Self-plagiarism, recycling fraud, and the intent to mislead

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Plagiarism may be defined as "the use of others' published and unpublished ideas or words (or other intellectual property) without attribution or permission, and presenting them as new and original rather than derived from an existing source" [1]. More succinctly, plagiarism is theft [2], and is universally condemned as egregious. While the ethical and legal implications of plagiarism are well characterized, surprisingly scant literature has addressed the reuse of one's own writings, a practice some term "self-plagiarism."

It is unclear at what point this term entered the vernacular of scientific writing. Some have proposed the terms "recycling fraud," "text recycling," or "text reuse" to avoid confusion with plagiarism [2–4]. So, what constitutes self-plagiarism or recycling fraud? In light of a recent manuscript submitted to the *Journal of Medical Toxicology*, the Editorial Board would like to address this topic, and formulate the journal's response to this growing intellectual transgression [5].

Roig [4] suggested four distinct types of self-plagiarism: duplicate publication of a manuscript, fragmented publication or the partitioning of a study into several manuscripts, text reuse, and copyright infringement. While the degree of transgression is not the same for these types of self-plagiarism, the *intent to mislead* is the ultimate ethical lapse. A brief analysis of Roig's classification provides meaningful insight into the issues surrounding self-plagiarism.

There is no ethical dilemma when it comes to duplicate publication of a manuscript. This practice is strictly prohibited and represents the basis for journals refusing to consider a manuscript under review elsewhere. Exceptions exist, such as the simultaneous publication of multispecialty guidelines in journals of different societies. Such cases must disclose the dual submission to both journals at the outset and to readers at publication. In contrast, if one's intent is to mislead readers into believing that each publication is a unique body of work, then duplicate publication has occurred. This practice is condemned by this journal in the strongest terms.

The partitioning of a study into the "least publishable units" [6] is viewed as a lesser error, unless the manuscripts are submitted without any reference to each other. The related practice of redundant publication refers to the reuse of previously published data [7]. These lapses in scientific integrity likely stem from the increasing academic competition to publish quantity over quality. A few studies are large or sufficiently complex to warrant several publications. Others deal with subsets of fundamentally different data. Misrepresenting each substudy as unique by concealing the hierarchy of primary study design and planned analysis undermines the statistical interpretation of the findings. It also erodes the trust that permits information exchange within the scientific community, and ultimately impedes the advancement of knowledge.

The most common method of self-plagiarism is text reuse or text recycling, defined as the reuse of one's previously published work that includes "almost identical methodology, literature reviews, discussions, and other similar or identical textual material" [4]. At times, repeating methods text verbatim is recommended, as when attempting to replicate technically complex methodology from a duly cited study. However, to cut-and-paste large portions of the introduction, methods, and discussion text into more than one manuscript without substantive changes suggests an underlying intent to mislead readers and thus academic misconduct, especially if the source is not properly attributed.

One may appropriately ask what constitutes "almost identical." How much of a previously published work can be reused without constituting text recycling? There can be little doubt that authors develop a stylistic way of writing. Furthermore, as more writing is done, one tends to use similar sentence structure when conveying similar thoughts. So, some degree of similar content format is to be expected in scientific writing. In fact, incongruous sentence structure has been suggested as one means to detect cut-and-paste plagiarism [2]. Yet, much like U.S. Supreme Court Justice Potter Stewart's attempt to define pornography, many editors feel that "I know [self-plagiarism] when I see it." In effect, this transgression can be identified as being the outlier from current and accepted norms as practiced by other authors and journals.

Authors outside the field of medical publishing have proposed that *up to 30% of the text* from one article can be reused in another article without constituting self-plagiarism [3,8,9]. We understand fully that authors seek clear guidance on what is acceptable. Nevertheless, any policy that allows an arbitrary percentage of a manuscript to be recycled material from previous publications is misguided and inappropriate for our journal. Instead, we will exercise our editorial judgment in all cases. A key

element is adequate disclosure at the time of manuscript submission that some elements are taken from another source.

Finally, copyright issues arise. Some argue that self-plagiarism is an oxymoron, as it is impossible to steal from oneself. However, it is possible for the author of a published work to infringe upon the copyright of that work. Most scholarly journals, including the *Journal of Medical Toxicology*, typically require an author to transfer copyrights to the publisher. In other cases, some agencies retain the copyright of papers written by employees. Any subsequent work that is fundamentally similar to the original product must cite the original, seek reproduction rights from the publisher, pay royalties, or not be published. Because the economic value of scientific manuscripts is limited, the first two methods of subsequent publication generally apply.

For scientific writings, case law surrounding copyright infringement is sparse. Litigation brought against the original author by a publisher may be unlikely to succeed given the defendant being the original author rather than a plagiarist, the lack of compensation paid for the original work, the transfer of copyright as a matter of course for publication, and fair use laws [8]. Copyrights are ultimately intended to protect economic rights, rather than impose ethical guidance on authors misrepresenting their work as original.

The World Association of Medical Editors (WAME) states that journals should develop a system of investigating and meting out penalties for self-plagiarism [1]. As a relatively new print journal recently indexed by Medline, the editorial staff of the *Journal of Medical Toxicology* will be working to develop such a system based on the WAME recommendations. Central to this system is the test of whether manuscripts represent important and original contributions to the field and properly attribute previously published work by either the same authors or others. Even with such a system in place, the due diligence of journal reviewers and editorial judgment are critical to minimizing the impact of self-plagiarism and any attempt to mislead our readers.

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