Does Higher Education Need a New Ethical Framework for the Internet?

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Overview

In the age of “copy and paste,” do we adequately teach students the definitions of plagiarism and ethics of respecting intellectual property? What is wrong with downloading copyrighted music, movies, and software from sites where this intellectual property is easily, but illegally, available? What is the difference between free expression of speech and cyber-bullying? What is the definition of privacy in a world of social networks and virtual realities? Is it right to publish or distribute material that was clearly stolen from confidential sources?

The Internet revolution rolls on, and innovators throughout the world continue to create exciting applications at an accelerating pace. Today our electronically interconnected societies realistically reflect Marshall McLuhan’s metaphor of “the global village,” which he expounded in the 1960s. Facebook (with more than 500 million active users), other social networks, games, virtual realities, and new applications not imagined by most people a few years ago confront individuals on a regular basis with ethical dilemmas they probably have not faced before. Do current ethical frameworks, more targeted codes of ethics, and existing acceptable use policies equip students, faculty, and staff at our institutions to handle these challenges?

This research bulletin is designed to help decision makers in higher education assess the applicability of four significant historical codes of ethics as they evaluate their current policies and guidelines. It provides examples of previous in-depth thinking about these issues from the Internet Activities Board (IAB), the Association of Computing Machinery (ACM), the Institute of Electrical and Electronics Engineers (IEEE), and the Computer Ethics Institute (CEI). In addition, it summarizes and references several publications that serve as foundations of the field of computer ethics.

Many societal structures have emerged to guide and/or constrain individuals’ behaviors. Examples include codes, commandments, contracts, conventions, copyrights, customs, directives, ethics, guidelines, imperatives, laws (local, state, national, international), mandates, morals, policies, principles, procedures, protocols, regulations, requirements, rules, standards, and treaties.

This bulletin will focus only on ethics as applied to the Internet or information technology (IT) more generally. We shall use the definition of ethics from Deborah G. Johnson’s seminal text Computer Ethics: “[E]thics is a normative lens through which to view human arrangements, choices, and actions.” More simply, one may view ethics as moral principles that should govern the behavior of a person or group.

The higher education IT community probably does not need to work on developing an entirely new Internet ethical framework; it can build on the large body of knowledge that already exists. But it does need to expend a significantly greater effort on examining, tailoring, and teaching about existing computer ethical norms to give members of our campuses better tools to face emerging ethical challenges.
Highlights

There are literally thousands of references available that attempt to shed light on how individuals should behave in computer-intensive environments. For example, in January 2011, Google searches of the terms “computer ethics” delivered approximately 150,000 citations, “Internet ethics” 37,000, “information ethics” 140,000, “cyberethics” 26,500, and “digital citizenship” 557,000. So the problem for higher education is not that there are no guidelines available. Rather, the problem seems to be that many individuals are not aware of useful ethical guidelines for their Internet activities, and they do not have appropriate tools to deal with new digital ethical dilemmas when they arise. This section summarizes a brief history of some of these developments and recommends a few that can be useful in higher education environments to expand the dialogue and help our constituents.

The year 1985 was an important milestone in the history of computer ethics. Prior to 1985, many who were active in the field of applied ethics argued that there was no need for special ethical considerations when dealing with IT questions; one could simply apply classical ethical reasoning to this rapidly emerging new technology. In October 1985, James H. Moor published a prize-winning essay, “What is computer ethics?,” in the Metaphilosophy essay competition. In this paper he argued that IT creates almost unbounded new possibilities for human actions. Since there is a policy vacuum regarding these actions, there is a need to create new ethical guidelines to help sort out the resulting conceptual muddle caused by the rapidly changing IT landscape. Unique
ethical issues occur—and will continue to emerge—that would not have existed if computer technology had not been developed.

In this same year, Johnson published the first edition of the landmark textbook *Computer Ethics*, which would become a standard in the field. The updated 4th edition of this important work (referenced above) was published in 2009. In it, she expands the scope of computer ethics to other emerging technologies and to the social systems in which they are invented, introduced, used, and modified. In addition, she presents many interesting scenarios that pose challenging ethical questions for readers.

