**Forced Transparency: Corporate Image on Wikipedia
and What it Means for Public Relations**

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Collaboratively edited information on social media that circumvents traditional media gatekeepers poses a challenge to public relations practitioners. The online encyclopedia Wikipedia gives corporate critics the opportunity to shape the public image of major corporations. This longitudinal panel study analyzed the framing of 10 Fortune 500 companies on Wikipedia between 2006 and 2010. It was found through content analyses of tonality and topics of more than 3,800 sentences in the articles for Wal-Mart, Exxon Mobil, General Motors, Ford, General Electric, Chevron, ConocoPhillips, Citigroup, AIG, and IBM that the negativity increased over time and that the focus shifted from historical information to legal concerns and scandals. The findings show that public relations practitioners need to pay close attention to the forced transparency about their companies on Wikipedia.

INTRODUCTION

Public relations practitioners face an extraordinary challenge through social media. While many have embraced social media as an important tool to enhance issues management, environmental monitoring, and two-way communication with their publics (Wright & Hinson, 2009), most practitioners neglect the collaboratively edited online encyclopedia Wikipedia and often do not even regard it a social medium (Paine, 2010). However, the editing and writing process on Wikipedia, which allows anyone to contribute to any article, has enabled the collective of editors and administrators to redefine the standards of knowledge. While traditional encyclopedias have an editing process that engages experts on specific subjects, Wikipedia allows anyone to weigh in on the discussion of what is correct and important enough to be published on a certain subject. This essentially leads to the publishing of a variety of topics about an organization – many of which a company would rather not see so prominently.

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This paradigm shift in how the public defines its knowledge has major implications on public relations practitioners. A critic of a company, a former employee, or even someone completely unrelated to the company has the same editorial authority on Wikipedia as a corporate executive. Therefore, many voices will contribute to the inclusiveness and transparency of information available about major corporations in the social media sphere. On Wikipedia, critics are guaranteed that their voices will be heard as much as corporate executives, as the following examples display:

> ExxonMobil has been criticized by major environmental advocacy groups. In 2003, Greenpeace listed Exxon as #1 Climate Criminal. Exxon's alleged crimes include the sabotage of efforts to deal with climate change, the fraudulent manipulation of peer reviewed scientific studies and organizations, misleading and outright lying to the population of the USA, its government officials and the global community in general (Wikipedia, 2010a).

> Labor unions, Christian organizations, and environmental groups have criticized Wal-Mart for its policies and/or business practices. In particular, several labor unions blame Wal-Mart workers' unwillingness to join their organizations on the company's anti-union stance. Others disapprove of the corporation's extensive foreign product sourcing, treatment of employees and product suppliers, environmental practices, and use of public subsidies, and the impact of stores on the local economies of towns in which they operate (Wikipedia, 2010b).

Similar examples of criticism of corporations can be found in almost all corporate articles on Wikipedia. Because Wikipedia is not a static medium as traditional encyclopedias are, new developments can be added to the articles instantaneously, yielding frequent changes.

The purpose of this study was to analyze the development of the framing of the same 10 *Fortune 500* corporations in Wikipedia articles across three different points of time. Data for this study was collected in 2006 before the current economic crisis began, in 2008 immediately after the recession started and in 2010 when the full effects of the recession were felt by the public. The study also analyzed the rigor and diversity of the editing process on these articles and their potential impact on public opinion. The findings have implications for public relations practitioners as the public information available about these companies is redefined on Wikipedia through a collective writing and editing process that circumvents traditional media gatekeepers. This collection of corporate facts is available online for anyone to see with just a click of their computer's mouse. Based on the results of this study, guidelines are provided for public relations practitioners to engage in the shaping of their companies' public profiles on Wikipedia.

LITERATURE REVIEW

In its relatively short history since its founding in January 2001, the collaboratively edited encyclopedia Wikipedia has developed into one of the most popular websites. Today, it is the sixth most popular website in the world and the fifth most popular in the United States. On a daily basis, Wikipedia reaches 12% of Internet users worldwide

(Alexa.com, 2010). Only Google, Facebook, YouTube and Yahoo are more popular websites in the United States. Leung (2009) also found that Wikipedia has similar contribution rates as YouTube.

The online social medium is based on the wiki concept, which allows any Internet user to contribute content to any page on the website. This concept, which has over time helped to increase the credibility and usability of the site, distinguishes it from traditional encyclopedia like Encyclopedia Americana or Encyclopedia Britannica, which ask experts to contribute articles on their specific fields. Through its large number of contributors, Wikipedia has grown 25 times as large as Encyclopedia Britannica (Cohen, 2010), and as Mattus (2009) stressed, "will never be finished" (p. 195) because it continuously expands.

In its early years, however, Wikipedia had been a synonym for hoaxes and unreliability, leading to harsh criticism by scholars and journalists. After gaining a broader audience in 2004 and 2005, many inaccuracies were detected in Wikipedia articles. In the 2004 presidential election for instance, the photo of former President George W. Bush was replaced in the article on him by one of Adolf Hitler (Boxer, 2004). A year later, in the probably most publicized Wikipedia hoax, the founding editorial director of USA Today, John Seigenthaler, was falsely linked to the assassination of former President John F. Kennedy (Lamb, 2006). Palser (2006) stated that "we've seen Wikipedia's good reputation besmirched by a few historical revisionists, ending our bewilderment" (¶ 3). Even today, hoaxes appear from time to time on Wikipedia articles (Pogatchnik, 2009).

Surprisingly, however, Wikipedia's overall accuracy has compared well against traditional encyclopedias. *Nature* found that Wikipedia and Encyclopedia Britannica's coverage of science topics was of similar reliability and had similar error rates (Ellison, 2006; Giles, 2005). Another study found that Wikipedia was superior to the traditional German encyclopedia Brockhaus in regard to accuracy, completeness and currency (Guentheroth, Schoenert, & Rodtmann, 2007). In addition, Wikipedia strengthened its policies for contributors and made it impossible to write and edit anonymously. Today, contributors either have to register or their IP addresses will be recorded. Thousands of popular articles (none of them corporate articles), such as the one of the U.S. president, are now locked for editing by only experienced administrators (Waters, 2009).

These improvements have led the *Financial Times* (2009) to point out that Wikipedia "is moving closer towards being like a normal encyclopedia, where specialist editors make sure that, as far as possible, the words that they print are true" (p. 8). In addition, *The Wall Street Journal* concluded that "Wikipedia has so much more depth and breadth than any other encyclopedia" (Crovitz, 2009, p. A13). Langlois and Elmer (2009) also stressed that the high search results for Wikipedia articles in Web searches contributed to the rise of Wikipedia. According to Stross (2009), "Authority now comes not from a small group of encyclopedia editors and famous contributors, but from Google's algorithms, which analyze links that point to Web pages elsewhere and other clues to make an educated guess about trustworthiness" (¶14).

Another sign of the growing credibility of Wikipedia is the increasing use of its articles as sources by reporters (Shaw, 2008). Messner and South (2008) found that Wikipedia has been framed as credible and accurate in the coverage of traditional news

media in the United States. McIntosh (2008) and Thorsen (2008) even argued that the adoption of the wiki concept for the collaborative online journalism project Wikinews leads to a redefinition of journalistic standards with a "neutral point of view" (p. 197). This describes a fundamental shift in how the standards of knowledge are defined in today's society. While traditional encyclopedias rely on elites to define these standards, Wikipedia lets the collective of public contributors decide what is important and what is not. This new approach changes the elitist gatekeeping process to a bottom-up process with the opportunity for everyone to participate. It also leads to a different framing of what is believed to be the standard of knowledge, which in turn can influence an audience's perception differently.

This shift in framing has major consequences for public relations practitioners. While in the past companies could rely on experts to define who they were, Wikipedia now confronts them with a collective of amateurs that has even greater influence on public opinion than the experts of the traditional encyclopedia ever did. While most traditional encyclopedias sit on shelves in libraries, Wikipedia articles are easily accessible every day on the Web. Subsequently, more and more companies are beginning to recognize the impact that social media can have on their reputation (Wright & Hinson, 2009). According to Bradshaw (2009), "companies are increasingly turning to social media sites such as Wikipedia … to communicate with investors" (p. 18). Nevertheless, with the explosion of social media, reputation management is more difficult than ever before and, if done carelessly, can cost a company greatly. Due to this importance, companies are using and monitoring social media like Twitter, blogs, and Facebook, but Wikipedia often goes unnoticed (Paine, 2010).

