

## **Measuring Public Relations Wikipedia Engagement: How Bright is the Rule?**

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Wikipedia has become almost a staple in society, and its prominence in search engines and frequency of use make it a very powerful website. While the goal of Wikipedia is to be considered an accurate and reliable resource (Wikipedia: Why NPOV, 2012), this study found that the “bright line” rule as co-founder Jimmy Wales has called it, is not working. This rule forbids public relations/communications professionals from editing Wikipedia articles for their company or clients and results in providing the public with inaccurate, outdated, and incomplete information, ultimately undermining Wikipedia’s value as a resource. While direct editing is not the only option that can provide accurate information, this study found that other means such as using the talk pages lack timeliness and oftentimes cooperation within the Wikipedia community.

On January 4, 2012 Phil Gomes, Senior VP, Edelman Digital, wrote an open letter to Wikipedia founder Jimmy Wales and Wikipedia on his blog (see Gomes, 2012). On the same day, Stuart Bruce, principal, Stuart Bruce Associates in the UK, wrote a blog post of his own addressing his concerns with Wikipedia (see Bruce, 2012). Both Gomes and Bruce, along with many others, are concerned about the current Wikipedia stance against public relations/communications professionals and the editing of Wikipedia articles.

The reasons for these concerns lie in the fact that Wikipedia is so frequently used and therefore has the potential to have a major impact on reputations. Having incorrect or outdated information is of no benefit to anyone – not the company, the public, or even Wikipedia, yet public relations/communications professionals are frequently challenged, rejected or even banned by Wikipedia from editing the articles of their company or clients.

Wikipedia may be concerned about public relations/communications professionals making inappropriate edits, but this is a profession built on ethics focused on providing accurate and truthful information in accordance with established codes of ethics.

On January 5, 2012, Phil Gomes started the Corporate Representatives for Ethical Wikipedia Engagement (CREWE) Facebook group with the goal of having a forum to discuss the relationship between public relations/communications professionals and Wikipedia (CREWE, 2012). This group has grown to 237 members (as of March 3, 2012) including Wikipedians, public relations/communications professionals, educators, representatives from the Public Relations Society of America (PRSA), the International

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Association of Business Communicators (IABC), the Society for New Communications Research (SNCR), the Chartered Institute of Public Relations (CIPR) and even JimmyWales. Members of this group are working on a variety of projects to help shed light on the issue about public relations/communications professionals editing Wikipedia.

Hopefully this study's findings can aid in establishing a mutually beneficial public relations/communications-Wikipedia relationship. To accomplish this, this study aims to identify the views of public relations/communications professionals about editing Wikipedia for their company or client, get a gage for their experiences with Wikipedia, and explore their thoughts on the policies and procedures for editing Wikipedia.

## REVIEW OF LITERATURE AND ISSUES

Wikipedia is a “multilingual, web-based free-content encyclopedia based on an openly edited model” (Wikipedia:About, 2012, para 1). It was founded in January 2001 by Jimmy Wales and Larry Sanger and has quickly developed into one of the most popular websites in the world. Today this collaboratively edited encyclopedia is ranked the sixth top website both globally and in the United States (Alexa.com, 2012). The English language Wikipedia is the largest with close to 4 million articles, but there are more than 19 million articles across all of its 270 language editions. It attracts 400 million unique visitors monthly (as of March 2011 according to ComScore as cited in Wikipedia:About) and has more than 82 hundred contributors. Visitors spend approximately five minutes each time on Wikipedia and spend an average of 61 seconds per page view (Alexa.com, 2012).

What makes Wikipedia different from traditional encyclopedias is that it is based on the wiki concept, which allows any Internet user to contribute or edit it (Wikipedia:About, 2012). While this has been credited for increasing its credibility and usability across the world, it has also led to challenges. This includes hoaxes like President George W. Bush having a photo of himself replaced by one of Adolf Hitler (Boxer, 2004) and founding editorial director of USA Today, John Seigenthaler, being falsely linked to the assassination of former President John F. Kennedy (Lamb, 2006).

While there was a study done by Nature that found that Wikipedia's articles about science topics had similar reliability and error rates as Encyclopedia Britannica (Ellison, 2006; Giles, 2005), no study has been conducted to analyze the accuracy of corporate articles (although one is underway as a CREWE initiative). Plus, research has found that Wikipedia articles about top *Fortune* companies are longer and contain a higher percentage of positive and negative content than the predominantly neutral Encyclopedia Britannica (Messner & DiStaso, 2011).

Wikipedia's fundamental principles (known as the five pillars) are:

- Wikipedia is an encyclopedia.
- Wikipedia is written from a neutral point of view.
- Wikipedia is free content that anyone can edit, use, modify, and distribute.
- Editors should interact with each other in a respectful and civil manner.
- Wikipedia does not have firm rules. (Wikipedia:Five pillars, 2012, para 1-5).

It is important to note that the pillar about Wikipedia being written from a neutral point of view does not require the content to be neutral. This is also one of its core content policies, the other two are “verifiability” and “no original research” (Wikipedia:Neutral point of view, 2012, para 2). Essentially, neutrality refers to a fair representation of “all significant viewpoints that have been published by reliable sources, in proportion to the prominence of each viewpoint” (para 12).

Reliable sources are a critical part of getting content to “stick” on Wikipedia. This also means that removing content with a reference is highly unlikely. In their study that explored the references of top US banks, DiStaso and Messner (2012) found that the Wikipedia articles for banks analyzed had an average of one reference for every two sentences. They also found that the news media were the main source for references (especially Bloomberg, New York Times and Reuters) followed by the bank’s own information (like its annual report or news releases).

### **Who Writes and Edits**

Wikipedians (as those who write and edit Wikipedia are called) are volunteers. According to Wikipedia, anyone can be a Wikipedian (Wikipedia:Wikipedians, 2012).

Wikipedia’s MediaWiki indicates that Wikipedia has had over 519 million edits and has over 16 million registered users including 1,507 administrators (Wikipedia>About, 2012). A 2010 survey of Wikipedians found that 87% are men and 13% women and about 23% have college degrees (Glott, Schmidt, & Ghosh, 2010). The purpose of Wikipedians is to defend articles from “vandals (the village jerk), copyedit, and research for Wikipedia to constantly improve it” (Wikipedia:Why use Wikipedia, 2012, para 2). Yang and Lai (2010) found that most contributors were motivated primarily by self-fulfillment rather than external recognition.

### **Why Wikipedia is Important**

A Pew Internet and American Life Project survey found that as of May 2010, 53% of adult online Americans use Wikipedia (Zickuhr & Rainie, 2011). Although it was previously criticized, Wikipedia has gained credibility in recent years. Reporters are increasingly using it as sources (Shaw, 2008) and an analysis of news coverage about Wikipedia found it to be framed as credible and accurate (Messner & South, 2011). In fact, Wikipedia was effectively used as a reliable source in the court case deciding trademark of F1 racing stating, “I cannot see that what is in Wikipedia is any less likely to be true than what is published in a book or on the websites of news organisations...I consider that the evidence from Wikipedia can be taken at face value” (Formula One Trademark, 2007, p. 13).

In 2010, DiStaso and Messner found that Wikipedia articles typically loaded as the third or fourth item in search engines for top companies. Lawton (2012) found that Wikipedia articles for the *Fortune 100* loaded second for 41 of the companies using Google and 45 using Bing. In fact, he found that for 88% of the companies, Wikipedia loaded in the top five in Google and for 96% of the companies, Wikipedia loaded in the top five in Bing. DiStaso and Messner (2010) also found that top *Fortune* companies were edited 780,053 times in a year, had an average of 2.72 edits per sentence, and 1.37 different editors per sentence.

