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ARE PRIVACY POLICIES MORE CLEAR AND CONSPICUOUS IN 2006 THAN 2001? A LONGITUDINAL STUDY OF THE FORTUNE 100

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ABSTRACT

Concern over the effectiveness of privacy policy statements has been the focus of numerous studies. Most studies have concluded that plenty of room exists for improving policy statements, both in terms of their readability as well as their adherence to fair information principles. However, few studies have examined the effectiveness of policy notices beyond a single point in time to determine whether or not organizations have made improvements. The current study compares the effectiveness of Fortune 100 policy notices in terms of clearness and conspicuousness for 2001 and 2006.

Keywords: information privacy, privacy notice, privacy statement, Fortune 100

INTRODUCTION

Concern over the effectiveness of privacy policy statements has been the focus of numerous studies. Privacy notices should be easy to read, easy to find, and adhere to fair information principles. Most studies have concluded that plenty of room exists for improving policy statements. The conclusions of these studies have propelled the Federal Trade Commission to create a new recommendation for privacy policy format.

Research studies on privacy policies often take a snapshot view, looking at effectiveness for a particular population at a specific point in time. Very few studies have looked at effectiveness over time, examining whether or not companies have made attempts to improve the effectiveness of their privacy policies.

In 2001, Kleen, Shell and Guidroz [9] examined Fortune 100 company privacy policies in terms of readability and ease of access, frequently used measures of policy adherence to "clear and conspicuous" criteria. The current study replicates the work of the 2001 study for Fortune 100 companies in 2006. The results provide insight into whether or not organizations have progressed in making statements clearer and more conspicuous.

BACKGROUND OF THE STUDY

The Gramm-Leach-Bliley Financial Modernization Act of 1999 set forth basic privacy requirements for institutions significantly engaged in financial activities. A privacy notice must be a "clear, conspicuous, and accurate statement of the company's privacy practices; it should include what information the company collects about its consumers and customers, with whom it shares the information, and how it protects or safeguards the information [6]."

Clear and Conspicuous Criteria

Research studies on privacy notices have examined their effectiveness in meeting clear and conspicuous criteria. Studies that focus on the "clear and conspicuous" requirement usually interpret clear as "easy to read" and conspicuous as "easy to find." Reading ease can be measured using a number of available indices such as Flesch Reading Ease Score [2, 8, 9, 11, 12] and the Gunning Fog Index [9, 12]. Other measures for readability have included privacy statement length [17], reader ratings [13, 15], and writing style [8, 9].

When "clear" is measured using readability indices, online privacy polices have not received high praise. Hochhauser [8] looked at 60 online statements and reported that none of the notices scored better than difficult based upon the Flesch Reading Ease test. Anton, et.al [2], computed the average Flesch score of privacy statements for nine financial institutions and found the average reading level to be 14.1 (requiring college education). When "clear" is measured using reader ratings, policies have received better reviews. Papacharissi and Fernback [15] used two Likert scale items and reported that "most documents were fairly understandable," and that "most statements were clearly organized." Similarly, Moscato and Moscato [13] evaluated readability using a "yes/no" rating and found all twenty US sites examined to have readable policies.

Standards for measuring conspicuousness are not as readily available as those for determining readability. Operationalized definitions have included such

metrics as the number of Web clicks [9] or a reader rating of how easy the policy is to find [13]. In both of these cases, research findings have found privacy notices to be conspicuous.

FIP Compliance

In addition to providing privacy notices that are clear and conspicuous, the FTC "recommends that companies develop privacy policies that fully comply" with the four principles of Fair Information Practice – notice, choice, access, and security [6]. Consumers should be given **notice** regarding what personal information is collected about them. They should have **choice** with respect to how collected information may be used. Consumers have the right to **access** personal data to determine its accuracy and completeness. Finally, collectors have responsibility for ensuring that data is accurate and **secure**.

