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MAMA on the Web: Ethical Consideration for Our Networked World

Barbara A. Schuldt, PhD. CCP
Southeastern Louisiana University, Department of Management
SLU 10350, Hammond LA 70402
Phone: 985-549-2405, Fax: 985-549-2019
bschuldt@selu.edu

Information systems ethics have been studied for many years. It has primarily focused on the impact information systems in general have had on society. This research has been very valuable and has helped information systems professionals and students assess various business scenarios using ethical constructs. As a result of these studies we do have a strong sense of information systems ethics.

However, the popularity of the Internet and more specifically the World Wide Web (web for short) has created new ethical concerns. It is important to remember that the Internet was built in an open systems environment, where collaboration to advance the improvement was encouraged. However, it was a closed community of a few intellectuals primarily in the United States of America. In this spirit many individuals spent countless hours expanding the capabilities of the Internet without worrying about ethical issues. As long as the Internet was used within this relatively closed community – government and academics – ethical problems could be discussed and resolved. Even though Internet use was extended to commercial venues, the software actually running the web is non-commercial. The Internet commercial pressures exploded in 1991 with Tim Berners-Lee's World Wide Web (WWW or web). With the web, users now had virtually seamless interfaces using browsers. Around 1995 the web was being transferred from a governmentally-run network to a network run by commercial organizations. One issue that had to be resolved was the limited assignment and control over domain names. After worldwide discussion the Internet Corporation for Assigned Names and Numbers (ICANN) was empowered to oversee the new DNS assignments. The first new registrars were announced in April 1999. Assignment of domain names was no longer a governmental sanctioned monopoly.

The web community has had to deal with various problems to insure the continued safe use of the web. Anonymity can be problematic, but has been resolved so anonymous emails of spammers could be identified and stopped. In the anonymous web world digital signatures have been a stumbling point to E-commerce. This has been resolved so that the digital signatures can be verified. Additionally, broadcasters use the web to transmit video and audio along with static web pages. Digital online music caused ethical, as well as, legal negotiations in recent years from the new format MP3.

The Internet community is already planning for the next step - a larger Internet - by the adoption of Internet Protocol version 6 (IPv6) which increases the size and availability of IP addresses, and will allow more data and encryption in the packets transmitted on the web. Advanced search engines are being developed that incorporate language translation and artificial intelligence to facilitate sophisticated web searches. It is very difficult to keep up with all the new advances on the web, which can happen very quickly. Therefore, there needs to be an identification of several basic categories to help us define and discuss ethical issues on the web.

In Richard Mason's article "Four Ethical issues of the Information Age" (1986) he stated, "The question before us now is whether the kind of society being created is the one we want." He challenged the information systems professionals to develop ethical standards for the permeation of computers in our everyday life. He proposed the ethical issues of privacy, accuracy, property and accessibility (PAPA) as a way to focus the ethical discussion regarding information systems. While these four issues continue to be relevant today, the web requires additional ethical considerations and discussions. To help the global electronic community focus the ethical discussions about the web, this article proposes the following ethical categories – multicultural, adaptive, multifaceted, and archival. The acronym MAMA can be used to help us remember the web ethical issues relevant today.

INTRODUCTION

The web has expanded marketplaces and spaces beyond traditional restricted physical locations previously imposed on businesses. This marketing pressure along with incessant new technology (computer hardware and software) introduction has forced organizations to continually redefine their web presence. During this redefinition, organizations should be taking the time to determine if their web presence is ethical to a diverse global community. However, this is usually only done after there are problems.

In addition, organizations – for profit and not for profit – must take into consideration ethical perceptions of many culturally diverse nationalities. The web is forcing the global electronic community to adopt a single acceptable and hopefully ethical culture. It is unclear if this is being planned and discussed or if those who were unethical on the web are being ostracized by the web community thereby minimizing their actions.

Tragic events on September 11, 2001 in Washington D.C. and New York City demonstrated the pervasiveness of society's use of the web to distribute and find out information worldwide (Pegoraro, 2001). News bureau websites like CNN were jammed and access to this and similar sites were extremely slow. This assimilation of the web into the lives of billons of people has impacted ethical decision-making. Now instead of the ethical "TV test," there should be the ethical "Web test." This "Web test" will need to be very adaptive since the web in some ways is like a living entity, growing, learning, and evolving.

In addition to being global and adaptable to everyday life, the web must be multifaceted. The web is used to communicate, to share information and to assist commerce. Individuals and organizations are using the web to promote and sell products and services. It is used to sell individuals, ideas, products, services, and consumers. In today's global business environment it is the end result that is important. And the result is to promote the web content worldwide. It is amazing the amount of material that is available on the web. It is estimated that this material is doubling every 180 days. Yes there is junk on the web but there is also quality.

