

Current Key Privacy Factors: Development and Analysis

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Abstract

Privacy in information technology is a critical topic for all practitioners. This study measures the current state of information technology privacy by a series of nine current computer related ethical privacy issues. The study surveys a broad cross-section of 219 students, faculty, and professionals and determines their recognition of an ethical issue for each individual topic. The study next reviews the development of overall privacy factors from the selected topics. Privacy is a complex concept that defies definition in a single variable. Separate and distinct privacy factors are required to properly include multi-faceted privacy concerns. Three distinct privacy factors are uncovered, Internet Mischief, Personal Privacy, and Workplace Privacy. They all achieve acceptable Cronbach's alpha ranging from .7424 to .9206. After the factor development, demographic variances are also analyzed uncovering some significant variances by gender, age, student status, and faculty/staff compared to practitioners. The study concludes with a review of the implications and limitations of the study.

Keywords: Internet mischief, personal privacy, workplace privacy.

Introduction

One of the most important topics in information technology ethics is privacy. Mason (1986) originally identified it as one of the “four ethical issues of the information age.” Chen and Rea (2004) suggest, “users should have no doubt that they need to protect and control their information.” Stewart and Segars (2002, p. 36) note:

“The arrival of the information age holds great promise in terms of providing organizations with access to a wealth of information stores. However, the free exchange of electronic information also brings the threat of providing easy, and many times unwanted, access to personal information. Given the potential backlash of consumers, it is imperative that both researchers and practitioners understand the nature of consumers' concern for information privacy and accurately model the construct within evolving research and business contexts.”

Privacy is viewed by most as a fundamental right. The right to privacy in the US can be traced to Warren and Brandeis in 1890, defining the right to privacy as the “right to be left alone” (Warren and Brandeis, 1890). The US constitutional supports for privacy are in the first and fourth

amendment protecting the right to free speech (and by extension thought) and the right to unreasonable search and seizure. The United Nations in 1948 adopted a Universal Declaration of Human Rights which includes concepts of human privacy in several articles of the declaration.

This paper deals exclusively with the first component in James Rest's multi-step (1986) ethical decision making model, recognizing moral issues. This model is supported by many researchers including Jones (1991) and Harrington (1997) who refined this recognition into "interpretation of the situation or recognition of a moral issue". This paper is first an exploration of whether current information technology issues or situations are viewed as moral or ethical issues. Calluzzo and Cante (2004) combine the Rest steps of recognizing a moral issue and making a moral judgment. This article separates those activities and only attempts to study recognition of a moral issue. Yuthas and Dillard (1999) note that moral issues are not issues until we "recognize them as such." As noted, this is the first step in Rest's (1986) multi-step model of recognize moral issue, make moral judgment, establish moral intent, and engage in moral behavior. There is no measurement of judgment, intent, or behavior in this study. Only recognition of the importance of a moral issue is studied. The study is similar to Loch, Conger, and Oz (1998) who surveyed for Importance of an ethical issue. Vitell and Hunt (1998) suggest four issues associated with ethical decision making – "deontological evaluation, various components of the teleological evaluation (i.e. the probabilities of consequences and the importance of stakeholders), ethical judgments and intentions."

This study is an attempt to explore information privacy concerns within the population by studying current information technology privacy ethical issues such as spamming, spoofing, and spyware technologies. First, a literature review of relevant information technology ethical studies is presented related to hypothesis development. Specific hypotheses are formulated and tested. This study includes an extraction of current information technology privacy ethical issues. Development and administration of the study are presented. An overall evaluation of the privacy issues is reviewed. Next, exploratory factor analysis tests for the existence of privacy factors. Finally, privacy factors are tested for demographic differences. The report concludes with limitations, discussion, and implications for researchers and practitioners.

Hypotheses Development

The continued concern over privacy has been demonstrated by many researchers including Ackerman, Cranor, and Reagle (1999) who note that 87% of the individuals surveyed were concerned about privacy over the Internet. We propose that information technology privacy issues will be viewed as an important issues and have developed hypothesis one for testing.

Hypothesis 1: Information technology privacy issues are viewed as important ethical issues.

