

Professional Ethics for Computer Science

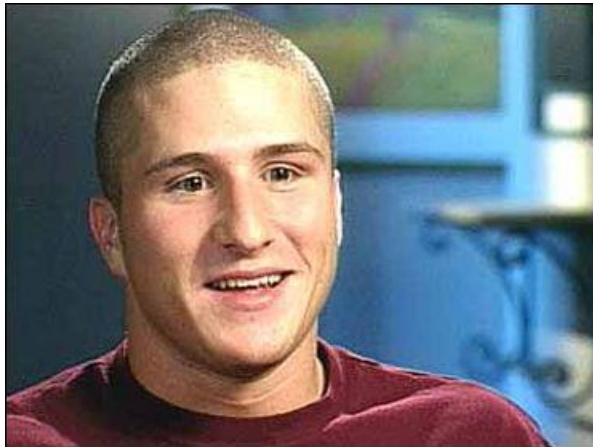
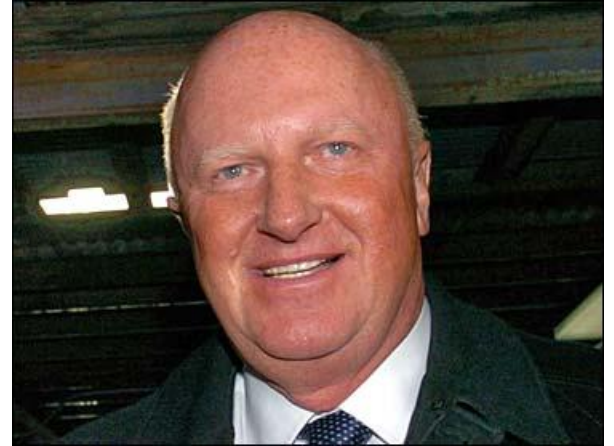
Lecture 1: Motivation and Basics

Klaus Mueller

Computer Science Department

Stony Brook University

Can You Name These Guys?



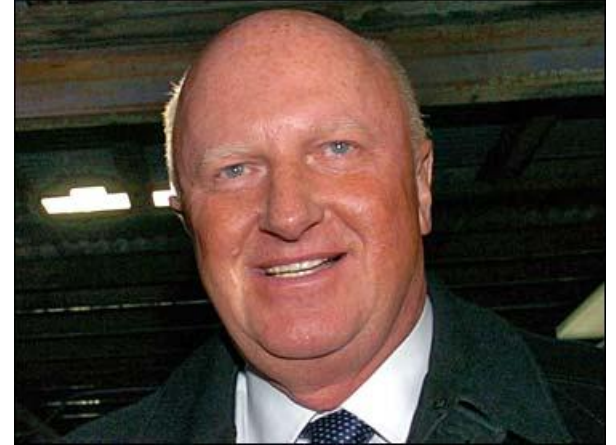
Can You Name These Guys?



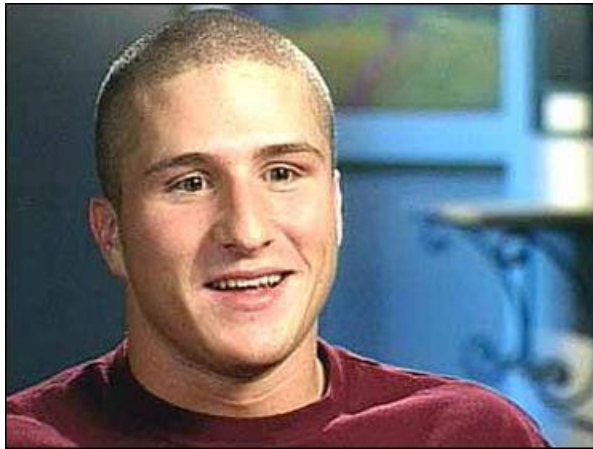
Bernie Ebbers (WorldCom)



Ken Lay (Enron)



Dennis Kozlowski (Tyco)



Shawn Fanning
(Napster)



Pinocchio (Literature)



