

Week # 06

**Professional Practice
&
Professional Ethics**

Outline

- Introduction to
 - Ethics
 - Islamic Ethics
 - Professional Ethic
 - Computer Ethics

What is Ethics?

- Derived from Greek word ***eché***, which means character
- Ethics may be defined as the set of moral principles that distinguish
 - what is right from what is wrong.
 - **ethics** refer to rules provided by an external source, e.g., codes of conduct in workplaces or principles in religions.
 - **Morals** refer to an individual's own principles regarding right and wrong.
- Ethics has a twofold objective:
 - it evaluates human practices by calling upon moral standards;
 - also it may give authoritarian advice on how to act morally in a given situation.
- Ethics, therefore, aims to study;
 - both moral & immoral behaviour
 - in order to make well-founded judgments and to arrive at adequate recommendations

Importance of Ethics

- Goodness without knowledge is weak.
Knowledge without goodness is dangerous
- The action differs from society to society
- Most people feel no sorrow when they are arrested because their ethical standards differ from those of society as whole
- *if a criminal were truly aware of the mental and spiritual consequences of his actions, he would neither commit nor even consider committing them*

	Ethics	Morals
What are they?	The rules of conduct recognized in respect to a particular class of human actions or a particular group or culture.	Principles or habits with respect to right or wrong conduct. While morals also prescribe dos and don'ts, morality is ultimately a personal compass of right and wrong.
Where do they come from?	Social system - External	Individual - Internal
Why we do it?	Because society says it is the right thing to do.	Because we believe in something being right or wrong.

	Ethics	Morals
Flexibility	Ethics are dependent on others for definition. They tend to be consistent within a certain context, but can vary between contexts.	Usually consistent, although can change if an individual's beliefs change.
The "Gray"	A person strictly following Ethical Principles may not have any Morals at all. Likewise, one could violate Ethical Principles within a given system of rules in order to maintain Moral integrity.	A Moral Person although perhaps bound by a higher covenant, may choose to follow a code of ethics as it would apply to a system. "Make it fit"
Origin	Greek word "ethos" meaning "character"	Latin word "mos" meaning "custom"
Acceptability	Ethics are governed by professional and legal guidelines within a particular time and place	Morality transcends cultural norms

FREQUENCY OF GOOD ETHICAL CHARACTERISTICS IN QURAN AND SUNNAH

Ethics in Islam

- Islam emphasizes on all aspects of ethics e.g. ethics in society, ethics in trading, banking
- The ethical standards published for computing field also coincides with Islamic ethics

Comparative analysis of Islamic ethics and IEEE/ACM ethics are discussed in previous session lectures

Good Ethical Characteristic	No. of Verses	No. of Hadith
Ihsan (beneficence)	66	29
Ikhlas (sincerity)	23	34
Istighfar & Tawba (forgiveness)	202	100
Amanah, Nazaha, Istiqama (honesty)	65	66
Iswa Hasana, Irshad Islah (good model & Guidance)	67	82
Wafaa Ahd, Ketman Ser (Keep promise and Secrecy)	31	50
Amr maarof Nahi munkar (order goodness, prohibiting badness)	13	33
Eman & Taqwa (Believe & piety)	595	145
Morality, Husn alkhulug walmuamalah (good ethics and dealing)	61	250
Hikman & hulum (wisdom)	129	31
Alhamd, Alshukr, Althanaa (Thankfulness)	235	142
Sabr, Musabara, Kathm ghaidh (patience)	108	64
Adl, Insaf (fairness)	23	62
Sidq (Truth)	92	44
Rahma, Raafa, Rifq (Mercyful)	227	124
Takrem Insan (Mankind priority)	96	24
Ilm, Amal (Science, Work)	530	139
Tafakr, Tadabr, Taaml (thinking)	83	48

What is Professional Ethics

- Professional Ethics: concerns one's conduct of behavior and practice when carrying out professional work, e.g., consulting, researching, teaching.
- Publicly displayed ethical conduct of a profession, embedded in code of ethics.
- The principles and standards that guide members of the profession in their interactions with internal & external stakeholders.

