On Wikipedia — The Technology, The People, The Unfinished Work

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ABSTRACT
Wikipedia is ubiquitous in the current age of the Internet. Every search conducted in Google is more than likely to turn up quite a few links to relevant articles in Wikipedia. However, Wikipedia also suffers major problems in numerous areas and its impact on society at large goes way beyond an extra Google search result. In this paper we will first examine the history and origin of Wikipedia. Secondly, a brief discussion of the underlying technologies and features of Wikipedia will be discussed. Thirdly, the results of the "Micro Wikipedia Survey" will be summarized and relevant commentaries given. Fourthly, the two major issues of Wikipedia and their impacts on society at large will be exposed and discussed in detail. Fifthly, positive and negative consequences Wikipedia have on different segments of society will be identified and discussed. Lastly, some concluding remarks and recommendations will be given that adequately summarizes the author's stance on the past, present and future of Wikipedia.

Categories and Subject Descriptors
Computer technology, Wiki technology, Web 2.0, Impact and ethics of new computerized technology

Keywords
Wikipedia, Wikipedian, Wiki, credibility, NPOV, CS, 492, impact, computerized technology, ethics, McHenry

INTRODUCTION
Computer information communication has undergone several stages of evolution. In the pre-Internet days, people used modems and regular telephone lines to dial into "bulletin board systems" (BBS). With the advent of the World Wide Web (WWW, or Web 1.0), people absorbed information through static websites and shared ideas on forums and message boards. Recently, a slew of new technologies comprising the so-called "Web 2.0" infrastructure arrived on the Internet. These technologies allow information and ideas to be shared in ways not possible with old Web 1.0 technologies such as forums and message boards. One of the most notable Web 2.0 technologies is the wiki[1].

According to (Viégas, et al., 2004), the wiki technology was first created by Ward Cunningham in 1995. Essentially, wikis are web pages whose *source code* could be edited by web browsers and saved back to the server. The modified wiki web page would then be served to all subsequent viewers of that page until the next modification to that page comes along.

Since their conception, Wiki web pages have transformed the landscape of the World Wide Web. They are often employed in technical collaboration web sites where information regarding symptoms and diagnoses of technical problems are continually posted by rewriting the respective wiki web pages. A more interesting application of wiki web pages could be found in http://www.se2006.xwiki.com/. In this case, the wiki technology is used to create the yearbook for University of Waterloo's Software Engineering Class of 2006. This paper, however, looks at one of the largest collection of wiki web pages in existence on the Internet — Wikipedia.

TECHNOLOGY
According to (Viégas, et al., 2004), the Wikipedia project started on January 15, 2001. The mission of the Wikipedia project is to create a multilingual encyclopedia free for use by people all over the world. However, unlike traditional encyclopedia, Wikipedia's entries are not written by experts. Anyone with an Internet connection could instantly add or remove contents from any article[2] on Wikipedia. Many people think that this *ad hoc* approach would

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[1] Two other notable Web 2.0 technologies are BitTorrent, RSS and blogs.

[2] Except "protected" entries.

eventually cause Wikipedia to fall apart, yet Wikipedia has become hugely successful. According to ("Wikipedia", 2006), to date, "Wikipedia has more than 3,700,000 articles, including more than 1,000,000 in the English-language version, and as of January 2006 it has more than 1,000,000 registered users." Furthermore, Wikipedia is ranked the 18th most trafficked web site by Alexa, as per figure 0.

As with all wikis, Wikipedia presents its users with an interface that allow them to make changes to Wikipedia's entries from directly within the web browser. As shown in Figure 1, every Wikipedia article has an "edit this page" tab at the top of the right side content area. Clicking on this tab opens the source code for the Wikipedia article in an editable text field, as shown in Figure 2. Wikipedia employs a slightly altered form of HTML, called "wiki markup", for formatting its articles. Editing Wikipedia articles using the "wiki markup" language is very simple. When people are finished editing a Wikipedia article, they could save it back to Wikipedia by clicking on the "Save page" button below the source code text field in Figure 2. The edited version would then become immediately viewable to people all over the world until further changes occur.