## Review of the Problem

Given Wikipedia's frequency of use by both the public and the media, it is critical that content about companies and/or clients is accurate, but many articles contain outdated or incorrect information. Oftentimes, public relations/communications professionals are the most knowledgeable about a topic, but according to Jimmy Wales, they should not edit the encyclopedia that "anyone can edit, use, modify, and distribute" (Wikipedia:Five Pillars, 2012, para 1-5). Although another one of the five pillars is that Wikipedia does not have firm rules – Wales recently stated, "This is not complicated. There is a very simple "bright line" rule that constitutes best practice: do not edit Wikipedia directly if you are a paid advocate. Respect the community by interacting with us appropriately" (Wales, 2012a, para 2).

This directly conflicts with the Wikipedia FAQ/Article subjects (2012) page that specifically asks public relations professionals to remove vandalism, fix minor errors in spelling, grammar, usage or facts, provide references for existing content, and add or update facts with references such as number of employees or event details.

Beyond the conflicting requirements, the problem with Wales' approach is that "appropriate interactions" such as making comments on talk pages often do not work and are frequently ignored or disregarded (Gomes, 2012). This probably is because comments by public relations/communications professionals are not perceived as coming from a neutral point of view because they are from someone with a conflict of interest (COI) and "COI editing is strongly discouraged...and risks causing public embarrassment for the individuals and groups being promoted" (Wikipedia:Conflict of interest, para 2). While this conflicts with other statements on Wikipedia, it does appear to be the main theme. There are other options available if using the talk pages is not working, but it is likely that many public relations/communications professionals do not know about them.

It is possible that public relations/communications professionals may turn to other ways of editing their company or client's Wikipedia articles when traditional editing processes prove unsuccessful. These include not disclosing an affiliation, hiring someone, or posing as someone else. While these alternative options may be considered "less ethical," it may simply be a case of someone not understanding the rules. However, posing as someone else would be against most industry ethical standards.

Another part of the problem is the definition of conflict of interest. Wikipedia considers it: "an incompatibility between the aim of Wikipedia, which is to produce a neutral, reliably sourced encyclopedia, and the aims of an individual editor. COI editing involves contributing to Wikipedia in order to promote your own interests or those of other individuals, companies, or groups. **Where advancing outside interests is more important to an editor than advancing the aims of Wikipedia, that editor stands in a conflict of interest**" (Wikipedia: Conflict of interest, 2012, para 1). If the "aims of Wikipedia" are to give accurate information to the public, given the goal of public relations/communications professionals to "Protect and advance the free flow of accurate and truthful information" (PRSA ethics, 2012, para 5), their editing involvement does not appear to fit the Wikipedia definition of COI.

### **In the News**

While the issue about public relations/communications professionals editing Wikipedia articles has been a problem for many years, recent media coverage has brought attention to it. The most recent example was when Newt Gingrich's communications director, Joe DeSantis, was criticized for editing and using the talk pages for articles related to Gingrich (Wallace, 2012). The CNN article that broke the news reported that DeSantis was unaware of the guidelines put into effect by Wikipedia. And he was quoted as saying, "I stopped making direct edits in May 2011 because I was alerted to the COI rules...Earlier I thought that simply disclosing my affiliation was enough but it wasn't. So I started posting requests on the Talk page" (Wallace, para 7).

In December 2010, the UK public relations firm Bell Pottinger was "caught" editing the Wikipedia articles of its clients. Jimmy Wales was quoted as saying, "I've never seen a case like this. In general when I speak to PR firms, they have ethical guidelines that would prevent this kind of conduct" (Lee, 2011, para 5) and he stated that he was "highly critical of their ethics" (para 4). James Thomlinson, head of digital at Bell Pottinger, admitted to editing entries and stated, "We have never added something that is a lie or hasn't been published elsewhere and we have never tried to 'astroturf', ie create fake positive reviews to sell a product. If we have been asked to include things about clients that are untrue we have always said no and pointed to Wikipedia's strict guidelines" (para 16).

Back in 2007, Microsoft was criticized by Wikipedians for attempting to hire a blogger to correct inaccuracies in their Wikipedia article (Bergstein, 2007). According to the Associated Press article, Microsoft's spokeswoman Catherine Brooker said that "Microsoft had gotten nowhere in trying to flag the purported mistakes to Wikipedia's volunteer editors, so it sought an independent expert who could determine whether changes were necessary and enter them on Wikipedia" (para 6). Jimmy Wales' response was that he was "very disappointed" and that they should have written a white paper with the facts, posted it on an outside website and provided the link in the talk pages (para 3).

## **PURPOSE OF THE STUDY**

As outlined above, the concerns and problems with Wikipedia are huge, but there is also a lack of understanding of how widespread the issue is, how public relations/communications professionals have been handling editing Wikipedia articles, and what steps are necessary to improve the relationship between public relations/communications professionals and Wikipedians. This study aims to fill that gap by addressing the following research questions:

**RQ1:** Do public relations/communications professionals believe that editing Wikipedia articles is an important issue?

**RQ2:** What is the Wikipedia editing experience of public relations/communications professionals?

**RQ3:** How do public relations/communications professionals perceive their relationship with Wikipedians?

**RQ4:** Are public relations/communications professionals familiar with Wikipedia's conflict of interest editing rule?

**RQ5:** What do public relations/communications professionals believe the rule for editing Wikipedia articles on behalf of a company or client should be?

## **METHOD**

The survey instrument was created in the online tool SurveyMonkey and pretested with members of Corporate Representatives for Ethical Wikipedia Engagement (CREWE). This included both public relations/communications professionals and Wikipedians. After refining the instrument, it was distributed to members of Public Relations Society of America (PRSA), International Association of Business Communicators (IABC), Institute for Public Relations (IPR), Word of Mouth Marketing Association (WOMMA), and National Investor Relations Institute (NIRI). Each group sent the link to the online survey to all members either through an email about the issue (PRSA, IABC) or as part of their weekly email newsletter (IPR, WOMMA, NIRI) and PRSA did both. Social media was also used by many of the groups to encourage participation in the survey, which was open from February 14 to March 14, 2012. The questionnaire contained 35 close-ended questions and one open-ended question that asked respondents to share any thoughts or experiences they had with Wikipedia. This study is an analysis of the close-ended questions.

Given the requirement of working with Wikipedians to create or edit Wikipedia articles, exploring the current relationship is important. While there are a variety of ways relationships can be measured, the four dimensions (trust, control mutuality, commitment, and satisfaction) identified by Hon and Grunig (1999) have received much support. For the purpose of this study, trust and satisfaction were determined to be the most relevant, so questions were included for each. All scalar data were measured on a 1-5 scale. There was a total of 1366 responses but because the study was interested in the experience of public relations/communications professionals, the responses from educators and students (n=64) and anyone else who indicated that they did not have public relations/communications experience (n=18) were removed resulting in a final number of responses of 1,284.

Respondents were primarily from North America (89.2%, n=1061), but 4% were from Asia (n=48), 3.5% were from Europe (n=42), 2% were from the Middle East (n=21), 1.5% were from other parts of the world (n=18). Chi-squares and ANOVAs were run to determine differences between the respondents in North America and others around the world, and the only significant difference was in how strongly they felt about posing as someone else to make changes to Wikipedia (see below).

As is common in public relations/communications practice, 67% were females (n=798) and 33% were males (n=391). Respondents were evenly distributed ages: 24% were younger

than 30 (n=282), 24% were 30-39 (n=282), 24% were 40-49 (n=278), 20% were 50-59 (n=242), and 8% were 60 and up (n=100). This is very similar to PRSA, the largest membership organization that the survey went to, possibly indicating a representative sample (see 2011 PRSA membership survey).