There have been two major studies that have attempted to develop constructs to deal with privacy. In 1996, Smith, Milberg, and Burke developed four factors to measure individual concern over information privacy. There were four elements of the construct – collection, errors, secondary use, and improper access. The four areas roughly correspond to the four ethical issues of the information age as posed by Mason collection (privacy), errors (accuracy), secondary use (property), and improper access (access). Subsequently in 2002, Stewart and Segars refined this

model with the addition of higher-order factor structure including computer anxiety and behavioral intention. Dhillon and Moores (2001) note the importance of examining the elements of the increasingly important issue of privacy. They note two factors have increased the issue of privacy – data collection and data mining. Supporting some of the other aspects of the study, Minor and Petocz (2003) discuss the problems with developing descriptive Ethical Decision making Models (EDM) without falling into a prescriptive trap. Kelley and Elm (2003) utilize Jones's model in their study of context influence on decision-making. Lastly, Vitell and Ho (1997) performed a comprehensive review of scale development for ethical constructs with none directly related to property or privacy. Many studies published no alpha values but those where alphas were given ranged from .56 to .94. We propose that current information technology issues will form specific privacy factors.

Hypothesis 2: Analysis of current information technology privacy issues will result in one or more privacy factors.

The importance of studying demographic factors as influences on ethical decision making is supported by Paolillo and Vitell (2002). The next several hypotheses deal with various demographic influences on privacy recognition. Vitell (2003) in his comprehensive review of ethics studies found that age tends to increase ethical behavior. Wood (1995) found that respondents with more years of experience did not have an influence on ethical views. Glover, Bumpus, Logan, and Ciesla (1997) found that years of work experience had a significant impact on ethical decision making in general business situations. Years of work experience correlated with higher ethical behavior in 50% of the situations. Kini, Rominger, and Vijayaraman, (2000) studied only students and concluded younger students were overall likely to be less moral. We propose that increasing age will result in a higher recognition of the importance of privacy issues.

Hypothesis 3: Age will significantly affect recognition of the importance of privacy factors.

Some studies found relationships with gender but Vitell suggests they are “not definitive at this point.” Athey (1993) also tested gender differences in determining ethical decisions. Her results did not show significant differences in gender. But, Panteli, Stack, and Ramsey (1999) suggest that IT is not gender-neutral and maintains a strong masculine bias. Glover, Bumpus, Logan, and Ciesla (1997) found that gender had a significant impact on ethical decision making in general business situations. Women were more likely to make ethical decisions than men. Wood and Glass (1995) found that females were less likely to condone software piracy. We propose that gender will affect recognition.

Hypothesis 4: Gender will significantly affect recognition of the importance of privacy factors.

Overall, Calluzo and Cante (2002) found that students have significantly different views between personal property and organizational property. Glover, Bumpus, Logan, and Ciesla (1997) found that years of work experience had a significant impact on ethical decision making in general business situations. Ellis and Griffith (2001) studied ethical scenarios exclusively with undergraduate and graduate students and suggested differences between students and non-students. Athey (1993) found significant differences between students and experts in their

evaluation of “computer-related” technical situations. As a result, we propose that student status will affect IT property ethics.

Hypothesis 5: Student status will significantly affect recognition of the importance of privacy factors.

It has been suggested that university personnel live in an ivory tower and do not reflect “real world” attitudes and concerns. We test this concept in hypothesis six.

Hypothesis 6: University faculty/staff versus IT practitioners will significantly affect recognition of the importance of privacy factors.

With limited empirical work done in the area of information technology factors, a review of contemporary popular literature as well as scholarly journals was undertaken to find relevant IT issues that might serve to uncover relevant factors. As a result of this review, as well as limited interviews with selected students and faculty, nine specific items were identified as current information privacy issues. The issues are presented in table 1.

Table 1. Current IT Privacy Issues

Online Privacy
Use of Spyware
Practice of Spamming
Practice of Spoofing
Privacy of personal information held by companies
Privacy of medical information held by companies
Privacy of information being held about you
Workplace monitoring of Internet Use
Workplace monitoring of email

Online privacy as an overall concept was included, since it is seen as many to be a significant impediment to electronic commerce. According to a major US poll, privacy is the most important issue for 90% of Internet users (Ulsch, 2000). Varnosi (2003) discusses the privacy concerns of software apps that are “tracking your behavior” commonly known as spyware. Weiss (2005) notes that unwanted email or spam continues to be a major problem even after legislative efforts to reduce the problem. Spyware is a malicious downloaded program that can “steal data and relay information to its creator, (and) often goes unnoticed.” (Sturgeon, 2004). Spyware can capture credit card information or other personal or confidential information. The anti-Spam legislation recently passed by the US Congress defines Spam as “transmission of unsolicited commercial electronic mail via the Internet.” (“Bill Summary”, 2004). Spoofing is an attempt to “appropriate the e-mail addresses of others in order to slip through content filters” (Wired News, 2004). D. Straub and R. Collins (1990) include discussion of privacy of medical information as well as personal information held about individuals. The importance of health information privacy was deemed so important, a major legislative federal government initiative resulted in the HIPAA or Health Insurance Portability and Accountability Act was enacted in 1996. Straub and Collins also review personal privacy perspective in their study as well. In this study, there is a third person view expressed as Personal information held by companies and a first person view