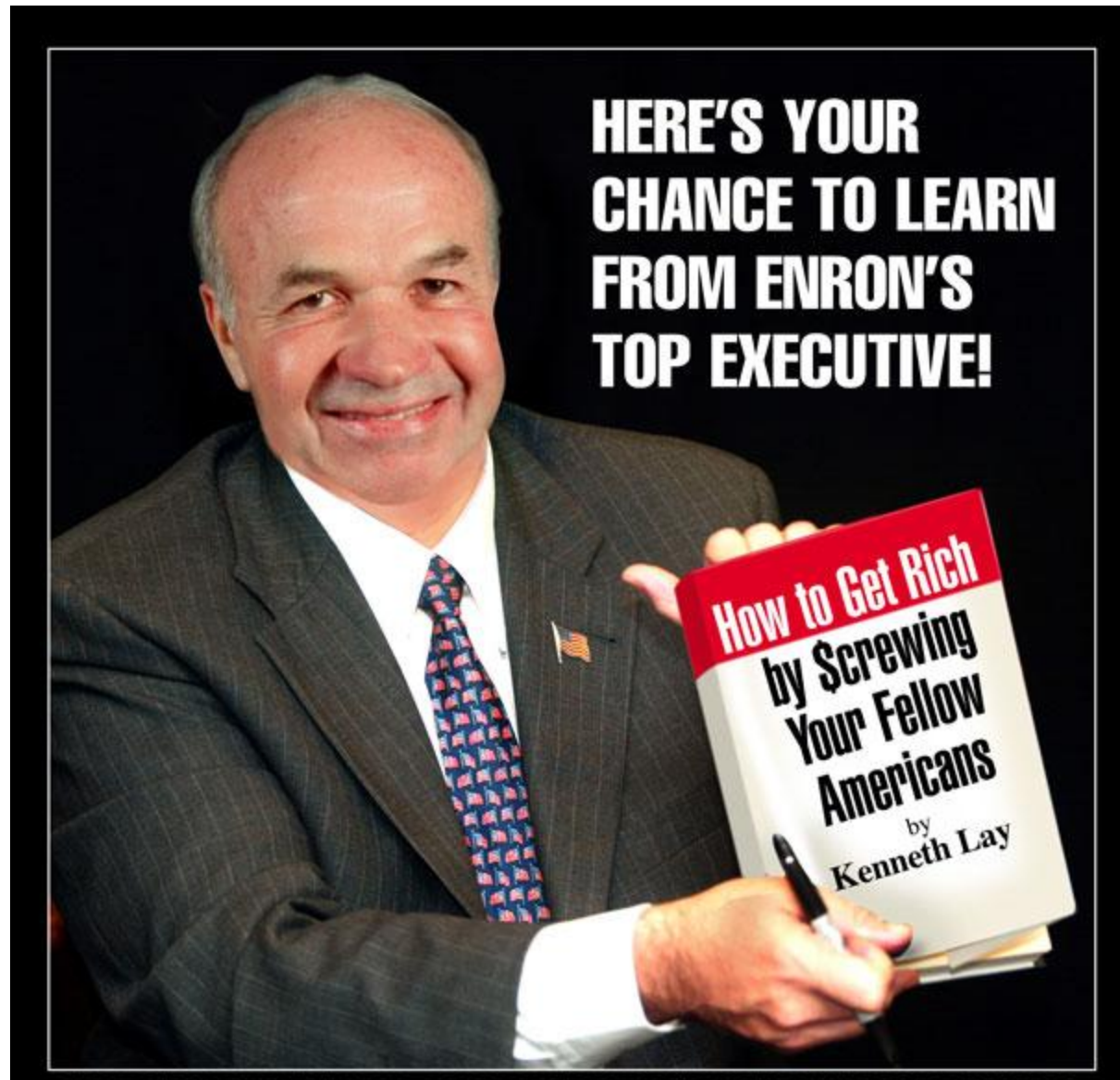
Robin Williams
(Hollywood)

Crucial Difference

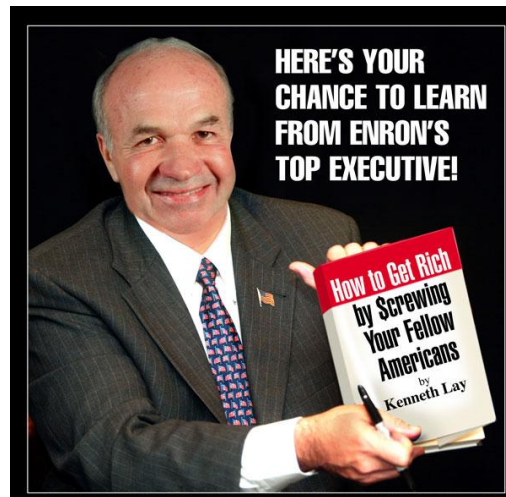
Purpose of misconception:

- greed (CEOs) vs. comedy (Williams)

What This Course Is NOT About:



What This Course Is NOT About:



HAVE YOU EVER WANTED TO BE RICH BEYOND YOUR WILDEST DREAMS?

