Miscellaneous commentary

Research sabotage in Science (*November 2010*)

Scientists are supposedly objective but a recent case in Michigan USA sheds a worrying light on a dark reality of research. A former post-doctoral researcher at the Ann Arbor campus of the University of Michigan has been found guilty of changing the experimental results of a PhD student who worked in the same lab; the charge was malicious destruction of personal property, which in the USA usually means vandalism. The postdoc claims his otherwise inexplicable actions stemmed from internal pressures and that he intended to slow down the student's work (Maher, B. 2010. Sabotage. *Nature*, v. **467**, p. 516-518; DOI: 10.1038/467516a). At first the student believed that she was making mistakes herself, but then realised some unknown person had swapped labels on her samples. When she aired her suspicions she was told she was being paranoid and going through a bad patch in her studies. She persisted despite such resistance, until her supervisor alerted the university's security officers. They launched an investigation into the student herself! After two interrogations and a lie-detector test, the university police installed cameras in the lab, which led to the culprit being caught red-handed.

Research misconduct is notoriously difficult to apprehend, institutional authorities often balk at clear evidence and end up in what amounts to a whitewash to protect the institution's integrity. Daniele Fanelli of the University of Edinburgh UK has made a study of malpractice in science, ranging from this kind of wilful derailing of a research project to withholding information and vindictive reviews that are rarely considered misconduct. She has found that up to 30% of scientists admit (anonymously) to lesser but still baleful issues, and a staggering 70% say they have witnessed deliberate damage to fellow researchers. This malice that dare not speak its name, even were it to be rarer than Famelli has discovered, is a blight that should be recognised by institutional authorities rather than ignored or actually turned against the complainants.

Crowd Science (*November 2010*)

Malice and/or mendacity are not the sole ways to get on unfairly. A mild form is somehow to join a team, preferably with a role that involves little actual work. 'Brownie-points' in the promotion stakes are guaranteed nowadays by authorship in peer-reviewed journals: senior or sole author is best; next being in a small authors list in a journal that demands an account of the role of each; but even being an also-ran or last of a great many can still go nicely on your CV. Does one have to have some *je ne sais quoi* to be accepted by a team? Well it depends on what the *quois* might be. Some might say seniority or prestige as that helps the paper to be accepted; others that having the only accessible scientific machine for the topic more or less guarantees a place; but is it possible merely to lurk in the corridor and still get on board?

The vast majority of author lists are surely completely honest, but there is a definite tendency for them to get longer as time goes by. During the days when analysis of lunar rocks from the Apollo Missions was booming a team of geochemists – the Lunatic Asylum – was formed at the California Institute of Technology (incidentally, in 1920 Caltech changed

its name from Throop University – after Amos Gager Throop, former Mayor of Pasadena). Its founder and leader was and remains Gerry Wasserburg, and occasionally papers were published under the anonymity of the group, so it is hard to tell just how many of them were involved. The Atlas experiment at the CERN Large Hadron Collider has given rise to a paper authored by 230 individuals from 169 institutions (The ATLAS Collaboration *et al*. 2008. The ATLAS Experiment at the CERN Large Hadron Collider. *Journal of Instrumentation*, v. **3**, doi: 10.1088/1748-0221/3/08/S08003), but that consortium does not hold the record. As far as I know, the biscuit is taken, for the moment, by Members of the Genetic Investigation of ANthropocentric Traits (GIANT) consortium (Allen, H.L *et al*. 2010. Hundreds of variants clustered in genomic loci and biological pathways affect human height. *Nature*, v. **467**, p. 832-838) whose title is self-explanatory. Of its 7 pages, 3 are taken up by the names of its 287 authors, their 203 institutions and a not inconsiderable number of funding agencies. At just under 3000 words (not including the names and affiliations of the authors), each author on average has just over 10 words to their name. Interestingly, 10 of the authors (the first 6 and last 4) 'contributed equally to this work' – how is not specified, and 4 authors are each affiliated with 5 institutions. By comparison, geosciences is definitely little league as regards collaborative ventures, but opportunities there surely are.