

Not being clear about authorship is lying and damages the scientific record

People expect honesty. Most of us know that we receive—and give—it less often than we would like. When the stakes are high, or when circumstances are just a little more complicated than they ought to be, we resort to lying—or perhaps withholding the full story. Accepting this failing seems to be part of life. Indeed, embracing it is often seen as part of growing up. One accepted description of this behaviour is ‘politics’: it is politic to do certain things or let certain things pass. Another is ‘business’; not that all business is dishonest, just that some practices seem to involve a level of dishonesty. It is our contention that when this behaviour is applied to authorship it damages the scientific record.

Authorship is a form of public declaration: ‘I did this’ or ‘we did this together’. For that to be interpretable, we need to know what the word ‘did’ actually means. A group of editors from major medical journals came up with a 3-point definition. They classify an author as someone who meets all of the following criteria:¹

1. Has made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;
2. Has drafted the article or revised it critically for intellectual content; and
3. Has given final approval to the version to be published.

We would wager handsomely that all of you reading this can think of someone who has been named as an author, but did not strictly meet all of the above criteria. We would also wager, although perhaps not so handsomely, that you can think of someone who could have been listed as an author, but was not. Does any of this matter?

Of course it does. Publishing articles is like getting a certificate from a school. It’s proof that you have done something. The better the school (i.e. journal), the more kudos you acquire. Such kudos (and visibility) is likely to lead to further research funding, a better job, or invitations to participate in conferences or commercially-funded research and product advocacy. Looking beyond personal gain, being named as an author means that you stake your claim to be part of a scientific community; your colleagues will want to compare notes at meetings, over the phone or in the corridor. The stakes are high, so anything that interferes with the process of attributing authorship must be examined.

It is often politic to name one’s senior as an author. The senior might not have made ‘substantial contributions’, ‘drafted the article’ or given ‘final approval’, but if you don’t scratch his or her back, he or she won’t scratch yours. Looking beyond personal politics, adding a senior’s name, especially if he or she is well-known in the field, may give your article an easier ride through peer review—because reviewers can be less harsh on respected names—or make your article more noticeable once published.

This practice is prevalent: one study found that 60% of senior researchers at an institution had accepted authorship in this manner.² This practice is known as ‘gifting authorship’ and we think it is wrong.

If you were not involved in the research, why should you have your name on the article? If you cannot truly say ‘I did this’, then why lie? What if the methods were flawed? What if a colleague asks detailed questions about the study? Worse still, what if the data are found to be fabricated? Claiming to have done something that you did not is lying. Saying it is part of scientific culture—or, more accurately, the politics of scientific culture—does not excuse it. Do we want the scientific record to be filled with lies? And if we can’t trust the authorship, can we trust the findings in the article?

There is also a problem with authors not being listed. All those that meet the above criteria should be listed but sometimes they are not—these authors are called ‘ghosts’. Clearly it is unfair for an individual not to receive credit for his or her work. On that premise alone, ghosting is unforgivable. However, there are also times when authors—or the funder of the research—would prefer to keep someone hidden. Any respectable journal should ask each author for his or her conflicts of interest. Knowing such information helps reviewers, editors and readers to understand the authors’ motivations. Much attention is paid to the idea that people being paid by pharmaceutical companies may submit biased work, but our experience suggests that personal and scientific beliefs are at times equally troublesome. However, if a *bona fide* author has not been listed, how can the reviewer, editor or reader take their motivations into account?

By not being listed as an author, the individual is saying ‘I do not meet the criteria for authorship’. If that is not true, then the individual is lying. By its very nature, it is hard to quantify ghost authorship, but there are estimates that 10% of manuscripts are written by ghosts.^{3,4} So we ask again: Do we want the scientific record to be filled with lies? If we cannot trust the authorship, can we trust the findings of the article?

There are times when someone has made a contribution to an article, but has not fulfilled all of the above criteria. For instance, a technician may have helped with the design and acquisition of the data, or a statistician may have helped with the conception, design, analysis and drafting. Such people should be acknowledged and, as part of their acknowledgement statement, their conflicts of interest should also be mentioned.

The above criteria for authorship are often questioned, and perhaps rightly so. Who said that those editors can tell the scientific world when they can and cannot be named on their own work? Whether someone should be an author is often highly emotional—people feel they deserve some public recognition for their contribution. This disquiet—and the general difficulties of applying the above criteria—has given rise to the idea of contributorship.^{5,6} Each contributor to an article has to explicitly declare what he or she did. How this is achieved varies: some journals ask authors to explain their contribution in their own words,⁷ while others have a checklist.⁸

There are clear advantages to this approach. Now someone can be recognized as an ‘author’ by explicitly saying what he or she did. Their work can be recognized even if they are not in a position to give ‘final approval’ to the article. It means that authors need only be held accountable for what they did, which has been openly declared in the contribution statement. If a senior colleague wishes to be listed as an author simply because he or she is the boss, then their contribution statement should make the limited nature of their involvement transparent and their egotism plain. One caveat, however, is that one author must take full responsibility for the article; such authors are called the ‘guarantors’. Despite the flexibility of the contributorship approach, some journals still vet whether contributions justify authorship, as they believe that they are avoiding the dilution of the meaning of authorship (the contributors of this article are divided as to the value of this approach).

Research is changing; hence authorship also needs to change. Increasing division of labour and multi-institutional projects in recent years challenge how to list authors and who takes overall credit. Given the virtually unlimited availability of space on the internet, and the increasingly acceptable idea of transparency in public life, we do not see why an article cannot have hundreds of authors, each with their contribution

statements and conflicts of interest published as part of an article. The aim should be to accurately and fully convey who deserves credit and why, and who has responsibility for the integrity of the work.

We would like to end with some advice for authors:

- Do not let institutional politics make a liar of the scientific record; if you know it is happening, take it seriously and create in-house policies on who can be listed as an author.
- If you are a junior author, be brave. Try to clarify authorship rights at the start of a project so as not to be disappointed at the end.
- If you are a senior author, show some humility. Do you really deserve to be an author? Would an acknowledgement not suffice? Don't bully your juniors into making you an author.
- Read the authorship and contributorship policies of the journal you aim to publish in. If in doubt, contact the editors to discuss their policy.
- If you run a journal, keep your authorship criteria consistent but re-consider them regularly. Look into whether you can embrace an open form of contributorship (as opposed to checklists).
- Finally, forget the 'order of authors'. We have not mentioned it here because it means different things in different disciplines and different countries, so trying to derive a meaning from it can be worse than pointless.

Although people expect honesty, we need to remember that only by being honest can we expect others to follow. Be the change we all need to see.

Contributorship

PST was asked to write this editorial and discussed it with CE and MH. CE and MH did a literature review, and drafted and edited the first version of the manuscript. PST substantially rewrote it, and CE and MH gave comments and final approval.

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