expressed as Privacy of information being held about you. Rosencrance (2001) notes a rapid increase in employee monitoring of employee Internet use and email. These sources are examples of the type of content surveyed to develop the privacy issues developed for this empirical research.

Methodology

There are three primary research areas that are addressed in this study.

1. Recognition of ethical issues concerning specific current information technology privacy topics
2. Development of overall privacy factor(s) based on current information technology privacy topics
3. Demographic analysis of recognition of ethical issues associated with current information technology privacy factors

An online questionnaire was developed to explore recognition of current information technology topics as ethical issues. Included in the survey were the nine items previously noted as privacy topics. As mentioned, Rest (1986) suggests that recognition of a moral issue is the first step in the ethical decision making process. The technologies and issues were the result of a review of popular press and include many of the most current and important issues dealing with online and technology privacy ethics. A general definition of ethics and ethical issues was thus included at the beginning of the survey.

Ethics is defined by the American Heritage Dictionary as “A set of principles of right conduct” Ethical issues then are matters that can be addressed by a “set of principles of right conduct”

The specific directions then were:

Based on your understanding of each technology or topic please rate the importance of ethical issues related to this technology or topic: (scale , not at all important, of little importance, neutral, somewhat important, very important)

The questionnaire was developed as an online survey and sent to several listservs including

- Information Resources Management Association (IRMA)
- Two Major University Faculty/staff listserv

The survey was also conducted in the author’s undergraduate classes. Harris and Weaver (1994-1995) used a similar approach of obtaining student respondents’ attitudes towards various ethical situations. Response rates ranged from 100% in the author’s classes to approximately 10-30% of the respective faculty/staff listservs and less than 5% from the IRMA listserv. All survey response rates were high except the IRMA listserv. Caution is thus appropriate in the results relating to this sub-segment. All analyses were performed using SPSS 10.0.5.

Overall 224 responses were received with generally 219 valid. A few of the questions went unanswered by participants and those were excluded from those analyses. The following tables 2 through 4 show the demographic makeup of the sample. There was a broad cross section of age groups from 40 in the 18-24 age group to 67 in the 41-50 age group. Overall, the average age is estimated at approximately 41. The gender mix was about 2 to 1 male to female, but this reflects the overall IT professional and student mix of male majority. Only 27 % of the sample was students, with the largest group being faculty and staff. This reflects the response rate of the survey based on the listservs. Specific demographic results will be analyzed

Table 2. AGE Distribution

Category	Frequency	Percent	Cumulative Percent
.18-24	40	18.3	18.3
25-30	12	5.5	23.7
31-40	48	21.9	45.7
41-50	67	30.6	76.3
51-60	36	16.4	92.7
60+	16	7.3	100.0
Total	219	100.0	

Table 3. GENDER Distribution

Category	Frequency	Percent
Female	78	35.9
Male	139	64.1
Total	217	100.0

Table 4. STUDENT Distribution

	Category	Frequency	Percent	Cumulative Percent
Valid	Student	59	27.2	27.2
	Faculty/Staff	136	62.7	89.9
	IT Professional	19	8.8	98.6
	Other	3	1.4	100.0
	Total	217	100.0	

Results

Hypothesis 1

Information technology privacy issues are recognized as important ethical issues.

The first analysis of the data is an examination of each of the privacy statements on a scale of 0 to 4 by recognition of importance of the ethical issues associated with this technology. The scale is as based on the respondent's understanding of each technology (scale of 0 to 4 with 0 = not at all important, 1= of little importance, 2=neutral, 3=somewhat important to 4 = very important). For all of the nine items surveyed, the topic was seen as an important ethical issue. Responses ranged from a low of 2.86, Internet monitoring by employers (3=somewhat important) to 3.8692, Privacy of medical information held about you. Hypothesis one was supported. Information technology privacy issues are recognized as important ethical issues.