Social media's influence means a company's message and reputation are no longer mainly in the hands of public relations, but instead, everyone with access to the Internet can now be involved. While this change has opened new opportunities, it has also become a frightening reality for organizations of all sizes. One of the great challenges of social media is transparency.

"Transparency is the degree to which an organization shares information its stakeholders need to make informed decisions" (Holtz, 2009, p. 2). Companies have to decide how transparent their communication will be, keeping in mind that if their disclosures are found to be lacking in transparency, they may face public outcry for more information through social media (Gillin, 2007). In fact, in their study about how social media were changing public relations, Wright and Hinson (2008) found that 76% of their respondents agreed that social media were impacting corporate transparency.

The very nature of Wikipedia forces transparency on an organization. The simple concept that any fact about an organization can be placed on a corporate article and not be removed if it is factual and has a citation, puts companies in a challenging situation. Oftentimes, companies have information on their corporate articles that they would rather not highlight, such as corporate scandals or lawsuits. For the public, this is a goldmine of transparency providing easy access to all types of information about a company allowing individuals to make truly informed decisions about that company.

As social media move from phenomenon to a strategic tool, more public relations practitioners are developing skills necessary to succeed in this new environment (Wright & Hinson, 2009). Given the unrestrained voice social media grant publics, practitioners need to monitor what is being said about their company to keep a grasp on public opinion. Not only is it important to pay attention to the activist voices, but all viewpoints should be included in monitoring since social media help create public opinion and because it is often a source of information for journalists (Lariscy, Avery, Sweetser, & Howes, 2009).

This monitoring should include an analysis of how a corporate article is framed and the potential influence of those frames on public opinion. McCombs (2005) pointed out that the framing of attributes is one of the five major areas within the study of agenda-setting. In addition, Gamson (1989) stated that when a variety of options for presentation are available, the framing model can be used to analyze how certain attributes of information are emphasized over others. Based on this model, Mahon and Wartick (2003) concluded that the selection of specific facts and their interpretation can shape public opinion and influence the public's agenda.

An important concept of framing is the analysis of tonality. According to Michaelson and Griffin (2005), "tonality is an analysis that uses a subjective assessment to determine if content is either favorable or unfavorable to the person, company, organization or product discussed in the text" (p. 4). Tonality itself can be measured as positive, neutral or negative (e.g., DiStaso, Messner, & Stacks, 2007). This approach has been applied in several studies analyzing for instance consumer product advertising (e.g., Smith, 1996), the news coverage of company mergers (e.g., Kweon, 2000) and the framing of Wikipedia in news media coverage (e.g., Messner & South, 2008). Other researchers studied the topical coverage on Wikipedia and found that the diversity of topics covered is driven by the interests of users and not by the ranking of an authoritative editorial gatekeeper (Halavais & Lackaff, 2008).

To date, it appears that there has not been a study conducted that examines the framing of companies through the collective writing and editing process on Wikipedia. Due to the increasing popularity of Wikipedia, companies need to know everything – the good, bad and the ugly – that is being said about them. This study will contribute to that important knowledge.

Research Questions
Based on the above review of literature, the following research questions were explored:
   RQ1: What potential influence do corporate Wikipedia articles have?
   RQ2: How is public opinion formed on corporate Wikipedia articles?
   RQ3: Has the length of corporate Wikipedia articles changed over time?
   RQ4: How has the tone of corporate Wikipedia articles changed over time?
      RQ4a: How has the tone of individual corporate Wikipedia articles changed over time?
   RQ5: How have the topics of corporate Wikipedia articles changed over time?
      RQ5a: How have the topics of individual corporate Wikipedia articles changed over time?

RQ6: How have the topics for positive and negative content in corporate Wikipedia articles changed over time?

RQ6a: How have the topics for positive and negative content of individual corporate Wikipedia articles changed over time?

METHOD

To analyze the content of corporate Wikipedia articles over time, this study conducted a longitudinal panel analysis by following the same 10 companies for 2006, 2008 and 2010: Wal-Mart, Exxon Mobil, General Motors, Ford, General Electric, Chevron, ConocoPhillips, Citigroup, AIG, and IBM. These companies were selected because they were the top 10 *Fortune 500* companies for 2005. By virtue of their membership in this list, these companies are the largest and most widely followed companies in the United States, providing an excellent starting point for understanding of corporate Wikipedia content.

Not only is the collective of all 10 companies analyzed, but this study also explored the findings for each individual company yielding 10 separate case studies. The complete sample included 30 articles from Wikipedia (one for each of the 10 companies for 2006, 2008 and 2010). The analysis was conducted for each of the three years following the same coding scheme. The unit of analysis was the sentence, and each of the 30 articles was analyzed sentence by sentence. The analysis was conducted in February for each of the years.

Potential Influence

To explore the potential influence corporate Wikipedia articles can have, the names of each company were entered into the main search engines Google, Yahoo, and MSN. Then, the search loadings were counted to determine where the Wikipedia article loaded. This provides an understanding of how easy it is for people to locate the Wikipedia article when searching for corporate information.

The next analysis for potential influence was to calculate the number of people that view each of the corporate articles. This information is available on a monthly basis through Wikipedia under article traffic statistics for each individual company.

Formation of Public Opinion

The formation of public opinion on Wikipedia articles is derived from the people involved in editing/writing the content for each article. On each article, Wikipedia tracks the edit history – a log of all edits made to the article over its lifetime, including time, date, username/IP address information. From this information, rigor and diversity were calculated:

Rigor is the total number of edits for an article. This is based on the assumption that more editing on an article provides a deeper treatment of the subject or more scrutiny of the content.

Diversity is the total number of unique users. With more editors (users), there are more voices and different points of view. This is the active public for each Wikipedia article.

By identifying the rigor and diversity of each article, the formation of public opinion is better understood.

Framing

Each sentence was analyzed to determine how the companies were framed. This was operationalized through a combination of sentence tonality and topic. Tonality was obtained as in previous research (e.g., DiStaso, Messner & Stacks, 2007; Kweon, 2000; Michaelson & Griffin, 2005) by coding each sentence as positive, negative, or neutral. For example, a sentence was coded as positive if it said something like this: "In 2006, *Fortune* ranked XYZ Company 8th on its annual "Top 20" list of the most-admired companies in the United States;" an example of a sentence that would be coded as negative is "In 2004 and 2007, the American Customer Satisfaction Index survey found that Company XYZ had the worst customer satisfaction rating of any company or government agency in the country;" and an example of a neutral sentence is "The company is headquartered in Northfield, Illinois, a Chicago suburb."

Each sentence was also analyzed for the presence or absence of the following predetermined topics: corporate (i.e., sentences about the company or management, such as "The XYZ Company is an American multinational corporation based in Dearborn, Michigan, a suburb of Detroit."), historical (i.e., sentences about historical events defined as pre 2000, such as "XYZ Company's first U.S. trademark was for the name "THINK" filed as a U.S. trademark on June 6, 1935"), performance (e.g., sentences such as "XYZ Company is also planning to produce 250,000 E85-capable vehicles a year in the US, adding to some 1.6 million already sold in the last 10 years"), employees (i.e., sentences such as "XYZ Company's dress code is 'Business casual' although normally employees wear formal clothes during client meetings"), financial (i.e., sentences about company finances or stock, such as "XYZ Company's share prices had fallen over 95% to just $1.25 by September 16, 2008, from a 52-week high of $70.13."), competition (i.e., sentences such as "In North America, XYZ Company's primary competition includes department stores like Kmart, Target, ShopKo and Meijer,"), corporate social responsibility (i.e., sentences such as "Since 1996, XYZ Company has been the exclusive source of funding for Safe Kids USA's "Safe Kids Buckle Up" program, a national initiative to ensure child automobile safety through education and inspection"), legal concerns/scandals (i.e., sentences such as "On August 4, 2009 the SEC fined XYZ Company $50 million for breaking accounting rules in two separate cases"), and other. Because each sentence was coded for the presence or absence of each topic, it was possible for any sentence to contain more than one topic.

