Ethics and information science

I. What is ethics?
   • Why are ethical decisions in IS and ICT work?

II. Making ethical decisions in ICT work
   • A framework for ethical analysis
   • Ethical decision making for global IT use
   • Consequences of ethical decision making

III. Approaches to ethical theory
   • Utilitarian, deontological, and social contract theories
I. What is ethics?

[Image: How important are ethics in today's society?]

gbr.pepperdine.edu/022/images/ethics.gif
I. What is ethics?

Ethics and information science

What is ethics?

It is the study of questions of value

These include the standards, morals, principles, etc., that we use as the basis for some of our decisions or actions.

In ethical decision making, there is often no clear "right" or "wrong" answer.

Ethical judgments are concerned with distinguishing "good" or "bad" behavior in a given situation.
I. What is ethics?

Ethics (n.pl.)

1. The study of morality
2. The evolved capacity to bring reason to issues and situations that our moral traditions do not equip us to handle as well as we might
3. The study of goals are appropriate and/or acceptable
4. The study of the intersections of the self's relation to self, the will to truth, and the exercise of power (Foucault)
5. Determining if status quo morality is right/appropriate
6. The study of how not to get sued

extra.upmc.com/050225/Default.htm
I. What is ethics?

www83.homepage.villanova.edu/richard.jacobs/MPA%208300/theories/legal-ethical.gif
I. What is ethics?

Ethics refers to the study and development of one's standards of judgment

Feelings, laws, and social norms can deviate from what is ethical

It is necessary to constantly examine one's standards to ensure that they are reasonable and well-founded

Ethics involves a continuous effort to study our moral beliefs and conduct

When acting ethically, we try to ensure that we, and the institutions we help to shape, live up to standards based on principles we can support
I. What is ethics?

Assumptions about ethical underpinnings of behavior are reflected in every social science

Economics: the distribution of scarce resources
Political science: the allocation of power
Sociology: group dynamics and collective action
Law: codifying ethical constructs (mercy and punishment)
Criminology: rewarding good and discouraging bad behavior
Psychology: defining and treating bad behavior
I. What is ethics?

“A 34% cut in our corporate ethics should return us to profitability.”

www.cartoonwork.com/archive/CEO/Cut-Ethics.gif
I. What is ethics?

Organizational storytelling, ethics and morality: How stories frame limits of behavior in organizations

Poulton distinguishes between descriptive, normative and applied ethics

He argues that more can be found out about an organization's ethical culture by tracking internal stories and narratives

~ Do you agree with Poulton's description of business ethics? Why?

~ What stories have you heard at IU that provide insights into the organization's ethics?
I. What is ethics?

Ethics

A society’s ongoing examination and pursuit of actions and practices that best promote the enrichment of peoples’ lives - both materially and spiritually

A societal discussion of what ought to be considered for overall human well-being

Includes concepts of fairness, justice and injustice and rights and responsibilities under certain situations

The virtues a society admires and wants to emphasize

I. What is ethics?

Descriptive ethics

Non-judgmental explanation of the ethical framework of societies or large institutions in a society

Normative ethics

A specific view or approach to ethics which aims to set a standard of behavior for a group or society

Applied ethics

An offshoot of normative ethics that tries to develop ethical standards for specific areas of human endeavor

Biomedical ethics, scientific ethics, academic ethics and business ethics
I. What is ethics?

Business ethics

Concerned with human interactions when sourcing, producing and marketing goods and services for profit

Includes relationships between

Business management and their employees

The firm and its primary stakeholders

The business and its relationships to the community, government and society in general

One view: the responsibility of business is to produce goods and services people will pay for and create wealth for its owners
I. What is ethics?

“See, son? Daddy’s company makes inhalers to help people with asthma.”

www.cartoonstock.com/newscartoons/cartoonists/mba/lowres/mban14l.jpg
I. What is ethics?

Many firms have codified codes of conduct that define formal requirements to be followed in specific situations.

Example: the firm’s relations with suppliers, customers, employees, shareholders, various communities, competitors, and employees.

May be simple and address only broad values that frame the firm’s response to moral issues.

We discover more about a firm’s ethics and morality by listening to employees and management narratives.

Organizational stories transmit information about what a firm actually does when ethical decision making is needed.
I. What is ethics?

