

plutonium in UK nuclear weapons originated in civil reactors.

The MOD reports do not separate the transfer data into weapons-grade and non-weapons-grade plutonium, and there are no data on production in the country's dedicated military reactors at Calder Hall and Chapel Cross.

We call on the MOD to provide this information. Similar data have been made public in the United States³. The UK government is now in an anomalous position, having published the military stockpile while refusing to publish similar figures for civil plutonium. We request that they do so, and clarify the contradictory statements that have been made to Parliament about the fate of civil plutonium.

The Magnox reactors have entered their shutdown phase and are again producing significant amounts of weapons-grade plutonium. The UK government has recently decided to restrict information on plutonium production in civil reactors⁷. One hopes that history will not repeat itself.

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1. *Plutonium and Aldermaston: An Historical Account* (Ministry of Defence, London, 2000). <http://www.fas.org/news/uk/000414-uk2.htm>
2. *Historical Accounting and Plutonium* (Ministry of Defence, London, 2000). <http://www.fas.org/news/uk/000414-uk3.htm>
3. Barnham, K. W. J., Hart, D., Nelson, J. & Stevens, R. A. *Nature* **317**, 213–217 (1985).
4. Layfield, F. *Sizewell B Public Inquiry: Summary of Conclusions and Recommendations* (Department of Energy, London, 1987).
5. *Hansard* 27–7–83, cols 439–440 (1983).
6. *Plutonium: The First 50 Years* (Department of Energy, Washington DC, 1996).
7. Barnham, K. W. J., Nelson, J. & Stevens, R. A. *Nature* **395**, 739 (1998).

Achievers should stay to aid Brazilian science ...

Sir — The Opinion article “Genome sequencing for all” (*Nature* **406**, 109; 2000) exposed a patronising view of research in developing countries.

In my view, *Nature* could have used its valuable space to tackle more interesting, painful yet real issues surrounding scientists in developing countries (see the News feature “A springboard to success” in *Nature* **407**, 440–441; 2000). For example, why was the Brazilian paper celebrated in your Opinion article an exception rather than the rule?

Local antinationalism has allowed imperialism from industrialized countries to survive for centuries. So, although I understand the views of the Brazilian

scientists abroad “who frequently decide not to return, citing a lack of scientific opportunity”, they are also being used as cheap labour in rich countries. Hence they are perpetuating an unfair situation by their short-sightedness and selfishness (very often their studies have been funded by Brazilian public money).

By leaving Brazil they may well avoid having to carry out less ‘important’ or ‘glamorous’ science. But they also lose the chance to involve themselves in relevant issues such as the dismantling of Brazil’s public university system, or to claim the right to better jobs and working conditions, or to build a better future for themselves and for future generations.

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...yet the path is strewn with needless obstacles

Sir — I am a young Brazilian scientist and I agree with Tomas Prolla’s point in Correspondence¹ that the rigid bureaucracy in Brazil turns scientific research into a nightmare.

Four years ago, I asked the director of the institute where I did my PhD to release funds (about US\$20) so I could send reprints to England, as one of my results was going to be cited in a textbook to be published there. The director punched his desk and said that he was not there to support my megalomania. I sent the reprints using my own money, and my result was cited in the book². A professor from another university told me that to behave as I had done, at my level of seniority, would cause fear among my superiors.

I recently entered the selection process for a professor’s position in one of Brazil’s leading universities. One of the interviewers asked why I wanted to stay in academia instead of working in industry for better pay. I did not get the job.

The person who got the job has published about six papers in journals, and is corresponding author on none of these. My curriculum vitae lists 21 papers in good international journals. In 20 of these I am the corresponding author and in 11 I am the sole author. I have spent \$23,000 of my own money doing serious research in this country and I receive about \$200,000 as a government grant. In my laboratory I have the first atomic force microscope for biological research in the country.

This is the fourteenth selection process I have undergone in this country. Before I

received the result of my latest attempt, I was advised by another professor to go to the United States as I do not fit in the Brazilian system.

It seems that Brazil can produce good scientists for export, but this material does not bring income into the country.

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1. *Nature* **406**, 826 (2000).
2. Walker, G. *Yeast Physiology and Biotechnology* 16–17 (Wiley, Chichester, 1998).

If free speech costs lives that’s a high price to pay

Sir — Stewart *et al.* are right to remind us that the 17 years following the discovery of HIV have been a long time (*Nature* **407**, 286; 2000).

Both of us lost grandparents and great-grandparents to tuberculosis. One might have thought that in the hundred or more years since Robert Koch discovered *Mycobacterium tuberculosis* (without fulfilling all his postulates), we would have done a little better than the state we are in today: some 1.7 billion infected, with an annual death rate of 1.8 million. Of course we could all agree on tuberculosis being caused by another, as yet undiscovered, microbe riding on the intimate coat-tails of *M. tuberculosis*. Then perhaps the lack of progress would make sense. Paradigm lost.

In an earlier life one of us was valet to the French philosopher Voltaire. I remember cleaning his room one day, coming across a letter to Jean-Jacques Rousseau. As a Huguenot, I rejoiced at the remark, “I disapprove of what you say, but I will defend to the death your right to say it”. What is not widely known is the next sentence: “My only question, Sir, is whether the columns of *Nature* are appropriate?”

We are staunch believers in the right to free speech, but is *Nature* the appropriate place to militate in favour of the pre-Copernican model of the universe or the existence of phlogiston? After all, there is Speakers’ Corner in Hyde Park, when it’s not raining. To demand the right of reply or equal time on such matters is a trick the creationists have used.

HIV causes AIDS. Problems arise when the proposed alternative costs lives.

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