# GROUP 5

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Research, technology and ethics

## THE ROLE OF THE RESEARCHER

Gain new knowledge and share it with the public

## DIFFERENCE BETWEEN LAW AND ETHICS

What is lawfully right is not always morally right

## THREE KINDS OF RESEARCH

Basic, Applied and Commissioned

# TWO DIFFERENT TYPES OF FUNDERS

Without direct interest of results

Interested in results for commercial purposes
- Can create conflicts over results

# RESEARCH FUNDERS WANT TO SEE RESULTS

# WHO BENEFITS FROM RESEARCH

Researcher

Funding organization

Commercial interests

# HANDLING OF RESEARCH MATERIAL

Source data is owned by the organization where the research is conducted

The collected material is not the private property of the researcher or research group

# HANDLING OF RESEARCH MATERIAL

In the case of experiments with live subjects, there are four concepts to keep apart: Secrecy, professional secrecy, anonymity and confidentiality

A researcher can never promise that no one outside the research group will ever have access to the material

# RESEARCH COLLABORATIONS

**Factors for successful and ethical collaborative research:**

Clear expectations on contributions
Honesty (e.g. persons involved)
Openness (e.g. towards funders)
Clear responsibilities
Documentation
Timetable
Authorship
Discuss changes
Data ownership

# WHY WE PUBLISH SCIENTIFIC PAPERS?

**For yourself:**

- Scientific papers is most common, rigorous and formal way to express your scientific research achievements and progress
- Share your research results, discuss scientific point of view, and seek cooperation
- Make yourself known (by peers)
- Promotion and grants?

**For peers:**

- Evaluate the importance and validity of your work
- Verify your results, learn and draw lessons from you

**For relevant research institutions, publishers and government:**

- Invite you to do counseling, peer review, comments and other decision-making

# RESEARCH ETHICS AND RESPONSIBILITY

**For Authours:**

- You are responsible for the contents of a book or article presenting your research. That includes everything related to the actual project - methods, validity and reliability of the results etc. - but also the quality of the manuscript.
- Not allowed plagiarism, data fraud and simultaneously submitted to or published in several different Journals.
- Author contributions.

**For publisher and the editor:**

- Ensure that existing rules in the area of research ethics and current legislation relating to research have been followed.
- Editor: overall responsibility for its scientific quality.
- Editor: should provide space in the journal for debate about published manuscripts.

