

DINNER/DISCUSSION SUMMARY

Science Communication – are we making progress?

Held at The Royal Society on Wednesday 10th November, 2004

We are grateful to the following for support for this meeting:

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In the Chair: **The Rt Hon the Lord Jenkin of Roding**
Chairman, The Foundation for Science and Technology

Speakers: **Professor Colin Blakemore FRS FMedSci**
Chief Executive, Medical Research Council
Professor Kathy Sykes
Collier Chair: Public Engagement in Science and Engineering, University of Bristol
Fiona Fox
Head, Science Media Centre, Royal Institution of Great Britain

The invited speakers outlined the development of thinking over science communication following the Bodmer Report of 1985 and discussed the involvement of scientists in public debate and with the media.

In discussion it was questioned whether it was really right for scientists to declare their personal values and raise questions about who stood to benefit from new technologies and who controlled them. There was a danger of prejudicing the independence of science, and the bodies involved in the debate were liable to represent interest groups. Research was properly judged on the basis of reproducibility and peer review, not the motives of those who conducted it. The value of Mendel's experiments with wrinkled peas did not depend on his personal qualities.

Another speaker agreed that science should be valued for its own sake, because the benefits were not readily predictable. Crick and Watson could not foresee where their work would lead, DVD players were not thought of when the laser was invented, and magnetic resonance imaging would not have been backed by citizens' juries. The House of Lords Science and Society report¹ had asked what would have happened if Galileo and Darwin had had to engage public support. It was hard to involve the public with blue sky research, and perhaps the right time to do this was at the stage of implementation. On the other hand scientists were not necessarily objective. They made

choices which reflected their personal views, and indeed Mendel manipulated his evidence. Scientists were members of the public themselves and needed to learn how to recognise the factors that influenced their behaviour. Lay people could help scientists do this.

In the area of climate change it was suggested that scientists had influenced public attitudes and gained credibility by reporting the consensus of scientific opinion while keeping their own values out of the debate. Against this it was argued that it could not hurt to say that you cared about the planet. Those developing nanotechnology could not ask people to trust them if they did not talk about their own hopes and concerns. Other participants in the discussion took the view that scientists could not simply drop their findings into the public arena and stand back. Embryo research had only been allowed in the UK because MPs had values, but scientists ought not to leave it to politicians to make all the links and the judgements. In any case it was possible to go into ethical issues while still looking at hard evidence. There had, for instance, been three parallel debates over GM crops, and the science debate did steer clear of rhetoric and look at the facts.

Another participant observed that by the time science hit the headlines it had moved on to the broader issues and questions about the consequences of technology could not be ducked. Presenting science to the media was different from other forms of public relations because scientists had rules to stop them just making up the answers. It was important to communicate how sci

¹ www.publications.parliament.uk/pa/ld199900/ldselect/ldsctech/38/3801.htm

ence worked and that scientists had an approach to issues which could command respect.

One way to engage members of the public with science, it was suggested, was to appoint them to panels making research funding decisions. One charity which funded work on a particular disease did this, with carers making a valuable input on the basis of their knowledge of what would and would not work. It was suggested that if members of the people had been involved at an early stage in decisions on the MMR vaccine it might have been recognised that mothers faced a real dilemma. Lay people did sit on ethics committees and research council funding panels. There was, however, a question of who were the right lay people to be involved in funding decisions. People who were personally concerned with a particular problem and had read everything they could find about it on the internet were not necessarily objective. There was also an issue about resources. The charity referred to found that the involvement of lay people came at a cost, in that they had to be supported and helped to formulate questions, and the scientists had to be helped to reply. If the object was to involve members of the public who were not in pressure groups it might be necessary to pay them for their time and trouble, and scientists had jobs to get on with.

A number of speakers made the distinction between opinion polling and engagement. For dialogue to happen, people needed to get information and develop informed views rather than just reacting. The public needed access to good advice, and one speaker criticised the material published in the GM debate for presenting polarised views without distinguishing evidence from campaigning opinion. Another participant emphasised the need for both talking and listening. Members of her family had become involved in campaigning against telephone masts, having asked questions and been given answers that did not tell them what they wanted to know. For want of the right answers they concluded that mobile phones must be harmless, because they were small and could be switched off, while telephone masts were big and might cook the children if put up next to a school.

The handling of uncertainty was another issue. The discussion had mostly concerned the problem of communication between single issue groups and committed scientists, but in the middle ground there had to be uncertainty and the question was how to deal with it in public debate. A scientifically informed public needed to understand scientific processes, how scientists could disagree with each other, how to handle probability. This was not just a problem for the lay public. The scientific com-

munity advocated evidence-based policy-making, but evidence did not imply certainty. At one time, for example, the public had been given simple messages about the significance of genetic information: there were genes for everything. Now the picture had changed and genes were no longer the whole story.

It was suggested that this was specifically a problem for scientists. People in general were used to uncertainty, but scientists needed to learn to acknowledge it. When, moreover, the public had become engaged with a scientific issue it was necessary to accept the results. The public were well aware of the benefits of science because they saw it all round them, but they were wary of being misled. In the US a lot of people had voted against stem cell research.

One contributor to the discussion raised the question of how to use the power of the media to get views back from the public. Focus groups were liable to be dominated by single interest groups. People got most of their information on scientific issues from the media, but there seemed to be a reluctance to use them for two-way communication. Part of the answer was that scientists needed to be prepared to get out and talk to the media, but it was also necessary to give positive messages to the media about what ordinary people thought, on the basis of informed views rather than just opinion polls. Some thought that the internet could be used for direct communication, but it was not clear how soon this might happen on any large scale. Another suggestion was that TV and radio drama, which tended to be very negative about science, could be used to promote more informed discussion. One university had introduced joint training programmes for PhD students and trainee journalists, but it was difficult for scientists to find time for media training so long as it did not score points in research assessment exercises.

One speaker saw grounds for optimism in that there had been a lot of progress in Europe, particularly within the sixth Framework Programme, in spite of some resistance from scientists, and some activities in the UK had been taken as models. In conclusion the advice was given never to overestimate how much science the public understood, but also never to underestimate their common sense.

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URL: www.sciencemediacentre.org

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