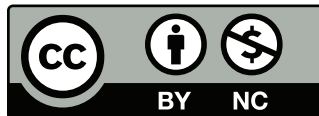# COMS W3995-001: Computers and Society

Prof. Steven M. Bellovin
Spring 2015

CS@CU

What is this Course?

- Ethical issues for practitioners

- Privacy

- Risks of computer systems

- Employment

- Freedom of speech

- Social networks

- Intellectual property

Course Structure

- Hybrid seminar/lecture format (as much as is possible with a class this large. . .)

- I want *you* to do a lot of the talking

- I want you to do a lot of the *thinking*

- Syllabus subject to change to discuss current events

- Grades will be posted on Courseworks

- Yes, I curve

CS
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Prerequisites

- An open mind

- A willingness to learn

- No specific technical prerequisites—I'll cover any specialized knowledge necessary

Readings

- *A Gift of Fire: Social, Legal, and Ethical Issues for Computing and the Internet*, Sara Baase, Prentice-Hall, 2008, 3rd edition, 978-0136008484.

- The *Risks Digest*: `http://catless.ncl.ac.uk/Risks/`—please subscribe. (Note that it appears irregularly.)

- My blog (`http://www.cs.columbia.edu/~smb/blog/`) will often be relevant

- Some primary source material—I assume you all know how to use the library and/or electronic resources. (Hint: Google does not (yet?) have access to all of the world's knowledge.)

- Note: ACM and IEEE readings are often available only from the campus network.

Logistics

- For grading issues, approach me within two weeks.

- For issues relating to *this class*, email smb+3995@cs...

- That lets me auto-sort class-related mail and keep better track of things

Cooperation versus Dishonesty

- Discussing the class with others is encouraged

- All written material *must* be individual work unless otherwise instructed.

- *All* quotations from external sources *must* be properly cited

- Zero tolerance for cheating

- See the department's honesty policy:
  `http://www.cs.columbia.edu/education/honesty` I will assume that you have all read it; you are in any event responsible for its terms and provisions.

Contacting Me

- Feel free to drop in during office hours.

- I'll announce changes on my home page

- I'm amenable to meeting other times, by appointment. You're welcome to drop in if my office door is open, but I reserve the right to ask you to come back later

- If you have any questions, please use email rather than telephone; I travel a lot and am not very reachable by phone

Talking to Me

- Drop by, just to talk (a good idea if you think you'll want me to write a recommendation. . .)

- You don't need to be in trouble to talk with me. . .

- If my office door is open, just walk in

- But—I travel too much

TAs

- Sebastian Zimmeck: sebastian@cs...

- Cecilia Watt: ciw2104@columbia...

- Jeffrey Scholz: jss2245@columbia...

- Their office hours will be posted

Lectures

- I prepare slides for each class, and upload them shortly before class time

- Slides (and other information) are uploaded to my web page

- Well, occasionally they're uploaded shortly after class. . .

Papers: Syntax

- Papers *must* include proper bibliographies

- Papers must be submitted electronically by the start of class

- I strongly prefer PDF to other formats

- Papers received later that day lose 5%, the next day 10%, two days late 20%, three days late 30%; after that, zero credit

- Exceptions granted only for *unforeseeable* events. Workload, day job, etc., are quite foreseeable.

- Problems? See me *before* the due date

Responsibility

- You're all adults

- You're all responsible for your own actions

- If there's some special issue or problem, you have to tell me

Papers: Semantics

- One paper on each major unit

- ☞ The lowest grade is dropped—which means you can omit one paper if you choose

- *About* 8–10 pages apiece

- Write something *analytic* about the topic

- Do not just summarize or regurgitate lectures or references—draw conclusions

- Think of them as take-home essay exams where you pick the question. They are not expected to be original research.

- Opinion pieces are ok—*if* backed up by research

Bibliographies

- A form of proper attribution

- Where to go for more information

- Sometime a way to judge the credibility of the statement

Citations

- I don't care about the precise format of citations. However—there should be enough information in each citation to permit me to find the reference

- Bare URLs are not acceptable

- Wikipedia is not a primary source

Resources

- There is wisdom in the world not known to Google

- There are rooms and even whole buildings on this campus known as "libraries"

- The CU library network also has a lot of electronic works

Discussing Legal Works

- This is not a law class

- We are not interested in the legal minutae or in a critique of the legal reasoning

- We are interested in the broad foundations of legal decisions, their effects, and on how these decisions and laws interact with technology

Legal Research

- `http://www.law.cornell.edu`—statutes, cases, etc.