**Some Illustrative Internet Ethical Codes**

Noteworthy efforts have been made to codify standards of ethical behavior related to appropriate use of digital technologies, the Internet and networks in general, shared services, confidential information, and other issues.

**Internet Activities Board**

One of the earliest attempts to define ethical behavior specifically focused on the Internet is the January 1989 widely referenced document distributed by the Network Working Group of the Internet Activities Board (IAB), "Request for Comments: 1087, Ethics and the Internet." It was based on guidelines developed by the National Science Foundation networking group and summarizes five activities that the IAB considered to be unethical:

- The IAB strongly endorses the view of the Division Advisory Panel of the National Science Foundation Division of Network, Communications Research and Infrastructure which, in paraphrase, characterized as unethical and unacceptable any activity which purposely:
  - (a) seeks to gain unauthorized access to the resources of the Internet,
  - (b) disrupts the intended use of the Internet,
  - (c) wastes resources (people, capacity, computer) through such actions,
  - (d) destroys the integrity of computer-based information,
  - and/or
  - (e) compromises the privacy of users.

**Association of Computing Machinery**

Other organizations have published ethical codes since the IAB introduced its guidelines. For example, in October 1992 the Executive Council of the Association for Computing Machinery (ACM) revised extensively its 1972 Code of Professional Conduct in order to clarify and state formally the ethical requirements that are important for membership in this professional association. The ACM’s goal was to develop a code that embodied a consensus and a commitment to ethical behavior that would help individuals make better decisions. It emphasized education rather than enforcement. It contains three major sections.
The first focuses on general moral imperatives such as contributing to society; avoiding harm to others; being honest, trustworthy, and fair; honoring property rights such as copyrights and patents; respecting the privacy of others; and honoring confidentiality. The second section describes more specific professional responsibilities, such as acquiring and maintaining professional competence, accepting and providing appropriate professional review, honoring contracts and agreements, improving public understanding of computing and its consequences, and accessing computing and communication resources only when authorized to do so. The third section describes several organizational leadership imperatives such as managing personnel and resources to design and build information systems that enhance the quality of life, and articulating and supporting policies that protect the dignity of users and others affected by computing systems. The code concludes with the statement that ACM members will uphold and promote the principles embodied in the code. The final paragraph notes that adherence to the code is largely a voluntary matter, but if a member of the ACM engages in gross misconduct by not following the code, membership in ACM may be terminated.

Institute of Electrical and Electronics Engineers

In August 1990, the IEEE Board of Directors approved the following concise code of ethics that focuses on general moral guidelines (like the first section of the ACM code). Note that the IEEE board did not try to articulate any of the special attributes of computer technology that would make these general principles more applicable in IT environments. According to the code, IEEE members should commit themselves to the highest ethical and professional conduct and agree:

1. to accept responsibility in making decisions consistent with the safety, health, and welfare of the public, and to disclose promptly factors that might endanger the public or the environment;

2. to avoid real or perceived conflicts of interest whenever possible, and to disclose them to affected parties when they do exist;

3. to be honest and realistic in stating claims or estimates based on available data;

4. to reject bribery in all its forms;

5. to improve the understanding of technology, its appropriate application, and potential consequences;

6. to maintain and improve our technical competence and to undertake technological tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations;

7. to seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, and to credit properly the contributions of others;

8. to treat fairly all persons regardless of such factors as race, religion, gender, disability, age, or national origin;
9. to avoid injuring others, their property, reputation, or employment by false or malicious action;

10. to assist colleagues and co-workers in their professional development and to support them in following this code of ethics.

