

Writing for Publication

Responsible Authorship

Peer Review

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13 January 2014



UNIVERSITY *of* ROCHESTER

What are common principles linking these topics?

- Accurate and complete representation of data
 - Interpretation/opinion delineated from ‘fact’
 - Credit given to work/contributions of others
 - Privileged information treated as such
-
- *All can intersect with issues of misconduct and plagiarism (next session)*



Writing for Publication

Why do we publish? – I

- Documentation of research/scholarship in a field
- Meta-analyses and refinement of models require accessible and archival records
- The scientific method rests on testing hypotheses and verification/refutation of previous results
- *Archival media and methods of dissemination evolving rapidly*



Writing for Publication

Why do we publish? – II

- Necessary activity for the advancement of a field
 - Defining critical problems/questions
 - Highlighting significance and ramifications
 - Public forum for critical debates, including challenges to widely accepted views



Writing for Publication

Criteria for Publication

- Broad guidelines defined by professional societies and by individual journals (Instructions to Authors)
- Common attributes
 - Originality
 - Impact
- Specifics
 - Field
 - Focus (theoretical, technical, experimental)

But much variation in practice



Writing for Publication

Nature

‘The criteria for publication of scientific papers (Articles and Letters) in *Nature* are that they:

- report original scientific research (the main results and conclusions must not have been published or submitted elsewhere)
- are of outstanding scientific importance
- reach a conclusion of interest to an interdisciplinary readership

Further editorial criteria may be applicable for different kinds of papers, as follows:

- **large dataset papers:** should aim to either report a fully comprehensive dataset, defined by complete and extensive validation, or provide significant technical advance or scientific insight.
- **technical papers:** papers that make solely technical advances will be considered in cases where the technique reported will have significant impacts on communities of fellow researchers.
- **therapeutic papers:** In the absence of novel mechanistic insight, therapeutic papers will be considered if the therapeutic effect reported will provide significant impact on an important disease.’

(http://www.nature.com/nature/authors/get_published/index.html)



Writing for Publication

Physical Review B-general

‘It is the policy of the American Physical Society that the *Physical Review* accept for publication those manuscripts that significantly advance physics and have been found to be scientifically sound, important to the field, and in satisfactory form. The Society will implement this policy as fairly and efficiently as possible and without regard to national boundaries.’

<http://prb.aps.org/info/polprocb.html>



Writing for Publication

American Political Science Review

- ‘The *American Political Science Review (APSR)* publishes scholarly research of exceptional merit, focusing on important issues and demonstrating the highest standards of excellence in conceptualization, exposition, methodology, and craftsmanship.’ <snip>
- ‘The *APSR* publishes original work. Submissions should not include tables, figures, or substantial amounts of text that already have been published or are forthcoming in other places. <snip>. Neither does the *APSR* consider submissions that are currently under review at other journals or that duplicate or overlap with parts of larger manuscripts submitted to other publishers (whether of books, printed periodicals, or online journals).’

http://www.apsanet.org/content_43805.cfm



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Writing for Publication

Proceedings of the Modern Language Association

‘PMLA welcomes essays of interest to those concerned with the study of language and literature. *<snip>* The ideal PMLA essay exemplifies the best of its kind, whatever the kind; addresses a significant problem; draws out clearly the implications of its findings; and engages the attention of its audience through a concise, readable presentation. *<snip>* The MLA urges its contributors to be sensitive to the social implications of language and to seek wording free of discriminatory overtones.’

http://www.mla.org/pmla_submitting



Writing for Publication

Framework and Dilemmas

- When is material ready for publication?
- Who decides?
- How is credit/authorship apportioned?



Writing for Publication

When and how to publish

- When is material ready for publication?
 - Importance
 - Reproducibility
 - Pressures to publish
- How to organize materials?
 - ‘Minimum publishable unit’
 - Likely citation impact
 - One paper or more
- Where to submit?
 - Peer-reviewed
 - Journal status
 - Non-refereed contributions



Writing for Publication

When and how to publish

One journal at a time

Policy Summary on Prior Publication The *Journal of the American Chemical Society* considers for publication only original work that has not been previously published and is not under consideration for publication elsewhere. When submitting a manuscript, an author should inform the editor of any prior dissemination of the content in print or **electronic** format. This includes electronic posting of conference presentations, posters, and preprints on institutional repositories and any other Web sites. Any content that has been made publicly available, either in print or electronic format, and that contains a significant amount of new information, if made part of a submitted manuscript, may jeopardize the originality of the submission and may preclude consideration for publication. For further details, see the [Author Guidelines](#) [PDF].

