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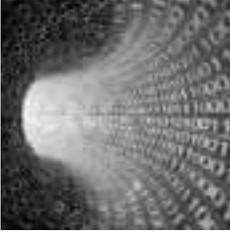
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Doing the right thing online: a survey of bloggers' ethical beliefs and practices

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Abstract

This study explores the ethical beliefs and practices of two distinct groups of bloggers – personal and non-personal – through a worldwide web survey. A stratified purposive sample of 1224 bloggers provided information about their blogging experience, blogging habits and demographics. They were asked about their beliefs and practices for four ethical principles: truth-telling, attribution, accountability and minimizing harm. The findings reveal that the two groups differ in terms of who they are and what they do in their weblogs (blogs). In addition, there were significant differences in the extent to which they value and adhere to the four principles, and some interesting similarities. For example, both groups believe that attribution is most important and accountability least important. Scholars have proposed blogging ethics codes, and this study found that bloggers themselves support such a code.

Key words

blog • ethics • demographics • ethical beliefs • ethical practices • ethics code • survey

Driven by technological advances and sociological forces, blogging has become widespread in the 21st century. As weblogs (blogs) gain readership, prominence, and influence, questions arise about bloggers' ethical responsibilities. What responsibilities do bloggers think they bear, and to what extent do they act upon their ethical beliefs? Answers to these questions may depend largely on the purpose that they think their blogs serve. Some blogs are mostly expressions of personal views and feelings, intended for small audiences. Other bloggers aspire to reach wide audiences, and may have different perspectives on ethical questions.

Blogging has begun to attract scholarly attention, but little work has addressed blogging ethics, and some of it has distinct limitations. For example, Blood (2002) proposed a blogging ethics code, but it was a 'how to' guide based primarily on journalism ethics codes. Kuhn (2005, 2007) grounded his proposed blogging ethics code more thoroughly in moral philosophy. He used feedback from bloggers to develop it, but only a convenience sample of fewer than 50 participants, so the extent to which he could 'ascertain the prevailing ethic in the blogosphere' (2005: 14) is questionable. Viegas (2005) examined the identification practices of bloggers and perceptions of accountability and liability, a narrow set of ethical issues. Perlmutter and Schoen (2007) examined only 30 'politically-oriented' blogs for self-imposed ethics codes, finding few. Given the dearth of research on blogging ethics and these studies' limitations, the purpose of the present study is to help fill the gap in the literature by surveying a large sample of bloggers to assess their ethical beliefs and practices, demographic differences, experiences and habits.

LITERATURE REVIEW

Blogging has grown tremendously in recent years, fueled by technological innovations. Initially, bloggers had to write their own HTML code or software for their sites, until the introduction in 1999 of user-friendly blog publishing tools and services (Bausch et al., 2002). A study estimated that 31.6 million blogs were created on popular blog hosting services by early 2005 (Perseus Development Corporation, 2005), when this research was conducted. In early 2008, the blog tracking site Technorati (www.technorati.com) was tracking about 113 million blogs (Technorati, nd). However, the total number of blogs created gives an exaggerated sense of the number of bloggers. A survey of blogs revealed that 66 percent had not been updated in two months, indicating that they were abandoned either temporarily or permanently (Perseus Development Corporation, 2003). Still, by most accounts, blogging is very popular.

As blogging grows in prevalence and influence, communication scholars, news media, governments and bloggers themselves have raised questions about ethical implications (Blood, 2002; Johnson and Kaye, 2004; Mintz, 2005).

As Kuhn observed: 'If bloggers are going to continue breaking stories, critiquing ... mainstream media, and being used by political parties and advertisers ... then a question ought to be asked regarding [their] responsibilities' (2005: 3). Blogs have become news sources, raising questions about whether journalism ethics apply. Throughout the war in Iraq, after the 2004 Asian tsunami, and during the 2006 coup in Thailand, blogging has been seen as an alternative news source offering first-hand reporting, sometimes surpassing the traditional news media (Roasa, 2008; Schwartz, 2004; Wall, 2005, 2006). Bloggers can drive the news agenda. For example, US senator Trent Lott resigned after bloggers broke the story of what some viewed as segregationist remarks, and the traditional media followed this up (McGookin, 2004). People generally trust blogs: Johnson and Kaye (2004) found that three-quarters of the blog readers surveyed felt that blogs are moderately to very credible, and Johnson et al. (2007) found that net users who were interested in politics found blogs moderately credible, and more credible than the traditional media or other online sources. Wall (2005, 2006) found that bloggers tend to regard news-oriented blogs as a better form of journalism than the traditional media, in part because blogs are up-to-date, personal and opinionated. In the 2004 American elections, 21 percent of bloggers chose blogs as their preferred information source (Nielsen BuzzMetrics, 2004). Singer suggests that there is 'considerable synergy between the norms of bloggers and journalists' (2007: 91). However, if bloggers have created a new genre of journalism (Wall, 2005), modified ethical standards may apply. Questions and concerns about bloggers' ethics may be motivated both by the public interest and, at least in the case of more journalistic blogs, by journalists' concern over defending their turf and their status as professionals uniquely qualified to fulfill their roles (Singer, 2003).