The majority of respondents worked in corporations (29.7%, n=354) or small agencies or consultancies (24.1%, n=287), but non-profits (15%, n=179), government (10.3%, n=123), and educational institutions (non-faculty) (9.7%, n=116) were also well represented. The remainder of respondents worked in healthcare or hospitals (5.0%, n=60), large agencies (3.7%, n=44), research providers (0.5%, n=6), and other (1.8%, n=22).

Most respondents indicated that they have worked in public relations/communications for 11-20 years (27.6%, n=329), but the responses were nicely distributed with 19% working 21-30 years (n=228), 17% working 6-10 years (n=197), 14% working 3-5 years (n=163), 10% working 1-2 years (n=115), 8% working 31-40 years (n=94), 3% working less than a year (n=39), and 2% working more than 40 years (n=28).

Seventy nine percent of respondents had a Wikipedia article for their company or recent client (n=989).

## RESULTS

### Is editing Wikipedia an important issue?

Respondents felt that the public believes Wikipedia is a credible source ( $M=4.03$ ,  $SD=0.84$ ). Actually, 87% strongly agreed or agreed (n=1109) (see Table 1). Plus, 41% of respondents agreed or strongly agreed that the public relies on Wikipedia corporate content more than on company websites ( $M=3.21$ ,  $SD=1.01$ , n=527).

**Table 1: Perceptions of How the Public Uses Wikipedia**

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Mean Score
<b>I feel that the public believes that Wikipedia is a credible resource.*</b>	1.4%	6.4%	5.7%	60.6%	25.9%	4.03
<b>I feel that the public relies on corporate content on Wikipedia more than on company websites.*</b>	2.7%	24.2%	31.7%	31.6%	9.7%	3.21

\*  $P < .001$

A one-way ANOVA found a significant difference between the respondents who have engaged with Wikipedia either through directly editing or the talk pages and their feelings about the public relying on Wikipedia more than company websites ( $F(1, 1237) = 7.33$ ,  $p < .01$ ). Essentially, respondents who had engaged had slightly higher levels of agreement about the public's reliance on Wikipedia ( $M=3.31$ ,  $SD=1.01$ ) than those who had not ( $M=3.15$ ,  $SD=1.00$ ).

Respondents felt that it was common practice to edit a company or client’s Wikipedia articles ( $M=3.61$ ,  $SD=0.95$ ), with 63% strongly agreeing or agreeing ( $n=799$ ) (see Table 2).

While those in both North America and those around the world felt that it was not common practice for public relations/communications professionals to pose as someone else to make changes to Wikipedia articles, a one-way ANOVA found significant differences between the groups ( $F(1, 1179) = 4.39$ ,  $p<.05$ ). Fifty-nine percent of the respondents from North America either strongly disagreed or disagreed that it is a common practice ( $M=2.31$ ,  $SD=1.09$ ), and the international respondents felt a little less strongly about it with 47% strongly disagreeing or disagreeing ( $M=2.52$ ,  $SD=0.98$ ).

**Table 2: Perceptions of Public Relations/Communications Common Practice**

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Mean Score
<b>I feel that it’s common public relations/communications practice to edit a company or client’s Wikipedia articles.*</b>	2.4%	11.3%	23.2%	48.8%	14.3%	3.61
<b>I feel that it’s common public relations/communications practice to pose as someone else to make changes to a Wikipedia article.*</b> North America	27.1%	32.3%	26.0%	11.3%	3.2%	2.31
<b>I feel that it’s common public relations/communications practice to pose as someone else to make changes to a Wikipedia article.*</b> International	17.2%	31.2%	33.6%	18.0%	0%	2.52

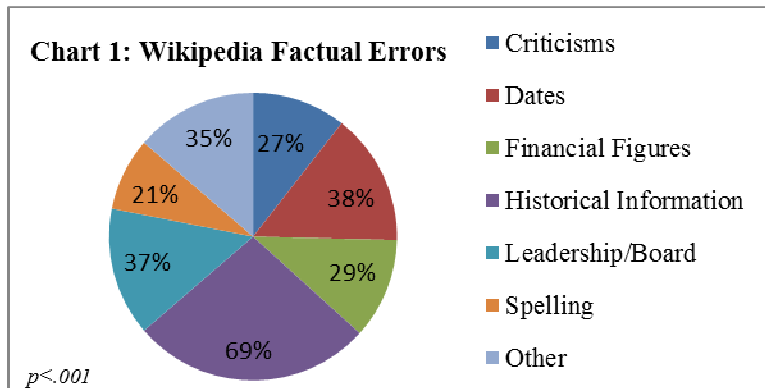
\*  $P<.001$

A one-way ANOVA found a significant difference between the respondents who have engaged with Wikipedia either through editing directly or the talk pages and their feelings about the practice of public relations/communications professionals editing Wikipedia ( $F(1, 1232) = 39.31$ ,  $p<.001$ ). Essentially, respondents who had engaged had slightly higher levels of agreement that editing is common ( $M=3.85$ ,  $SD=0.92$ ) than those who had not ( $M=3.48$ ,  $SD=0.94$ ).

When asked if there are currently factual errors on their company or client’s Wikipedia articles, 32% said that there were ( $n=406$ ), 25% said that they don’t know ( $n=310$ ), 22% said no ( $n=273$ ), and 22% said that their company or client does not have a Wikipedia article ( $n=271$ ). In other words, 60% of the Wikipedia articles for respondents who were familiar with their company or recent client’s article contained factual errors.

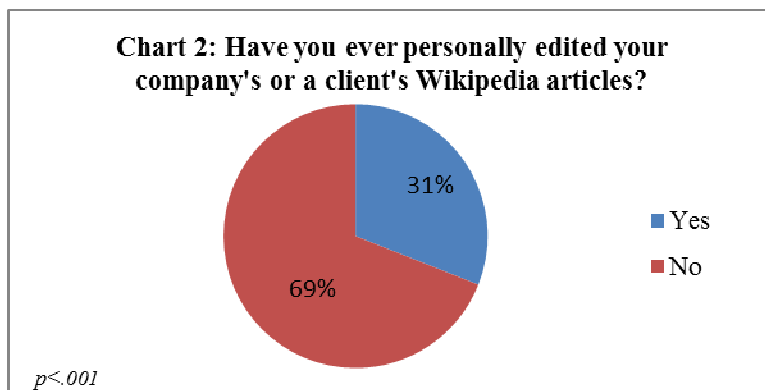


The most common error types as selected by respondents who indicated that they had errors currently on their company or client's Wikipedia article were historical information (68.5%, n=287), dates (37.7%, n=153), leadership or board information (37.4%, n=152), financial figures (28.8%, n=117), criticisms (27.1%, n=110), spelling (21.2%, n=86), and other (35.2%, n=143) (see Chart 1). The "other" category included errors about product information, links, locations, general facts, and even company names.