I'm Kenneth Lay, and I'm here to tell you that the Tony Robbinses and Oprahs of this world are full of crap. They will tell you that the keys to success are goal-setting, affirmations, walking on hot coals, meditating or finding your inner child. Bullshit! If you really want to get rich, there are only three skills you need: lying, stealing and cheating! And I'll teach you how in my new book!

First, you'll learn how to buy off politicians from Bush to Cheney, who will push your deregulation plan so you can manipulate the California energy market and rake in millions! Then I'll show you step-by-step how to cook the corporate books, bamboozle your investors, hide your debt and cash in your stock just before the whole thing goes to hell! Sound too good to be true? Just read the chapter in my book entitled "What to Do if the Feds Come After You." Learn all the tricks of pleading the Fifth while your co-workers get indicted! If creditors try to sue you, follow my tips on how to evade them by socking away millions in annuities in the state of Texas, where the losers can't touch it!

While the suckers of this world cry about losing their retirement funds, you can live it up on their hard-earned cash! To learn more about being a white-collar scumbag with no soul, or paper trail—buy my new book today! Remember, if you ain't lyin', then you ain't tryin'!

Ad parody. Not a real ad. No such book exists. Crooked CEO's head stripped onto our model's body. We doubt that Kenneth Lay would be any more forthcoming in a book than he was with the senators at the Enron hearings. As of this writing, Kenneth Lay has not yet been indicted.

What This Course IS REALLY About

Ethics in general:

- the set of beliefs about *right and wrong* behavior

Ethics in business:

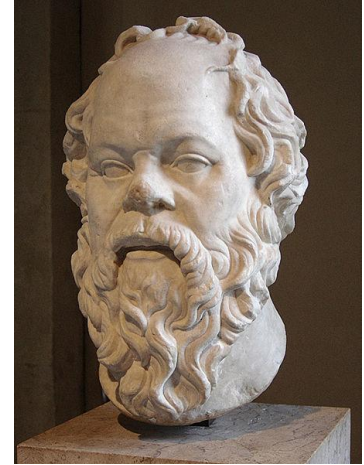
- is becoming more important because the *risks associated with inappropriate behavior have grown* in number, complexity, likelihood and significance
- corporations want to protect themselves and their employees from *legal action*

Ethics in information technology:

- email and Internet access *monitoring* by employers
- peer-to-peer networks used for music downloads implies *violation of copyright laws*
- unsolicited e-mail (*spam*)
- hackers breaking into databases of financial institutions can result in *identify theft*
- students downloading material from the web can result in *plagiarism* on term papers
- web sites plant cookies or spyware on visitors' hard drives to *track their Internet activity*

What IS Ethics?

According to Socrates (Greek philosopher, 477 - 399 BC):



- knowledge having a bearing on human life is highest
- self-awareness is necessary for success
- self-ignorance will cause difficulties in life
- people will naturally do what is good, if they know what is right
- evil or bad actions are the result of ignorance.
- so, if a criminal were truly aware of the mental and spiritual consequences of his actions, he would neither commit nor even consider committing them
- therefore, any person who knows what is truly right will automatically do it

Ethics In Practice (Applied Ethics)

Ethics is founded in a society's *moral code*

- the rules (conventions) by which a society lives (an established consensus)
- but there are conflicts...

Moral code depends on personal background

- age group, ethnic and cultural background, religion, gender,...
- example: "Should I put Grandma into a retirement home?"
- example: "Should I buy/manufacture/distribute pirated software?"
(China/Vietnam 92%, US 22%)

Moral code tested in real-life situations, such as:

- "Is getting an abortion immoral?"
- "Is affirmative action right or wrong?"
- "What are human rights, and how do we determine them?"
- "Do animals have rights as well?"
- "Is lying always wrong?" and "If not, when is it permissible?"
- "Should I allow a friend to copy my answers in an exam?"
- "Should I keep the umbrella I found in the taxi cab?"
- "Can I keep the \$10 excessive change?"

Applied Ethics

How do we overcome these conflicts?

Should we apply *situational ethics*?

- “moral principles can be cast aside in certain situations if love is best served” (Episcopal priest Joseph Fletcher, 1960s)
- concerned with the outcome or consequences of an action → the *end*, as opposed to an action being intrinsically wrong
- the ends *can* justify the means

Personal Ethics

Rules/morals (habits) you have acquired when growing up
(and still acquire/modify as you live on)

- there are good habits and bad habits

Virtues:

- (good) habits that incline people to do what is acceptable
- fairness, generosity, honesty, loyalty

Vices:

- (bad) habits of unacceptable behavior
- vanity, envy, greed, anger
- good corresponding habits: pride, admiration, ambition, force

These 'good vices' all can be catalysts of great accomplishments and achievements

- improve your competitor's product
- train harder than your opponent
- but, apply ethical rules in doing so (no sabotage, cheating, etc.)

