



Case Report

Text recycling: Self-plagiarism in scientific writing^{☆,☆☆}

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ABSTRACT

To further the progress of scientific research and expand the literature, authors and editors share a common goal of producing and reviewing innovative publications. However, as publication rates increase, so does the amount of detected plagiarism, including self-plagiarism. This concept, also referred to as text recycling, is defined as the repurposing of one's own previously published work in new publications without referencing the original source. There are advocates both for and against versions of text recycling, but without a universal protocol for authors and editors of what constitutes self-plagiarism, there is no strict standard among journals as to what is unethical. The advent of online text duplication detection software has been increasingly used by journals to assure that all published work is novel, but challenges remain. Converging on standardized guidelines would be beneficial with regard to text recycling and improving author education and the promotion of active communication between journals and authors during the submission process if confusion arises.

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Case scenario

Dr. X has decided to report on the results of a recent research study in which she discovered a novel therapeutic agent for acne vulgaris, a common dermatologic complaint that she sees in her daily clinic. Previously, Dr. X has co-authored several papers on acne vulgaris, so she plans to incorporate a few paragraphs from the discussion section from one of her previously published studies as part of the current paper's introduction because the required information is quite similar. She wrote the original text for the first paper; thus, Dr. X does not see any problem using her own words in a different context for a new publication.

In this scenario, Dr. X should

- Keep her text verbatim in this new paper without referencing the original publication because she is simply reusing her own work in a different context
- Paraphrase her original text in this new paper without mentioning her previous publications because she is rephrasing her own ideas

- Change the wording and sentence structure of her original text in this new paper, but reference her previous work and determine through an online plagiarism checker whether she is plagiarizing
- Use her original text, but explicitly quote the original paragraphs and reference the previous paper.

Discussion

Avoiding plagiarism is essential for the advancement of novel scientific discovery and subsequent publication of findings, but rates of plagiarism have increased within the last few decades. A 2008 analysis of more than 7 million abstracts in the Medline online database, which at the time contained approximately 17 million citations and now contains more than 22 million, yielded a rough increase from two suspected duplicates per 1000 citations in 1975 to more than eight suspected duplicates per 1000 citations in 2005 (Errami and Garner, 2008). The number of peer-reviewed journals has grown, so the number of published articles that contain information with probable plagiarism has grown as well.

Due to the copyright infringement laws from journal publishers, authors should be aware that submitting duplicate articles with verbatim wording by the same authors to multiple journals is not allowed and an unethical practice (Suárez et al., 2012). However, because journals do not have collective standards as to what is

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considered substantial text reuse, confusion remains among authors as to what, if any, previously written text can be resubmitted for publication.

By definition, plagiarism occurs when an author purposefully uses someone else's work without acknowledging or giving credit to the original author. This can appear either as direct copying or paraphrasing previously published words, ideas, phrases, and data without crediting the initial source (Elsevier, 2015). Varying degrees of severity exist depending on how much and what type of information is reproduced, but any type of text reuse without appropriate citation of the original publication is considered plagiarism.

Less commonly recognized within the framework of plagiarism is the concept of text recycling or self-plagiarism. Text recycling, defined as reusing any amount of one's own work from published papers or presentations as new research without referencing the original material, is still considered plagiarism. However, the boundaries of what one can and cannot use from previous publications remains unclear to many authors, editors, and, by virtue, readers (Moskovitz, 2017). The debate among authors on what is considered acceptable is ongoing, with valid arguments on both sides. Some authors may recycle pieces from previous work because they are unaware that repurposing their own material is considered self-plagiarism or because of the notion that citing previous work in new publications diminishes the originality of the new research and appears self-important (American Psychological Association [APA], 2010).

Commonly, authors will recycle the description of study procedures within a methods section in manuscripts from the same trial, for which there may be insufficient ways to report the methodology differently (Roberts, 2018). This practice endures especially because many journal editors and authors view this practice as permissible due to the circumstance of this type of text recycling. Several organizations, including the APA and BioMed Central, in conjunction with the Committee on Publication Ethics (COPE), have set standards in which some cases of text recycling are acceptable (Moskovitz, 2017). COPE and BioMed Central go so far as to claim that text recycling may be inevitable in certain instances when there are few ways to report on a common feature, such as describing background concepts in an introduction section or detailing a specific technique in a methods section (COPE, 2013).