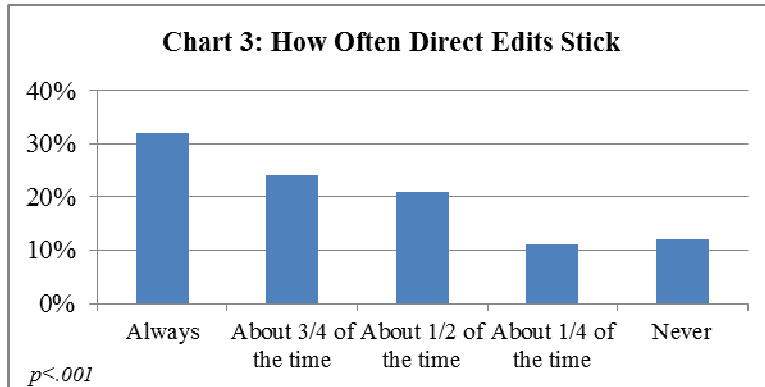


### Wikipedia Editing Experience

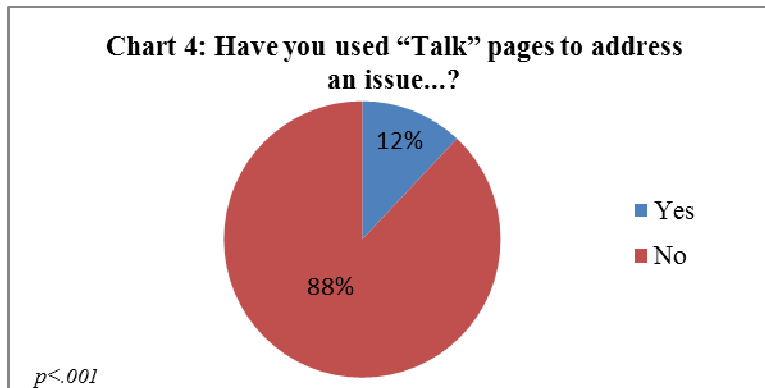
Thirty-one percent of respondents have personally edited their company's or client's Wikipedia articles (n=374) (see Chart 2). Of those, 18% have been editing Wikipedia for less than a year (n=60), 47% for one to three years (n=157), 23% for three to five years (n=77), and 11% have been editing it for at least five years (n=37). Typically, the public relations/communications professionals in this study edited Wikipedia articles about their company or client annually (56.5%, n=196), followed by quarterly (29.1%, n=101), monthly (10.4%, n=36), weekly (2.6%, n=9), and daily (1.4%, n=5).



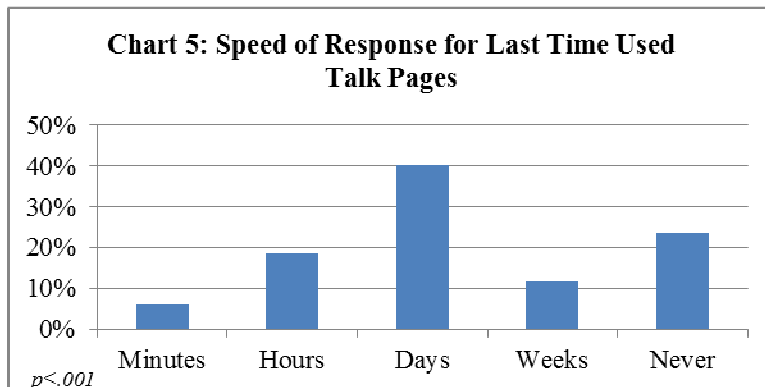
Of those who have directly edited Wikipedia for their company or client, 32% indicated that their edits always “stuck” (n=112) while 24% said they “stuck” about three quarters of the time (n=85), 21% said about half the time (n=74), 11% said about one quarter of the time (n=39), and 12% said their edits never stuck (n=41) (see Chart 3). In other words, this means that about 77% of edits stick at least half of the time.



Twelve percent of respondents have used the talk pages to address an issue regarding their company or client’s Wikipedia article (n=149) (see Chart 4).



When the respondents who had used the talk pages before were asked how quickly they received a response the last time they used it, 40% indicated days (n=56), 19% said hours (n=26), 12% said weeks (n=16), 6% said minutes (n=8), and 24% said never (n=33) (see Chart 5).

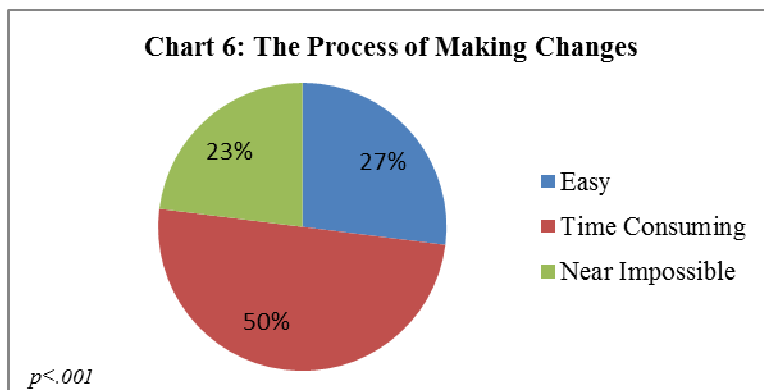


A variety of resources are available to assist in editing but when the respondents who indicated that they had used the talk pages were asked if they used the most common resources, the most frequent answer was “no” and none of the resources were used by more than 20%; in fact, there was an average usage of 14% and an average of 27% of respondents had not heard of the resources (see Table 3). The most familiar resource was Wikipedia:Request for comment (19.4% had never heard of it) and the least familiar resource was Wikipedia:WikiProject cooperation/paid editor help (35.8% had never heard of it).

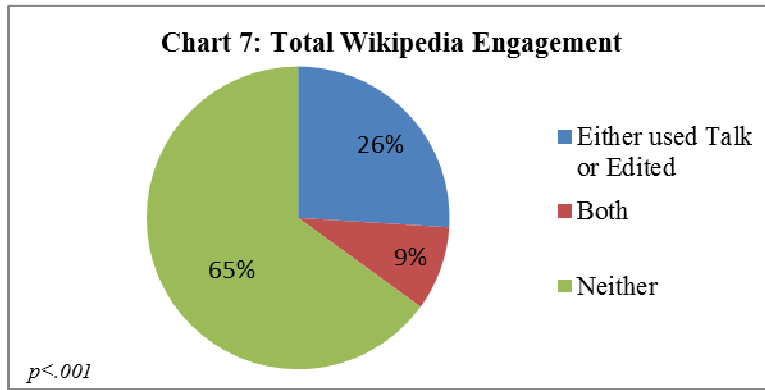
**Table 3: Wikipedia Resources to Help Edit Articles**

	Yes	No	Never Heard of it
<b>Wikipedia:Oversight (to remove defamatory material)</b>	15.8%	55.6%	28.6%
<b>Wikipedia:Biographies of Living Persons/Noticeboard (for help with articles about a living person)</b>	19.5%	54.9%	25.6%
<b>Wikipedia:WikiProject Cooperation/Paid Editor Help (for help tailored for PR)</b>	5.2%	59.0%	35.8%
<b>Wikipedia:Third Opinion (to request an outside opinion of a dispute)</b>	11.2%	59.7%	29.1%
<b>Wikipedia:Requests for Comment (to request outside input of a dispute)</b>	18.7%	61.9%	19.4%
<b>Wikipedia:Requests for Mediation (to request formal mediation of a dispute)</b>	12.9%	65.2%	22.0%

Half of respondents who have either directly edited or used the talk pages to make edits indicated that they believe the process of making changes to a company or client’s Wikipedia article is typically time consuming (n=275), but 27% stated that it was easy (n=152), while 23% said it was near impossible (n=127) (see Chart 6).



Overall, 35% of respondents had experience in Wikipedia engagement by either editing directly or using the talk pages (n=437), and of that about 9% had used both the talk pages and edited directly (n=116). The majority of respondents did not have experience with Wikipedia (65%, n=808) (see Chart 7).



Males had 12% more Wikipedia engagement than females (41.7%, n=163 of males and 30.1%, n=240 of females) ( $\chi^2(1, N=1188)=15.68, p \leq .001$ ). The 30-39 (40.4%, n=114) and 40-49 (39.2%, n=109) age groups were the most engaged groups ( $\chi^2(4, N=1183)=26.36, p < .001$ ). Wikipedia engagement was most common at educational institutions (46.6%, n=54) and large agencies (38.6%, n=17) ( $\chi^2(8, N=1190)=12.18, p < .05$ ). See Table 4 for the percentage of respondents who have experience using the talk pages and the percentage who have edited directly on their company or client’s Wikipedia articles.