The codebook, created in 2006, was pretested and revised before coding began to increase intercoder and intracoder reliability. This same codebook was used in the analysis of all three years. The coding was completed by the primary coder for all the articles and 20% was also analyzed by the second coder to calculate intercoder reliability. Overall, the data reflected an intercoder reliability coefficient of .91 using Soctt's *pi* (1955).

RESULTS

This study analyzed the Wikipedia content and statistics for 10 companies in 2006, 2008, and 2010: Wal-Mart, Exxon Mobil, General Motors, Ford, General Electric, Chevron, ConocoPhillips, Citigroup, AIG, and IBM. In total, this included 3,824 sentences (885 for 2006, 1271 for 2008, and 1668 for 2010).

RQ1: What potential influence do corporate Wikipedia articles have?

The corporate Wikipedia articles in this study were among the top loadings in common search engines. The corporate Wikipedia article loaded in the top 5 on at least one of the search engines for seven companies in 2006 and all 10 in 2008 (with four in the top two) and 2010 (with seven in the top two) (see Table 1).

On average, the corporate Wikipedia article loaded as the eighth item in the search engines in 2006, the fourth in 2008, and the third in 2010, indicating an increase in prominence.

Table 1: *Fortune 10* Wikipedia Search Loadings								
	2006*			2008*			2010*		
	Yahoo	MSN	Google	Yahoo	MSN	Google	Yahoo	MSN	Google
Wal-Mart Stores	9	17	12	4	9	6	4	2	4
Exxon Mobil	4	8	12	3	2	3	9	3	3
General Motors	5	4	17	2	3	2	4	2	3
Ford Motor	13	13	10	5	7	6	2	2	6
General Electric	11	5	14	4	2	4	3	3	6
Chevron	8	10	14	3	4	5	4	5	5
ConocoPhillips	10	5	3	3	3	4	2	4	5
Citigroup	5	6	7	4	4	3	2	3	5
AIG	5	8	4	2	4	3	3	2	3
IBM	3	5	2	4	4	4	2	2	3
Average per search engine	**7.3**	**8.1**	**9.5**	**3.4**	**5.8**	**4.0**	**3.5**	**2.8**	**4.3**
Average for year	**8.3**			**4.4**			**3.5**		

* Analyzed each February.

In one year (ending February 2010), there was an average of 780,053 views of the 10 corporate Wikipedia articles (see Table 2). General Motors, Wal-Mart, IBM and Ford Motor all had over a million views. It is important to note that these are views of the articles and not the number of people.

Table 2: Influence of Wikipedia	
	# Article Views 2010*
Wal-Mart Stores	1,422,943
Exxon Mobil	350,111
General Motors	1,656,415
Ford Motor	1,052,443
General Electric	829,243
Chevron	241,663
ConocoPhillips	128,385
Citigroup	484,223
AIG	519,653
IBM	1,115,454
Average	780,053

* From March 2009 to February 2010. Other years not available.

RQ2: How is public opinion formed on corporate Wikipedia articles?

The formation of public opinion was analyzed by calculating the rigor (the number of edits) and diversity (the number of users) of the corporate articles (see Table 3). The average rigor increased from 2006 (*M*= 443.8) to 2008 (*M*=607.6), but decreased back to a level similar to 2006 in 2010 (*M*=453.7). The average diversity also increased from 2006

(*M*=194.5) to 2008 (*M*=308.3), but decreased from 2008 to 2010 (*M*=227.5). The average number of edits per user was 2.28 in 2006, 1.97 in 2008, and 1.99 in 2010.

When calculated by sentence, it was found that the adjusted rigor (number of edits per sentence) slightly decreased from 2006 (*M*=4.85) to 2008 (*M*= 4.78) and dropped substantially from 2008 to 2010 (*M*=2.72). The adjusted diversity increased from 2006 (*M*=2.13) to 2008 (*M*=2.43), but dropped quite a bit from 2008 to 2010 (*M*=1.37).

All the companies analyzed, aside from Wal-Mart, saw an increase in rigor from 2006 to 2008. However, only General Motors, General Electric, and AIG increased again in 2010. In addition, all the companies saw an increase in diversity from 2006 to 2008, and again, only General Motors, General Electric, and AIG continued to increase from 2008 to 2010. Wal-Mart had the highest rigor and diversity over all three years, and ConocoPhillips had the lowest.

Table 3: Wikipedia Formation of Public Opinion						
	Rigor (# Edits)*			Diversity (# Users)*		
	2006	2008	2010	2006	2008	2010
Wal-Mart Stores	2046	1713	241	664	748	122
Exxon Mobil	226	532	214	131	247	127
General Motors	360	1122	1962	202	519	750
Ford Motor	772	940	279	342	499	130
General Electric	272	307	326	92	211	225
Chevron	85	118	114	61	86	76
ConocoPhillips	32	69	59	25	52	34
Citigroup	141	426	219	96	223	127
AIG	96	117	497	62	79	283
IBM	408	732	626	270	419	401
Average	443.8	607.6	453.7	194.5	308.3	227.5
Average Per Sentence	4.85	4.78	2.72	2.13	2.43	1.37

* Figures are for full year from March to February. Highlighting = increase.

RQ3: Has the length of corporate Wikipedia articles changed over time?
The length of the corporate articles in Wikipedia increased steadily from 2006 to 2010 (2006: *M*=91.5, *SD*=51.6; 2008: *M*=127.1, *SD*=75.0; 2010: *M*=166.6, *SD*=76.4) (see Chart 1). This was a 28% increase from 2006 to 2008 and an additional increase of 17% from 2008 to 2010 for a total increase of 45% from 2006 to 2010.


Chart 1: Length of Articles
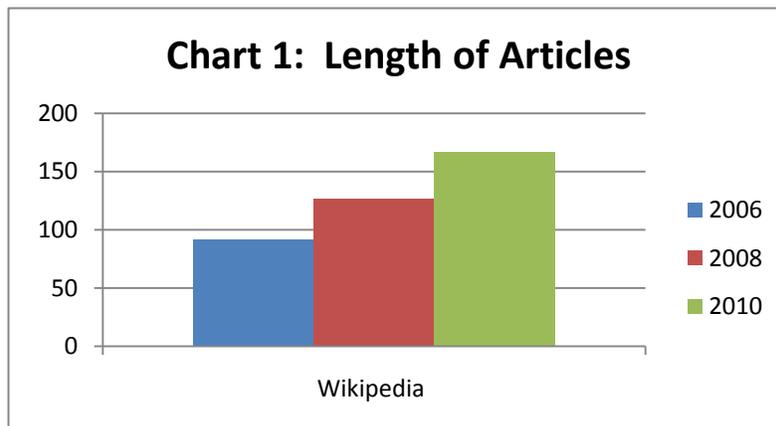
In 2006, the shortest article in 2006 was for ConocoPhillips with only six sentences, and the longest article was for Ford Motor with 175 sentences. In 2008, the shortest article was for ConocoPhillips again but it increased to 29 sentences, and the longest article was still for Ford Motor with an increase to 259 sentences. Then, in 2010, ConocoPhillips was again the shortest corporate article, even though it grew to 36 sentences, and Ford Motor remained the longest, but now with 311 sentences.

RQ4: How has the tone of corporate Wikipedia articles changed over time?

In 2006, the Wikipedia corporate articles analyzed contained a higher percentage of negative content (17.6%, *n*=149) than positive content (12.6%, *n*=107). This reversed in 2008, to be more positive (24.2%, *n*=298) than negative (14.6%, *n*=178). In 2010, it reversed again going back to levels similar to 2006 with more negative (18.9%, *n*=287) than positive (12.4%, *n*=188) content (see Table 4 and Chart 2).

