



# Ethics of Authorship & Publication

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# Dissemination is an Obligation

- Researchers are obliged to share their study methods and findings
- Participants, funders, and colleagues rely on this commitment
- Research is not complete until it is reported
- Publication is the “currency” of academics for people who work in academics; recognition, tenure, promotion, grants, etc. all come from authorship

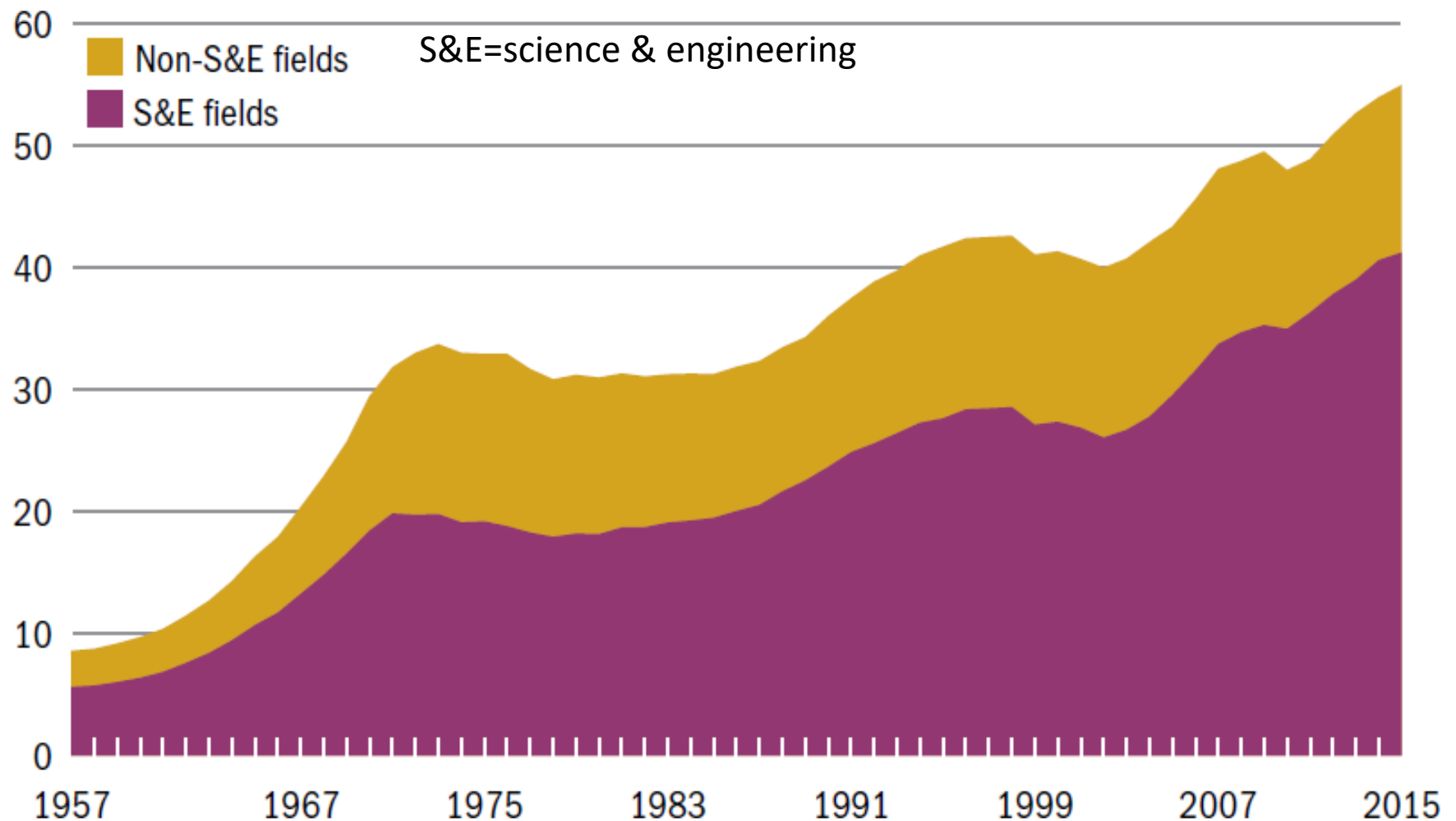


# Authorship Disputes

- Disputes among authors “have become part of the culture of scientific publication”  
(Barrett, Funk, & Macrina, 2005, p. 194) *Accountability in Research*
- **Why?**
  - prevalence of multiauthored papers (Claxton, 2005b) *Mutation Research*
  - the number of senior authors on multiauthor papers (Drenth, 1998) *JAMA*
  - the number of scientists holding PhDs—  
increasing over 100% since 1970 National Science Foundation (June 2017)
  - the number of publications increasing to now  
about 2 million per year (Claxton, 2005b) *Mutation Research* (International Assn of Sci Tech & Med Pubs, 2012)