	<b>Used Talk</b>	<b>Directly Edited</b>
<b>Sex</b>		
Males	15.7% (n=61)	36.0% (n=140)
Females	9.1% (n=72)	27.0% (n=214)
<b>Age</b>		
Younger than 30	6.8% (n=19)	21.0% (n=59)
Ages 30-39	13.9% (n=39)	35.9% (n=101)
Ages 40-49	10.1% (n=28)	35.6% (n=99)
Ages 50-59	16.7% (n=40)	30.4% (n=72)
Age 60+	10.0% (n=10)	23.0% (n=23)
<b>Years of Experience</b>		
Less than 1 year	7.9% (n=3)	12.8% (n=5)
1-2 years	1.8% (n=2)	13.0% (n=15)
3-5 years	10.4% (n=17)	26.4% (n=43)
6-10 years	14.4% (n=28)	35.6% (n=69)
11-20 years	12.5% (n=41)	35.1% (n=115)
21-30 years	14.2% (n=32)	33.6% (n=76)
31-40 years	9.7% (n=9)	26.9% (n=25)
More than 40 years	14.3% (n=4)	25.0% (n=7)
<b>Type of Organization</b>		
Corporation	14.8% (n=52)	27.6% (n=97)
Government	9.8% (n=12)	30.1% (n=37)
Healthcare or Hospital	8.5% (n=5)	30.5% (n=18)
Large Agency	14.0% (n=6)	30.2% (n=13)
Small Agency or Consultancy	9.8% (n=28)	28.9% (n=83)
Research Provider	0	33.3% (n=2)
Educational Institution	14.9% (n=17)	41.7% (n=48)
Non-profit	7.8% (n=14)	30.3% (n=54)
Other	9.1% (n=2)	13.6% (n=3)

### Perceived Relationship with Wikipedians

The perceived relationships with Wikipedians were tested using the Hon & Grunig (1999) variables of trust and satisfaction. Each was found to be reliable; the three items that measured trust had a Cronbach's alpha of .87 and the three items that measured satisfaction Cronbach's alpha of .76 (see Table 5). This indicates that there is a moderate level of trust and a slightly higher level of satisfaction.

**Table 5: Means and Standard Deviations for PR/Communications Professionals-Wikipedians Relationships**

	No. of Items	Cronbach's $\alpha$	Mean	Std. Dev.
Trust	3	.867	2.94	0.67
Satisfaction	3	.761	3.24	0.86

In measuring trust, 25% of respondents felt that Wikipedia does not treat public relations/communications professionals fairly and justly ( $n=316$ ,  $M=2.85$ ,  $SD=0.79$ ) while 15% did ( $n=189$ ) (see Table 6). Thirty-six percent also felt that Wikipedia does not take the opinions of public relations/communications professionals into account when making policy decisions ( $n=457$ ,  $M=2.67$ ,  $SD=0.77$ ) while 10% did ( $n=128$ ). On the other hand, 46% felt that sound principles seem to guide Wikipedia's behavior ( $n=584$ ,  $M=3.30$ ,  $SD=0.91$ ) while 19% did not ( $n=244$ ).

In measuring satisfaction, 48% felt that Wikipedia believes the need of public relations/communications professionals to have accurate and complete articles is legitimate ( $n=500$ ,  $M=3.34$ ,  $SD=0.99$ ) while 20% did not ( $n=249$ ). Fifty-eight percent felt that Wikipedia should change its editing policies to accommodate public relations/communications professionals ( $n=730$ ,  $M=3.55$ ,  $SD=1.11$ ) while 18% did not ( $n=217$ ). On the other hand, 28% felt that most public relations/communications professionals are not pleased with their interactions with Wikipedia editors ( $n=277$ ,  $M=2.83$ ,  $SD=0.69$ ) while 10% felt they were ( $n=127$ ).

**Table 6: Perceived Relationship with Wikipedians**

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Mean Score
<b>I feel that Wikipedia treats public relations/communications professionals fairly and justly. Trust*</b>	6.3%	18.7%	60.0%	13.4%	1.6%	2.85
<b>I feel that Wikipedia takes the opinions of public relations/communications professionals into account when making policy decisions. Trust*</b>	7.3%	28.9%	53.6%	9.4%	0.7%	2.67
<b>I feel that sound principles seem to guide Wikipedia's behavior. Trust*</b>	2.9%	16.5%	34.4%	40.4%	5.9%	3.30
<b>I feel that Wikipedia believes the need of public relations/communications professionals to have accurate and complete articles is legitimate. Satisfaction*</b>	3.9%	15.9%	32.5%	37.9%	9.8%	3.34
<b>I feel that Wikipedia should change its editing policies to accommodate public relations/communications professionals. Satisfaction*</b>	5.2%	13.0%	24.1%	36.8%	20.9%	3.55
<b>I feel that most public relations/communications professionals are pleased with their interactions with Wikipedia editors. Satisfaction*</b>	5.3%	16.7%	67.9%	9.5%	0.6%	2.83

\*  $P < .001$ 

A series of one-way ANOVAs found that respondents with experience either editing directly or through the talk pages felt significantly different than those who did not for many of the relationship variables (see Table 7). Specifically, those with experience engaging Wikipedia had lower agreement about being treated fairly and justly ( $F(1, 1224) = 29.17$ ,  $p < .001$ ), having their opinions taken into account for Wikipedia policies ( $F(1, 1226) = 38.94$ ,  $p < .001$ ), that sound principles guide Wikipedia's behavior ( $F(1, 1224) = 6.38$ ,  $p < .05$ ), that Wikipedia believes their needs are legitimate ( $F(1, 1220) = 11.49$ ,  $p < .001$ ), and that they are pleased with interactions with Wikipedians ( $F(1, 1221) = 45.02$ ,  $p < .001$ ). They, however, felt stronger about Wikipedia needing to change its editing policies to accommodate public relations professionals ( $F(1, 1230) = 26.04$ ,  $p < .001$ ).

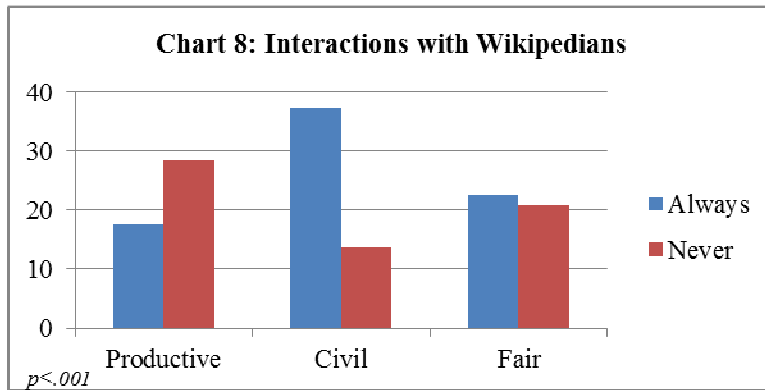
**Table 7: Perceived Relationship with Wikipedians**

	Mean Score for Engagement	Mean Score for No Engagement	Significance
<b>I feel that Wikipedia treats public relations/communications professionals fairly and justly.</b> Trust	2.68	2.94	.001
<b>I feel that Wikipedia takes the opinions of public relations/communications professionals into account when making policy decisions.</b> Trust	2.49	2.77	.001
<b>I feel that sound principles seem to guide Wikipedia's behavior.</b> Trust	3.21	3.35	.012
<b>I feel that Wikipedia believes the need of public relations/communications professionals to have accurate and complete articles is legitimate.</b> Satisfaction	3.20	3.40	.001
<b>I feel that Wikipedia should change its editing policies to accommodate public relations/communications professionals.</b> Satisfaction	3.77	3.43	.001
<b>I feel that most public relations/communications professionals are pleased with their interactions with Wikipedia editors.</b> Satisfaction	2.65	2.93	.001

The relationship variables were factor-analyzed using principal component extraction with a varimax rotation. The analysis yielded one factor with eigenvalues exceeding 1.0, accounting for 47% of the explained variance. For an item to be included in the factor, a primary loading of at least 0.50 and no secondary loading within 0.30 of the primary loading was required. All six items loaded together indicating that they were all measuring the relationship, therefore, they were combined and used to analyze the public relations/communication professional-Wikipedian relationship. The relationship variable had a mean of 3.09 and a standard deviation of 0.46 ( $p < .001$ ).

