as front line clinical staff. They are going out of business because they have accepted the idea that drugs are wonderfully effective and extraordinarily safe. Perhaps, at some point soon, when health systems have replaced doctors, our systems will find a way to recognise the harms that treatments can cause; but it is difficult to see how any solution will be able to work without a named person to stand behind each claim that a drug has caused this individual that specific harm.

Anonymity is not likely to be part of that. If we offer anonymity to the weak and scared, there will be no way to stop the strong and brazen from using it to destroy the credibility of someone like Peter and anything that has his name attached to it.

*Note: The Sackler family, owners of Purdue Pharma, denied wrongdoing in the opioid addiction and deaths of several thousands of Americans who got addicted to their prescription drug OxyContin, which the company had marketed as a harmless painkiller.

References

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**COMMENT**

**Gift authorship: Look the gift horse in the mouth**

**JOE VARGHESE, MOLLY JACOB**

**Abstract**

Unmerited authorship in research papers is widely acknowledged to constitute research misconduct. In different contexts, it has been called “gift,” “honorary,” or “guest” authorship. Although several attempts have been made to address the issue, it remains a significant problem in research. In this paper, we discuss accepted criteria that qualify a person to be an author on a research publication and define what constitutes “gift authorship.” We also look at the scenario in India and try to identify the circumstances that have fostered this practice in academia in the country. Finally, we discuss the adverse effects of this practice on the research enterprise as a whole, and possible remedial measures.

**Keywords:** authorship, medical writing, research ethics, honorary authorship, ICMJE authorship criteria

**Introduction**

The question of who qualifies for authorship on a research publication has been a controversial and vexatious issue for long [1]. It came into sharp focus in the aftermath of sensational cases of research fraud in the 1970s and 80s. The Darsee [2], Slutsky [3], Pearce [4] and Soman [5] cases are prominent examples of research papers that contained data that were fabricated. However, what was shocking was the number of high-profile co-authors who denied any knowledge of the veracity of the data in those papers that they were supposed to have co-authored [1]. While these authors were only too ready to take credit for the publications, they did not seem to feel they needed to be held accountable when the data were called into question.

In response to these and several other similar scandals, the International Committee of Medical Journal Editors (ICMJE), which was then known as the ‘International Steering Committee of Medical Editors’, proposed authorship criteria in 1978 [6], which have since been amended several times. The current ICMJE criteria (updated in Dec 2021), which are widely accepted today, state that authorship should be based on fulfilment of the following four conditions [7]:

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or
interpretation of data for the work; AND

2. Drafting the work 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.

These criteria are not mere guidelines and fulfilling them is mandatory to qualify for authorship.

What is gift authorship?
Among the many controversies associated with authorship in research publications, the most common is that of gift authorship. What constitutes gift authorship has been extensively discussed in literature, the contentious issues have been defined, and possible solutions proposed [8-11]; however, the problem has not been adequately resolved.

Gift authorship refers to the practice of inclusion of a person as an author on a scientific paper when the person has not contributed sufficiently to merit such inclusion, as per the ICMJE criteria [12]. It is used as an umbrella term to describe a host of unethical authorship practices, which include “honorary”, “guest” and true “gift” authorship. Honorary authorship is conferred on a person who is in a senior position, such as the head of a department, or because they helped obtain funding; this is often done with the recipient’s knowledge and approval. Guest authorship is given to enhance the stature of a paper by including a scientist held in high esteem in the field. Gift authorship is where authorship is conferred as a gift, with or without an expectation of reciprocation from the recipient; this would include mutual agreements between two researchers (who do not work together) to add each other to their respective lists of authors, in order to increase their publication numbers, or where a researcher may feel obliged to provide authorship to current or former colleagues to repay help or mentorship received. These problems are widespread [9,10,13,14] and have been documented in numerous areas of medical research [15-19].