In addition to the main articles and the editing mechanisms, Wikipedia offers several features that are invaluable in the maintenance of articles and the building of a vibrant Wikipedia community. "Talk" pages, shown in figure 7, allow a Wikipedia article's readers and writers to communicate with each other. A "Talk" page facilitates the maintenance and continual improvement of the main Wikipedia article to which it is associated. "History" pages, shown in figure 5, provide a complete archive of all versions of a Wikipedia article since its inception. The "history" tool is particularly useful in restoring Wikipedia articles that have been vandalized. "User pages", shown in figure 4, are home pages of Wikipedia volunteers. "User Talk pages", shown in figure 8, are communication venues between volunteers and the rest of the Wikipedia community. "Recent changes" and "Watch lists", shown in figure 6, allow Wikipedia volunteers to closely monitor changes made to all Wikipedia articles so that signs of vandalism may be detected and dealt with. Finally, "lock down" templates shown in figure 9 indicate that a particular Wikipedia article could
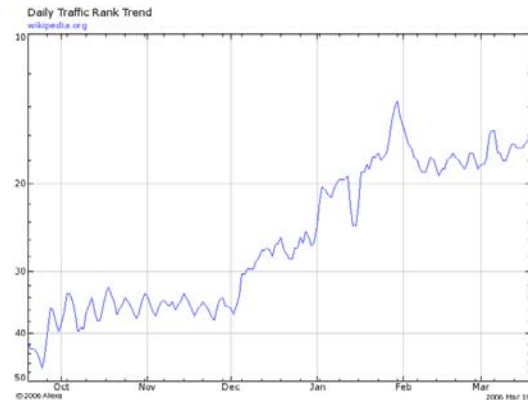

Fig 0: Alexa traffic graph of Wikipedia

no longer be modified. This template is used to protect Wikipedia entries suffering from heavy vandalism. In most cases, the lock will be lifted after a set period of time so the Wikipedia article becomes editable again. However, the home page of Wikipedia, shown in figure 10, is permanently locked down due to its importance within the Wikipedia infrastructure.

The Micro Wikipedia Survey

Originally the author has intended the survey to be in the format of a simple HyperText Markup Language (HTML) page with questions at the top and a drop-box in the form of a text-field at the bottom. On second thoughts, since this is a survey about "Wikipedia", it would be better if the survey is to be conducted in the "Wiki" style. Hence, the author signed up for an account on Wikipedia (his first one on the English Wikipedia for that matter) and wrote up the Micro Wikipedia Survey on the homepage as shown in the Appendix. Wikipedians had three ways to respond to the survey. The first is the "Wiki-way" — namely the user goes to the companion "talk-page" and adds a section containing her response and thoughts to the micro Wikipedia survey. The second way is via the "drop-box" available in the author's homepage on University of Waterloo's Computer Science servers. The third way is via email. The latter two methods of responding to the survey are designed to guarantee the anonymity of the responder. For more information regarding the mechanisms of all three forms of response please refer to the Appendix

To date (March 20, 2006), a total of *27* responses have been received through the "Talk page" venue, a total of *7* responses are found in the drop-box, and a total of *2* responses came via

email. The responses are well-crafted, detailed and showed much enthusiasm and jolly spirits on the part of the responding Wikipedians. For original texts of the responses please refer to the attached Appendix. In this section the results will be statistically tallied into three tables, to be followed by some general commentaries on certain trends and themes observed in Wikipedians' responses to the survey.

The first question is concerned with Wikipedia's past. Table 1 provides a list of top reasons Wikipedians attributed to Wikipedia's success.[3]

Reason	# of Wiki-pedians citing said reason
Wikipedia has excellent breadth and depth of coverage, and it is up-to-date	36
Wikipedia is free	34
Wikipedia is easily accessible	24
Wikipedia fosters good community atmosphere/spirit	22
Wikipedia is open, anyone could edit it	15
Wikipedia is "democratic"	6
Wikipedia rewards its editors with "the good feeling of doing good work"	3

Table 1: *Results of responses to question 1 of survey.*

As could be seen from the table 1, Wikipedia's broad coverage of subjects and its uniquely up-to-date entries are universally lauded as the most distinguishing characteristic of Wikipedia. The community spirit and the free cost of using Wikipedia have also been cited as major factors contributing to the project's success.