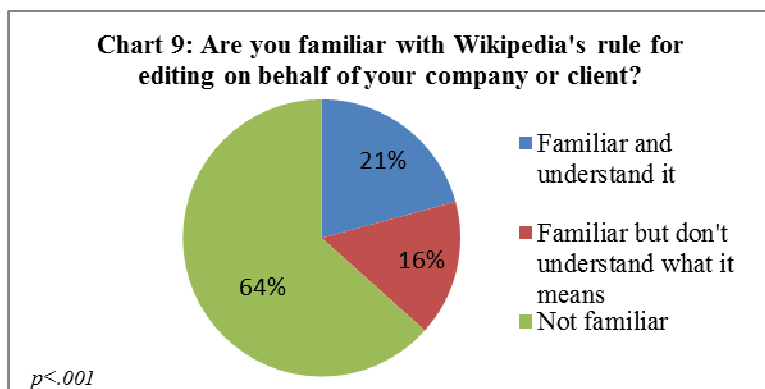
A series of ANOVAS found that there the relationship was not significantly different for any of the demographic data, but the stronger the public relations/communication professional-Wikipedian relationship was the less likely respondents were to have factual errors ( $F(3, 1255) = 35.28, p < .001$ ). It is important to note that the strength of the relationship was not significantly related to the amount of time it took for respondents to receive a response when they last used the talk pages. However, the stronger the relationship, the more likely direct edits were to stick ( $F(5, 372) = 12.87, p < .001$ ) and the more productive their interactions were perceived to be ( $F(3, 371) = 28.49, p < .001$ ).

On a scale that asked respondents the frequency of their interactions with Wikipedians, about 29% of respondents who had directly edited Wikipedia articles for their company or clients indicated that their interactions with Wikipedians were never productive ( $n=63$ ), but 18% claimed they were always productive ( $n=39$ ) (see Chart 8). About 37% stated that Wikipedians were always civil ( $n=80$ ), but 14% identified that they were never civil ( $n=29$ ). About 23% stated that Wikipedians were always fair ( $n=53$ ), but 21% identified that they were never fair ( $n=49$ ).



### Wikipedia’s Conflict of Interest Editing Rule

The majority of respondents were not familiar with Wikipedia’s rule for editing on behalf of a company or client (63.6%, n=758), and while others were familiar, only 21% were familiar and understood it (n=249), leaving 16% that were familiar but did not understand what it means to them (n=185) (see Chart 9). It is important to note that the percentage of respondents who indicated that they were familiar with the rule may be falsely elevated. This is because while many selected that they were familiar with the rule, they also contrary comments in the survey’s open-ended question like: “Communications professionals are able to create and contribute to any articles like any other contributor” and “It’s my understanding, maybe incorrect, that anyone can edit a Wikipedia piece. If anybody can do that, then it’s certainly the prerogative of professional communicators to exercise their craft on the site.”



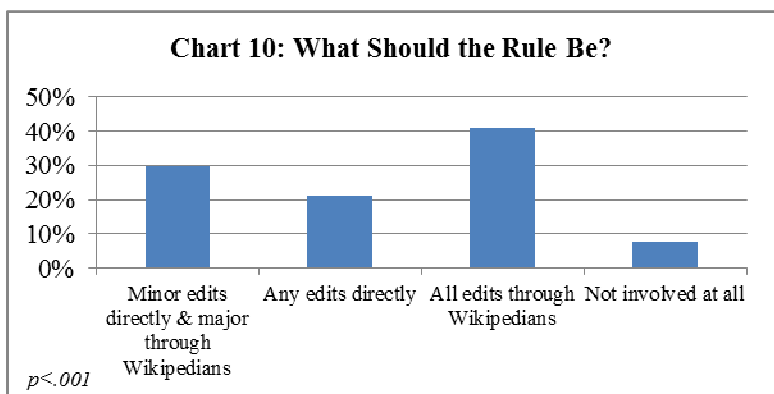
Sixty percent of respondents with engagement experience, through editing or using the talk pages, understood Wikipedia’s rule for editing on behalf of a company or client (n=149) versus 40% of those without experience who understood it (n=100) ( $\chi^2(2, N=1191)=149.63, p < .001$ ). Plus, 40% of those who engaged were not familiar with the rule.

Of those who have “broken” the rule by directly editing the Wikipedia article for their company or client, 36% were familiar with it (n=130), 22% knew about it but did not understand what it means to them (n=80), and 41% were unfamiliar (n=148) ( $\chi^2(2, N=1186)=113.08, p < .001$ ).

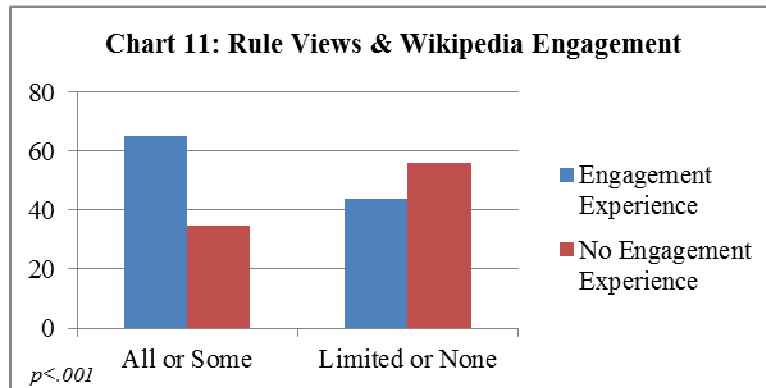


### The Wikipedia Rule for Public Relations/Communications Professionals

When respondents were asked how they feel about public relations/communications professionals editing Wikipedia for their company or clients, the largest percentage wanted all edits (major and minor) to go through Wikipedians before they go on an article (41.1%, n=487), followed by 30% indicating that only minor edits should be made directly on an article while major edits should go through Wikipedians (n=353). On the other hand, 21% felt that public relations/communications professionals should be able to directly make any edits they want (n=253) and 8% thought that because public relations/communications professionals have a conflict of interest that goes against Wikipedia’s goal of neutrality, they should not be involved at all (n=93) (see Chart 10). This indicates that 59% of respondents felt that the rule should change.



There were significant differences in what respondents viewed the rule should be depending on if they had engaged in Wikipedia (through talk pages or editing directly) or not ( $\chi^2(3, N=1185)=68.43, p<.001$ ) (see Chart 11). Specifically, 65% of those who had Wikipedia engagement felt that the rule should include minor edits directly and major edits through Wikipedians or any edits directly (all or some) (n=263) compared to 45% of those who had no previous Wikipedia engagement (n=343). On the other hand, 35% of those who had engaged felt that the rule should include all edits going through Wikipedia editors or not being involved at all (limited or none) (n=141) versus 56% of those without engagement experience (n=438). In other words, those who had experience with Wikipedia were more in favor of a rule with flexibility for public relations/communications professionals. In fact, 74% of those with experience using the talk pages believed that the rule should change (n=99,  $\chi^2(3, N=1179)=20.10, p<.001$ )).



