Ethical principles at a University
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Sources:
Phil Rogaway, UC Davis
Dave Touretsky, CMU

Ethical principles

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The two main goals of academic institutions:
- Dissemination and creation of knowledge
- Fair assignment of credit for the learning and the work

Use of human subjects in research
Consent, ...

Use of animal subjects in research
Appropriate care, appropriate use, ...

Moral debates
Evolution, stem cell research, weapon developments, genetic screening, ...

Professional issues
Plagiarism, authorship, confidentiality, ...

How to avoid ethical dilemma

- Know the rules!
  http://sja.ucdavis.edu/cac.html

  On being a scientist (National Academy of Sciences)
  http://www.nap.edu/openbook.php?record_id=4917

- Know your rights and responsibility
- Learn to recognize common ethical mistakes
- Act early to avoid conflicts
Ethical principles

Do’s and Don’t’s:
- Plagiarism: copying someone else’s work and attempting to pass it off as one’s own work
- Hiring someone to do your work
- Using work without proper attribution
- Using work with proper attribution, but relying exclusively on such work rather than developing one’s own solutions

Ethical principles

Do’s and Don’t’s:
- Aiding a student who is taking a test
- Receiving credit for work you have not done

Ethics and Publication

Policies
Acknowledgement of Credit
Writing the paper
Citations
Reviewing a paper
Ethics and Publication: Policies

Many scientific journals impose ethical rules on authors:
- Release of data and/or software to the community
- Compliance with NIH for experiments with human subjects
- Compliance with NIH for experiments with animals
- Research should not have been published (or submitted) elsewhere

Ethics and Publication
Acknowledgement of credit

There are two ways to acknowledge contribution to a paper:
- Authorship
- Acknowledgements

Ethics and Publication
Acknowledgement of credit

Who should be a co-author:
Anyone who has made a significant and direct contribution to the work, where contribution relates to:
- Providing key ideas
- Doing the implementation
- Collecting/analyzing data
- Writing the paper

Note that being co-author is a privilege and a responsibility!
Ethics and Publication
Acknowledgement of credit

Order of appearance of authors:
Generally, authors are listed in decreasing contribution level...

There are many exceptions:
- Some fields use alphabetical listing
- The first and last positions carry more weight
- There are cultural differences between fields of studies
- Papers in CS usually have up to 4 names

Who you should acknowledge:
- People who contributed a good idea
- People who provided pointers to papers
- People that helped debug a tricky part of the code
- People that helped with illustrations
- Funding agencies!

It is good manner to acknowledge!
Ethics and Publication
Acknowledgement of credit

What you should ask your advisor:
- What is the policy about co-authorship in your field?
- What is the policy in the lab?

Ethics and Publication
Fraud in Research

Trimming: smoothing irregularities to make the data appear extremely accurate and precise.

Cooking: retaining only those results that fit the theory, and discarding others.

Forging: inventing some or all of the research data that are reported; even reporting experiments that were never performed.

Sigma Xi’s “Honor in Science”

Favorite excuses for trimming and cooking:

“those outlier points must be measurement error”

“they would only confuse the readers”

“everybody cleans up their data before publication”
Ethics and Publication
Fraud in Research

The "hall of shame":

NIH Office of Research Integrity
http://ori.hhs.gov

Ethics and Publication
Writing the paper

Beware of plagiarism!
It is easy to avoid with quotes and citation.

Beware of plagiophrasing!
Cite other people’s work often:

- Avoid antagonizing reviewers by not citing their work
- Demonstrate that you know your field and have done your background work
- Make new friends (people like to be cited!)
Ethics
If you have a problem/ doubts

➢ Get your advisor's advice.
➢ If you have a problem with your advisor, discuss it with him or her before seeking outside opinions.
➢ If necessary, speak confidentially with some other senior scientist whose opinions you respect.