Organizational storytelling: a “good” story makes common themes new and fresh by using a range of poetic techniques

Conveys a thought, a moral or virtue, a consequence in a way that forces us to look at a theme in a new way

Particularly the genesis story

A powerful tool to communicate values in organizational learning

Creates frames that legitimate behavior

Information, control and political functions

How employees see themselves and the firm
I. What is ethics?

Corporate excellence, ethics, and the role of IT

Johnson questions whether it is possible for corporations to pursue excellence while acting in ethically and socially responsible ways.

Drawing on STS, she discusses the role of technology in the formulation of business ethics and argues that technological choices are moral choices.

~ According to Johnson, what is the role of technology in shaping a corporation?

~ In what ways does technology regulate social behavior and arrangements?
I.  What is ethics?

Johnson argues that IT plays a fundamental role in the structure and functioning of corporations

This extends to the formation and embodiment of business ethics

Technology constitutes the material being of a corporation

The means through which it performs its actions and interacts with stakeholders

IT shapes how, where and with whom corporations do business

I. What is ethics?

Her interest is in how IT shapes business ethics and the effects on the pursuit of corporate excellence

There is a relationship between IT and systems of power and authority

Adoption of a particular technology means adoption of a particular social order

IT shapes corporate structure, organization, operations, and values

It’s inseparable from social practices and organization

IT choices are moral choices
I. What is ethics?

Assumption: the ethical standard of managers’ beliefs is always higher than their behavior when using IT

Data gathering through a questionnaire (n=249)

Seven IT ethical scenarios where managers were asked to indicate degree of unethical behavior involved

A set of demographic variables

Canonical correlation used to test relative strength of independent on dependent variables

Then links individual factors with ethical attitudes

I. What is ethics?

Dilemmas

Disclosure, privacy protection, conflict of interest, personal conduct, social responsibility, integrity, accountability

Findings

Target group: managers with a combination of features - younger age, lower management position, less working experience, and lack of formal ethics training

Type of training: ethical values about protection of privacy, personal conduct, disclosure, accountability, conflict of interest and social responsibility

I. What is ethics?

**Ethical decision-making for knowledge representation and organization systems for global use**

Beghtol discusses ethical issues involved in the development and implementation of multicultural IR.

She explores ethical decisions that are part of the development of knowledge representation and organization systems and presents a framework for ethically analyzing systems.

~How can bias be built into a knowledge representation and organization system?

~What is an example of an ethical issue that arises in the development of a search engine like Google?
I. What is ethics?

Using Brey’s model of computer ethics

Non-disclosive: practices, decisions, and technological development are clear and can be reconciled with ethical behavior

Disclosive: the ethical problems are hidden in the practices and development

System level: analysis of ethical values

Theoretical level: where ethical theories are refined

Application level: where theories are applied to results of research

Beghtol, C. (2004). Ethical decision-making for knowledge representation and organization systems for global use. JASIST, 56(9), 903-912
I. What is ethics?

Cultural warrant: personal and professional stakeholder cultures influence establishment of appropriate fields, terms, categories, or classes in a system

Provides a rationale and authority for decisions about concepts and relationships among them

Universal Declaration of Human Rights and Global Information Justice should provide a global foundation

Frameworks for ethical decision making have pre-existing, technical or emergent biases

Representation may be biased or unintentionally distorted
I. What is ethics?

1. Assessment of each system at each level

Theoretical level: assess system for conformity to the principles of UDHR and GIJ

Disclosure level: assess system for preexisting, technical, and emergent bias

   Assess system for biased representation and misrepresentation

Application level: assess system for common biases and biases in context of use, and account for diverse contexts
I. What is ethics?

2. Establishment of ethical policies and procedures to ensure that all positions are included
   Also that the overall process is transparent
   Establish policies and procedures to ensure that all involved are appropriate judges of the processes
   To allow self-regulation and self-assessment to emerge
   Allows direction of development, management and revision of IS of all kinds

This methodology allows stakeholders to develop policies at theoretical, disclosure and application levels to develop systems ethically
I. What is ethics?

Ethics and technology design

Noting the connection between ICT and values, Albrechtslund argues for the establishment of ethically sound design

Using a case of an “augmented window” he raises the positivist problem and clarifies the difference between design and use contexts

~ How cold you put principles of value sensitive design into practice?

