Ethics in Student Projects

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What are Ethics?

The moral principles by which a person is guided (OED)

What are Ethics?

Ethics are based on an underlying moral code

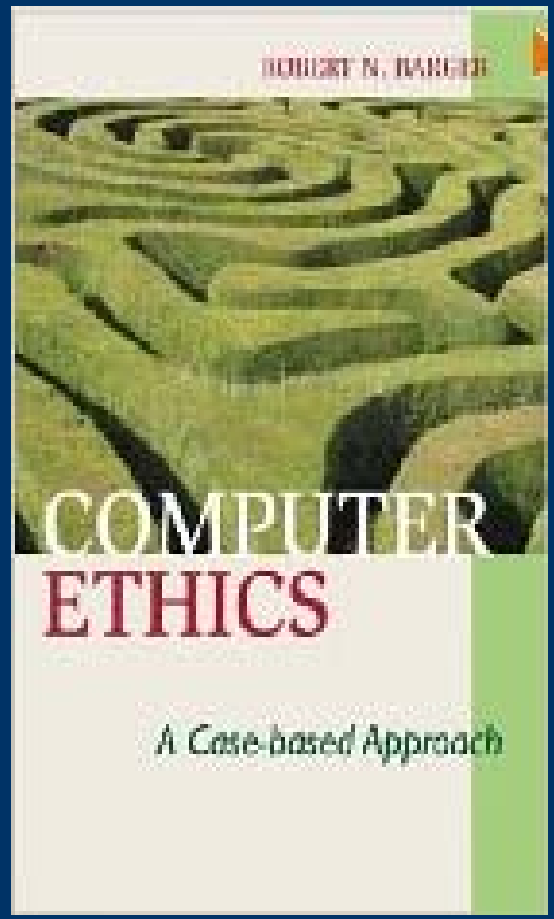
That code is culturally dependent

Different philosophical schools imply different codes of ethics

What are Ethics?

- Good background introduction to ethics and the underlying philosophies:

- Barger, R. N. (2008) *Computer Ethics: A Case-Based Approach,* Cambridge University Press



What are Ethics?

The legal system reflects the extremes of the moral code

Just because something is legal it is not necessarily ethical

Examples?

- MPs and expenses

What are Ethics?

As well as legal codes there are codes of ethics

Usually applied by organizations

What are Ethics?

There are no hard-and-fast rules

- beyond the law

Personal judgements

Cultural differences

Every decision you make has an ethical dimension

Nothing I say today can be taken as definitive

Ethics in projects

Ensuring that the work of the project is carried out according to ethical principles.

Having regard for the moral implications of the results of the project.

Ensuring that the work of the project is carried out according to ethical principles

The basics

- No plagiarism
- Not making up results
- etc.
- Regarding any *people* involved

Having regard for the moral implications of the results of the project

Not necessarily clear-cut

The student has no control over the use of their project results

Why ethics in projects?

We should all act ethically

Students should learn how to work in an ethical manner

Projects are an opportunity to demonstrate that they have learned this

External bodies like to see evidence that students understand ethics

Ethical codes

Do no harm

ACM Code of Ethics

General Moral Imperatives.

More Specific Professional Responsibilities.

Organizational Leadership Imperatives.

Compliance with the Code.

Acknowledgments.

1. General moral imperatives

1.1 Contribute to society and human well-being.

This principle concerning the quality of life of all people affirms an obligation to protect fundamental human rights and to respect the diversity of all cultures. An essential aim of computing professionals is to minimize negative consequences of computing systems, including threats to health and safety. When designing or implementing systems, computing professionals must attempt to ensure that the products of their efforts will be used in socially responsible ways, will meet social needs, and will avoid harmful effects to health and welfare.

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1. General moral imperatives

As an ACM member I will ....

1.1 Contribute to society and human well-being.

1.2 Avoid harm to others.

1.3 Be honest and trustworthy.

1.4 Be fair and take action not to discriminate.

1.5 Honor property rights including copyrights and patent.

1.6 Give proper credit for intellectual property.

1.7 Respect the privacy of others.

1.8 Honor confidentiality.

1. General moral imperatives

Is there a student project to which those do not apply?

Ethics of research with human participants

Very strict guidelines about what you can do with human participants

But also an opportunity to consider what you are doing

Need to consider ethics at the following 5 stages:

1. Recruitment of participants for studies
2. Briefing of participants when a study starts
3. During study
4. Withdrawal from study
5. Debriefing after study

Recruitment

Need to inform participants of the nature of what they are being asked to do, the effort involved

Should not ask a participant to act against their best interests

Should not offer inducements that might cause a participant to act against their best interests

- e.g. in the learning context, ask people to participate in a study with different versions of a LMS to evaluate it, knowing that one of those versions is sub-optimal

Briefing

What you tell the person when they are starting a study

Need to create a situation in which they can give **informed consent**

So they must be appropriately briefed - otherwise it doesn’t count as **informed** consent

Participants need to know:

how much time
how much effort
type of task involved
how they can withdraw
what data will be collected
what it will be used for
who will have access to it
how long it will be kept
etc

