The other day, my daughter, who was once trained as a philosopher, explained performative utterances to me. They are statements that, by the very act of carrying them out, become true. If you want a trivial example, read out loud the phrase: 'I am speaking at this moment.' Performative utterances can be more serious. The priest who pronounces that a man and a woman are now married, changes the status of that man and woman just by the words he speaks. A celebrity who, just before she swings the ritual bottle of champagne, says 'I name this ship Titanic' has indeed done just that.

The opposite of performative utterances, performative contradictions, also exists. They are statements that contain their own refutations. A man who says 'I cannot speak' is a straightforward example. Often, they are more subtle. I remember Tony Blair, the prime minister of the UK, saying that 'he was genuinely sorry' when one of his cabinet ministers had resigned. If he had not used the word 'genuinely', I would have had no difficulty in believing him. As it was, that extra unnecessary word made one doubt the sincerity of the sentiment he was expressing.

Doctors do not often get to make performative utterances. Saying that you think a patient is going to recover does not ensure his survival even if the patient’s relatives sometimes believe that it does. But although our statements do not become true simply by the act of saying them, we are in the enviable position of being members of a profession with a reputation for truthfulness. The same cannot be said for politicians or lawyers. And, in my experience, the reputation is deserved. There is a professional culture of truth telling in medicine and doctors do not, for the most part, lie to their patients or their colleagues.

There was a time when scientists had a similar reputation. But nowadays, at least in some countries, there is a view that scientists cannot be trusted to give honest and straightforward accounts of what they do and that they need to be policed. The USA, for example, has an office of research integrity and the UK has been strongly criticized for not having something similar. The possibility of scientific fraud bothers editors of journals too. The Journal of Clinical Investigation, a high impact factor, open access journal, recently published an editorial entitled 'Stop misbehaving'. You can read it at http://www.jci.org/cgi/content/full/116/7/1740. It was written by the executive editor following the receipt of manuscripts where Adobe Photoshop had been used to improve the appearance of the western blots. Apparently, this software makes it easy to clean up the background, erase duplicate bands and construct a composite image by cutting and pasting.

What surprised me about the editorial, however, was its author’s conviction that, despite the amount of time she spends dealing with misconduct, researchers are, by and large, an honest bunch. She believes that it is just a few rotten eggs who are causing the
trouble. Perhaps she is right and there is a sharp distinction between a tiny minority of researchers prepared to commit fraud and the rest of the scientific community whose behaviour is invariably exemplary. But I’m doubtful. Isn’t it more likely that these cases are the tip of an iceberg?

Geoffrey Rose, a cardiovascular epidemiologist, is remembered for his explanation of how an individual’s risk of disease depends crucially on the way in which the population at large is exposed to the causes of that disease. Where levels of exposure follow a continuous distribution, which for the most part they do, the number of people at high risk is powerfully determined by the average level of exposure for the whole population. So the prevalence of hypertension can be predicted from the average blood pressure in the community; or the prevalence of alcohol dependence by how many drinks the average person consumes each week. Rose even reckoned that the amount of violent crime in a society was influenced by the amount of aggression that the average person displays, or is prepared to tolerate, as he or she goes about their everyday business.

If we apply the idea to the reporting of biomedical research, we need to look at our own behaviour as doctors and researchers and examine what we are prepared to let pass in the behaviour of our colleagues and collaborators. These are the things, if Rose was right, that set a standard that determines the quantity of more extreme forms of dishonesty. And the corollary is that if we want to reduce scientific misconduct, we would do better not to emulate the USA and set up an office of research integrity to investigate the extreme cases, but to make sure that the way in which we report our own research is beyond reproach.

I’ve worked in the editorial offices of two biomedical journals and I guess that I’ve read several thousand manuscripts submitted for publication. Out of these there have been a handful of cases of fabrication, falsification or plagiarism. But I’ve encountered hundreds of lesser examples of dishonesty. The sort of thing I mean is the retrospective case-series presented as a prospective investigation; the cross-sectional survey labelled as a cohort study; tabulation of percentages when the total number of people studied is less than a hundred; controls glibly described as matched when, in fact, they were selected haphazardly from colleagues in the laboratory. It is often hard to know whether these should be classified as deliberate efforts to mislead, naïve attempts to give poor methods undeserved credibility or just slipshod work.

You may think that this sort of thing does not matter much: that a critical reader would not be fooled. Rose, I believe, would have disagreed. Surely he would have reminded us that if we tolerate minor misdemeanours in the many, a few will get away with murder. Papers in biomedical journals can never have the self-validating status of the performative utterance. But isn’t that the direction in which we ought to be heading?

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