

## Threshold for Plagiarism

*Published in the IEEE Engineering in Medicine and Biology Magazine vol 29(2)  
March/April 2010*

The editorial on plagiarism (“*Don’t Play It Again, Sam*”) in the September/October issue of *IEEE Engineering in Medicine and Biology Magazine* hit on several subjects for which I have much interest. I have served for many years on Student Honor Boards at the University of Maryland, and student dishonesty cases mostly concerned either exam cheating or plagiarism.

I found myself sympathetic towards freshmen accused of plagiarism when it was clear that high school teachers had encouraged them to include verbatim excerpts in their own papers, and no instructor at the University had yet explained to them what constituted plagiarism. On the other hand, upper class students who plagiarized certainly should have known better, and, consequently, they were given grades of “XF” in the offending courses (“F” for failure and “X” indicating dishonesty). They could have the “X” removed from their transcript by attending an Academic Integrity Seminar. Thus, the emphasis for the punishment was to teach them to modify their behavior for the better. Once the seminar was successfully completed, they could retake the course if they wished. The “F” would still remain for the first time they took the course.

I think that plagiarism needs to be defined differently for science and engineering compared to the arts. In the arts, words are used to convey feelings or particular interest in the arrangement of words; science and engineering use words to describe products or processes. It is difficult to achieve clear and adequate descriptions of products or processes without using the same words as previously used. The value of these words lies in rational interpretation rather than irrational emotion. Therefore, I would want to see lines from a poem included in quotation marks and given an acknowledgement of their source, but I would want neither quotation marks nor source attribution for the description of a hemostat.

It’s similar to brand-name usage. Some brands, like “Jello”, have become part of the common use vernacular. Other brands have not because their owners have taken great pains to protect the integrity of their brands. Once they transition into common usage, brands are no longer considered exclusive. Scientific and engineering descriptions usually carry with them the assumption of common usage.

That’s why one must use duplication-search software with caution. There is no clear limit as to how many words can be duplicated before it is defined as plagiarism. Identical strings of two, three, or more words are not at all rare in descriptive writings. Identical strings of one hundred words would clearly indicate plagiarism. Somewhere between these limits is the threshold for plagiarism. In the arts, an identical pair of words not in quotes could well be plagiarism. It is hardly ever so in science and engineering.

There are other issues, too, that are more difficult to detect. Figures and drawings can be plagiarized as well as words. How much different does one drawing have to be from another in order that the two not be considered legally identical? My publisher says 40%, but it is really hard to recognize a 40% difference in a drawing. This is especially true, again, for a common-use, vanilla-type drawing.

So, it is good that we don't look too closely at the issue of plagiarism in the *IEEE Engineering in Medicine and Biology Magazine*. There is only quicksand on the path to the muck, and it is always better to begin with an assumption of honesty rather than a suspicion of guilt