A code of conduct for reviewers is suggested to address certain problems of the peer-review process: "It is high time that we, as scientists and physicians, learn to behave at all levels in a professional and courteous manner to one another." A member of the Danish parliament comments on the roles of government and universities in supporting scientific research. To meet the challenge of "develop[ing] the full capabilities of students while staying at the cutting-edge of scholarship," universities, it is posed, could hire faculty "who would be expected to be excellent teachers, and be rewarded as much for be being so as faculty are for being excellent researchers." And whether infection by porcine endogenous retrovirus was transmitted to patients who received pig tissue transplants is discussed.

Peer Review Under Review

From discussions with colleagues around the world, I have found that it is common for authors of a scientific manuscript or grant to receive nonconstructive peer-review reports. In his News Focus article "NIH eyes sweeping reform of peer review" (5 Nov., p. 1074), Bruce Agnew describes some but not all of the issues associated with grant review. Two major problems appear to be the frequent use by reviewers of unsubstantiated statements with no accountability, and the use by reviewers of deliberately dismissive phraseology. The outcome in these instances is usually rejection of the manuscript or grant, but also probably the demoralization of young scientists rather than the provision of constructive feedback from experienced colleagues. Furthermore, these problems appear to be more common for—although certainly not limited to—junior authors or those of foreign countries, especially if English is not their first language. One probable reason for this phenomenon is the anonymity granted to reviewers. Other reasons might include the competition for grant dollars and for space in the top journals, and a professional laziness justified by a chronic shortage of time.

Journals and granting agencies should require reviewers to abide by professional standards and reasonable guidelines of civility in reviewing the work of others. Guidelines for the adoption of professional standards for peer review could include such items as the following. (i) The same rigor must be used in review as the writer used in manuscript or grant preparation, in particular, the use of appropriate literature citations to support statements. (ii) Criticism should be constructive rather than destructive or aggressive. (iii) Aggressive statements criticizing the misuse of the English language are not acceptable. It is high time that we, as scientists and physicians, learn to behave at all levels in a professional and courteous manner to one another.

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State of Scientific Research at Danish Universities

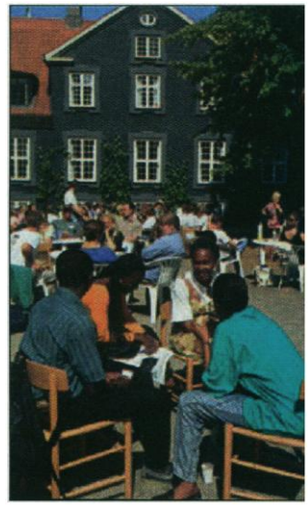
The News Focus article "Something rotten in the state of Danish research?" by Lone Frank (1 Oct., p. 33) is missing some important points in analyzing why the situation for scientific research in Denmark is difficult.

The flow of funds to Danish universities is determined by a taximeter system and by the Danish Council for Research Policy. The taximeter system links research grants to the number of students who finish their studies with specific faculties, so the universities and faculties have an economic incentive to attract students that have a good chance of finishing. Furthermore, under the taximeter system, funds and grants will be reallocated from faculties that experience a decline in the number of students to faculties that experience a growth.

In recent years, Danish students have chosen not to study science, which has resulted in a decline in the flow of funds to science research and education. This is a serious situation because science research is important for the international competitive power of Danish companies. If Danish companies fall behind, the economy will suffer, which in the end will lead to cuts in the welfare system. According to trade and industry, primary schools and high schools do not motivate students to take a deeper interest in science. But that is only part of the explanation. A recent report (*1*) evaluating science education at Danish universities criticizes the management of science faculties for not working more systematically to diminish the dropout rate from science studies, which is between 50 and 60%.

At present, science faculties at the universities in Copenhagen and Aarhus have large deficits because the faculties have not adjusted the staff to the economic reality of a diminishing science student base. The report (*1*) concludes that maintaining the large deficits is a deliberate strategy. The management at the faculties, it is suggested, are counting on a political rescue operation to deal with the deficit.

It is important for research that the universities are autonomous and not controlled politically, but it is also important to stress that in the end the purpose of research is to benefit society. The Danish government has dealt with this by introducing performance contracts (*2*), which the universities draw up with the government. The contracts are not legal, but are a list of goals that the universities are then committed to meet, and they will provide an opportunity for the universities to reexamine the way they organize research and teaching.



Students are a prized commodity for Danish university science faculties.

The goal of the Danish government is to find mechanisms to support science research and education, but the management at the universities also has a responsibility to create a more dynamic and efficient research environment. It is not just a political task.

Lise Hækkerup
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References and Notes

1. "The natural science at the University of Copenhagen, the University of Aarhus and the University of Southern Denmark—economy, education and personnel" (Engl. transl.) (Danish Minister of Education and Minister of Research and Information Technology, Copenhagen, 3 November 1999). Available at www.fsk.dk/cgi-bin/doc-show.cgi?doc_id=18426
2. Information is available at www.fsk.dk in the publication "University performance contracts for Denmark's universities" (Engl. transl.).

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