Integrity

Act in accordance to a personal code of principles

- do as you expect others to do (recall Socrates)
- apply accountability and moral responsibility as necessary tools for maintaining consistency between one's actions and one's principles, methods and measures

Again, there are often conflicts that compromise consistency:

- you may be asked to work overtime to accomplish a certain company goal
 - integrity rule #1: overtime OK since it benefits the company
 - integrity rule #2: overtime should be properly compensated
- however, your boss may be over budget and cannot bill overtime
 - two rules are compromised and you need to decide which to choose or seek a deal with your company

So often have to make choices between right vs. right

- “Is it OK to drill for oil in Alaska?” preserve wildlife vs. oil feed

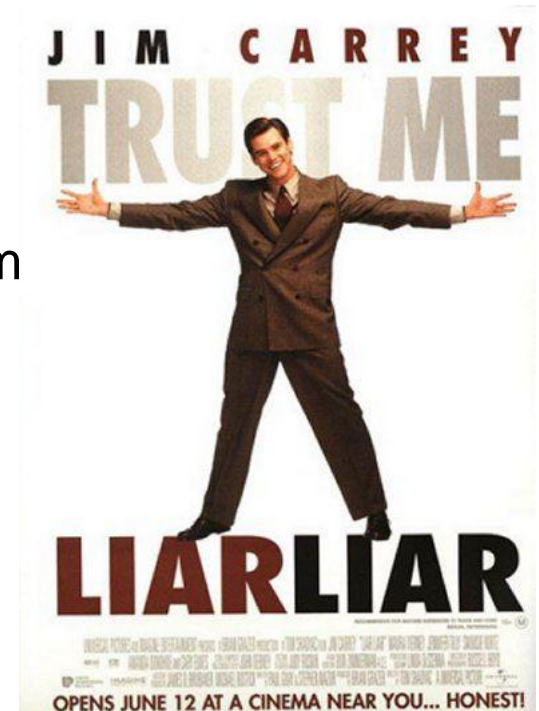
Important Test for Morals and Integrity: Truth/Lie

A lie is a deception in the form of an untruthful statement

- intended to deceive others
- motivated by maintaining a secret or reputation, protecting someone's feelings or to avoid a punishment
- a statement of something that is false with the intention that it be taken for the truth by oneself or someone else
- but there are different forms of lies, which challenge personal judgements of situational integrity and ethics

Severity of lie depends on context, situation, and intent

- need a moral understanding when to refrain from lying
- children do not have this
- some adults are habitual liars



Forms of Lies

There are many:

- fabrication: a statement not based on fact
- bald-faced lie: obvious lie
- lying by omission: leave out an important fact
- lie-to-children: simplification (the stork brought you)
- white lie: harmless lie to avoid harmful implication (your tie looks nice)
- emergency lie: strategic lie when it is dangerous to tell the truth
- perjury: false statement in court
- bluffing: tactic lie in a game, expected
- misleading: not an outright lie, but aimed to guide to untruth
- promotion lies: in advertising (you will love our new product)
- jacose lies: sarcasm, storytelling, comedy

There is a moral code when to apply these lies and when not:

- OK to tell white lie to a friend
- not OK to tell a lie to a colleague or a customer

Conclusion

So, when in doubt:

- recall Socrates words
- apply situational ethics and see the big picture

Savage Chickens

by Doug Savage



www.savagechickens.com

Questions

Why is business ethics becoming increasingly important?

What are corporations doing to improve business ethics?

Why are corporations interested in fostering good business ethics?

What approach can you take to ensure ethical decision making?

What trends have increased the risk of using information technology unethically?

Ethics in the Business World

Risk is the product of multiplying the likelihood of an event by the impact of its occurrence

Risks associated with inappropriate behavior have increased

- and thus a greater emphasis now on ethics

This is due to:

- globalization, creating a much more complex work environment that spans diverse cultures
- heightened vigilance by employees, shareholders, regulatory agencies (S.E.C.)

All of above are sensitive to:

- accounting scandals
- failure to disclose substantial changes in business conditions to investors
- non-conformance with required health & safety practices

Recent Scandals in IT Companies

WorldCom

- SEC filed fraud charges against them in 2002 for inflating earnings by \$11B

Qwest Communications International Inc.

- in 2002, SEC charged CEO and 6 other executives with orchestrating massive fraud (misstated that \$3B from one-time sale was recurring revenue to ensure merger with US West)

Adelphia Communications Corp.