Table 4. Overall Statistics

Topic	N	Minimum	Maximum	Mean	Std. Deviation
Online Privacy	218	1.00	4.00	3.7798	.5656
Spyware	216	.00	4.00	3.6065	.8985
Spamming	216	.00	4.00	3.5000	.8996
Spoofing	207	.00	4.00	3.5169	.8116
Personal information	214	1.00	4.00	3.8692	.4130
Medical information	217	.00	4.00	3.8710	.4430
Info on You	218	2.00	4.00	3.8761	.3697
Internet Monitoring	216	.00	4.00	2.8611	1.0429
Email Monitoring	217	.00	4.00	2.9447	1.1042

Hypothesis 2

Analysis of current information technology privacy issues will result in one or more privacy factors.

An exploratory factor analysis was performed on the nine item survey to determine if there were underlying privacy factors that could be uncovered. Similar to Moore (2000) factor analysis with extraction method of principal component analysis and Varimax rotation with Kaiser normalization was used to determine the privacy factors. Similar to Chow, (2004) factor loadings over .50 were used to identify factors contributing to a factor cluster. There were three components found with Eigenvalue over 1.0 (cutoff for factors per Moore, 2000). The factors are shown in table 5. A total of over 70% of the variance is explained by the three identified factors.

Table 5. Total Explained Variance

Factor	Eigenvalue		
	Total	% of Variance	Cumulative %
1	3.083	34.259	34.259
2	1.689	18.768	53.027
3	1.549	17.210	70.236

Similar to Chow (2004) factor loadings over .50 were used to identify factors contributing to a factor cluster. The rotated Varimax matrix is shown in table 6 and converged in five iterations. The rotation groups the nine issues into three general factors which we have named Internet Mischief, Personal Privacy, and Workplace Monitoring. These three factors include topics sufficiently similar to be grouped into these broader factors, yet sufficiently different to be differentiated from the broader concept of overall information technology privacy.

Table 6. Rotated Component Matrix

	Factor		
	Personal Privacy	Internet Mischief	Workplace Monitoring
Use of Spyware	0.288	0.651	0.006
Practice of Spoofing	-0.046	0.882	0.067
Practice of Spamming	0.170	0.843	0.088
Online Privacy	0.561	0.086	0.124
Privacy of personal information held by companies	0.898	0.092	0.043
Privacy of medical information held by companies	0.795	0.160	-0.008
Privacy of information held about you	0.768	0.087	0.080
Workplace monitoring of Internet Use	0.105	-0.017	0.960
Workplace monitoring of email	0.088	0.162	0.948

An internal consistency check was performed on the three identified factors via scale reliability using Cronbach's alpha. Table 7 shows that all were above the cutoff rate for respectable of .70 (DeWellis, 1991). According to Nunnally (1978) when developing "hypothesized measures of a construct ... reliabilities of .70 or higher will suffice." According to DeVellis (1991) .65-.70 minimally acceptable and between .70 and .80 is respectable. The overall alpha suggests respectable privacy factors.

Table 7. Scale Reliability

Scale	Number of items	Alpha	N
Personal Privacy	4	.7699	213
Internet Mischief	3	.7424	204
Workplace Monitoring	2	.9206	215

Hypothesis 2 was supported. Analysis of current information technology privacy issues resulted in one or more privacy factors.

Hypothesis 3

Age will significantly affect recognition of the importance of privacy factors.

With the development of the distinct privacy factors, a study was next undertaken to review demographic differences in recognition of these privacy factors. A preliminary review of the overall distribution of the responses suggested that the data exhibited forms of non-normality. As a result a non-parametric test, Kruskal-Wallis mean ranks test was used. Kruskal-Wallis test is a “nonparametric equivalent to one-way ANOVA. Tests whether several independent samples are from the same population. Assumes that the underlying variable has a continuous distribution, and requires an ordinal level of measurement.” (SPSS, 1999)

Table 8. Kruskal-Wallis – Age Test Statistics

	Personal	Mischief	Workplace
Chi-Square	.819	6.411	6.916
df	5	5	5
Asymp. Sig.	.976	.268	.227

Hypothesis 3 was not supported. Age did not significantly affect recognition of the importance of privacy factors. No significant differences were found (at $p < .05$) among age groups based on any of the three uncovered factors (Tables 8). This is somewhat in contrast to other studies noted by Vitell (2003) that suggested older individuals more readily follow ethical norms. But this study does not explore following norms only recognition of privacy IT ethical issues. Older individuals did not more readily recognize and classify as important, privacy ethical issues. This may suggest that privacy ethics are age neutral. Similar to Cleek and Leonard (1998) (and many other researchers) significance of $p < .05$ was used.

