



Research Ethics

Not quite random thoughts and considerations by
Richard Carlson



Image 1 of 2

Patriarch Kirill, the head of the Orthodox Church, has been photographed wearing a Swiss watch Photo: EPA

Research Ethics

Eth-ics – moral principles that govern a person’s behavior or the conducting of an activity

- In the Workplace
- Scientific Publication & Review
- Proposal Preparation & Review
- Additional Information:
 - AGU Scientific Integrity and Professional Ethics
 - <http://ethics.agu.org/files/2013/03/Scientific-Integrity-and-Professional-Ethics.pdf>
 - <https://ethics.berkeley.edu/code-conduct>
 - <http://scholarworks.umass.edu/esence/>
 - <http://www.scholarlyintegrity.org/Resources.aspx>
 - Columbia U. On-line Course in Research Ethics
 - <http://ccnmtl.columbia.edu/projects/rer/>
 - Presentations (to be posted to DTM web page) by:
 - Yixian Zheng and Christoph Lepper (Carnegie Embryology)
 - Sara Rockwell (Yale, Emeritus) Ethics of Peer Review: A Guide for Manuscript Reviewers
 - An ethics briefing for new employees at UC Berkeley
 - Conduct of Research Policy –
 - currently being developed by Carnegie (Larry Nittler and Alycia Weinberger, DTM reps)

In the Workplace

Treat your fellow employees as professionals and equals. They are neither your slaves, nor your masters.

- In the use of communal facilities (labs, instruments, library, shop, etc.) recognize that you are not the only user. When you are done, the facility should be left in equal or better shape than you found it
- Do not use the BBR internet for searches that your colleagues would find objectionable, and that will violate the Carnegie internet use policy
- Vigorous discussion about differing interpretations of scientific issues is fine, but don't allow the discussion to turn into an argument. Respect other's opinions.

Harassment

MANDATORY Carnegie Compliance Training – Nov.9

Harassment is unwelcome conduct that:

- is based on race, color, religion, sex (including pregnancy), national origin, age (40 or older), disability or genetic information.

Harassment becomes unlawful where:

- 1) enduring the offensive conduct becomes a condition of continued employment
- 2) the conduct is severe or pervasive enough to create a work environment that a reasonable person would consider intimidating, hostile, or abusive.

It's unacceptable **WAY** before this!

Anti-discrimination laws also prohibit harassment against individuals in retaliation for filing a discrimination charge, testifying, or participating in any way in an investigation, proceeding, or lawsuit under these laws; or opposing employment practices that they reasonably believe discriminate against individuals, in violation of these laws.

- From U.S. Equal Employment Opportunity Commission, <https://www.eeoc.gov/laws/types/harassment.cfm>

Reporting

Saying nothing is implicit support for unethical behavior

The reporting hierarchy at DTM

1. The person at fault
2. Your (or their) supervisor
3. The representative in your postdoctoral association (Jonathan Tucker, Sharon Wang)
4. The Department HR representative (Jan Dunlap)
5. Department Director
6. The Institution HR representative (Loronda Lee)
7. The Carnegie General Counsel (Ben Aderson)
8. EthicsPoint Hotline/Website
 - carnegiescience.ethicspoint.com or 844-680-0876

Scientific Misconduct

- 1) **Fabrication:** Making up data or results and recording or reporting them
- 2) **Falsification:** Manipulating research materials, equipment or processes of changing or omitting data or results such that the research is not accurately represented in the research record
- 3) **Plagiarism:** Appropriation of another person's ideas, processes, results, or words without giving appropriate credit.

A finding of scientific misconduct requires that:

There is a significant departure from accepted practices of the relevant research community

The misconduct be committed intentionally or knowingly and recklessly

The allegation must be proven by a preponderance of evidence

Scientific misconduct does not include:

errors of judgment, honest errors in the recording, selection, or analysis of data or differences in opinion regarding the interpretation of data

Solution – KEEP A GOOD NOTEBOOK OF YOUR RESEARCH ACTIVITIES!

From the AGU Guide to Scientific Integrity and Professional Ethics

Scientific Publication & Review

- Plagiarism
- Shingling papers
- Authorship
- Proper attribution
- Reviewing and Conflict of Interest

When in doubt, ask the editor

- <https://www.elsevier.com/authors/journal-authors/policies-and-ethics>

Plagiarism

- **Which of these constitutes plagiarism?**
 - Your paper includes sentences or paragraphs copied from other papers by other authors
 - A reviewer provides a review comment that you like, so you include it, verbatim, in your revised paper
 - Several paragraphs in your new paper include introductory material copied from your previous papers
 - You have two papers on different subjects that use the same analytical procedures. You use exactly the same analytical procedures section in both.

- Good resource: Avoiding plagiarism, self-plagiarism, and other questionable writing practices: A guide to ethical writing, by Miguel Roig
 - <http://ori.hhs.gov/avoiding-plagiarism-self-plagiarism-and-other-questionable-writing-practices-guide-ethical-writing>

Authorship

A good guide: Think about the Nature/Science request to describe which author did what for the paper.

If you can't provide a good explanation for the role someone played in producing the paper, then they probably should not be on the author list

Every coauthor should be given the opportunity to read and comment on the paper before submittal.