Table 4: Wikipedia Tone			
	2006	**2008**	**2010**
Positive	12.3% (*n*=109)	24.2% (*n*=308)	11.5% (*n*=192)
Negative	17.5% (*n*=155)	14.6% (*n*=185)	24.6% (*n*=410)
Neutral	70.2% (*n*=621)	61.2% (*n*=778)	63.9% (*n*=1066)

Chart 2: Wikipedia Tone
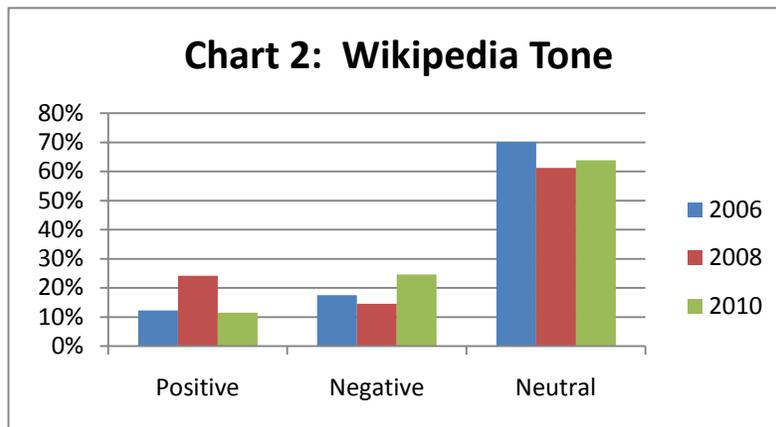
RQ4a: How has the tone of individual corporate Wikipedia articles changed over time?
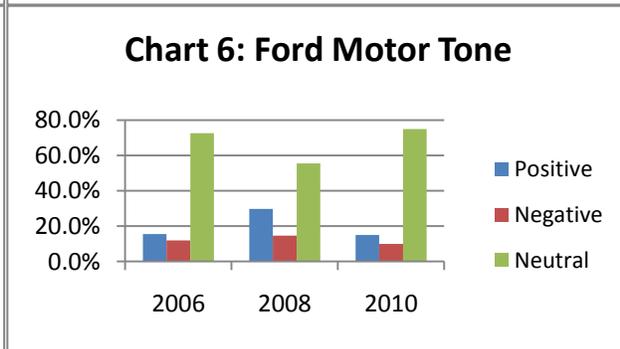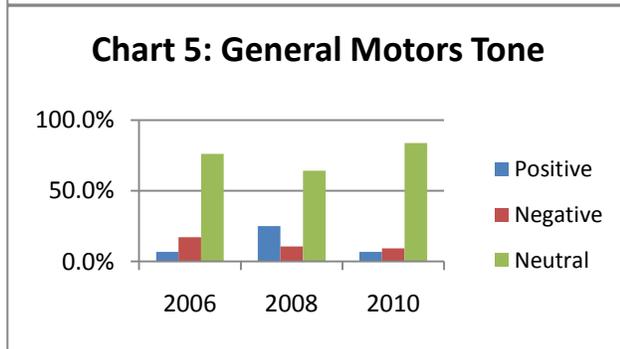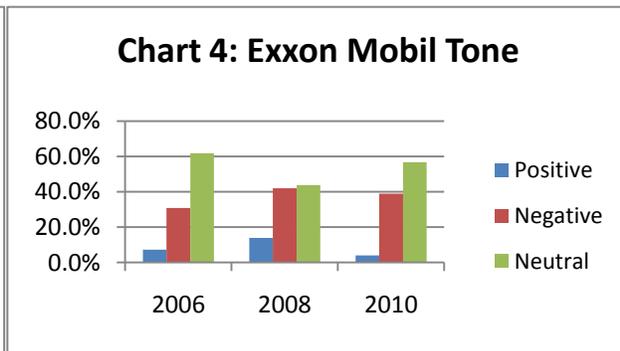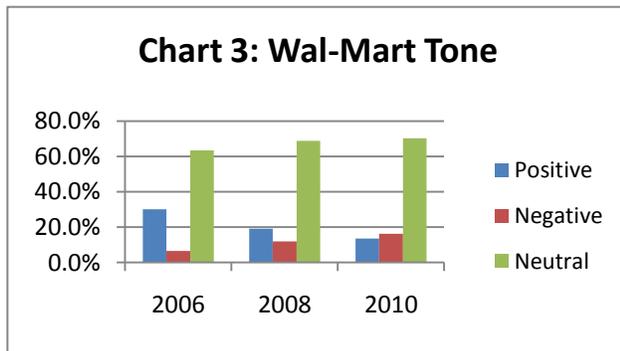
Over the years, each company faired differently (see Charts 3-12); however, there are some trends to point out. Three companies maintained a positive ratio for positive to negative content over all three years analyzed: Ford Motor, General Electric, and IBM (see Table 5). Exxon Mobil was the only company to maintain a negative ratio for its positive to negative content. Four companies (General Motors, ConocoPhillips, Citigroup, and AIG) saw an improvement of their positive to negative ratio in 2008.
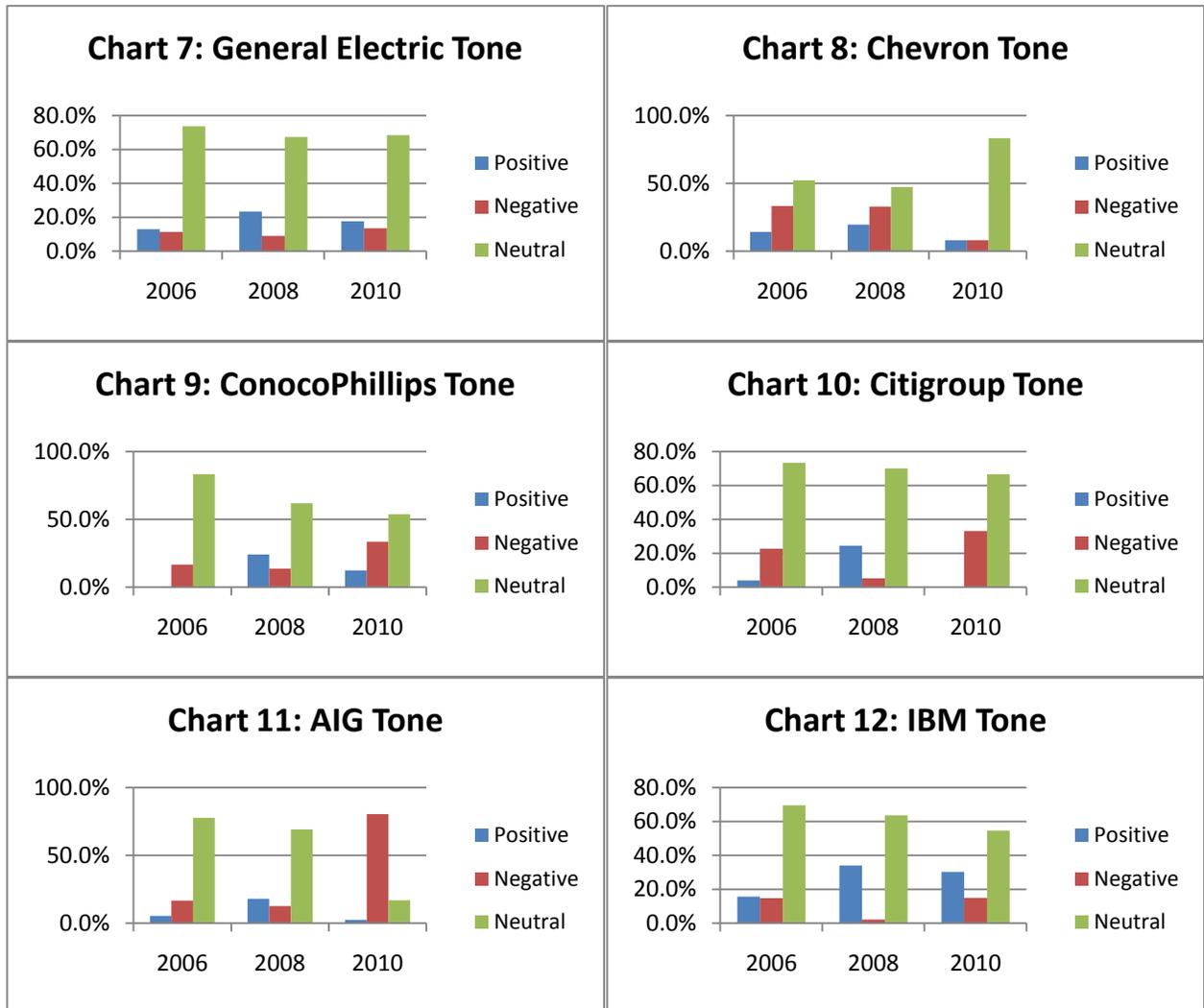
The companies with the highest percentage of positive content were Wal-Mart (30.1%, *n*=28) in 2006 and IBM in 2008 (34.1%, *n*=45) and in 2010 (30.3%, *n*=46). The companies with the highest percentage of negative content were Chevron (33.3%, *n*=5) in 2006, Exxon Mobil (42.1%, *n*=48) in 2008, and AIG (80.4%, *n*=123) in 2010. The most

