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How Often Do You **Plagiarize** in Class?

BY SIMON BOXALL

Plagiarize: To "[t]ake and use as one's own (the thoughts, writings, inventions, etc., of another person); copy (literary work, ideas, etc.) improperly or without acknowledgement; pass off the thoughts, work, etc., of (another person) as one's own" (*Shorter Oxford English Dictionary*, Oxford University Press, 2007).

There—I have plagiarized before I even start my article—or have I? Apparently not: by the word's own definition, I have acknowledged my source and have made clear that they are not my own words.

Plagiarism, or rather avoiding it, sits as one of the core morals of science and research. Stealing a colleague's ideas or findings to present as one's own is comparable to shoplifting or housebreaking. The scientific foundation of any field, not just oceanography, is honesty. It is not surprising, then, that we put extensive effort into getting that message across to our students from the outset. At Southampton, they have to read and sign a declaration on plagiarism as they start the degree course, and they are given extensive instruction on how to properly reference their sources of information. We have, as do many universities, access to Turn It In software, which checks a student's digitally submitted work against both published material and other student submissions.

Over the years, I have come across some extreme examples of student

plagiarism. One evening I was plowing through a pile of 100 scripts for a firstyear field practical—not the most exciting pastime. I realized how tired I was getting when, having taken a five-minute break for more strong coffee, I felt déjà vu with my next script. Thinking I was cracking up, I started marking it again. It was only as I glanced across to the already marked pile, I realized I had just marked the work-but with a different name on the front. Student B had literally photocopied Student A's script, changing just the name. Even more stupidly, they had handed in their work together so, surprise, they were marked togetherand I thought our students were supposed to be bright! It was a clear and serious breach of the rules and was dealt with accordingly. At the other end of the scale, I had to defend a number of oceanography students accused of plagiarism in a course they took in another department. The professor in question was furious that all 10 had, according to Turn It In, colluded on their essay. It transpired that the essay title was three lines long and our students, as we instruct them to do, had put the essay title at the top of their submission. Adding the title was sufficient to trigger the software's alarm, and begrudgingly, my over-zealous colleague backed down.

These stories are two extremes. In their first year at university, it often takes students a while to move from the rote learning school of copying tracts of texts from books and the web to phrasing the work in their own way. We need to be realistic when applying the rules and help students develop their science writing skills. Eventually, by final year, they will be creating their own research and findings in projects and dissertations, with their own interpretations and words.

But what about us, their professors? We all do research and are mindful to ensure that our work is clearly shown to be ours, and other third-party material or observations are duly credited. We also want to ensure that no one uses our work as their own. However, do we follow this rigor in our lectures?

Before Microsoft PowerPoint, in the time of 35 mm slides, we might have had the luxury of a reprographics department, or failing that, more commonly we used hand-drawn overhead transparencies or blackboard chalk sketches. I had many multicolor overhead pens varying from thick to thin, and spent hours designing complex figures, which didn't make up for the fact that I went into science rather than art for good reason. Add to that my neat writing skills, where the Baltic Sea was translated in reading to an erotic romp in Scandinavian fjords (my a's always looked like x's)... the arrival of the digital projector was much welcomed by all. We all made use of occasional diagrams from "Pond and Pickard" or "Strickland and Parsons,"

photocopied in black and white crudely onto overhead, but rarely did we give due credit as the source was often evident from the header at the top, and the page number in the bottom corner. This use is legal for education purposes in the UK and the USA (though credit should be given), but the precise details in both countries are longwinded and not to be copied, of course. Sense does prevail.

Today, computer-generated lecture slides are dynamic and exciting, and the standards expected by students are high. Quality graphics are good for the student experience and make explaining difficult concepts much easier for the educators. But the demise of quick, hand-sketched diagrams makes lecture preparation far more complex. Does one spend four hours trying to create a diagram of Atlantic Ocean circulation, or is it easier to do a Google Image search and in a few seconds cut and paste one of the 50 perfect options available?

This problem is one suffered primarily by the educational side of our profession. For a journal publication, we would use our reprographics department to generate original diagrams and illustrations (or spend that four hours). Where third-party figures are used, we would seek copyright permission with full referencing. But, we only produce two or three journal articles a year-we produce many more and varied lecture notes and handouts. Not using existing material in our lectures also misses out on hundreds of fantastic animations. many of them interactive, that really bring science to life. Take a look at sites such as http://www.coastal.udel. edu/faculty/rad/linearplot.html, where Robert Dalrymple from the University of Delaware shows the motion of water

particles under surface waves.

We all set out to give credit to borrowed figures, but it only takes one slip, or someone copying a copy of someone else's online PowerPoint slide and then incorrectly crediting it, and we are into plagiarism. It is amazing how many of us do this-it is almost impossible to find a physical oceanography lecture without a copy of at least one of Matthias Tomczak's diagrams, recognized sometimes only by the fact that they are so common (thank you, Matthias). I realized how much of an issue this misattribution can be when I started research for this article and Googled "North Atlantic Sea Surface Temperature Image." One image that appeared numerous times was the one shown here, from the OCCAM model, produced by Andrew Coward at the National Oceanography Centre in Southampton. I cite this figure, as I can give due credit and have cleared the copyright with its originator and owner. I used it on a website for Cape Farewell (http://www.capefarewell.com) five years ago to describe some of the structure we were investigating in the project, with the correct acknowledgements. It was picked up from this website by a number of users worldwide, spread virally, and in a number of places it is now ascribed to either me or the Cape Farewell projectplagiarism by proxy? It is through errors like this one, beyond my control, that often makes me nervous when people ask to borrow or use my lecture PowerPoint slides. I'm not so concerned that someone will use my original material; in fact, I'd be flattered. I'm more concerned that other material I borrowed is incorrectly acknowledged. I'd be more embarrassed if someone thought I had



OCCAM sea surface temperature model output for the North Atlantic. Figure courtesy of Andrew Coward, National Oceanography Centre, Southampton

plagiarized their material than annoyed if someone else plagiarized mine.

We can easily find ourselves guilty of plagiarism, a misdemeanor for which we discipline our students, and in the digital age, we need to be extremely cautious that we set a good example. To err on the side of caution and only use your own pictures and diagrams is one way of solving the problem, but not one that is good for the students or our time. When you next review your lecture notes, see if you can determine the true origin of all your material.

As I finished this article, I did submit it to *Turn It In*, and it failed. The reason? The opening sentence was identified as a direct copy from the *Shorter Oxford English Dictionary*. A fair cop, but at least I owned up to it at the end of the quote. I'll try better next time.

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