Who in this list should, or should not, be included as author?

- Person A did all the analyses in the paper, but none of the writing
- Person B didn't do any analyses, but wrote the paper
- Person C provided the samples, but nothing else
- Person D funded the project
- Person E is the head of the institute where the work was done
- Person F, a reviewer of the paper, who adds considerable impact to the paper in their review.

Proper Attribution

In a talk

- If you borrow a figure from a paper, from someone else, or from the web, make sure you provide a proper citation to the source on the slide. Be careful with the use of copyrighted images in public presentations!

In a paper

- When repeating ideas, conclusions or discussing data presented previously, cite the paper that presented it originally.
- When citations are limited, how do you decide which not to include?
 - The discovery paper and the most recent review?
- When citing data from a database, cite the original data sources, not the database, if possible
- Cite the funding source – required for NSF
- Do not cite every single one of your papers in each new paper, select only those most appropriate
- When reviewing, comment on inadequate citation, but don't ask the author to cite every paper you've ever published

Conflict of Interest

“A conflict of interest is a situation in which financial or other personal considerations have the potential to compromise or bias professional judgment and objectivity.”

“An apparent conflict of interest is one in which a reasonable person would think that the professional judgment is likely to be compromised.”

con·flict of in·ter·est

Columbia University

noun

a situation in which the concerns or aims of two different parties are incompatible.

"the conflict of interest between elected officials and corporate lobbyists"

- a situation in which a person is in a position to derive personal benefit from actions or decisions made in their official capacity.

"Watson quit his job after questions about a possible conflict of interest"

Real *or* apparent conflicts of interest

- Institutional affiliations
 - Through current institution
 - Past institution (recent enough to have close associations)
 - Future institution (e.g. negotiating for a position)
 - Consultant to authors institution
- Collaborators and colleagues
 - How close?
 - When?
- Other relationships with the authors
 - Family
 - Personal friends
 - People you detest
 - People you would be reluctant or afraid to give a harsh review to

Other conflicts of interest

- Strong personal beliefs – in papers related to emotionally charged areas such as stem cells, abortion, or evolution
- Participation in heated scientific debates in the area of the paper or with the authors
- Other scientific conflicts of interest
 - Studies so closely related to your own that you are in competition with the authors
 - Labs/groups with ongoing real or apparent competitions in a general area of research

Is the work too close to your own?

- Example: paper contains experiments that overlap with those you are performing, planning, or preparing for publication
- Decline to review paper
 - Conflict of interest precludes review
 - There would be a danger of the appearance of misconduct, even if you acted ethically throughout the review process
- Make every effort to avoid receiving the full paper – if you receive it, return it immediately and discuss this problem with editor

Dr. Sara Rockwell
Professor Emeritus
Yale University

Ethics in Reviewing: Case # 1

- Dr. Smith runs a very active, productive research laboratory with several graduate students and postdocs.
- To help his trainees understand the peer review system, Dr. Smith frequently has them help to review manuscripts.
- Some of his students/postdocs have become quite skilled; their reviews need virtually no editing before Dr. Smith signs them and sends them to the journals.
- Dr. Smith is surprised when a colleague says that this practice is not ethical.

What are the ethical issues?

Case # 1, Issues to consider

- The confidentiality of the review process
- Taking credit for the work of others
- Misrepresentation to journal
- Fairness to the trainees who perform the reviews

Should you sign your review?

Open Review

- Authors know the reviewers, reviewers know the authors

Single-blind

- Reviewers know the authors, authors are not given the names of reviewers

Double-blind

- Neither the authors, nor reviewers, are named during the review process

Reasons to sign:

You get credit for the review

You are being open about your opinions

The authors may appreciate your viewpoints, which may pave the way to future research collaborations

Will keep your comments at a professional level

Reasons not to sign:

You may be exposing yourself to retribution by the authors

You may compromise your ability to make critical comments

Ethics in Reviewing: Case # 2

- Dr. Ardito is asked by the editor of a major journal in her field to review a manuscript.
- She is sent the authors, title, and abstract for her use in deciding whether to perform this review.
- Dr. Ardito realizes that some of the studies contained in the paper must be very similar to those included in a paper she submitted to the same journal a few days before.

What actions should she take?

Summary

- The review of manuscripts for peer reviewed journals raises many ethical issues and problems.
- Reviewers should be aware of these when deciding whether to review a paper, throughout the review process, and even after they submit their reviews.
- Forethought and planning will enable the reviewer to avoid many potential ethical problems.
- Other ethical problems may appear without warning.
- When in doubt about ethical issues, the reviewer should discuss his/her concerns with the editor or the journal staff.
- The reviewer should always work to provide reviews that meet high standards of ethics as well as high standards of science.

Proposal Writing & Review

Most of the same concerns as with publications and reviews

- Appropriation of other people's ideas
- Conflict of interest
- Confidentiality of the review

And some more:

- The financial and career consequences
- Appropriate budget expenses
- Proper mentoring plan

When in doubt, ask the Program Director

Grant proposal guide for appropriate agency

NSF Responsible Conduct of Research

- <http://www.nsf.gov/bfa/dias/policy/rcr.jsp>