## How to handle authorship disputes: a guide for new researchers

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One of the main tasks of COPE's education committee is to reduce unethical behaviour. This involves the rather bold step of defining when people have been behaving unethically, and then providing suggestions on how they can avoid doing so in the future. To this end we have written, and tested on a group of authors, a guide for young researchers on the area of authorship, which many people agree is one of the more confused areas. But writing a document is one thing; disseminating it is another. We would therefore welcome comments, particularly on how we can use this report to change behaviour, so that it becomes not just another discussion document, but a real catalyst for change.

In theory, authorship sounds straightforward, but in practice it often causes headaches. While preparing these guidelines, we heard about several cases. In one, a deserving junior researcher was omitted from the author list; in another a sponsoring company insisted on the inclusion of an opinion leader who had made virtually no contribution to a study. And the writer of a review article found her name replaced with that of her boss, because she was on maternity leave when the final version was submitted.

Listing the authors tells readers who did the work and should ensure that the right people get the credit, and take responsibility, for the research. Although journal editors do not always agree among themselves on what constitutes authorship, many of them subscribe to the guidance from the International Committee of Medical Journal Editors (ICMJE), also known as the Vancouver group.

The latest version, issued in 2001, states that:
"Authorship credit should be based only 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.

Conditions (1), (2), and (3) must all be met. Acquisition of funding, the collection of data, or general supervision of the research group, by themselves, do not justify authorship."

The problem, as studies have shown, is that what editors want is not what authors do. ${ }^{12}$ This is hardly surprising given the enormous pressure on individuals and institutions to "publish or perish." Thus the principles laid down by editors are often breached and by-lines often do not reflect who really did the work. ${ }^{1}$ Many people (both editors and investigators) feel that this misrepresentation is a form of research misconduct, and that honesty in reporting science should
extend to authorship. They argue that, if scientists are dishonest about their relationship to their work, this undermines confidence in the reporting of the work itself.

We have written this document to help new researchers prevent and resolve authorship problems. In particular it provides:

■ suggestions for good authorship practice that should reduce the incidence of such dilemmas,

- advice on what to do when authorship problems do arise, and
- a glossary of key concepts in authorship, with some reading lists and websites for those who wish to take this further.


## How to reduce the incidence of authorship problems

People generally lie about authorship in two ways:
■ by putting down names of people who took little or no part in the research (gift authorship, see below)
■ by leaving out names of people who did take part (ghost authorship, see below).
Preventing a problem is often better than solving it and we recommend the following three principles.
(a) Encourage a culture of ethical authorship

One problem is that people who are being unethical about authorship are simply following local customs and practice. They need to be made aware of the views of editors, so that in time the culture will change. As a junior researcher you can make sure your departmental library has at least one book on publication ethics (see list below). You can also inquire if there is a university or departmental policy on authorship, and suggest that you start working on one if there is not.
(b) Start discussing authorship when you plan your research
Raise the subject right at the start. Start gathering views of all team members and if possible discuss authorship at a face-to-face meeting. Even before a study is finished, you should have some idea of the publications that might come out of it, such as a conference abstract, the full paper, then some supplementary papers, and who is likely to be most involved in these. Continue to discuss ideas about authorship as the project evolves, and especially if new people get involved. Keep a written record of your decisions.
(c) Decide authorship before you start each article Many authorship difficulties arise because of misplaced expectations and poor communication. So it is important that, before you start to write up your project, you confirm in writing who will be doing what-and by when. Ideally you should do this face to face, though this may not always be possible. Keep everyone informed of any changes with a written note.

## How to handle authorship disputes when they occur

The above suggestion, that every team should have a written authorship agreement before the article is written, should reduce the chances of disputes arising at a late stage, when effectively all the real work has been done. We accept, however, that many people are reluctant to be pinned down in this way, and that it will not always be possible to take such a sensible approach in real life. Disagreements about authorship can be classified into two types: those that do not contravene ICMJE guidelines (disputes) and those that do (misconduct).

## (a) Disputes

These are largely questions of interpretation, such as whether someone's contribution was 'substantial' or not. In such cases you need to negotiate with the people involved. If the suggestions to include or omit names came from your supervisor, make clear that you are not disputing his or her right to make such a decision, but show dispassionately why you do not agree with the decision. Support this with evidence, such as laboratory notebooks, manuscripts, ICMJE statement, Instructions to Authors etc. If you remain unhappy with your supervisor's decision, you may consider an appeal to someone more senior, such as the departmental head or dean. But you should do this in exceptional circumstances only - and make sure your supervisor knows what you are intending to do.

## (b) Misconduct

If you believe that someone is proposing to do something with the authorship list that is unethical, then you have a real problem. Should you say nothing (and therefore be complicit in the unethical behaviour), or should you blow the whistle, even though this might damage your career prospects or future funding? We recommend a third way, which is to explain the fact that the suggested author list contravenes editors' recommendations, and could be considered scientific misconduct. Again, stick to the facts and avoid being emotional. Point out that an editor could well decline to publish if he or she finds out. As soon as the meeting is finished, make a note and file it.

## What you can do if authorship issues are not resolved

Authorship may be used as a bargaining tool if team members cannot agree on the presentation or interpretation of results. All authors should see the final
version of a publication before it is submitted so you can withdraw your name. This will not be an easy decision, and you must weigh up the loss of credit for the work you did with the disadvantages of being included in something with which you do not fully agree.

