

## COMMENTARY

### WHO SHOULD POLICE SCHOLARLY PUBLICATION INTEGRITY?

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### **The Problem – Supply Side**

Plagiarism, the most commonly recognized form of academic, or intellectual, misconduct is nothing new. Would-be authors, scientists, students, faculty members, journalists, and others have used the shortcut of stealing someone else's ideas and words since the beginning of publication. It is, and always has been, wrong.

But today, in a world nearly overwhelmed by both print and *online* publishing, the problem is growing, along with numerous other related types of intellectual misconduct. Faux plagiarism, when the idea is stolen and then slightly reworded, is still plagiarism in fact. Contract writing, where an incompetent writer hires a surrogate writer to take ideas and form them into a document, is also fraudulent (unless the contract writer is listed as a co-author). Self-plagiarism and redundant publication run afoul academic norms and can violate publishers' copyrights. Schemes to avoid competent peer review, fabricate data and discovery, invent co-authors, or even to list co-authors without their consent are all ploys to publish without doing the work of scholarship and good science.

Those who are under pressure to publish, or to produce research documents, are the most likely to be tempted to cheat. Students at every level, but particularly in university settings, are probably the most frequent culprits because faculty members usually assign research papers for graded course completion. Sometimes student misconduct is because of naiveté and can be addressed with information and education, but it would be unrealistic to assume that most is not deliberate. Because of the prevalence of such misconduct by students, most universities have developed sophisticated detection, honor codes, accountability and sanctions. Many research centers have invested time and talent to contain such behavior. Sophisticated policy statements populate institutional websites and faculty members are trained to use screening programs routinely to weed out the cheaters. Students are warned that punishments can be harsh, including failure or expulsion from the academy.

Many excellent illustrations are available to become familiar with the current situation within academic institutions. For instance, Vanderbilt University's programs and policies regarding academic misconduct, including plagiarism, within the student body include written policies, training programs for faculty who are principally responsible for policing student academic misconduct, procedures and policies, podcasts and a wealth of information in a variety of formats. There should be no excuse for any member of this academic community to be unaware of such policies, procedures, potential sanctions and punishments. All major universities, colleges, research institutions who offer internships or fellowships to students, and whose members require publication in peer-reviewed, scientific journals, offer similar programs regarding academic misconduct [1].

The same is true throughout Commonwealth nations with the defining language stemming from language offered by Oxford University. Nearly identical defining language, institutional responses, and potential sanctions are found in the UK, Canada, South Africa and Australia. The standard language traced to Oxford is:

"Plagiarism is presenting someone else's work or ideas as your own, with or without their consent, by incorporating it into your work without full acknowledgement."

And also:

"All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition. Plagiarism may be intentional or reckless, or unintentional. Under the regulations for examinations, intentional or reckless plagiarism is a disciplinary offence." [2,3,4].

Within academic settings, the misconduct of students in some settings has also been considered as something that faculty can address not only by policing and punishment, but also through education and sensitivity training among the students. One innovative campus experiment forced students to learn about plagiarism and academic misconduct, before the fact, concluded that,

".. the intervention reduced plagiarism by increasing student knowledge rather than by increasing the perceived probabilities of detection and punishment. These results are consistent with a model of student behavior in which the decision to plagiarize reflects both a poor understanding of academic integrity and the perception that the probabilities of detection and severe punishment are low." (abstract) [5,6].

But students' pressures to write, perhaps beyond the capability of a student, is nothing compared to the pressure put onto faculty members and recently-graduated doctoral students who seek promotion or tenure, or to land a teaching or research position. Furthermore, for mid-career scholars, most professional societies require publications of significance to aspire to ranks of Fellow or Diplomat. Reputations are made on the basis of publication records and metrics that demonstrate impact in the global community. Academic careers can be made, or lost, by the ability to write for publication, irrespective of other, compelling abilities, such as classroom teaching, mentoring, or service to an academic organization.

Professor Tracey Bretag, University of South Australia, offered a concise state of the situation in 2013 that included equal attention to academic misconduct by students as well as by established researchers (and faculty). Her summary points included the following:

"Plagiarism undermines the integrity of education and occurs at all levels of scholarship. Research indicates that both undergraduate and postgraduate students require training to avoid plagiarism. Established researchers are not immune to allegations of plagiarism. Educational institutions need to move beyond deterrence, detection, and punishment, and take a holistic and multi-stakeholder approach to address plagiarism." p. 2 [7].

Facing publication pressures forces some academics to leave fields that are driven by highly competitive publication options. Others become conservative, or cautious, with ideas, research initiatives, and intellectual partnerships in order to maximize their perceived probability of successfully producing of publications. When academics succumb to such issues, the true intellectual or social value of their work can be very modest.

