

CISC-497 Discussion Topics for Weeks 2,4,5,6,7

Readings from *Ethics for the Information Age* 5th edition, by Michael J. Quinn

Note: All legislation, statistics, and case studies in the short presentations and papers **must be from countries other than the U.S.** in order to obtain a balanced perspective, since those in the text are nearly all from the U.S.

Week 2: Networking (Readings: all of Chapter 3)

T1: Controlling the Internet

Censorship versus freedom of expression, Ethics of pornography, Fighting spam

Example presentation topics (choose one of these or create your own):

Should there be limits on what is tolerated on the Internet? What are the harms and benefits?

(e.g., libel, hate literature, pornography, terrorism promotion, bomb-making instructions)

Present the argument: There should be limits

Present the argument: There should not be limits for adult users

If there should be limits on what is tolerated ...

What methods for control are there and how effective are they?

For instance, is the war against online child pornography being won?

Who should be liable (individuals, service providers)?

What is the best solution to the spam epidemic?

T2: Cultural Differences and Political Effects

Legislation, Government control of the Internet, Effects on Democracy

Example presentation topics:

How do governments limit access to the Internet (e.g., the "Great Firewall of China")?

Are these limits justifiable? Should cultural values be defended?

What are the benefits and harms of government control of the Internet?

What regulations for the Internet currently exist, and what regulations should there be?

Should regulations be national or international?

How do individuals and agencies try to challenge government control of the Internet?

Should citizens of democratic nations help people in authoritarian nations get around the

Web censorship of their repressive governments?

How do companies from democratic nations facilitate government control in authoritarian governments, and are these actions ethical (e.g., Yahoo, Google)?

Discuss the Global Network Initiative's attempt to address this problem.

Is the Internet a positive force for increasing democracy in the world or the opposite?

T3: Children Online

Web filters, Legislation, Chat-room predators, Sexting, Cyberbullying, Violence in games

Example presentation topics:

What dangers are children exposed to online and what should be done to reduce these?

What current legislation is there to protect children online, and what are its pros and cons?

Should there be limits on children's access to Internet sites at home? In libraries and schools? How?

How could minors be protected from the dangers of sexting?

Should cyberbullying be made a criminal offense? What measures effectively combat cyberbullying?

Should there be limits on violence in computer games? How should any limits be implemented?

T4: Social Issues

Internet and online game addiction, Online gambling, Social networks, Computer dating

Example presentation topics:

Are Internet addiction and online game addiction real and, if so, what should be done?

What national/international controls are there for online gambling, and what should there be?

Are computer dating services a wonderful way to meet compatible potential partners?

Is the easy communication of the Internet a threat to marriage and family?

What are the benefits and disadvantages of online social networks (e.g., Facebook)?

What is attention deficit trait and do you have it?

Week 4: Intellectual Property (Readings: all of Chapter 4)

T1: Intellectual Property Rights and Protection

Benefits of and limits to protection, Copyrights, Patents, Fair Use, Creative Commons

Example presentation topics:

What should be the purpose of intellectual property laws?

Protect an inventor's or artist's natural right to a product?

Promote technological progress and artistic creation for the benefit of society as a whole? Is intellectual property protection needed in order to promote innovation?

Has copyright law gone too far?

Current/Proposed Canadian laws?

Current European laws?

Are restrictions on "Fair Use" limiting education?

Should all copyrights be Creative Commons copyright licenses?

To what extent do copyrights, patents and trade secrets ensure the continued dominance of the developed world?

How have technological advances throughout history made it easier for individuals to violate intellectual property protection laws?

T2: Artistic Works

Peer-to-peer networks, Technological and legal restrictions, Digital rights management

Example presentation topics:

What are the ethical pros and cons of Napster and its successors?

What is the case for and against DRM (Digital Rights Management)?

Should artistic works have different protection from other types of intellectual property?

Should copyright laws protect musical compositions?

Should copyright laws protect recordings of musical performances?

Have developments on the Internet helped to promote or limit musical creation?

What are the pros and cons of Google Books?

Are e-book readers promoting or limiting literary creation?

T3: Software Ownership

Software copyrights and patents, Open-source software

Example presentation topics:

Present both sides of the argument: Software should be free

Should all software be open-source?

How effective are copyrights, patents and trade secrets for protecting software?

Should the "look and feel" of software be copyrightable?

Should algorithms be patentable?

T4: The Ethics of Piracy

Legitimacy of protection for artistic works and software, Cultural differences

Example presentation topics:

Is there an ethical defence for making unauthorized copies of software?

Is there an ethical case for (or against) using other people's designs or algorithms in one's own software?

Is there an ethical defence for making unauthorized copies of music, movies and books?

Develop the argument that artistic works should be in the public domain, to benefit society as a whole.

Develop the argument that artistic works should be paid for by anyone who accesses them.

What cultural differences exist as to the ethics of piracy?

How can these cultural differences be resolved?

Week 5: Privacy (Readings: All of Chapter 5 and 6.1 – 6.8)

T1: Perspectives on Privacy and Privacy Legislation

Harms and benefits of privacy, Privacy and wiretap legislation

Example Presentation Topics:

Why is privacy important, or why is it not?

Evaluate the statement, "If you have nothing to hide, you have nothing to fear"

Evaluate the statement, "Metadata is not a threat to privacy because it doesn't access any content"

Explore cultural differences regarding the right to personal privacy

What legal protection is there against invasion of privacy?

In Canada?

In any of the U.K., Sweden, the European Economic Union?

What principles for data collection should be enforced by law?

If privacy is important, why do people post so much personal information on Facebook and blogs?

Has it become more important to manage our public identity (Facebook, Twitter, etc.) than to develop as individuals?

