

New Zealand reforms weighed in the balance

Sir — Anyone reading your article about the science reforms in New Zealand (*Nature* **391**, 426–427; 1998) could be forgiven for thinking that their main purpose must have been to provide more scientists with more pay, more equipment and jobs for life, simply because science is a good thing. But that was not the purpose at all.

I would like, first, to dispel a major misperception regarding funding. Your correspondent, Peter Pockley, writes of concern that the government “will cut spending on R&D by as much as NZ\$40 million” and that I admit that future prospects for science and technology are not good because, although there will be no reduction in government spending, I stated that “baselines won’t grow”.

But the future of science and technology in New Zealand is of increasing importance; I have never said its prospects are not good. Already built into the funding ‘baseline’ (a technical budgetary term in this context) are increases in spending for each of the next two years. The possible “cuts” referred to by some would at worst amount to a smaller than expected increase, certainly not an actual reduction in funding.

Funding in the first years of the next decade will be more strongly influenced by the outcome of the recently initiated Foresight Project — whose significance your article seriously underestimates — than by the government’s 1996 commitment to increase funding towards a target of 0.8% of gross domestic product. The comments in your leading article (*Nature* **391**, 419; 1998) are relevant and perceptive. Your call for a “new burst of imagination” for New Zealand science is one with which we have already challenged ourselves, in the form of the Foresight Project. This is intended to encourage strategic thinking about the future by all New Zealanders.

My ministry wants to stimulate understanding and awareness of the future we face as a ‘knowledge society’. The impact of globalization, new technologies and demographic, economic and lifestyle trends can be analysed and discussed. The Foresight Project will allow us to think about a range of future scenarios in a way that will help to identify the factors that will determine whether nations, sectors and individuals can prosper. There must be increased focus at all levels on education, research, science and technology. Sectors across the economy and society will be invited to think about the future, and the project will provide a common framework

within which to do this. In the process, the government will use sector-level thinking about the knowledge and capabilities each will require to succeed as one input into setting priorities for publicly funded science and technology.

The real benefits of the reforms to New Zealand science and technology will not be measured in the numbers of dollars spent or scientists employed. They will be measured in the extent to which both sectors and individuals come to recognize that their future well-being depends on science and technology — and spread this view to their children, their politicians and their boards of directors. Watch this space.

Maurice Williamson
(Minister of Research,
Science and Technology)
*Parliament Buildings,
Wellington, New Zealand*

Sir — Sadly, your analysis of New Zealand science is accurate. While agreeing that underfunding of research is a problem, however, I should like to point out a much more insidious change in New Zealand science — the move from “leadership” to “management”.

I had first-hand experience of this change in 1992. The management at my newly created Crown Research Institute (CRI) told the staff that we had to get rid of

the “science culture” and replace it with a “business culture”, something they have relentlessly done over the past six years to the extent that business managers and accountants are now blithely making crucial decisions about research projects which are not subject to meaningful peer review. Pockets of good science do survive, usually centred on high-calibre scientists capable of exerting leadership in a somewhat alien environment.

This disenfranchising of professionals is, of course, a national sport in New Zealand, as witnessed by the enormous problems encountered in a health system run on a market-driven model dreamt up by our Treasury. During my time in the CRIs, the pressure exerted by government to return a “profit” was so extreme that the accountants used to deduct “profit” from my government research grants on the first day of the financial year and return it to the government on the last day.

In my view, if we want to do good science that makes money, the CRIs need to be dramatically revamped. I, and many of my colleagues, believe that the fatal flaw with the CRIs is that they fall between two camps — they are neither research institutes nor commercially viable businesses. Because they are all absolutely dependent on government funding, much of the Foundation for Research, Science and

Technology (FRST) funding is ring-fenced to ensure their survival and not open to truly competitive bidding by the best scientists with the best ideas.

Rather than cloak in pseudo-business-speak the present monopolistic system, could we not simply face up to the fact that we need government-funded research institutes? If we accept this, we could award say one-half of the current FRST funding direct to the CRIs as block grants to maintain their core facilities, and make the other half the subject of a truly competitive grants system to fund scientists whether in universities, private companies, CRIs or elsewhere.

Until we return scientists to centre stage in the New Zealand research scene I fear we shall be the subject of regular and equally depressing analyses by your journal.

R. J. Wilkins

*Department of Biological Sciences,
University of Waikato,
Hamilton, New Zealand
e-mail: d.wilkins@waikato.ac.nz*

Sir — In attempting to form a view on New Zealand science, it must be remembered that New Zealand is an isolated country with a small population and with little tradition of support for research and development (R&D) from the private sector. It also has many good scientists

whose talents need to be tapped in the best possible way. The special circumstances (and problems) required a New Zealand solution and the government and scientific community are to be applauded for having the courage to try a new way.

Is it the best way? I don't think anybody knows the answer, for the jury will be out for several more years. Have mistakes been made? Undoubtedly. The micromanagement of the early days and the undue power accorded to non-scientists to make judgements on operational scientific issues stand out as the obvious ones. But those shortcomings appear to have been recognized and have to be judged against a national requirement for obtaining value for money, and relevance, from the relatively limited funding available for R&D. Is the balance between basic and applied science right? Again, who knows at this point, but the lack of adequate small grants should be addressed.

Is the New Zealand model appropriate to other countries? Given the fact that it has yet to be shown to work in the long term for New Zealand, the safe answer may be no, but small countries with a limited science base would do well to watch the New Zealand experiment, to benefit from its mistakes and hopefully to gain from its successes.

