

GMS 6091

Responsible Conduct in Research

Authorship, Publication and Peer Review

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26 October 2012

9-9:50 am

The Questions

- Why publish?
 - Who are the authors?
 - Which journal should I publish in?
 - Open access
 - Impact Factor
 - What are the typical sections of a manuscript?
 - How do I keep track of and format my references?
 - How do I submit my manuscript?
 - What about the agency funding the studies?
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Authorship

Components of any study:

- idea
- design
- implementation
- conducting experiment
- data analysis
- writing





Ending Honorary Authorship

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CREDIT FOR SCIENTIFIC RESEARCH CONTRIBUTIONS MUST BE CLEARLY AND APPROPRIATELY ASSIGNED at the time of publication. This task has become increasingly complicated because of the number of different laboratories and coauthors involved in many studies. The good news is that academic institutions, funders, and publishers are exploring new ways to clarify attribution,* and many publishers now require disclosure of specific contributions for scientific authorship. As part of this effort, it is critical that the problem of honorary authorship be effectively addressed. According to a recent report, honorary authors were attached to 25% of research reports, 15% of review articles, and

medical journals in 2008.† It is time to end this practice.

A true author is someone who has made substantive intellectual contributions to a study and is responsible for a component of the work. Honorary authorship violates this central principle. Why then is it so frequent? In some cases, honorary authorship amounts to “coercive authorship,” in which a senior person informs a junior colleague that the senior person must be listed as an author, even though she/he did not contribute substantially—or at all—to the work. In other cases, the principal investigator may add the name of a prominent scientist in the field as a guest author in an attempt to boost the paper’s chance of publication. Both types of behavior have fraudulent aspects, distorting the ethical culture that is central to a healthy academic environment.

To discourage honorary authorship and ensure appropriate accountability for published results, many journals have updated their policies on authorship. For some (including *Science*), all authors must formally agree to be listed as authors, specify their contributions to the manuscript, and certify that they approve of its content and submission to the journal. But scientific journals could go even further by adding a statement on authorship forms that reminds authors of their accountability in the event of challenges to the veracity or integrity of the work, such as “By signing this statement, I acknowledge that I take credit for the content of the published work. I also acknowledge that I will take responsibility for the work if questions arise in the future as to its authenticity and credibility.” Such a statement would serve as a firm reminder that being inappropriately listed as an author has negative consequences if the results are challenged or retracted.

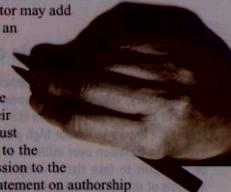
Research institutions should develop and promulgate clear statements in their research policies about the importance of upholding ethical standards of authorship. For example, Washington University in St. Louis‡ defines both guest and gift authorship as research misconduct, whereby “guest (honorary, courtesy, or prestige) authorship is defined as granting authorship out of appreciation or respect for an individual, or in the belief that expert standing of the guest will increase the likelihood of publication, credibility, or status of the work” and “gift authorship is credit, offered from a sense of obligation, tribute, or dependence, within the context of an anticipated benefit, to an individual who has not contributed to the work.” Each institution should also specify to whom concerns should be directed, without fear of retribution, when an author feels coerced to include an inappropriate author.

It is incumbent on more-senior coauthors to assist in educating their colleagues about the proper standards for authorship. But all scientists should take a stand against coercive authorship and refuse to comply with such behavior. In this way, senior faculty and mentors will serve as role models of best practices, reinforcing for more-junior investigators the importance of ensuring appropriate authorship. Honorary authorship must no longer be tolerated. Concerted efforts by institutions, authors, and journals are needed to put an end to this fraudulent and unethical practice.

— Philip Greenland and Phil B. Fontanarosa

10.1126/science.1224988

*http://projects.iq.harvard.edu/attribution_workshop. †J. Wislar et al., *Br. Med. J.* 343, d6128 (2011). ‡<http://wustl.edu/policies/authorship.html>.



Phil B. Fontanarosa is executive editor of the *Journal of the American Medical Association* and Adjunct Professor of Emergency Medicine and Preventive Medicine at the Northwestern University Feinberg School of Medicine, Chicago, IL.

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- Stephen Kosslyn – psychologist at Stanford University uses a points system to give credit for who did what; with the most credit being given to the individuals with the ‘idea’ and those ‘writing’ the manuscript; based on a 1000 point system
 - idea – 250 points
 - design – 100 points
 - implementation – 100 points
 - conducting the experiment – 100 points
 - data analysis – 200 points
 - writing – 250 points
 - Drummond Rennie –editor of *JAMA* – 1996 –proposed that each manuscript contain a description of the contribution of each author, an idea that has now permeated the best journals
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Author Contributions

Dr. Zesiewicz: drafting/revising the manuscript for content, including medical writing for content, study concept or design, analysis or interpretation of data, acquisition of data, study supervision or coordination, obtaining funding.

Dr. Greenstein: drafting/revising the manuscript for content, including medical writing for content, acquisition of data.

Ms. Sullivan: drafting/revising the manuscript for content, including medical writing for content, study concept or design, analysis or interpretation of data, obtaining funding.

Dr. Wecker: drafting/revising the manuscript for content, including medical writing for content.

A. Miller: acquisition of data, study supervision or coordination.

Dr. Jahan: acquisition of data, study supervision or coordination.

Dr. Chen: analysis or interpretation of data.

Dr. Perlman: drafting/revising the manuscript for content, including medical writing for content, acquisition of data.

