



Online Ethics Center  
FOR ENGINEERING AND SCIENCE

# Topics: Publication

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## Description

A guide that provides information and resources on teaching responsible conduct of research that focuses on the topic of publication ethics. Part of the Resources for Research Ethics Education collection.

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## Summary

- **Research is incomplete until reported**

Published reports are a necessary step in the dialogue with other scientists about the approach and significance of research studies.

- **Publication is not merely a matter of credit**

Publications should present some substantive and new result or analysis, and should not serve merely to increase the author's number of publications.

- **There are significant responsibilities in publishing**

Although errors can occur, authors should endeavor to publish accurate, complete, clear, and unbiased representations of their work, including the background, the methods used, the findings, and the significance and contributions of the work, as well as fair assignment of authorship and credit.

## Background

In academic life, it is said, one must publish or perish. Publication facilitates the open exchange of information among researchers and exposes research methods and findings to the scrutiny of the larger scientific community. It also documents who is first with new ideas or discoveries, demonstrates productive use of research funds and provides a record by which a research career can be judged. For these reasons, publication has a prominent role in advancement, promotion, and continued research funding.

In pursuit of publication and, more specifically, of credit, prospective authors can have serious differences of opinion about when to publish, what to publish, and how credit should be apportioned. Some of these issues are discussed below. Ultimately, the centrality of publication in academic life means that it is implicated to some degree in nearly all aspects of the responsible conduct of research.

## Regulations and Guidelines

Other than copyright law and federal definitions of research misconduct, nearly all aspects of authorship and publication are covered only by guidelines and unwritten standards. While many professional societies, scientific journals, and institutions have guidelines for publication, the depth and scope of these are quite variable.

One of the most widely cited guidelines for publication is a document from the International Committee of Medical Journal Editors (ICMJE). In 1978, a group of medical journal editors met in Vancouver to establish guidelines for the format of manuscripts submitted to their journals. A product of that meeting was the [ICMJE guidelines](#), Uniform Requirements for Manuscripts Submitted to Biomedical Journals. These guidelines have periodically been expanded and revised to address ethical questions, including authorship (ICMJE, 2006). These guidelines have been adopted by more than 500 biomedical journals, although adherence to these guidelines is not necessarily consistent or reliable.

Extensive international and U.S. copyright laws regulate protection for written works, including research publications. For most published articles and book chapters, authors are required to transfer the copyright to the publisher. In practice, this means that authors of a published paper are in violation of federal law, not just ethical standards, if they attempt to re-publish without first getting permission from the copyright holder, the publisher. Therefore, unless one is legally advised otherwise, it is best to assume *that it is never acceptable to reproduce previously published work without permission from both the author(s) and the publisher.*

## **Discussion**

### **Case Study 1**

A postdoc and his mentor have co-authored a paper describing their research results. This paper has appeared as a preliminary report in a copyrighted monograph. One of the figures in this paper is a computer-generated graph that describes data on a series of bacterial growth curves. The postdoc and mentor presently are preparing a major paper for submission to a peer-reviewed journal. They both agree that the growth curve data in the monograph article are crucial to the story they're telling in the present manuscript. Accordingly, they decide that this same figure must be included in their present writing. Because they are aware of potential copyright violations, they generate the exact same figure using different

typeface fonts and different line thicknesses for the ordinate and the abscissa. They have decided that since this is not the exact same figure which appeared in their monograph article the use of it will not constitute a copyright infringement. They also plan to indicate in their manuscript that this figure has been "adapted from" the one initially published in the monograph article.

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## **Case Study 2**

Marvin Brian, a faculty member at a major research university was funded by a contract to conduct work within a relatively well defined work-scope. Brian was the advisor of an advanced doctoral student, Henry Ruth, and a beginning master's student, Mark Butterworth. Henry served as the lead investigator, including preparing and presenting reports to the funding agency. Mark worked on the same project, sharing his data with Dr. Brian and Henry. After working on the project for about two years, Mark submitted his thesis which was reviewed and approved by Dr. Brian, but not seen by Henry. A year or so later, when Henry was finishing the text of his doctoral dissertation, he discovered that Mark's thesis contained at least one complete table representing his work in exactly the format that Henry had used to express his results. The master's thesis contained a general acknowledgement of Henry, among others, but there was not specific attribution associated with the verbatim table. All parties were aware that this research was supported by a contract with a defined work-scope. Does this sponsorship justify duplicative "publication" in a master's thesis and doctoral dissertation without explanation? If not, how should the matter have been handled? Once duplicative "publication" occurred, what should be done and who is responsible for initiating remedial action?

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## **Case Study 3**

Helen Louis has published the description of 3 new bacterial mutants in a peer-reviewed journal. Mutants 1 and 2 were exhaustively characterized and described in the report, but mutant 3 was only briefly mentioned. Larry Savage writes her requesting mutant 3. Larry clearly describes his intended use for the mutant in studies which are presently underway in his laboratory. Helen refuses to release the strain. Helen affirms that mutant 3 was only described in a preliminary way in the paper. She mentions that another major manuscript is in preparation in which

mutant 3 will be the central focus of the report. She says she will be happy to release the mutant after the second manuscript has been accepted for publication. Larry refuses to accept this rationale and presses his request for the mutant strain.

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## Resources

- [Best Practices for Publishing Your Research](#)  
An excellent online tutorial that discusses all aspects of preparing research for publication, including issues of authorship, conflicts of interest, data management, overlapping publications, and preparing a text for publication.
- [OEC Publication Ethics Bibliography](#)  
A bibliography of materials on the ethics of publication, including authorship. Includes guidelines, websites, books, and journal articles.
- [Publication Ethics Subject Aid](#)  
A short guide to some key resources and readings on the topic of publication ethics, including authorship, peer review, and collaboration.

## Cited Resources

- American Statistical Association (2018): Ethical Guidelines for Statistical Practice. Prepared by the Committee on Professional Ethics. <http://www.amstat.org/about/ethicalguidelines.cfm>
- International Committee of Medical Journal Editors (2019): Recommendations for the Conduct, Reporting, Editing and. Publication of Scholarly Work in Medical Journals. <http://www.icmje.org>
- Office of Research Integrity (1994): Working definition of plagiarism. Office of Research Integrity Newsletter 3(1). <http://ori.hhs.gov/policies/plagiarism.shtml>

## Notes

The Resources for Research Ethics Education site was originally developed and maintained by Dr. Michael Kalichman, Director of the Research Ethics Program at the University of California San Diego. The site was transferred to the Online Ethics Center in 2021 with the permission of the author.

## **Rights**

Use of Materials on the OEC

## **Resource Type**

Instructor Materials

## **Parent Collection**

Resources for Research Ethics Education

## **Topics**

Publication Ethics

## **Discipline(s)**

Research Ethics

Teaching Ethics in STEM