

## Plagiarism: The *bête noire* of Scientific Communication

*"The only thing worse than quoting me, is not quoting me"*

Oscar Wilde

The basic premise of scientific writing remains, that whatever is stated is considered to be the truth, until proved otherwise. Scientific communication is said to be an "implicit contract"<sup>1</sup> between the author and the reader; a contract of faith and a promise of honesty.<sup>1,2</sup> When an author breaches this contract, he/she is guilty morally and also of perpetuating a false belief or knowledge. Needless to say, wilful promotion of false belief or knowledge is an anathema to the very essence of science. Plagiarism is one such major scientific misconduct where misappropriating of ideas or words occurs without giving credit to the originator.<sup>1,3</sup>

According to the *Oxford Dictionary*,<sup>4</sup> the word 'plagiarism' is derived from the Latin word '*plagium*' which means 'kidnapping'. In the English language, this word was introduced in the early seventeenth century by Ben Jonson, a dramatist and playwright.<sup>5</sup> When Samuel Johnson, the famous English lexicographer, first published *A Dictionary of the English Language* in 1755, the word 'plagiary' was defined as "a thief in literature: one who steals the thoughts or writings of another" and "the crime of literary theft".<sup>5</sup> Presently, there are various definitions of plagiarism.<sup>1,6,7</sup> The most expansive one is given by the World Association of Medical Editors:<sup>7</sup> "*Plagiarism is the use of others' published and unpublished ideas or words (or other intellectual property) without attribution or permission, and presenting them as new and original rather than derived from an existing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. The intent and effect of plagiarism is to mislead the reader as to the contributions of the plagiarizer. This applies whether the ideas or words are taken from abstracts, research grant applications, Institutional Review Board applications, or unpublished or published manuscripts in any publication format (print or electronic).*"

Perhaps the commonest form of plagiarism is 'inappropriate paraphrasing'.<sup>1</sup> The plagiarist purloins text, rearranges it and boasts of the transformation without even acknowledging the original. One may be accused of plagiarism even after the source has been cited. This could occur when phrases or sentences are copied as such from another article and not enclosed within quotation marks.<sup>1</sup> A subtle form of plagiarism is called 'self-plagiarism',<sup>1</sup> also known as 'auto-plagiarism'.<sup>8</sup> Here, an author comes up with genuinely different data/results, in different subject sample but reuses portions of text from his/her previously published article without due citation.<sup>1,8</sup> Infringement of copyright can be

included in this form of plagiarism. Although, doctrine of 'fair use' protects the author to reuse a few lines from the text, but to copy large portions may infringe copyright laws.<sup>1</sup> While 'stealing from self' appears oxymoronic, the impropriety lies in a false impression of novelty in work. The concept that one can steal from oneself is not well characterised and still debatable.<sup>9</sup>

It appears that the menace of plagiarism has grown substantially over the last decade.<sup>10-12</sup> An informal survey conducted by the Nature Publishing Group, revealed that a particular journal had rejected almost a quarter of the accepted manuscripts for reasons pertaining to various forms of plagiarism.<sup>13</sup> While searching extensively for such acts, an editor from Europe, during a 2-year period, found plagiarism in approximately 30% of accepted manuscripts of a peer-reviewed journal.<sup>14</sup> Another important aspect which is impossible to measure is the rampant practice of brazenly lifting slides or even information, for presentations at seminars/ symposia/ conference without giving due credit.<sup>15</sup>

With the advent of computers and internet, talks, books, journals, databases and libraries are now available at the click of a mouse. Advances in software have resulted in powerful search tools and word processing software which makes creating 'new' documents by 'copy' and 'paste' a child's play. An editor of *Nature* wrote "students trained today have grown up in an environment where access is taken for granted and attribution only loosely enforced".<sup>16</sup> This power of technology is also being utilised by the authorities. Apart from journal editors, universities are also increasingly resorting to routine use of software to detect plagiarism.<sup>17</sup> It should be stressed that plagiarism software are not without problems. It has been suggested,<sup>8</sup> though not without concern,<sup>18</sup> that occurrence of six exact words consecutively should be declared plagiarism. An author<sup>19</sup> blogged in *Nature* that one plagiarism detection software listed four genuine independent publications as unverified duplicates. Administrators of plagiarism detection software have highlighted that software are fallible and have stated "We are not the judge or jury of plagiarism. It still needs a human eye to look at the results".<sup>17</sup>