The second question is concerned with Wikipedia's present. Table 2 summarizes Wikipedians' opinions of the most effective "silver-bullets" used to cure Wikipedia's credibility problems. This information will be used again in the next section.

Silver-bullet	Effectiveness[4]

Recruit more experts and experienced editors to participate in the Wikipedia project	33
Limiting Wikipedians' ability to add, remove and alter Wikipedia entries	30
Completion of the "Wikipedia 1.0" stable articles project	28
Wikipedia will naturally gain credibility with the passage of time (the do-nothing approach)	22
Credibility problem present in all encyclopedias, not just Wikipedia[5]	18
Irresolvable, incorrigible	16

Table 2: *Results of responses to question 2 of survey.*

As could be seen from table 2, a great majority of Wikipedians believe that the participation of experts and the curtailing of Wikipedians' powers would constitute the "magic solutions" needed to address Wikipedia's credibility problem once and for all. However, participation of experts runs counter to Wikipedia's decidedly "anti-elitist" atmosphere and the curtailing of Wikipedian power directly violates the fundamental "open participation" principle of Wikipedia. Hence two dilemmas are present in the responses to this question, they are further addressed in the next section.

The third question is concerned with Wikipedia's future. Table 3 summarizes Wikipedians' stances on whether Wikipedia would eventually overpower and overcome Encyclopedia Britannica in the future.

Wikipedia beats Britannica	# of Wiki-pedians holding this opinion
YES	16
NO	10
YES/NO	9
Not answered	1

Table 3: *Results of responses to question 3 of survey.*

As predicted, the largest number of Wikipedians responded "yes" to this question, demonstrating their loyalty to the project and their good wishes

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Fig 1: *The "Dog" article, showing "edit this page" tab*

Fig 2: *Editing the "Dog" article.*

for it in the future. It is also interesting to note that a statistically significant portion of Wikipedians are of the belief that this question is largely irrelevant to the future of both encyclopedias. They believe that neither Wikipedia nor Britannica will be vanquished in the future, but rather the two encyclopedias would complement each other to give readers access to the best information under any given circumstance.

Specific case study of major issue 1 — Wikipedia's lack of credibility

The most striking characteristic that serves to distinguish Wikipedia from all other encyclopedic works is its open participatory nature. With traditional encyclopedia such as the encyclopedia Britannica, a small group of elite editors and writers typically have total control of what appear or do not appear in the final version of each edition of the encyclopedia. With Wikipedia, any person anywhere in the world may add, remove and change contents found in the various Wikipedia entries at any time. The closed-circuit nature of Britannica means that its articles, while of an exceedingly academic and epistemological quality, nevertheless suffer from obsolescence and are severely limited in the scope and breadth of their coverage of the sum of all human knowledge. On the other hand, the open participatory nature of Wikipedia articles begs for vandalism and the inclusion of false and libelous information, as the recent Seigenthaler incident (Seigenthaler, 2005) (Orlowski, 2005) has demonstrated. According to ("Jimmy Wales", 2006), the founder of Wikipedia, Jimmy Wales, once had doubts about whether applying the wiki model to an online encyclopedia would ever work out in practice. Robert McHenry, the former editor-in-chief of Britannica, was even more adamant and unforgiving in his criticism of Wikipedia, saying that "the user who visits
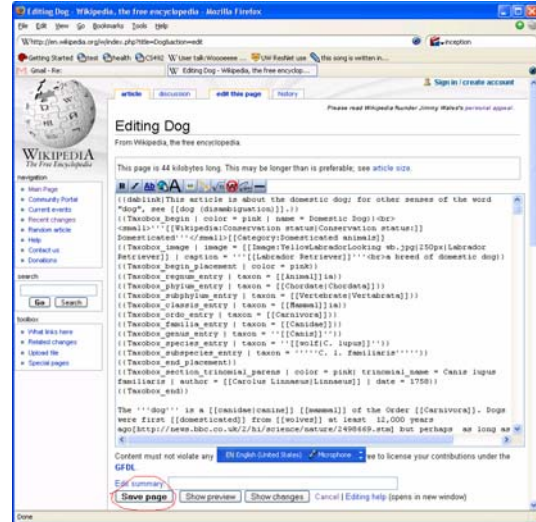
Wikipedia to learn about some subject, to confirm some matter of fact, is rather in the position of a visitor to a public restroom. It may be obviously dirty, so that he knows to exercise great care, or it may seem fairly clean, so that he may be lulled into a false sense of security. What he certainly does not know is who has used the facilities before him." (McHenry, 2004) Therefore, given the open participatory nature of Wikipedia, it would be natural for people to doubt whether any given piece of information coming out of any Wikipedia articles is indeed factually correct from one moment to the next.