Hypothesis 4

Gender will significantly affect recognition of the importance of privacy factors.

Hypothesis 4 was partly supported. Gender significantly affected recognition of the importance of privacy factor, Personal Privacy but did not significantly affect recognition of Internet Mischief

or Workplace Monitoring. Table 9 shows a significant difference was found between men and women in the area of Personal Privacy. Women found Personal Privacy to be a more important ethical issue than men. Internet Mischief and Workplace Monitoring showed no such significant gender influence at $p < .05$. The gender difference is supported by Krete and Cronan (1998) who found in all their information technology ethical scenarios that men were “less likely to consider a behavior as unethical”. There is also support for the lack of gender influence on certain ethical situations. Both Vitell (2003) and Athey (1993) did not find gender differences in their studies.

Table 9. Kruskal-Wallis – Gender Test Statistics

	Personal	Mischief	Workplace
Chi-Square	6.160	3.471	.248
df	1	1	1
Asymp. Sig.	.013	.062	.618

Hypothesis 5

Student status will significantly affect recognition of the importance of privacy factors.

Hypothesis 5 was supported for two of the three factors (table 10). Student status significantly affected recognition of the importance of privacy factors Internet Mischief and Workplace Monitoring but did not affect Personal Privacy. Students found Internet Mischief as well as Workplace Monitoring to be less important than non-students. This difference supports Athey (1993) who found significant differences in ethics between students and experts. There was no significant difference between students and non-students based on Personal Privacy.

Table 10. Kruskal-Wallis – Student Test Statistics

	Personal	Mischief	Workplace
Chi-Square	.534	6.736	5.198
df	1	1	1
Asymp. Sig.	.465	.009	.023

Hypothesis 6

University faculty/staff versus IT practitioners will significantly affect recognition of the importance of privacy factors.

Separately non-students were reviewed and it was found that faculty and staff assign a significantly higher importance to Personal Privacy than information technology practitioners. However, practitioners assign a significantly higher importance to Internet Mischief. There is no significant difference between faculty/staff and practitioners for Workplace Monitoring. The Mean Rank table (table 11) and test for significance (table 12) are both shown due to the differing results.

Table 11. Kruskal-Wallis – University/Professional Ranks

	Professional Status	N	Mean Rank
Personal	Faculty/Staff	117	70.88
	IT Professional	18	49.28
	Total	135	
Mischief	Faculty/Staff	117	64.81
	IT Professional	18	88.72
	Total	135	
Workplace	Faculty/Staff	117	69.44
	IT Professional	18	58.61
	Total	135	

Table 12. Kruskal-Wallis - University/Professional Test Statistics

	Personal	Mischief	Workplace
Chi-Square	4.820	5.905	1.212
df	1	1	1
Asymp. Sig.	.028	.015	.271

Hypothesis six was somewhat supported. University faculty/staff versus IT practitioners significantly affected recognition of the importance of privacy factors Personal Privacy and Internet Mischief. Workplace Monitoring was not affected by University faculty/staff designation versus IT Professional.

Discussion, Limitations, and Implications

The study provides interesting implications for both researchers and practitioners but as with any study there are limitations that must be recognized. The study used a literature review to determine current privacy issues. Though the intent was to include all relevant privacy issues some other issues may be recognized to fall under an overall privacy umbrella. In other words, other researchers may discover other issues that should be included in the framework. Clearly, the rapid changes inherent in technology make likely the probability of the studied list may exclude some, most current issues. Refinement of the list and resurvey should be undertaken periodically. The data collected and analyzed are self-reported, so the potential exists for response bias. As with any study, the specific development of the test, though carefully prepared and pre-tested may have some undiscovered ambiguity. This study should be replicated to confirm results.

The sample was drawn from a convenience population of students, faculty, and practitioners and may not be applicable to the population as a whole. More extensive sampling would be

necessary to verify results. This study should be rightly viewed as the start of an exploration of specific privacy factors from an overall concept of privacy within society as a whole.

Overall the study had three goals. First, it tried to identify and analyze current information technology privacy issues to understand whether and how strongly information privacy topics are recognized as important ethical issues. This is the first step in Rest's decision making model. For the most part all the issues were identified as ethical issues requiring a set of rules of proper conduct. The most important issues were those related to personal privacy. This is not surprising. Allen and Ng (2001) noted the impact of self-interest and how it "clouds" moral reasoning.