## SUMMARY & CONCLUSIONS

This study reports the findings of a survey about Wikipedia conducted with a large number of public relations/communications professionals. Recent news about public relations/communications professionals editing Wikipedia articles for their clients has led people to become more aware of Wikipedia’s rule for editing when there is a conflict of interest. Jimmy Wales, co-founder of Wikipedia, has called this a “bright line” rule, whereby public relations/communications professionals are not to directly edit the articles of their company or clients.

There are problems with the “bright line” rule. By not allowing public relations/communications professionals to directly edit removes the possibility of a timely correction or update of information, ultimately denying the public a right to accurate information. Also, by disallowing public relations/communications professionals to make edits while allowing competitors, activists and anyone else who wants to chime in, is simply asking of misinformation. If direct editing is not a possibility, an option must be provided that can quickly and accurately update Wikipedia articles; as this study found, no such process currently exists.

This may be a “bright line” rule to Jimmy Wales, but most of the public relations/communications professionals in this study were unaware of the rule and almost half of those who were familiar with it did not understand what it meant to them. With the conflicting information in Wikipedia articles, a clear concise explanation of the “bright line” rule is lacking. Having clarity about the requirements would help public relations/communications professionals as well as all other editors. While not all Wikipedians feel the same about editing done by public relations/communications professionals as Wales, he is the person who is quoted in the news when a public relations/communications professional gets “caught” making edits.

The majority of public relations/communications professionals in this study had never tried to make changes to their company or client’s Wikipedia articles. The comments on the survey indicate that this is so low because many respondents were afraid of media backlash and uncertainty of what to do. Of the 35% who had engaged with Wikipedia, most did so by making edits directly on the Wikipedia articles of their companies or clients. Just over a quarter of those with experience editing thought it was an easy process, about

half thought it was time consuming, and just under a quarter thought it was near impossible. This, along with the fear of doing something wrong and potentially winding up in the news, is likely to influence the relationship with Wikipedians.

The level of trust was lower than the level of satisfaction for public relations/communications-Wikipedia relationships, but the stronger the relationship, the less likely respondents were to have errors, the more likely direct edits were to stick, and the more productive their interactions were perceived to be; all very positive results for everyone and encouragement for continued focus on this relationship. Although some respondents were concerned about being treated fairly and justly and having their opinions taken into account with policy decisions, about half felt that sound principles guided Wikipedia's behavior. This can simply refer to the success of Wikipedia – if its principles were not sound, it would no longer exist or be as successful.

The problems in the public relations/communications-Wikipedia relationships could stem from the finding that most interactions had a greater likelihood of being unproductive even though Wikipedians were typically civil and fair. Responses to comments on talk pages typically took days. This can be a giant concern when incorrect or damaging information is allowed to remain. In today's social media society, people have gotten used to things happening quickly, especially online, so waiting days, weeks, or never getting a response to a request on talk pages is not acceptable.

When the wait becomes too long, the content is defamatory, or a dispute with a Wikipedian needs to be elevated, there are resources to help. Unfortunately, only a small percentage of the respondents in this study had used them and many had never heard of these resources.

These problems, along with the unfamiliarity of the rules, could be why so many respondents made direct edits to their company or client's Wikipedia articles, but their successful use of direct edits is what most likely spurs continued direct editing. Given that there are so many Wikipedians, having 77% of direct edits stick at least half the time is surprising, but this study did not ask what the edits were or if respondents clearly indicated their affiliation when making the edits. Therefore, it is possible that the edits stuck because they were minor edits to things like grammar or because Wikipedians did not realize who the edits were from.

Much of this study has ethical components. Many of the respondents believed that it is common practice to edit Wikipedia articles for companies or client and more than half felt that it is common practice to pose as someone else to make edits. Posing as someone else should raise a red flag – if you feel that it is necessary to disguise who you are, it is wrong and probably unethical.

A less straight forward ethical issue is the dilemma about direct editing. For example, although direct editing is against the "bright line" rule, it appears to be permitted and even encouraged for minor edits on some Wikipedia help articles. This makes it difficult to determine what to do. While 36% of those who directly edited Wikipedia articles for their company or clients were familiar with the rule, it is unlikely that most knowingly chose to break the rule. Given that this survey did not ask respondents to specify what their edits

were, along with the ethical standards public relations/communications professionals are required to adhere to with membership organizations like PRSA, IABC, WOMMA, NIRI, etc., the most likely explanation for this is that they were making minor edits that are “allowed.” Ultimately, it is the responsibility of the public relations/communications professionals to learn the rules, as they would before engaging in any environment, but even a good review of Wikipedia could result in someone thinking that editing is allowed, at least for minor edits.

The problem again, is that the rules are not clear and with so few familiar with the conflict of interest policy or “bright line” rule, public relations/communications professionals are in a difficult situation. Oftentimes editing a company or client’s article can be in the best interest of the company/client, the public and even Wikipedia. When faced with a decision to take action or sit and wait for the correction of incorrect, misleading or defamatory content for an undetermined amount of time, it should not be surprising that some would simply choose to edit.

Jimmy Wales (2012b) has clarified his view of this choice: “the policy pages on Wikipedia specific [sic] the absolute bare minimum of acceptable behavior. If all you are doing is, for example, updating an address or this years published financials, the truth is that people aren’t going to freak out. That doesn’t make it best practices, and I personally still very very strongly advise against it. Not everything that is “legal” under the current rules of Wikipedia is actually the most effective thing you can do for yourself or your client” (para 1). It, however, would be difficult to explain to corporate executives that you *can* but should not personally remove erroneous content.

The bottom line is that errors exist in the Wikipedia articles for the companies and clients of public relations/communications professionals. In fact, 60% of respondents who were familiar with their company or recent client’s Wikipedia article indicated that it article contained factual errors. This is a lot, especially when you consider that there are errors in six out of ten Wikipedia articles for companies that the public reads to make purchasing or investment decisions. The most common errors were historical information, dates, the leadership/board, and financial figures. All errors provide misinformation to the public, but this list of frequent errors can easily be corrected by public relations/communications professionals.

Since 87% of public relations/communications professionals believe that the public views Wikipedia content as credible and 41% believe that the public relies on Wikipedia articles for their company or client more than on their website, changes need to be made in the current process, which is simply not working. Although the respondents who directly edit appear to be relatively successful, this may be short-lived and could land them in a media spotlight.

Over half of the respondents in this study thought that Wikipedia should change its editing policies to accommodate public relations/communications professionals. Those with experience directly editing or using talk pages felt even stronger about the need for change. It was surprising to see that 41% of respondents thought the rule should be to have all edits go through Wikipedians. This brings it back full circle to Jimmy Wales’ “bright line,” but changes must be made that provide a consistent application of the rule from both

sides. Public relations/communications professionals must be allowed to contribute to the talk pages indicating affiliation and Wikipedians must make appropriate edits in a timely manner. If not, the public is being deprived of accurate information.

Now that this study has provided details into the issue of public relations/communications professionals editing Wikipedia, hopefully it can be used to improve this process. The next steps should include educating public relations/communications professionals about the rules and resources available, along with educating Wikipedians about the need for timeliness and the role of public relations/communications professionals in editing Wikipedia articles for their companies and clients. Hopefully, the common desire for accurate Wikipedia articles will drive improvement in the public relations/communications-Wikipedia relationship.