Fair Information Practice (FIP) compliance was the subject of a Federal Trade Commission study [5] that examined two groups of sites: (1) a random sample of 335 Web sites and (2) 91 of the 100 busiest sites. The study found that only 20% of sites in the first group and 42% in the second group that "collected personal identifying information implement, at least in part, all four fair information practice principles." A 2001 study [1] replicated the 2000 with the exception that it did not include a question about access. The results showed that, to some extent, 55% of sites in the random sample implemented notice, choice, and security.

Concern over FIP compliance has been the focus of several studies beyond the Federal Trade Commission. Ryker, LaFleur, McManis, and Cox [18] performed a content analysis of the e-50 and found that 31% of business-consumer firms failed to comply with one or more fair information practices. Wood, Haugen, and Behling [20] looked at online privacy policies for 100 of the busiest Web sites and found that 79%, 68%, 51%, and 58% provided notice, choice, access, and security, respectively. More recently, Schwaig, Kane, and Storey [19] performed a content analysis of online privacy policies for the Fortune 500 firms and found that only 3% adhered to all principles of the FIP or even one (31%).

The Need for Longitudinal Reseach

Most studies have focused on privacy notices at a particular point in time. Studies that take a longitudinal view of changes in privacy notices are rare, such as the Milne and Culnan [12] longitudinal content analysis of U.S. Web surveys used by the FTC for 1998-2001. Milne and Culnan focused on compliance with fair information principles. The current paper contributes to privacy notice research by providing a longitudinal perspective on the "clear and conspicuous" criteria. The study compares the effectiveness of Fortune 100 policies in 2001 and 2006.

RESEARCH QUESTIONS AND METHODOLOGY

The 2001 study focused on the following broad research questions:

1. How easy were the statements to find on the company Web site?
2. How readable were the privacy policy statements?

To answer the first question, data were collected about the number of clicks required to access a policy on a company's Web site. The question of readability was addressed by determining the length of a statement, computing reading ease and fog index levels, and examining a policy's use of visual enhancements such as bullets, bold-facing, and so on.

The same methodology was used for the current study as the 2001 study. The researchers collected privacy policy statements for Fortune 100 companies in fall 2006 [7]. The policy statements were captured electronically, converted to word processing documents, and examined for ease of access and readability. Ease of access was measured by counting the number of clicks from the home page. Readability was determined using the Flesch Reading Ease score and Gunning Fog Index. Flesch Reading Ease calculations fall between 0 (extremely hard) and 100 (extremely easy) [16]. Flesch Reading Ease may be calculated routinely using Microsoft Word's option to show readability statistics when using the spelling and grammar checking capabilities of the software. The Gunning-Fog Index, although not a calculation available through Microsoft Word, equates to the number of years of schooling a reader would need to read material with ease [3].

DATA ANALYSIS AND FINDINGS

Of the companies in the 2001 Fortune 100 list, 66 also appeared in the 2006 list. Not appearing in the 2006 top 100 list were Enron, Philip Morris, SBC Communications, Duke Energy, Fannie Mae, Compaq Computer, Lucent Technologies, WorldCom, Kmart, USX, J.C. Penney, Freddie Mac,

Dynegy, Reliant Energy, UtiliCorp United, BellSouth, ConAgra, Bank One Corporation, Tosco, Southern, FleetBoston Financial, PG&E Corp., AutoNation, Georgia-Pacific, TXU, El Paso Corp, Phillips Petroleum, Loews, Tech Data, Sara Lee, Supervalu, and AMR.

New to the 2006 list from 2001 were Valero Energy, Altria Group, Marathon Oil, AmerisourceBergen, Wellpoint, Lowe's, Medco Health Solutions, Archer Daniels Midland, Wachovia Corp., Caremark Rx, Plains All American Pipeline, Sunoco, Northrop Grumman, Sysco, FedEx, Johnson Controls, Best Buy, Hartford Financial Services, Tyson Foods, Cisco Systems, HCA, News Corp., Federated Department Stores, Amerada Hess, Weyerhaeuser, Massachusetts Mutual Life Insurance, Abbott Laboratories, Comcast, Deere, Raytheon, Nationwide, Washington Mutual, and General Dynamics.