Since ethical issues may vary depending on the type of blog, a thorough examination of blogging ethics requires a meaningful classification of blogs.

Defining and classifying blogs

Herring et al. define blogs simply as 'frequently modified web pages in which dated entries are listed in reverse chronological sequence' (2004b: 1), consistent with other definitions (Bausch et al., 2002; Blood, 2002; Mortensen and Walker, 2002; Trammell and Gasser, 2004). In other words, blogs are defined by structure, not content, which varies dramatically.

Research has explored bloggers' motivations (Huang et al., 2007; Nardi et al., 2004), and scholars have classified blogs in a number of ways. Blood (2002) and Bausch et al. (2002) classified blogs with reference to length of entry and subject matter. Trammell and Gasser (2004) classified blogs by function: for interpersonal communication, intrapersonal communication or professional reputation. Herring et al. (2004a) used two

categories: journal-style blogs with more personal content, and filter-style blogs with more topical content (see also Herring et al., 2004b). Similarly, Kuhn (2005) divided blogs into personal blogs, such as electronic diaries, and journalistic blogs featuring news and commentary.

Following Kuhn (2005), for the first category, the present study defines a personal blog as a blog that an individual maintains as an online diary, focusing on content such as daily events and reflections. For the second category, the non-personal blog is defined to encompass all blogs not in the personal blog category; rather than focusing solely on news and commentary, it focuses on areas such as politics, commerce, entertainment or technology. The distinction is broad yet meaningful. There may be differences between personal and non-personal bloggers and their approaches to blogging ethics, which are examined here.

RESEARCH QUESTIONS

Demographics, experiences and habits

In their analysis of 357 blogs, Herring et al. (2004a) found that usually, journal blogs were created by teenage females. To verify and extend these findings, the demographic profiles of personal and non-personal bloggers were examined, including age, gender, nationality, occupation and education level. In addition, blogging experiences and habits were assessed using variables from previous surveys of bloggers (Perseus Development Corporation, 2003; Pew Internet & American Life Project, 2004; Viegas, 2005) and a focus group discussion was conducted in the preliminary stage of this research. For example, items included the main reason for blogging, type of blog content, number of readers daily, primary intended audience, frequency of updates and experience in reading and writing blogs. The following research questions are proposed:

RQ1: How do personal and non-personal bloggers differ in demographics?

RQ2: How do personal and non-personal bloggers differ in blogging experiences and habits?

Typically, bloggers must accept 'terms of use' to use popular blog publishing services. Although some blog hosting services provide ethical guidelines, they tend not to enforce them or monitor content, leaving ethical judgements to bloggers. There are no widely accepted rules or ethics codes for blogging, but there are general principles that are relevant.

Ethical principles in blogging

Upon reviewing the ethical guidelines potentially relevant to blogging – netiquette manuals, ethical guidelines posted online, proposed blogging ethics

codes from the literature, and various newspapers and journalism associations' ethics codes – four underlying ethical principles were identified: truth telling, accountability, minimizing harm and attribution. They all are important journalism ethics principles, and although the literature suggests that they are important to bloggers, actual importance remains an empirical question, and different groups of bloggers may value the principles differently. These principles overlap with the key principles of the Society of Professional Journalists' Code of Ethics (1996), except that 'independence' was omitted and 'attribution' was added to this study. While conflicts of interest and issues of independence arise among bloggers, they seem more likely to occur and have serious consequences in the traditional commercial media. Furthermore, independence does not seem to be widely expected of blogs, which are seen as an alternative to journalism, which seeks objectivity (Wall, 2005, 2006). However, attribution seems especially important in the blogosphere, where bloggers often comment on others' works, and digital technology makes copying easy.

Truth-telling involves honesty, fairness and completeness in reporting (Association for Computing Machinery, 1992; Herrscher, 2002). Journalists are expected to be fair and accurate in gathering and reporting information, in service of the public's right to know the truth (e.g. Society of Professional Journalists, 1996). Non-personal bloggers may be more attuned to journalism ethics, and thus value truth-telling highly.

Accountability involves being answerable to the public, bearing the consequences of one's actions and revealing conflicts of interest (Association for Computing Machinery, 1992; Herrscher, 2002; Scheuermann and Taylor, 1997; Shea, 1994; Strentz, 2002). For example, journalists are expected to admit and correct mistakes promptly (Society of Professional Journalists, 1996). However, bloggers' sense of accountability may be low if they feel that they are more anonymous than the traditional media. Viegas (2005) found that while bloggers believe that they are responsible for their blog content, they do not realize that they can be sued for it. Bloggers may misunderstand accountability in the blogosphere, or desire a different level of accountability.