<http://pubs.acs.org/page/jacsat/submission/prior.html>

{Red highlight added}



Writing for Publication

Decision on readiness

- Who decides when work is ready to be published?
 - You
 - Graduate adviser
 - Collaborators
- Strategies for resolving disagreements



Writing for Publication

Avoiding and Resolving Disputes

- **Senior Author and Order of Authorship** - The senior author is generally defined as the person who leads a study and makes a major contribution to the work. All the authors at the outset of a project should establish senior authorship, preferably in a written memorandum of understanding. This memorandum of understanding should reference the authors' agreement to abide by their departments' policy on authorship or this University default policy on authorship. At the outset of the study the Senior Author should discuss the outline of work and a tentative Order of Authorship with the study participants. As projects proceed, agreements regarding authorship may need to be changed. It is the responsibility of the senior author to assure that the contributions of study participants are properly recognized.
- **Disputes Over Authorship** - Disagreements over authorship, e.g. who has a right to be an author or the order of authorship, should be resolved by the Senior Author in collegial consultation with the other authors. When this process cannot reach resolution, the Senior Author should arrange with his or her chairperson for arbitration by a knowledgeable and disinterested third party acceptable to all the authors. If the authors cannot agree on a mutually acceptable arbitrator, then the Vice President for Research and Graduate Studies shall appoint an arbitrator. During the arbitration process all the authors are expected to refrain from unilateral actions that may damage the authorship interests and rights of the other authors.
- **Accountability** - Every author listed on a publication is presumed to have approved the final version of the manuscript. Each author is responsible for the integrity of the research being reported.
- **Graduate Student Authorship** - Faculty should be especially aware of their responsibility to safeguard the rights of graduate students to publish the results of their research. (*MSU Research Handbook*, 1985, p. 16, section 4.3.1.)

Material derived from <http://rio.msu.edu/authorshipguidelines.htm>



Writing for Publication

Authorship and credit

- How is credit/authorship apportioned?
 - Within group
 - Collaborators
- Minimum requirements stated by most journals for authorship
 - Increasingly, some require explicit statements on contributions of authors



Writing for Publication

Authorship and credit

- Authorship credit should be based on 1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; and 3) final approval of the version to be published. Authors should meet conditions 1, 2, and 3.
- When a large, multi-center group has conducted the work, the group should identify the individuals who accept direct responsibility for the manuscript. These individuals should fully meet the criteria for authorship defined above. *<snip>* Journals will generally list other members of the group in the Acknowledgments.
- Acquisition of funding, collection of data, or general supervision of the research group, alone, does not constitute authorship.
- All persons designated as authors should qualify for authorship, and all those who qualify should be listed.
- Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.

http://www.councilscienceeditors.org/editorial_policies/whitepaper/2-2_authorship.cfm#2.2.1 Based on information from the International Committee of Medical Journal Editors (http://www.icmje.org/ethical_1author.html)



Writing for Publication

Author-ineligible categories

- **Guest authorship.** Guest authorship has been defined as authorship based solely on an expectation that inclusion of a particular name will improve the chances that the study will be published or increase the perceived status of the publication. The "guest" author makes no discernible contributions to the study, so this person meets none of the criteria for authorship.
- **Honorary or gift authorship.** Honorary or gift authorship has been defined as authorship based solely on a tenuous affiliation with a study. A salient example would be "authorship" based on one's position as the head of a department in which the study took place.
- **Ghost authorship.** Ghost authors participate in the research, data analysis, and/or writing of a manuscript but are not named or disclosed in the author byline or Acknowledgments. Examples of ghost authors include undisclosed contributors who are employees of pharmaceutical or device companies, medical writers, marketing and public relations writers, and junior staff writing for elected or appointed officials. Any person who makes a substantial contribution to a manuscript should be listed in the author byline, if appropriate, or in the Acknowledgments, along with the individuals' institutional affiliations, if relevant.

http://www.councilscienceeditors.org/editorial_policies/whitepaper/2-2_authorship.cfm#2.2.1

But many vagaries in how such guidelines are applied and used within various fields and for different types of reports



Writing for Publication

Nature **409**, 860-921 (15 February 2001)

Initial sequencing and analysis of the human genome

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Responsible Authorship

- Presentation of data
- Citing work of others
- Full disclosure
- Sharing resources



Responsible Authorship

Presentation of Data

Most professional organizations have codes of ethics

- IEEE (<http://www.ieee.org/portal/pages/iportals/aboutus/ethics/code.html>)
 - 3. to be honest and realistic in stating claims or estimates based on available data
- AIChE (<http://www.aiche.org/About/Code.aspx>)
 - Issue statements or present information only in an objective and truthful manner.
- ACS (<http://pubs.acs.org/userimages/ContentEditor/1218054468605/ethics.pdf>)
 - An author' s central obligation is to present an accurate account of the research performed as well as an objective discussion of its significance.