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## REFERENCES

- Alexa.com (2012). Wikipedia.org. Retrieved on March 2, 2012 from <http://www.alexa.com/siteinfo/wikipedia.org>
- Bergstein, B. (2007, January 24). Microsoft offers cash for Wikipedia edit. *USA Today*, Retrieved on March 3, from [http://www.usatoday.com/tech/news/2007-01-24-microsoft-wikipedia\\_x.htm](http://www.usatoday.com/tech/news/2007-01-24-microsoft-wikipedia_x.htm)
- Boxer, S. (2004, November 10). Mudslinging weasels into online history. *The New York Times*, p. E1.
- Bruce, S. (2012, January 4). Wikipedia and PR have got to work it out. Retrieved March 2, 2012 from <http://stuartbruce.biz/2012/01/wikipedia-and-pr-have-got-to-work-it-out.html>
- CREWE (2012). The Facebook group Corporate Representatives for Ethical Wikipedia Engagement. Retrieved March 1, 2012 from <https://www.facebook.com/#!/groups/crewe.group/>
- DiStaso, M. W., & Messner, M. M. (2012). Cite that crisis: An analysis of the references in Wikipedia entries of major banking institutions. Paper presented at the International Public Relations Research Conference, Miami, FL.
- DiStaso, M. W., & Messner, M. (2010). Forced transparency: Corporate image on Wikipedia and what it means for public relations. *Public Relations Journal*, 4(2), 1-23.
- Ellison, S. (2006, March 24). In a war of words, famed encyclopedia defends its turf at Britannica, comparisons to an online upstart are bad work of 'Nature.' *The Wall Street Journal*, p. A1.
- Formula One Licensing BV to Register the Trademark: FI. (2007, June). 2277746c. Retrieved March 1, 2012 from [http://www.f1sa.com/images/F1\\_trademark\\_court\\_ruling.pdf](http://www.f1sa.com/images/F1_trademark_court_ruling.pdf)
- Giles, J. (2005). Internet encyclopedias go head to head. *Nature*, 438, 900-901.
- Glott, R., Schmidt, P., & Ghosh, R. (2010). Wikipedia survey – Overview of results. UNU-Merit and Collaborative Creativity Group. Retrieved March 1, 2012 from [http://www.wikipediastudy.org/docs/Wikipedia\\_Overview\\_15March2010-FINAL.pdf](http://www.wikipediastudy.org/docs/Wikipedia_Overview_15March2010-FINAL.pdf)
- Gomes, P. (2012, January 4). An open letter to Jimmy Wales and Wikipedia. Retrieved March 2, 2012 from <http://blog.philgomes.com/2012/01/open-letter-to-jimmy-wales-and-wikipedia.html>

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Hon, L., & Grunig, J. E. (1999). *Guidelines for measuring relationships in public relations*. Gainesville, FL: The Institute for Public Relations, University of Florida. Available at <http://www.instituteforpr.org/topics/measuring-relationships/>

Lamb, G. M. (2006, January 5). Online Wikipedia is not Britannica – but it's close. *Christian Science Monitor*, p. 13.

Lawton, R. (2012). Search engine rankings for Wikipedia articles on Fortune 100 companies. Retrieved March 1, 2012 from [https://docs.google.com/spreadsheet/ccc?key=0AmStAwwKK6\\_ndGN6UEJkWDZpdEI2QWZMUfo0TUhiSXc#gid=11](https://docs.google.com/spreadsheet/ccc?key=0AmStAwwKK6_ndGN6UEJkWDZpdEI2QWZMUfo0TUhiSXc#gid=11)

Lee, D. (2011, December 8). Wikipedia investigates PR firm Bell Pottinger's edits. *BBC*, Retrieved March 2, 2012 from <https://bbc.co.uk/news/technology-16084861>

Messner, M., & DiStaso, M. W. (2011, August). Wikipedia vs. Encyclopedia Britannica: A longitudinal analysis to identify the impact of social media on the standards of knowledge. Paper presented in a referred research poster session at the Association for Education in Journalism and Mass Communication Conference, Mass Communication and Society, St. Louis, MO.

Messner, M., & South, J. C. (2011). Legitimizing Wikipedia: How U.S. national newspapers frame and use the online encyclopedia in their coverage. *Journalism Practice*, 5 (2), 145-160.

PRSA Code of Ethics (2012). Ethical Guidance for Public Relations Practitioners. Retrieved, March 4, 2012 from <http://www.prsa.org/AboutPRSA/Ethics/>

PRSA Membership Survey (2011). Membership value perception and satisfaction study. Retrieved March 4, 2012 from <http://www.slideshare.net/prsa/prsa-2011-membership-satisfaction-survey>

Wales, J. (2012a, January 10, 2012, 5:56 am). Corporate Representatives for Ethical Wikipedia Engagement (CREWE) Facebook page comment. Retrieved March 1, 2012 from <https://www.facebook.com/groups/crewe.group>

Wales, J. (2012b, January 10, 2012, 11:13 am). Corporate Representatives for Ethical Wikipedia Engagement (CREWE) Facebook page comment. Retrieved March 1, 2012 from <https://www.facebook.com/groups/crewe.group>

Wallace, G. (2012, February 6). Gingrich spokesman defends Wikipedia articles. *CNN politicalticker*, Retrieved March 2, 2012 from <http://politicalticker.blogs.cnn.com/2012/02/06/gingrich-spokesman-defends-wikipedia-edits/>

Wikipedia:About (2012). Retrieved March 1, 2012 from <http://en.wikipedia.org/wiki/Wikipedia:About>

- Wikipedia: Conflict of interest (2012). Retrieved March 1, 2012 from [http://en.wikipedia.org/wiki/Wikipedia:Conflict\\_of\\_interest](http://en.wikipedia.org/wiki/Wikipedia:Conflict_of_interest)
- Wikipedia:FAQ/Article subjects (2012). Retrieved March 1, 2012 from [http://en.wikipedia.org/wiki/Wikipedia:FAQ/Article\\_subjects](http://en.wikipedia.org/wiki/Wikipedia:FAQ/Article_subjects)
- Wikipedia:Five pillars (2012). Retrieved March 1, 2012 from [http://en.wikipedia.org/wiki/Wikipedia:Five\\_pillars](http://en.wikipedia.org/wiki/Wikipedia:Five_pillars)
- Wikipedia:Neutral point of view (2012). Retrieved March 2, 2012 from [http://en.wikipedia.org/wiki/Wikipedia:Neutral\\_point\\_of\\_view](http://en.wikipedia.org/wiki/Wikipedia:Neutral_point_of_view)
- Wikipedia:Why NPOV? (2012). Retrieved March 13, 2012 from [http://en.wikipedia.org/wiki/Wikipedia:Why\\_NPOV%3F](http://en.wikipedia.org/wiki/Wikipedia:Why_NPOV%3F)
- Wikipedia: Why use Wikipedia (2012). Retrieved March 1, 2012 from [http://en.wikipedia.org/wiki/Wikipedia:Why\\_use\\_Wikipedia](http://en.wikipedia.org/wiki/Wikipedia:Why_use_Wikipedia)
- Wikipedia: Wikipedians (2012). Retrieved March 1, 2012 from [http://en.wikipedia.org/wiki/Wikipedia:Wikipedians#cite\\_note-Yang2010-4](http://en.wikipedia.org/wiki/Wikipedia:Wikipedians#cite_note-Yang2010-4)
- Yang, H. and Lai, C. (2010). Motivations of Wikipedia content contributors. *Computers in Human Behavior*, 26(6), 1377-1383.
- Zickuhr, K., & Rainie, L. (2011). Wikipedia, past and present. Pew Internet & American Life Project, Retrieved on March 1, 2012 from [http://pewinternet.org/~media/Files/Reports/2011/PIP\\_Wikipedia.pdf](http://pewinternet.org/~media/Files/Reports/2011/PIP_Wikipedia.pdf)