

frustrating,” says Wendy Lipworth, a sociologist who has studied the ethics of scientific review at the University of Sydney in Australia.

The most frustrating rookie offence, however, might be making contradictory assessments in a single review. Kulp says it drives editors “insane” when a reviewer submits highly critical comments with a recommendation to “publish as is”. Such reviews are most common when journals allow reviewers to submit one set of comments to the editor and another to authors. Contrasting reviews create problems for everybody concerned, says Parthasarathy. At best, they make the editor’s decision harder; at worst, the catty ones can start a feud. Reviewers should never write anything that would be damaging if their identity were revealed.

Reviewers should avoid overestimating their own capacity to review multidisciplinary papers: a lack of understanding could lead the reviewer to recommend that perfectly good work is rejected, says Erik De Schutter, a theoretical neurobiologist at the Okinawa Institute of Science and Technology in Japan. He is editor-in-chief for *Neuroinformatics*, where he has published a paper on his difficulties in getting theoretical modelling papers accepted in general neuroscience journals, many of which insisted on experimental data (E. De Schutter, *Neuroinformatics* 6, 253–255; 2008). Being qualified to make comments on only one part of a paper doesn’t rule out valuable contributions, but reviewers should be open about where their expertise lies. “I am a theorist, so quite often when I’m asked to review experimental papers, I make clear that I’m not qualified to judge the methods,” says De Schutter.

Whatever the content of the review, referees should be completely honest about their affiliations and who helped them to write it. Often, senior scientists invite graduate students or postdocs to write or contribute to the review. Most editors don’t mind this, as long as they are notified in advance and all contributors are listed. “Finding the proper mix of expertise among reviewers is a careful calibration on the part of the manuscript editor — one that can get screwed up if the reviewer is not who you think it is,” says Parthasarathy. Graduate students have every right to make sure that their mentors explain how they have helped.

Conflicts of interest may sometimes dictate that researchers decline a review — for

example, if they have financial stakes in the paper’s content or personal ties with the author. Some journals don’t mind, as long as all issues are disclosed. “Biases are not all conflicts of interest; and sometimes editors want the perspective of someone inclined to loathe a particular piece of work,” says Lipworth. If, for example, a potential reviewer is actively writing a paper on the same topic, says Sage, it is probably best to decline the review. But if the reviewer’s own paper has already been submitted, and therefore is documented in the scientific record, the reviewer can’t be accused of stealing ideas.

GETTING NOTICED

The most straightforward way for researchers to become peer reviewers is for their mentors to introduce them to editors, but there are other routes. The best is to do good science and get published; manuscript editors scour citation databases and conferences, looking for young scientists with expertise that might make them a valued reviewer. Scientific meetings are the most appropriate place for would-be reviewers to introduce themselves to editors. In fact, finding bright young reviewers is one of the main reasons journal editors attend meetings. E-mailing an editor out of the blue is a riskier endeavour and can be seen as overly pushy, says Sage.

Novice reviewers might also find that journals run by scientific societies are often short on reviewers, and so are eager to get them involved. The Ecological Society of America in Washington DC, publisher of *Ecological Applications*, contacts its student members to find reviewers. Others, such as the *American Journal of Pharmaceutical Education*, encourage potential reviewers to sign up on their website. “I don’t have many reviewers for the pharmacokinetics papers so I’ve been pushing to get people engaged,” says Gayle Brazeau, the journal’s associate editor.

Reviewing may seem like a time sink in the short term, but it can have long-term benefits. For one, watching manuscripts evolve through the editorial process can be a valuable experience, says Veeman. And editors sometimes reward thoughtful, articulate reviews with further opportunities. Schimel says that excellent reviewers might be offered seats on a journal’s editorial advisory board. And, notes Wacek, reviewing can be an entry point to a career in scientific publishing.

Spigt’s reviews helped him to get a position as an assistant editor with the *Journal of Clinical Epidemiology*, a leading publication in his field. He hopes one day to become an associate editor. “One of the most important things manuscript reviews can do,” says Spigt, “is help the reviewer build relationships with the journals in which they want to publish.” ■

Virginia Gewin is a journalist based in Portland, Oregon.



“Reviewing manuscripts makes me feel like I’m a fully fledged member of the scientific community.”

Claudio Casola

UNITED STATES

Postdocs probe industry

A programme launched this year at the University of California, Berkeley, aims to give its postdocs an inside view of local life-sciences companies and other businesses. The Postdoc Industry Exploration Program (PIEP) was instituted after Berkeley postdocs ran a successful pilot programme. The PIEP will be offered every year to Berkeley’s 1,100 science postdocs, and possibly also to its graduate students. PIEP participants meet company researchers, administrators and executives, learn about their work and establish alliances that could lead to job offers. More than 100 postdocs joined the pilot: half indicated an interest in industry before the programme began, whereas three-quarters did after it ended. Christopher Tsang, PIEP co-founder and a postdoc at Berkeley, says that the project will be shared with postdocs at other institutions at next year’s US National Postdoc Association meeting.

EUROPE

PhD funding inadequate

Funding for doctoral candidates in some European nations often runs out before the research projects end and doesn’t cover living expenses, according to a 2008–09 survey of more than 7,500 PhD students from 12 countries. In Spain, 31% of respondents said that funding does not adequately cover their living costs; in Portugal it was 24%, and in Croatia 23%. The report, by the European Council of Doctoral Candidates and Junior Researchers (Eurodoc) in Brussels, was released on 30 September. Eurodoc’s most extensive survey to date, the report documents trends in career paths, funding, mobility, training and working conditions.

UNITED KINGDOM

Science careers unstable

UK scientists are concerned about career instability and lack of research positions, says a poll by an advocacy group, Science is Vital. It surveyed 700 science PhD students and researchers in September at the behest of UK science minister David Willetts, who met group leaders on 6 October and is arranging a discussion with government and funding representatives. Respondents cited problems with short-term contracts, low pay, compromised mobility and lack of work–life balance. Many want smaller labs and permanent academic posts funded by universities.