If your name is included on a publication against your wishes you should inform the other authors as soon as possible. If you discover this only after publication you may contact the journal and ask for a correction. Similarly, if your name is wrongly omitted, you should discuss this with the other contributors. You could contact the journal but an editor is unlikely to add your name without the agreement of the other authors. If your name is omitted by accident, and the other authors agree, then the journal may publish a correction.

## Key concepts in authorship

Acknowledgements: Most journals permit (or even encourage) acknowledgement of contributions to a research project that do not merit authorship. The ICMJE guidelines state: 'All others who contributed to the work who are not authors should be named in the Acknowledgments, and what they did should be described'. All those who are listed in this way should be aware of it. Some journals (mainly in the US) will require signatures of those acknowledged.

Appeals: You may ask a journal to withdraw your name from a paper if it has been included against your wishes. However most editors are reluctant to get involved in disputes about omitted authors since they do not have enough information to judge such cases. Some journals have an ombudsman, but they deal with cases of alleged misconduct by the journal. Similarly, COPE only hears cases submitted by journal editors and is not an appeal body for cases of disputed authorship.

Contributorship: The ICMJE guidelines now recommend that authors should state their contribution to the project: 'authors should provide a description of what each contributed, and editors should publish that information'. Some journals publish this information but in most cases it is for the benefit of the editor, who wants reassurance that the criteria have been fulfilled. (See Instructions to Authors.)

Corresponding author: The person who receives the reviewers' comments, the proofs, etc. and whose contact details are printed on the article so that readers can request reprints or contact the research group. Journal editors view this as a purely administrative role, but some authors equate it with seniority. Take the views of your co-authors at an early stage, and decide in advance who will be the corresponding author. Ideally, choose somebody whose contact details are not likely to change in the near future.

First and last authors: Generally speaking, the most sought-after position is the first, which is not surprising given the convention of referring to studies by the first-
named author, e.g. 'Smith et al. have shown that'. The first named author is therefore generally held to have made the greatest contribution to the research. Sometimes significance is attached to being the last named author. However, views about this do seem to vary, so don't assume that everybody feels the same way about it. Authors have often given the last place to a senior team member who contributed expertise and guidance. This can be consistent with the ICMJE criteria if this person was involved in study design, the interpretation of the data, and critically reviewed the publication. However, cynics may suspect that the final author is often a guest or honorary author. (See Order of authors.)

Ghost authors: This phrase is used in two ways. It usually refers to professional writers (often paid by commercial sponsors) whose role is not acknowledged. Although such writers rarely meet ICMJE criteria, since they are not involved in the design of studies, or the collection or interpretation of data, it is important to acknowledge their contribution, since their involvement may represent a potential conflict of interest. The term can also be used to describe people who made a significant contribution to a research project (and fulfil the ICMJE criteria) but are not listed as authors. The ICMJE guidelines clearly condemn this practice and state that 'All persons designated as authors should qualify for authorship, and all those who qualify should be listed.'

Gift authors: People who are listed as authors but who did not make a significant contribution to the research and therefore do not fulfil the ICMJE criteria. These are often senior figures (e.g. heads of department) whose names are added to curry favour (or because it is expected). Another type of gift author is a colleague whose name is added on the understanding that s/he will do the same for you, regardless of your contribution to his/her research, but simply to swell your publication lists.

Group authorship: Some journals permit the use of group names (e.g. The XYZ Study Group) but many require contributors to be listed (often alphabetically) and/or the writing group to be named as well. One problem with group names is that they are often miscoded on databases such as Medline. The first person in an alphabetical list of contributors sometimes becomes the first author by default, which rather defeats the object.

Guarantor: Should we expect a radiographer to explain the statistical methods or the statistician to interpret the x-rays? To take increasing specialisation into account, the latest version of the ICMJE guidelines acknowledges that it may be unreasonable to ask individuals to take responsibility for every aspect of the research. However, the editors felt that it was important that one person should guarantee the integrity of the entire project. '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. One or more authors should take
responsibility for the integrity of the work as a whole, from inception to published article.'

Instructions to authors: While there is a great deal of agreement among journal editors on authorship matters, there are also some differences in detailed requirements and the ways in which by-lines are presented. You should carefully read the Instructions to Authors for your target journal.

Number of authors: There are no rules about this. In the past, databases such as Medline limited the number of authors they listed. This was shown to influence the number of authors (most groups tried to stay below the limit) and, in larger groups, probably increased jostling for position. Now, however, most databases list all authors. Rather than decide how many authors there should be, it is probably best to agree who will qualify as an author, and then simply include all those who do. However, remember that including large numbers of authors usually increases the time it takes to prepare, review and finalise a paper.

Order of authors: The ICMJE guidelines state that the order of authorship, should be 'a joint decision of the coauthors. Authors should be prepared to explain the order in which authors are listed'. They rather unhelpfully do not give guidance about the order in which authors are listed. Wherever possible, make these decisions before starting to write up the project. Some groups list authors alphabetically, sometimes with a note to explain that all authors made equal contributions to the study and the publication. If you do so, make sure it is clear to the editor.

## References and further reading

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