Often, assignment of authorship roles can be controversial, especially when the research work has been carried out as a team that includes several collaborators. The question is not merely related to individuals being included in or excluded from the list of authors; the position of an author’s name in the list can become contentious [8,20]. Traditionally, the first author’s position is most coveted, as it is generally understood that the first author has done most of the work reported in the paper, and hence should be accorded the most credit [21]. It is assumed that the other authors have made smaller contributions and are listed in accordance with the extent of such contributions. However, such decisions are often not easily made, and much depends on the subjective interpretation of the senior author(s) concerned.

In a paper with multiple authors, it is often those who are listed in the middle who are beneficiaries of gift authorship. In fact, it has been suggested that the increase in the average number of authors on research publications over the past five decades is associated with an increase in the incidence of gift authorship [22]. In the world of research today, where it is not uncommon to find papers with 10 or more authors, it is often difficult to define who does and does not merit authorship [23].

It is also not uncommon for authors to be completely unaware of the fact that they have been listed as a co-author on a paper. Such instances can occur when a scientist may have been consulted on certain aspects of a paper and is then included as an author without specific consent. This may be done innocuously as a mere courtesy, or sometimes with the intention of enhancing the chances of acceptance of the manuscript, based on the stamp of authenticity conveyed by the presence of an eminent scientist in the field on the list of authors (guest authorship) [24]. To counter this, many (but not all) journals nowadays require the explicit consent of each of the authors listed on the publication, prior to submission to the journal.

Equally important is the problem of not including as co-author a person who qualifies for it [8]. For example, this could occur when supervisors do not give their students the opportunity to draft or revise a manuscript towards which they have made substantial intellectual or practical contributions. In this way, students who satisfy criterion 1 of the ICMJE criteria do not get an opportunity to satisfy criteria 2 and 3, and are thus, disqualified from authorship.

The scenario in India
As with most other issues related to research misconduct, there is little data available on authorship issues in India. The limited information that is available, however, paints a dismal picture. Shah et al [25] have reported that, in articles published in Indian biomedical journals, the prevalence of gift (honorary) authorship (as judged on the basis of the ICMJE criteria) was an alarming 60%. Interestingly, the same study reported that, if judged by the perception of the first authors of the publications examined, the prevalence of gift authorship was only 20.9%. This indicates that many of these authors were unaware of and/or did not adhere to criteria for authorship, as defined by the ICMJE. Dhingra et al [26], in a study to determine the extent of research misconduct among biomedical researchers in India, found that 65% of the respondents had observed gift authorship in research papers they were part of, making it the single most common type of research misconduct that was reported. Dhalwal et al [27] have reported that, while 65% of faculty members in a teaching hospital in North India were aware of the existence of authorship criteria, only 44% could identify the source of these criteria.

Given the research culture (or rather the lack of it) in most universities in India, the limited information available is
probably only the tip of the iceberg. There is clearly a need for more primary research from India, on the basis of which informed decisions may be made to address the issue. For example, there is very little pan-India data available on awareness, among faculty members in Indian universities and research institutions, of authorship guidelines. Large studies on the prevalence of authorship malpractice in India are also lacking. These are obvious lacunae that require addressing. However, there are huge challenges involved in getting accurate data on the extent of this problem. All over the world, published studies in this area have generally relied on questionnaire-based surveys, where researchers voluntarily provided information on authorship misconduct they have indulged in or observed in others. Such surveys had variable response rates (15-69%) [9, 10, 14, 28, 29], which can give rise to biased and hence, misleading data. An important factor underlying the less-than-optimal response rates may be the reluctance of individual scientists and academic institutions to divulge true information that is likely to show them in a poor light and would be detrimental to their "prestige" and standing.