In 2005, Donna Euben, Staff Counsel for the American Association of University Professors and Barbara Lee, of Rutgers University concluded that there was acknowledgement, but significant hesitation to fully sanction faculty members within research institutions because of institutional barriers to faculty self-governance, contractual relationships, and concern about institutional reputations, including among sponsors of research within the public and private sectors. They concluded that, "Academic organizations may use discipline for these purposes when non-faculty employees engage in misconduct, but the discipline of a faculty member appears to be rare." [8].

The supply side of academic misconduct is not a contained or regional issue and the pace of publication misconduct is certainly accelerating. More universities, more graduates, and often highly competitive job markets put a premium on documented scholarship. The tools for facilitating misconduct have improved too. It takes only an elementary understanding of word processing and search engines to manufacture a fraudulent document that is interesting, formatted consistently, thoroughly documented, and with the appearance of cutting-edge relevance in most disciplines in the applied social, economic, and health sciences. Blending the words, ideas, and paragraphs of previously authored and published works is not difficult at all. It is academic and intellectual misconduct that has never been as easy as it is today.

### **The Problem – Demand Side**

Not many years ago most disciplines had a handful of highly-rated, scholarly, peer-reviewed and revered journals. Publishing journals has never been a small enterprise. Publishing costs from scientific oversight to production and postage was costly and most frequently underwritten by a professional society's membership dues and subscriptions by libraries within research institutions, governments, and individuals. Hard copy publishing is far more expensive today.

But in the world of *online* publishing the largest cost burdens have been reduced. Newly created journals today seem to pop up like weeds in intellectual fields and meadows. Checking out how many *online* journals have evolved during the last 25 years is an interesting exercise and reveals scores of publishing possibilities for those seeking a place to submit their work. Many of these journals claim to be peer-reviewed, international, multi-disciplinary and, most critically, assert a rapid peer-review and acceptance for publication cycle. New journals appear annually and offer tempting possibilities for aspiring authors.

The situation, however, is ripe for misconduct and fraud. If, hypothetically, there were 25 credible, peer-reviewed journals in a specific scientific field in 1980 and a total of 500 capable peer reviewers (usually academics serving on a *pro bono* basis) who were each

willing and able to review 50 manuscripts per year, it could be assumed that the reviewers represented successfully published writers who "knew their stuff". Editors could rely on competent reviews of methodology, substance, style and contribution to the specific field. The novelty of specific discoveries or conclusions could be entrusted to such reviewers. These reviewers earned the right to review and pass judgment on others because of their own good science and publication records. It was never a perfect situation with scientific competition and even jealousies within the leadership of scientific fields, yet it usually worked and intellectual fields grew with a level of trustworthy oversight. But what happens in 2020 when the same field is flooded, globally, with 150 or more *online* journals, and they all claim to be peer-reviewed? It can go sour very quickly:

- Are there six times as many qualified reviewers available to the editors?
- Do these journals advertise for reviewers from a broad spectrum of fields in order to appear credible, without actually vetting any reviewers' credentials?
- Do these recruited reviewers need to document their own "reviewer service" in tenure or promotion applications to institutional personnel committees? What are their motivations for serving?
- Do novice reviewers know what they are doing in terms of depth of understanding of their field's literature? Do they know the intellectual history of ideas, discoveries, methods, and applications? Or to use a metaphor, have they "waded in the stream" long enough to know where the fish are?
- Is the "journal" an *online* creation in which the editors are also the authors and as a "club of misconduct" they "review" each other's work, and predictably demonstrate astonishing publication productivity? Do these club members troll for young academics or scientists, especially in developing nations, who have limited experience with publishing in mainline journals in order to create short-term, co-authorship, partnerships for rapid publication?
- Or, is there a cynical assumption that it really doesn't matter anyway because the "publish or perish game" is so superficial and esoteric that only ingrown academics participate and some institutions are so hungry for a stable faculty that personnel committees accept publications from nearly any source? Have standards for the academy fallen so far?

Unfortunately, we believe that there is at least an element of affirmation to all of these questions.

We do not believe that it is universally true. The vast majority of aspiring or senior scholars play by the rules. Most universities can claim that standards for hiring, promotion, tenure and scholarly recognition are very high. Most scientific journals engage ethical and dedicated scholars and scientists to produce the fruits of scientific and technological progress.

It takes only a few spoiled fruits, however, to ruin the public's perception of the academy. We remember how *Lancet* was forced to publicly retrieve the infamous, and false, 1998

revelation that vaccinations in children can cause autism because the peer review process failed to spot a fake. Even after that article was retracted, twelve years after-the-fact, by the authors and by *Lancet*, millions of children go unvaccinated today because of parental apprehensions. The original paper can still be found on the Internet. The clear lesson is that it is far easier to prevent loss of respect than it is to earn it or to regain it [9, 10].

