Avoiding Plagiarism & Self-Plagiarism

Scientific Integrity in the Research Community

Presentation by Olivia Walling, OR Ethics Seminar
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Misconduct Allegations (ORI)

No. of allegations

- 2000: 160
- 2001: 190
- 2002: 180
- 2003: 170
- 2004: 240
- 2005: 240
- 2006: 250
- 2007: 280
- 2008: 280
- 2009: 260
- 2010: 240
- 2011: 220
- 2012: 380
- 1st qtr. 2013: 100

Total: 2,070 allegations
The Office of the Inspector General audited all proposals submitted to NSF in 2011 and found evidence of plagiarism in 1.5% of them. The NSF is currently investigating 100 of those proposals.
Integrity isn’t just not engaging in misconduct

Research integrity is primarily not about misconduct and compliance. It’s a commitment to ensuring and preserving the accuracy and completeness of the research record.

Because these activities are social (performed collectively through systems of trust and cooperation), it means doing this work in an atmosphere that ensures trust. This is why plagiarism is a violation of integrity.
“Integrity in research includes not just the avoidance of wrong-doing, but also the rigor, carefulness and accountability that are the hallmarks of good scholarship. All persons engaged in research at the University are expected to adhere to the highest standards of intellectual honesty and integrity.”

Research Misconduct

The Office of Science and Technology Policy (OSTP) defines research misconduct as fabrication, falsification or plagiarism in proposing, performing, or reviewing research, or in reporting research results when this action:

- Represents a significant departure from accepted practices of the relevant research community;
- Is committed intentionally, knowingly, or recklessly, and
- The allegation is proven by the preponderance of the evidence.

*It does not include honest errors or differences of opinion.
Roadmap for This Talk

- What plagiarism is and isn’t
- Copying, paraphrasing, and summarizing (brief review)
- Self-plagiarism (redundant and duplicate publication, salami slicing, copyright infringement, and text recycling and text augmentation)
- Ghost authorship
- Ana’s First Grant Proposal
Plagiarism: What It Is

“ORI considers plagiarism to include both the theft or misappropriation of intellectual property and the substantial unattributed textual copying of another’s work. It does not include authorship or credit disputes.”

“The theft or misappropriation of intellectual property includes the unauthorized use of ideas or unique methods obtained by a privileged communication, such as a grant or manuscript review.”

ORI, http://ori.hhs.gov/ori-policy-plagiarism
“Substantial unattributed textual copying of another's work means the unattributed verbatim or nearly verbatim copying of sentences and paragraphs which materially mislead the ordinary reader regarding the contributions of the author. ORI generally does not pursue the limited use of identical or nearly-identical phrases which describe a commonly-used methodology or previous research because ORI does not consider such use as substantially misleading to the reader or of great significance.”

ORI, http://ori.hhs.gov/ori-policy-plagiarism
“Many allegations of plagiarism involve disputes among former collaborators who participated jointly in the development or conduct of a research project, but who subsequently went their separate ways and made independent use of the jointly developed concepts, methods, descriptive language, or other product of the joint effort. The ownership of the intellectual property in many such situations is seldom clear, and the collaborative history among the scientists often supports a presumption of implied consent to use the products of the collaboration by any of the former collaborators.”
Copying, Paraphrasing & Summarizing

- Copying of text or figures requires attribution and quotation marks where possible. (Quote & Cite)

- Inappropriate paraphrasing is the same thing as copying but worse because it is harder to detect. An inappropriate paraphrase occurs with substantial duplication of syntactical or semantic units that do not change the text enough to consist of an original expression of the idea. (Quote & Cite)

- Summarizing consists of usually the condensed expression in original language of the ideas in another text or other medium. (Cite only)
“Because the intracellular concentration of potassium ions is relatively high, potassium ions tend to diffuse out of the cell. This movement is driven by the concentration gradient for potassium ions. Similarly, the concentration gradient for sodium ions tends to promote their movement into the cell. However, the cell membrane is significantly more permeable to potassium ions than to sodium ions. As a result, potassium ions diffuse out of the cell faster than sodium ions enter the cytoplasm. The cell therefore experiences a net loss of positive charges, and as a result the interior of the cell membrane contains an excess of negative charges, primarily from negatively charged proteins.” (CITE)
The concentration gradient for sodium (Na) ions tends to promote their movement into the cell. Similarly, the high intracellular concentration of potassium (K) ions is relatively high resulting in K’s tendency to diffuse out of the cell. Because the cell membrane is significantly more permeable to K than to Na, K diffuses out of the cell faster than Na enters the cytoplasm. The cell therefore experiences a net loss of positive charges and, as a result the interior of the cell membrane now has an excess of negative charges primarily from negatively charged proteins. (CITE)
The interior of a cell maintains a negative charge because more potassium ions exit the cell relative to sodium ions that enter it, leaving an over abundance of negatively charged protein inside the cell. (CITE)
Paraphrasing Technical Language