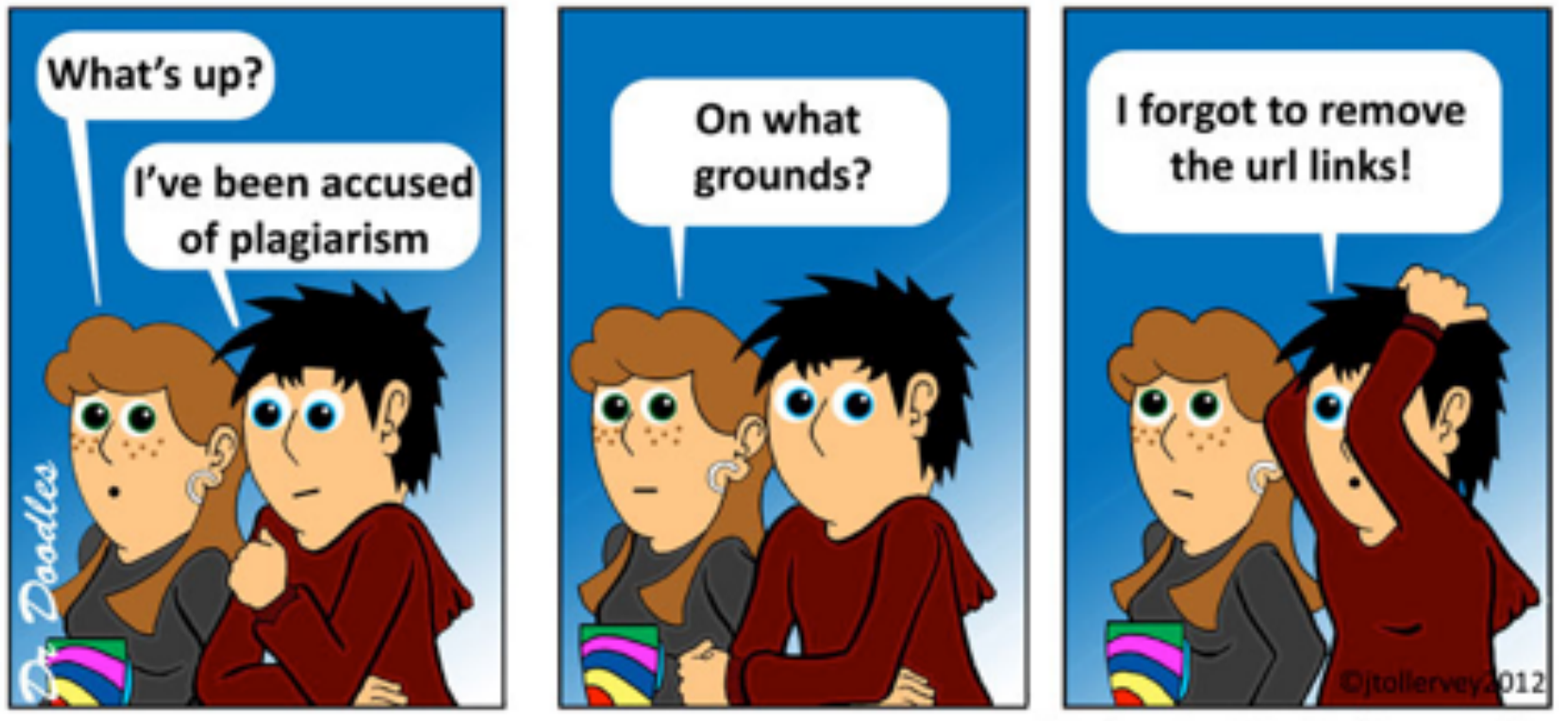
# RESEARCH MISCONDUCT

**Potentially harmful for:**

Health, society, environment…

Confidence in scientific results

The academic merit system (plagiarism)




Thanks to Tom West for his cartoon idea

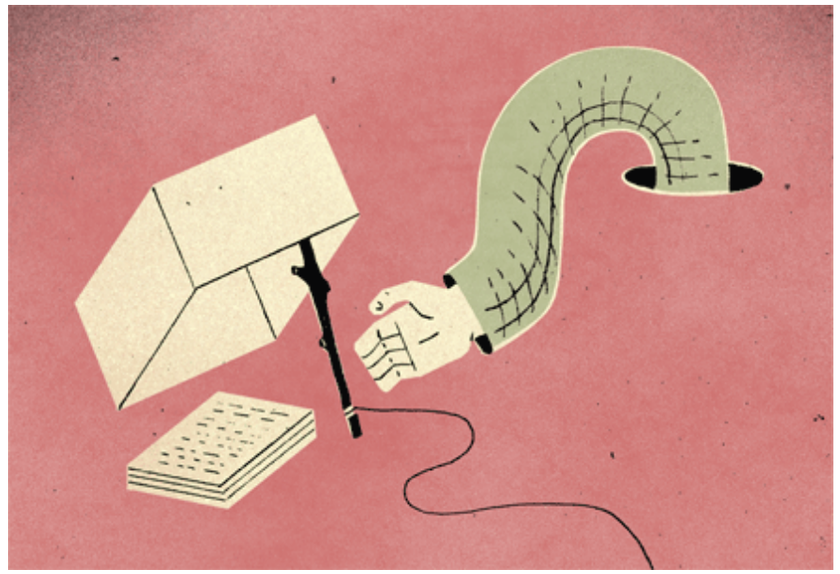
- Also fabrication and falsification of results
- Central Ethical Review Board (CEPN)
- A definition work, draw the limits:
  - Conscious misconduct / carelessness
  - Unethical behavior non-inherent to science (sexual harassment)
  - Establish plagiarism is difficult (self-plagiarism)
- ”For doctoral students, the supervisor’s contributions can be supplemented with classes in research ethics” (Good research practice, Vetenskapsrådet, p. 113)

# OPEN ACCESS?

nature.com

Science

Cell



Gimmick called ”impact factor”

Eye-catching, provocative

Bubbles in fashionable fields

62 % accepted bogus paper

36 of 304 with relevant review comments

Often hidden location