expert knowledge of the individual editor; by the aggregated knowledge of the "swarm" of editors; and by our experiences with the connection between Wikipedia articles and the world. None of these approaches makes consulting Wikipedia reasonable. At a minimum, they encourage us to be agnostic, since the information we'd need to assure ourselves is unavailable; in the worst case, they encourage us to caution and distrust. Either trust in Wikipedia is unjustified, or it is justified on some other ground. But the premise of this paper is that we are right to consult Wikipedia. So in the next section, I attempt to open a new approach to the problem.

3. In order to locate this new approach, let me start by pointing out a feature which the three unsuccessful accounts share. All focused on what could be called epistemic factors to justify our consultation of Wikipedia. The first two were concerned with whether Wikipedia is transmitting knowledge from the heads of one or more editors safely to the head of the reader. The third was concerned with whether the reader can verify in experience Wikipedia's truthfulness. If any of these accounts worked, we would be

relying on Wikipedia because we positively assessed its epistemic qualities; we would be justified in coming to it for knowledge, because we'd be assured that knowledge was there. Since these accounts don't work, is there something else we can rely on?

In ordinary life, we do trust others--and not always, or perhaps even often, on epistemic grounds. When I deposit my paycheck in my bank, for example, I am not relying on my banker's knowledgeability to get it back to me with interest. After all, there's been plenty of evidence recently that at least some bankers are foolish. Instead, I am relying on my bank's contract with me, on the court system which allows me to enforce that contract, and on the federal guarantee which will hold me harmless if my bank collapses. Let's call this kind of reliance "pragmatic," since it involves assessments of what agents (my bank, the court system, the federal government) can be relied upon to do.

Can we justify consulting Wikipedia on pragmatic grounds? To test this idea, let us leave aside consideration of what Wikipedians *know*, and examine instead what Wikipedians *do*.

3.1 The most obvious thing that Wikipedians do is to create Wikipedia. And it is an extraordinarily impressive achievement. As of the time of this writing, the English version Wikipedia has more than 2.8 million articles. That is thought to be around 1.2 billion words, or nine hundred big volumes--in other words, thirty times the size of Encyclopedia Britannica (Wikipedia: Size in volumes 2009). As mentioned above, over 160,000 people have contributed to Wikipedia in the last month. They are creating between one and two thousand new articles each day (Wikimedia Projects Graphics Statistics 2009). They are submitting about ten thousand edits of all kinds each hour when it's around midday in North America, and four thousand or so in the middle of the night (Edit Rates of Wikipedia 2009).

Our ordinary understanding of how people act tells us that activity of this scope and intensity must be due to some compelling passion or interest. What drives all this activity? Profit motives can be ruled out. All but a handful of editors are volunteers. They are donating not only their time but their work product; Wikipedia is a "free" encyclopedia, where "free" means no charge for access, and also a license to readers to copy, modify, redistribute and even sell it for themselves. We can also rule out the desire for fame, reputation, or social position in the world at large, for the culture of anonymity/pseudonymity noted above makes these difficult to achieve. Except for a few students who have been assigned to write Wikipedia articles for credit, no one is forced to participate.

So what accounts for the ferment around Wikipedia? The answer given by Jimmy Wales, is simple: "love." In an early interview, Wales admitted.

> It isn't very popular in technical circles to say a lot of mushy stuff about love, but frankly it's a very very important part of what holds our project together. . . . I have always viewed the mission of Wikipedia to be much bigger than just creating a killer website. We're doing that of course, and having a lot of fun doing it, but a big part of what motivates us is our larger mission to affect the world in a positive way. . . . Those kinds of big picture ideals make people very passionate about what we're doing. And it makes it possible for people to set aside a lot of personal differences and

> disputes of the kind that I talked about above, and just compromise to keep getting the work done. . . . Imagine a world in which every single person on the planet is given free access to the sum of all human knowledge. That's what we're doing (Wikipedia Founder Jimmy Wales Responds 2004).

This last sentence, slightly tweaked, now serves as the vision statement for the Wikimedia Foundation: "Imagine a world in which every single human being can freely share in the sum of all knowledge. That's our commitment" (Vision 2008).

This then is basic pragmatic rationale for consulting Wikipedia. The startling size of and activity around Wikipedia demonstrates that those who are creating it are deeply committed to the project of providing me with knowledge (indeed, with the sum of *all* knowledge). Relying on their conspicuous passion, it is reasonable for me to trust the Wikipedians, and consult Wikipedia.