~ How can ethically sound designers take into account uses not intended in the design process?
I. What is ethics?

What is involved in ethically sound design?

Values are always embedded in ICT (as in user-centered design)

In part this is because ICT are designed with specific intended functionalities

They have non-technological consequences (political, social, economic, environmental impacts)

ICT assessment has tended to be retrospective

Concern for ethics means trying to be prospective

Seen in value sensitive design

I. What is ethics?

VSD is proactive, influencing the entire design process:

- It deals with a broad variety of contexts (social and work life, education, home, online communities…)
- It deals with a variety of values (cooperation, democracy and those with moral import)
- It integrates the conceptual, empirical and technical
- It is interactional: social systems affect ICT design and ICT shape individual behavior and social systems;
- It uses ethical theory maintains certain universal values in the design process regardless of casual opinions
- It considers concrete universally held values
I. What is ethics?

The positivist problem is the relation between the design process and the eventual use of technology

The assumption that the design of an ICT corresponds to its use and that this relation is unproblematic

The context of use differs from the context of design

ICT do not have an essence or basic meaning apart from the use contexts they enter into

Case: augmented window as a surveillance enabling technology

The display technology improved work conditions in the office but a real window was even more beneficial
I. What is ethics?

Concern: people in the test worried that the feed from the video displays would invade the privacy of people captured by the outside camera.

The screen and camera could be used as surveillance technology.

It facilitates storage and zooming in the mediated view.

The challenge of ethically sound design is to imagine potential use contexts and the ethical scenarios they create.

Designers must pay attention to potential uses not intended in the design process, because these might be ethically undesirable.
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Ethical leadership and ethical decision making: A meta-analysis of research related to ethics education

Winston examines research on ethics for research design, methodologies, populations, types of data, the researchers, and dissemination of the research.

He finds that the small number of studies have focused on undergraduates’ perceptions of ethics and less on the impact of ethics curricula.

~ Do you feel prepared to make ethical decisions in your work?

~ What is an effective way to integrate ethics training into the curriculum?
II. Making ethical decisions in ICT work

This meta-analysis of research on ethics focuses on how education for ethical decision making and leadership has been studied

Methods, measures of impact, populations studied

There is a link between ethical decision making and corporate success

Professional associations have codes of ethics to communicate principles to guide members’ work

LIS professional values: intellectual freedom, privacy, confidentiality, valuing intellectual property, access

II. Making ethical decisions in ICT work

Typical problems: misuse of company resources, misrepresentation of financial performance, aggressive and illegal marketing practices

Issue: lack of senior management/board oversight and accountability

Motivations: competition, the nature of success and successful performance, lack of preparation for ethical decision making

Also our tendency to overestimate our ability to make ethical decisions

Trend: to incorporate ethical principles into coursework and degree programs
II. Making ethical decisions in ICT work

Meta-analysis is used to aggregate and compare findings from studies of ethics education in business (n=36)

Mostly from accounting and marketing published in ethics education journals

2/3 had samples of undergrads (<50 - >500; 3/4 used surveys of curricula and perceptions and attitudes

Finding: gaps in original research limit the ability to assess the impact of ethics education

Despite an emphasis on ethics in MBA programs, there has been little research measuring the impact on student learning and preparation
II. Making ethical decisions in ICT work

A framework for ethical decision making

Collect information and identify the problem

- Identify what you know and what you don’t know
  - What is the moral or ethical issue in this situation?
    - If there is more than one, how they are linked?

Describe the facts of the situation

- Who are the major stakeholders?
- What are the stakes involved for these people?

What are the options?

II. Making ethical decisions in ICT work

Briefly state the case with as many of the relevant facts and circumstances as can be gathered within the decision time available

Determine options that can be followed to resolve the ethical issues

Possible courses of action and potential outcomes?

Evaluate options from the stakeholders’ perspectives

What are the costs and benefits for each?