Conversely, many members of the scientific community find any form of text recycling unethical, which implies that text recycling is indicative of an intellectual limitation of the author. Proponents of this viewpoint claim that a significant reuse of text circumvents traditional citation norms and misleads readers into thinking that the information presented is novel (Moskovitz, 2017). Reviewers and editors dedicate copious time providing feedback to authors; thus, readers assume that each recent publication represents a new contribution to the literature. Therefore, when articles that include self-plagiarism without necessary citations are published, the consumers of scientific literature are deceived (Vitse and Poland, 2012).

Despite the ongoing debate, no uniform convention exists between journals to identify and eliminate text recycling. The International Committee of Medical Journal Editors has created guidelines for the protection of editors, authors, and reviewers, stating that "When authors submit a manuscript reporting work that has already been reported in large part in a published article or is contained in or closely related to another paper that has been submitted or accepted for publication elsewhere, the letter of submission should clearly say so and the authors should provide copies of the related material to help the editor decide how to handle the submission" (International Committee of Medical Journal Editors, 2018). However, many journals do not follow these guidelines, and a substantial lack of consistency among peer-reviewed journals during the publication review process remains (Berquist, 2013).

The variation among ideas with regard to text recycling further exacerbates the issue, but scientific journals worldwide have begun to implement plagiarism checks in their manuscript submission process, most notably CrossCheck, which is a service that uses iThenticate software (Berquist, 2013; Roberts, 2018; Zhang, 2010). CrossCheck originated in 2008 and is capable of analyzing all published articles to determine areas of significant text overlap. The program identifies the percentage of text similarity with the original source and allows the user to retrieve the original article to manually assess the CrossCheck results as well.

Along with CrossCheck, ongoing advancements in technology have allowed for the creation of numerous easy-to-use online plagiarism checkers (Table 1). However, despite the widespread availability of these online systems, accuracy issues persist, as do the potential financial burdens of utilizing these programs. When evaluating for plagiarism, even with online automated checkers, there truly is no substitution for human review. Yet unfortunately, given the endless expansion of publications, manual review sometimes becomes an unsurmountable task.

The lack of homogenous plagiarism guidelines that all journals can reference when scanning manuscripts for text duplication creates uncertainty among authors when submitting to different journals. Plausibly, editors of peer-reviewed journals would be motivated to eradicate plagiarism by jointly developing anti-plagiarism guidelines for authors. Perhaps the submission process could even be altered so that the first step of paper submission involves using software, such as CrossCheck, to identify any potential forms of plagiarism. Authors may dislike any added steps in the publication pipeline, which can already be lengthy, but removing chances of plagiarism will serve to legitimize both the journals and the authors of the articles. Adopting uniform anti-plagiarism guidelines across journals and editorial staff and enforcing plagiarism checks during the submission process are two strategies to alleviate the problem of plagiarism, including text recycling.

Further solutions to combat plagiarism, specifically text recycling, involve improving author education and communication with editorial staff and reviewer teams during the submission process. Before submission, journals could include a standard statement to authors on what constitutes plagiarism and self-plagiarism with ways to avoid either practice. All text that is directly used from any previously published article, including those written by the authors themselves, should be quoted and include appropriate citations. Additionally, journals should encourage authors to actively ask for clarification before and during the submission process if concerns exist about potential text recycling in the manuscripts. Plagiarism is unethical and detracts from scientific progress, and authors should always err on the side of caution when using previously published work, including their own.