Table 1 summarizes comparative data for 2001 and 2006 with respect to the percentage of companies with online privacy statements, the number of these that are certified, the average number of clicks to access, the average length of statement, the average Flesch Reading Ease score, and the average Gunning Fog Index.

In 2001, 80% of the Fortune 100 companies had online privacy policies that could be located on websites. In 2006 this percentage had increased to 93%. Only Berkshire Hathaway, Marathon Oil, Lockheed Martin, Plains All American Pipeline, Sunoco, Delphi, and Raytheon had no online policy listed. In a majority of these companies, individual consumers would not be purchasing directly from the company.

Both in 2001 and in 2006, a relatively small number of Fortune 100 companies listed either BBB Online or TRUSTe linkages on their sites.

Of the 2001 Fortune 100 companies with online privacy policies, more than 90% provided easy access to those policies, requiring a website visitor to click on a hyperlink only once to obtain the policy or key in "privacy policy" on the search option provided on the home page. Again in 2006, more than 90% of the companies with online privacy policies provided one-click hyperlink access or "privacy policy" search from the home page. In 2006, only J. P. Morgan Chase & Company, Lowe's, Archer Daniels Midland, Honeywell, Johnson Controls, Best Buy, Amerada Hess, and Weyerhaeuser required two or more clicks (all but three of these companies were new to the Fortune 100 list in 2006).

Table 1: Privacy Policy Comparison Between 2001 and 2006 Studies

Comparison Factors	2001	2006
% of companies with online privacy policy	80%	93%
Number of certified sites (TRUSTe or BBB Online)	14	17
Average number of access clicks	1.07	1.08
Average length of statement (words)	1269	1511
Average Flesch Reading Ease Score	37.44	33.50
Average Gunning-Fog Index	14.79	14.98

The average length of privacy statements actually increased 242 words among the Fortune 100 companies in 2006 to an average length of 1511 words. The average Flesch Reading Ease score decreased from 37.44 to 33.5 (lower scores on the Flesch Reading Ease = more difficult text). The average Gunning-Fog Index increased from 14.79 to 14.98 (reflecting grade level required for reading ease).

Table 2 provides a more detailed comparison of Flesch Reading Ease scores of the Fortune 100 in 2001 as compared to 2006. Flesch Reading Ease calculations fall between 0 (extremely hard) and 100 (extremely easy) [16]. Cartoons are often at the 90+ level, while newspaper articles are often at the 50 – 70 level. Academic journals are often at the 20 - 40+ level. (For example, this manuscript measures 23.3 on the Flesch Reading Ease scale.)

As Table 2 illustrates, although very few companies fall below a reading ease of 20, over half in both 2001 and in 2006 fall within the same reading level as articles in academic journals. Less than 5% in each year fall in the same range as newspaper articles. The companies with less than 20 Flesch Reading Ease (most difficult of the policies reviewed) in 2006 included Johnson Controls, News Corporation, and Northrop Grumman. At the higher end, Metlife, PepsiCo, and IBM all scored between 50 and 60 on the Flesch scale.

Table 2: Flesch Reading Ease Comparison Between 2001 and 2006

Flesch Reading Ease Score	No. of Companies in 2001 (N = 80)	No. of Companies in 2006 (N=93)
Below 20	1	3
20-29	7	25
30-39	45	48
40-49	24	14
50 +	3	3

The Gunning-Fog Index, calculated somewhat differently than the Flesch Reading Ease score, measures readability in relation to number of grades of schooling a reader would typically need to read a document with ease. The algorithm addresses average number of words per sentence and also calculates percentage of difficult words in the document (words with three or more syllables). Table 3 provides a comparison of Gunning-Fog Index scores of the Fortune 100 privacy policies in 2001 as compared to 2006 for grade levels 10, 11, and 12. In both 2001 and 2006, a high percentage of privacy policies tested at grade 13 and above, suggesting a reader needs at least some college education to read the documents with ease. The single highest grade tested in 2001 was 22 (American International Group), and the single highest grade tested in 2006 was 19.7 (Johnson Controls). In 2006, International Paper and General Dynamics scored 11s on the Gunning-Fog Index, while the highest was Johnson Controls, at 19.7.