Reconcile facts and values

Hold multiple and conflicting values in tension

Make and justify the decision
II. Making ethical decisions in ICT work

Examples of commonly applied ethical principles

Golden rule: do unto others…

Categorical imperative (Kant): if the action isn’t right for everyone to take, then it isn’t right for anyone to take

Rule of change (Descartes): if it can’t be done repeatedly, then it’s not right to do it at all (slippery slope)

Utilitarianism: do what achieves higher or greater value

Risk aversion: do what produces the least harm or risk

No free lunch rule: Assume all objects are owned by someone else and compensate them appropriately
II. Making ethical decisions in ICT work

Ethical issues related to IS development processes

Given pressure to perform and meet deadlines, there is pressure to release software or IS before adequate testing and debugging

If done knowingly, this is a breach of trust

Ethical issues surrounding the manager-subordinates

A subordinate might abuse power by causing harm to the employer

They can be told to change software in ways they believe is wrong (ethically rather than technically)

II. Making ethical decisions in ICT work

Surreptitious monitoring of computer users, especially on a network

- Invasion of privacy can be justified on technical grounds but is an ethical concern
- Problems of unreliability and untimely output

As hardware and software become more complex it is more difficult to control and predict

Who is responsible when major losses occur?

Should IT professionals insist on slower development and thorough testing and expensive backup systems to help prevent such problems?
II. Making ethical decisions in ICT work

Unintended data use is a serious ethical problem

Selecting data from legitimately files to make new files of personal client or customer data for sale

Is this a breach of confidentiality with use of the data an invasion of privacy?

Related to questions of data collection, storage and access

What data should be collected and stored?

Can access be controlled and data stored securely?

Are data accurate, current and relevant to a particular context for which it might be used?
II. Making ethical decisions in ICT work

Consequences of ethical decision making

Whistleblowing: under what circumstances will you publicly challenge a coworker’s or organization’s actions?

When do ethical principles outweigh organizational or personal loyalty?

Magnitude of the consequences

The act stems from appropriate moral motive of preventing unnecessary harm to others

You perceive that serious danger that can result from the violation
II. Making ethical decisions in ICT work

When to blow the whistle

Probability that the action will actually take place and will cause harm to many people must be considered

Be very sure that the action in question will actually happen and have clear proof that the people (or the environment) will be harmed

Temporal immediacy

Consider the length of time between the present and the possibly harmful event

The more immediate the consequences of the potentially unethical practice, the stronger the case
II. Making ethical decisions in ICT work

When to blow the whistle

Proximity of potential victims should be considered

A company depriving workers of medical benefits in town has more proximity than one 1,000 miles away

Concentration of effort

Determine the intensity of the unethical practice or behavior

Is stealing $1,000 from one person more unethical than stealing $1 from 1,000 people?

England, L (2003). Ch. 4 Whistleblowing. exchanges.state.gov/forum/journal/bus4background.htm
II. Making ethical decisions in ICT work

When to blow the whistle

You use all available internal procedures to rectify the problematic behavior before public disclosure

  Circumstances may preclude this

You have evidence that would persuade a reasonable person

You act in accordance with your responsibility to avoid and/or expose moral violations

You have a reasonable chance for success and are prepared for the range of consequences (especially negative) that can follow
II. Making ethical decisions in ICT work

What to consider when blowing the whistle

Consider alternative explanations: you may be wrong

Ask questions, don't accuse and try to find out the other side of the story

Locate all documentation that supports your concerns and know where it is

Make sure you have concrete evidence

Separate personal and professional problems

Exposing personal problems may make testimony seem less convincing
II. Making ethical decisions in ICT work

Also

Think about how the problem should be resolved

If you don't know what you want, you may not like the final outcome

Seek advice from someone you can trust and take it seriously

Consult someone in a position to listen carefully and objectively evaluate the issues and your story

Get a second opinion and take it seriously also

Throughout the investigation, ask questions and keep thorough notes
II. Making ethical decisions in ICT work

If you make formal charges line up all the support you can

Are there others who can verify your claims and are willing to back you up?

