CSCI 494: Final Paper

Select a question/issue within the context of social/ethical issues as raised by or applicable to computing technology; write a paper of 8–12 pages that addresses the question based on class readings, discussions, and other readings you may locate. You will also produce an expanded bibliography that evaluates the readings used (details below), and you will present your paper to the class.

Your paper should:

- clearly lay out the question;
- note the relevant ideas/materials from the course readings;
- explain common/likely positions; and
- argue (with support!) for a position.

It is important that you try to bring your specifically Christian understanding to bear on the issue. At the same time—especially if you are addressing a matter of public policy—you will need to marshal arguments that are accessible to non-believers as well.

Warning: Notice that you are required to select a question and take a position. Failure to do so will result in a disappointing grade.

Topics

Pick a topic that is of current interest; it should be a matter of personal/professional behavior, organizational action, social policy, or technological impact on personal or social understandings. A few items that have made the news (or come up in class) within the last few years are:

- The DMCA amends U.S. copyright law to exclude some activities, such as reverse engineering, that previously fell under fair use. DMCA also gives special standing to technical means for preventing copying, and appears to prohibit defeating such mechanisms even for fair use. Competing bills have been introduced to protect fair use or to require all suppliers of digital devices to incorporate support for technical restriction of copying.
- Under DMCA, record labels have been able to order network service providers to turn over some records about use of their services. What kinds of regulations should govern network history? What sorts of technical measures should be taken to protect or prevent privacy?
- Proposals have been made that law enforcement should be able to seize or block IP addresses or domain names without court action, based on complaints about copyright infringement.
- It is common for software licenses to disclaim any warranty of merchantability—to refuse to back the product performs as claimed. Some have argued that this is essential, for "bugs are unavoidable". Is this claim well founded? What does it say about the professional status of software development?
- An increasing array of devices record information about our location and activities; cellphones and RFID-embedded objects (including passports) greatly expand the amount of automated tracking that is possible. What issues does this raise? And how might those issues be addressed in system design, legal regulation, and even social convention?
- There have been surges in fraud and errors related to personal identification. How might such problems be addressed?
- There have been many debates about the proper handling of security-related flaws in computer systems, including matters of disclosure, promptness of fixes, and liability.
- How have recent technological changes affected the ability of governments (or other powerful institutions) to manage the access of individuals to news and other information? What issues have been raised by the recent role of social media in popular uprisings?

- How does monitoring/surveillance affect the social interactions within a (at least partially) voluntary community (such as a church or college campus)?
- There are experimental trials underway employing brain-computer interfaces for input to computer systems.
- One suggested use for "domestic robots" is to provide care for the elderly. In some cases, robotic systems (such as the iRobot/Hasbro "My Real Baby") have been suggested as ways to provide social interaction for the elderly and infirm. There are places where robots are already used for tutoring or minding young children. What should we be thinking about?
- Some argue that the management of computing systems should be a regulated profession. There have also been calls to regulate some or all programming, while others argue market forces are adequate to protect the concerns of the public. ACM and IEEE parted ways a few years back, and IEEE appears to be mounting a push for engineering licensing for at least some software developers.
- How are we affected by particular facets of information technologies, such as always being connected? rapid/instant response? decoupling from place? from natural constraints of time?

Most of the above are not sufficiently focused for a paper topic, but they should raise some questions that will serve well. You will need to focus carefully: it is vital that you be able to phrase your topic as a question.

Presentations

Most of one regular class meeting will be devoted to presentations of your papers. You will have about *ten minutes* to present; that means your presentation will have to waste no time, and you will probably have to focus it even more narrowly than your paper. There will be limited additional time for questions and discussion; we will arrange the schedule so that related papers are presented together.

Bibliography with evaluation

Finding peer-reviewed articles is a plus, but other sources may be appropriate as well. In evaluating those sources, however, you will need to pay close attention to their character. For example, there are some more trustworthy web sites (such as Freedom to Tinker), and there are useful articles in reputable non-scholarly publications (though you still need to distinguish there between informational and opinion pieces). You will need to be especially careful about the random web site you find and publications/forums that are devoted to advocacy.

Separate from your paper, you will need to produce an annotated bibliography that discusses the quality of the sources you cite. This should explain the nature of each work, and it should explain how each source can be appropriately used and what limitations apply. You may provide that evaluation through some combination of bibliographic notes and a brief essay.

Timeline

Each portion is due at the scheduled start of class.

Mar 24 Topic due (in writing; e-mail or paper).

Mar 31 Preliminary annotated bibliography with evaluation due.

Apr 7 Presentation schedule will be distributed.

Apr 21 Brief presentation of your paper.

May 3 Final version of your paper due.