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# Against Scientific Nationalism

Tom Quirk reviews

## *The Australian Miracle*

by Thomas Barlow

(Picador Australia, 2006, 288 pages)

One of the canards of Australian industry policy that survived the dismantling of the protectionist policies of the mid-twentieth century is that if the Government gives scientists buckets of money, they will cause us all to become rich. Broadly, this is the Barry Jones or ‘Science Club’ view of the world and it has led State and Federal Governments to support high-risk emerging technologies and start-up companies that investors are generally too smart to go near. Despite the hundreds of millions that go into Government support for R&D, the ongoing failure of this policy is rarely subjected to proper policy analysis. In the main, economists and Treasury departments pretend it never happens and still prefer to leave the discussion to the professional doom-sayers.

So it’s a pleasant surprise to see somebody emerge from the Government side who talks about the basic flaws in the language employed by Governments and professional and industrial rent-seekers alike.

Thomas Barlow, a former science adviser to Brendan Nelson when Minister for Education, Science and Training, has written *The Australian Miracle*, which suggests that governments and their supporters in the science club have got it wrong in presenting a dismal past contribution from science and innovation to economic development. This may be a useful primer for the Produc-

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tivity Commission as it considers government support for science and innovation.

The central theme of the received wisdom is codified by Barlow in ‘ten myths’. Briefly put, these myths argue that Australians are innately inventive but no good at making money from their inventions. Not enough is invested in research and development and, when invested, is badly targeted to scientists who won’t work together. As a consequence, the best ideas and scientists leave Australia and the country remains a farm and a quarry. Australians are not interested in science and are condemned to be second rate. These criticisms have become familiar to us through the likes of Barry Jones, Donald Horne, John

Dawkins and through countless ‘Innovation Summits’ and ‘Future Forums’.

Barlow comprehensively debunks these ‘myths’. As an example, take the perennial favourite of our low national R&D activity. The accounting does not include mineral or petroleum exploration. Consequently, at least a billion dollars and some high-tech activities are ignored. The ‘myths’ are a consequence of a mismatch between aspirations and reality, but by holding to them, rent-seekers can persuade governments to support fashionable technology developments. It is the equivalent of a middle-ranking state of the United States wanting all the industries of California.

Barlow considers the history of government-targeted research initiatives. He uses the example of the German Government’s biotechnology initiative, involving half a billion Deutschmarks, that has made little impression on the local pharmaceutical industry. There are many other Ozymandias-like objects in the research landscape—the super-computer policies of MITI in Japan, the Alvey computer initiative in the UK, and the recent French initiative to develop a uniquely Franco-German Google—they all show how hard it is to follow on and catch up. Local State premiers should reflect on this as they fund their biotechnology initiatives.

Barlow makes some excellent points about inefficiencies being important for invention. While he is correct in stating that decisions on direction should be left to researchers, this does not void the need for justification to the policymakers and the paymasters. He also worries that research into the ‘unknown’ will not be welcomed, even though, over time, this approach has led to some of the great scientific discoveries.

The most important point Barlow makes is the unpredictability of the consequences of research. The same point can also be made for the processes of

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innovation. For instance, the incorporation of text messaging was not seen as much more than a minor added function to mobile phones, yet it has grown and blossomed into an essential teenage mode of communication, an advertising medium and a source of information.

The remainder of the book covers the past development and use of technology in Australia and, sadly for those of us who remember, Barry Jones's fondness for futurism, suggests ways of finding our future. Even Barlow seems not to have completely removed the absurdities of modern industry policy from his system. One is tempted to wonder whether we are, in fact, analysing any real public policy problems at all.

Perhaps this is because nobody knows how to address the core question: What is the magnitude of the direct contribution made by scientific

researchers to economic development? If the contribution is minor, then the language of national science or development priorities should be rejected.

The answer is that if Australia is like other developed economies, business is the dominant source of innovation. Universities and government laboratories contribute a few per cent of innovations.

This does not mean that there is no contribution from science. On the contrary, it is a much deeper and wider contribution through education and research. Education provides graduates who make innovative contributions from within the companies that employ them, or in some cases, from the companies they establish. Research in science and engineering supplies understanding of methods and techniques that enable the realisation of novel products and processes.

This book is the first considered analysis expressing a contrary view to the received wisdom. It is a powerful statement and a warning to those in the scientific community who have offered to rebuild Australia, an undertaking they will not be able to keep. Experience and measurement elsewhere shows that they will not deliver. In the words of one scientific organisation, what is now needed is a mid-course correction. At the very least, Barlow could have another go—perhaps suggesting what we might usefully do with the dismembered parts of the CSIRO that would inevitably follow a serious rethink of industry policy.

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