The ethical principle of minimizing harm (done to others) underlies issues involving privacy, confidentiality, reputational harm, consideration of others' feelings, and respecting diversity and underprivileged groups (Association for Computing Machinery, 1992; Herrscher, 2002; Scheuermann and Taylor, 1997; Shea, 1994; Strentz, 2002). Journalists are expected to treat others as deserving respect (Society of Professional Journalism, 1996). In addition, minimizing harm may be highly relevant to personal bloggers, who blog about others.

Attribution involves issues such as avoiding plagiarism, honoring intellectual property rights and giving sources proper credit (Association for

Computing Machinery, 1992; Herrscher, 2002; Scheuermann and Taylor, 1997; Shea, 1994; Strentz, 2002). A study found that 66 percent of US internet users do not care if the files they are sharing are copyrighted (Pew Internet & American Life Project, 2004). Journalists are expected to identify sources whenever feasible (Society of Professional Journalists, 1996). In the blogosphere, attribution of content is important not only for credibility but for community building (Blood, 2002), perhaps making attribution even more important than in other media.

This study aims to study bloggers' beliefs about these four ethical principles and related blogging practices, leading to the following research questions:

RQ3: What are the ethical beliefs that personal and non-personal bloggers value?

RQ4: What are the ethical practices that personal and non-personal bloggers report that they follow?

Ethics guidelines in blogging

Whether an ethics code is necessary, desirable or feasible for such a large, heterogeneous group as bloggers has been debated (Kuhn, 2007). Usually, ethical codes are developed for the professions such as medicine or law (Ang, 2001) or journalism, whose status as a profession is disputed (Singer, 2003), not for a recreational activity such as blogging. Despite such objections, several commentators (including some bloggers) have recommended blogging ethics codes, in part because many blogs are public and are similar to journalism (Blood, 2002; Kuhn, 2005, 2007; Mintz, 2005; Online News Association, 2003; O'Reilly, 2007; Volokh, 2004). No quantitative study has investigated whether bloggers themselves see a need for a code, so this study asks:

RQ5: To what extent do personal and non-personal bloggers see a need for a blogging ethics code?

METHOD

A web survey was chosen for this study because it was deemed best to reach bloggers, who are by definition regular web users, and because of its speed, low cost and efficiency compared to other survey methods. In addition, it can ensure confidentiality, which is important when asking about sensitive topics such as ethics.

Pre-testing

Prior to questionnaire construction, a focus group was conducted to explore the ethical issues that bloggers face and their ethical beliefs and practices. Six bloggers aged 22 to 28, mostly undergraduate students, participated. The participants were asked about the ethical issues they had encountered

or heard about, the ethical values and practices in blogging that they found important, and the need for an ethics code. The findings from the discussion, together with the literature reviewed, were used to construct the pre-test survey. The pre-test was administered to 70 bloggers contacted using random blog generating services and personal contacts. The results were examined to improve existing questions and eliminate unnecessary ones.

Participants

The sample consisted of bloggers from around the world. Invitation emails were sent to bloggers at email addresses posted publicly on their blogs, encouraging them to complete the survey at the weblink provided. The study required that the blog was active (i.e. it had at least three entries and had been updated at least once in the past two weeks), contained a contact email address to send the invitation email, and was mainly in English (as the survey was in English). In order to compare relevantly similar blogs, the study required that the blogs have one sole author, be text-based (rather than audio or image-based) and not be used for purposes other than blogging (e.g. for community announcements or advertisements).

Sample

As with other surveys of bloggers, probability sampling was not possible for this study because there is no way to track all existing blogs. Thus, researchers have sampled bloggers using multiple alternative strategies (Li and Walejko, 2008). To obtain a reasonable representation of bloggers, purposive stratified sampling was employed in this study. The sample was collected in a proportionate manner according to the respective distribution size of blog services, as indicated on the National Institute for Technology and Liberal Education (2004) blog census site. Blogs were found using blog-tracking websites such as Blo.gs (<http://blo.gs>) and Blogdex (www.blogdex.net), which feature random blog generating functions, and bloggers' email addresses were extracted from their blogs. The Blo.gs site was selected as the primary data source as it was able to track approximately 82 percent of active blogs listed on the National Institute for Technology and Liberal Education blog census site, including those from Antville.org (www.antville.gor), Blogger (www.blogger.com), Pitas.com (<http://pitas.com>), Weblogs (www.weblogs.com), and individual bloggers who blog on sites with their own domain names (Herring et al., 2004a). Because blog-tracking websites did not provide links to blogs from some large blogging services (e.g. Xanga, www.xanga.com; and Diaryland, www.diaryland.com), blogs from such services with a user base of more than 5000 (following the National Institute for Technology and Liberal Education (2004) blog census data) were sampled directly using the 'random' function on the service's homepage. Additionally, bloggers were encouraged

in the invitation emails to forward invitations to blogger acquaintances and post the link to the survey on their blogs, a snowball sampling technique employed in other blogging studies (Huffaker and Calvert, 2005; Johnson and Kaye, 2004; McCullagh, 2008; Nardi et al., 2004).