The web is a 24 * 7 * 365 ¼ technology. This means that any time and from anywhere a web site can be accessed. Web sites must be timely

and accessible anytime from anywhere, but for how long. The web is still in its infancy and as such hasn't faced the necessity of defining archiving protocols. Older material is either removed from the web site by the creator or archived and accessible on the web site, or the web site is no longer supported and you have a bad link. This has changed how we look at information systems. From a societal perspective we have an ethical issue concerning what, when, and how material should be archived.

This paper proposes that the web-based ethical issues defined by the acronym MAMA (multicultural, adaptive, multifaceted, and archival) are appropriate looking at information systems that are networked via the web. Identification of these concepts will hopefully lead us to answer Richard Mason's question by being able to state that the society being created today is the one that we truly want. Our society today can be described by both off-line and on-line aspects; however, the on-line aspects have infused our daily lives at an unprecedented rate.

MULTICULTURAL: What is a global culture? How is a global culture determined? Should it be planned for or allowed to evolve?

ADAPTIVE: How can the global community help individuals and organizations adapt to the changing web environment? What are appropriate changes to the web and what changes are being implemented to prey on the unsuspecting user?

MULTIFACETED: What is the minimum that a web presence should provide in terms of information, ownership, verifiable claims, or security? How can users identify what to expect from the web presence? How can users evaluate claims made on the web?

ARCHIVAL: What, when, how and who should archive the material on the web? Who should have access to the material in the archives and for how long?

Multicultural

The web is a distributed network of networks, which does not have any one governing body. From a historical perspective the roots of the internet are with a few intellectuals primarily in the United States of America. Along with this came many of the values of the USA and western Europe. However, this is no longer the predominant population using the web since only two-fifths of the users still reside in the United States. The internet demand continues to grow at a factor of 1.4 to 2 per year (Cerf, 2002). Much of this new demand is from Asian and African residents.

The ethical issue of multicultural looks at the cultural relativism of web sites. How does an organization ensure that its web site will be appropriate for the cultural values and ethics of the world? This is extremely difficult. What is applicable in the USA may be offensive in Japan. How does the organization remain a respected global citizen if parts of the global electronic community question its web site's values or avoid its web site due to cultural conflicts? This is an issue that needs to be looked at by the global electronic community. The web is the technology that has and will probably continue to facilitate growth of the global electronic community. The question is will it be many communities using the web but not interconnecting due to value and cultural differences or will it be one global electronic community?

It appears that the web by its global nature is establishing a web culture that is a composite of the cultural norms of the participants. By default, are we defining this web culture as acceptable since we haven't discussed what should be an ethical web culture? By allowing this to evolve and be controlled by those organizations that have the resources to establish and promote web sites, we may be missing or eliminating the very diversity of thought and contribution that built the Internet. Often we look to laws to establish what is ethical, but in the global community laws are nation-based and the web has no predefined national boundaries.

Also, most USA citizens want this global community to be free of governmental influence, regulation, and control. Usually at the point the government becomes involved, it is to pass legislation that some would characterize as restrictive to the software application creativity that made the web the persuasive influence in our lives today.

This leads us to the need for the web to adapt to changes from its very nature of promoting and encouraging innovative applications. This adaptation however, has ethical issues.

Adaptive

The web has been and will continue to be very adaptive and responsive to new technologies and innovations in the field. However, this adaptive behavior can have ethical concerns for many of its users. Questions like designing web sites for the lowest common capabilities of the target audience's computer hardware and software versus continually designing for the leading edge hardware and software, when should new technologies be adopted and incorporated into the organization's web presence, who will assess the potential impact of these adaptations and evaluate their effectiveness, and how will novice users be made aware of their need to upgrade and improve their skills? Or is this creating a society of haves and have-nots. Those that can access the web anytime and from anywhere have an advantage over the individual or group that has limited or controlled access to the information on the web. The international court systems will in the future be dealing with the fairness issue with business transactions. Such questions as: when do transactions begin and when do they end, how do varying line speeds, noise, and interference modify or negate a transaction, and do limited or restricted access and the availability of information change how organizations do business on the web. For now organizations must be cognizant of users' ability to access the web.

It is very frustrating for users to work with a web site over time and then see a dynamic design shift. These shifts can take advantage of new computer hardware and software but can be detrimental to the user just trying to do his or her job. What appears to be lacking consideration for the user, is an assessment of the need for training and a determination when training should take place? Is this the organization redesigning the web site's responsibility or is it the user's responsibility? How does the user acquire this training? Is this an unfair (unjust) added burden (cost) to the user?

In addition, how quickly can the global electronic community respond to new questionable activities, such as Gamespot's download manager hiding spyware and digital-rights-management (DRM) on your PC (Hachman, 2002). This software is actually "stealware" that diverts commissions for online purchases that you make from other vendors back to them rather than to the vendor who referred the purchase. Many of these referral vendors are dependent on these commissions for their survival (Schwartz and Tedeschi, 2002). A discussion about this topic generated 31 pages of postings in one day on Slashdot.org. The discussions defined this as unethical behavior, but basically felt that it wasn't unusual and the respondents felt powerless to stop this kind of behavior. How can the global electronic community keep the adaptive, responsive nature of the web as a high priority, while discouraging or restricting negative activities such as what Gamespot recently did with the spyware and DRM?

