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# Indian Journal of CRITICAL CARE MEDICINE

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# It is not just the work - It is also the words

Murali Ramaswamy

## Definition of Plagiarism

Plagiarism is an ethical issue. I personally became aware of the concept of plagiarism seven years ago when I was a pulmonary fellow. A medical student was rumored to have been suspended because of an essay that had one overlapping sentence structure to that of a referenced citation. I was told that this constituted plagiarism. While details on this specific case were sketchy, many students in our university community were shocked at the severity of the punishment in relationship to the degree of the purported crime. In discussing this event, someone told me that if six consecutive words were the same as an earlier publication and there was no reference to it in the quotation, it constituted plagiarism. I quickly realized I had learned an important principle in research ethics; that language in scientific manuscripts is intellectual property and any reproduction of that without due recognition was fraudulent practice.

*Wikipedia* states that the word “plagiarize” stems from the Latin word “*plagiarius*” which means “to plunder or from “*plagium*” which means to “kidnap”. The English dictionary Merriam-Webster explains “*plagiarize*” as “to steal or pass off someone else’s ideas as one’s own”. It also defines it as “literary theft”. In the United States, the Office of Research Integrity (ORI) has oversight on research funded through the National Institutes of Health (NIH); the major sponsor of all biomedical research. Therefore ORI’s two part definition of plagiarism is

noteworthy. The ORI does not consider authorship or credit disputes as part of plagiarism. Instead, it considers plagiarism to “include both the theft or misappropriation of intellectual property and the substantial unattributed textual copying of another’s work”. ORI explains theft of intellectual property as “the unauthorized use of ideas or unique methods” and copying as “unattributed verbatim or nearly verbatim copying of sentences and paragraphs which materially mislead the ordinary reader regarding the contributions of the author”. The definition suggests that both tests can be met and the label of plagiarism avoided if authors a) use appropriate citations when expressing ideas that belong to others; and b) write in language that is uniquely one’s own. Software tools such as the freely available “WCOPYFIND” objectively quantify copying. This software allows one to define a number of parameters in an effort to detect plagiarism. One key recommendation by the software is that matching phrases beyond six consecutive words define plagiarism.<sup>[1]</sup>

## Epidemiology of Plagiarism

Plagiarism is likely an age old practice. However, there are number of pointers to suggest that the incidence and the recognition of plagiarism have increased in the past one or two decades. For instance, 64.4% of the 545 pub med citations for the search word “plagiarism” have occurred since 1997, compared to 28.3% for the period 1987-1997 and 3.7% for the decade prior. Another recent problem I have encountered on a sporadic basis in hospitals that have converted to electronic medical records is copying and pasting of progress notes written by other providers. According to many of my colleagues this too constitutes plagiarism. It is hard to ignore the fact that the increased reporting and recognition of plagiarism has corresponded to the development of the internet and online publications. I personally believe that there are

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two factors that currently make copying easy. One is the fact that access to information is very easy. The second fact is that this information is prone to manipulability. This is because all one has to do is “copy and paste” and in crafty hands “edit” some words or sentences as window dressing.

### Risk Factors for Plagiarism

Research on identifying the risk profile(s) of those who plagiarize is scanty. In a study on the prevalence of plagiarism amongst Croatian medical students there was no correlation between gender, subject source or complexity on the plagiarism rate. In contrast, students who performed well in a medical informatics class prior to the study period showed lower rates of plagiarism.<sup>[2]</sup> One question we have to ask ourselves is whether there is an increased incidence of plagiarism in non-English speaking countries or certain cultures. Although there is no study that compares the rates of plagiarism in different countries, a recent discovery of massive plagiarism by 15 Turkish physicists has led to the suggestion that a combination of poor grasp of the English language and cultural factors that minimize the seriousness of plagiarism are contributory factors towards plagiarized articles from non-English speaking cultures.<sup>[3]</sup> Indeed, one of the accused Turkish physicists vehemently justified his actions as follows, “for those whose mother tongue is not English borrowing beautiful sentences from other studies on the same subject...is not unusual”. Furthermore, he contested that originality of scientific content should outweigh criticisms about language misappropriation.<sup>[4]</sup> While one can sympathize with the handicaps in language faced by the Turkish physicists it is important to remember that it is the responsibility of the scientist to meet ethical standards established by the journals or societies in which they intend to publish. Indeed, the example from Turkey highlights a lack of understanding that scientists are also writers and that published language is as proprietary to a scientist as discovery is.