For the study, 6000 invitation emails were sent and 1288 surveys were completed. Because the participants were recruited using multiple techniques including snowball sampling, it is impossible to calculate the response rate, because it cannot determine how many of the participants learned of the survey using each technique.

Questionnaire design

The first section of the survey asked about bloggers' experience in reading and writing blogs, their blogging habits, the content of their blogs and their readers. A blogger was classified as either personal or non-personal based on the answer to the question, 'Which one of the following best describes the content of your weblog?' (e.g. 'A kind of personal journal', or 'A non-personal weblog, e.g. topical'). The next set of questions concerned bloggers' ethical beliefs and practices. Ethical beliefs were derived from the four ethical principles formulated from existing ethical guidelines and codes. Ethical practices were based on examples from the focus group discussion, news reports and pre-test results. In addition, the participants were asked whether they thought a blogging ethics code was needed. Seven-point Likert scales were used for items in this section.

Sixteen statements were used to measure bloggers' ethical beliefs (see Appendix). Of these, three statements were combined to form the truth-telling belief index (Cronbach's $\alpha = .88$), four for the accountability belief index (Cronbach's $\alpha = .80$), four for the attribution belief index (Cronbach's $\alpha = .77$), and five for the minimizing harm belief index (Cronbach's $\alpha = .85$). The participants were asked to express their level of agreement with these statements on ethical beliefs (where 1 = 'strongly disagree' and 7 = 'strongly agree'). For example, an ethical belief statement was: 'Honesty should be a guiding principle when people blog.'

Ethical practices were measured similarly, using 21 statements (see Appendix), of which seven statements were used to form the truth-telling practices index (Cronbach's $\alpha = .77$), five for the accountability practices index (Cronbach's $\alpha = .72$), four for the attribution practices index (Cronbach's $\alpha = .68$) and five for the minimizing harm practices index (Cronbach's $\alpha = .73$). The statements required the participants to state the frequency of performing each action (where 1 = 'never' and 7 = 'always'). For example, an ethical practice statement was: 'I correct any misinformation in my weblog.'

The last section asked about demographic variables such as age, gender, nationality, occupation and education level.

Procedure

Invitation emails were sent to bloggers over the first three days, with reminder emails sent about 10 days later. The email invitation described the study and linked to the web survey, which was constructed using Nsurvey software. On the first page of the survey, the participants were informed that confidentiality was assured. Most of the surveys were completed within the first five days of the survey launch on 6 February 2005. The data collection period was limited to just over three weeks, in order to reduce the chance that some historical event would occur during data collection and alter the responses, thereby posing a threat to the validity of the findings. The data collection concluded on 1 March 2005, when a sufficiently large number of responses had been obtained and the number of surveys completed had declined to a few per day.

The final sample size for analysis was 1224 after removing 64 surveys during data cleaning. The surveys that failed to meet the screening criteria were removed, and the remaining surveys were examined for duplicates. The responses to a few surveys that were completed very quickly (e.g. five minutes and below) and very slowly (e.g. two hours and beyond) were checked for logical consistency.

RESULTS

Demographics, blogging experiences and habits

Of 1224 bloggers in the sample, more than half were male (51%) and most were aged 30 years or below (65%). One out of three was a student (33%), and most were well educated, with a mean of 13.9 years of formal education ($SD = 5.11$). The majority were from the USA (65%), with no other country accounting for more than 8 percent of the participants. The demographic profile was consistent with other studies of bloggers (Herring et al., 2004b; Lenhart and Fox, 2006; Pew Internet & American Life Project, 2005).

In the sample, 892 participants (73%) were personal bloggers and 332 (27%) were non-personal bloggers. There were significant differences between the two groups in terms of age, education, gender and marital status (see Table 1).

For personal bloggers, the largest categories of occupation were students (39%) and information technology industry workers (9%). The personal bloggers' main reasons for blogging were to express their thoughts and feelings (36%) and to document their lives (22%). The content they wrote about was mostly their life events (64%). Usually, they did not have a

• Table 1 Demographic differences between personal and non-personal bloggers

	PERSONAL BLOGGERS (N = 892)	NON-PERSONAL BLOGGERS (N = 332)
Mean age (SD)	27.0 (9.7)	34.9(12.2)
Years of formal education (SD)	13.4 (4.9)	15.1 (5.4)
Gender (% female)	59.6	19.2
Marital status (% single)	73.4	53.9
Married	22.0	40.7

All differences are statistically significant at $p < .001$.

primary intended audience (41%), or if they did, it was the people they knew personally (39%). When asked how well they know their readers, the majority of personal bloggers agreed that to some extent they know their readers very well (62%).