In order to resolve the thorny credibility issue, which at first glance seem to be an inherent problem to the open nature of Wikipedia and would forever remain incorrigible, many mechanisms have already been put into practice on Wikipedia itself. The global "watch-board" feature allows groups of dedicated Wikipedians to quickly spot and fix acts of explicit vandalism such as the addition of coarse language and removal of entire Wikipedia articles. The page lock-down feature allows certain controversial Wikipedia articles that are undergoing frequent and repeated alternations between competing versions (the so-called "edit wars") to be frozen in a "last-known good version" until all disputes have been resolved. Wikipedia even has its own anti-vandalism taskforce known as the "Counter Vandalism Unit" which consists of close to 800 Wikipedians. Finally, the "Wikipedia 1.0" initiative has also been launched whose goal is to compile the first "stable" version of Wikipedia consisting of high quality articles that are

Fig 4: *A typical Wikipedia User Page*

Fig 5: *The "Dog" article's "History" page.*

suitable for publication in the print, CD or DVD format. Furthermore, each "Wikipedia 1.0" article would form the new foundation upon which subsequent work on the entry shall build.

The Micro Wikipedia Survey that forms an integral part of this essay has a question that specifically asks for Wikipedia users' ideas of what constitute the "silver bullet" curing Wikipedia's credibility problems. There were several discernible themes to Wikipedians' response to this question. The most frequently proposed solutions include the need for more experts to participate in the Wikipedia process; the need for a stable version of each Wikipedia article to be erected (reminiscent of the "Wikipedia 1.0" idea); and the curtailing of the amount of freedom Wikipedians have in working with Wikipedia entries. A majority of Wikipedians responding to the survey believed that the credibility problem would naturally go away by itself as Wikipedia matures with time. Many Wikipedians also believe that the credibility problem is inherent in any encyclopedic work and people should use encyclopedias as secondary information sources that are to be supplemented with fact-checking and corroboration before any information could be used. A final prevalent opinion is that there are no silver bullets to address Wikipedia's credibility issues ("Essentially+unresolvable." as one anonymous replier using the drop-box has said) and that credibility would both be Wikipedia's source of greatest strength (because it is borne out of the very spirit of open participation) and its greatest weakness. This opinion is in line with the initial view advanced
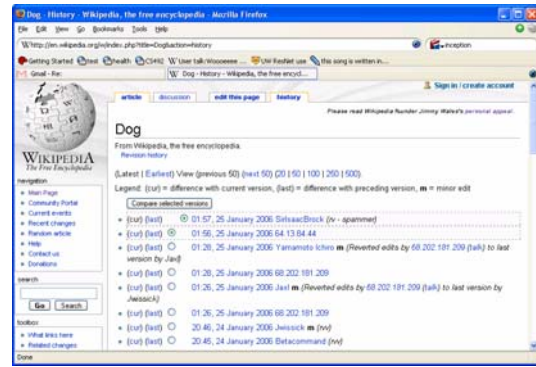
by the author in the second part of the question, where it says, "…or is it the case that a lack of credibility is a fundamental property of Wikipedia?"