The second goal was to uncover underlying privacy factors that could be generalized from the individual privacy topics. The study examined the nine items through exploratory factor and reliability analyses and found that three factors had a sufficiently high alpha level to qualify as acceptable overall privacy factors. This should prove invaluable to researchers who wish to further study either the subsequent steps in privacy ethical decision making process or who wish to develop other constructs and structural equation modeling of the privacy process. Further work can also be undertaken to explore and confirm these privacy factors.

The final goal was to determine whether there were demographic differences in identification of ethical issues with regard to privacy. This broad study clearly suggests that both gender and student status have significant impact on recognition of some privacy ethical factors. Men are less likely than women to recognize the importance of Personal Privacy. Men, however, showed stronger recognition of Internet Mischief as an ethical issue, though the relationship was only significant at $p < .10$ rather than the accepted $p < .05$. No gender relationship was demonstrated with the Workplace Monitoring factor. It would be interesting first to confirm and then explore the reasons behind these varying gender relationships. Perhaps the workplace monitoring results suggest that gender bias is lost once one enters the workplace arena. All view the environment equally. This would have interesting ramifications for management researchers and practitioners alike. The dichotomy between Personal Privacy and Internet Mischief could be related to an underlying gender bias in Internet Mischief activities. Most instances of Internet Mischief have been perpetrated by males. This too has implications for researchers and practitioners. Are women less likely to be concerned about Internet nefarious acts because they are less likely to engage in the activity or is there some other reason? Clearly further work is suggested to explore this area

Students are less likely to view Internet Mischief and Workplace Monitoring as important ethical issues than those in the workplace. First, it is logical that those who are subject to workplace monitoring (non-students) are more likely to view the importance of monitoring than those not subject to monitoring (students). Less clear, however, is the issue of Internet Mischief. Perhaps students, who are not working, see Internet Mischief as playful activity with little harm rather than workers who view the mischief as detracting from efficient overall business operations. This is somewhat supported by the finding that IT professionals who are most affected by Internet Mischief assigned a much higher significance to this factor than university faculty/staff. Further work would be interesting to explore the underlying causes of these attitudes. Likewise, it would be helpful to understand why students and non-students do not see differences in the area of personal privacy.

Another finding is that Personal Privacy is recognized as much less important by IT professionals than university faculty/staff. Perhaps industry professionals have cynically given up on their right to privacy in the modern corporate environment. Certainly further study is warranted here. Finally, age did not show a consistent trend with regard to identification of privacy issues.

Further implications for research

The broad concept of privacy has been much studied in both information technology and business research but little work has been performed to understand the underlying concepts that make up the basket of ethical factors that are commonly referred to as privacy. This work is an attempt to subdivide the general privacy notion into empirically defined factors. Much more remains to be done to determine the universality and further refinement of these identified factors.

The work also provides significant contribution in terms of the demographic distinctions of information technology ethics. There is a rich body of work that investigates gender, age, and student and occupational status on ethical recognition and decision making. This work can be further developed to expand and refine these fruitful areas.

Only the first step in Rest's moral decision making is addressed, recognition of a moral issue. The other steps in moral decision making should be similarly studied to determine whether the relative importance displayed via this survey carries over into making a moral judgment, establishing moral intent and engaging in moral behavior. Only when all aspects of the decision making process have been studied, can the full implications of privacy concerns be fully addressed.

Further implications for practice

Understanding how the importance of privacy, the development of reliable factors and understanding how these factors are viewed by various demographic groups have significant implications for practitioners. The fact that women are more sensitive to Personal Privacy than men, can allow tailored marketing by Internet commerce forms to address privacy concerns among women. The recognition of Internet Mischievous as a lesser ethical issue by students should encourage stronger efforts by the industry to promote and explain the benefits of Internet security and the costs and penalties associated with Internet Mischievous to the overall student population. There are many other implications that can be explored as a result of this study including addressing concerns over many other new issues such as shopper cards, video surveillance, RFID and GPS and how they will affect the economy, ways of shopping and our overall lives. The concern for privacy on the part of consumers is significant. This work supports the overall concept that consumers readily recognize as important, common information technology privacy issues. When all is said and done, companies need to understand and address the issues of privacy and mitigate the negative consequences related to consumer concerns over privacy. This study should help in better understanding how privacy is viewed and subsequently addressed.

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