Deception in research

Sometimes if participants know what the hypothesis is, it is going to ruin the experiment

If I tell people in advance that I'm studying whether the location of the navigation bar affects their performance, they will be self-conscious about their performance, they will take particular note of the location

So it is acceptable to withhold certain information

- as long as it would not be harmful to the participant
- the deception should be revealed at the end

Consent form

At the end of briefing session, you ask the participant to give their consent, usually by reading and signing a consent form

For questionnaires, you can use ‘implicit consent’, if they have an explanation of what will happen to the data etc and they proceed to the questionnaire they are consenting, otherwise they would just stop

During the study

Participants should not be asked to do things which are dangerous, excessively boring etc

Must be allowed suitable breaks for refreshments, rest etc (may be obvious, but you’d be surprised!)

Withdrawal from the study

It must be clear to participants that they can withdraw from a study at any point without detriment

Must treat them politely even if you are very irritated that they are withdrawing

Must reimburse them proportionately (might be a bit tricky!)

Debriefing after the study

Must debrief participants fully

Tell them what the study was about, why you collected the data you did, what you are going to do with it

As appropriate, you should uncover any deceptions

The study should be an interesting and educational experience for the participant

Are there ethical objections to the following?

~~Project involving phishing~~

Illegal

…and therefore unethical

for the department to allow it

or a student to undertake it

Software to assist in animal experiments

- not illegal
- student might have ethical objections
  - should not be forced to do such a project
- Student who chooses to do it should provide an ethical statement
  - The greater good?

Spam generator

- Illegal?
- Immoral
  - Student should not be allowed to do such a project
  - The Department’s ethical responsibility

Password-cracker

Would require a clear justification/ethics statement

Would have to be carried out with care

Other attempts to subvert security?

Poker bots

Not illegal

But against the rules of on-line casinos

University of Alberta Computer Poker Research Group

http://poker.cs.ualberta.ca

http://www.guardian.co.uk/technology/2009/feb/12/online-poker-bots

Others which would require careful justification

- Card counter
- Crossword solver
- Others?

Use of the project outcomes

- Design of a better weapon-aiming system
  - Clear ethical dimension
  - Which the student would have to address
- Design of a collision-avoidance system for civil aircraft
  - Ethically positive?
  - But what is to stop it being used in military aircraft?
  - *Virtual reality* and Jaron Lanier

Would you object?