In the author's opinion, the credibility issue of Wikipedia will remain thorny at best. It seems that any "silver bullets" proposed to address Wikipedia's lack of credibility once and for all are all in direct confrontation with one of the fundamental principles of Wikipedia — open participation. It is perhaps for this reason that we rarely encounter a permanent IP address ban or article lock-down on Wikipedia. Instead of mulling over the prospect of "magic fixes", the author prefers to look at Wikipedia's credibility issue this way: that credibility, much like Wikipedia itself, would forever remain an open question, an unfinished work, and a never-ending struggle. Battles between the Counter Vandalism Unit and Wikipedia vandals would be ongoing on a perpetual basis, much like the eternal epic struggles of the human residents of Zion against the machines of 01. At the end of this section, the author would like to dedicate this passage, describing the People's Liberation Army stationed on the Hainan Island in South China Sea, to all Wikipedians and the CVU constantly *en-garde* and ever vigilant of the vandals that dare transgress Wikipedia:

> Intently and resolutely they stared off into the vast blue sea, their gaze ready to penetrate 8 meters of armored steel, their eyes sharp as falcons. With their AK-47s in hand, and the Howitzers by their side, they are ready to give fatal blows to the heads, the heads of all foreign transgressors far and wide.

Specific case study of major issue 2 — Wikipedia's NPOV policy and its impact on the Chinese government

If *open participation* could be said to be

Fig 6: "Recent changes" and "Watch lists"

Fig 7: The "Dog" article's "Talk" page.

Wikipedia's body, then *neutral point of view* (NPOV) would certainly be Wikipedia's soul. According to ("Wikipedia:Neutral point of view", 2006), "the neutral point of view is a means of dealing with conflicting views. The policy requires that, where there are or have been conflicting views, these are fairly presented, but not asserted. All significant points of view are presented, not just the most popular one. It is not asserted that the most popular view or some sort of intermediate view among the different views is the correct one. Readers are left to form their own opinions." This policy is one of the oldest, and arguably one of the most important, policies of Wikipedia. Adherence to this policy is mandatory and non-negotiable. This policy is sensible because people working on Wikipedia come from all parts of the globe. These people bring to the various Wikipedia entries their own perspectives, biases and views. "Each view represents a different idea of what the truth is, and insofar as that view contradicts other views, its adherents believe that the other views are *false* and therefore not *knowledge*." ("Wikipedia:Neutral point of view", 2006) Since Wikipedia "cannot expect collaborators to agree in all cases, or even in many cases, on what constitutes knowledge in a strict sense" ("Wikipedia:Neutral point of view", 2006), the NPOV policy is adopted so that each view could be adequately represented in a Wikipedia entry, no matter how unpopular or minor that view maybe. However, NPOV serves to significantly impede Wikipedia in certain cases. The censorship of Wikipedia in China is a famous example to bear to mind the potential
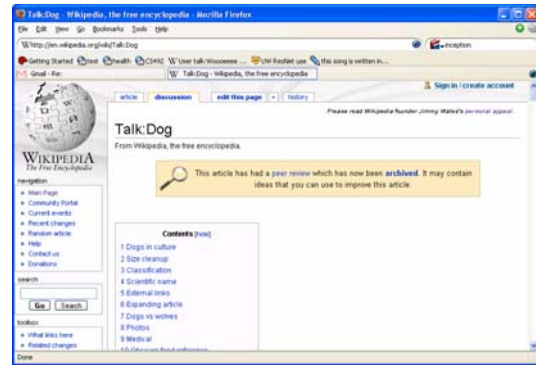
ramifications NPOV may have on Wikipedia's development in regions where the *governmental* point of view (GPOV) is seen as the norm. The Chinese Wikipedia entry on Tiananmen Square Event is an example that readily comes to author's mind. In accordance with NPOV, the writers of the Tiananmen Square Event presented polarizing views on its cause, progression and aftermath. The following point of view, appearing in a bordered box in the section "impacts and commentaries" of ("六四事件", 2006), reflects the state-sanctioned view of how the Tiananmen unrest has transpired:

> There are many causes leading up to this [Tiananmen Square] political incident. As Deng, Xiaoping (Chairman of the People's Liberation Army and the *de facto* ruler of China from 1978 to 1997) has pointed out in its [Tiananmen Square's] aftermath, "the arrival of this [Tiananmen Square] incident is inevitable. This incident is determined by macroscopic world trends and microscopic trends in the Chinese socioeconomic infrastructure and is not subject to human will." The "macroscopic world trends" denote the imperialist West's evil conspiracy of forcing socialist-nations world wide to abandon socialism and adopt capitalism. They have hastened their pace of inciting "color revolutions" in every socialist state including China, the Soviet Union and certain countries in Eastern Europe where the ideas of "democratic socialism" has run amuck… These various factors, both domestic and abroad, has caused great rejoice among Chinese citizens who have become fanatical adherents of the principles of "Bourgeois liberalization". They have become ardent advocators of freedom of speech, total political Westernization, and private ownership of properties. Their actions have aggravated the state of political and ideological confusion and turmoil in China. The severity and scale of this political incident [Tiananmen Square] has never been met since the establishment of the People's Republic of China in 1949, it has presented the Party [Communist Party of China] and the State with a most grim trial, it has also thrown the policies and future development plans enacted by the Third Plenary Session of the 11th Communist Party of China's Central Politburo Conference into great jeopardy. ("六四事件", 2006)

Fig 8: *A typical Wikipedia User Talk Page*

In the same entry, the views of the eyewitnesses living in Beijing during the time of the Tiananmen Square Event are also covered as follows:

> This incident [Tiananmen Square Event] is originally a student movement. After the fasting of the students and the enactment of martial law it quickly developed into a nation-wide patriotic democratic movement (popularly called the '89 democratic movement by Chinese living abroad). They [the witnesses] believe that the Tiananmen patriotic democratic movement represented the struggle of the Chinese people against the tyranny of an autocracy. They further believe that although this movement has failed in mainland China, it has nevertheless initiated the quest for democracy and constitution by the Chinese people. ("六四事件", 2006)

Clearly, for any ordinary Chinese citizen educated in mainland China, the second viewpoint will be deemed "factually incorrect" (or "highly morally offensive" at best). If that Chinese citizen happens to be working with the Tiananmen Square entry, she would delete this viewpoint without a second thought if NPOV is not in place. Likewise, any Chinese living in Hong Kong, Taiwan or abroad would deem the first viewpoint politically incorrect and an evil attempt at brain-washing Chinese citizens. Without NPOV they, too, would delete the boxed material in the first inset without a second thought. Since each view is supported by a significant portion of the Chinese population[6],

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[6] And to a certain extent the world population — Singapore has officially stated its support for the communist government's approach to dealing with the students at

Fig 9: *A Wikipedia article that has been locked down*

NPOV warrants the inclusion of both views into the Wikipedia article on "Tiananmen Square". Any attempt to delete either viewpoint will result in a speedy reversion to the version containing both viewpoints by other Wikipedia users or Wikipedia administrators.

However, the presence of the second viewpoint in the article will not sit well with the communist government of China. The communist party believes the first viewpoint to be the only correct version of the history concerning the rise and fall of the Tiananmen Square student movement. It is worried about the second viewpoint serving as a socially destabilizing factor threatening the legitimacy of its sovereignty over China. Yet the Chinese communist government is powerless to change the Wikipedia entry to say otherwise. Any attempt to do so will be seen as vandalism and result in speedy reversions to the original version. Thus, the only sensible course of action for the Chinese communist government to undertake is to block Wikipedia altogether. (York, 2006) (Slinger, 2006)

This scenario demonstrates the fallibility of NPOV and the subtle problems of Occidental cultural and political centrism. To many Wikipedia contributors and critical-thinkers in liberalized societies, NPOV seems to be something that is taken for granted and is seen as a fundamental premise without which the Wikipedia could not be built. Yet the concept of NPOV may itself be foreign or even hostile to certain people and nations. What may be *neutral* to Wikipedia could be false, malicious, libelous, reactionary, politically incorrect, seditious, poisoning, corrupting, blasphemous, anti-Semitic, promiscuous and Chauvinist to other people in the world. There are even some people in this world who argue that NPOV is a logical fallacy and has never really existed. Perhaps some people feel that NPOV would only affect those