neutral content was for ConocoPhillips (83.3%, *n*=22) in 2006, Citigroup (70.2%, *n*=80) in 2008, and General Motors (83.9%, *n*=172) in 2010, while the least neutral content was for Chevron (52.4%, *n*=48) in 2006, Exxon Mobil (43.9%, *n*=50) in 2008, and AIG (17.0%, *n*=26) in 2010.

In 2006, the company that had the "best year" due to the best positive to negative content ratio was Wal-Mart, and the company that had the "worst year" was ConocoPhillips. The company with the "best year" in 2008 was IBM and the company with the "worst year" was Exxon Mobil. Again, in 2010, IBM had the "best year," but Citigroup had the "worst year."

Table 5: Positive to Negative Content Ratio per Company			
	2006	**2008**	**2010**
Wal-Mart Stores	4.6 x 1	1.6 x 1	1 x 1.2
Exxon Mobil	1 x 4.3	1 x 3.7	1 x 9.5
General Motors	1 x 2.5	2.4 x 1	1 x 1.4
Ford Motor	1.3 x 1	2.0 x 1	1.5 x 1
General Electric	1.1 x 1	2.6 x 1	1.3 x 1
Chevron	1 x 2.3	1 x 1.7	1 x 1
ConocoPhillips	0 x 16.7	1.7 x 1	1 x 2.7
Citigroup	1 x 5.7	4.6 x 1	0 x 33.3
AIG	1 x 3.0	1 x 1.4	1 x 30.9
IBM	1.1 x 1	14.8 x 1	2.0 x 1

Chart 3: Wal-Mart Tone

Chart 4: Exxon Mobil Tone

Chart 5: General Motors Tone

Chart 6: Ford Motor Tone

Chart 7: General Electric Tone

Chart 8: Chevron Tone

Chart 9: ConocoPhillips Tone

Chart 10: Citigroup Tone

Chart 11: AIG Tone

Chart 12: IBM Tone

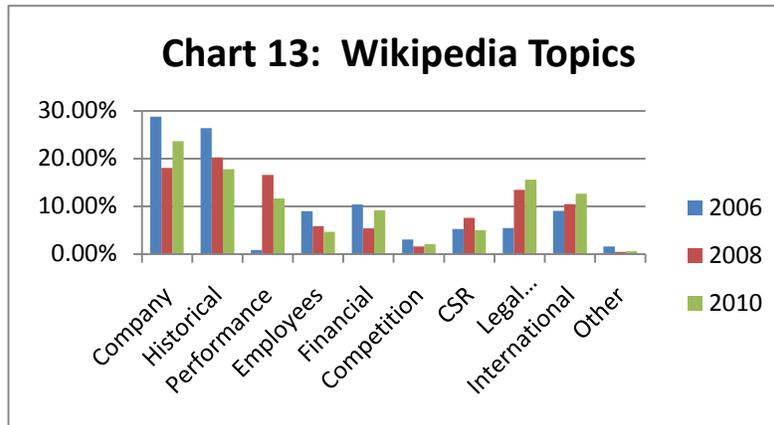**RQ5: *How have the topics of corporate Wikipedia articles changed over time?***

The corporate Wikipedia articles analyzed largely focused on company information (37.7%, *n*=334) and historical information (34.6%, *n*=306) in 2006 and on historical information (22.4%, *n*=285) and company information (20.0%, *n*=254) in 2008. Then in 2010, the focus changed to company information (36.0%, *n*=601), and legal concerns/scandals (23.8%, *n*=397) (see Table 6 and Chart 13).

Table 6: Wikipedia Topics			
	2006	**2008**	**2010**
Company	28.8% (*n*=334)	18.1% (*n*=254)	23.7% (*n*=601)
Historical	26.4% (*n*=306)	20.3% (*n*=285)	17.8% (*n*=297)
Performance	0.9% (*n*=8)	16.6% (*n*=233)	11.7% (*n*=376)
Employees	9.0% (*n*=104)	5.9% (*n*=83)	4.7% (*n*=120)
Financial	10.4% (*n*=121)	5.4% (*n*=76)	9.2% (*n*=233)
Competition	3.1% (*n*=36)	1.6% (*n*=23)	2.1% (*n*=53)
CSR	5.3% (*n*=62)	7.6% (*n*=107)	5.0% (*n*=126)
Legal Concerns/Scandals	5.5% (*n*=64)	13.5% (*n*=190)	15.6% (*n*=397)
International	9.1% (*n*=106)	10.5% (*n*=147)	12.7% (*n*=322)
Other	1.6% (*n*=18)	0.5% (*n*=7)	0.6% (*n*=16)

Note: Each sentence was coded for the presence or absence of all topics so many sentences

contained multiple topics and percentages may not total 100 due to rounding.

Chart 13: Wikipedia Topics

RQ5a: How have the topics of individual corporate Wikipedia articles changed over time?

Each of the 10 companies was analyzed for topic (see Table 7) and only two had the same main topic over time (General Electric and Citigroup). The top topic in both companies was information about the company for all three years (General Electric 2006: 36.2%, *n*=25; 2008: 44.2%, *n*=34; 2010: 29.5%, *n*=49; Citigroup 2006: 34.3%, *n*=74; 2008: 40.2%, *n*=53; 2010: 30.1%, *n*=68).

The most common topic in 2006 was company information with six companies having this as their main topic (AIG 44.7%, *n*=17; IBM 38.5%, *n*=55; General Electric 36.2%, *n*=25; Citigroup 34.3%, *n*=74; ConocoPhillips 33.3%, *n*=2; Wal-Mart 32.1%, *n*=34). The second most common topic in 2006 was historical information (Exxon Mobil 37.1%, *n*=49; General Motors 30.4%, *n*=49; Chevron 27.7%, *n*=18). The third most common topic in 2006 for the companies was international (Ford Motor 26.5%, *n*=59).

The topics in 2008 diversified more among the companies. The most common topic was still company information (AIG 67.3%, *n*=37; General Electric 44.2%, *n*=34; Citigroup 40.2%, *n*=53). This was followed by historical (ConocoPhillips 34.3%, *n*=32; Chevron 32.5%, *n*=27) and performance (Ford Motor 25.0%, *n*=78; General Motors 22.9%, *n*=51). Again in 2008, one company's article focused on international information (Wal-Mart 20.5%, *n*=47), but new to this year was employee content (36.1%, *n*=52) and legal concerns/scandals (44.9%, *n*=53).

There was yet another shift in topics in 2010, but the main topic remained company information (Chevron 38.6%, *n*=22; General Motors 33.0%, *n*=89; Wal-Mart 32.9%, *n*=143; Citigroup 30.1%, *n*=68; General Electric 29.5%, *n*=49; IBM 27.2%, *n*=50). The second most common topic for the companies was legal concerns/scandals, with three companies having it as their top topic (AIG 39.7%, *n*=110; Exxon Mobile 29.7%, *n*=65; ConocoPhillips 27.1%, *n*=54). Finally, one company contained a high amount of content on performance information (Ford Motor 30.9%, *n*=157).

