The publication of research results – ethics and plagiarism implications

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ISEKI Conference, 21-23 May 2014
Outline

• What is unethical behaviour?
• Scientific misconduct
• Publishing misconduct
• Consequences
• Authorship questions
What is unethical behaviour?

Unethical behaviour can earn rejection and even a ban from publishing in some journals. Unethical behaviour includes:

- **Scientific misconduct**
  - Falsification or fabrication of results

- **Publishing misconduct**
  - Plagiarism
    - Different forms / severities
  - Duplicate/multiple submission
  - Self plagiarism/Redundant publication
  - Failure to acknowledge prior research and researchers
  - Inappropriate identification of all co-authors
  - Failure to declare Conflict of interest
Scientific misconduct
- *Fabrication and falsification*

- Fabrication is making up data or results, and recording or reporting them.
- Falsification is manipulating research materials, equipment, processes, or changing/omitting data or results such that the research is not accurately represented in the research record.
Publishing misconduct
- Plagiarism

“Plagiarism is the *appropriation* of another person’s ideas, processes, results, or words *without giving appropriate credit*, including those obtained through confidential review of others’ research proposals and manuscripts”

Federal Office of Science and Technology Policy, 1999

“Presenting the data or interpretations of others without crediting them, and thereby gaining for yourself the rewards earned by others, is *theft*, and it eliminates the motivation of working scientists to generate new data and interpretations”

Bruce Railsback, Professor, University of Georgia
Plagiarism high amongst ethics issues

Sample of cases reported to Elsevier Journals publishing staff in 2012
Correct Citation is Key

Crediting the work of others (including your advisor’s or your own previous work) by citation is important for at least three reasons:

- To place your own work in context
- To acknowledge the findings of others on which you have built your research
- To maintain the credibility and accuracy of the scientific literature
Multiple submission

- Multiple submissions waste editor and reviewer time
- The editorial process of manuscripts will be completely stopped if the duplicated submissions are discovered
- Competing journals constantly exchange information on suspicious papers
- DO NOT send a paper to a second journal until the final decision is received from the first
**Duplicate submission**

- When two or more papers, **without full cross reference**, share the same hypotheses, data, discussion points, or conclusions.

- An author should not submit for consideration in another journal a previously published paper.
  - Published studies **do not need to be repeated** unless further confirmation is required.
  - Previous publication of an abstract during the proceedings of conferences does not preclude subsequent submission for publication, but **full disclosure** should be made at the time of submission.
  - Re-publication of a paper in another language is acceptable, provided that there is **full and prominent disclosure of its original source** at the time of submission.
  - At the time of submission, authors should disclose details of related papers, even if in a different language, and similar papers in press.
Self-plagiarism (or text recycling)

“Whereas plagiarism refers to the practice of claiming credit for the words, ideas, and concepts of others, self-plagiarism refers to the practice of presenting one’s own previously published work as though it were new”*

Papers considered to be self-plagiarizing are often duplicate submissions

Examples of self-plagiarism

• Republishing the same paper that has already been published elsewhere in another journal
• Publishing a significant study as a number of smaller studies to increase the number of publications rather than publishing one large study
• Reusing portions of a previously written paper (published or unpublished) without proper citation or attribution
Publishers have tools to detect plagiarism

- 3800 publishers
- Over 38 million journal articles
- Crawls 10 million web pages daily
- Papers are run through iThenticate which matches the document against the Crosscheck database and major data providers and the open web
- Get a report displaying degree of similarity to other documents and a link to the full text of the matching documents
- Cannot detect plagiarism but can identify a manuscript of concern
An iThenticate report

STABILITY OF BUTTER OILS PRODUCED FROM SHEEP’S NON-PASTEURIZED AND PASTEURIZED MILK

30 March 2011

The physical and chemical characteristics and thermal stability of butter oil produced from non-pasteurized and pasteurized sheep’s milk were studied. Thermal stability of samples was estimated by using the accelerated shelf life testing method. Samples were stored at 50, 60 and 70 °C in the dark and the reaction was monitored by measuring peroxide, thiobarbituric acid and free fatty acid values. The peroxide and thiobarbituric acid values increased as the temperature increased. The increase of acid values of the two samples was not significant. A slight increase in free fatty acid value showed that hydrolytic reactions were not responsible for the deterioration of butter oil samples in thermal stability studies. When compared, butter oil produced from pasteurized sheep’s milk has higher thermal stability than butter oil produced from non-pasteurized sheep’s milk. Although butter oil produced from non-pasteurized milk was not
Consequences

The article of which the authors committed plagiarism: it won’t be removed from ScienceDirect. Everybody who downloads it will see the reason of retraction...
Authorship – who is considered as an author?

• Policies to address authorship can vary
• One example, the International Committee of Medical Journal Editors (aka Vancouver Group) declared that an author must:
  1. substantially contribute to conception and design, or acquisition of data, or analysis and interpretation of data;
  2. draft the article or revise it critically for important intellectual content; and
  3. give their approval of the final version to be published.
  4. **ALL 3** conditions must be fulfilled to be an author!
Authorship

General principles for who is listed first

• **First Author**
  ✓ Conducts and/or supervises the data generation and analysis and the proper presentation and interpretation of the results
  ✓ Puts paper together for submission to the journal

• **Corresponding author**
  ✓ The corresponding author can be the first author, or sometimes is a senior author from the institution

Avoid

• **Ghost Authorship**
  – leaving out authors who should be included

• **Gift Authorship**
  – including authors who did not contribute significantly
Main causes of authorship disputes

• Papers submitted and published without the knowledge of all listed authors

• Papers submitted and published, and author claims they should have been included

Main problem – to make any changes to authorship after publication, ALL authors need to agree to request. This can result in significant delays and possible retraction of paper
Elsevier has advice for authors on ethics issues

As researchers, you can make valuable and lasting contributions to the health and future of society.

Understanding the ethical boundaries in scientific research and publishing is a key step in making sure your work gets off to the best start. From there, anything’s possible.

The Ethics in Research & Publication program is the collaboration of an independent panel of experts in research and publishing ethics and Elsevier. The materials on this website have been developed to provide resources and tools so you can proceed confidently.

Scientific truth is the foundation of scientific advancement. Present your work with the intellectual integrity that the scientific community expects.

Make your research count, publish ethically.

www.ethics.elsevier.com
Committee on Publishing Ethics (COPE)

- Provides advice to editors and publishers on all aspects of publication ethics and, in particular, how to handle cases of research and publication misconduct
- Publishes guidelines for the industry
- Almost all reputable publishers (and their journals) are members
To summarize:

- Two types of unethical behaviour – scientific and publishing misconduct
- Plagiarism is a serious offence that can lead to retraction of paper or termination of employment
- Publishers have tools and organizations to assist them in such cases
- Authorship disputes can also be classified as ethical issues