T2: Personal and Public Information

Public Records, Loyalty Programs, RFIDs, Cookies, Use & Misuse of Databases

Example Presentation Topics:

What are the advantages and disadvantages of loyalty programs?

Discuss the issues of third-party access to personal information (such as facebook apps.)

Discuss the erosion of anonymity via "name and shame" on the Internet

What are the benefits and risks of RFIDs? Of smart cards? Of Cookies?

What are the benefits and risks of personal tracking devices, such as cell phones and car systems?

How does data mining and marketing cause social stratification?

What kinds of data mining for information about job applicants is ethical?

Is social media monitoring of employees ethical?

How are business/government databases misused?

Should there be restrictions on the use of business databases by government?

T3: Surveillance

Covert government surveillance, Computer monitoring in the workplace and in public places

Example Presentation Topics:

If you were being watched continuously every day, how would you act differently?

Generalize this to analyze the societal harms/benefits of monitoring.

Does covert surveillance being done in Canada violate the rights of a citizen?

Do current airport security practices violate privacy rights?

Are no-fly lists justifiable?

Workplace monitoring:

What types of monitoring are technologically possible?

Which are justifiable? Which are not?

Public place computer monitoring:

What types of monitoring are technologically possible?

What types of monitoring are currently used?

Which are justifiable? Which are not?

Does whether or not the monitoring is recorded affect the ethics of using it?

T4: Privacy and Security

Privacy by Design; Surveillance by Design

How can we have both privacy and security?

How has surveillance by design increased since 9/11?

Is surveillance by design justifiable?

What are the principles of privacy by design?

Is privacy by design justifiable?

Should information collection be opt-in or opt-out?

Week 6: Computer and Network Security (Readings: 6.9-6.11, and all of Chapter 7)

T1: Software Vandalism, Hacking, Computer Terrorism

Viruses, Worms, Trojan horses, Hacking, Cyberterrorism, Denial-of-Service (DoS) attacks

Example presentation topics:

Are operating systems manufacturers at all responsible for damage caused by malware?

To what extent is the victim responsible?

How has the evolution of computer networks affected the spread of malware?

What is being done to combat the spread of malware? What should a user do?

Are there conditions under which hacking is morally justifiable?

Is it wrong for a company to hire a former malicious hacker as a security consultant?

What laws exist with respect to hacking in Canada and elsewhere? Are they effective?

Is the term cyberterrorism useful or does it overstate the threat? Has anyone died as a result of a computer or network attack?

Are there conditions under which politically motivated cyber attacks are justifiable?

T2: Security of Online Transactions

Banking & shopping, Online voting, Identity theft, Phishing, Pharming

Example presentation topics:

Should online voting become the standard?

How secure is online banking?

What are the benefits of online shopping? The pitfalls? How secure is online shopping?

Is identity theft (including phishing and pharming) a growing problem? How large a problem is it?

What efforts have been made to combat identity theft? What should an individual do?

How hard is it to recover from identity theft?

T3: Digital Forgery

Digital Cash, Digital signatures, Counterfeiting, Forgery of Documents, Faking photos

Example presentation topics:

What is digital cash? How is it used? How is it similar to real cash? How is it different?

What are its potential benefits? Its weaknesses? Is anyone using it?

What are digital signatures? How are they used? How are they similar to real signatures?

What are their potential benefits? Their weaknesses? Is anyone using them?

In what ways do digital methods of counterfeiting and forgery differ from traditional forms?

What defenses are there against digital counterfeiting and forgery?

Is digital manipulation of a photograph ever problematic (ethically speaking)?

Should photographic evidence continue to be admissible in courts?

T4: Security and Privacy: ID Systems

National ID cards, Web Anonymity, Biometrics. Other ID Systems

Example presentation topics:

What are the advantages and disadvantages of requiring national ID cards?

Social Insurance Numbers, drivers' licenses or other national ID systems

What are the advantages/disadvantages of the use of biometrics?

When should biometrics be used and when not?

Should parents implant microchips in their children to make them easier to identify in case they are lost or kidnapped?

Should convicted criminals be implanted with microchips to identify them?

Should smart cards be required for the elderly or disabled to protect them?

Current online identity systems

Proposed online identity systems (e.g., mandated Internet "driver's license")

How can privacy be preserved while bringing reasonable safety and security to the Internet?

Week 7: Computer Reliability and Professional Ethics (Readings: all of Chapters 8 and 9)

T1: Critical Systems

Health-related, Transportation, Nuclear warning and defense systems

Example presentation topics:

Examples of defective health-related critical systems

Software failures in nuclear warning and defense systems

Software failures in spacecraft, and aircraft and other transportation systems

The story of Lt. Col. Stanislav Petrov

Other critical systems failures?

What are reasonable limits to the use of computers in critical systems?

T2: Data-Entry and Predictive Systems

Voting machines, Financial systems, Computer modeling and simulations

Example presentation topics:

The reliability and security of voting machines

Computers and

Financial systems

Weather prediction systems

Climate change forecasting

Stock market forecasting

Modeling the early universe

Validating simulations

T3: Certification and Liability

Software engineering standards, Software warranties, Certification of professionals

Example presentation topics:

Software engineering

What is it, and what is its history?

What makes one a “software engineer”?

Software warranties

What are they?

Do they work?

The moral responsibilities (if any) of the software manufacturer

Certification of professionals

What certifications (if any) are currently available to a software professional in Canada or the US?

What does one need to do to get certified? Does certification matter?

T4: Professional Ethics

Professional codes of ethics, Ethical questions at work, Whistleblowing

Example presentation topics:

The Software Engineering Code of Ethics and Professional Practice

What is it, and what is its history?

Principle features

Is it applicable in professional life? (Strengths, weaknesses)

Whistleblowing

Is whistleblowing ethical?