

Opinion
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Inappropriate Authorship and Kinship in Research Evaluation

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INTRODUCTION

The excessive use of bibliometric indicators to evaluate and rank researchers has upturned the priority of scientific publications.¹ Research articles are increasingly used for research evaluation and individual profiling.² As a result, some researchers have opted for unethical mechanisms to maximize the number of articles in spite of failing to provide a substantive intellectual contribution.^{3,4}

To curb the issue of allocating the same credit to all co-authors of any multi-author paper, it has been proposed to give the greater credit share to the first author and lesser shares to the co-authors, depending on their contribution and position in the byline.⁵ Moreover, Shen and Barabási⁶ developed an algorithm that attempts to quantify the credit share of co-authors. Consistent with this idea, a recent study of more than 12,000 articles in the biological and life sciences confirms that 1st authors declare more contributions (3.77) than last (3.03) and middle (1.80–2.50) co-authors.⁷ Also, it has been documented that middle authors of papers with numerous co-authors are less likely to become principal investigators unless they publish in journals with a high-impact factor.⁸

The aim of this article is to discuss the issue of inappropriate, even if disguised as “collaborative,” practice epitomized by some spouses and intimate partners of reciprocally co-authoring papers that each couple's member generates individually and despite of their different research fields. A scheme is proposed to identify this nepotistic practice at the research evaluation.

ACADEMIC NEPOTISM AND KIN AUTHORSHIP

Although academic nepotism might be an ethical expression of “social capital,” it remains a disputed and widespread phenomenon that leads to conflicts of interest and even to inappropriate (kin) authorship in biomedical publications.⁹⁻¹¹ An analysis of more than 21 million MEDLINE/PubMed-indexed papers published worldwide points to a modest rise in kin co-authorship globally.¹⁰ Kin authorship is defined as the same surname occurring more than once among the authors of a single paper. The kinship, for example, is a big issue for Italy, India, and Poland. Overall, countries with low level of corruption are exemplified as those with low publication kinship.¹⁰

Except for conjoint efforts illustrated by four Nobelists or Nobel-nominees egalitarian couples (the Curies, Joliot-Curies, Coris, and Noddacks), the husband-creator/wife-assistant collaborative model dominated in the last 3 centuries.^{12,13} Such a pattern, implying that theoretical ideas and publications are all ascribed to the husband, are further reinforced by anti-nepotistic rules operating against the wives.¹³ Studies on scholarly productivity and collaborative projects of spouses and researchers, who sustain an intimate relationship, show that they often engage in reciprocal co-authorships.¹⁴

INAPPROPRIATE AUTHORSHIP

The ratio of inappropriate authorship in biomedicine, be it corporative, coercive, honorary, guest, ghost, or ascribed to academic nepotism, can be as high as 70%.¹⁵ A recent analysis of 12,772 papers authored by 79,776 individuals and published in a single mega-journal (*PLOS ONE*) revealed that approximately 48% of listed co-authors did not fulfill the authorship criteria of the International Committee of Medical Journal Editors primarily because they were not involved in writing.⁷ Co- and multi-authorship is currently associated with pressures to publish more and builds up impressive academic profiles.¹⁶ To counteract these trends and promote ethical authorship, all stakeholders of science communication are in their position to implement concerted measures, ranging from educational courses offered by research institutions to editorial strategies and authorship criteria set up by learned associations.¹⁵

A detailed analysis of an individual's profile on MEDLINE/PubMed can identify the main field(s) of expertise and allow calculating proportions of 1st, single, corresponding authorship (excluding those in which the researcher is also the 1st author), and "et al." co-author publications. Such an analysis may also identify unethical practices of reciprocal gift and matrimonial authorship provided spouses are previously identified.¹⁷ The identification of spouses can be particularly difficult in countries where married female authors often keep their maiden last name(s) (e.g., Italy, Mexico).

FOCUSED EVALUATION

I propose that in the evaluation of research productivity of biomedical researchers with an academic age ≥ 10 years (time elapsed since his/her first publication) or ≥ 25 publications, to specifically look for overly represented "et al." co-authors at multi-author papers. To target couples, the following scheme may apply: 1) to identify pairs of spouses or intimate partners; 2) to ascertain the field(s) of expertise of the researcher under evaluation via his/her publications as first or corresponding author in MEDLINE/PubMed; and 3) to identify the two most common "et al." co-authors and for each of these determine the field of expertise as well as the number and the ratio of papers coauthored with the researcher under evaluation. Whenever a co-author working in a different field is found to have a high "et al." co-authoring ratio (above a pre-determined threshold) with the researcher under evaluation, I suggest to discard the co-authored papers or at least those exceeding the agreed threshold in the evaluation of both partners. Yet, all papers co-authored by couples working in the same specific field are to be regarded as valid publications provided both authors are genuine (ethical) collaborators.

It may be also revealing to count formal acknowledgments given to spouses/partners. Such an additional analysis of acknowledgment notes may reveal collaborative activities

undisclosed by analyzing the author bylines.¹⁸ And finally, author contribution statements may complement information inferred from analyzing author bylines.