3.2 Our ordinary understanding of how people act, however, also tells us that passions often lead astray. I could be impressed by the Wikipedians' conspicuous dedication to their project, but still judge that the website they were constructing was not worth my time. For example, if I found out that the "knowledge" they were committed to offering was based exclusively on secret wisdom books passed down from some lost civilization, I wouldn't consider it prudent to consult the site. The Wikipedians by their activity are giving me pragmatic assurances, but there still remain many pragmatic doubts.

So when inviting me to trust them based on their apparent passion, it would be helpful if the Wikipedians went on to give me further assurances--evidence that passion's predictable distortions, errors and lapses are not in fact arising. To do this, they need to refine and strengthen the core rationale sketched above, making it apparent that they are channelling their substantial energies in directions I can respect.

In fact, Wikipedia goes very far in providing me such assurances. The encyclopedia articles are the focus of most readers' interest on the Website. But they represent only about one fifth of the total number of pages within the Wikipedia project. Much of the rest is "meta" material: policies and procedures regulating editors' behavior, fierce debates over contested points, manifestos, pleas for help, complaints--an immense body of talk about Wikipedia, which, like the articles themselves, is entirely produced and organized by the Wikipedians. Some of this material meets the pragmatic doubts that I, a potential reader of Wikipedia, bring to the site. In the following paragraphs, I take up two key doubts, and show how the Wikipedians are addressing them.

3.2.1 A first doubt is as follows: The Wikipedians are conspicuously dedicated to giving me knowledge. But was does that mean? Is the "knowledge" they are offering what I also would recognize as such? Let's call this a concern about *definition*, and see what Wikipedia does to address it.

It does not take much exploration of the site to discover that although *technologically* anyone can edit any article in any way they please, *socially* editors are expected to respect a highly elaborated although ever evolving set of global principles, content standards, advisory guidelines and informal opinions. Much of this material attempts to define what Wikipedia ought to be; for example, through what it is not:

> Wikipedia is not a paper encyclopedia

> Wikipedia is not a dictionary
> Wikipedia is not a publisher of original thought
> Wikipedia is not a soapbox...
> (Wikipedia: What Wikipedia is not 2009)

The page expressing this "global principle" has been edited by users over 5,000 times its seven year history, suggesting a high level of concern. In addition to this activity, the Talk (or "discussion") page associated with the "global principle" records questions, comments or debates on over 800 topics. For example:

> Is it fair to say that the collection of pages on the Simpsons, Star Wars, Atlas Shrugged and the like violate convention #7 (on encomia/fan pages). I appreciate that some people consider these books/shows very important, or like them very, very much, but I hardly think that an encyclopedia is the place for such pages. While I think the question of what knowledge is relevant and important enough to warrant inclusion in Wikipedia is a difficult one, I think these pages clearly don't deserve inclusion; if the authors wish to create detailed pages on the Star Wars universe, they are perfectly capable of creating such pages in hundreds of other places around the Web. Has this been discussed elsewhere? -Graft 08:21 Jul 25, 2002 (PDT) (Wikipedia talk: What Wikipedia is not/Archive 1 2007).

As is evident in this excerpt (selected more or less at random), many Wikipedians define their project as an "encyclopedia." And although they find that "the question of what knowledge is relevant and important enough to warrant inclusion in Wikipedia is a difficult one," they want to think--and talk--it through.

From such talk three core policies have emerged, setting the content standards the Wikipedia articles must meet: "Neutral point of view," "Verifiability," and "No original research." Each of these, in turn, is filled out content guidelines covering specific points. For example the "Verifiability" policy requires Wikipedians to cite "reliable sources," and what these "reliable sources" are is further defined by a guideline. Finally, there are hundreds of "essays," reflecting views that the community has not yet been fully committed itself to. And as always, each of these policies, guidelines, and essays is put forward on a page which anyone can edit, and is accompanied by a Talk page with often very extensive debates about its meaning.

How does this pile of webpages address my concern about the definition of the "knowledge" the Wikipedians are so passionate about giving me?

