

4. Professional Ethics

Most parts of this talk are borrowed from:

"On being a scientist: responsible conduct in research"

National Academy of Sciences

What is ethics all about?

ethic [Show phonetics](#)

noun [C usually plural]

a system of accepted beliefs which control behaviour, especially such a system based on morals:

the (Protestant) work ethic

The ethics of journalism are much debated.

*He said he was bound by a scientist's **code of ethics**.*

*Publication of the article was a **breach of ethics**.*

Cambridge Advanced Learners Dictionary

What is ethics all about?

- Ethics deals with the answer to the questions
 - What ought I to do?
 - How ought I to live?
- There are multiple answers
 - Depend on the ethical system/tradition
 - Deontological ethics
 - Utilitarian ethics
- It is a vast field
 - *A companion to ethics*, 1993, Edited by Peter Singer

Goal of this talk

- Identify ethical issues on scientific environment
- Learn what to do when these situations arise
- Methodology
 - discuss a few ethical situations

■ Is science independent of values?

Error and negligence

- What to do with “honest mistakes”?
- What about systematic negligence?
- Learn more
 - *Fallacies in astronomy and medicine*, by Edwin E Salpeter, Rep. Prog. Phys. 68 (2005) 2747
 - Adriaan Van Maanen versus Edwin Hubble on the distance of “spiral nebulae” (galaxies)

Misconduct

- Data fabrication/misreporting
- Plagiarism
- Double funding

Misconduct

- “Submitted” papers

Conflict of Interest

- Definition

- Individual has interest in the object (grant application, proposal, paper) under review that will bias his opinion.

Publication and openness

- Published papers can be freely used provided they are cited
- What about if a paper doesn't cite you?
- What about if you ask data from a published paper and the author refuses?

Publication and openness

- What about work in progress?
 - It is important to discuss with others
 - But you might end up “robbed”

- What about one versus many papers on a subject? When does salami regime apply?

Authorship practices

- Who should sign the paper?
 - Honorary authorship
- What should be the order of authors?
- Information flow within authors

Responding to violations of ethical standards

- Can you discuss the situation with the individual?
- Discuss the situation with a trusted friend/colleague
- Has your laboratory/university ethic support?
- Complaining verbally or in written

The Scientist in the society

- Is your research in a given moment relevant for the public affairs?
- Giving something back – outreach
 - Responsible outreach

How to improve

- Read some papers
 - *On being a scientist: responsible conduct in research*, National Academy of Sciences www.nap.edu/html/obas/
 - *Responsible Science*, National Academy of Sciences, <http://www.nap.edu/catalog/1864.htm>
 - *The responsible researcher: paths and pitfalls*, 1999, Edited by Sigma Xi www.sigmaxi.org/programs/ethics/ResResearcher.pdf
- Discuss ethical situations with colleagues you respect
- Learn how to protect yourself from unethical behavior
- Learn how to act when facing unethical behavior

Thank you!