Academic research institutions, corporate research enterprises in food production, agricultural research, pharmaceutical development, and vast numbers of high technology research and development operations all find their reputations, competitiveness, and public trust in peril when fraudulent publications are found to be linked to their scientific staff. In a hard ball game whose success is "hitting it out of the park", it is a good idea not to be hit in the head by the ball. Considering today's global interest in vaccines and therapeutic treatments for COVID-19, it can be anticipated that unethical publication efforts could threaten our successful pathway out of a pandemic.

### **Intellectual and Academic Misconduct is Not Rocket Science**

Plagiarism, the outright theft of another's published words, is easy to do, and today it is also easy to detect. Published works, in most major languages, that are of recent origin are almost universally available with simple Google, Google Scholar or comparable and widely available search engines. Clever minds that have a sense of key words and phrases can quickly and painlessly find lists of publications dealing with thousands of topics. Cutting and pasting from an assortment of such digital loot and repackaging it into a "new" document may, or may not, include referencing the source materials to make the new document appear legitimate and avoid detection.

But running such a document through any of the available plagiarism detection engines, such as CrossCheck, with IThenticate software, Turnitin, or even just copying a paragraph and then searching for that paragraph through Google, will instantly reveal the original sources and help to reveal the fraud that the "new" document represents. Manufacturing a document from the wealth of available *online* resources is easy to do, and the fraud is equally easy to detect [11, 12, 13].

Publishing new ideas and good science, with integrity, insight, technical competence and scholarly recognition of traditions of thought and discovery is not easy. If it was easy, everyone would do it. It would seem, today, that everyone thinks they can.

There is plenty of help for would-be authors to get an adequately-written manuscript even if they do not have the skills (or motivation or time) to do it themselves. Fraudulent, surrogate writing is so easy to find, and so common, that the credibility of the whole is at risk. In fact, there is an *online* industry providing ghost writers, editing, proof reading and other assistance to anyone for an affordable price. For instance, an *online* company based in Duluth, Minnesota describes the service by stating in the website, "...custom paper writing services by a reliable company, entirely plagiarism-free and fully confidential." The company targets customers who do not speak English as a primary language or do not know how to write well. In the website the company's pitch to customers addresses the legal issue by stating, in Frequently Asked Questions,

"The papers we provide serve as examples of excellent academic writing and can be used to improve one's writing skills. Customers who get help with writing papers **are discouraged from passing them as their own**. As such, hiring the best paper writing helper via this website is totally legal." (Highlight ours) [14].

It is obvious to us that this company is not in business to educate would-be writers, but to serve as surrogate writers for incompetent writers. We state with urgency that being "legal" is not the same as being ethical. If would-be writers did not use such services the industry would not be growing. Just like the cries of "fake news", a growing prevalence of fake scholarship threatens the scientific enterprise.

We are compelled to ask, however, why some kinds of scholarly misconduct take place. The pathology for post-degree academics is certainly the pressure to publish. Stunning new discoveries, theories, technologies and methods of inquiry are precious but rare. The knowledge base of all scientific fields is cumulative, often conservative, and ideas are always drawn from traditions of published and time-tested knowledge. Rather than taking credit for someone else's work, contributing authors should realize that documenting sources and providing thorough and citations **increases** the value and worth of their writing. This process grounds new contributions on a platform of previous work. Pretending, through plagiarism, that an idea is the author's own, by failing to reference, **weakens the message**. Just because word-for-word copying (lifting, stealing) is easy to do it is also easy to spot. Would-be cheaters need to realize that what makes plagiarism easy to do also makes it equally easy to detect. It is not worth it to pretend an idea is your own when it is not.

In the current era of COVID-19 lockdown, stay-at-home public health requirements, virtual classrooms and virtual offices, we suggest the temptation to crank out publications without doing the essential work could be overwhelming to those who see their pathways to academic or professional security at risk. Acceptable norms of behavior and performance expectations can be threatened when we all are more isolated from one another than ever before.

### **Policing Publication Integrity**

Our response to the issues we have briefly described above is to ask, who is responsible for policing scholarly writing in scientific journals? Just as academic institutions have a focus on student writing and cheating, and at least check plagiarism with services like Turnitin, major publishers also routinely check submissions for plagiarism. Major journal editors routinely reveal that plagiarism is checked upon submission or after an initial peer review. Such oversight is essential to protect the journals' reputations and integrity. The process of checking for plagiarism, however, is expensive. Publications of academic and scientific societies access financial resources from membership dues, submission fees and page fees for accepted manuscripts. Many professional societies that host publications operate as non-profit corporations and can use donations to support publication integrity. Credible journals that are not supported by large and wealthy societies or institutions, however, may not have budgets to use these services. We believe that the flocks of new *online* journals can, and should, be held to the same standards as

well-heelled journals and new resources may be necessary to ensure integrity. This would not fully protect the process, however because plagiarism is not the only kind of threat to publication integrity.

