

A word of advice

A spat over scientific advice to government underlines, yet again, the need for better engagement with science across the population.

If you're reading this, you're probably a scientist. Would you label yourself, then, an "arrogant god of certainty"? Such was the epithet used in the British press recently, in an article that called on scientists to know their place: a country run by scientists would, it claimed, "truly be hell on Earth".

What provoked this invective was the sacking of Professor David Nutt from his post as head of the government's Advisory Council on the Misuse of Drugs (ACMD). Professor Nutt is a pharmacologist, whose opinions on the relative dangers of classified drugs, garnered through his years of research, were at odds with those of Home Secretary Alan Johnson. Nutt's advice on drug classification — in particular that cannabis should not have been moved back earlier this year from 'class C' to 'class B' (associated with higher penalties for use), as it is less harmful overall than alcohol or tobacco — was roundly ignored by Johnson. After Nutt made his disagreement known publicly, he was accused by Johnson of crossing a line from science into politics and "lobbying against government policy", and then fired.

As *Nature Physics* went to press, five other members of the ACMD had resigned in protest at the sacking of Professor Nutt and the government's handling of scientific advice. Meanwhile, in parliament, a backbencher saw fit to recall a quote attributed to Winston Churchill — that it is better to "keep scientists on tap, not on top". His fellow politicians chortled in agreement.

And hence the article by A. N. Wilson in *The Daily Mail* (a newspaper renowned for provocative statements), attacking the 'gods of certainty' and denigrating Nutt in particular and scientists in general (<http://go.nature.com/IqNYWx>). "The worship of science," says Wilson, "is the great superstition of our age." He goes on: "The scientific adviser speaks and we are all supposed to believe him". Well, yes. The advice of any science adviser should be based on empirical scientific fact, it is not an issue of belief or superstition. But advice is advice — it is not a setting down of policy. That's the job of politicians, hopefully with the full weight of scientific argument behind them. On occasion, however, there may be cause to set aside advice for political reasons, and in such an instance the political case



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for doing so must be made clearly: Home Secretary Johnson failed to do so, and in sacking Professor Nutt sent absolutely the wrong message to scientists and the population at large.

Scientists are now rightly wondering about the point of serving as a science adviser to government, if voicing an opinion any government doesn't like will simply result in their sacking. Fortunately, there is hope that the situation will soon be clarified. A group of 20 academics, including President of the Royal Society Martin Rees and former chief of the Medical Research Council Colin Blakemore, have already submitted a set of guidelines for the interaction of government and scientists that should "enhance confidence in the scientific advisory system and help government secure essential advice"; and Chief Science Adviser John Beddington is set to report on the issue to the prime minister before the end of the year.

What remains of this unfortunate episode is the continued misperception of science, as peddled in *The Daily Mail* article, and elsewhere. According to

Wilson, "What scientists are saying basically is that they will brook no contradiction"; "science rules" and needs "to distort and control the brains of men and women who might otherwise think for themselves." Any scientist surely struggles to recognize this description. What must be appreciated, by politicians and populace alike, is that there can be certainty in science, but there can also be contradiction. There are issues on which there is scientific consensus, there are others on which there is not. To pick on less emotive issues than the examples offered by Wilson, think of how tried and tested the standard model of particle physics is (even if in need of some extension), and yet how controversial the mechanism of high-temperature superconductivity remains.

It is a subtle, sophisticated picture, and men and women do need to think about it for themselves. It is vital to appreciate what it means to know something scientifically, and what it means to not know; what science can say, and what it can't.

We don't claim that science is all. That would be arrogant. But we are certain that it cannot be ignored. □