It is also a cause for concern that Indian biomedical journals do not uniformly require authors to adhere to authorship norms as per ICMJE criteria, in their "instructions to authors". In 2011, Jaykaran et al. showed that only 59.3% of the Indian journals included in their study mentioned authorship criteria, as per ICMJE [30]. It must be noted that this study was done prior to the introduction of the fourth criterion of ICMJE in 2013. Bolshete et al. found that although 32 out of 55 (58.2%) MEDLINE-indexed biomedical journals from India defined authorship, only 2 (3.6%) mentioned all four ICMJE criteria. The others mentioned the first 3 criteria (49.1%) or fewer (5.5%) [31].

It has been reported that graduate students are not adequately trained in ethical practices related to publishing in scientific journals and on issues related to authorship. This is held to be applicable especially to those trained in low- and middle-income countries [32]. Reliable and accurate information on the systems in place in Indian institutions to train students in research ethics in general, and authorship ethics in particular, is lacking. At the institutional level, a few premier research institutions in India have stated policies on research ethics and misconduct, which are displayed on their websites. However, in the majority of academic and research institutions, such mechanisms do not seem to exist [33]. There is also no clear information on systems in Indian institutions for complaints and redressal mechanisms in this area, and how well (or poorly) they function.

What are the circumstances that have fostered gift authorship in India?

The reasons for the practice of gift authorship are varied [34-38]. Many of the factors identified are applicable to researchers all over the world. However, some are uniquely applicable to India.

The National Medical Council (NMC) in India mandates research publications for academic promotions of faculty members in medical colleges in India. The bar is set low — the requirement is only 2 publications as first, second, third or corresponding author for an Assistant Professor to be eligible for promotion to an Associate Professor and another 2 (with the same criteria) to be promoted to a Professor [39]. Notwithstanding the low bar, it is often a challenge for faculty members in many medical colleges in India to meet these criteria, due to reasons such as poor training in research methodology, lack of research infrastructure and absence of a research culture in many of these institutions [40]. This situation has spawned an entire industry of predatory publications in India [41], making for a deplorable state of affairs.

Another undesirable effect of the NMC’s requirement of publications for faculty promotions is the pressure on researchers to “gift” authorship to colleagues who have little to do with the research work reported in a paper. Such “gifting” is thought of as an act of kindness or benevolence towards a struggling colleague; not doing so is often construed as selfishness or as not being inclusive, or worse. It is often easier to be “generous” with authorship credit than be seen as unhelpful or unsupportive of colleagues in their quest for academic promotions. Ignorance and confusion regarding authorship ethics often makes it difficult to highlight the fact that gift authorship is, in fact, research misconduct.

In addition, the extent to which authorship criteria are adhered to may vary between institutions and indeed between departments in an institution. In such circumstances, it may seem unfair to hold faculty members in some departments to higher standards, while those in other departments who are of similar or inferior calibre, get the benefit of unmerited authorship. In the absence of national and/or institutional policies that mandate adherence to ICMJE criteria, it is difficult to have uniform and fair enforcement of these criteria in institutions and in departments within an institution.

In many well-established labs or clinical research groups, it is a common and routine practice that all members of the team are listed as authors on all papers, irrespective of the specific nature of their individual contributions. Justification for this may be that this fosters teamwork or that it uplifts the morale of all in the team. On the other hand, senior researchers are often gifted authorship in labs where the practice is that every paper must include the head or senior scientist. This is often referred to as the “White Bull effect,” where senior scientists coerce junior colleagues and students in various ways to get their names included in research papers to which their contribution is minimal [42]. It has been shown, in a world-wide survey, that junior members of faculty and women researchers are more likely to list gift/honorary authors on their papers [43]. The former observation seems a simple enough situation to comprehend, given the inequality in power dynamics
between senior and junior researchers in academia. The latter situation, though also comprehensible, has not received the attention it deserves. It is also possible that heads of departments demand a supervisory role (often superficial) in all projects that are on-going in the department, and that all publications must include their names for their “intellectual contribution,” whether or not they made a significant contribution to the work reported. In addition, gift authorships are often offered and accepted as rewards to senior colleagues for not hindering proposed work; the principle is “you don’t have to help, but please don’t create obstacles to the study.”

