

# Comment

## Are politicians listening?

It is important for practitioners to raise the understanding of science by engaging in a dialogue with the general public. But as Peter Cotgreave describes, one important part of the audience, the politicians, may not be listening ...

About 15 years ago, the scientific community started to realize that it no longer enjoyed the unmitigated support of the wider public. For decades, science and technology had been seen as the great engines of a better world, delivering such wonderments as electric light and plastic containers that kept food fresh. It is hard for many of us now to remember the days before antibiotics, when common illnesses were often deadly.

But not everything had been rosy. Thalidomide and DDT had caused as many problems as they had solved, with devastating consequences for some people. As we realized that public support was no longer as strong as it had been, scientists took action. We formed a committee, awarded each other grants and went on training courses. We started giving talks to the Women's Institute, visiting schools and talking to journalists.

In large part, these efforts have been successful. There are more science programmes on television than ever before, ever more 'popular science' books are published. Some science programmes, such as *Walking with Dinosaurs*, attract more viewers than even the most popular soap operas, and when asked to choose the 'Greatest Briton', the public voted Darwin, Brunel and Newton into the top ten, while only one writer (Shakespeare) and no sportsmen made it onto the list.

And, partly due to this activity, British people know more basic scientific facts than the people of other industrialized nations. They also have a better understanding of some of the fundamental principles of the scientific method. A higher proportion of people in Britain understand the need for a control group in a drug trial than in almost any other country.

But when the average citizen is asked whether he or she is enthusiastic about scientific and technological advances, the British are far more sceptical than their counterparts in other European countries. Many people see this as a problem, claiming that our society is rife with anti-science sentiment and that the great British public is determined to be backward-looking.

I suspect, however, that British scepticism is in part a reflection of our greater understanding and a testament to the success of the scientific community in engaging with the public. When non-scientists have a basic understanding of how science works, they can ask the right sort of probing questions, rather than accepting that scientists know more than them and must always be believed.

By opening up the scientific process, we have revealed its great strength. Science is not about certainty; it is about picking a route through uncertainty. And it is on the uncertain issues – BSE, the safety of mobile phones,

the environmental effects of genetically modified crops – that we need more public engagement.

While the scientists, pressure groups, media and the wider public have developed a rigorous, wide-ranging and often frustrating debate about these issues, there is one group that seems to remain semi-detached, unsure whether it should take sides in any argument, or whether it should stand back and just listen, or try to mediate.

The world of politics still takes the view that science should be dealt with by a small group of specialists. Individual parliamentarians may bluster about a particular subject (mobile phones if they have a mast in their constituency, BSE if they represent an abattoir), but in the main, they hide behind 'scientific advice' rather than making up their own minds. The demands of short-termism and the need for 100% certainty sometimes seem to make science and politics inherently incompatible.

In many ways, the scientists who invented the movement for the public understanding of science were extremely prescient. The wider public is much more sceptical than it was, partly because of social changes that mean we are (in general) much less deferent to authority, partly because technological changes have made information easier to find and partly because science is not, and never was, a great panacea to cure all ills.

If we do not develop new lines of defence, the era of killer bacteria will be back. The 'superbug' MRSA may just be the first in a long line of microbes that are resistant to existing drugs. It has arrived just as we start to understand more about prions, disease-causing agents that were virtually unstudied just a few years ago, and as we have a much greater appreciation of the role that viruses may play in diseases that were traditionally attributed to other causes.

It is more important than ever, in microbiology as in all areas of science, not only that the scientific community continues to engage with the public at large – including sceptics and critics – but also that we force the political world to listen to us, to engage with us more, and to take science more seriously.

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