Scientific prose is not easily paraphrased since the words and phrases will have unique meanings to researchers. Changing a word may signal to your reader that you aren’t actually talking about the concept to which you refer.

Two solutions:

- Closer paraphrasing in the sciences is generally permitted without constituting inappropriate paraphrasing especially when terms of art are used or to describe commonly known methodologies.

- When in doubt, use a direct quotation with quotation marks.
Self-Plagiarism

Self-plagiarism violates your trust with the reader who will always consider unattributed material in your work as new, original, and accurate.

4 Types:

- Redundant or duplicate publication
- Salami slicing and data augmentation
- Copyright infringement
- Text recycling and text augmentation
Redundant or Duplication Publication

- **Duplicate**: submission of a paper with the same data to more than one journal without alerting readers and editors of the existence of other identical (or substantially identical) publications.

- **Redundant**: submission of a paper with the same or largely the same data but a different or slightly different interpretation or slant (such as a different theoretical interpretation or empirical context).

*Be aware that many journals have policies to prevent these practices that require positive steps on the part of submitting authors.*
Salami Slicing & Data Augmentation

- Salami slicing: segmenting of a study or body of data into two or more publications in order to pad one’s CV

- Data augmentation: publishing and then collecting additional data (which generally strengthens the previous conclusions) and publishing another article
Copyright Infringement

When you publish, you sign an agreement transferring your copyright to the publisher. As a result, duplicate and redundant publication and other forms of plagiarism and self-plagiarism will violate copyright laws. The fair use exception to the copyright law allows copying of copyrighted works in limited ways for specific purposes.

*All publishers have policies on the extent of copying allowed.
Text Recycling

Because of the pressure to publish, some researchers use as templates portions of text from previously published work and recycle it to create a seemingly new report.

This may be acceptable when:

- Recycled text is from an IRB, IACUC, grant, or other internally published proposal
- Recycled text is from a conference presentation that was not published in conference proceedings or otherwise
- Recycled text describes a commonly used methodology
The written work fails to identify individuals who made significant contributions to the research and writing. This occurs most frequently in two contexts:

- In the pharmaceutical and biomedical device industries, companies frequently “offer” well established researchers working in relevant fields authorship of documents prepared by company researchers or business people.

- Students (including graduate students and post-docs) purchase existing papers or custom written papers including doctoral theses.
Tools for Avoiding Plagiarism

Best resources for researchers:

- Miguel Roig’s “Avoiding plagiarism, self-plagiarism, and other questions writing practices: A guide to ethical writing”

  [http://publicationethics.org/resources/guidelines](http://publicationethics.org/resources/guidelines)

Resources used by publishers and granting agencies:

- iThenticate: This software tool is used by ORI and NSF to screen submissions for potential plagiarism

- Other software tools are used to measure pixel density and count to determine when figures and tables have been copied
If you are considering blowing the whistle EVER, read this article first:

Gunsalus, “How to blow the whistle and still have a career afterwards, or how to conduct professional disputes professionally,” Science and engineering ethics, 4(1), 1998
http://nationalethicscenter.org/resources/150/download/gunsalus_whistleblowing_2010.pdf
Reminder--

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Sources


- Office of Research Integrity, Newsletters, (March 2012, June 2012)
  http://ori.hhs.gov/newsletters

- Diamond, Getting more: How you can negotiate in work and life

- Patterson, et al., Crucial conversations: Tools for talking with stakes are high

- Partin and Fisher, “The challenges for scientists in avoiding plagiarism”
  Conference Pres. APPE 2013

- Dahlberg, Plagiarism workshop
  http://ori.hhs.gov/blog/john-dahlberg-speaks-about-plagiarism

- UCSB, Research misconduct policy
  http://www.research.ucsb.edu/compliance/research-misconduct/

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