

Getting on the same page

- Readings - make sure you keep up
- General Ethical concepts
 - do a little research, read Johnson chapter
- SE Code of Ethics reading (pop quiz)
- Paper proposal coming up!
 - What is the format?

Tip

- 2 minute talks: current events presentation
 - 1 or 2 minutes, just talking
 - you choose the topic in general computing
 - what is new, interesting or controversial?
 - where is there further information?
 - as part of your class participation grade
 - produce a very simple piece of paper with your name, date and subject of the talk for credit

Basic CSC 300 Issue List

- Hacking - black and white hat
- Downloading copyrighted files
- Pornography
- Replacement of human judgment by deterministic machines
- Safety of computer controlled systems
- E-voting
- Privacy
- Video game violence

More topics - my favorites

- Software Engineering
 - requirements
 - testing
 - degree programs
 - licensing as engineers
 - ethics of NDA's as part of required capstone sequence in SE program

Topics, top level

- Broad ideas can be explored:
 - EIR model for software development
 - Ethical distance “increased” by computing
 - Software systems as “agents” of humans
 - vis a vis moral / ethical responsibility
 - search for Johnson’s papers
 - Copyright as applied to object is unethical
 - hides the “innovative ideas” contrary to US Const
 - patent applied to software is better (exposes ideas)
 - find Pam Samuelson’s old stuff

Even More Possible General Paper Topics

- Intellectual Property in software
 - Open Source, GPL?
- Online gaming addiction
 - “addiction” to software?
- Military use of software for smart bombs
 - software as decision maker?
 - Expert Systems and personal responsibility
- Database / Network privacy
 - Spyware and the “free market”?
- Wardriving as a “service” ?

Topic Thoughts

- My Passions:
 - The “Requirements” problem
 - “Design” considerations
 - “Licensing” and “Liability” issues
 - Abstraction as Reification
- What is YOUR passion?
 - the lens with which you can view the entire course?

Ethical parameters at Issue Here?

- Private property
 - theft and morality: IP, downloading, cheating
 - trespass: hacking, spam
- Anonymity
 - privacy, pornography, marketing, spam
- Privacy
 - “right to be left alone”
 - data mining, spam

- Others?
 - dependence (backup systems?)
 - could we survive without all the chips functioning?
 - distribution of control / centralized control
 - right to know (connected, secret databases)
 - accuracy, ownership / control of “information”?
 - responsibility (“many hands”)
 - cause (“traceability”)

What is “*new*” about computing as a human artifact?

- Are these computing ethics issues special?
 - why can’t you take a GE in “Ethics” and be done with it?
- Fred Brooks “Mythical Man-Month” says
 - complexity
 - conformity
 - changeability
 - invisibility

Computing Uniqueness

- Johnson sees differences -
 - new entities
 - scale of activities
 - new kinds of activities heretofore impossible?
 - inherent unreliability
 - reliability is always an issue (can’t have statistical reliability models?)
 - power and pervasiveness

Johnson goes Deeper

- “Instrumentation of human action”
 - what is this?
- Johnson has a problem with analogical reasoning in computing activities

Philosophical Ethics

- Critical examination of beliefs for
 - consistency?
 - rationality?
 - logic?
 - what sort of meaning do we look for?
- What is the method she recommends?
 - Dialectic to “find” the underlying principle

Utilitarianism

- Utilitarianism
 - act-utilitarians
 - rule-utilitarians
 - egoists
- Pros and Cons of Utilitarianism

Deontology

- the principle inherent in the action is decisive
 - do consequences count?
- Kant’s “categorical imperative” says
 - “never treat another human being merely as a means ...” (compare Buber’s “I-thou”?)

Rights

- Positive rights
- Negative rights

Claims about the World

- Normative
- Descriptive

Parnas view on What We Do

- What is a “Rational” design process
 - and why is it called “Rational” Corp? :-)
- What is the reality?
- Does Parnas advocate dishonesty?
 - what is the difference between the rational process and his process?
 - why?
 - impact on SE Code analysis?

Reminder: Highest level CSC 300 concerns

- Our subject is [pure] ABSTRACTION
 - what is that?
 - how does it work?
 - how good is it, how can we tell it is “good”
 - or “better” than another one?
- What are the basic issues in abstraction of reality?
- Anyone know about the Sapir-Whorf-Korzybski hypothesis in the field of general semantics?
 - what might it mean for CSC/SE/CPE and does it infect everyone to such an extent?

- What is the basis for doing CSC, CPE, SE
 - development
 - science, too?
 - who “supports” science and why?
 - what is needed to make all this happen?
 - educated workers
 - loans, contracts, money
 - socialized workers
 - law, ethics, morality
 - “level” playing field for innovation and profit
 - contracts, roads, buildings, health system
 - could any of this happen in a vacuum?

What does Weyuker Add?

- “Testing NonTestable Programs”
 - when was this written?
 - true today?
 - what does she really say?
 - what has changed?
 - any progress at all?

And Hamlet?

- Are we testing for “reliability” ?
 - what is “reliability” ?
 - a quality attribute of software (nonfunctional....)
 - what is the “testing” to which he refers?
 - how do others refer to “testing”?
 - is it all dark, or does he have suggestions?
 - any progress on this front?
 - what did Brooks point to?

Boris Beizer

- What does he have to say about all of this?
 - does he knit this together in any way?
 - do “other engineers” have anything to do with us as software developers (SE and CSC.... and CPE)
 - what is a “system” by the way?
 - what is it that we build as software developers
 - systems view

Suggestion for Exam

- Put all the research papers into a matrix
 - what is their “main point”
 - how do they connect to each other?
 - what SE Code provisions would interact with them?
 - what do they mean to the “real world?”

Midterm Exam

- Friday
- All notes OK, “open everything”
 - references must be clear to me
 - but do not need to meet paper standards
- You may even speak to neighbors
 - to borrow materials or get a reference
 - but you may not “copy” answers :-)
- Materials up to Wednesday covered

- Some diffs with current practice and last exam
 - but you may write out and bring answers, number them appropriately, and turn them in to me
- Critical to review comments on your first writing assignments (and on the instructions for writing the term paper!)
 - Really! You need to write well, logically, and your “flow” must express your best thinking
 - if an answer is not written well, it cannot communicate your best thinking and it will not receive credit