The definition of the project offered by these pages sounds plausible on its face; I too would like articles which are unbiased, are based on reputable sources, and so on. Do I concur with the definition in detail, however? Are the Wikipedians and I in full agreement as to what "knowledge" they should ideally be giving me? Unfortunately, I probably won't be in a position to answer these epistemically vital questions. Since I generally consult Wikipedia for information about the world, I am unlikely to "go meta" and explore the nether reaches of the policy pages. Further, I confess I haven't thought much about ideal encyclopedias, nor, given my many other commitments, am I likely to. But as before, it is not necessary for me to resolve these doubts, for Wikipedia gives me pragmatic assurances that my qualms are baseless. The massive effort that Wikipedians have conspicuously invested in policy-making gives me confidence that they share my concern for definition; it also suggests that whatever definition they have (currently)

come up with is likely to be sophisticated and well-grounded. Finally, the fact that the entire process is "transparent"--that Wikipedians offer me not only all the principles, policies and guidelines which define their activity, but also the debates which led to them--allows me to infer that there are no epistemically embarrassing principles hidden from view. In sum, even without working out my own definition of an ideal encyclopedia, conspicuous features of the Wikipedians' activities give me confidence that I can rely on theirs.

3.2.2 So perhaps I am justified in trusting that the Wikipedians are dedicated to an ideal I share. But Wikipedia is the "encyclopedia anyone can edit"; as we saw above, not even registration (much less a loyalty oath) is required. How then can I be sure that what I find when I consult Wikipedia is written by one of the dedicated folk? In particular, there seems to be nothing to prevent someone editing an article out of self-interest (e.g., to promote their products), or out of malice ("vandalism"). Let's call this a concern about *outsiders*, and see what the Wikipedians do to address it.

Again, it does not take much exploration of the site to discover that Wikipedians have developed elaborate methods for policing contributions to the site from those who don't share their commitment to provide knowledge to the world.

One line of defense is an additional set of policies, guidelines and opinions which serve to define for the community the appropriate content in articles likely to attract vandalism (e.g., biographies), as well as the line between self-serving spam and legitimate information. To further specify how these standards apply to particular articles about living persons, Wikipedians have established a Noticeboard where they can discuss any issues that arise, and a separate forum where they can seek the advice of the whole community by posting a "request for comment" on particularly vexed matters.

Obviously, however, outsiders are unlikely to know of or heed such policies, or follow such practices. So a second set of policies and practices has been fostered, which ask Wikipedians to assume that outsiders have come to Wikipedia "in good faith," to give them a big hug, and to attempt to convert them to insiders. This attitude towards outsiders is fostered by some of the longest-standing policies within the Wikipedia community. Jimmy Wales' "Statement of Principles" (2009)--one early declaration of community sentiments--includes a commitment that "newcomers are always to be welcomed." This value is still enshrined in a current guideline asking Wikipedians, "please do not bite the newcomers" (2009). A self-organized group Wikipedians has undertaken responsibility to act as a "Welcoming Committee" (Wikipedia: Welcoming committee 2009) with the goal of making these ideals real. When outsiders to Wikipedia begin to make their first edits to the site, they are likely to find that one of the 500 members of the Committee has left a large electronic greeting card on their User Talk page. Standard versions of this missive not only invite the outsider into the community, they also contain detailed advice about some of Wikipedia's basic standards for content and behavior.

Again, however, it seems unreasonable to expect that this "WikiLove" approach will be effective in combating outsiders truly motivated by malice or self-interest. So Wikipedians have developed yet another line of defense: self-organized groups who take responsibility for tracking down and correcting outsiders' interventions on the site. The roughly 3000 Wikipedians who have joined the Recent Changes Patrol often announce themselves with flags on their User pages; they undertake to monitor the list of edits to

Wikipedia, looking for likely vandalism and correcting it. This "patrolling" was originally done by hand, but the growth of Wikipedia has encouraged Wikipedians to develop an array of software tools to automate aspects of the process (Wikipedia: Recent changes patrol 2009), and which allow the vast majority of malicious edits to be reverted quickly (Priedhorsky 2007). Currently under development is an even more sophisticated tool, one which would not only identify but also correct the most conspicuous kinds of vandalism (e.g., "X is a homosexual"), without human intervention. (Abuse Filter is enabled 2009). Another software tool has been used to detect more subtle abuse. Wikiscanner takes public data about the IP addresses of those making anonymous edits, and associates the edits with the organizations that made them. The resulting list reveals instances of self-promotion by corporations, lobby groups, activists and even governments, all of which Wikipedians can examine for bias, and correct.

As a potential reader of Wikipedia, I appreciate these policies, practices, institutions and software tools in part because they make the site better, eliminating some of the distortions injected by malice and self-interest. Wikipedia is very, very large, however, and I cannot be sure that the particular article I want to check is free of outsiders intervention. So just as important as their actual effectiveness is what the conspicuous existence of these policies, practices, institutions and software tools communicates to me. The massive and apparent efforts that Wikipedians devote to policing the site give me confidence that they are deeply pained when outsiders damage it, and will do everything they can to ensure that what I encounter when I consult Wikipedia is the product of their devotion.