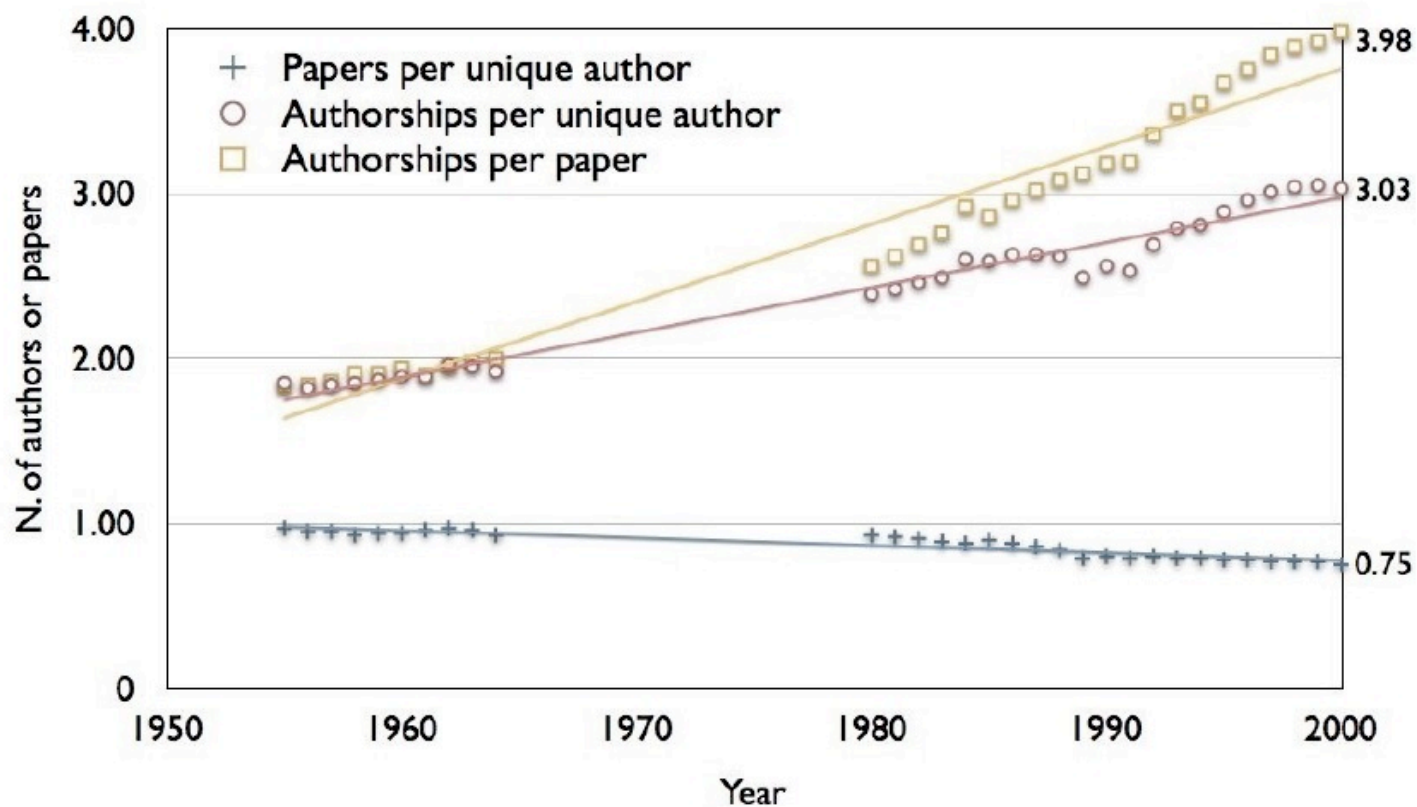
## Doctorates awarded by U.S. colleges and universities: 1957-2015

Doctorate recipients (thousands)





**Figure 9:** Coauthorship patterns 1954 to 2000 (from Mabe & Amin 2002, using data from Thomson Reuter Science Citation Index)





# Responsible Authorship

(American Psychological Association, 2017)