Computer Ethics Institute


1. Thou shalt not use a computer to harm other people.
2. Thou shalt not interfere with other people’s computer work.
3. Thou shalt not snoop around in other people’s computer files.
4. Thou shalt not use a computer to steal.
5. Thou shalt not use a computer to bear false witness.
6. Thou shalt not copy or use proprietary software for which you have not paid.
7. Thou shalt not use other people’s computer resources without authorization or proper compensation.
8. Thou shalt not appropriate other people’s intellectual output.
9. Thou shalt think about the social consequences of the program you are writing or the system you are designing.
10. Thou shalt always use a computer in ways that ensure consideration and respect for your fellow humans.

Although it is criticized by some as being trite or too short on details to be useful, its simplicity as a starting point for discussions about IT ethics makes it an important tool. In January 2011, a Google search using this paper’s title generated about 70,800 citations. It’s a very widely referenced document!

What It Means to Higher Education

The four computer ethics guidelines summarized above were all created approximately 20 years ago—before the development of the modern browser; the web; the incorporation of Google, Facebook, and Twitter; widely accessible virtual realities; smartphones, and many other innovations we take for granted today. Are these guidelines still relevant in the digital world in which our students, faculty, and staff now function?
One way to explore this question is to review specific examples of current policies—from EDUCAUSE member colleges and universities—that have been placed in the organization’s resource library. A January 2011 search of the EDUCAUSE “Policies and Procedures” web section, filtered on the term “Ethics Policies,” returned 44 contributed resources, but only one had been written after 2005 and 10 were submitted before 2000. Using the more general term “Acceptable and Responsible Use Policies,” the search returned 324 resources, only 8 of which were submitted after 2005.

Although the author of this bulletin has not read all of these policies, a sampling indicates that many are not current and most focus on legal and resource usage issues—in general, what one is not allowed to do. Most do not try to develop an ethical framework “to guide one’s behavior” or “to serve as a normative lens through which to view human choices.” Is it realistic to try to add an ethical dimension to our IT policies and procedures, or is it enough to present legalistic and bureaucratic regulations?

Opportunities for IT Organizations

Experiences as the CIO at the University of California, Berkeley, for more than 13 years led this author to question how best to engage our university community in the interesting ethical questions that arise because of the ways the Internet expands what people are now able to do that were not even conceived of before many current applications were invented. One set of issues stands out as particularly frustrating: the confusing responses to, and requirements of, the Digital Millennium Copyright Act of 1998.7

In conversations with students and colleagues it became obvious that there were widely different ethical norms being applied to digital media copyright issues by different groups. One dimension of this problem became very public: the widespread downloading of copyrighted music by individuals throughout the world, not just in the education community. Acceptable use policies were published, articles were written, subpoenas were issued, and people were sued, but a broad consensus seemed impossible to achieve. During this author’s tenure as CIO, we did not discover a satisfying way to engage our campus community in the interesting ethical dimensions of this and other IT-related issues. As a community, we seem more comfortable exploring legal issues than wrestling with ethical ones; it seems easier to do and less subject to criticism.

An ongoing question in higher education is whether IT organizations are strategic to the missions of colleges and universities. As selected applications that were once provided internally are outsourced at some institutions (e.g., electronic mail and routine help desk services), IT organizations may be looking for expanded roles that are more strategic. Leading CIOs are exploring ways to become more valuable to the core teaching and research missions of their institutions. Collaborating with academic departments to explore ways of presenting the ethical dimensions of emerging Internet applications may be one such activity. Many IT professionals are likely not skilled in the field of applied ethics, and most ethics professors are probably not experts in the more technical aspects of some information technologies (e.g., data mining, RFID tags, GPS locators, net neutrality, router logging histories, network security monitors, and so forth).
Another logical collaboration would be to work closely with campus librarians to explore how to improve copyright compliance in our networked digital world. Intellectual properties are fundamental assets of our institutions and our constituents. The storage, accessibility, protection, sharing, and communication of these assets are certainly strategic issues.

Professor Larry Lessig of the Harvard Law School and director of the Edmond J. Safra Foundation for Ethics at Harvard University is a leading scholar and authority on copyright issues in general and more specifically about issues related to digital media. At the 2009 EDUCAUSE Annual Conference in Denver, Lessig challenged all of higher education to join his efforts to bring sanity to the copyright muddles. To make his point even more strongly he “deputized” attendees by granting them an “official” certificate of entitlement to question current copyright law.

