Technology, research and ethics

Introduction

Iordanis Kavathatzopoulos

The course

- Lecture, seminars, group project
- Literature: Good research practice, links, papers
- Examination: Participation, abstracts, group project, presentations, home exam
- Focus on practical methods applicable in professional issues

Program

<table>
<thead>
<tr>
<th>Date, room</th>
<th>Subject</th>
<th>Presenter</th>
<th>Literature, etc.</th>
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<tr>
<td>17 Oct, 2115</td>
<td>Introduction</td>
<td>Iordanis</td>
<td>Links, papers</td>
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<td>10.15-12.00</td>
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<td>24 Oct, 2115</td>
<td>Research issues</td>
<td>Groups</td>
<td>Good RP, Papers, Abstracts, Slides</td>
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<td>17 Oct, deadline</td>
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Problems

- Use or application of research findings, e.g. atomic energy, biotechnology, etc.
- Sustainability and environment
- Privacy and ICT
- Publishing and authorship
- ...

Ethics and morality

- Morality is “knowledge”, i.e. answers to choices we feel we need to make in our lives as persons or groups
- Ethics is about the process of gaining this “knowledge”
Answers or questions?

- **Content**: “Right actions are moral but wrong actions are immoral”
  - Common sense definition based on moral content and normative aspects, focused on satisfaction with the result

- **Choice**: “Morality and ethics are related to choice”
  - Philosophy and psychology base the definition on choice and option, focused on the quality of the process

Technology, research and ethics

- Technology and science are necessary, modern society can not function without it
- Technology and science affects significant values for persons and organizations
- Technology and science can be tools for almost any purpose
- Technology and science have a big impact, both positive and negative, on all aspects of life, especially today

Ethical aspects

- Ethical aspects have an increasing impact on technology usability and on the application of research
- Good technology and research do not cause conflicts
- Good technology and research satisfy important values and interests
- People do not want to and cannot use research findings and technology that do not satisfy the above, independently of its other usability aspects
Do we need ethics?

• There are really no problems! Just follow the law, the rules, or your moral feeling!
• Education in ethics cannot make people better!
• It is impossible to use ethics education in real life!

Do we know what is right?

• World: changing, global, unpredictable, complex
• Scientific and technical development
• Problems vary, are personal, different
• People are complex, isolated, undefined
• No functioning authorities & guidelines
• Decentralization, delegation
• Intense public and media interest

Can it be serious?

• Low applicability and gains
• Bad service, no trust
• Higher stress, worse environment
• Confusion, fear, desperation ...

Sub optimality: Nothing spectacular but devastating in time
Is it easy or difficult?
Generally we are constrained because of our nature but ethics are harder:
• Incompatible values decide right and wrong
• Contradictory cases, e.g. double standards
• Strong emotions
• Group and organizational constraints
• Authority is very important
• Focus on content not on process

Gaining Knowledge

<table>
<thead>
<tr>
<th>Nature, technology</th>
<th>Society, morality</th>
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<tbody>
<tr>
<td>Content</td>
<td></td>
</tr>
<tr>
<td>Answer</td>
<td>No</td>
</tr>
<tr>
<td>Fact</td>
<td>Yes</td>
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<tr>
<td>Method</td>
<td>Yes</td>
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<tr>
<td>Process</td>
<td>No</td>
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<tr>
<td>Skill</td>
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Rationality?
• **Open:** There is no limit, no end, everything can be related to everything
• **No base:** Premises have to be identified and questioned
• **Logically imperfect** thinking processes work fine

(no algorithms, no computer calculations)
Ethical insecurity?
Handling of moral issues creates a big risk: *Important myths can be destroyed*

- For persons: Resolution of problems, personal development, but risk to lose enthusiasm, get disoriented, lost, cynical
- For organizations, society: Hero, e.g., whistle blowing (courageous, responsible), or offend persons and principles (show no respect, disloyalty, treason, hostility)

What do we need?

- Ethical competence: Know how to handle ethical issues, how to think
- Ethical processes: Roles, procedures, mechanisms in organizations
- Ethical confidence: Know that we can find good solutions and trust our ability (i.e., know that our skill and our way of handling moral issues is working)

Different approaches

<table>
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<th>Content</th>
<th>Choice</th>
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<tbody>
<tr>
<td>Values and norms</td>
<td>Problem owners</td>
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<tr>
<td>Authority, tradition, …</td>
<td>Psychosocial processes</td>
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<tr>
<td>Right solution</td>
<td>Skills, methods</td>
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Moral problem