- authorship credit should reflect the individual's scientific or professional contribution to the study
- *Author*: anyone involved with initial research design, data collection and analysis, manuscript drafting, and final approval
- the following do not necessarily qualify for authorship:
  - providing funding or resources
  - mentorship
  - contributing to the research but not helping with the publication itself
- the primary author assumes responsibility for the publication, making sure that:
  - the data are accurate
  - all deserving authors have been credited
  - all authors have given their approval to the final draft
  - s/he is the one who will handle inquiries after the manuscript is published



# Authorship Policy of International Committee of Medical Journal Editors (ICMJE)

- Authorship credit should be based on 4 criteria
  - 1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; AND
  - 2) drafting the article or revising it critically for important intellectual content; AND
  - 3) final approval of the version to be published; AND
  - 4) agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

(International Committee of Medical Journal Editors, 2019)



## Authorship Policy of International Committee of Medical Journal Editors (ICMJE)(continued)

- “Acquisition of funding, collection of data, or general supervision of the research group, alone, does not justify authorship.
- All persons designated as authors should qualify for authorship, and all those who qualify should be listed.”

(International Committee of Medical Journal Editors, 2004)





# Variance in Authorship Practices Across Fields

*(Committee on Science, Engineering, and Public Policy)*

- in many fields, the earlier a name appears in the list of authors, the greater the implied contribution
- sometimes the scientist with the greatest name recognition is listed first
- in other fields the research leader's name is always last
- in some disciplines supervisors' names rarely appear on papers
- in others the professor's name appears on almost every paper that comes out of the lab
- some research groups and journals avoid these decisions by simply listing authors alphabetically.



## ...solutions?

- frank and open discussion of the division of credit within research groups—as early in the research process as possible and **preferably at the very beginning**
- best practice is for authorship criteria to be explicit among all collaborators
- collaborators should be familiar with the conventions in a particular field to understand their rights and obligations
- group meetings provide an occasion to discuss ethical and policy issues in research

## Activities Associated with Research Manuscript/Poster: Points and Method of Assignment

This instrument should be completed collaboratively, with discussion including all contributors. Scores are estimates and are negotiable as the project progresses. Some of the items may not be appropriate for studies analyzing existing data and authorship “cut-off” scores may have to be adjusted. Please note that these scores should be used as guidelines and that the final order of authors might not reflect the rank of the contributors’ scores.


Activity Category	Total Points	Method of Assigning Points*	Contributor Score (the total of these columns should equal the <i>Total Points</i> column)				
			Initials				
Conceptualizing and refining research ideas	50	Q					
Literature search	20	T					
Creating research design	30	Q					
Instrument selection	10	Q					
Instrument construction/questionnaire design	40	Q/T					
Selection of statistical tests/analyses	10	Q					
Performing statistical analyses and computations	10	T					
Collection and preparation of data (gathering, scoring/coding, entering)	40	Q/T					
Interpretation of statistical analyses	10	Q					
Drafting manuscripts/posters							
First draft	50	T					
Second draft	30	T					
Redraft of a page (on later drafts)	2	T					
Editing manuscript	10	T					
Total Score**							

\*Q = points assigned on qualitative criteria; T = points assigned based on proportion of total time expended on the task or on proportion of total pages drafted or revised; Q/T = points assigned partly on the basis of time spent on the tasks and partly on qualitative criteria.

\*\*50 points minimum to be an author

This table is based on information described in the following article:

Winston, Jr., R. B. (1985). A suggested procedure for determining order of authorship in research publications. *Journal of Counseling and Development*, 63, 515-518.



## Contract Regarding Publication Intent

We hereby enter into an agreement, as outlined below, regarding the publication of the project *tentatively* titled: \_\_\_\_\_

### FIRST AUTHOR

Name (print): \_\_\_\_\_ Signature: \_\_\_\_\_

Percent effort: \_\_\_\_\_ Activity Score (see page 2): \_\_\_\_\_

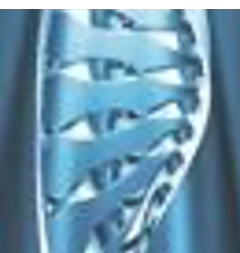
Brief description of basic responsibilities/role on project:

### SECOND AUTHOR


Name (print): \_\_\_\_\_ Signature: \_\_\_\_\_

Percent effort: \_\_\_\_\_ Activity Score (see page 2): \_\_\_\_\_

Brief description of basic responsibilities/role on project:







...