Why professional ethics?

- Awareness of professional ethics is gaining importance with time
- decision making process in the work place is a complex phenomena
- the professional ethics provide a way of simplifying that decision making process

Professional Ethics

- Professional Ethics must take into accounts:
 - Relations between professionals and clients
 - Relation between profession and society
 - Relations among professionals
 - Relations between employee and employer
 - Specialized technical details of the profession
 - A computing professional must understand;
 - Cultural, social, legal, and ethical issues in computing
 - Responsibility and possible consequences of failure

Professional Ethics

- Why Professional code of ethics?
 - Symbolize professionalism
 - Protect group interests
 - Specify membership manners
 - Inspire good conduct
 - Educate and discipline members
 - Itemize principles, express ideals
 - Put forth rules, offer guidelines
 - Codify rights

Problems with Professional Ethics

- Can not cover all aspects
- Who determine violations?
- How are the rules interpreted?
- What penalties exist for violations?

Computer Ethics

- Computer ethics defined as the application of classical ethical principles to the **use of computer technology**
- Ethical problems related to computers are not unique but they tend to occur on a much larger scale and scope
- High ratio of cyber destruction
- **Aspects of computer ethics:**
 - Analysis of the nature of problems related to the **social impact of computers**
 - **Formulation and justification of policies** needed to manage computer technology

History of Computer Ethics [standford, 2001]

- 1940-1950:
- Founded by MIT (Massachusetts Institute of Technology)
- prof Norbert Wiener:
 - **cybernetics-science of information feedback systems.**
- 1960s:
- Donn Parker from California examined unethical and illegal uses of computers by professionals.
 - **1st code of professional conduct for the ACM.**
- Mid 1970:
- **Walter Maner taught 1st course and starter kit in computer ethics.**

History of Computer Ethics (contd.)

- 1980:
- Issues like computer-enabled crime, disasters, invasion of privacy via databases, law suits about software ownership became public.
- Mid 80s:
- First book was published with issues and articles by James Moore, Deborah Johnson and others.

History of Computer Ethics (contd.)