Non-personal bloggers were more likely to be male, older, married and better educated (see Table 1). As with personal bloggers, the largest categories of occupation were students (18%) and information technology workers (12%). The non-personal bloggers' main reasons for blogging were to make commentary (36%) or provide information (21%). The content they blogged about was diverse, with government and politics (28%) and news (10%) being most common. They tended either to blog about people they did not know (40%), or not to blog about people at all (35%). Their primary intended audiences tended to be people that they did not know personally (48%), or no particular intended audience (38%). When asked how well they know their readers, 49% expressed agreement that to some extent they knew their readers very well.

RQ1 asked whether there are demographic differences between personal and non-personal bloggers. From Chi-square tests run on demographic variables, gender was found to be moderately associated ($\phi = -.36$) with whether one was a personal or non-personal blogger ($\chi^2(1, N = 1224) = 157.8, p < .001$). Independent-sample t -tests showed that non-personal bloggers were significantly older ($t(509.3) = 10.7, p < .001$; degrees of freedom adjusted for unequal variances), and had more years of formal education than personal bloggers ($t(1222) = 5.45, p < .001$).

RQ2 asked about differences in blogging experiences and habits between personal and non-personal bloggers (see Table 2).

Virtually all the differences between the two types of bloggers are significant (see Table 3 and Table 4).

Specifically, the reasons for blogging and type of blog content had strong associations with the type of blogger, whereas primary intended audience had a moderate association. Furthermore, non-personal bloggers have more

• Table 2 Descriptive differences personal and non-personal bloggers (%)

PERSONAL BLOGGERS (N = 892)		NON-PERSONAL BLOGGERS (N = 332)	
Main reason for blogging			
Express thoughts and feelings	36	Provide commentary	36
Document one's life	22	Provide info	21
Provide commentary	9	Express thoughts and feelings	11
Entertain others	8	Entertain others	8
Release emotions	7	Influence others to take action	8
Weblog content			
Events in my life	64	Government and politics	28
No main topic	4	News	10
Entertainment and arts	4	Entertainment and arts	10
Family and home	4	Others	7
Religion and beliefs	4	Events in my life	6
Primary audience			
Do not have one	41	People not known personally	48
People known personally	39	Do not have one	38
People not known personally	12	People known personally	11
Myself	8	Myself	3
Number of readers daily			
1-10	31		17
11-20	20		12
21-50	19		16
51-100	12		14
101-500	10		23
Frequency of updates			
1-2 times a week	23		19
3-6 times a week	37		27
once daily	20		18
Twice daily	7		14
Blogging experience			
1-6 months	23		26
7-12 months	16		21
1-2 years	23		25
2-3 years	19		15
3-4 years	10		8
Weblog reading experience			
1-6 months	15		13
7-12 months	15		13
1-2 years	25		30
2-3 years	20		19
3-4 years	13		15

Percentages may not total to 100%, as some variables have more than five categories.

readers daily than personal bloggers, update their blogs more frequently, spend more time writing each entry and check how many readers are accessing their blogs more frequently than personal bloggers.

• Table 3 Pearson's Chi-square tests between blogger type and blogging habits

WEBLOG HABITS	χ^2	<i>DF</i>	<i>CRAMÉR'S V</i>
Reasons for blogging	410.00***	9	0.58
Type of weblog content	482.33***	18	0.63
Primary intended audience	213.84***	3	0.42

N = 1224, ****p* < .001.

• Table 4 Independent *t*-tests between blogger type and blogging habits

BLOGGING HABITS	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>
Number of readers daily					
Personal	791	3.48	1.54	-9.59***	412.92
Non-personal	291	4.75	2.06		
Frequency of updates					
Personal	892	4.03	1.29	-5.04***	476.98
Non-personal	332	4.55	1.72		
Time spent writing					
Personal	892	1.84	.76	-2.99**	563.81
Non-personal	332	2.03	1.05		
Extent of knowing one's readers very well					
Personal	886	4.71	1.37	5.54***	540.02
Non-personal	328	4.19	1.51		
Frequency of checking access					
Personal	578	4.50	1.57	-3.37**	593.71
Non-personal	263	4.84	1.33		

N = 1224, ***p* < .01 ****p* < .001, degrees of freedom adjusted for unequal variances.

Ethical beliefs and practices

RQ3 asked what ethical beliefs personal and non-personal bloggers value. Within-subject analysis of variance (ANOVA) models were used to test whether means for the four ethical beliefs differed significantly. For personal bloggers, the results indicate that the overall model was significant ($F(3, 891) = 321.6, p < .001$), and pairwise comparisons reveal that differences in means between the four ethical beliefs were all significant. For non-personal bloggers, the differences in means were significant, except for truth-telling and attribution beliefs (see Table 5).

Therefore it can be concluded that personal bloggers valued attribution most, followed by minimizing harm, truth-telling and accountability respectively. Non-personal bloggers valued both attribution and truth-telling most, followed by minimizing harm, then accountability. For both groups, attribution was most valued, and accountability least valued.