3.3 Why then is it reasonable for me to consult Wikipedia? As one essay puts it, because Wikipedians "care deeply about the quality of our work":

> Wikipedia has a complex set of policies and quality control processes. Editors can patrol changes as they happen, monitor specific topics of interest, follow a user's track of contributions, tag problematic articles for further review, report vandals, discuss the merits of each article with other users, and much more. Our best articles are awarded "featured article" status, and problem pages are nominated for deletion. "WikiProjects" focus on improvements to particular topic areas. Really good articles may go into other media and be distributed to schools through Wikipedia 1.0. We care about getting things right, and we never stop thinking about new ways to do so (Wikipedia: Ten things you may not know about Wikipedia 2009).

Of course, we can have further pragmatic doubts about whether the Wikipedians' efforts to provide me with the sum of all knowledge are really effective. Without going into further detail, let me suggest that the Wikipedians are working to overcome these as well. For example:

The Wikipedians' ideals are noble. But do they live up to them? Well, they have developed a variety of inspection systems, in which self-appointed janitors scan pages and offer positive reinforcements in the forms of awards ("Barnstars") or nominations for "featured article" status, or penalties in the forms of personal messages on an editor's User page, or the posting of one cautionary templates I listed above on the article itself.

Again, the Wikipedians ideals are noble. But how do they handle the vexed problems of making those ideals real in the messiness of particular cases? (What is a "neutral point of view" about George Bush?) Well, attached to each article page is a discussion page where editors are invited to thrash out the issues with each other, their interactions governed by rules of conduct elaborated themselves through extensive discussions, and enforceable in extreme cases by a judicial process that can suspend or even ban members.

When confronting these or other doubts, Wikipedians proceed by developing policies, practices, institutions, and technologies which function conspicuously to assure me that what I will encounter in a Wikipedia article is the work of people passionate about giving me free access to the sum of all knowledge. The design of Wikipedia is not an epistemic design; as Jimmy Wales has put it, "the design of Wikipedia is the design of community" (Wales 2006).

My ultimate goal in consulting Wikipedia is to learn something. In that sense, both epistemic and pragmatic accounts of why my consultation is reasonable must explain how an epistemic good comes about. What I have called an epistemic account says that I proceed directly to knowledge, assessing the expertise of the author(s) or the reliability of the site. By contrast, the pragmatic account claims that I proceed indirectly. I assess the not the expertise but the trustworthiness of the authors. Perhaps they already have the knowledge I'm looking for, perhaps they will have to find it out; I don't need to be concerned about such details, as long as I am licensed to rely on them to take care in giving it to me.

How much difference is there between these two accounts? As I tried to show in section 2, there are many aspects of Wikipedia regarding which the more I find out about them, the less I trust. In many cases, however, these same features work pragmatically to encourage trust--and indeed, the more I find out about them, the more I trust. Take as an example the warning templates. Epistemically, every time I see a flag that the article I'm looking at is disputed, or that it lacks sources, or that it may be an advertisement--every time I see such a flag, my trust in the page, and in Wikipedia as a whole, should go down. By contrast, pragmatically speaking these warnings reconfirm that there is a community out there of people who care about quality. And the more prevalent the warnings are, the more I'm assured that the community is large, well-organized and working hard.

I do not have much idea of whether any particular Wikipedian knows anything. Nor do I generally bother to check how accurate the information in an article is. However I do know--because they insistently communicate it to me--what Wikipedians are trying to do. They tell me that "we love accumulating, ordering, structuring, and making freely available what knowledge we have in the form of an encyclopedia of unprecedented size" (Wikipedia: WikiLove 2009). I can learn about the policies, practices, institutions and technologies Wikipedians have invented to insure that they achieve their goal, because they are not only transparent but conspicuously signalled to anyone visiting the site. Confident that the Wikipedians are committed to providing me with the sum of all knowledge, I have good reasons to consult the site. I trust Wikipedia on pragmatic, not on epistemic, grounds.

4. Wikipedia is of course an extreme case. In less extreme cases, we often have good epistemic as well as pragmatic reasons for relying on what others tell us. However,

attention to pragmatic justifications will, I believe, help us deepen our understanding of our ordinary practices of trust. Let me close this paper by briefly noting the consequences of my analysis for the philosophy of testimony and for argumentation theory.