A proximity warning system for civil aircraft

The same system used on military aircraft

Used on military aircraft to avoid missiles

Used on military aircraft to improve accuracy of their missiles

Summary

Some projects are clearly unethical – usually illegal ones

Some raise ethical questions which the student must be prepared to address

Some ethical consequences cannot be anticipated

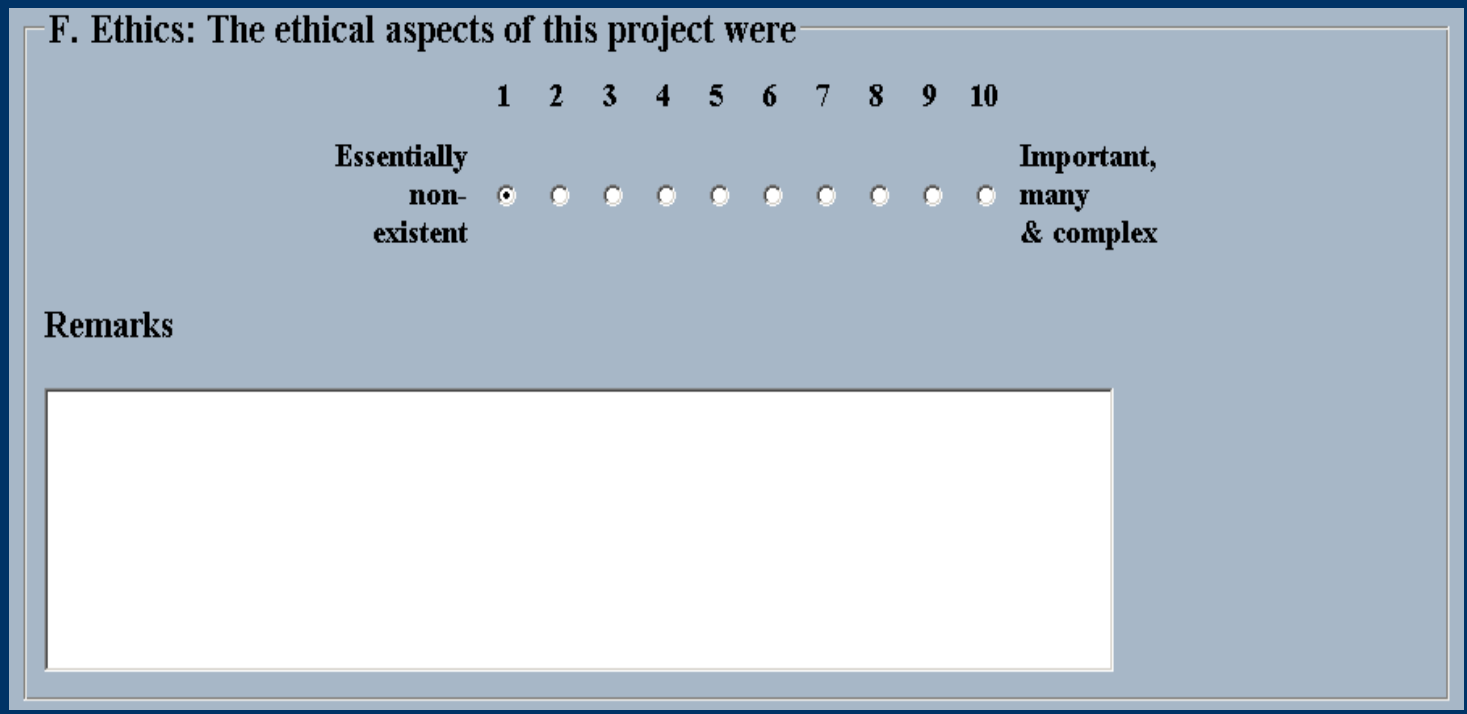
Marking the ethics statement

Not marking the ethics

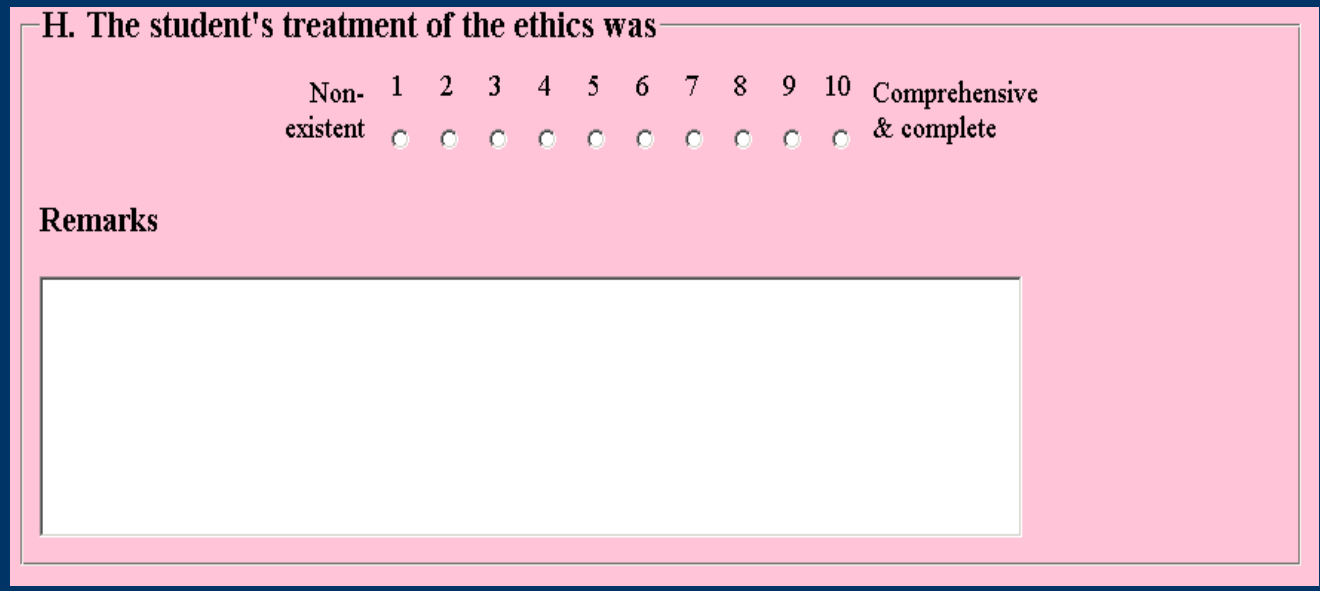
- whether you agree with them

Marking the student's appreciation of the ethical implications

Supervision Report



Marking form



Marks

It is up to the marker to what extent they consider the Statement of Ethics in their mark

Marks

Supervisor says ethical aspects were *Important, many and complex*

Student says there were no ethical questions

- Poor mark

Marks

Supervisor says there were some ethical considerations

Student's Statement of Ethics contradicts the body of the report

e.g. No evidence of informed consent

- Poor mark

Marks

Supervisor says there were few ethical considerations

Student’s Statement of Ethics says there were few ethical considerations

- Good mark

References

ACM Code of Ethics:

http://www.acm.org/about/code-of-ethics

British Psychological Society code of conduct:

http://www.bps.org.uk/the-society/code-of-conduct/code-of-conduct_home.cfm

Ethical Principles for conducting Research with Human Participants

http://www.bps.org.uk/the-society/code-of-conduct/ethical-principles-for-conducting-research-with-human-participants.cfm#principles

BCS Code of Conduct:

http://www.bcs.org/server.php?show=nav.6030

Barger, R. N. (2008) *Computer Ethics: A Case-Based Approach,* Cambridge University Press