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Lessig made similar arguments at the TED conference in 2007. His challenge could serve as a creative point of entry, among many, for professors, librarians, and IT workers to join together exploring many of the ethical and legal intellectual property rights issues currently facing our constituency.

One way to move forward with these suggestions is to develop a small set of scenarios that fit your campus culture and use them in seminars and/or short courses sponsored by the IT organization along with academic departments. Johnson’s Computer Ethics, referenced earlier, contains dozens of such interesting and illuminating discussion scenarios. Another well-known professor who uses this technique is Michael Sandel, creator of one of the most popular courses in Harvard’s history: “Justice: What’s the Right Thing to Do?” As part of the background of this research bulletin, the author developed a small series of Internet ethical scenarios for use at the ECAR 2009 Symposium and a related lecture in 2010. A short summary of one of these scenarios follows as an illustration of how this method may be used to explore interesting ethical issues.
An Illustrative IT Ethical Teaching Scenario

Judy is the CIO of a large university. Bob, one of her reports, is director of networking services. The university has a set of policies governing the use of computer resources, one of which affirms that individuals must not access the files or communications of other individuals (a version of CEI commandment 3 above). Another policy states that the campus network cannot be used to download copyrighted or illegal data (a version of CEI commandment 8).

As part of his normal duties of managing the campus network, Bob happens to observe the following data. After deliberating about what to do, he comes to Judy for guidance. There are three different situations to discuss.

- Part 1: A faculty member (or student, or staff member) has a university computer account that is being used to download very large amounts of data from a location that is a well-known source of copyrighted music, movies, and/or software.
- Part 2: Change the data source so that in this part of the discussion it is a documented off-shore source of child pornography.
- Part 3: The data that Bob inadvertently sees contains e-mails to a member of the campus community threatening the addressee with bodily harm if he or she does not change the grade of an individual whose records are in the system.

What should Bob do with this information? Once he discusses it with Judy, what should both of them do?

Conclusion

Given the rapidly changing IT environment upon which we depend in increasingly complex ways, it is important for college and university personnel to review their policies for the use of Internet resources on a regular basis to ensure that those policies are not outdated. It is perhaps even more important to explore whether these policies set the right tone for the institution’s culture and whether they adequately deal with how individuals should face new computer ethical issues when they emerge. IT organizations can play an important role in shaping these policies and procedures by collaborating with academic departments and libraries.

For example, it is not enough to declare that plagiarism is against the institution’s code of conduct. Individuals need to wrestle with what the word actually means in today’s digital world. More nuanced discussions are called for that discuss what constitutes plagiarism, why intellectual property rights are important, how creativity can be encouraged and blended with property rights, how archaic laws might be changed, and how to behave in the meantime.

It is clearly important to explain what is legal, but it is just as important to help individuals build a framework for deciding what is right. By engaging in and leading such
explorations, IT organizations can enlarge their role of supporting the strategic educational mission of their colleges and universities.

**Key Questions to Ask**

- Where does your institution publish helpful guidelines about what is considered appropriate Internet behavior, and how are students, faculty, and staff encouraged to read and apply those guidelines?
- Where, when, and how often are ethical issues discussed? Where can individuals obtain guidance when they face new computer ethics challenges?
- How does your student handbook (or similar publications) explore the special issues surrounding plagiarism that emerge because of the ease of “copy and paste” from digital resources?
- Which campus organization presents short courses, develops online resources, or hosts panel discussions about Internet ethics? If there is none, should there be one, and which organization should take the lead?
- What are the implications of “great universities” making, or not making, some or all of their courses freely available on the Internet?

**Where to Learn More**

- Berkman Center for Internet and Society, [http://cyber.law.harvard.edu/](http://cyber.law.harvard.edu/).
- Harvard University, Safra Center for Ethics, [http://www.ethics.harvard.edu/](http://www.ethics.harvard.edu/).

**Endnotes**


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