- in 2004, founder and son convicted in Federal court on charges of security fraud (hiding \$2.3B in debt)

Computer Associates (CA)

- several executives pleaded guilty to criminal fraud for recording sales before contracts finalized (inflating 2000 revenues by \$2.2B)
- led to resignation of CEO Sanjay Kumar in 2004

The Sarbanes-Oxley Act (SOX)

Enacted in response to public outrage over several major accounting scandals (Enron, WorldCom, etc.)

- section 404 requires that the CEO and CFO sign any SEC filing to attest to its accuracy
- companies must submit to audit of financial controls

Public Company Accounting Oversight Board (PCAOB)

- provides oversight for auditors of public companies
- overseen by SEC

IT organizations must build controls that ensure information stands up to audit scrutiny controls that ensure integrity of financial systems and business processing apps

- audit emphasizes segregation of duties
- for example, same person cannot generate a P.O. and then approve its payment

Fostering Good Business Ethics

Why is it important?

- gains the goodwill of the community
- creates an organization that operates consistently
- produces good business
- protects the organization and its employees from legal action
- avoids unfavorable publicity

Gaining the Goodwill of the Community

Basic responsibilities to society

- declared in formal statement of company's principles or beliefs
- includes:
 - making contributions to charitable organizations and nonprofit institutions
 - providing benefits for employees in excess of legal requirements
 - choosing economic opportunities that might be more socially desirable than profitable OLPC

Goodwill that socially responsible activities create can make it easier for corporations to conduct business

- adverse publicity (e.g. due to pollution) reduces sales and draws unwanted government attention

Creating an Organization That Operates Consistently

Many business values include:

- operating with honesty and integrity, staying true to corporate principles
- operating according to standards of ethical conduct, in words and action
- treating colleagues, customers, and consumers (called stakeholders) with respect
- striving to be the best at what matters most to the company
- accepting personal responsibility for actions
- valuing diversity
- making decisions based on facts and principles

Good Ethics Can Mean Good Business

Produce safe and effective products

- avoid costly recalls and lawsuits

Provide excellent service

- maintain customers

Develop and maintain strong employee relations

- suffer less turnover
- enjoy better employee morale

Suppliers and other business partners prefer companies that operate in a fair and ethical manner

Bad ethics can lead to bad business results

- can destroy employee commitment to company goals and foster low moral leading to poor performance

Protecting the Corporation Its Employees from Legal Actions

U.S. Justice Department sentencing guidelines suggest more lenient treatment for convicted executives if their companies had ethics programs

Fines for criminal violations can be lowered by up to 80 percent if the organization has implemented an ethics management program and cooperates with authorities

Ethics in Information Technology

Public concern about ethical use of IT includes:

- E-mail and Internet access *monitoring* by employers
- Peer-to-peer networks used for music downloads implies *violation of copyright laws*
- Unsolicited e-mail (*spam*)
- Hackers breaking into databases of financial institutions can result in *identify theft*
- Students downloading material from web can result in *plagiarism* on term paper
- Web sites plant cookies or spyware on visitors' hard drives to *track their Internet activity*

Trends contributing to the risk of using IT unethically:

- growth of the Internet
- ability to capture and store vast amounts of personal data online
- greater reliance on information systems

Ethics in Information Technology

The general public has not realized the critical importance of ethics as applied to IT

- IT policies can affect millions

Important technical decisions often left to technical experts

General business managers must assume greater responsibility for these decisions

- must be able to make broad-minded, objective, ethical decisions based on technical savvy, business know-how, and a sense of ethics
- must also try to create a working environment in which ethical dilemmas can be discussed openly, objectively, and constructively

Summary

Ethics is a set of beliefs about *right and wrong* behavior

Ethics is important since it *respects trust* placed by customers and colleagues

Ethics in business is becoming more important because the *risks associated with inappropriate behavior have grown* in number, complexity, likelihood and significance

Corporations want to protect themselves and their employees from *legal action*

Corporations can appoint a corporate ethics officer, set ethical standards, establish a *code of ethics*, conduct *audits*, require employees to take *ethics training*

Ethical Decision Making: 7 Step Approach

#1: Get the facts

- innocent situations can become controversies if no one bothers to check the facts

#2: Identify stakeholders

- someone who stands to lose or gain from how a situation is resolved and their positions

#3: Consider the consequences of a decision on stakeholders

#4: Weigh various guidelines and principles, legal implications, corporate policies

#5: Develop and evaluate options option you choose

- these should be ethically defensible

#6: Review a decision

- consider POV (Point of View) of stakeholders

#7: Evaluate the results of a decision

- monitor results to see if achieve desired effect