Work with a lawyer, find out where to file charges, and make sure to do it properly

Do not appear to have a personal vendetta

Be patient: a careful, fair evaluation is likely to be much slower than you think it should be

www.life.uiuc.edu/micro/ethics/whistleblowing-guidelines.html
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III. Approaches to ethical theory

Western philosophers tend to determine “goodness” in conduct using two chief principles:

Conduct is good in itself

- The act itself is desirable and is not a means to an end

Conduct is good because it conforms to a moral standard

- Three standards are offered as the highest good:
  - Happiness or pleasure
  - Duty, virtue, or obligation; and
  - Perfection as the fullest form of human potential
III. Approaches to ethical theory

Depending on the setting, there are different appeals to authority

The will of a deity

Obedience to divine commandments in scriptural texts is the accepted standard of conduct

The pattern of nature

Conformity to the qualities attributed to human nature is the standard

The rule of reason

Behavior results from and conforms to rational thought
III. Approaches to ethical theory

Utilitarian theories

This is a normative (ought) ethical theory

The decision about what is right and wrong is based solely on the outcomes of one’s choices

The consequences of choosing one action or policy over other action or policy are critical

This type of theory moves beyond the ego and self-interest and takes into account the interests of others

It can lead to a cost-benefit type of analysis

caae.phil.cmu.edu/Cavalier/80130/part2/sect9.html
III. Approaches to ethical theory

Bentham: the fundamental role of pain and pleasure in human life

An action is good or bad on the basis of the amount of pain or pleasure brought about (consequences)

Good as pleasure and evil as pain are capable of quantification

Mill: it is not the quantity of pleasure, but of happiness that is central

Qualities cannot be quantified (there is a distinction between “higher” and “lower” pleasures)

The greatest happiness for the most people
III. Approaches to ethical theory

Act-utilitarianism: the principle of utility is applied to each alternative in a situation of choice

The right act brings about the best results

The right act could also bring about the least amount of bad results

Criticisms

It is difficult to attain full knowledge of and certainty about the consequences of actions

One could justify immoral acts this way

One could sell drugs to put drug dealers out of business
III. Approaches to ethical theory

Rule-utilitarianism: the principle of utility is used to determine the validity of rules of conduct (moral principles)

A rule is established by looking the consequences of breaking and following the rule

Right and wrong as following or breaking rules

Criticisms

If the rules take into account exceptions, it collapses

“Unjust rules” can follow the principle of utility

Slavery is OK because it leads to happiness for the greatest number at the expense of a few
III. Approaches to ethical theory

Deontological theories: derived from Plato and Kant

Categorical imperative: act as though your actions are guided by a “universal law of nature” (monistic)

This becomes a moral imperative

Principle of ends: treat humans as an end in themselves and not as a mere means to an end

Principle of autonomy: every rational being is a maker of universal law

Everyone who is ideally rational will legislate exactly the same universal principles
III. Approaches to ethical theory

Kant: no matter how intelligently we act, the results of actions are subject to accident and circumstance

Ethical decision making on the basis of predicted consequences is irrational

The morality of an act is judged by motivations and intentions, not by consequences

Intention leads a person to act from duty which is based on a general principle that is right in itself

The problem is in figuring out what these duties are

What happens if they conflict?
III. Approaches to ethical theory

Social contract theories
We live in a system of collectively enforced social arrangements

This system is legitimate if we all agree to follow it
If we see the system as a social contract, we then honor our responsibilities under the terms of the contract

We pay taxes, follow laws, participate in decision making
We do this because we agree to do so
We also believe it is reasonable that we do so
III. Approaches to ethical theory

In this view, morality is a set of rules that determine how people will get along with others.

As rational people, we accept that this is how we can get the most benefit out of our society and expect others to follow these rules as well.

Rousseau: social contract is a basis for our human rights and justifies the state.

We give up some freedoms for some rights and acquire some obligations (none are natural and can be changed).

Hobbes: we give away individual rights to the state in exchange for protection.
III. Approaches to ethical theory

So we end up with a situation of “mutually applied coercion”

The social contract encourages us to cooperate and divide the labor

It encourages us to give up some autonomy to a governing authority that clarifies and enforces the contract

The social contract is always uneasy and fragile

Moral decisions and correct actions then are those which are consistent with the social contract
III. Approaches to ethical theory

Two views of ethics

Absolutism: there are universal ethical principles
Relativism: ethical principles or judgments vary with the individual or culture

Pushed to extremes, both are difficult to sustain

LaFollette argues that ethical principles do vary culturally and individually and we can also reason rationally about this relativism

The principles may be absolute but what they prescribe varies depending on the situation