Journals

- Traditional journals
 - need a subscription (\$\$\$) to access information or purchase articles individually
 - authors may need to pay submission fees
 - information is copyrighted, so you do not own it anymore
- Open access journals
 - digital/online
 - free to readers
 - costs are paid for by authors
 - free of most copyright and licensing restrictions

[for more information see Peter Suber, Director Harvard Open Access Project,
<http://www.earlham.edu/~peters/fos/overview.htm>]

Journals

- Thomson Institute for Scientific Information (ISI) [(Thomson Reuters *Journal Citation Reports*® (*JCR*®))] provides quantitative tools for comparing and evaluating journals.
 - The most readily used is the journal Impact Factor (IF), which measures the frequency with which the 'average article' has been cited based on a specific period of time.
 - Journals with the highest IFs are thought to be the ones with the highest impact in their field.
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Journals

Category	Journal	Current IF	5-year IF
Neuroscience		2.759 (category median IF)	3.951 (aggregate IF)
	Nature Rev Neurosci	30.445	34.187
	Ann Rev Neurosci	25.737	31.058
	Nature Neurosci	15.531	16.289
	J Neurosci	7.115	7.915
	Brain Injury	1.360	1.906
Biochem & Mol Biol		2.857 (category median IF)	4.276 (aggregate IF)
	Ann Rev Biochem	34.317	35.013
	Cell	32.403	34.774
	Nature Med	22.462	26.418
	J Biol Chem	4.773	5.117
	Cell Mol Biol	0.975	1.193

Sections of a Manuscript

Title

Authors/Affiliations

Keywords/Running title

Abstract

Introduction

Methods and Materials

Results

Discussion

Acknowledgements

References

Tables

Figure legends

Figures

Supplementary material

Citation Management Software

- enable users to organize and retrieve information
 - interfaces with word-processing software to insert citations into a manuscript and create a reference list formatted specifically for the journal under consideration
 - two most commonly used products
 - EndNote
 - RefWorks
 - other products available – free, web-based
 - Zotero
 - Mendeley
 - see comparisons at
 - <http://www.library.wisc.edu/citation-managers/comparison.html>
 - http://en.wikipedia.org/wiki/Comparison_of_reference_management_software
-

The Submission Process

- most journals have online submission, but some still accept submission by mail
 - you must include a cover letter
 - need to complete copyright agreement
 - many, but not all journals now have a submission fee
 - typically a fee assessed for color figures
 - you may or may not be asked to submit information for possible reviewers
-

Comments from Reviewers

- comments are confidential
 - good reviews will indicate both strengths and weaknesses
 - possible outcomes
 - accepted as is
 - accepted with minor revision
 - accepted with major revision
 - rejected
 - your decision
 - revise manuscript with response to each reviewer's comments
 - re-submit to another journal
-

The Proofs and Online Versions

- many journals post articles in an uncorrected format as soon as manuscript has been accepted
 - typically, you will receive 'proof' in a few weeks; requires fast (24 hour) turnaround; proof will be posted online prior to assignment to journal issue
 - reprints and pdfs of article
 - what if you find an error 'after the fact'
 - retractions, corrections, corrigendums
 - 'depositing' article as per guidelines from NIH and other funding agencies
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NIH Policy – PubMed Central

- NIH Public Access Policy - makes all research funded by the NIH freely accessible to anyone
- requires scientists to submit all final peer-reviewed manuscripts on research funded by the NIH to the digital archive of PubMed Central upon acceptance, and no later than 12 months after publication
- you will receive a PMCID number to use for all reports/applications to the NIH
- most, if not all journals, will deposit the paper for you

Case Scenarios

Case Study #1

Robert has been working in a large engineering company for three years following his postdoctoral fellowship. Using computer simulations, he has developed a method to constrain the turbulent mixing that occurs near the walls of a fusion reactor. He has written a paper for *Physical Review* and has submitted it to the head of his research group for review. The head of the group says that the paper is fine, but as the supervisor of the research, he needs to be included as an author of the paper. Yet Robert knows that his supervisor did not make any direct intellectual contributions to the paper.

1. How should Robert respond to his supervisor's demand to be an honorary author?
2. What ways might be possible to appeal the decision within the company?
3. What other resources exist that Robert can use in dealing with this issue?

Case Study #2

As his first major grant is coming to an end, several important elements of Dr. K's research suddenly fall into place. The last series of experiments his graduate student ran clearly link the gene they are studying to a particular type of cancer, and his postdoc's work on the proteins associated with this gene could pave the way for possible cures. With these results, Dr. K. is ready to make a strong case for continued support and his pending promotion. All he has to do now is publish the results. A week later, Dr. K's optimism starts to fade because his department chair suggested that the paper come out under her name to give it broader circulation. In addition, his postdoc and graduate student have gotten into a heated debate about the order of their names on the paper; the university's public affairs office has asked for a summary of the results for a press release; and the technology transfer office has called telling him to hold all publications until they can evaluate the commercial potential of his work.

What should be done?

modified from: Steneck: ORI Introduction to the Responsible Conduct of Research

Case Study #3

Andre, a young assistant professor, and two graduate students have been working on a series of related experiments for the past several years, and now it is time to write up the experiments for publication. They could write a single paper with one first author that would describe the experiments in a comprehensive manner, or they could write two shorter, less-complete papers so that each student could be a first author. Andre favors the first option, arguing that a single publication in a more visible journal would better suit their purposes. This alternative also would help Andre, who faces a tenure decision in two years. Andre's students, on the other hand, strongly suggest that two papers be prepared. They argue that one paper encompassing all the results would be too long and complex. They also say that a single paper might damage their career opportunities because they would not be able to point to a paper on which they were first authors.

1. How could Andre have anticipated this problem? And what sort of general guidelines could he have established for lab members?
2. If Andre's laboratory or institution has no official policies covering multiple authorship and multiple papers from a single study, how should this issue be resolved?
3. What kind of laboratory or institutional policies could keep disputes like this from occurring?