To compare whether personal and non-personal bloggers differed in valuation of the four ethical beliefs, independent-sample *t*-tests were

• Table 5 Mean scores of ethical beliefs of personal and non-personal bloggers

ETHICAL BELIEFS	<i>M</i>	<i>SD</i>
Personal		
Truth-telling	5.22 _a	1.35
Accountability	4.44 _b	1.39
Attribution	5.89 _c	1.04
Minimizing harm	5.35 _d	1.11
Non-personal		
Truth-telling	5.68 _a	1.45
Accountability	4.53 _b	1.51
Attribution	5.79 _a	1.03
Minimizing harm	4.99 _c	1.25

Within group, values with subscripts in common do not significantly differ at $p < .05$.

conducted. The results indicate significant differences for two of them. Specifically, non-personal bloggers valued truth-telling belief more than personal bloggers ($t(1222) = -5.11, p < 0.01$). However, personal bloggers valued minimizing harm more than non-personal bloggers ($t(537.3) = 4.57, p < 0.01$).

RQ4 asked about the ethical practices which personal and non-personal bloggers report that they follow. As with RQ3, within-subject ANOVAs were run in order to determine whether means for the four ethical practices were significantly different. For personal bloggers, differences in means between three of the four ethical practices were significant, but the difference between truth-telling and attribution practices was not (see Table 6).

For non-personal bloggers, the overall model was significant ($F(3, 315) = 27.7, p < .001$), but pairwise comparisons indicated that none of the differences

• Table 6 Mean scores of ethical practices of personal and non-personal bloggers

ETHICAL PRACTICES	<i>M</i>	<i>SD</i>
Personal		
Truth telling	5.78 _a	0.83
Accountability	5.13 _b	1.35
Attribution	5.74 _a	1.21
Minimizing harm	6.06 _c	0.87
Non-personal		
Truth telling	5.97 _a	0.95
Accountability	5.35 _b	1.39
Attribution	6.02 _a	1.07
Minimizing harm	5.94 _a	1.00

Within group, values with subscripts in common do not significantly differ at $p < .05$.

in means were significant, except for accountability and the other three ethical practices.

To compare whether personal and non-personal bloggers differed in their reported ethical practices, independent-sample *t*-tests were conducted. The results show that non-personal bloggers practise three of the four ethical principles more frequently than personal bloggers. The three practices were truth-telling ($t(1222) = 3.29, p < .01$), accountability ($t(1205) = 2.50, p < .01$) and attribution ($t(650.61) = 3.91, p < .01$). No significant difference was found for minimizing harm practices.

Blogging ethics code

RQ5 asked whether personal and non-personal bloggers see a need for a blogging ethics code, and both groups tended to support a code (see Table 7).

A one-sample *t*-test using the value 4 (4 = neutral) indicated that overall, bloggers slightly agreed that a blogging ethics code is needed ($t(1223) = 9.11, p < .001$). Both personal bloggers ($M = 4.5, SD = 1.73$) and non-personal bloggers ($M = 4.39, SD = 1.73$) slightly agreed that there was a need for an ethics code, and an independent sample *t*-test revealed that this was not a significant difference ($t(1222) = .93, p = .35$).

DISCUSSION

This exploratory study of blogging ethics used a broad distinction between personal and non-personal bloggers to examine the differences between their ethical beliefs and practices, and compared demographics, blogging experiences and habits to identify the differences between these two groups. In addition, it investigated whether bloggers see a need for a blogging ethics code. Although it is not possible to generalize the results due to the impossibility of random sampling, purposive stratified sampling may have yielded some of the best available data to date.

Comparing demographics, the present findings show that non-personal bloggers are more likely to be older males with more formal education than personal bloggers. Since more specialized knowledge is required to write about topics such as government and politics compared to expressing one's

• Table 7 Bloggers' agreement on the necessity of an ethics code

	PERSONAL BLOGGERS (N = 892)	NON-PERSONAL BLOGGERS (N = 332)
At least slightly agree	56	53
Neutral	19	16
At least slightly disagree	24	31

Values represent percentages of bloggers who responded to this question.

feelings, it follows that non-personal bloggers would be more educated and older. These findings are consistent with those of Herring et al. (2004a), who found that journal-style bloggers tend to be young female teenagers, whereas filter-style bloggers tend to be older males. Lenhart and Fox (2006) found that among American bloggers, the most popular topic was their personal experiences. As with Herring et al. (2004a), the present authors believe that to understand blogging fully, more attention needs to be paid to the large number of personal bloggers.

The present study found several significant differences between personal and non-personal bloggers' blog experiences and habits, although at this point it is possible only to speculate about the reasons. Non-personal bloggers had more readers daily than personal bloggers, perhaps because, unlike personal bloggers who write mainly about their personal lives, non-personal bloggers write about topics with potentially broader appeal. Non-personal bloggers report checking more frequently than personal bloggers on how many readers access their blogs, perhaps as a way of judging quality of content. Non-personal bloggers also spent more time writing each entry than personal bloggers, perhaps because to provide commentary, they need to spend more time on research and analysis.