#### FOURTH AUTHOR

Name (print): \_\_\_\_\_ Signature: \_\_\_\_\_

Percent effort: \_\_\_\_\_ Activity Score (see page 2): \_\_\_\_\_

Brief description of basic responsibilities/role on project:

It is agreed that authorship order may be renegotiated should an individual's responsibilities substantially change, or should an individual fail to perform their role as stated above. Furthermore it is agreed that if the project involves a student milestone, the manuscript (MS) or poster must be submitted for possible publication no later than 12 months from the date of the successful defense of the project. Should the manuscript not be submitted within 12 months time, it is agreed that the faculty supervisor will take primary responsibility for submission of the manuscript and will become first author.


Date contract signed: \_\_\_\_\_

Expected date of data completion: \_\_\_\_\_

Expected date of MS/poster submission: \_\_\_\_\_

Date project actually complete: \_\_\_\_\_

Date MS/poster submitted: \_\_\_\_\_





# The Dissertation Problem

- PhD students must generate substantial and original scholarship
- PhD advisors must guide and contribute to this scholarship
- faculty co-authors have an ethical responsibility to engage actively in developing dissertation manuscripts by passing along lessons in writing clearly and coherently as well as techniques for revising manuscripts based on reviewer feedback (Bearinger, Taliaferro, & Given, 2010 *Res Nursing & Health*; Jennings, 2011 *Res Nursing & Health*)
- power differential between student and advisor
- advisor should put student interests first
- be mindful of intergenerational transmission of ethical and unethical authorship negotiation and practices



# Changing the Structure of Authorship After the Fact

*(APA Science Student Council)*

- changes can refer to including additional authors
- reducing the number of authors
- or rearranging authorship order



# Reasons For Adding Authors

- the project has expanded beyond the original purpose, conceptualization, or scope
- the added author may possess valuable expertise necessary for the completion of the project or to address major concerns expressed by a reviewer of the submitted manuscript
- a contributor to the project who originally was intended to be thanked in the acknowledgement section of the manuscript became significantly more involved to the extent that their contributions warranted authorship





# Reasons for Removing an Author

- the author did not contribute to the project as originally expected or agreed upon
- the author graduated or relocated before a project could be significantly undertaken, and the author's relocation prevented her or him from reasonably or substantially contributing to the proposed project



# Reasons for Revising Authorship Order

- the actual contributions of authors differed significantly from the originally expected contributions at the beginning of the project
- an author would like to accept increased responsibility, or would like to delegate a portion of her or his responsibility to other authors



# Preventing Authorship Problems

- Identify and assign study tasks that are key for authorship, and those warranting only acknowledgement.
- Link authorship to quality and completion of *work* not to an individual's *role* or *title*.
- Renegotiate authorship and author order when new tasks emerge, responsibilities alter, or people enter or leave the collaborative group.



# Contact Me

- [segrin@u.arizona.edu](mailto:segrin@u.arizona.edu)
- UA COMM dept. (520) 621-1366
- <https://comm.arizona.edu/user/chris-segrin> for my office hrs.





# Expertise + Long Hours

- **4.1** Dr. Colleen May is a participating neurologist in a clinical trial to assess the efficacy and toxicity of a new anticonvulsant medication. For the duration of the 2-year study, each neurologist is to meet with each of his or her patients for an average of 30 minutes each month. In Dr. May's case, this amounts to an average of 20 hours per month. During each visit, the physicians administer a variety of specialized tests, requiring judgments dependent on their experience and training in neurology. At the completion of the study, the results are to be unblinded and analyzed by the project leaders. It is anticipated that at least two publications will be prepared for the *New England Journal of Medicine*. Dr. May has just learned that she will be listed in the acknowledgments but not as a coauthor of the manuscript. Dr. May argues that she has provided nearly 500 hours of her expert time, far more than needed to complete a publishable study in her experimental laboratory. Does Dr. May have a case for authorship? Why or why not?

# The Coin Toss

- **4.2** Dr. Ethyl Metzger has published five multiauthored papers during her postdoctoral training. Ethyl shared first authorship on two of these papers. The names of Ethyl and her co-first author were decided by a coin toss as indicated in a footnote according to journal policy. In both cases, Ethyl lost the coin toss and her name appears as the second author in the byline. Her remaining three publications each have five authors in their bylines, and Ethyl is third author on two and fourth author on one. Ethyl is submitting application materials to several institutions to be considered for faculty positions. On her *curriculum vitae* she has changed the order of the authors on her two shared first authorship papers so that her name appears first instead of second. She is concerned that search committees reviewing applications may miss any notation indicating shared first authorship, so she believes the most direct way to assert this is to have her name first in the citation. Ethyl worries that if she doesn't do this there is a risk of her postdoctoral publication record appearing as though she did not publish a single senior-authored paper. She mentions this to you over lunch and asks if you have any concerns about her strategy. What do you tell her? If you have concerns, what guidance or advice do you have for her?



