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Fake Peer Review and Inappropriate Authorship Are Real Evils



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ABSTRACT

Inappropriate authorship and other fraudulent publication strategies are pervasive. Here, I deal with contribution disclosures, authorship disputes versus plagiarism among collaborators, kin co-authorship, gender bias, authorship trade, and fake peer review (FPR). In contrast to underserved authorship and other ubiquitous malpractices, authorship trade and FPR appear to concentrate in some Asian countries that exhibit a mixed academic pattern of rapid growth and poor ethics. It seems that strong pressures to publish coupled with the incessantly growing number of publications entail a lower quality of published science in part attributable to a poor, compromised or even absent (in predatory journals) peer review. In this regard, the commitment of Publons to strengthen this fundamental process and ultimately ensure the quality and integrity of the published articles is laudable. Because the many recommendations for adherence to authorship guidelines and rules of honest and transparent research reporting have been rather ineffective, strong deterrents should be established to end manipulated peer review, undeserved authorship, and related fakes.

Keywords: Fake Peer Review; Inappropriate Authorship; Authorship Trade; Retractions; Publication Ethics

INTRODUCTION

Among the insidious misbehaviors or questionable research practices, inappropriate authorship is widespread and has been documented in both developed and developing countries.¹⁻³ Actually, this deceitful practice can amount to falsification or fabrication and has even been compared to scientific fraud because it misrepresents the authors' contributions.^{4,5} Moreover, Kovacs³ used Bourdieu's sociological framework to analyze the mechanisms underlying inappropriate authorship and concluded that undemocratic authorship decisions illustrated by honorary authorship and an authorship-based academic evaluation are a form of symbolic violence. Despite many recommendations on possible ways to curtail undeserved authorship,^{3,6-8} such a malpractice is still evolving and may partially explain the stunning publication rate of overly prolific authors insofar as they do not fully adhere to international authorship criteria.⁹ I comment here on some authorship issues and the novel fakery of fraudulent peer review.

CONTRIBUTION DISCLOSURES

The contribution disclosures required by a growing number of journals aim to justify the authorship and give the proper credit share; yet, the implicit assumption that the authorship contributions stated in each published paper are true overlooks the social desirability bias and diverges from the widespread undeserved authorship already documented.^{10,11} In fact, an analysis of 12,772 articles with 2 to 14 authors published in PLoS ONE during 2007–2011 by 79,776 researchers disclosed a 47.66% rate of undeserved authorship.¹² These authors also emphasized the perception that contribution statements are completed just to fulfill journal requirements rather than to correctly describe the specific contribution by each co-author. More precisely, the declared contributions are not necessarily real.⁹

AUTHORSHIP DISPUTES AND PLAGIARISM AMONG COLLABORATORS

In developed countries, the most common allegations of misbehavior result from authorship disputes which are increasing at a similar pace as the number of authors per article.¹³ Regardless of whether or not such quarrels reveal that many scientists ignore or disregard the Mertonian values, some of such conflicts are better described as plagiarism among collaborators.¹⁴⁻¹⁶ While authorship disputes usually reflect disagreement over attribution and order in the byline, in-house plagiarism deprives someone of receiving proper credit and hence violates the author rights; “It's like stealing one's friends or family.”¹⁴

KIN CO-AUTHORSHIP

According to Creamer,¹⁷ whenever academic spouses or intimate partners appear as joint authors, they defend their intellectual autonomy through a clear demarcation of their distinct research fields. In a subsequent survey of nine academic couples, Creamer¹⁸ highlighted the conjoint effort to maintain parallel records so that no member “would be seen as the trailing partner.” Note that these efforts to preserve the own autonomy contrast with the systematic inclusion of both partners as co-authors even if the respective research fields are different.¹⁹

A parent-child inappropriate co-authorship appears to be emerging and may be not so rare. Such a malpractice is currently under investigation in Korea where some researchers are adding the names of their middle- or high-school children as co-authors.²⁰