In part, plagiarism is borne of an incessant pressure to 'publish or perish'.<sup>1</sup> Unfortunately, in the present academic reward system, it is the quantity and not the quality of publications which usually

forms the basis of future grants/ positions.<sup>16</sup> Further, to have one's work recognised, it has become imperative to publish in English as it has emerged as the *lingua franca* of scientific communication with the widest readership. It is known that scientists from non-English speaking world may copy verbatim simply because the previously published text describes their thought better and they find the accuracy and clarity difficult to resist.<sup>20</sup> Cultural differences may also contribute to the problem as the authors may not be aware of what constitutes plagiarism and that it is inappropriate. Lack of awareness, combined with poor linguistic skills and a complete absence of training in this regard leads to blatant plagiarism.

Plagiarism has been termed as "a crime with no victims".<sup>8</sup> However, plagiarism can have serious consequences for the perpetrator. At the least, plagiarist suffers infamy and often punishment has been meted out. Recently, a university medical dean resigned after plagiarism was reported by students in his speech.<sup>21</sup> The Committee on Publication Ethics<sup>22</sup> has devised a set of detailed, easy to follow flowcharts to help editors in dealing with suspected plagiarism. Rarely, when matters have reached courts, the decisions of institutional committees have been upheld.<sup>23</sup> Sir Iain Chalmers<sup>24</sup> has opined that "unless perpetrators face greater sanctions the problem is unlikely to go away".

In India too, this menace is viewed seriously<sup>25,26</sup> and when detected by editors,<sup>27-29</sup> appropriate action was taken.<sup>30</sup> The Medical Council of India and the Indian Council of Medical Research have both laid down guidelines for medical research but it is felt that these guidelines need refinement<sup>26</sup> and "are too general to bring a plagiarist to book".<sup>27</sup> Recently, an action plan to combat this plague has been proposed.<sup>26</sup> The late Professor Autar Singh Paintal, FRS, our former Director and Editor-in Chief, a stalwart in the field of medical science, foresaw the malady of scientific misconduct and founded in 1986, a 'Society for Scientific Values' with the objective "to promote integrity, objectivity and ethical values in the pursuit of science".<sup>31</sup>

This malady of plagiarism needs to be nipped in the bud. The present generation carries the responsibility to 'pass the baton' to their students, who are in their formative stage and would occupy positions of responsibility in future. Failure to censure students early in their career, during departmental seminars or while preparing research grants might embolden them to resort to misadventures even in thesis/dissertations and research papers. Documents detailing all aspects of plagiarism are available at websites of learned societies of medical editors.<sup>7,32,33</sup> The 'Office of Research Integrity'<sup>1</sup> documents 27 simple to

understand guidelines on what constitutes plagiarism and how to avoid it. There is a crying need to train students, authors and even editors<sup>34</sup> on pertinent issues related to ethics in publication including plagiarism.

In conclusion, plagiarism should be frowned upon. Academia should be aware about the evils of plagiarism and the grave consequences. With advances in technology, it will be easier to commit as well as detect plagiarism. Regulatory policies need to address the issue of misconduct in research in more detail and exemplary punishment administered.<sup>27,28</sup> Like all human frailties, curing the malady should begin within the individual but external regulation may be necessary to curb this vulnerability.

Over a century ago, Oscar Wilde had sagely advised, "While one should always study the method of a great artist, one should never imitate his manner. The manner of an artist is essentially individual, the method of an artist is absolutely universal. The first is personality, which no one should copy; the second is perfection, which all should aim at."

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