Bottom line: Scholarly practice and advancement depends on having credible representations of research findings

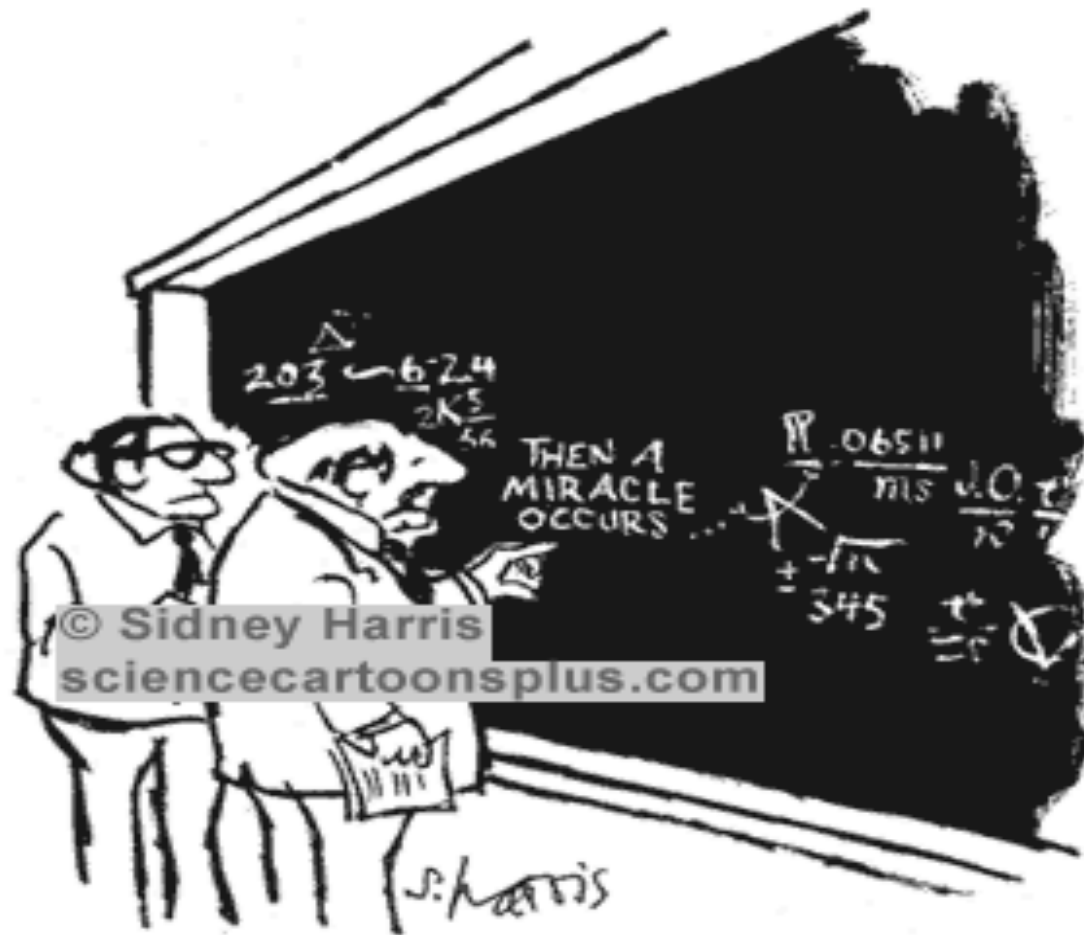


Responsible Authorship

Presentation of Data--a Balancing Act

- Manuscripts condense the full record in lab notebooks into results and interpretations
- Paramount responsibility is in truthfully addressing
 - Inclusions and omissions of data
 - Fact versus interpretation





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sciencecartoonsplus.com

"I THINK YOU SHOULD BE MORE EXPLICIT HERE IN STEP TWO."



Responsible Authorship

Citations

- Scope of references to published work
 - Basic requirement that these have been read by the author(s)
 - Citations fairly reflect content of cited paper
 - Balancing act
 - Own papers
 - Historical context versus immediate relevance
- Unpublished communications
 - Within or external to group
 - Journals require written permission
- Most journals and professional societies provide guidance



Responsible Authorship

Citations

American Chemical Society guidelines

<http://pubs.acs.org/userimages/ContentEditor/1218054468605/ethics.pdf>

An author should cite those publications that have been influential in determining the nature of the reported work and that will guide the reader quickly to the earlier work that is essential for understanding the present investigation. Except in a review, citation of work that will not be referred to in the reported research should be minimized. An author is obligated to perform a literature search to find, and then cite, the original publications that describe closely related work. For critical materials used in the work, proper citation to sources should also be made when these were supplied by a non-author.