Overall, the bloggers reported that they value the ethical beliefs and adhere to the practices into which this study inquired, with some variations. This first large-scale survey of blogging ethics revealed no shocking lack of ethics in these areas. The findings show that among ethical beliefs, personal and non-personal bloggers valued attribution the most (non-personal bloggers valued truth-telling belief as much as attribution belief). The strong value placed on attribution, consistent with the findings of Herring et al. (2005), may be due to the fact that in blogging, attribution serves a community-building function (Blood, 2002).

Among non-personal bloggers' reported practices, attribution was practised as frequently as truth-telling and minimizing harm. However, among personal bloggers' practices, attribution was practised less frequently than minimizing harm. A likely reason that non-personal bloggers practise truth-telling, attribution and minimizing harm with similar frequency is the nature of their blogs. To provide convincing commentaries, non-personal bloggers need to provide accurate information, cite sources and provide links. Telling readers the 'truth' may not suffice – they need to show readers where they get their truth.

Accountability was valued and practised least by both groups of bloggers. Possible explanations include Viegas' (2005) finding that most bloggers do not believe that people can sue them for blog content, or perhaps because bloggers have lower perceptions of social risk (i.e. diminished personal cost if interactions or relationships fail) for online as compared with face-to-face

communication (Morahan-Martin and Schumacher, 2000; Turkle, 1995; Wallace, 1999; Walther, 1996).

The two groups of bloggers valued truth telling differently. Among the beliefs of non-personal bloggers, truth-telling holds the same importance as attribution. Drawing from earlier explanations for beliefs regarding attribution, non-personal bloggers may value truth-telling and attribution highly because of the nature of their blogs. For personal bloggers, belief in truth-telling was the third most valued, behind beliefs in attribution and minimizing harm. One possible reason is that personal bloggers blog mainly to express their thoughts and feelings (39%) and to document their lives (22%). For example, a personal blogger may blog about an argument with their parents, and use their blog more like a diary, where they can freely express their feelings rather than present a truthful account of why the argument occurred. Non-personal bloggers' main reasons for blogging are to provide information and commentary, with topics often centered on government and politics (28%) and news (10%), so they may believe journalistic principles such as truth-telling are essential for credibility, whereas personal bloggers may see less of a need to establish credibility.

Non-personal bloggers reported adhering to truth-telling practices as frequently as attribution and minimizing harm practices. Personal bloggers reported adhering to both truth-telling and attribution practices less frequently than minimizing harm practice. Belief in minimizing harm was valued more than belief in truth-telling for personal bloggers, and valued less than belief in attribution and truth-telling for non-personal bloggers. One reason that personal bloggers believe more in minimizing harm than in truth-telling may be that they know their readers better than non-personal bloggers (see Table 2). A significant positive correlation between belief in minimizing harm and how well bloggers know their readers supports this idea ($r(1212) = .10, p < .01$). Related to this, the fewer readers that personal bloggers have, the more likely it is that they will know their readers better ($r(1070) = -.13, p < .01$). Another possible reason that personal bloggers value minimizing harm belief more than truth-telling belief is that many write for people they know personally (39%). Personal bloggers may believe that it is more important for them to prevent harm to friends than to tell the truth.

Although scholars and commentators have proposed blogging ethics codes, this is the first study to examine whether bloggers themselves see a need for such a code. Although some cast calls for blogging ethics codes as the reactions of journalists attempting to defend their turf (Singer, 2003), it must be noted that there was strong (if not enthusiastic) support for an ethics code among bloggers themselves, including both non-personal and personal bloggers. As most non-personal bloggers take a journalistic approach (Kuhn, 2005), one may expect them to see more of a need for a code akin to a

journalism ethics code, compared to personal bloggers. However, the present findings revealed no significant difference between personal and non-personal bloggers' agreement on the need for a blogging ethics code. A possible reason for the less-than-enthusiastic support for a code is that blogging is almost always for leisure (Drezner and Farrell, 2004), so bloggers may not see a strong need for a code to restrict a recreational activity. Even if an ethics code is self-imposed by bloggers, it may be seen as a constraint on the free expression championed in much of the blogosphere, or as interference with bloggers' autonomy to make ethical decisions, just as ethics codes are regarded sometimes among journalists (Black and Barney, 1985–6).