Since the proposed scheme faces some hurdles, such as the difficulty to discern research fields (for instance, how many and which subfields are encompassed by the term human genetics?), determine the threshold of ethical co-authorship, and clarify whether spouses or intimate partners are genuine collaborators, a reasonable compromise may require that the proportion of valid, or ethical, “et al.” papers for each researcher should be not greater than the proportion of his/her papers either as 1st or corresponding author (at the researcher's convenience).

CONCLUSION

I advocate for research evaluation that not only rewards entrepreneurs and managers, but also recognizes creative researchers. Such an evaluation would require enforcement primarily in countries with high level of corruption and kinship (e.g., Mexico, Brazil). An ideal research evaluation should be based not only on a researcher's list of papers, but also on the proportion of papers with 1st or corresponding authorship, which are valued more than multi-authored (“et al.”) ones.

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REFERENCES

1. Lawrence P, Garwood J. The heart of research is sick. *Lab Times* 2011;2:24-31.
2. Gasparyan AY, Nurmashev B, Yessirkepov M, Endovitskiy DA, Voronov AA, Kitas GD. Researcher and author profiles: opportunities, advantages, and limitations. *J Korean Med Sci* 2017;32(11):1749-56.
[PUBMED](#) | [CROSSREF](#)
3. Tilak G, Prasad V, Jena AB. Authorship inflation in medical publications. *Inquiry* 2015;52:0046958015598311.
[PUBMED](#) | [CROSSREF](#)
4. Hong ST. Avoiding inappropriate authorship. *J Korean Med Sci* 2017;32(6):1046-7.
[PUBMED](#) | [CROSSREF](#)
5. Kovacs J. Honorary authorship epidemic in scholarly publications? How the current use of citation-based evaluative metrics make (pseudo)honorary authors from honest contributors of every multi-author article. *J Med Ethics* 2013;39(8):509-12.
[PUBMED](#) | [CROSSREF](#)
6. Shen HW, Barabási AL. Collective credit allocation in science. *Proc Natl Acad Sci U S A* 2014;111(34):12325-30.
[PUBMED](#) | [CROSSREF](#)
7. Sauermaun H, Haeussler C. Authorship and contribution disclosures. *Sci Adv* 2017;3(11):e1700404.
[PUBMED](#) | [CROSSREF](#)
8. van Dijk D, Manor O, Carey LB. Publication metrics and success on the academic job market. *Curr Biol* 2014;24(11):R516-7.
[PUBMED](#) | [CROSSREF](#)
9. Allesina S. Measuring nepotism through shared last names: the case of Italian academia. *PLoS One* 2011;6(8):e21160.
[PUBMED](#) | [CROSSREF](#)

10. Prosperi M, Buchan I, Fanti I, Meloni S, Palladino P, Torvik VI. Kin of coauthorship in five decades of health science literature. *Proc Natl Acad Sci U S A* 2016;113(32):8957-62.
[PUBMED](#) | [CROSSREF](#)
11. Grilli J, Allesina S. Last name analysis of mobility, gender imbalance, and nepotism across academic systems. *Proc Natl Acad Sci U S A* 2017;114(29):7600-5.
[PUBMED](#) | [CROSSREF](#)
12. Slack NG. Epilogue: collaborative couples – past, present and future. In: Lykknes A, Opitz DL, Van Tiggelen B, editors. *For Better or for Worse? Collaborative Couples in the Sciences*. Basel, Switzerland: Springer Verlag; 2012, 271-95.
13. Lykknes A, Van Tiggelen B. Ida and Walter Noddack through better and worse: an Arbeitsgemeinschaft in chemistry. In: Lykknes A, Van Tiggelen B, Opitz DL, editors. *For Better or for Worse? Collaborative Couples in the Sciences*. Basel, Switzerland: Springer Verlag; 2012, 103-47.
14. Creamer EG. Knowledge production, publication productivity, and intimate academic partnerships. *J Higher Educ* 1999;70(3):261-77.
[CROSSREF](#)
15. Gasparyan AY, Ayzazyan L, Kitas GD. Authorship problems in scholarly journals: considerations for authors, peer reviewers and editors. *Rheumatol Int* 2013;33(2):277-84.
[PUBMED](#) | [CROSSREF](#)
16. Fanelli D, Larivière V. Researchers' individual publication rate has not increased in a century. *PLoS One* 2016;11(3):e0149504.
[PUBMED](#) | [CROSSREF](#)
17. Bozeman B, Youtie J. Trouble in paradise: problems in academic research co-authoring. *Sci Eng Ethics* 2016;22(6):1717-43.
[PUBMED](#) | [CROSSREF](#)
18. Paul-Hus A, Mongeon P, Sainte-Marie M, Larivière V. The sum of it all: revealing collaboration patterns by combining authorship and acknowledgements. *J Informetr* 2017;11(1):80-7.
[CROSSREF](#)