Table 3: Gunning-Fog Index Comparison Between 2001 and 2006

Gunning-Fog Index Grade Level	No. of Companies in 2001 (N = 80)	No. of Companies in 2006 (N = 93)
10	1	0
11	5	2
12	6	7
13 and above	68	84

Although almost one-third of the Fortune 100 companies changed between 2001 and 2006, only 7 of the top 50 in the 2006 study were not included in the 2001 list. Of the remaining 43, thirty-nine had privacy policies online in 2001, allowing a direct comparison between 2001 and 2006. Table 4 provides details of policy length changes, Flesch Reading Ease changes, and Gunning-Fog Index changes. More often than not, if a company has increased the words in its privacy statement since 2001, the Flesch Reading Ease level has gone down (more difficult), and the Gunning-Fog grade level index has increased. Twenty-three of the companies had increased the length of their privacy statements, and 23 had decreased Flesch Reading Ease scores. However, only 19 had increases in Gunning-Fog Index scores. The individual discrepancies in the increases or decreases in the reading ease scores suggest caution in interpreting scores.

While reading level algorithms can be helpful in assisting writers to measure how readable their documents are, they do reward short sentences made up of short words. For example, in privacy statements, words such as "privacy," "information," "computer," "hyperlinks," "dissemination," "preferences," "personal," "sensitive," "conditions," "promotions," "advertising," "collecting," and many other multi-syllable words may be mentioned frequently, thus running a fog score high and a readability score low. The scores also only provide estimation, as fragmented sentences and files with many lists or headings are often difficult to calculate with total accuracy. Thus other readability issues should also be examined.

The overall 2006 Coca-Cola score for Flesch Reading Ease was 33.9. To illustrate the challenges of providing information to consumers concerning their privacy, the following single paragraph titled, "Passive Collection of Non-Personal Information," has been selected from the current Coca-Cola 2467-word privacy statement:

"This Site often requires the use of encrypted or non-encrypted cookies. Cookies are data that a web server transfers to an individual's computer for recordkeeping purposes. Cookies are an industry standard used by most web sites, and help facilitate users' ongoing access to and use of a particular web site, for example by providing information used to deliver content specific to your interests and for other purposes, such as security and other account administrative functions, and which may track personal identifying information." [4].

In contrast, Nationwide's 2006 score for Flesch Reading Ease was 48.6. A sample paragraph from that privacy policy discussing cookies reads as follows: "When you visit Nationwide.com, we send cookies – a small file containing a string of characters – to your computer. Cookies uniquely identify your Web browser to us. We use cookies to track visitors as they use our Web site. Most Web browsers are set up to accept all cookies, but you can change this

setting to refuse (disable) all cookies or to tell you when a website is sending you a cookie." [14].

In addition to reading level issues, other factors can also impact reader understanding. Over 90% of the companies in the Fortune 100 list in 2006 provide clear contrast between background and text by using white background and black text. As in 2001, the majority of privacy policies in 2006 are written in a conversational tone, including use of first and second person. Numerous companies now also use "talking" headings such as "What About Cookies," or "What are Cookies," and "What Choices Do I Have Regarding Collection and Use of My Information." These are phrased in a way the typical consumer might pose a question if face to face with a company employee. Additionally, almost half of the 93 policies in 2006 incorporated use of bulleted or numbered lists to help enhance readability.

While some companies continue to use a simple manuscript style, others have limited line length and restrict the number of lines and/or paragraphs on screen at one time. The use of "white space" has long been a technique business writers use to make materials appear easier to read.

CONCLUSIONS AND FUTURE DIRECTION

Previous studies of privacy policy statements have typically taken a snapshot view, looking at effectiveness for a particular population at a specific point in time. While previous studies have given good marks to accessibility of the privacy statements, studies have not given high praise to company policies in the area of readability. Very few studies have looked at effectiveness over time.

