

Comment on:

“Science Funding Isn’t the Only Problem When Expert Advice Falls on Deaf Ears”¹

Much of what the author, Will Grant, stated in his opinion-article is correct: Abbott did get on the wrong foot with Australia’s scientific sector, and claimed to be vindicated eventually on the basis of what his government will do rather than what titles it chooses to apply. Grant is also spot-on with the view that performance in each of three designated areas -- funding, scientific advice and what it wants science to be – has been less than optimal with the Abbott government.

Perhaps more importantly, the perception of a “clear line coming from this government that Australia’s scientists should do more to make their work relevant to the community at large” (read this as industry and the business community) puts the main issue on the table. Grant agrees that this is desirable but only if it is in addition to the core interest of Australian scientists, which is the advancement of scientific knowledge to and for all who seek it. He suggests that the responsibility for this should be shared:

If this government does want to see science and research playing a critical role in Australia's future, then it's going to have to stop thinking of science as a glorified valet, valued for skills but not for advice.

An important point not mentioned by Grant is that scientists and politicians do not mix well. If scientists seek truth, then politicians seek partial truths in order for them to act as mediators in the conflict over any less-than-fully-established consensus. If scientists use theory as a way of bringing order and clarity to the universe, then politicians use existing order and clarity to legitimise the action of their political practices. If scientists’ ethics of responsibility act as a damper on the revolutionary ardour of opinionated intellectuals, then politicians’ ethics might fan the ardour in order to place the responsibility for undesirable political effects upon the one who is a self-proclaimed *cause*.²

This suggests that the situation might be restated as: *scientists are scientists and politicians are politicians, and never the twain shall meet; except they must meet since they are mutually dependent*. Scientists could not exist without grants from the public sector and politicians could not exist without a roadmap through the maze of causes and effects (the “meat and potatoes” of science) since, without this, the preferred order of political action would be random (it might appear to be that way even with a road map). The task would therefore seem to be how to help each to live with the mutual dependence.

¹ By Will Grant, *The Sydney Morning Herald*, 29 October 2013. Available at: <http://www.smh.com.au/comment/science-funding-isnt-the-only-problem-when-expert-advice-falls-on-deaf-ears-20141028-11cxf.html>.

² This notion of the “ethics of responsibility” can be traced to Eric Voegelin, *The New Science of Politics*, University of Chicago Press, 1951 (reprinted in 1987), part 3 of “Introduction,” Kindle location 393.

Numerous studies have been made in the USA concerning recent increases in anti-intellectualism, with scientists placed in the same category as intellectuals.³ Among these, Hofstadter classifies three types of anti-intellectualism:⁴

- (1) *religious anti-rationalism*, with a belief that emotion is warm (therefore it is good) and reason cold (therefore it is bad) so that rational intellectuals are not desirable;
- (2) *populist anti-elitism*, with an unsatisfactory view of the patrician of “old money” elitism; and
- (3) *unreflective instrumentalism*, through which knowledge is considered to be worthless unless it leads directly to material gain, such as increased profits and higher salaries.

While uncertainty about intellectuals, including scientists, can arise from failure to understand both the process of acquiring the knowledge and the value of its use, much of the resistance within these categories seems to be the annoyance, and even fear, of having established views challenged by intellectuals and scientists. Normally, this annoyance is likely to weaken over time, but a rapidly changing world with instant, or virtually so, communications destroys old paradigms in a cumulative manner, giving rise to more intense attitudes against those who are held responsible for the challenge. Introducing critical thinking in secondary schools may result in a self-evaluation of old paradigms, thus breaking the link with scientists, but it would be a slow process.

An easier approach, and perhaps a less-time consuming one, would be to remove partially or completely the factors that limit the perceptions of the value of scientific work on everyday activities, including industry and business. One type of constraint emerged from the anonymous peer-review system that is relied upon by government bureaucrats to give a greater degree of uniformity and objectivity throughout the full range of research grant activities. It almost certainly contributed to uniformity, quality improvement and greater objectivity in the initial period. A similar peer-reviews process is widely used for papers appearing in academic journals⁵ and comparable processes are used with assessments of art and literature.

However, applications for research grants are obviously made before the research is completed and in some cases before it even begins. The peer assessment is therefore based upon what is promised rather than on the accuracy and credibility of what was delivered. This is frequently determined by the proposer’s track record and that of other researchers who are or were associated with the proposer. This difference in the review process favours

³ A summary of these studies is available in Dane S. Claussen, “A Brief History of the Anti-Intellectualism in America Media,” American Association of University Professors, May-June 2011. Available at: http://www.aaup.org/article/brief-history-anti-intellectualism-american-media#.VFFMTL_Qpr8.

⁴ Richard Hofstadter, *Anti-Intellectualism in American Life*, published in 1963 by Knopf.

⁵ Objections to the peer-review process for scientific journals are discussed in Richard Smith, “Peer Review: A Flawed Process at the Heart of Science and Journals,” *Journal of the Royal Society of Medicine*, Vol. 99, No 4 (April 2006), pp. 178-182 (available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1420798/>), and Hank Campbell, “The Corruption of Peer Review is Harming Scientific Credibility,” *The Wall Street Journal*, 13 July 2014 (available at: <http://online.wsj.com/articles/hank-campbell-the-corruption-of-peer-review-is-harming-scientific-credibility-1405290747>).

projects that are more likely to produce a large number of research papers than ones that can provide an assurance of value to the overall community.

A second constraint is evident from the notion that it is the scientists who should ensure that their work is more relevant to industry and business. This must be replaced by a broader view that scientific research from the abstract and theoretical to the applied and patentable work is performed with a broad spectrum of skills from a variety of specialisations in pure science (sometimes referred to as fundamental science) to engineers, technicians and lab assistants. All of these people work together to achieve maximum returns from scientific breakthroughs. The question that industry, business and government should ask is what could be done in Australia to improve the quantity and quality of the output from the entire spectrum. It is a simple fact that to get the right answers it is necessary to ask the right questions.

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