Responsible Authorship

Full Disclosure

- Payments from sponsoring corporations
- Payments as consultant fees
- Loan of equipment, agents, materials
- Travel and institutional support
- Affiliation with involved company



Responsible Authorship

Sharing Resources

- Reproducing results
- Furthering science
- Data availability

- Conflicts
 - Expectation of authorship based on sharing reagents
 - Expectation of free dissemination of reagents once published



Responsible Authorship

Dissemination and Sharing of Research Results

NSF Data Sharing Policy: Investigators are expected to share with other researchers, at no more than incremental cost and within a reasonable time, the primary data, samples, physical collections and other supporting materials created or gathered in the course of work under NSF grants. Grantees are expected to encourage and facilitate such sharing.

NSF Data Management Plan Requirements: Proposals submitted or due on or after January 18, 2011, must include a supplementary document of no more than two pages labeled “Data Management Plan”. This supplementary document should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results.

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



Peer Review-as an Author

Overview

- Submission to carefully selected journal and editor, following journal guidelines
 - Cover letter highlighting main points
 - Optional suggestion of reviewers
- Waiting period during anonymous review process
- Responding to critiques



Peer Review-as an Author

Suggesting Reviewers

- Natural set of reviewers found in cited works
- Avoid obvious conflicts of interest
 - Editors take requests for exclusions of particular reviewers seriously but are not obligated
 - Important that the nature of any serious conflicts be clearly delineated in such a request
 - Recommending reviewers who are close associates is strongly discouraged



The Reviewer's Charge

- The review categories are self-explanatory. However, two criteria are necessary for a recommendation of acceptance for publication: NOVELTY (new or innovative methods or approaches to a problem of engineering, science or mathematics) and APPROPRIATENESS (a complete well written manuscript that falls within the scope of the transactions to which it was submitted). In assessing novelty, you should be aware that **it is acceptable for authors to submit expanded versions of their work that has been previously published in a conference paper, but that the prior work must be cited and the extensions clearly explained in the body of the paper.** In such cases, the journal submission should include some new elements, such as expanded theoretical discussion, algorithm refinements, more extensive experiments, and/or new results analysis. In assessing appropriateness, you should consider the scope of the journal, completeness of the technical work, and quality of the writing. The IEEE does not provide editorial services for correcting grammatical errors, but we can point authors to services that they can make use of at their own expense.
- You are to score the manuscript according to the following codes:
- A = Manuscript is ready for publication as is.
- AQ = Manuscript is almost ready for publication; the author should be required to make some small amendments as noted in the Comments part of the review form. The amended manuscript should not be returned to the reviewers.
- RQ = Manuscript requires some major changes by the author, and should be returned to the reviewers for a second review round. Please note there is no RQ status for Signal Processing Letters, all other statuses are used.
- R = Reject (A major rewrite and/or additional experiments are needed such that the author is unlikely to be able to complete the revision within 6 weeks. However, the paper has merits and the authors should be encouraged to resubmit.).
- R - Reject (The paper is not of sufficient quality or novelty to be published in this Transactions. The author should not be encouraged to resubmit.)

Source: IEEE Signal Processing Society {red highlight added}



Peer Review-as an Author

Responding to Critiques

- Brace yourself for major concerns, founded and unfounded.
- Respond point-by-point in letter with revised manuscript
- Thank the anonymous reviewers for their helpful suggestions
- If final rejection, then consider options
- ?How much do you have to change manuscript to resubmit?



Peer Review--as a Reviewer

Should you do the review?

- At initial inquiry
 - Do you have the expertise?
 - Is there a potential conflict?
 - Can you respond in a timely fashion?
- After receipt of manuscript
 - Can you provide an impartial, professional analysis?
 - Are there ethical concerns about the work or presentation?
 - If additional information is needed to initiate or complete the review, requests can only be made via the journal editor



Peer Review--as a Reviewer

Responsibilities

- Privileged and confidential content
- It is unethical to:
 - Use information for own work
 - Share manuscript with others, including in your own group
 - Exception: Others may assist in the review AFTER the editor has been contacted and permission granted.
 - Discuss the contents
- If asked to look at a manuscript sent to another reviewer, ask whether permission has been given



Peer Review--as a Reviewer

Critiques

- Provide constructive criticism
- Avoid ad hominem attacks
- Focus on logical constructs and journal criteria
- May suggest other experiments if important for the scientific integrity of the work
 - Distinguish between ‘necessary for publication’ and ‘of potential interest’
- May suggest editing if important for clarity
- *Do unto others.....*



Discussion of Case Studies