Table 7: Top Wikipedia Topics per Company			
	2006	**2008**	**2010**
Wal-Mart Stores	Company	International	Company
Exxon Mobil	Historical	Legal Concerns/Scandals	Legal Concerns/Scandals
General Motors	Historical	Performance	Company
Ford Motor	International	Performance	Performance
General Electric	Company	Company	Company
Chevron	Historical	Historical	Company
ConocoPhillips	Company	Historical	Legal Concerns/Scandals
Citigroup	Company	Company	Company
AIG	Company	Company	Legal Concerns/Scandals
IBM	Company	Employees	Company

RQ6: How have the topics for positive and negative content in corporate Wikipedia articles changed over time?

By characterizing all the topics by tone, the most common topics for positive, negative and neutral content in the corporate Wikipedia articles was identified (see Tables 8 and 9). The top topic for the positive content was corporate social responsibility (3.6%, n=32) in 2006, performance (9.1%, n=116) in 2008, and again corporate social responsibility (13.3%, n=339) in 2010. The top topic for the negative content was legal concerns/scandals in 2006 (6.2%, n=55), in 2008 (10.1%, n=128), and in 2010 (20.3%, n=339). The top topic for the neutral content was company information (32.4%, n=287) for 2006, historical information (18.1%, n=230) for 2008, and company information (34.2%, n=571) for 2010.

Table 8: Wikipedia Topics by Tone			
	Positive	**Negative**	**Neutral**
2006			
Company	2.8%(n=32)	1.3%(n=15)	24.8%(n=287)
Historical	0.6%(n=7)	3.2%(n=37)	22.6%(n=262)
Performance	0.1%(n=1)	0.3%(n=3)	0.3%(n=4)
Employees	1.6%(n=19)	2.6%(n=30)	4.7%(n=55)
Financial	2.0%(n=23)	3.5%(n=41)	4.9%(n=57)
Competition	0.2%(n=2)	0.6%(n=7)	2.3%(n=27)
CSR	3.5%(n=41)	1.1%(n=13)	0.7%(n=8)
Legal Concerns/Scandals	0	4.7%(n=55)	0.8%(n=9)
International	0.4%(n=5)	1.1%(n=13)	7.6%(n=88)
Other	0	1.0%(n=12)	0.5%(n=6)
2008			
Company	4.3%(n=61)	0	13.7%(n=193)
Historical	3.3%(n=47)	0.5%(n=8)	16.4%(n=230)
Performance	8.3%(n=116)	0.6%(n=9)	7.7%(n=108)
Employees	1.6%(n=23)	0.4%(n=5)	3.9%(n=55)
Financial	1.4%(n=19)	0.9%(n=11)	3.4%(n=48)
Competition	0.1%(n=1)	0.4%(n=6)	1.1%(n=15)
CSR	4.4%(n=62)	1.5%(n=21)	1.7%(n=24)
Legal Concerns/Scandals	0.1%(n=2)	9.1%(n=128)	4.3%(n=61)
International	1.7%(n=24)	0.7%(n=10)	8.0%(n=113)
Other	0	0	0.4%(n=7)
2010			
Company	0.9% (n=24)	0.2% (n=6)	22.5% (n=571)
Historical	1.8% (n=47)	0.9% (n=23)	8.9% (n=227)
Performance	1.5% (n=39)	0.8% (n=21)	12.4% (n=316)
Employees	1.1% (n=28)	1.7% (n=42)	1.8% (n=47)
Financial	0.3% (n=8)	5.2% (n=133)	3.6% (n=92)
Competition	0.01% (n=2)	0.1% (n=3)	1.9% (n=48)
CSR	3.3% (n=84)	1.2% (n=31)	0.4% (n=11)
Legal Concerns/Scandals	1.0% (n=27)	13.3% (n=339)	0.8% (n=21)
International	0.6% (n=14)	2.8% (n=71)	9.3% (n=237)
Other	0	0.01% (n=1)	0.6% (n=15)

Table 9: Top Wikipedia Topics by Tone			
	Positive	**Negative**	**Neutral**
2006	CSR	Legal Concerns/Scandals	Company
2008	Performance	Legal Concerns/Scandals	Historical
2010	CSR	Legal Concerns/Scandals	Company

RQ8: How have the topics for positive and negative content of individual corporate Wikipedia articles changed over time?

In 2006, the most common positive topic for the companies analyzed was company information (General Electric 7.7%, n=5; Chevron 5.9%, n=4; AIG 5.3%, n=2; General Motors 2.5%, n=4). In 2008, this shifted to performance information (IBM 16.0%, n=23; General Motors 12.1%, n=27; Chevron 10.8%, n=9; Ford Motor 10.3%, n=32; Exxon Mobil 5.9%, n=7). In 2010, the focus changed again, but this time to corporate social responsibility being the main topic for the positive content (Ford Motor 6.9%, n=35; Chevron 5.3%, n=3; ConocoPhillips 3.5%, n=7; Wal-Mart 2.8%, n=12; AIG 1.4%, n=4).

The most common topic for the negative content was legal concerns/scandals for all three years analyzed. In 2006 there were five companies that had legal concerns/scandals as their main negative content (ConocoPhillips 16.7%, n=1; AIG 13.1%, n=5; Citigroup 10.6%, n=23; IBM 4.9%, n=7; General Electric 4.6%, n=3). This number increased to nine companies in 2008 (Exxon Mobil 39.0%, n=46; Chevron 30.1%, n=25; AIG 12.7%, n=7; ConocoPhillips 12.5%, n=4; General Electric 9.1%, n=7; Wal-Mart 8.7%, n=20; Ford Motor 6.4%, n=20; General Motors 4.0%, n=9; Citigroup 3.0%, n=4; IBM 1.4%, n=2), and nine companies again in 2010 (AIG 39.0%, n=108; Exxon Mobil 25.1%, n=55; ConocoPhillips 21.6%, n=43; Citigroup 15.5%, n=35; General Electric 9.6%, n=16; Chevron 5.3%, n=3; Ford Motor 4.5%, n=23; General Motors 4.4%, n=12; IBM 4.3%, n=8).

Table 10: Top Topics for Tone by Company						
	2006		**2008**		**2010**	
	Positive	**Negative**	**Positive**	**Negative**	**Positive**	**Negative**
Wal-Mart Stores	CSR	Company	CSR	Legal	CSR	Employees
Exxon Mobil	Financial	Historical	Performance	Legal	Performance	Legal
General Motors	Company	Financial	Performance	Financial	Performance	Legal
Ford Motor	CSR	Financial	Performance	Legal	CSR	Legal
General Electric	Company	Legal	Company	Legal	Performance	Legal
Chevron	Company	Historical	Performance	Legal	CSR	Legal
ConocoPhillips	None	Legal	CSR	Legal	CSR	Legal
Citigroup	Financial	Legal	Company	Legal	None	Legal
AIG	Company	Legal	Company	Legal	CSR	Legal
IBM	Employees	Legal	Performance	Legal	Employees	Legal

DISCUSSION

The purpose of this study was to conduct a longitudinal panel study by analyzing Wikipedia content and statistics for the same 10 *Fortune 500* companies in 2006, 2008, and 2010: Wal-Mart, Exxon Mobil, General Motors, Ford, General Electric, Chevron, ConocoPhillips, Citigroup, AIG, and IBM.

Overall, Wikipedia has gained influential search engine prominence over the years, moving from an average of eighth in 2006 to the third top loading in 2010. This indicates an increase in prominence. Combined with the sheer number of article views, it also makes the Wikipedia corporate articles in this analysis very influential. When searching for these 10 companies on leading online search engines, the Wikipedia articles can hardly be ignored in the search results, as they rank right below the official company websites. In addition, it gives Internet users the choice of retrieving company information from the corporate website or viewing information on a variety of topics that has been developed through a rigorous collective editing process. The number of views for the 10 Wikipedia articles analyzed, with an average of more than 780,000 views in the last year alone, stresses that they are finding a mass audience at this point.

On the other hand, the Wikipedia community that is editing these 10 corporate articles has been forming a tighter circle. In 2010, the rigor of Wikipedia content analyzed decreased by close to half and the diversity decreased by more than half. Nevertheless, with an average of more than 400 edits and roughly 200 users per article over all three years, these articles maintained a high level of interest and were in a state of constant change. In addition, the corporate articles maintained a steady length growth, with the largest article (Ford Motor) having 311 sentences, giving the reader a large amount of content about each company. This underlines that Wikipedia has the ability to store as much content from the past as needed, but can also add new developments continuously and instantaneously. This makes Wikipedia a very useful tool for users and explains why it has been increasing in popularity.

