Introduction

We hope and believe that most researchers and nearly all editors, with the assistance of peer reviewers, strive hard to make sure that data published in academic journals are accurate, reproducible and comprehensible. Those tasks are difficult enough without having to be on guard against scientific and publication misconduct.

Every year a handful of shocking examples of dishonesty by researchers comes to light. At the time of writing this introduction, we learn that an investigative committee in The Netherlands has found evidence of fraud in 'several dozen' publications by a professor of cognitive social psychology between 2004 and 2011, claiming that it is one of the biggest cases of scientific fraud on record. This revelation follows hard on the heels of the exposure of a US professor of anaesthesiology, an international authority on multimodal anaesthesia, at least 21 of whose papers have been found to contain fabricated data.

Fraud and fabrication of this degree is likely to be discovered eventually, so some argue that corruption of the scientific record and harm to patients and the public health is limited. However, misconduct in research is, more widespread and more subtle than these particularly egregious examples. Of great concern, because they are so difficult to detect, are such issues as selective reporting of data to support a prior hypothesis; biased discussion; conclusions –especially in abstracts– which do not properly reflect the data; authors putting their names and, therefore their authority, to ghost-written articles; failure to disclose conflicting interests which might have affected the authors' conclusions; the temptation for editors to favour so-called 'positive' findings; and plagiarism and the tedious but frequent arguments between co-authors regarding priority. In smaller scientific communities, where English, as the language of today's mainstream science, is not the mother tongue, and where the pressures to publish for research/academic advancement are intense, the temptation to resort to these questionable research practices may also be greater. Lack of proficiency in English and of access to relevant literature may also be an important barrier to learning about responsible conduct of research and good research practice.

Organisations concerned with scientific misconduct, such as COPE (the Committee on Publication Ethics) and CSE (the Council of Science Editors), receive numerous allegations of misconduct less serious than falsification or fabrication of data. Cumulatively the harm may be greater than that provoked by the more obvious and widely-reported 'bad apples'.

Many resources are available to readers and editors to assist them with identifying misconduct and advising them how it should be handled. Ultimately, of course, it is for those who employ or otherwise provide funds to the researchers concerned to investigate allegations and make their findings known. Sometimes they are reluctant to do so, fearing that a determination that an academic has committed research or publication misconduct may reflect badly on the institution itself.

This publication addresses conflict of interest as a factor that may have a significant adverse influence on the conduct of research, as well as its reporting and publication. Financial conflicts of interest have become so complicated, in their linkage to contemporary economic terminology,

that the ICMJE (the International Committee of Medical Journal Editors) felt impelled to publish a glossary of terminology related to conflict of interest and to translate it into major languages (available at http://www.icmje.org/coi_glossary.pdf) as guidance relating to its common form for declaring such conflicts. Non-financial conflicts of interest may be of even greater importance in smaller academic communities, where different forms of academic or research reciprocity may be primary sources for conflict of interest, rather than financial issues.

We hope that this publication by the Esteve Foundation will prove a helpful reminder to readers, authors and editors and be a useful resource to all those who are dedicated to preserving the integrity of the scientific record.

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