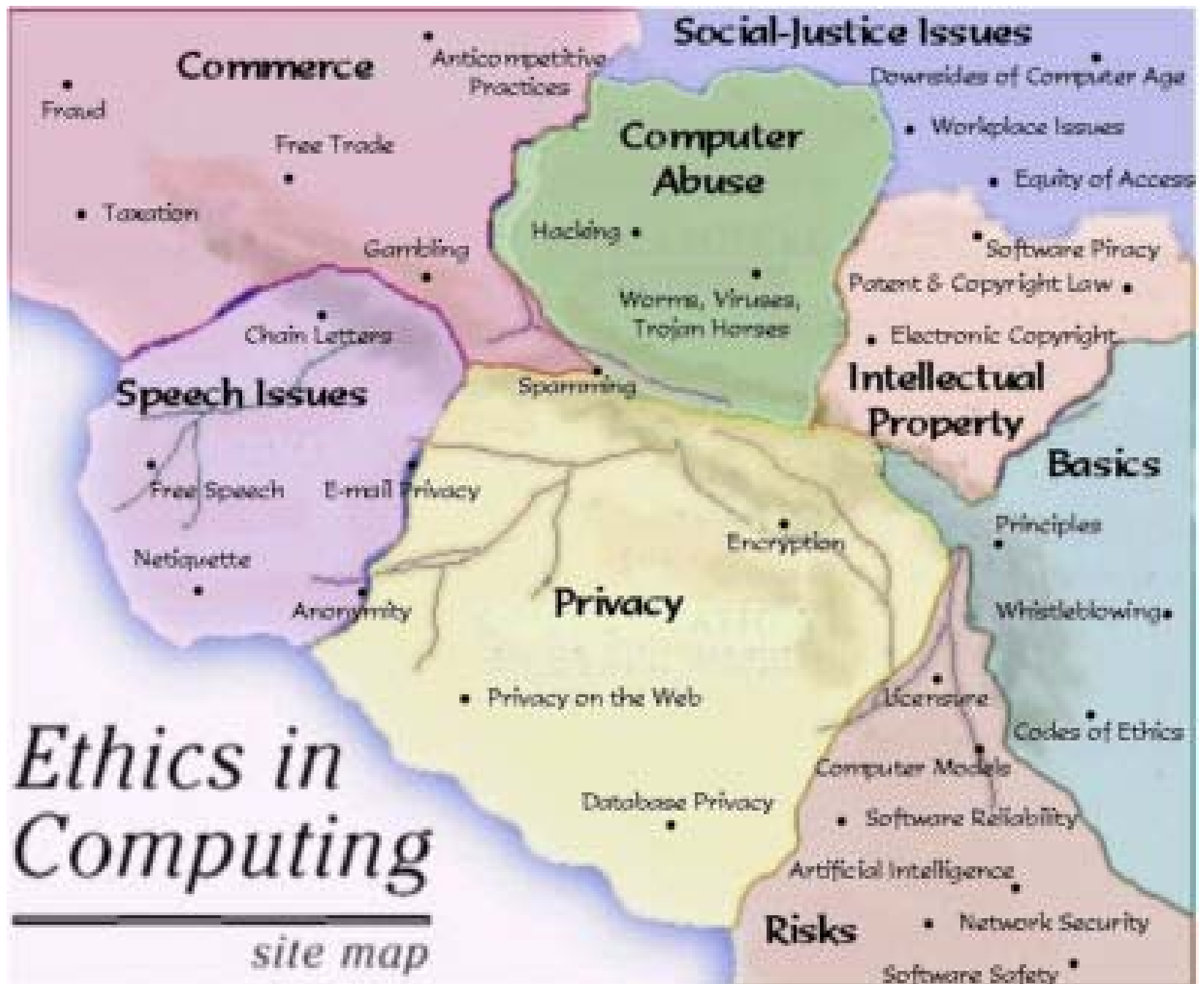
- 1990:
- Interest in computer ethics as a field of research had spread to Europe and Australia.
- Simon Rogerson of De Montfort University (UK) Terrell Bynum, editor of Metaphilosophy (USA), initiated international conferences.
- Mid 90s:
- Beginning of a 2nd generation of computer ethics with more practical action.

Categories of Computer Issues

- **Privacy**
 - Computers create a false sense of security
 - People do not realize how their information stored on computers are
- **Property**
 - Physical property
 - Intellectual property (in both copyright and patent)
 - Data as property
- **Access**
 - Access to computing technology
 - Access to data
- **Accuracy**
 - Accuracy of information stored

Moral and Ethical Problems

- **Hacking, cracking and virus creation**
 - Serious crimes that cannot be justified
 - Attempts at justifying such actions
 - Electrons are free- they do not belong to anybody
 - Companies have weak protection
 - Point out flaws and exposures in information systems
 - Hacking or virus creation is right in a particular country or culture
- **Software piracy**
 - Unauthorized copying of software is stealing
 - It is morally wrong as it constitutes a violation of someone else's rights



Ethical Scenarios

- Using a software trial version for 12 months, saying that s/he is evaluating it before deciding to buy it. Whether such conduct is ethical?

Ethical Scenarios (contd.)

- A serious bug has been identified just a day before deploying a safety critical software. The quality assurance (QA) team has been warned not to report the bug to avoid delay in deploying software. Is it ethical?

Ethical Scenarios (contd.)

- A software that can predict the radiation of a nuclear system up to 75% accuracy, is to be developed, the software has acquired 74.6% accuracy. The manager has decided to round it off to meet client's requirement. Is it ethical?

- discussion topic for next class
 - ethics in computing field vs. other fields