- LexisNexis, via CU library — comprehensive, annotated, complex

- `http://www.lib.uchicago.edu/~llou/mpoctalk.html` — research guide

- `http://thomas.loc.gov` — good for bills currently before Congress

- Many, many more

Legal Notation: Court Cases

United States v Morris (1991, CA2 NY) 928 F2d 504

United States v Morris Common name; lists parties to the case

1991 Year of the decision

CA2 NY Court of Appeals, Second Circuit, New York

928 F.2d 504 Volume 928, page 504, of the Federal Reporter, Second Series (yes, cases are cited by page number!)

See `http://www.faqs.org/faqs/law/research/part1/` for more details

Similar formats are used even when referring to cases from other countries: Semayne's Case, 5 C. Rep. 91a, 77 Eng. Rep. 194 (K.B. 1603).

Legal Notation: U.S. Code

18 USC 1030 (Computer Fraud and Abuse Act)

18 Title 18 of the U.S. Code (Crimes and Criminal Procedure)

USC U.S. Code or other body of laws or regulations ("CFR" is the Code of Federal Regulations)

1030 Section 1030

Computer Fraud and Abuse Act The common name. Strictly speaking, it applies to the *Public Law* that created that section (or made major amendments to it)

The U.S. Code is the orderly compilation; sections are created and amended by Public Laws: P.L. 98-473, Title II, Ch XXI, §2102(a), 98 Stat. 2190.

Opinions

- I'm an unabashed privacy advocate. But the course is not about *promoting* privacy, and I don't expect you to agree with me.

- Feel free to espouse any position—but be prepared to back up what you say

- I may challenge you even if I agree with you…

- "You are entitled to your own opinions, but not your own facts." (Sen. Daniel Patrick Moynihan, probably among others.)

Why These Topics?

- Ethical issues for practitioners

- Privacy

- Risks of computer systems

- Employment

- Freedom of speech

- Social networks

- Intellectual property

All represent potential conflicts between the good and the bad things that computers can do

Ethics

- "Once the rockets are up, who cares where they come down? That's not my department, says Werner von Braun". (*Werner von Braun*, Tom Lehrer)

- Who should worry about such things?

- What are the special issues for computer scientists?

Privacy

- What are the special risks to privacy from computer systems?

- What are the privacy benefits of computer systems?

- What is the tradeoff between privacy and security? How do we strike the proper balance?

- How does one design systems to improve privacy without giving up other things?

Risks of Computer Systems

- Many items we deal with on a daily basis are computerized

- Often, older control mechanisms have been replaced by newer, computerized ones

- Where is this being done?

- What are the effects, good and bad?

- How can we maximize the benefits and minimize the risks

Employment

- The computer industry has created many new jobs and careers

- It has also cost jobs and is threatening others

- It has aided the migration of jobs to lower-cost areas

- What are the tradeoffs? Can we have our cake and eat it, too?

Freedom of Speech

- The Internet is a very powerful vehicle for free speech.

- Or is it?

- Is there such a thing as too much free speech? Who decides?

- How do we balance conflicting national interpretations of the balance?

Social Networks

- We all know about Facebook and other social networking sites

- Do people reveal too much about themselves?

- Do people tell the truth about themselves?

- Who profits? How?

Intellectual Property

- Computer technology and the Internet have lowered the cost of copying and distributing many things to near zero

- Why has this happened?

- Is it a problem? Is it a benefit?

- If it is a problem, how can we solve it?

Current Events

- Charlie Hebdo

- The Snowden revelations

- Nation-state activities

- More. . .

What's Different About Computers?

- Scale

- Speed

- Complexity

- Inflexibility

- Lack of human judgment at runtime

As computer professionals, what do we do?

What's this Course About?

- Facts about various interactions

- Some notion of where things might be headed

- How to think about the issues