

REVIEW OF THE WEEK

Trust me, I'm a scientist

The biggest problem in science communication is public lack of trust in the scientific establishment, argues **David Colquhoun**, who urges scientists to bypass the PR people and take up blogging

Unscientific America sounds like a fascinating topic, not least because the book is a follow-up to Mooney's *The Republican War on Science*. It is written entirely from a US perspective (the United States, apparently unaided, sequenced the genome and invented the internet). It is reported that 46% of Americans believe that the earth is less than 10 000 years old. That's certainly cause for alarm, and Mooney and Kirshenbaum are certainly alarmed. They think that the public needs to be educated in science. They identify the obvious problems—evolution, climate change, and quackery—and ask what can be done. The problem is that they propose no good solutions and some bad ones. The aims are worthy, but sometimes the book reads like an overlong and somewhat condescending whine about why science and scientists are not sufficiently appreciated.

I simply don't think it's true that the public is not interested in science, nor that people can't understand it at a level that is sufficient to be useful. It's true that they have been let down badly by some sections of the media. Think particularly of the great "MMR hoax". The disastrous fall in vaccination against measles, mumps, and rubella can be attributed more to talk show presenters and airheaded celebrities than to lack of interest among the public. People are systematically deceived by "anti-vaxers," climate change denialists, vitamin pill salesmen, and a horde of crackpot alternative therapists.

There is one problem that Mooney and Kirshenbaum don't talk about at all, yet it seems to me to be one of the biggest problems in science communication: it isn't lack of interest on the part of the public, nor even lack of understanding, but lack of trust. The tendency of real science to indulge in hyperbolic self promotion is one reason for this lack of trust. Sometimes this descends into outright dishonesty. This is a tendency promoted by governments and funding agencies, through their insistence on imposing silly performance measures. The public is quite sensible enough to take with a pinch of salt the almost daily announcements of "cancer cures" that emanate from university press offices.

On the face of it, we should be encouraged that "public engagement in science" is the flavour of the day. It isn't quite that simple, though. Too

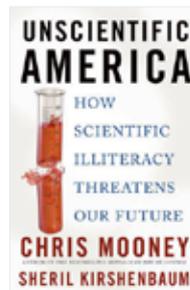
Unscientific America: How Scientific Illiteracy Threatens America's Future

Chris Mooney, Sheril Kirshenbaum

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often, universities regard engagement with the public as a branch of their own public relations machine. They even instruct you on what tone of voice to use when talking publicly.

One reason why scientists need to talk to people outside the lab is precisely to counteract this tide of nonsense from PR people, who are paid to deceive. The problem for academics is usually time. We already do three jobs: teaching, research, and coping with human resources bollocks. How can we find time for a fourth? That's not easy, especially for the best researchers (those who do research themselves, not just lead a team). Mooney and Kirshenbaum suggest that the solution is to create a "cadre of communication and outreach experts." I don't think this would work. Such people would, by and large, be outsiders, writing uncritical paeans, dictated by big name scientists. A new cadre of PR hangers on does not sound like a great idea. A better—and very much cheaper—solution would be to provide training in free blogging software, and we'll do it ourselves.

The two chapters that I looked forward to reading, on religion and that entitled "The bloggers cannot save us," proved deeply disappointing. The authors are firmly in the camp of what Richard Dawkins called the "Neville Chamberlain school of evolutionists." They maintain that "if the goal is to create an America more friendly to science and reason, the combativeness of the New Atheists is strongly counterproductive." They are particularly critical of P Z Myers, the University of Minnesota developmental biologist who is splendidly clear in his views. Of the communion wafer he famously said, "It's a crackin' cracker." But he and Dawkins are right. When it comes to young earth creationists we have a war on our hands, and nowhere more than in the US. What's more, it's a

winnable war. Mooney and Kirshenbaum are all for appeasement, but appeasement won't work. It might please the more moderate wings of the church, but they already believe in evolution and are regarded by fundamentalists as being just as big an enemy as Myers and Dawkins. And, we must ask, who has done best at getting a wide public readership? Myers's blog, Pharyngula (<http://scienceblogs.com/pharyngula/>), has up to two million page views a month. Dawkins's book *The God Delusion* has sold three million copies. In comparison the bland and often rather condescending corporate science websites get tiny numbers of hits.

In Europe in general, and the United Kingdom in particular, young earth creationists are not the major problem they are in the US, despite being supported by Tony Blair. Perhaps the nearest analogy in Europe is the threat to reason from various sorts of crackpot medicine. The appeasers are widespread. The medical royal colleges and the Department of Health are at the forefront of the Chamberlain approach. But appeasement hasn't worked there either. What has worked is the revelation that university courses are teaching that "amethysts emit high yin energy" (www.dcsceience.net/?p=227). Or, in a lecture on herbal approaches for patients with cancer: "Legally, you cannot claim to cure cancer . . . This is not a problem because 'we treat people, not diseases'" (www.dcsceience.net/?p=2043). This is shocking stuff, but it has been unearthed not by the corporate media but by bloggers.

I think Mooney and Kirshenbaum have it all wrong. They favour corporate communications, which are written by people outside science and which easily become mere PR machinery for individuals and institutions. Such blogs are rarely popular, and at their worst they threaten the honesty of science. More and more individual scientists have found that they can write their own blog. It costs next to nothing, and you can say what you think. A few clicks and the world can read what you have to say. Forget corporate communications. Just do it yourself. It's fun. And think of the money you'd save for doing science if the PR people were fired.

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Further references are in the version on bmj.com

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