Another contributory factor is the prestige associated with having a large number of publications on scientists’ curriculum vitae, which is often considered as a surrogate marker of their brilliance as researchers. It is not uncommon to come across researchers who have several hundreds of publications to their credit. A recent paper has reported that thousands of scientists (called “hyperprolific authors”) were found to have published more than 72 papers a year (about 1 every 5 days) [44]. The authors of this study contacted 265 such authors to understand the reasons for their exceedingly high productivity; of these only about 30% (n = 81) responded. Self-stated reasons for their prolific output varied; they included “hard work; love of research; mentorship of very many young researchers; leadership of a research team, or even of many teams; extensive collaboration; working on multiple research areas or in core services; availability of suitable extensive resources and data; culmination of a large project; personal values such as generosity and sharing; experiences growing up; and sleeping only a few hours per day.” Of those who responded, 33% (n = 27) completed a survey where they were asked whether they met the ICMJE criteria for authorship in the papers they published. Among them, 70% admitted that they had not fulfilled at least one ICMJE criterion, and 40% had not met two or more criteria in at least 25% of their papers. Further analysis showed that many of those who responded had their own opinions and views on what scientific authorship means, which were not in concordance with ICMJE criteria. In some cases, it was observed that publication rates of scientists increased dramatically after they assumed powerful administrative roles, such as directorship of research institutes, and rates declined after they demitted these roles [33]. These observations indicate that gift authorship probably contributed significantly to their publication portfolio. An audit of individual contributions in each of these papers is bound to reveal the extent of gift authorship. However, such audits are seldom undertaken since it involves stirring the horns’ nest and ruffling the feathers of those who may be influential in the research world.

How has research been affected by this?

It is common to regard gift authorship as a minor transgression, compared to the high crimes of research misconduct, such as fabrication, falsification and plagiarism [34]. Nevertheless, the practice strikes at the very root of research ethics, which is established on foundations of trust and the highest standards of propriety. The practice robs genuine authors of adequate recognition by diluting credit among many undeserving authors. It is also a common source of conflict in a research team, where authorship decisions are usually the domain of the senior author, while other authors may have little say in the decision-making process. This results in an erosion of faith in the system, and a cynical view of research ethics and processes to safeguard against research misconduct.

Another direct consequence is that gift authors are often unwilling to be held responsible for the integrity of the paper when it is called into question [1]. Gift authorship promotes a culture of taking credit without attached responsibility, which is in direct violation of the fourth ICMJE criterion. There are innumerable cases where investigation into cases of research fraud revealed many authors who claimed innocence, on the basis of ignorance [1]. However, as in the case of the law, ignorance is no defence in such a situation.

Gift and honorary authorships have decreased the value associated with being genuine and valid middle authors of a paper, since it is widely regarded that other than the first (and perhaps the second author) and the corresponding or last author (often the senior author who holds overall responsibility for the work reported), the other authors play minor roles, if any at all, in the work reported [45]. This leads to an overemphasis on the first/second/ corresponding or last author’s contributions (as exemplified by criteria set by the NMC in India [39]) and a belittling of that of the other authors listed in between. The unintended consequence is that researchers are often unwilling to be part of research projects where they are likely to end up as a “middle author,” despite putting in the effort to qualify as authors (as per the ICMJE criteria).

Gift authorship also subverts departmental and institutional systems and processes for promotion of faculty members. Consequently, faculty members with little or no research experience are promoted to positions where they are expected to supervise research work by trainees and students. They are not equipped to do this, as they have not acquired the requisite skills during their (undeserved) ascent up the career ladder. This adversely impacts the quality of research output in the department, students do not receive adequate research training and the culture of a poor research atmosphere is perpetuated.