However, the popularity and nature of Wikipedia pose extraordinary challenges for public relations practitioners, as the results of this study show. The tone of the 10 corporate articles revealed a higher level of negative content in 2006 and 2010, but contained more positive content in 2008, reflecting the challenging times for these companies caused by the worldwide economic recession. The different tonality observed in 2008 also seems to stem from a greater awareness of public relations practitioners about Wikipedia and its challenges after the reliability issues discussed in earlier parts of this study gained widespread public attention. Nevertheless, the focus of the corporate articles became less and less about the past and more about what is currently going on with the companies. This included more content about corporate social responsibility activities and legal concerns/scandals. Especially during the ongoing recession, the focus shifted towards these topics, inserting more negativity into these corporate articles. However, when the company articles were analyzed individually on their tonality and topic, a very diverse picture emerged, showing great differences in how the companies were framed over time.

Company Profiles

Wal-Mart: Wal-Mart was the most heavily edited corporate article in this analysis and it had the highest number of users. In 2006, it had the "best year" out of all the companies analyzed due to having the strongest positive to negative content ratio. The year with the highest positive to negative content for Wal-Mart was 2006 and its lowest year was 2010 when it had more negative than positive content. The Wikipedia article content for Wal-Mart was mainly about the company in 2006 and 2010 and international information in 2008. Corporate social responsibility was its main topic for positive content

over all three years, but its negative content fluctuated from being largely about the company in 2006, to legal concerns/scandals in 2008, and employees in 2010.

Exxon Mobil: In 2008, Exxon Mobil had the "worst year" out of all the companies analyzed due to having the highest ratio of negative to positive content for the year. It consistently had more negative than positive content, and 2010 it had its highest level of negative content. The Wikipedia article content for Exxon Mobil was mainly about historical information in 2006 and legal concerns/scandals in 2008 and 2010. Financial information was its main topic for positive content in 2006, but it changed to performance for 2008 and 2010. Its negative content started out predominantly about historical information in 2006, but changed to legal concerns/scandals in 2008 and 2010.

General Motors: General Motors had the highest percentage of neutral content out of all the companies analyzed in 2010. The year with the best positive to negative content was 2008; the only year it had more positive than negative content. The Wikipedia article content for General Motors was mainly about historical information in 2006, performance in 2008 and the company in 2010. Company information was its main topic for positive content in 2006, but it changed to performance for 2008 and 2010. Its negative content started out largely about finances in 2006 and 2008, but changed to legal concerns/scandals in 2010.

Ford Motor: Ford Motor had the longest Wikipedia article out of all the companies analyzed over all the three years. It consistently had more positive than negative content and 2008 was the year it had the highest amount of positive content. The Wikipedia article content for Ford Motor was mainly about international information in 2006 and performance in 2008 and 2010. Corporate social responsibility was its main topic for positive content in 2006 and 2010, but performance was the focus in 2008. Its negative content primarily started out about its finances in 2006, but changed to legal concerns/scandals in 2008 and 2010.

General Electric: General Electric consistently had more positive than negative content in its Wikipedia article, and 2008 was its best year for positive content. Over all three years, its content remained largely about the company. The company was the main topic for positive content in 2006 and 2008, but performance was the focus in 2010. Its negative content was mainly about legal concerns/scandals in all three years analyzed.

Chevron: Chevron had the highest percentage of negative content in 2006. It consistently had more negative than positive content, and 2006 was the year that it had the highest amount of negative content. The Wikipedia article content for Chevron was mainly about historical information in 2006 and 2008 and the company in 2010. Its main topic for positive content fluctuated over the years, with 2006 focused largely on company information, 2008 on performance, and 2010 on corporate social responsibility. Its negative content started out primarily about its historical information in 2006, but changed to legal concerns/scandals in 2008 and 2010.

ConocoPhillips: ConocoPhillips had the shortest Wikipedia article over all three years analyzed. It also had the lowest number of edits and users and the highest percentage of neutral content in 2006. In 2006, it had the "worst year" out of all the companies analyzed due having the highest ratio of negative to positive content for the year. It is no surprise then, that 2006 was its worst year with a high amount of negative content and no positive content, but in 2008, it turned that around and had more positive content than negative. Then, the Wikipedia content turned more negative again in 2010. Its content was mainly about the company in 2006, historical in 2008, and legal concerns/scandals in 2010. Corporate social responsibility was its main topic for positive

content in 2008 and 2010 but they did not have any positive content in 2006. Its negative content was predominantly about legal concerns/scandals in all three years analyzed.

Citigroup: In 2010, Citigroup had the "worst year" out of all the companies analyzed due having the highest ratio of negative to positive content for the year. It also had the highest percentage of neutral content in 2008. Its best year was 2008 when it had more positive than negative content, and its worst year was 2010 when it had no positive content and a high level of negative content. Over all three years, its content remained largely about the company. Its finances were the main topic for positive content in 2006, but this changed to company information in 2008 and it did not have any positive content in 2010. Its negative content was largely about legal concerns/scandals in all three years analyzed.

AIG: It is no surprise that AIG had the highest percentage of negative content for 2010 out of all the companies analyzed. It consistently had more negative than positive content, and 2010 was the year that it had the highest amount of negative content. The Wikipedia article content for AIG was mainly about the company in 2006 and 2008 and legal concerns/scandals in 2010. Corporate social responsibility was its main topic for positive content in 2010 but 2006 was about company information. Its negative content was predominantly about legal concerns/scandals in all three years analyzed.

IBM: IBM had the highest percentage of positive content in 2008 and 2010. It had the "best year" out of all the companies analyzed in 2008 and 2010 due to having the highest positive to negative content ratios for those years. It consistently had more positive than negative content, and 2008 was the year that it had the highest amount of positive content. The Wikipedia article content for IBM was mainly about the company in 2006 and 2010 and employees in 2008. Its employees were the main topic for positive content in 2006 and 2010, but performance was the main topic in 2008. Its negative content was predominantly about legal concerns/scandals in all three years analyzed.

Public Relations Responsibilities

As the research presented shows, companies may be surprised at the content on their Wikipedia articles. What is said in a corporate Wikipedia article has the possibility to influence many people. Therfore, the monitoring of Wikipedia in public relations should be included in all social media plans. Simply knowing about what content is on a company page will provide public relations practitioners with an understanding of what the general public knows about their organization. It also gives insight into what topics are important, and how many people have something to say about the company. Ultimately, a key principle of social media is to understand and respect the rules and expectations of each individual community. Therefore, the following guidelines are suggested.

For many companies, the creation of a Wikipedia article is not a choice, because one is created for them. But if a company does not have a Wikipedia article yet, one can be started easily. To have a Wikipedia page, the company must be deemed noteworthy enough to warrant an article. This means that if the Wikipedia community does not believe it is worthy, it will be deleted. In addition, the idea behind Wikipedia is that articles are created by a community of editors with a neutral point of view and citations to published sources, not original content. This means that a company can't simply write its entire Wikipedia page.

Once a Wikipedia page exists for a company, the rules for making changes need to be followed. Although topics that many companies would rather not have highlighted (such as legal concerns or scandals) often have prominent placement, there is nothing a company can do (or should do) about it. That is, unless it is not factual information. Then, and only then, can a company edit the content in its Wikipedia article.