As Richard Moran has argued in an important essay (2006), both reductionist and anti-reductionist accounts tend to ignore the act of testimony itself, treating it as merely a convenient instrument for detecting knowledge in other people's heads. If we had another method for finding out what others believe--e.g., an epistemometer--we might be able to dispose of testimony entirely. But that seems odd. Moran proposes instead that we must attend to what speakers are doing when they testify: namely, taking responsibility for the truth of what they are saying. He is urging, in other words, what I have here called a pragmatic rationale for trust. As I have argued, a pragmatic approach works much better than an epistemic approach in accounting for our ordinary practice of consulting Wikipedia. In Fred Kauffeld's terms (2003), the entire "speech act" that is Wikipedia--not just the page of an article, but the conspicuous evidence the site provides of all of the Wikipedians' efforts--licenses a presumption that what I find there is worth consulting. This suggests that those pursuing projects in the philosophy of testimony should be paying more attention to the diverse and complex ways speakers can design their talk to provide auditors with reasons to trust. More work is needed that proceeds under the slogan "pragmatic, not epistemic!"

"Pragmatic, not epistemic" is a slogan important for argumentation theorists as well. As I noted above, contemporary treatments of the appeal to expert authority tend to focus on expertness. This focus casts many internet resources under suspicion, since it is often difficult or impossible to verify a website author's expertise. But similar problems arise even in more traditional communication media. As Walton (1997) has pointed out, there is a paradox involved in any attempt to evaluate expert authority on epistemic grounds--a paradox already recognized in antiquity. We consult an expert because we don't know about a subject. But in order to assess whether she is an expert, we need to assess her knowledge--and that requires us to know about the subject. What if instead we were to shift scholarly attention from epistemic assessments of expertise to pragmatic assessments of the expert's activities? We might then approach the problem of judging experts with the same mindset that we approach judging plumbers. In that situation, we ask whether the craftsman has a good name in the community that he would want to protect, or whether he's offering a guarantee. We trust him (when we trust him) on pragmatic grounds, to have the skills he promises to use on our behalf.

The pragmatic approach would make a difference in the pointers we offer students in our informal logic, critical thinking, argumentation or debate courses. From the pragmatic perspective, we should encourage students to be less concerned about figuring out who the "real" expert is, for example on climate change, and to pay more attention to the assurances that the competing experts are offering us. Critical questions for testing an appeal to expert authority might include:

Why is this person offering you their view?

Can you verify her intentions?

What does she have to lose if it she turns out to be wrong?

Are there reliable enforcement mechanisms to ensure she will endure these penalties?

I consult Wikipedia, and I'm a reasonable person. In particular, the account I have defended in this paper suggests that I may be a person of "practical wisdom" or prudence. This is nothing special: as far as I can tell, prudence is widely distributed, or at least, it's not the province of any particular social class or group. So though we may lack expertise ourselves, still many of us are equipped to figure out when to trust what ordinary folk, experts, and Wikipedia tell us.

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Appendix: Wikipedia Consultation
20 August-24 November, 2008

%C3%96%C3%A7po%C3%A7maq
1997_Cleveland_Indians_season
1998_Cleveland_Indians_season
1999_Cleveland_Indians_season
2000_Chicago_White_Sox_season
Afghan_cuisine
Ajvar
Albert_Speer
Ames_High_School
Aphthonius
Aphthonius_of_Antioch
Armenian_cuisine
Assassination_of_Julius_Caesar
Baba_ghanoush
Banausos
Banitsa_(pastry)
Battlestar_Galactica
Battlestar_Galactica_(reimagining)
Besbarmak
Bethel,_Alaska
Bierock
Bougatsa
Bovine_spongiform_encephalopathy
Burek
Caponata
Carlo_Petrini
Cassius
Central_Asian_cuisine
Cherokee_County,_Iowa
Ciar%C3%A1n_Hinds
Cleopatra_VII
Cluster_criticism
Cold_Lazarus
College_of_Charleston
Commonplace
Communicative_rationality
Copia:_Foundations_of_the_Abundant_
Style
Cuisine_of_Kashmir
Cuisine_of_Turkey
Cuisine_of_the_Republic_of_Macedonia
Cyanide
Cyanide_poisoning

Debate
Dennis_Potter
Dirty_tricks
Dramatistic_Pentad
Edupunk
Enthymeme
Erich_Gruen
Ethanol_fuel
Ethanol_fuel_energy_balance
Ethanol_fuel_in_the_United_States
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