The web by its very design is trying to provide a venue for any one to do many things by being networked to the world. Does it set up additional ethical concerns that one entity – the web – is trying to be multifaceted?

Multifaceted

There is no dispute that the web has many aspects. As of February 2002 there were 544 million Internet users, whereas the teleco's have about 1.3 billion terminations (Cerf, 2002). In the push for increased mobility the wireless telephone providers have been incorporating web access and applications with the cell phone. It is estimated that by 2006 there will be 21.4 billion Internet devices along with other GSM and 3rd generation wireless communication devices. It would be hard to believe that all these users would be accessing the web for only one or two standard applications. Therefore the web must continue to be multifaceted as it has been.

The purpose of a web site can be for educational or informational sharing, or to promote an idea, product or service, or to actually facilitate exchanges between two or more parties. How can these web-based information systems that have a global influence of unprecedented economic impact support the ethical standards that society expects?

One area is the future of business to consumer (B2C) web applications. The average consumer is still uncertain about the security of these transactions, whereas the business to business (B2B) and business to government (B2G) applications have grown exponentially. The success of these applications has reduced costs and increased revenues amounting to millions of dollars. In 2006 the growth to 2.4 billion Internet devices will not be from new organizations but primarily from individual users. The average consumer is beginning and will continue to demand additional applications that allow them the freedom to take full advantage of the web while remaining in a secure environment. How do we define what is a secure environment? The court system uses what a reasonable person would expect in assessing whether a person's privacy has been violated; will that work in the web environment?

We already have an Internet-enabled refrigerator made by Electrolux in Sweden (Cerf, 2002); can other Internet-enabled appliances, jewelry or clothing be far behind? How are these multifaceted applications going to change society? And will it be the changes that we as society want?

On top of this are demands by some web users for adult activities. How will we ethically resolve our predisposition (at least in the USA) to the notion of free speech and the right to pursue adult activities while protecting those not capable of making informed decisions (children or mental challenged individuals)? Off-line ethical standards do not easily translate into the on-line world. Adult content after 9 p.m. has no correlation on the web since it is always after 9 p.m. somewhere in the world.

Currently, with the fast paced growth of web applications organizations are faced with the problem of Internet techies who do not have the same concern for the non-technical user that the new web marketers are trying to cultivate. The techie wants to develop the system for the sake of the technology and because he or she can. The web marketer is creating a new market and building an Internet community for the product or service. This can lead to conflicts within the organization that are often ethically based and will need to be resolved.

One such consideration is the archival of the material. Who is responsible the technical personnel or the marketing personnel? Who pays for the costs of archiving?

Archival

Archival questions need to be answered by organizations, such as what is archived; where is it archived (internal or external sites); what audiences have access rights to the archives; and how long must the organization's materials be archived?

Organizations today are faced with new data storage rulings. Firms need to determine how to save information in a systematic manner. They need to determine whether to internally or externally store their email and instant messages. "Everything from Martha Stewart to Enron has brought e-mail into focus. This is getting people's attention now and it's something you just have to do," says Jim Pirack, vice president of compliance at ShareBuilder Securities, a subsidiary of Netstock Corp. (Barrett, 2002). Granted Mr. Pirack was not talking about Internet posted material specifically; however, corporate e-mail and instant messages and in our current business climate, publicly posted material on the web, will probably be viewed as fair game for future legal actions.

The online magazine Salon removed an article that had charged Thomas E. White, secretary of the Army, as a contributor to the accounting practices that led to the downfall of Enron. The article was removed according to the editors because "a critical piece of evidence, an e-mail message attributed to Mr. White, could not be authenticated." (Carr, 2002) The article was on-line and publicly available, it has now been removed, but where is it archived and referenced (for example, this article)? This specific case will probably be resolved in the legal system. But what is the impact on the rest of the web? Does archiving become an individual's or an organization's responsibility?

Many individual web site owners address archiving on the web, however, many of us use the web as a research tool and having access to historical archives may be of importance in the future as the web matures. Ethical considerations of who is responsible for archiving web materials, when they are archived, how this can be documented and verified, and who has liability for inaccurately archived material will need to be discussed and a workable consensus achieved.

CONCLUSION

As the global electronic community identifies web ethical issues and proceeds to define acceptable web practices related to MAMA - multicultural, adaptive, multifaceted, and archival -the world wide web will be assimilated into our every day lives beyond our current limited thinking in an ethical responsible manner. And the web will be a better place in which the global electronic community can grow and promote the well being of all its citizens and society as a whole.

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