There are three choices for editing an article. First, according Jay Walsh, Head of Communications for Wikipedia, anyone, including public relations practitioners, "can participate on Wikipedia in any way they like" (see Armstrong, 2010, ¶ 12). This means that public relations practitioners can add content to an article, but it must be backed up by a citation. The second option is to post a discussion to the article requesting a change or to add content. It is important to disclose that the request is on behalf of the company. This can be done by creating a user account using a real name and the company name. Before making the request, it is important to read through the article discussion tab to make sure the issue has not already been brought up. The third option is to send a request to info@wikimedia.org. All three of the options require back-up with a citation, such as media coverage. If it cannot be cited, it is unlikely to be changed. In addition, if the information posted on an article is incorrect but is cited from a credible source, a more credible source will need to be cited. Factual information that is not worded as a company would like or about a topic it would rather not have highlighted should be left alone. This forced transparency puts public relations practitioners in a difficult position, but simply knowing what is available will help companies better plan their communications. Changing or adding content to company Wikipedia pages is a slippery slope, because every change on Wikipedia is recorded and IP addresses can be traced. Editing beyond the fixing of errors is unethical. The website Wikiscanner.com also records and reveals anonymous edits by organizations in their own Wikipedia articles. Therefore, it is strongly recommended to work openly towards changes and edits.

CONCLUSION

Through an analysis of 10 *Fortune 500* companies over time, this study emphasizes the importance of monitoring Wikipedia by public relations practitioners. The corporate Wikipedia articles analyzed loaded high in search engines, had high levels of edits, users, and viewers. It was common for the companies to have positive content about corporate social responsibility and negative content about legal concerns or scandals.

The findings should be a call to action by public relations practitioners. They cannot afford to not be part of the discussions about the public profile of their organizations. The rules of Wikipedia make it almost impossible to erase negative and controversial content from these articles and make it a very tedious task to implement changes. However, public relations practitioners have the same opportunity as anyone else to write and edit. There is nothing wrong with weighing in on the discussions that hundreds of Wikipedia editors have every day. It would only be wrong to do this anonymously or to hire someone else to do it "undercover." This would not only constitute unethical behavior, but would most likely cause a much larger online crisis than the content on Wikipedia will ever do. While it might not be possible for public relations practitioners to erase content on a scandalous event that happened decades ago and is well documented, it is possible to add content on how

the company has dealt with the situation and changed its policies. This should be able to be referenced fairly easily.

As with all research, this study is also subject to limitations. One is that this study analyzed 10 *Fortune 500* companies over time. Although analyzing the largest and most widely followed companies was appropriate for this study, the findings are limited to just these companies and cannot be generalized. Future research should analyze various sized companies with good and bad reputations.

Wikipedia is an example of the fact that companies cannot always control what others say and publish about them. This is yet another reason to have a good communication plan that includes all social media. Monitoring Wikipedia articles and engaging in the discussions over how the article will be shaped should be a daily task for public relations practitioners, and neglecting to do so practically means giving up on shaping the public profile of an organization by turning transparency over to everyone else.

REFERENCES

Alexa.com (2010). Wikipedia.org. Retrieved on March 25, 2010 from
     http://www.alexa.com/siteinfo/wikipedia.org

Boxer, S. (2004, November 10). Mudslinging weasels into online history. *The New York Times*, p. E1.

Bradshaw, T. (2008, December 1). Companies woo investors via social websites. *Financial Times*, p. 18.

Cohen, N. (2010). Wikipedia. *The New York Times*. Retrieved on March 25, 2010 from
     http://www.nytimes.com/info/wikipedia

Crovitz, L. G. (2009, April 9). Information age: Wikipedia's old-fashioned revolution. *The Wall Street Journal*, p. A13.

DiStaso, M. W., Messner, M., & Stacks, D. W. (2007). The wiki factor: A study of reputation management. In S. C. Duhé (Ed.), *New media & public relations.* New York: Peter Lang.

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.

Financial Times (2009, August 29). Internet grows up; Wikipedia recognizes the limited wisdom of crowds, p. 8.

Gamson, W. (1989). News as framing. *American Behavioral Scientist, 33*(2), 157–161.

Giles, J. (2005). Internet encyclopedias go head to head. *Nature, 438*, 900-901.

Gillin, P. (2007). *The new influencers: A marketer's guide to the new social media.* Sanger, CA: Quill Driver.

Guentheroth, H., Schoenert, U., & Rodtmann, E. (2007). Wikipedia: Wissen fuer alle. *Stern, 60*(50), 30-44.

Halavais, A., & Lackaff, D. (2008). An analysis of topical coverage of Wikipedia. *Journal of Computer-Mediated Communication, 13*, p. 429-440.

Holtz, S. (2009). *Tactical transparency: The value of getting personal in business.* Webinar presentation on May 20, 2009.

Kweon, S. (2000). A framing analysis: How did three U.S. news magazines frame about mergers or acquisitions? *The International Journal on Media Management, 2*(3/4), 165–177.

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

Langlois, G., & Elmer, G. (2009). Wikipedia leeches? The promotion of traffic through a collaborative Web format. *New Media & Society, 11*(5), 773-794.

Lariscy, R. W., Avery, E. J., Sweetser, K. D., & Howes, P. (2009). Monitoring public opinion in cyberspace: How corporate public relations is facing the challenge. *Public Relations Journal, 3*(4), 1-17. Available at http://www.prsa.org/Intelligence/PRJournal/Fall_09/

Leung, L. (2009). User-generated content on the Internet: An examination of gratifications, civic engagement and psychological empowerment. *New Media & Society, 11*(8), 1327-1347.

Mahon, J. F., & Wartick, S. L. (2003). Dealing with stakeholders: How reputation, credibility and framing influence the game. *Corporate Reputation Review, 6*(1), 19–35.

Mattus, M. (2009). Wikipedia – free and reliable? *Nordicom Review, 30*(1), 183-199.

McCombs, M. (2005). A look at agenda-setting: Past, present and future. *Journalism Studies, 6*(4), 543-557.

McIntosh, S. (2008). Collaboration, consensus, and conflict: Negotiating news the wiki way. *Journalism Practice, 2*(2), 197-211.

Messner, M., & South, J. C. (2008). *Legitimizing Wikipedia: How U.S. national newspapers frame and use the online encyclopedia in their coverage.* Paper presented at the Association for Education in Journalism and Mass Communication Conference in Chicago, IL.

Michaelson, D., & Griffin, T. L. (2005). *A new model for media content analysis.* Gainesville, FL: Institute for Public Relations.

Paine, K. D. (2010, March 24). Wondering about Wikipedia? You Should Be. The Measurement Standard. Retrieved on March 31, 2010 from http://kdpaine.blogs.com/kdpaines_pr_m/2010/03/wondering-about-wikipedia-you-should-be.html

Palser, B. (2006). Coping with jerk swarms. *American Journalism Review*. Retrieved on March 25, 2010 from http://www.ajr.org/article.asp?id=4095

Pogatchnik, S. (2009, May 12). Student hoaxes world's media on Wikipedia. *Associated Press.* Retrieved on March 31, 2010 from http://www.msnbc.msn.com/id/30699302/.

Scott, W. (1955). Reliability of content analysis: The case of nominal scale coding. *Public Opinion Quarterly, 17*, 321-325.

Shaw, D. (2008). Wikipedia in the newsroom. American Journalism Review, *30*(1), 40-45.

Smith, G. E. (1996). Framing in advertising and the moderating impact of consumer education. *Journal of Advertising Research, 36*(5), 49–64.

Stross, R. (2009, May 3). Encyclopedic knowledge, then vs. now. *The New York Times*. Retrieved on March 25, 2010 from http://www.nytimes.com/2009/05/03/business/03digi.html

Thorsen, E. (2008). Journalistic objectivity redefined? Wikinews and the neutral point of view. *New Media & Society, 10*(6), 935-954.

Waters, R. (2009, August 26). Wikipedia plans to introduce new restrictions on editing articles. *Financial Times*, p. 18.

Wikipedia (2010a). Exxon Mobil. Retrieved on April 3, 2010 from http://en.wikipedia.org/wiki/ExxonMobil

Wikipedia (2010b). Wal-Mart. Retrieved on April 3, 2010 from http://en.wikipedia.org/wiki/Wal_mart

Wright, D. K., & Hinson, M. D. (2008). How blogs and social media are changing public relations and the way it is practiced. *Public Relations Journal, 2*(2), 1-21. Available at: http://www.prsa.org/prjournal/spring08.html

Wright, D. K., & Hinson, M. D. (2009). An updated look at the impact of social media on public relations practice. *Public Relations Journal, 3*(2), 1-27, Available at http://www.prsa.org/Intelligence/PRJournal/Spring_09/