### Plagiarism in India

A search on PubMed for the key words “plagiarism India” shows consistent citations on the topic only since 2003. However, a pediatrician in India recently told me that an article he had read over 15 years ago on a certain viral infection in a national journal had many sentences and paragraphs copied verbatim from a World Health Bulletin report. Some of my medical school friends

practicing in India believe that plagiarized articles appear in Indian medical publications on a consistent basis. In a recent review, Gitanjali has suggested that academic dishonesty including plagiarism is widely prevalent in Indian medical schools.<sup>[5]</sup> In a correspondence to the editor, Brathwal mentions that there is a “phenomenal growth” of plagiarism in India.<sup>[6]</sup> Recently, one of India’s best known scientists’ Dr. Raghunath Maselkhar resigned as head of a government appointed committee looking into intellectual property patent laws on medicinal drugs.<sup>[7]</sup> This is because parts of his report supporting the presence of multi-national pharmaceutical companies was believed to have been plagiarized from a British think-tank report that was funded (in part) by the very companies he wrote in favor of. Taken together, the above evidence suggests that plagiarism is perhaps common in Indian science.

Misperceptions about the seriousness of plagiarism is probably an important contributor to the high incidence of plagiarism in India. In her review, Gitanjali cites that 20% of medical students in India do not perceive copying during exams as unethical which contrasts to only 2% of student doctors in the United Kingdom who believe copying is unethical.<sup>[5,8]</sup> Indeed this observation would be consistent with the recent *Nature* report that suggests that the seriousness of plagiarism is misperceived in many cultures.<sup>[3]</sup> The resignation of Dr. Maselkhar following charges of plagiarism suggests that a lack of leadership in research ethics in India. Indeed, there is a lack of clear consensus statements regarding plagiarism by research bodies in India. A search for the word “plagiarism” on the websites of the Indian Academy of Sciences (IAS) and Center for Scientific and Industrial Research (CSIR) (<http://www.ias.ac.in> and <http://www.csir.res.in/csir/home.asp>) resulted in “zero” hits. A similar search on the website for the Indian Council for Medical Research (ICMR) website (<http://www.icmr.nic.in>) resulted only in external links on scientific writing but no position statement from ICMR itself.

The Indian Journal of Medical Ethics (IJME) is perhaps the only publication with a guideline regarding plagiarism. Their 2000 position statement declares plagiarism as unethical but unfortunately does not elaborate on the subject.<sup>[9]</sup> Indeed, there is a growing sense of frustration within the Indian academic community about the level of academic dishonesty. This has resulted in a number of

them suggesting the need for specific bioethics regulatory body in India.<sup>[5,6]</sup> Therefore, there is a need for urgent leadership to prevent plagiarism in India.

### Approaches to Tackle Plagiarism

There are many nuances and specifics about plagiarism. Some of these are the allowance of paraphrases in situations when employment of one's own unique language is not possible or inappropriate. One other is the lack of requirement for a citation when writing from common. However, further details on all the nuances and specifics of plagiarism are beyond the scope of this editorial. The most important step in tackling plagiarism is to not only raise awareness but also educate researchers about the concept and details of literary proprietary. Next, punitive standards need to be established for those who plagiarize. These are best done in my opinion through comprehensive position statements that define, explain and establish punitive guidelines regarding plagiarism.

I believe that efforts to stem plagiarism are perhaps best undertaken by national research bodies because of the vital role they play in leadership regarding ethical issues. Medical schools should move beyond the focus on clinical medicine and impart research education. However, the bureaucratic and time consuming nature of these large agencies suggests that alternative local resources are required to immediately tackle plagiarism. One such resource to tackle plagiarism immediately is journals and professional societies. This can be accomplished through publication of a policy statement on the journal's website and through programmed sessions in annual meetings. Technological approaches that a journal could undertake are employment of software programs available to detect plagiarism. One interesting and upcoming software is *CrossCheck* launched recently by a group of over 2000 publishers called *Crossref* (<http://www.crossref.org/crosscheck.html>) in a collaborative effort with plagiarism detection software pioneer *iParadigms* (<http://www.iparadigms.com>). With this system each time a manuscript for publication is submitted the computer software will "cross check" the manuscript for potential plagiarism by performing a web search against a database of prior publications. The computer then identifies potential plagiarized contents and submits to the editor for a final decision. An interesting aspect of this program is that submitting authors can test their own

manuscripts for originality and evidence of inadvertent plagiarism.<sup>[10]</sup> I would strongly recommend the journal to join in this service when available and feasible. In addition, authors should educate themselves about plagiarism. A simple search for "plagiarism" on [www.google.com](http://www.google.com) yields a wealth of information that should be of immense benefit to anyone submitting a manuscript.

### Conclusion

The key concept to realize is that scientists possess intellectual property over the written language as much as they do over their discovery or invention. Violation of this key principle constitutes 'literary theft' and thereby plagiarism. The consequences of plagiarism are severe in many countries. There is evidence to suggest that plagiarism is common in many non-English speaking countries and in India. Factors contributing to plagiarism include ineffective skills in English language, misperceptions about the importance of ethical research, ineffective policies defining plagiarism and lack of punitive standards for plagiarism. Nevertheless, plagiarism is a worldwide phenomenon and is seen even in sophisticated research communities. There is an urgent need in India for journals and professional societies to step up and establish comprehensive guidelines regarding plagiarism. Utilization of sophisticated computer software programs can be of help to both authors and journals in preventing plagiarism. In the interim, every author should educate themselves about plagiarism.

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