The current study compared online privacy policies of Fortune 100 companies in 2001 with online privacy policies of Fortune 100 companies in 2006, assessing how easily a site visitor could find the policies on the company websites and how readable the policy statements were. In both 2001 and 2006, overall marks for accessing the privacy policies were good. More than 90% in 2001 and 2006 provided easy access through one click or a simple keyword search of the site.

Average word length of policies increased in 2006. According to Flesch Reading Ease score calculations, 2006 privacy policies are a little more difficult to read than the 2001 policies. The majority of the statements calculate in the same reading difficulty level as academic journal articles. Likewise, according to Gunning-Fog Index scores, readers need a slightly higher education to read the 2006 policies with ease. In 2006, 90% of the policies would require some college education to read the material with ease. This is up from 85% at that level in 2001.

The majority of companies do appear to use some other strategies to assist readability, such as numbered or bulleted lists, numerous headings to guide readers, conversational tone using "we" and "you," and hyperlinks of topics to allow effective use of "white space" on the screen.

Examples of more readable policies do exist within the Fortune 100 in 2006. A few companies have achieved levels comparable to newspaper article reading ease on the Flesch Reading Ease test and Gunning-Fog scores that reflect junior or senior in high school reading ease. Opportunities clearly exist for many of the Fortune 100 companies to follow the examples of those easier to read policies.

The privacy policy practices of organizations will continue to be of interest in the future. The Federal Trade Commission along with five other federal agencies released a report on the *Evolution of a Prototype Financial Privacy Notice* [10]. The report found that it is possible for financial privacy notices to include all of the information by law in a short document that consumers can readily understand. The report includes a prototype notice designed in a tabular format for improved readability. The next phase of the project will examine the effectiveness of the prototype.

The researchers will continue to follow developments in policy actions recommended by the interagency project along with their impact on organizational practices. Hopefully, when the effectiveness of privacy policies is examined in 2011, the data will show substantial improvement.

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Table 4: Top 50 Fortune companies in 2006, compared to 2001 findings*

Company	Increase or Decrease in 2006 Word Count	Increase or Decrease in 2006 Flesch Reading Ease	Increase or Decrease in 2006 Gunning Fog Index
Exxon Mobile	Increased	Decrease	Decrease
Wal-Mart	Same	Decrease	Increase
General Motors	Increase	Decrease	Decrease
Chevron	Increase	Decrease	Increase
Ford	Same	Same	Same
Conoco/Phillips	Increase	Decrease	Increase
General Electric	Increase	Decrease	Increase
Citigroup	Decrease	Decrease	Decrease
American Int. Group	Increase	Increase	Decrease
IBM	Decrease	Increase	Decrease
Hewlett Packard	Decrease	Decrease	Increase
Bank of America Corp.	Increase	Decrease	Increase
Home Depot	Increase	Decrease	Increase
J.P. Morgan Chase	Decrease	Increase	Decrease
Verizon Communications	Increase	Decrease	Increase
Cardinal Health	Increase	Decrease	Increase
Kroger	Increase	Decrease	Decrease
State Farm Insurance Cos.	Increase	Same	Same
Procter & Gamble	Decrease	Increase	Decrease
Dell	Increase	Same	Increase
Costco Wholesale	Increase	Decrease	Decrease
Target	Same	Decrease	Increase
Morgan Stanley	Same	Same	Same
Pfizer	Increase	Decrease	Increase
Johnson & Johnson	Decrease	Decrease	Increase
Sears Holdings	Same	Same	Decrease
Merrill Lynch	Increase	Decrease	Increase
MetLife	Increase	Increase	Decrease
Dow Chemical	Same	Same	Decrease
UnitedHealth Group	Increase	Decrease	Increase
AT&T	Decrease	Increase	Decrease
United Technologies	Increase	Decrease	Increase
United Parcel Service	Increase	Decrease	Increase
Walgreen	Increase	Decrease	Decrease
Wells Fargo	Decrease	Increase	Decrease
Albertson's	Same	Same	Same
Microsoft	Decrease	Increase	Increase
Intel	Increase	Decrease	Increase
Safeway	Increase	Increase	Decrease

*Only 39 of the top 50 companies in 2006 were in the 2001 and also had online privacy policies in 2001