In developing countries, where scholarly effort is critically needed, journals may not be able to afford subscribing to services that check for plagiarism unless new fees are exacted from those who submit manuscripts or to charge page fees for papers that are accepted for publication. This represents a significant challenge to scholars and journals alike in Africa, or any developing nation or region where publishing excellent "home grown science" is essential. It may be necessary to establish financing mechanisms from the international community, including research institutions and universities, to underwrite plagiarism oversight by journals whose budgets do not reflect their importance to developing nations. It would be in the self-interest of such organizations to support indigenous publishing integrity.

When a publishing fraud is publicly revealed, it can cause embarrassment for the university or research institution. Such embarrassment can affect the organization's status among peers. It would be highly naïve, however to expect all universities to police misconduct that does not lead to a tarnished institutional image or the institution's ability recruit and retain scholars. No academic or research institution desires to have faculty or staff who reflect poorly on the organization, but internal resources for such effort are rarely sufficient for the task. Academic institutions, especially research universities, can punish scholars who cheat, and get caught. In most cases, when fraud is revealed, academic institutions exert sanctions quietly. Tenure or promotion can be denied, teaching or research assignments can be changed, and culprits can be quietly asked to leave. In some cases, they probably set up an equally fraudulent pattern of behavior at their next position.

Just because faculty members are now asked to check student work, often through Turnitin, for plagiarism, does not mean that a similar norm could be transferred to overseeing the work of other (peer) faculty members. Just because students can be sanctioned with ease does not mean that faculty members would be particularly interested in prosecuting other faculty members or scientific colleagues. It would be highly unusual for university faculty who serve on personnel promotion or tenure committees to be required to investigate all possibilities of scholarly fraud in a collegial environment. Even if faculty and science norms embraced self-policing, it would be after-the-fact and reactive to fraudulent work that is already published. In our opinion, it would be far better to prevent such publication in the first place. In Ghana there is an Akan saying: "If you think all people are good, you have not met all people." We know that this is true, even within academic and scientific communities and that self-policing scholarly publication will work mostly for those who are already adhering to ethical professional standards and expectations. Those who cheat will not self-police, by definition.

Self-policing and the frequency retraction of mistakes and errors is very high in the U.S. and could reflect efforts to move to publication too quickly in the scientific process. It also could evidence higher levels of intentional misconduct and cheating. On a hopeful side, those who self-retract erroneous or flawed research, subsequent to publication, can



be rewarded. However, waiting to be forced to retract can cause serious career damage[15].

Institutions that offer science and discovery, within the academic community or in industrial or technical research and development, have plenty of self interest in avoiding the embarrassment and loss of prestige that can result after a publication fraud is revealed from within. It is rare for such frauds to be discovered prior to publication. However, the range of scholarly fraud goes far beyond plagiarism. Those who seek to fraudulently advance their own careers are not interested in institutional reputations and most institutions are poorly equipped to offer ongoing oversight and enforcement of publication norms in a preventative way.

Scientific journals, including AJFAND, face a dilemma, but also hold all the cards. For generations peer-reviewed journals have offered societally-accepted high standard for disseminating new discoveries, challenging false hypotheses, altering the way we see the world, and serving up new ideas that lead to more research and problem solving. Journals that publish good science have given us opportunities for high quality of life and solutions to problems of every kind. We believe, then, that protecting the integrity of such publication is an opportunity for all scientific journals, and should not be viewed simply as a burden. Scholars and scientists need to publish in respected places. Journals need to receive and publish excellent work that advances disciplines and the state of knowledge. Universities and research institutions need excellent journals to disseminate the fruits of their investments.

We believe, then, that it is up to the journals and the peer review process to police publication fraud and misconduct. It is at the point of publication that fraud can best be detected. Plagiarism can be, and should be, checked prior to any manuscript's publication and the tools for this are plentiful. Engaging well-qualified reviewers can go a long way to providing high quality assessments of manuscripts and the extant literatures to which the manuscript might contribute. This could require journals to seek sustaining resources including charging fees for the privilege of publication. Non-profit support can be generated to support able scholars who need financial help. Employers should underwrite their scholars by supporting the protection of publication integrity through direct support of journals that need financial support. Knowledgeable reviewers should know the literature in their field and editors should vet the credentials of all reviewers. All fraud and publishing misconduct cannot be prevented because culprits are clever and motivated, but vigilance here can best be effected before publication by the journals.

Finally, like all the other stakeholders, scientific journals live in a competitive environment where trust and reliability are essential to survival. Journals that publish fraudulent trash should face a Darwinian future. Journals that invest in the process to hold authors to very high standards will thrive because the discoveries and insights that they disseminate will change the world and publishing in such journals will be the envy of scholars and scientists on whom our futures depend.

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