# Overtured Oversight

- **4.3** Aarti Shankar, a new M.D.-Ph. D. graduate, has a hypothesis about a mechanism that would explain an unexpected phenotype displayed by a knockout mouse constructed by her doctoral mentor, Dr. Gina Costello. With Dr. Costello's permission and resources, Aarti experimentally tests her hypothesis in the few remaining weeks before she leaves the lab. Her results reproducibly demonstrate that the mouse is totally missing a minor signaling protein called Xgro. This defect provides a compelling explanation for the knockout phenotype. Aarti leaves for her residency training buoyed by the hope of being an author on a major paper. In follow-up work on the project, Raymond, another postdoc in the lab, is unable to repeat Aarti's work. To Dr. Costello's chagrin, not only are Aarti's data irreproducible but Raymond demonstrates that, to the contrary, the mutant mouse produces 10-fold more Xgro than the wild-type mouse. It takes another 4 months of experiments to rigorously collect confirmatory data. In the process, Raymond also discovers that Aarti's data were the result of her failure to properly conduct the signaling protein assay. Interestingly, Raymond's newly observed overproduction of Xgro provides an attractive alternative explanation for the mutant phenotype. Upon completing the lab work and data analysis, Dr. Costello and Raymond write a manuscript describing their findings on the mechanism underlying the mouse phenotype. Aarti becomes aware of this and requests that she be a coauthor on the paper because her seminal idea was key to the work even though she did the assay incorrectly. Raymond is opposed to this, saying that Aarti's lab work has delayed submission of this important discovery for publication. Dr. Costello seeks your advice on whether Aarti has a case for authorship. What do you tell her? Why?



# Who Is Where On The Author List- Graduate Students

- A manuscript submitted to a journal was returned to authors with the editor's letter stating that it would only be reconsidered if major changes were made to satisfy the comments of the reviewers. To accomplish this, all the data had to be re-analyzed using a new analysis.
- On the original manuscript the first author was student, Origen, who was primarily responsible for gathering data and making the analysis. The second author was faculty member, Overview, who was primarily responsible for the method of analysis, supervising Origen, and writing the manuscript. For the revised manuscript, another student, Secundy, re-analyzed the data using another method developed by Overview, who then had the primary responsibility of revising the manuscript. Since student Origen had already graduated and was engaged in another career situation, he could not participate further and his contribution to the revised manuscript was the original data collection.
- What, if any, changes can or should (as a matter of fairness) be made in the author list in the revised manuscript?





# Failure to Perform

- Prof. A is PI on a grant. Prof. B is co-I. Student C, is Prof. B's advisee and uses A & B's data for her dissertation research project. After graduating, Student C (now Prof. C) submits a manuscript based on the dissertation project with the following order of authorship: C, B, & A. The manuscript is rejected. A & B urge her to revise and resubmit the manuscript to another journal. Three years have passed and she has yet to do so. Prof. A has an obligation to the funding agency to show that the project generated publications and wants the manuscript resubmitted now.
- What should A and B do?
- Is it fair for them to take over the publication process and be senior authors on a paper from a student's dissertation, over C's objection?



# No Response

- **4.10** Dave Clubman completes his Ph.D. program and leaves the laboratory immediately to attend to personal matters. An important manuscript based upon his dissertation exists only in a preliminary draft. During the next year, Professor Holly Franks, his former advisor, attempts to contact Dave to complete the manuscript. After some months, Dr. Franks edits the manuscript, prepares the figures, and sends the updated version to Dave. Dave acknowledges receipt of the manuscript but provides no comments and does not sign a memorandum acknowledging consent to submit the manuscript. During this period, some results similar to Dave's are published by another laboratory. Dr. Franks and a postdoctoral fellow extend the work and prepare a new manuscript with Dave as first author and the postdoctoral fellow as an additional coauthor. The manuscript is sent to Dave by certified mail, but he does not provide any comments nor return a signed memorandum agreeing to submission for publication. A third party hears that Dave blames Dr. Franks for the delay and is trying to "give her a hard time." Dave was supported by federal funds, and his results were included in annual progress reports to the granting agency. Can Dr. Franks submit the manuscript and publish it if it is accepted by the journal? What should be the authorship on the paper? Should any comments be included in the "Acknowledgments" section?