(according to a report in the *Foreign Service Journal*, March 2001), making visa and passport services an even less attractive profession.

Last August, consular officers received updated State Department instructions on how to apply the Technology Alert List and the list of 'state sponsors of terrorism' to the visa-screening process. Ideally, consular staff should be augmented by intelligence and law-enforcement personnel trained to recognize suspect applicants, and others with scientific or technical backgrounds. Instead, the current officers have been instructed to post these two 'cheat sheet' lists at the "interview windows where the staff can become familiar with the contents". (The department's updated instruction cable is available online at http://travel.state.gov/state147566.html.)

The visa staffing, instructions and evolving interagency review process seem guaranteed to further slow the entry of foreign scientists, students and visitors into the United States. For now, official Washington appears to be content with that frustrating backlog, as suggested by congressional comments such as: "Our security is more important than your convenience." That attitude is likely to endure until the airlines, tourism and other global industries begin to make the same complaints that the scientific community is making now.

Edward McSweegan
US State Department Diplomacy Fellow (1986–1987), 1692 Barrister Court, Crofton, Maryland 21114, USA

Designer scientific literature

Sir — Your News report[1] "Axeing of website article sparks row at Max Planck", describing the removal of several hundred web pages discussing a concept called 'intelligent design' (ID), is welcome.

In Germany, efforts to undermine evolution education — mostly in the form of ID, which rejects the theory of natural selection — have evolved into a successful campaign, including a standard textbook in its fifth edition, several journals and two professional video films in which proponents of ID such as the microbiologist Siegfried Scherer and the geneticist Wolf-Ekkehard Lönnig give interviews in the laboratories of their government-sponsored departments. The ID strategy is not to identify the 'designer' as God in the Bible or for adherents to call themselves creationists; they have coined the term 'theists' to describe themselves (see ref. 2 for a discussion).

Last year, ID–creationism took a step towards scientific respectability when Lönnig and Heinz Saedler published an review[3] entitled "Chromosome rearrangements and transposable elements". In this article they summarize arguments against Darwin's concept of gradual evolution with reference to the prominent German anti-Darwinists Otto Heinrich Schindewolf (1896–1971) and Richard Goldschmidt (1878–1958).

Lönnig and Saedler discuss the possibility of "a partly predetermined generation of biodiversity and new species", which they characterize as a "nonselection-driven and autonomous" process. Popular books by ID proponents Michael Behe and William Dembski are cited as credible sources. (For critical reviews of these books, see refs 4 and 5.) Lönnig and Saedler refer to a "wide range of opinions" and cite evolutionists such as Michael J. Benton, Stephen Jay Gould and John Maynard Smith as well as ID–creationists such as Behe and Dembski, and Lönnig's now-removed web pages. On the basis of these references and polemical comments, the authors state that we should welcome all ideas and hypotheses on the origin of life, "wherever they may lead".

In a German video film called *Is The Bible Right? There is No Evidence for the Theory of Evolution*, Lönnig argues that an intelligent force, endowed with consciousness and spirit, has been at work in the creation of all complex forms of life. This viewpoint is now implicitly proposed as a hypothesis in the scientific literature.[3]

Four years ago, this journal published two excellent editorials[6,7] entitled "The difference between science and dogma" and "Combating the exploiters of creationism". I think that the time is ripe to continue this series.

U. Kutschera
Department of Biology, University of Kassel, Heinrich-Plett-Strasse 40, 34109 Kassel, Germany

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4. Coyne, J. A. *Nature* **383,** 227–228 (1996).
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7. *Nature* **402,** 843 (1999).

Peer review: recognition via year-end statements

Sir — Although I agree with T. Clausen and O. B. Nielsen in Correspondence ("Reviewing should be shown in publication list", *Nature* **421,** 689; 2003) that peer review is a very significant factor in the quality of the scientific literature, their suggestion that peer-review activities should be shown in scientific CVs has practical problems, as they themselves note.

An alternative solution might be for journals to send a letter to their reviewers each year stating how many manuscripts they have reviewed, with some associated measure of quality. This verifiable information should become one criterion for assessment exercises, and would also improve and maintain the general standard of the peer-review system.

The efforts of reviewers should not be underestimated. Even a short and exceptionally well-written manuscript takes at least three or four hours to review properly: more commonly this task takes a day or more. Most manuscripts are revised by their authors and reviewed again by the original reviewers. Two or three reviewers are involved in every manuscript, and about two-thirds of submitted manuscripts are rejected. Hence, on average, each published article has received about 10–15 days of reviewing activity.

Good reviewers may receive one or two manuscripts a month from each journal that knows of them. It follows that these scientists are spending a large percentage of their time on reviewing manuscripts that could otherwise be spent on research, writing and so on (although of course they themselves benefit from peer-review when they submit their own papers).

Editors of journals complain that it is becoming more difficult to attract good reviewers because university researchers increasingly need to earn 'scientific credits'. What is needed, therefore, is a change in attitude from university managers, boards, agencies and others who decide about grants, tenure, promotion and so on.

It has been (and will be) mentioned many times that the current system in which quantity is taken as a measure for academic achievement should be replaced by one that gives credit to quality (*Nature* **422,** 259–261; 2003). Reviewers are chosen because of their quality: their standing in their own discipline and their ability to think critically. An endorsement by a journal could be one way to acknowledge this ability in real terms, by incorporating peer-review activities into the professional career structure. The more prestigious the journal to researchers in the field, the more weight could be given to peer-review activities for that journal by assessment committees.

If reviewers do not receive public credit, the better scientists will eventually no longer be prepared to do this work, which would then devolve to less good reviewers, and the standard of scientific publications would fall.

A. J. (Tom) van Loon
President, European Association of Science Editors, Valle del Portet 17 bajo, 03726 Benitachell, Alicante, Spain