GENDER BIAS

Although the proportion of women first authorship has increased in the last decades, men first authors still publish more papers. An analysis of 3,758 original articles published in 6 top medical journals during 1994–2014 revealed that women first authorship increased significantly from 27% in 1994 to 37% in 2014, a figure greater than the < 30% of women clinical faculty quoted therein.²¹ Likewise, Lerback and Hanson²² documented that among 7,196 distinct first authors who submitted 22,067 papers to all 20 journals published by the American Geophysical Union (AGU) during the period 2012–2015, just 26% were women; moreover, women 1st authors submitted 0.79 fewer manuscripts per person than their men

counterparts (although the respective acceptance rates were 61% and 57%). The proportion of women reviewers (20%) was substantially less than the proportion (28%) of women members in both the AGU and science, technology, engineering and mathematics (STEM) American community.²²

In a comparable analysis,²³ women accounted for 23.2%, 26.0% and 36.8% of last, corresponding and first authorships in 7,192 full submissions to 'eLife' between 2012 and 2017. Gender disparity was also clearly seen in acceptance rates for last authors (53.4% for men vs. 49.7% for women) and was greatest when the reviewers were all men. Among 6,669 gatekeepers (editors and reviewers) dealing with full submissions, only 1,372 (20.6%) were women.²³ These data highlight how the underrepresentation of women in editorial boards and bias of men editors and reviewers could influence women's success in publishing.²¹⁻²³ Regardless of the possible role of inappropriate authorship related to sexism or other biases, the relevance of such disparities is magnified when we consider that a high rate of first author papers is one of the main factors behind academic success.²⁴

AUTHORSHIP FOR SALE

The black market for authorship listings, first documented five years ago in China²⁵ and then in Iran,²⁶ is now a widespread practice. In a further sting operation,²⁷ a fictional author asked 263 out of 400 so-called predatory publishers and 64 biomedical journals of the same kind to add a co-author name to any manuscript they would publish. Among the responsive entities (117 publishers and 35 journals), 19/117 (16.2%), and 3/35 (8.6%) agreed to the request without asking for a specific contribution disclosure. Although the country of origin of the 117 responsive publishers was not identified, 119 (29.8%) and 94 (23.5%) out of 400 publishers that produce 4,924 biomedical journals were located in India and the United States, respectively.

FAKE PEER REVIEW (FPR)

Due to their direct monetary value in terms of better salaries and bonuses, publications have spawned the industry of "academic article brokering" and triggered novel ruses such as the FPR scam.²⁸ Using this sly strategy, some submitting authors suggest fake or sometimes real reviewers but provide the editors with invented e-mail addresses allowing the submitters to receive the invitation to review their own manuscripts. In a further elaboration, a peer circle is sometimes created to internally review the papers of each co-participant. Yet, it is likely that third-party agencies paid by the authors supply most of fabricated reviewers and reviews.²⁸⁻³⁰

Manipulation of the peer review process accounts for a large proportion of retracted articles, particularly those published in open access journals (OAJs). Although only 621/5,354 (11.6%) retractions listed in PubMed until October 2017 concerned papers in OAJs, this proportion has been steadily increasing since 2010 and for 2016 it was 24.6%.³¹ These authors found that FPR (alone or combined with other reasons) accounted for 93/621 (15%) retractions in OAJs but did not provide the respective figure for conventional journals; yet, a much smaller proportion in the latter can be assumed because FPR was first disclosed in 2012.³² Wang et al.³¹ also observed that FPR "was the number one reason for retraction in the five journals (of 93 with multiple tagged articles) with the highest rate of retractions" and accounted for

most retractions in journals with an impact factor < 2. Taking into account the first author's country of residence, Iran with 56% (28/50) and China with nearly 30% (58/199) exhibited the highest proportion of retractions related to FPR.