Essentially, a code is only as useful as the number of people who adhere to it. Given their diversity, it may be unrealistic to expect bloggers to agree on much at all, or to be bound by any one code. Indeed, ethics codes may be little more than a set of ideals, unless they have 'teeth' in the form of sanctions. Some have observed that industry self-regulation, in which industry players enforce ethics codes on their members, seems to work best when a relatively small, cohesive group enforces standards on members who have high incentives to maintain membership, as in a profession such as law or medicine (Ang, 2001). By contrast, the blogosphere is exceptionally large, diverse and linked only informally. 'Membership' of the blogosphere presents very low barriers to entry, with none of the qualifications that characterize some professions such as specialized training. Perhaps subgroups of the blogging community would have stronger motivation to follow an ethics code than the blogosphere as a whole. If future blogging ethics codes are proposed, they may be tailored to different types of blogs, given the differences among bloggers and their ethical beliefs.

The prospect of thousands of bloggers unmoored by any shared ethical standards or training may seem frightening, but the reality is that bloggers profess that they value the principles and adhere to the practices into which this study inquired. Moreover, the blogosphere is more interactive than traditional media, allowing instant feedback to bloggers that violate readers' standards. Bloggers may profess to value accountability least among the principles inquired into here, but accountability exists in the form of feedback, which is often vigorous. Such a 'sanction' on unethical behavior may supplant largely the need for a formal blogging ethics code, but nonetheless, bloggers do support a code.

CONCLUSION

Limitations of the study

A problem with any survey of bloggers is that random sampling is impossible, and therefore so is generalization. As with other self-administered surveys, web surveys have shortcomings, including a low response rate and lack of

verification of participants' identities. Reaching bloggers through mass email is difficult, since emails may be disregarded or mechanically filtered out as spam. As the survey was in English, only English blogs were sampled. Future research should examine non-English speaking bloggers.

Suggestions for future research

Some might criticize the simple distinction made between personal and non-personal bloggers in this study. While these groups differ in demographics, blogging experiences and habits and ethical beliefs and practices, perhaps other important distinctions can be made between other categories of bloggers. As the blogosphere evolves, perhaps becoming more specialized, future studies might build on this one to investigate further differences among different types of bloggers, and reasons for the differences identified here. For example, regarding the present findings and that of Herring et al. (2004a) that non-personal bloggers tend to be male, some have suggested that women are disinclined to participate in the non-personal blogosphere because it is dominated by men, who hold them to different standards (Ratliff, 2007) – a topic that future research might explore.

Ethics is not a one-way street. Future studies might examine not only bloggers' views of their ethical obligations, but also others' expectations of bloggers. Due to their interactivity, blogs break down the traditional distinctions between content providers and audiences, however, it is through research not only into views of bloggers but of parties to whom their obligations are owed – their readers, and the people they write about – that the ethics of the blogosphere can be understood best.

APPENDIX

Items for ethical beliefs

Truth-telling index:

- 1 Honesty should be a guiding principle when people blog.
- 2 Telling the truth should be a guiding principle when people blog.
- 3 Bloggers should make sure that their weblog entries are always accurate.

Accountability index:

- 1 Bloggers should be responsible to their readers.
- 2 Bloggers need to be accountable to their readers.
- 3 Bloggers should take responsibility for any harm that their weblogs cause.
- 4 Bloggers should be answerable for any negative consequences that their weblogs may have.

Attribution index:

- 1 Bloggers always should credit others' work that they use in their weblog.
- 2 Bloggers ought to get permission to use substantial parts of others' work.
- 3 Bloggers should never plagiarize.
- 4 Bloggers should respect copyrighted materials.

Minimizing harm index:

- 1 It is important to be mindful of others' feelings when blogging.
- 2 It is important to treat everyone with dignity when blogging.
- 3 Bloggers should protect the confidential information of the people about whom they blog.
- 4 It is important to respect people's privacy when blogging.
- 5 Respect for others should be a guiding principle when people blog.

Items for ethical practices

Truth-telling index:

- 1 I make up characters in my weblog.
- 2 I exaggerate facts or figures in my weblog.
- 3 I make changes to my previous weblog posts.
- 4 I sometimes distort facts in a way that favor my opinion.
- 5 I present false information in my weblog.
- 6 I include fictitious material in my weblog.
- 7 I have included facts which may not be accurate in my weblog.

Accountability index:

- 1 I take responsibility for any negative impact that my weblog may have.
- 2 I own up to my readers the mistakes I have made in my weblog.
- 3 I write in a way that I would want others to write about me.
- 4 I correct any misinformation in my weblog.
- 5 When I correct any misinformation in my weblog, I make it known to my readers.

Attribution index:

- 1 I give credit to any sources from which I obtained my information.
- 2 In my weblog, I list picture credits for the images I do not own.
- 3 When I copy and paste a substantial amount of material from another website or weblog, I clearly indicate it to my readers.

- 4 I borrow material from other websites for my weblog without attributing it to its source.

Minimizing harm index:

- 1 I write abusively about others in my weblog.
- 2 I post confidential information about others on my weblog.
- 3 I post private information about others on my weblog.
- 4 I have written about others in a disrespectful manner in my weblog.
- 5 I discriminate against a particular group or groups when I blog.

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