

## New Zealand science system

SIR — In a recent Commentary article (*Nature* 379, 112; 1996), David Swinbanks reported on an address by Professor Philippa Black to a *Nature*-sponsored conference in Canberra. Among other things he claimed that Black gave a “stunning example of harm done to basic research through strategic planning”, and also referred to “horrendous complexity and bureaucracy”.

On the first point, it is somewhat ironical that *Science* published the following day (271, 141; 1996) an article by Elizabeth Pennisi headed “Fund fuels a resurgence of basic research”. It described how a new fund, soon to be worth NZ\$25 million a year, has been established by the New Zealand government specifically to foster basic curiosity-driven research.

Similarly, it is peculiar that *Nature* chose to labour issues relating to the ratio between basic and strategic science. A recent survey conducted by the New Zealand Association of Scientists showed that this ratio was not identified as being of particular concern to New Zealand scientists. And, whatever criticisms may be legitimately levelled at the New Zealand science system, the trend of government funding is upwards, unlike that in most OECD economies.

I regret to say that Black's paper contained many inaccuracies. My detailed letter of response listing 28 of the problems raised by her speech has been published on the same website as her address.

The science system in New Zealand is new and in need of continuing improvement and adjustment. But virtually none of the justified criticisms can be found in Black's speech. A working scientist who is by no means enamoured of every aspect of the new system commented, when I showed him her speech, that whatever criticisms he and his colleagues have, he did not recognize them in the speech. It struck him as being written by somebody who was not particularly close to the actual operation of the system. The level of simple factual inaccuracies and the absence of evidence to support Black's most serious charges renders her paper, in my view, almost useless as a commentary.

Finally, I believe *Nature* did not do justice to Black's paper, in which she took considerable trouble to spell out some of the benefits of change as well as the costs. No one reading your report could guess

that she ended her analysis by noting a “degree of optimism within the New Zealand science community that has not been seen for almost a decade”.

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**David Swinbanks replies:** Those attending the Canberra conference were taken aback by Philippa Black's description of the dramatic changes in the funding and management of New Zealand's science over the past ten years. It became the topic for much discussion among delegates, mainly along the lines of “at least things are not that bad in my country”. That is why we chose to focus on her presentation.

The reference to the “horrendous complexity and bureaucracy” of New Zealand's grant system paraphrased both the words and tone of Black's speech which variously described the system as “very complex and immensely bureaucratic” and “very bureaucratic and extremely conservative”.

Black's speech did end on a positive note, mentioning the Marsden Fund for basic research to which Simon Upton refers. But she pointed out that in 1995 it constituted only 2% of the Public Good Science Fund, and the main thrust of her speech was on the damage that she claims has been done over the past ten years to basic research in New Zealand as a result of government reforms. Readers can see Black's full speech and Simon Upton's rebuttal on the following website maintained by the Australian National University: <http://biology.anu.edu.au/Pages/Pubs/NatConf/Nathome.html>

## Metallic optic fibres unlikely

SIR — Daedalus<sup>1</sup> proposes that metallic light-wires will act as optic fibres, transmitting light with a delay appropriate to the high refractive index characteristic of metals. Unfortunately, the refractive index of a typical metal is dominated by a term in  $\sqrt{i}$  so that the propagation of a light wave is in fact highly damped in a metal — for example, in sodium<sup>2</sup> at room temperature, a wave of vacuum wavelength 10  $\mu\text{m}$  will have a damping length of 0.1  $\mu\text{m}$ . This may be contrasted with the 100-km damping length found for light in high-quality glass fibres. The optic fibre companies are not “likely to lose their monopoly of wide-band optical transmission”.

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1. *Nature* 379, 124 (1996).
2. Kittel, C. *Introduction to Solid State Physics* 7th Edn, 331 (Wiley, New York, 1996).

## Support fishermen and dolphins

SIR — Your recent article “Environmental lobby splits on US tuna bills” (*Nature* 379, 288; 1996) details two approaches to dealing with marine mammal interactions in the eastern Pacific purse seine tuna fishery.

Marine mammals are present in every ocean and therefore virtually every fishery. To put this fishery in perspective, the present US Marine Mammal Protection Act would consider a take of approximately 55,000 dolphins annually to be biologically insignificant on dolphin populations of the numbers present in the eastern Pacific. This is due to the huge size of this fishery (8 million square miles, almost 3 times the size of the United States) and the abundance of marine mammals (10 million). The international fishermen of the eastern Pacific are, however, committed to a higher standard by participating in the education programme of the Inter-American Tropical Tuna Commission. They are committed to reducing marine mammal deaths in the fishery to fewer than 5,000 animals by 1999. They reached and surpassed that target 2 years ago.

The continuation of the ‘dolphin safe’ status quo, as in Senator Barbara Boxer's bill, continues to oppose the encirclement and release of dolphins by purse seine net fishermen on moral grounds even though substitution of other gear would result in higher marine mammal mortality rates. Boxer's bill offers no support for the fishermen and what they have accomplished. However, Greenpeace, the Center for Marine Conservation, World Wildlife and other groups are supporting Senator John Breaux's bill, which will remove US embargoes from this fishery in the light of the tremendous progress made.

Breaux's bill does not remove or reduce regulation of the fishery — in fact, it adds more protection for stocks of dolphins. But it does expand the definition of ‘dolphin safe’ to include fish produced by purse seine fishermen when all the dolphins involved are released unharmed as verified by on-board observers. This allows the fishermen to catch clean schools of large yellowfin to keep the fishery healthy, and ‘dolphin safe’ becomes a well-earned ‘gold star’ for perfect performance.

We need to support effective multi-lateral conservation programmes and the efforts of responsible fishermen, not blacklist their products.

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### Correspondence

Letters submitted for Correspondence should be typed, double-spaced, on one side of the paper only, or e-mailed to [nature@nature.com](mailto:nature@nature.com)