Other comparable studies confirm that FPR is rife in countries like China, Iran, Korea, India, and Pakistan. Qi et al.³³ identified 250 retracted articles due to FPR in Retraction Watch until November 2015. Except for one paper whose country of origin was unknown, all retractions were from China (187), Korea (28), Iran (17), and Pakistan (17). By June 2018, that figure had increased to > 600 retractions with the vast majority concerning manuscripts from Asia while there were > 700 papers retracted by inappropriate authorship or related issues and predominantly with the same continental origin.³⁴ An analysis of retracted publications by Chinese authors — including 24 repeat offenders with > 5 retractions each — during the period 1997–2016 revealed about 12% (100/834) of retractions due to FPR mostly in low-impact journals.³⁵ Searching in PubMed and Web of Science in May 2017, Chen et al.³⁶ documented that 137/825 (15.5%) retracted papers (95 original articles and 42 meta-analyses) from mainland China were invalidated by FPR. Overall, there were 651 (78.9%) retractions from journals with an impact factor < 5 and 72 (8.7%) from journals not listed in the Science Citation Index. A further analysis ranked the top 25 countries with the highest number of retractions during 1996–2014 in the Scopus database and found that the countries with the highest normalized ratio of retractions were China (755), Iran (99), Taiwan (77), India (20), and Korea (20); with one exception, the respective figure for all other countries was ≤ 7.³⁷ A search in KoreaMed (this database indexes abstracts of all medical journals based in Korea) from January 1990 to January 2016 disclosed that 114/217,839 papers were retracted mainly due to duplicate publication and plagiarism; although FPR was seemingly not a retraction reason, it may have gone unrecognized and been included in the “unknown” (20.2%) and “other” (3.5%) categories.³⁸ Finally, compromised peer review was the leading cause of retraction of articles published in BioMed Central journals in 2000–2015: though the authors' country of origin was not specified, FPR accounted for 44/134 (33%) retracted reports.³⁹

CONCLUDING REMARKS

Inappropriate authorship has been considered a kind of prisoner's dilemma by Shaw⁴⁰ who highlights how researchers, instead of behaving ethically, opt for misattribution of authorship to avoid a disadvantageous position in front of academic rivals. In Bourdieusian terms, the current forms of academic evaluation centered on authorship confer legitimacy to the transformation of administrative power and seniority into undeserved authorship and ultimately into intellectual capital, a clear case of symbolic violence.³ Regardless of whether men are more likely than women to engage in authorship malpractices and FPR, it seems that, alike to researchers guilty of fraud, extreme perpetrators are mostly men.⁴¹

In contrast to underserved authorship, plagiarism, self-plagiarism, and other ubiquitous malpractices, authorship trade and FPR appear to concentrate in countries with emerging economies or at the “periphery of the scholarly endeavor” such as some Asian nations that exhibit a mixed academic pattern of rapid growth and poor ethics. To counteract FPR, China's main research agency announced that it will demand to dozens of guilty Chinese researchers to return research funding.⁴² Even harsher disciplinary actions and a “zero tolerance” policy were set up by China's government after the mass retraction of 107 papers (including 101 due to FPR) in ‘Tumor Biology’ by more than 400 Chinese authors in April 2017.⁴³ Altogether,

these data agree with the perception that strong pressures to publish coupled with the incessantly growing number of publications entail a lower quality of published science⁴⁴ in part attributable to a poor, compromised or even absent (in predatory journals) peer review.⁴⁵ In this regard, the commitment of Publons (<http://home.publons.com>) to strengthen the peer review process and ultimately ensure the quality and integrity of the published articles is laudable. By making a profile of each researcher and listing his/her achievements as a reviewer, this platform helps editors choose the appropriate referees and avoid the FPR trap.⁴⁶ In addition, we must be aware that cash incentives per publication may push unscrupulous researchers to cross the line not only in China, Iran and other countries with a rapid scientific growth^{9,31,37} but also in low-output nations like Mexico where fake authorship prevails and publications are equally rewarded with money.

Because the many recommendations for adherence to authorship guidelines and rules of honest and transparent research reporting⁸ have been rather ineffective, alternative academic assessments (either unfocused on authorship or based on a fractional credit allocation) and strong deterrents should be established to end up with manipulated peer review, inappropriate authorship, and related fakes.

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