

**It's embarrassing to host labs at the forefront of science in the same country where presidential candidates are discussing whether the Earth is really 6,000 years old** page 581

## Integrity: how to measure breaches effectively

SIR — When suspected scientific misconduct occurs in a research department, it is likely that more than one person knows about it. In their Commentary, Sandra Titus and colleagues avoid the multiple-reporting problem in estimating the incidence of misconduct by surveying one person per academic department about suspected misconduct within that department. However, I question their extrapolation of these survey results, which they claim projects an alarming picture of under-reporting.

The authors derive a rate of 0.03 cases of suspected misconduct per department per year, but settle on a more conservative figure of 0.015. They then apply this rate to the total population of 155,000 researchers funded by the US National Institutes of Health (NIH), arriving at an extrapolated estimate of a minimum of 2,325 cases of suspected misconduct per year.

It is not appropriate to extrapolate from a sample of departments to a universe of individuals. Applying the 0.03 rate to a rough estimate of 10,000 departments with NIH funding, the authors could claim an extrapolated estimate of only 300 cases of suspected misconduct per year.

Titus and colleagues cite our earlier study (J. Swazey, M. Anderson and K. Lewis *Am. Sci.* **81**, 542–553; 1993) as methodologically weak in its estimate of misconduct incidence, because we allowed multiple reports within departments. The difference is that we neither aimed nor claimed to measure incidence, but rather to measure scientists' exposure to suspected misconduct.

The authors' extrapolation seems, like ours, to estimate exposure and not incidence.

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*Titus et al. reply:*

As Swazey points out, the earlier study (J. Swazey, M. Anderson and K. Lewis *Am. Sci.* **81**, 542–553; 1993) measured exposure to misconduct, rather than its incidence, when multiple respondents in the same department were reporting on the same case. The only circumstance in which exposure points to incidence is when there is only one observer per unit of observation. We therefore designed our study so that we sampled only one scientist per department.

Swazey's statement, however, implied that our results should be extrapolated only to departments. Her comment assumes that each observer is reporting all incidents in the department, rather than just those that he or she observed. This is unlikely even in a moderately sized department, let alone in a very large one. In a separate analysis (Gallup Organization *Final Report: Observing and Reporting Suspected Misconduct in Biomedical Research* Washington DC; 2006, table 8, see [ORI.hhs.gov/gallup08](http://ORI.hhs.gov/gallup08)), we showed that the incidence of reporting was not affected by department size, and so justified an extrapolation based on the number of research personnel supported by the National Institutes of Health.

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## Digital identifiers could keep up with authors' moves

SIR — *Litera scripta manet*: 'written words will endure'.

But not, it seems, in the case of the e-mail addresses of corresponding authors in the scientific literature.

To investigate the survival rate of author e-mail addresses, I sent an e-mail to the first one hundred corresponding authors of peer-reviewed papers whose addresses were returned in a Google Scholar search for 2007 and 2003. Roughly one out of five messages was undeliverable in 2008 (from 2007: 17%; 2003: 25%), indicating that those e-mail addresses were no longer valid.

E-mail addresses of scientists, particularly those without tenure, are volatile. Researchers leave behind a trail of obsolete e-mail addresses, phone numbers and fax numbers in the printed literature.

Unique digital author identifiers, as proposed in Correspondence (*Nature* **453**, 979; 2008), could be linked to up-to-date e-mail addresses and other contact information. This would increase the traceability of authors, facilitate scientific networking, and even speed up the peer-review process.

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## Schools in a third of Spain teach only in minority languages

SIR — Your Editorial 'Comédie française' (*Nature* **453**, 1144; 2008) argues that opposition by the members of the *Académie française* to including regional languages in the French constitution is disingenuous. But maybe these French

academics have looked south and seen what has happened in Spain, where "regional and minority languages, like endangered species", are considered to "merit protection" by several of the regional governments.

Today, it is impossible to obtain public or publicly funded education in Spanish, the common language, in the schools of about one third of the country, including Catalonia, Mallorca and Valencia. For example, teaching is conducted in Catalan or one of its variants in northeastern Spain, and in Gallego in Galicia in the northwest.

In the Basque country, despite the obscurity of the language, education programmes will be available only in Basque from 2009 and programmes taught partially in Spanish will be dropped.

This is an absurd situation, where in some places it is easier for Spanish children to study in English (for example, in the British Council schools) than in Spanish, the language that the Spanish constitution has set as the common official language.

It has stimulated prominent — and by no means all conservative — intellectuals, headed by the novelist Mario Vargas Llosa, to sign a manifesto calling to defend the rights of Spanish-speaking people in their own country (see <http://tinyurl.com/692c5g>, or in automatic-translation English at <http://tinyurl.com/5fvbrp>). *iQué horror!*

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