



Technology and ethics

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Agenda



- Overview of chapters II and III
 - Summary of each chapter
 - Section “Distilled”
 - Criticism and discussion
- Division into two groups
 - Reading of a case study
 - Discussion



A quote



- Lubarsky's Law of Cybernetic Entomology



A quote



- “There is always one more bug.” - Lubarsky's Law of Cybernetic Entomology



Part II: Professional responsibility



- Unintentional Power in the Design of Computing Systems
- Informatics and Professional Responsibility
- The Ethics of Software Development Project Management



Part II's claim



- “Computing has matured to a point where it has standards, methods, and techniques which, if employed, would reduce the likelihood of many computing disasters. The world will no longer accept the view that bugs arise in programs by Spontaneous Generation. The bugs (errors) were put there by people who should know better. The failure to deliver quality products is unethical, even in computing.” – Gotterbaum, 1992



Unintentional Power



- Engineers should take responsibility where possible, making systems more safe, more usable etc under more conditions
- Engineers should be humble about guarantees
- This will happen at the expense of our simplistic approaches to design



Informatics and Professional Responsibility



- Crosswords: The way engineers are trained at university
- Side-steps: Avoiding or dodging responsibility
- “these excuses are used to justify development of systems that are detrimental to society and these excuses inhibit the development of computing as a profession”



Project Management



- Introduces 8 principles
 - Honor, Honesty, Bias, Adequacy, Due care, Fairness, Social cost, Action
- Maps an ethical process onto a development methodology
- “project management should be guided by a sense of justice, sense of equal distribution of benefits and burdens and a sense of equal opportunity.”



Part II distilled



- What does the term “professional” suggest?
 - Mastering an extensive body of knowledge
 - Provide an important service
 - Exercising monopolistic control over services
 - Accepting a code of professional conduct



Part II criticism



- Every chapter talks about “Lives lost” as if every computer system is safety critical and should be built that way
- The doctor versus the carpenter: which one are computer professionals?
 - A stratified model?
- Cost. What if all carpenters were engineers?



PART III: Codes of Ethics



- No, PAPA: Why Incomplete Codes of Ethics are Worse than None at All
- On Licensing Computer Professionals



No, PAPA



- PAPA – Privacy, Accuracy, Property, Accessibility – may detract from other issues
- Beware of checklists
- No moral code can be complete - “authors of codes should make it clear that their code is no substitute for careful moral consideration”



Licensing



- Government license to practice a profession
- Administered through a professional organization
- Opens up for malpractice lawsuits
- Would help establish computing as a profession



Part II distilled



- Ethics codes are for
 - Inspiration, Education, Guidance, Accountability, Enforcement
- Ethic codes are not
 - Laws, complete frameworks or algorithms
- Not laws, yet they can be enforced



Part III criticism



- Would help establish computing as a profession. Wait, isn't it a big industry?
 - Higher status, higher cost, less supply
- Can we demand that engineers are social creatures? Maybe “geeks” need checklists.
- Our proposal: Stratified licensing, more rigorous processes for safety-critical systems



Discussion



- Division into groups
- Reading of case
- Discussion