ICMJE authorship guidelines: pitfalls and problems in implementation

Although widely accepted, the ICMJE criteria have also been criticised [46,47]. Research teams often have many members with specific and essential tasks to perform, which makes them indispensable members of the team. However, these tasks per se may not qualify them for authorship as per the
ICMJE criteria. This category includes tasks such as recruiting patients for clinical studies, caring and providing for such patients, or obtaining samples. The research work in question could not have been carried out without someone performing these tasks, nor can the fact be ignored that performing these tasks came at a considerable cost of time and effort that is not specifically accounted for in the ICMJE authorship criteria. However, the counter argument is that ICMJE does not completely discount these tasks as insignificant, but mandates that these be specifically acknowledged in the manuscript in the “acknowledgement” section. Nevertheless, it is widely perceived that mere acknowledgement does not give adequate recognition and credit to the team members involved in performing such tasks [8]. Under the circumstances, even among authors who are aware of the ICMJE authorship guidelines, many consider them unrealistic. Often, it is established practice in many departments and research labs to include as authors everyone who has contributed to successfully carrying out a project, no matter how tangential that involvement may be.

Use of the terms “substantial contribution” in criterion 1 of the ICMJE criteria lends itself to highly subjective interpretations of authorship eligibility. It is not clear who will be the final judge of whether or not an author has made a “substantial contribution”, although this responsibility usually lies with the senior author of the paper [48]. There are also no objective guidelines to decide the order of authors based on the extent of individual contributions [45]. Consequently, the ICMJE criteria leave authorship decisions largely in the hands of the senior author, and if disputes arise, it is up to the institution(s) to which the authors are affiliated to resolve these issues. Many labs and institutions have developed mechanisms to objectively make authorship decisions [49,50], but none of these are universally accepted or practised.

The feasibility of adhering to criterion 4, which places equal responsibility on all authors for the accuracy and integrity of the entire body of work, has also been called into question. In today’s era of collaborative research, where multiple researchers working in different parts of the world often work together as a team, it may be impossible for all authors to attest to the veracity of data generated by other authors who work independently of each other. It is also not reasonable for all authors to have the necessary expertise and knowledge to judge the authenticity of highly specialised aspects of the work, even if they have full access to the raw data of the experiments done. Therefore, the expectation that all authors should be fully responsible for the work of other authors is often unrealistic [8]. This presents a significant problem. Some journals try to address this by mandating an explicit “authorship disclosure statement” where the actual role of each author is clearly stated. Nevertheless, the ICMJE criteria require all authors to take overall responsibility for the integrity of the work “in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved”.

Contributions that fulfil criteria 2 and 3 are also not quantifiable. In most cases, senior authors fulfill their responsibility in the matter by giving all authors an opportunity to contribute to the final manuscript that is submitted to a journal. They usually do this by sending potential authors a draft of the manuscript, usually by email. Authors may or may not respond to the email or contribute to the manuscript in any meaningful way. In addition, it is not incumbent on the senior author to incorporate any changes suggested by the co-authors or engage meaningfully with the co-author on the merits of the suggested changes.

What are possible remedial measures?

It has been argued that many of the problems identified with the current ICMJE criteria can be addressed by moving to a contributor-guarantor model [1,51,52]. In this model, one of the authors assumes responsibility for the entire paper (the “guarantor”) and any number of individuals can be listed as “contributors” with their contributions specified. Each contributor is responsible for only those aspects of the work that they contributed to. This effectively addresses the problem of authors not being able to attest to the veracity of data generated by other authors, and not writing or reviewing the manuscript. The guarantor, on the other hand, assumes full responsibility for the paper, and is usually the senior and corresponding author.

Although most journals still stick to the traditional authorship model (as specified by ICMJE), they have included changes that try to incorporate some of the important tenets of the contributor-guarantor model. For example, many journals now make it mandatory to include an “authorship disclosure statement”, in which the individual contribution of each author is mentioned. This statement is often published by the journal [53]. The ICMJE, on its part, clearly states that the best way to handle authorship issues is to discuss this as early as the planning stage of the work and make necessary changes to the authorship list as the work progresses. In addition, it states explicitly that institutions (and not journal editors) are responsible for looking into any conflicts that may arise. Institutions, therefore, must evolve policies that can deal with authorship disputes.