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Tiananmen, and condemnatory attitudes were held nearly universally by all other nations of the world

living under authoritarian regimes like China or Korea, yet one has to merely substitute "abortion" or "holocaust denial" for "Tiananmen Square" when searching for entries in the Wikipedia to appreciate the extent of the impact NPOV has even on people living in the Western world. However, despite this apparent cacophony surrounding the acceptance of Wikipedia's NPOV policy by the nations of the world, the author of this essay would still like to believe that one day the world will eventually understand the true value behind the NPOV policy. Indeed, the value of NPOV to Wikipedia is comparable to that of the Constitution to the United States of America.

Wikipedia's impact on segments of society — the news media

One unexpected segment of society that has been impacted by the arrival of Wikipedia is the traditional news media industry. People tend to believe that an encyclopedia would be entirely unrelated to the reporting of current events. Yet the bifurcation of news and encyclopedia is necessary only for traditional print encyclopedias such as Britannica. Wikipedia is on-line and is constantly being updated. Late-breaking news is instantly added as new entries to Wikipedia. Detailed background information is added to give news its depth. Since traditional news media lack the depth of Wikipedia in reporting late-breaking events, increasing number of people are turning away from traditional news media to Wikipedia in order to gain better understanding of what is happening in the world. According to (Clarke, 2005), "Wikipedia attracted 22.3 percent of users searching for information about the Gaza Strip[7] as Israeli troops closed down settlements and withdrew from the region. Wikipedia's market share numbers meant it drew five times more traffic than Google News, Yahoo News or the BBC and tied with CIA World Factbook for information on the strip."

There are both positive consequences and negative consequences to Wikipedia acting as a news source. The positive consequence is that current events get covered in greater detail with multiple alternative viewpoints so that there is less chance of the audience being misled. The negative consequence is that the open participatory nature of Wikipedia means that it will be hard to prevent fallacious and inaccurate

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[7] http://en.wikipedia.org/wiki/Gaza_strip

Fig 10: *The Wikipedia home page (old version)*

information from finding their way to Wikipedia's news articles.

Wikipedia's impact on segments of society — traditional encyclopedia makers

Traditional encyclopaedia makers also feel threatened by Wikipedia. Robert Henry, former editor-in-chief of the Encyclopaedia Britannica, went so far as to say, "The user who visits Wikipedia to learn about some subject, to confirm some matter of fact, is rather in the position of a visitor to a public restroom. 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." (McHenry, 2004) Traditional print encyclopaedias could be cost-prohibitive to use and could not hope to provide coverage anywhere near as broad or as deep as Wikipedia (Micro Wikipedia Survey, 2006). Therefore, print encyclopaedias deeply worry about the possibility of losing the competition to Wikipedia. On the one hand this carries a positive consequence for print encyclopaedia readers because it forces print encyclopaedias to listen more attentively to their users' needs in order to compete with Wikipedia. On the other hand this carries a negative consequence as the potential shutdown of a traditional print encyclopaedia company in the future would create unemployment for societies at large.

Wikipedia's impact on segments of society — the academia

The academic segment of society is the one most impacted by the arrival of Wikipedia. Wikipedia's main purpose is to provide all people with a free and handy reference tool. As the founder of Wikipedia, Jimmy Wales, once said himself, "I would treat it as an excellent starting point to get some basic background

