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# David Penny confronts science policy through the New Zealand Association of Scientists

Mike Berridge and Chris Sissons

David Penny's involvement with the New Zealand Association of Scientists (NZAS) arose out of turbulent times for New Zealand science. In 1984, a Government Working Party reporting on New Zealand science and its value to the New Zealand economy (subsequently published as 'the Beattie Report' 1986) elicited a response from Treasury, a summary of which was published in the NZAS journal, *New Zealand Science Review* (NZSR). This article by Roger Kerr (1985), a Treasury divisional director at that time, was dismissive of the Beattie Report conclusions, arguing that the case for increased research and development (R&D) effort and Government assistance for R&D was on 'shaky grounds'. This red rag spurred David into action, resulting in two papers being published in NZSR the following year, one (Penny 1986a) evaluating New Zealand science policy in terms of international sector comparisons and outputs, and the second (Penny 1986b) on the expected economic benefits of Government involvement in R&D. The fundamental importance of these papers, and of a related article by David in the *National Business Review* (Penny 1985), has echoed down the years.

A quintessential comment by David in the first NZSR paper (Penny 1986a) is worthwhile noting. The discussion starts: 'Readers should examine the data presented here and come to their own conclusions. Nevertheless, the temptation to editorialise is high and I will offer some personal comment, largely aimed at the smugness that is one of the main national characteristics.'

The second paper (Penny 1986b) on the economic importance of science was a devastating critique of the Treasury paper. It started:

'This paper is in four parts

1. The first considers a review paper on economics and research and development (R&D) that treats science policy from case studies (Mansfield 1981). It appears that Treasury has seriously misunderstood the paper.
2. Work of Denison (1979) is then discussed. He analysed economic growth from a macroeconomic viewpoint and concluded that increased knowledge is a major component in economic growth. It appears the Treasury has accepted a minority economic view in discounting Denison's work.
3. Other arguments Treasury has used to place a lower value on research are analysed, these arguments being shown to be either errors or simplifications.

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4. The final section discusses some science policy options that are still open to us.'

Thanks in part to David, Roger Kerr has continued to begrudge the role that government plays in R&D and innovation ever since. It is probably fair comment that the public sector reforms of the late 1980s and the subsequent restructuring of the New Zealand science sector essentially buried the Beattie Report and its recommendations.

The exchanges mentioned above led David to contribute further to science policy discussions in New Zealand with papers on restructuring New Zealand science (Sissons *et al.* 1989) and on the limitations of bibliometric rating by citation analyses (Penny 1989b). As a result of his proactive stance in the science policy arena, David was nominated to Council of NZAS in 1989 and subsequently became President for the 1990/91 period heralding a flurry of further activity on science policy issues (e.g. Penny & March 1993). For his outstanding contributions to science in New Zealand and worldwide, David was awarded the NZAS Marsden Medal in 2000, a forerunner of his being awarded the Royal Society of New Zealand Rutherford Medal in 2004.

David made a major contribution to developing the initial (1994) NZAS Survey of Scientist's Perceptions of New Zealand's Science, the results of which were published the following year (Sissons *et al.* 1995). He also contributed to a further article concerned with restructuring science in New Zealand (Penny 1996), and was involved in organising a special 1999 election issue of NZSR and wrote its editorial (Penny 1999). Over these projects, we had many animated discussions with insight being fuelled by coffee, single malt Glenmorangie and Laphroaig, and a little classical music. More recently, David has taken a prominent role in the NZAS Awards programme, which recognises outstanding lifelong contributions to science and also the talent of young scientists.

Nowhere was David's commitment to rational science policy development and to underpinning regulation by evidence more evident than in his submission, on behalf of NZAS, to the 2000 Royal Commission on Genetic Modification. It was anathema to David that controlled alteration of a known gene in a laboratory organism that could not survive outside the test tube should be hampered by excessive regulation, when nature alters and reshuffles many thousands of genes in reproduction, and each cell division in a living organism sustains random mutations. Despite the efforts of David and many others, we retain the lingering legacy of outmoded science regulation by fear, with systems that are demonstrably safe and arguably, green.

Another issue of particular concern to David was the lack of R&D tax write-off for industry to match that enjoyed in Australia, resulting in a lamentably low level here of industry R&D. After 20 years this was finally introduced, only to be overturned by the incoming Government this year. So David, best wishes for a happy 70th birthday with a dram of Glenmorangie to inspire the science policy battles to come.

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## References

- Beattie, D. (Chair) 1986. *Key to Prosperity: Science and Technology*. Report to the Ministerial Working Party, Nov 1986, Wellington
- Denison, E.F. 1979. *Accounting for slower economic growth: the United States in the 1970s*. The Brookings Institution, Washington DC.
- Kerr, R.L. 1985. Government involvement in Research and Development. *New Zealand Science Review* 42: 4–9.
- Mansfield, E. 1981. How economists see R&D. *Harvard Business Review* 59(6): 98–106.
- Penny, D. 1985. R&D: More research and better management needed. *National Business Review* 16(11), issue 617: 46–47.
- Penny, D. 1986a. Studies on New Zealand science. *New Zealand Science Review* 43(5–6): 68–76.
- Penny, D. 1986b. Expected economic benefits of R&D. *New Zealand Science Review* 43(5–6): 76–84.
- Penny, D. 1996. Editorial: Restructuring science in New Zealand: getting it right for science and society. *New Zealand Science Review* 53(3): 49–51.
- Penny, D. 1999. Editorial: Research is more vital than ever. *New Zealand Science Review* 56(3): 44.
- Penny, D.; March, F. 1993. Editorial: Research is vital. *New Zealand Science Review* 50(2): 33.
- Penny, D.; Sissons C.H. 1989. The diversity and measurement of research outputs. *New Zealand Science Review* 46(1–3): 40–48.
- Sissons, C.H.; Berridge, M.V.; Penny, D. 1995. 1994 NZAS Survey of Scientists' Perceptions of New Zealand Science: The why, the how, the release and the response. *New Zealand Science Review* 52(1–2): 3–6.
- Sissons, C.H.; March, F.C.; Penny, D. 1989. Restructuring of New Zealand Science. *New Zealand Science Review* 46(1–3): 2–9.