In India, efforts have been made to address authorship issues in recent years. The National Ethical Guidelines for Biomedical and Health Research Involving Human Participants from the Indian Council of Medical Research (ICMR – 2017) endorse the use of ICMJE guidelines for “responsible authorship and publication” [54]. This is a move in the right direction. The University Grants Commission (UGC), on its part, published the Good Academic Research Practices guidance document (in September 2020), which advocates the establishment of an Office of Research Integrity in academic institutions affiliated to it [55]. Although the document mentions unethical authorship as research misconduct, it does not refer to the ICMJE criteria. Nevertheless, the UGC has made it mandatory for all research
scholars to complete a course on research and publication ethics, which should familiarise them with issues of authorship in research publications [56]. While this is a good directive, by itself, it is not adequate. Individual institutions should have mechanisms in place to ensure that practice on the ground matches stated policies, and to deal with violations.

It must be emphasised that, like with all other problems related to research ethics, authorship-related issues too are confounded by social and societal pressures. It is probably inevitable that, irrespective of the model used to determine authorship, senior authors will continue to play an important role in the decision-making process. A lot will depend on their sense of right and wrong, and attitudes towards fair-play, inclusiveness and commitment towards truthfulness and ethical behaviour. This, in turn, will greatly influence junior members of a research team, and their attitudes and conduct. Thus, there is a case to be made that the onus of setting ethical standards rests heavily on senior authors, who need to ensure that they employ best practices, thereby setting good examples for other colleagues to emulate.

Initiatives to raise awareness in institutions (and hence in its faculty members) are imperative. There is a need to mandate training in ethical scientific writing that specifically addresses authorship issues in institutions, geared to raising awareness, and to providing support systems that encourage and ensure that faculty members follow best practices. Resources offered by organisations such as the Committee on Publication Ethics (COPE) would be beneficial to employ in such endeavours [57].

**Conclusion**

We would like to highlight the fact that gift authorship is not a minor excusable offence; it constitutes research misconduct. Consequently, such instances are punishable and have, in the past, resulted in irrevocable damage to reputations and careers. Authorship of research papers plays a critical role in determining the progression of academic careers. Authors who deserve credit must be given their due and those who have not contributed meaningfully should not take credit. Although there are guidelines in the form of ICMJE criteria, the onus rests on researchers and authors to implement these within a framework of ethical and transparent research practices. In India, academic and research institutions have not given these issues the importance that they deserve. It is imperative, and high time, that they do.

**Note:** The Institute of the authors — Christian Medical College — is affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai, India.

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**COMMENTARY**

**Gift authorship: Two more contexts**

**TR DILIP**

**Abstract:** The emergence of multi-centric studies and collaborative research between institutions within and outside the country, and of research led by authors who are from the same family, has led to noteworthy changes in the production of public health research evidence from India. There is a potential risk of research publications overlooking the well known ICMJE (International Committee of Medical Journal Editors) criteria for authorship, with the provision of gift authorship to researchers who can facilitate faster access to Indian data for such collaborative research. The paper calls for action to reduce the practice of gift authorship in these research settings.

**Keywords:** Authorship, India, ICMJE, gift authorship

The paper “Gift authorship: Look the gift horse in the mouth” is an excellent exposition of the causes and consequences of the practice of gift authorship, not only in research on medical and related issues but also in the entire academic domain in India [1]. It can act as a starting point for a campaign against such practices. Periodic discussion on these issues is needed in order to restrain researchers from being part of such misconduct. This commentary is an attempt to include in this discussion two emerging trends in health research in India where there is a high risk of gift