

*Technical Viewpoint in Medical Education*

# Tortured phrases dilute the specificity of medical jargon

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## Abstract

The effectiveness of technical communication among medical peers is, to a great extent, determined by the accuracy of the jargon that is used, so as to avoid errors in interpretations or ambiguity in the message. “Tortured phrases”, a fairly new phenomenon, employ ambiguous language to provide odd or synonymous meanings that substitute for established jargon or standard English phrases. This technical viewpoint highlights this risk using several examples from the recent medical literature. This might represent a strategy to avoid the detection of plagiarism, it might reflect a poor command of English grammar, or it might reflect the use of a third-party service during the development of the paper. Much wider debate is still needed, as is the discovery of more examples to appreciate if there are trends underlying this phenomenon, and to what extent they may be distorting the medical literature.

**Take-home message:** “Tortured phrases” in the medical literature can introduce ambiguities to readers where standard jargon actually exists.

**Key words:** Editorial oversight; Ethics; Failed peer review; Medical education; Nonsense text; Status quo testing.

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## INTRODUCTION

A 2021 preprint called for the open investigation of the use of anti-plagiarism software and other technologies to generate nonsense text, coining the term “tortured phrases” to describe phrases, or snippets of text, that resemble recognized technical language, i.e., jargon, although essential parts of those phrases have been distorted or manipulated, for example through the use of text thesauruses [1].

One possible reason why some authors might use “tortured phrases” is that this technique would allow them to escape the detection of text similarity or apparent plagiarism (verbatim text copied from the source without due attribution) by similarity or anti-plagiarism software. Another possible reason could be the use of thesauruses by non-native English speakers who might wish to find alternative ways to express their ideas, but in doing so, they would distort, or “torture”, the intended meaning. A third possibility for the existence of such nonsensical phrases is the attempt by non-specialists to write specialized text, unaware of the error that they are making by substituting veritable jargon with a non-standard and thus peer-unacceptable text. A fourth option could be to attempt to medicalize general terms in order to make them appear more medically

technical, or at the other polar extreme, to soften their meaning in order to make them easier for a non-medical audience to understand. The latter possibility would make most sense in a practitioner-patient setting [2].

In the first three options, the will or intent of the individual, absent a confession of foul play, could be ascribed merely to sloppy work while in the fourth option, there may be an intentional desire to manipulate the language, not necessarily to deceive, but rather to dilute or euphemize difficult-to-accept terms or jargon, for example when delivering a death notice to a family member, or to attempt to clarify difficult-to-understand medical terms. Finally, the existence of “tortured phrases” may reveal papers that may be testing the submission and peer review processes of publishing status quo journals, as a form of a sting, by attempting to show, through a form of trickery, that peer review and editorial scrutiny have failed in that journal. In the latter option, if true, then the forger or the author or architect of that forgery is committing a serious ethical violation [3]. As it currently stands, still too little is known or published about “tortured phrases” in order to be able to make a decisive prognosis regarding their existence, or to substantiate the exact reasons why authors have employed them.

## **DISCUSSION**

### ***Importance of accurate jargon in medical publishing***

A medical paper can be best appreciated by another specialist or peer when suitable and accurate jargon is used. In general, medical papers published in medical journals exist primarily to serve peers in their immediate medical community, although increasingly members of the public, such as parents of patients, are also taking interest in such publications [4]. In some cases, a paper may carry excessive jargon, defeating the intended objective of simple language to inform the target medical audience [5]. Although there is no tangible or credible evidence to suggest that “tortured phrases” serve to simplify the excessive use of complex established medical jargon in order to make the text easier to read and consume, *a priori* this possibility should not be excluded.

Typically, peer review and editorial handling serve to identify such lapses in jargon, since peer reviewers and editors would be the most obvious professionals to screen jargon, verify its validity, and screen out nonsense or non-existent terms, and then approve the screened paper for publication, suitable for consumption by medical experts [6]. However, the failure to detect “tortured phrases” and manipulated jargon may be a sign that editorial handling has failed or that peer review integrity has been compromised [7]. Ideally, in such a circumstance, if “tortured phrases” are detected at the post-publication stage, after conducting an ethical investigation, including the request for the author(s) to explain the existence and use of such twisted jargon, where possible, those terms should be corrected by an erratum [8]. Given the likelihood that “tortured phrases” are likely more widespread than is currently known, such corrective measures could lead to a very complex and messy correction of the medical literature since many errata or corrigenda would need to be published, although this would need three key elements in order for a correction to occur: a) clear definitions of what is a “tortured phrase”, and what this term does not encompass; b) formal recognition of the phenomenon by international bodies related to medical and publishing ethics or standards, such as COPE, the ICMJE, DOAJ, WAME, etc.; c) a clear appreciation of the reason(s) why authors have employed such odd phrases, and how they came to exist, and not merely an uninformative or superficial correction.

### ***Select examples***

Drawing from clues derived from PubPeer entries, Table 1 lists several examples of papers in five fields of the medical literature that have “tortured phrases”, including in cancer [9], cardiology [10], immunity [11], neurology [12], and nutrition [13]. These papers are indexed in established respectable databases and indexes (PubMed, Scopus and/or Web of Science). In one case [10], the paper was retracted because of plagiarism and also the existence of “tortured phrases”. Even if some medical specialists might understand the authors’ intended meaning or jargon, in instances where “tortured phrases” have been used, it is the responsibility of authors to ensure that correct jargon is used, and for peer reviewers and editors to detect these prior to publication. The greater

risk is that such errors will be read by other academics, assumed to be the “standard”, and then cited and/or used in their own papers, thereby propagating the errors in jargon into downstream literature.

What will happen to such papers, for example to those listed in Table 1, and how will journals, editors and publishers handle this new threat to the integrity of the biomedical literature?

**Table 1.** Instances of ‘tortured phrases’ in five fields of medical research.

Reference (medical field)	“Tortured phrases” (select examples)	Likely intended jargon
[9] (cancer)	“various clamor information” “actuation work” “bolster vector machine”	noise activation function support vector machine
[10] (cardiology)	“counterfeit neural organization” “uphold vector machine” “subterranean insect state”	artificial neural network support vector machine ant colony
[11] (immunity)	“T-aide”, “T-partner”, “T-assistant cell” “administrative T cells”	T-helper cell regulatory T cells
[12] (neurology)	“Alzheimer's malady” “Parkinson's ailment” “Parkinson's illness” “blood cerebrum hindrance”	Alzheimer's disease Parkinson's disease blood brain barrier
[13] (nutrition)	“Alzheimer's illness” “Parkinson's unwellness” “dementedness”, “insanity”	Alzheimer's disease Parkinson's disease dementia

## CONCLUSION

For medical researchers and practitioners, the accuracy of jargon used in biomedical literature that is consulted for practice and cited for publication is essential to avoid errors in communication between experts within a field of study. “Tortured phrases”, or non-sensical text derived most likely from paraphrasing well-known terms or established jargon, can distort the accuracy of the medical literature. Depending on the journal and editor, such errors may be perceived as minor, or as issues of greater integrity-related concern. In this brief overview, five examples are demonstrated from five fields of study (cancer [9], cardiology [10], immunity [11], neurology [12], and nutrition [13]), one of which was retracted, with the partial reason being the existence of “tortured phrases”. Editors thus need to screen papers very carefully prior to publication.

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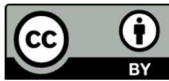
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