What steps might be taken to increase

the chances of success? Enhancing the overall level of government funding for R&D, increasing the present level of discretionary funding from 10% to 15% or 20% to enable CRIs to do more basic research to underpin their more applied science; providing a better system of funding small 'starter' projects in the universities; and last, but by no means least, encouraging industry to raise its level of support for R&D.

But all that has a familiar ring, and I could just as well be talking about the United Kingdom (or Australia) as New Zealand.

Peter J. Cook

(Past Director,
British Geological Survey)
Research School of Earth Sciences,
Australian National University,
PO Box 4, Canberra, ACT, Australia

Sir — Analysis of science reforms in New Zealand raises serious questions about the future of science in New Zealand, particularly in the light of indications that government commitments to increase science funding will not be met in the 1998–99 budget. A subsequent response by P. M. Hargreaves, president of the Association of Crown Research Institutes (*Nature* 391, 834; 1998), demands a response.

Hargreaves states that 349 new science positions have been established since the Crown Research Institutes (CRIs) were set up, but a breakdown of this figure reveals that it represents only 126 full-time equivalent research and development science positions (CRIs also have a commercial arm). Furthermore, only 21 additional positions for scientists are represented, a 1.6% increase in four years. In contrast, technical staff increased by 7.8% and support staff by 20%. Further analysis of recently released Ministry of Research, Science and Technology figures indicates that these are continuing trends in that the number of scientists declined by almost 4% between 1994 and 1996 while technicians increased by 10% and support staff by 25%.

The New Zealand Association of Scientists is particularly concerned about these marked shifts in employment in government research institutions "from research staff to non-scientists" referred to in the *Nature* article. These are disturbing trends which suggest that the reforms may have spawned a new wave of managerialism and bureaucracy on the New Zealand science scene.

Mike Berridge

(Secretary)
New Zealand Association of Scientists,
PO Box 1874,
Wellington, New Zealand
e-mail: mimrmb@wnmeds.ac.nz

Change comes all too slowly in Albania

Sir — Albania's first democratic government effectively chose to ignore the Albanian Academy of Sciences, but the Socialist party, which took office last year, has been looking at it more critically.

The government appointed a new temporary academy presidium, comprising a president, two vice-presidents and a general secretary, who were given the task of drafting statutes and of organizing elections for a regular presidium. But the members of this temporary presidium worked for the administration of the Hoxha era, and appear to be working undemocratically.

The government said that the new staff of the presidium, together with new directors of the 12 research institutions under the academy's umbrella, should initiate reforms as soon as possible. The most important issues were the means of selecting institute directors and the presidium and of bringing new members into the ageing body of academicians.

The temporary presidium, however, altered the proposed statutes agreed after discussion with scientists at the institutes. The final version, about to be submitted for approval to the president of Albania, says that institute directors should be appointed by the presidium from a list of nominations from the scientific council of each institute. The presidium itself should be elected by an assembly composed of the directors whom the presidium itself appoints, and academicians. It is feared that the presidium will propose to the assembly a two-year postponement of even this procedure.

The slow reorganization process is detrimental for research. Older academy members, some of whom received their scientific titles and degrees by decree in Hoxha's totalitarian regime, cling to their positions and cannot grasp the new paths that science should follow in a democracy.

Researchers will for a long time face not only financial difficulties but also chaotic "reorganizations" by backward minds.

Betim Muco

Seismological Institute, Tirana, Albania
e-mail: betim@sizmo.tirana.al

Addiction, the tobacco industry and *Nature*

Sir — At the end of 1996, *Nature* published my views about behavioural (that is, non-chemical) addictions and the biopsychosocial nature of addiction (*Nature* 384, 18; 1996). These views were originally submitted as an item of

correspondence under the title "Addicted to anything?". After revision, however, it was published under the title "Nicotine, tobacco and addiction".

I thought this title was a little strange — particularly because there was no mention of nicotine, tobacco or smoking in the article itself — but I was pleased just to have had something published in *Nature*. Since that time, however, a number of events have happened that I feel I should share.

Obviously, the publication of my short article automatically led to entry on academic databases all over the world. As a consequence, anyone who types keywords such as "nicotine", "tobacco" or "addiction" into word searches will eventually come across my contribution. On the positive side, I have received what appears to be a record number of reprint requests from academics all over the world wanting to read my thoughts about addiction. In addition, some of those requesting my article were (quite understandably given the title) members of the tobacco industry.

I have also received many telephone calls from the media and legal firms representing the tobacco industry who have done their database word searching and come up with my name (or rather that of "tobacco" and "nicotine"). With regards to the media, I am generally happy to explain my general views on addiction but would be the first to admit I do not consider myself an "expert" on anything concerning nicotine. However, the number of legal firms that have contacted me is not something I have relished.

The feeling I get is that they want to use my research findings to get themselves "off the hook". The general sequence of events is as follows. A legal firm telephones me to say they would like to speak to me face to face about my views on the psychological nature of addiction. I meet them (usually) in their London offices. They tell me they are looking for "scientific advisers" and/or "expert witnesses" to represent their clients (the tobacco industry). I speak to them for about an hour and explain that just because I believe psychological processes to be fundamental in the explanation of all addictions does not excuse the fact that nicotine is physiologically addictive.

Hopefully, with the word "tobacco" in the title of this piece of correspondence, the legal representatives of the tobacco industry will leave me alone!

Mark Griffiths

Psychology Division,
Nottingham Trent University,
Burton Street,
Nottingham NG1 4BU, UK
e-mail: mark.griffiths@ntu.ac.uk

● The title was broadened to reflect an accompanying letter. — Editor, *Nature*