information before doing further research." (Paula, 2006) So far Wikipedia seems to have benefited the student population enormously. One student puts it this way: "so instead of going to the library, you open up your browser and input the keyword for the search. You then get a hit that contains a title suspiciously similar to what you are researching. Curious, you click on the link, only to find a well-written article summarizing everything you need to know about the subject of your research in neat, little sections, complete with a reference list awash with the most pertinent references for further reading. Ahhhh, the wonders of the Internet age." (Aviv, 2006) Therefore Wikipedia seems to have facilitated student research significantly, and this could be seen as a positive consequence of Wikipedia on the academic community. However, this positive consequence could more than likely be offset by the huge negative consequence stemming from Wikipedia's lack of quality and authority as a reference source. Teachers, professors and librarians seem less-than-impressed about Wikipedia as a reference tool. Librarian and Internet consultant Phillip Bradley says, "Theoretically, it's a lovely idea, … but practically, I wouldn't use it; and I'm not aware of a single librarian who would. The main problem is the lack of authority. With printed publications, the publishers have to ensure that their data is reliable, as their livelihood depends on it. But with something like this, all that goes out the window." (Waldman, 2004) Former editor-in-chief of Encyclopaedia Britannica, Robert McHenry, concurs, "It was always a doomed idea. It was bad from the start. But it's got the public playing the encyclopaedia game. To extend the analogy, it's also like playing a game in the sense that playing it has no consequences. If something goes wrong, you just restart. No problem!" (Orlowski, 2005) There are also serious concerns over Wikipedia's quality as a reference, even Wikipedia's founder, Jimmy Wales, admits to quality problems in Wikipedia when he said, "The two examples [Wikipedia entry on Bill Gates and Jane Fonda] he [author Nicholas Carr] puts forward are, quite frankly, a horrific embarrassment. [sic] Bill Gates and Jane Fonda are nearly unreadable crap. Why? What can we do about it?" (Orlowski, 2005) However, a recent study done by the esteemed Science journal Nature seems to indicate that Wikipedia has very high-quality entries in the area of natural sciences. According to (Goodin, 2005), "based on 42 articles reviewed by experts, the average scientific entry in Wikipedia contained four errors or omissions, while Britannica had three. Of eight "serious errors" the reviewers found — including misinterpretations of important concepts — four came from each source, the journal reported." Jimmy Wales puts it most aptly when he said that the "accuracy of his project [Wikipedia] varies by topic." Therefore, the question of whether Wikipedia will become a quality and authoritative source of reference remains an open question for the future.

CONCLUSION

Wikipedia represents one of the best things Web 2.0 has to offer. Its open participatory nature, NPOV policy and counter vandalism mechanisms destined the project's ascension to greatness. However, numerous major issues need to be resolved to a certain degree of satisfaction before Wikipedia could make positive and lasting contributions to the world. Credibility issues are the most urgent, and Wikipedians have already taken numerous measures of improving the overall accuracy and quality of Wikipedia articles. The world's citizens would also require much education to come to an understanding of and respect for Wikipedia's NPOV policy. The full extent of the ramifications Wikipedia has on traditional news media and print encyclopaedia makers remains to be seen. Finally, the lack of credibility still prevents Wikipedia from being considered as a serious research tool by academicians world-wide. This is unfortunate, considering that the amount of energy, time and effort Wikipedians put into Wikipedia easily outweighs the efforts required for the creation and publication of the most gargantuan academic undertaking in the world. It is the sincere hope of the author that as time goes by and Wikipedia matures into a quality collection of articles, the academic world would become more appreciative of the true value of Wikipedia, and learns to treat it as a friend rather than an enemy to intellectuality.

RECOMMENDATIONS

The following list presents the author's reflections on how best to make use of Wikipedia in the years to come:

- Always corroborate information obtained from Wikipedia with other sources, preferably sources that have been subject to peer-review and proven to be academically reliable
- When browsing through Wikipedia articles, stay focused on the information one truly

want to find, the tendency to get side-tracked by hyperlinked Wikipedia articles could easily turn into a form of "Wikipedia addiction" that does more harm than good to an individual

- Be tolerant of viewpoints on Wikipedia that may seem outright ridiculous or offensive to you. Keep in mind that the NPOV policy is complementary, non-negotiable, and cannot be superseded by any other guidelines or by editor's consensus.
- Ask fellow Wikipedians for help, even when one's questions are not directly related to Wikipedia itself. Wikipedians are, for the most part, highly learned and educated, and are more than likely to impart wisdom to fellow academics in trouble.
- If time and energy are permitting, contribute to Wikipedia to make the project better.
- However, if one is unfortunate enough to get entangled in an edit war while contributing to Wikipedia, take a deep breath and back off. The earth still spins and the sun still rises, at the end of the day, Wikipedia is not that important when compared to one's real life.

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