Table 1
Examples of online plagiarism checkers

Plagiarism checker	Website	Cost
iThenticate	https://www.ithenticate.com/	Yes
CrossCheck	https://crosscheck.ieee.org/crosscheck/	Yes
Plagium	https://www.plagium.com/	Yes
PlagScan	https://www.plagscan.com/plagiarism-check/	Yes
TurnItIn	https://turnitin.com/en_us/	Yes
HelioBLAST	https://helioblast.heliotext.com/	Free
Viper	https://www.scanmyessay.com/	Free
Grammarly	https://www.grammarly.com/plagiarism/	Free
Plagiarisma	https://plagiarisma.net/scholar.php	Free + additional cost to upgrade

Analysis of case scenario

In Option A, Dr. X reuses her original text verbatim without referencing the publication from which she took the ideas. This is considered text recycling, a form of plagiarism, and not an ethical publication practice. The scientific community should recognize that, regardless of the author (including oneself), directly copying from another publication is unacceptable, especially without giving credit to the original source.

Option B, paraphrasing her previously published text, again without referencing the original paper, is a trickier option. Paraphrasing is still considered using information from a source, and it can sometimes be difficult to properly maintain the original meaning without directly quoting. Because Dr. X did not reference the source, this type of paraphrasing is certainly unethical. However, had Dr. X successfully paraphrased her own content without changing the intended initial meaning and appropriately referenced the source, this would be considered ethical.

Option C, in which Dr. X slightly changes her original wording, is another complicated option. Reference to her original publication is important and necessary because that is the best ethical practice. The point of potential confusion arises from determining the extent to which she changed her previous words. If the new text retains the same meaning as the old, and the new paragraphs do not clearly resemble those that were previously published in sentence structure or word choice, then Dr. X has avoided self-plagiarism. Despite her use of an online plagiarism checker, human interpretation of text is always best to identify potential plagiarism, so authors should not solely rely on the advice of an online checker.

Option D, putting her own text from a previously published paper in quotes and properly referencing the original research, is the best

choice to prevent inadvertent plagiarism. By using this method, Dr. X has unambiguously avoided any risk of self-plagiarism.

Bottom line

This case emphasizes the lack of clarity that still exists regarding text recycling, a form of plagiarism. The use of previously published work without properly quoting and referencing the original research is unethical. It is crucial for authors and journal editors to understand the concept of text recycling, not only to avoid self-plagiarism, but also how to understand how it negatively affects the scientific community by devaluing the legitimacy of novel findings.

References

- American Psychological Association. *Publication Manual of the American Psychological Association*. 6th ed. Washington: American Psychological Association; 2010.
- Berquist TH. Self-plagiarism: A growing problem in biomedical publication! *Am J Roentgenol* 2013;200(2):237.
- Committee on Publication Ethics. Text recycling guidelines [Internet]. Available from: <https://publicationethics.org/text-recycling-guidelines>; 2013, Accessed date: 15 August 2018.
- Elsevier. Ethics in research & publication [Internet]. [cited 2018 May 7]. Available from: https://www.publishingcampus.elsevier.com/websites/elsevier_publishingcampus/files/Guides/Brochure_Ethics_2_web.pdf; 2015.
- Errami M, Garner H. A tale of two citations. *Nature* 2008;451(7177):397–9.
- International Committee of Medical Journal Editors. Recommendations, overlapping publications [Internet]. Available from: <http://www.icmje.org/recommendations/browse/publishing-and-editorial-issues/overlapping-publications.html>; 2018, Accessed date: 15 August 2018.
- Moskovitz C. Text recycling in health sciences research literature: A rhetorical perspective. *Res Integr Peer Rev* 2017;2(1):1.
- Roberts J. Plagiarism, self-plagiarism, and text recycling. *Headache* 2018;58(3):361–3.
- Suárez AL, Bernhard JD, Dellavalle RP. Telling the same tale twice: Déjà vu and the shades of grey in self-plagiarism. *Dermatoethics: Contemporary ethics and professionalism in dermatology*. London: Springer; 2012. p. 233–6.
- Vitse CL, Poland GA. Plagiarism, self-plagiarism, scientific misconduct, and VACCINE: Protecting the science and the public. *Vaccine* 2012;30:7131–3.
- Zhang H. CrossCheck: An effective tool for detecting plagiarism, 23; 2010; 9–14.