

DINNER/DISCUSSION

THE BSE INQUIRY: IMPLEMENTING THE LESSONS LEARNED

Held at the Royal Society on Tuesday, 3 April, 2001

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The Wellcome Trust

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

Speakers: **The Lord Phillips of Worth Matravers**, Chairman, The BSE Inquiry
Professor Liam Donaldson FMedSci, Chief Medical Officer, Department of Health
Professor David King FRS, Chief Scientific Adviser, Office of Science and Technology, DTI

In his lecture Lord Phillips drew attention to the lessons of his Committee's report following the BSE Inquiry, notably the need for an effective system of surveillance of animal diseases; for strong veterinary epidemiology; for open communication of information to the public; for care in the use of expert advisory committees; for co-ordination and quality control in research; and for public education about risk.

In discussion, the Government's promulgation of formal guidelines and codes of practice for advisory committees was seen as a welcome outcome of the BSE experience. The Southborough Committee had been set up as an informal working party and then found themselves making policy. It was noted that the Committee had recommended that meat and bone meal should not be sold for feeding to cattle but did not realise what large stocks were held on farms.

The Phillips report was seen as pointing to a fundamental change in the methods of Government. Openness, as practised for example by the Food Standards Agency with its public Board meetings, entailed a step into unfamiliar territory, but it seemed to work. Some business had to be done in private, for example when the Agency was given access to scientific information which had not yet been peer-reviewed, but the normal rule was to make its deliberations public. Transparency had an international dimension too: the UK was part of a wider community and needed to integrate its approach to openness with that of the rest of Europe. In this it was suggested that the UK ought to lead by example. There was real anger in France because the UK had continued to export meat and bone meal after it had been identified as potentially carrying BSE. Strictly speaking nothing had been done wrong, in that the meal was not exported for use as cattle-feed, but plainer

warnings should have been given.

There was evidence from social science research that openness was necessary but not sufficient to gain people's trust. Scientists could make predictions about the ozone layer but would not necessarily be believed. The late Marty Feldman had a sketch: in which he assured an audience that there was no cause for alarm, and then stood back to watch the alarm mounting. At one time advertisements used the figure of a white-coated scientist to sell washing powder. Now scientists were seen as people who could not be trusted when they said that there was "no evidence" that something could be harmful. This might be a problem of how to deal with the unfamiliar, given that people seemed to cope quite happily with unreliable scientific predictions, in the shape of weather forecasts, every day. Perhaps the answer was to have a Radio Doctor and a Radio Vet to make health issues more familiar..

Scientists in any case tended to disagree with each other. One speaker suggested that Government statements on the possible future incidence of vCJD were unduly cautious. The study of the Queniborough cluster suggested an incubation period of 12-15 years, and on that basis only a few hundred future deaths from the disease might be expected. Against this it was argued that there were very great uncertainties and that it was necessary to forecast on a wide range of assumptions. Variations in susceptibility were not understood, and a recent study of kuru, the spongiform encephalopathy linked with the eating of human brains, indicated that different incubation periods were associated with different genetic types.

One participant saw the public as having a very important part to play in exchanges with scientists. The latter could get carried away with the

excitement of what they had done, and they could benefit from being exposed to the different viewpoint of the public. Or perhaps rather its different viewpoints. Another participant who had made use of focus groups suggested that there was no such thing as one public opinion. A surprising number of those consulted had taken the view that the Government would not say that something was safe if it wasn't.

There was a particular problem in communicating with the public about risk. The schools tried hard to get the concepts of risk and probability across in the maths syllabus, but with limited success: people still bought lottery tickets. Scientists needed to learn how to become more effective communicators than the media. One tool was graphical presentation. A graph showing forecasts of the course of the foot-and-mouth epidemic on different assumptions made a very persuasive case for the rapid culling of animals on infected and contiguous farms.

One problem was the use of large numbers to convey small risks. Participants in one focus group, when asked what a million meant, said simply that it was a very big number. Other ways had to be found to illustrate relative risks, for instance by saying that the radiation left over from Chernobyl had the same impact on health as smoking two cigarettes in a lifetime.

It was argued that risk could not be discussed in isolation. What mattered was the trade-off between benefit and risk. Thus the sales of mobile phones had increased even after possible risks to health had been identified, because the benefits of using them were obvious. In the case of genetically modified foods the benefits to consumers were not so apparent. When beef first came under suspicion the supermarkets were able to sell their stocks off cheap, because customers decided it was safe to eat so long as the price was low enough. People differentiated between risks which they could run if they so chose - eg smoking cigarettes or cycling round London - and those which they could not control, such as the risk that the food they bought from the supermarket might make them ill. The public seemed more and more conscious of food-borne disease even as the real risk declined.

The Government was being advised on the current outbreak of foot-and-mouth by a group of scientists assembled for the purpose. It was asked how the members of such a group should be chosen. At one time there had been an attempt to draw up lists of experts on different subjects, but a degree of improvisation was probably unavoidable. If different people active in a given field were asked to list the top experts, their answers tended to be reasonably convergent. It was important also for expert committees to include people with mud on their boots.

A recent scientific conference in France had been thought to merit Ministerial visits and an audience with the President of the Republic. British politicians seemed to find science less attractive. One view, however, was that politics needed to be taken out of critical decisions on human health. Against this, a participant with experience of advising Ministers found their contribution helpful, in that they asked basic, common sense questions and offered a constructive challenge to the views of officials.

It was observed that the seeds of BSE were planted after the war when farmers began feeding animal protein to cattle. Another change in farming practice - autumn planting - had reduced biodiversity much more than GM crops. The question was who should check and test the possible effects of such paradigm shifts in the way things were done. Similarly, the horizon needed to be scanned for possible hazards such as exotic infections of livestock. The problem was how to do this without being swamped by a multiplicity of warnings.

One speaker suggested that commonsense was needed more than science. It could have been foreseen that feeding animal protein to animals was risky and that trouble was to be expected from pigswill and illegal imports of meat. On this view BSE, swine fever and foot-and-mouth disease were accidents which had been allowed to happen because of a failure to think laterally.

Other speakers urged the need to maintain the Government infrastructure for monitoring animal disease and dealing with new threats. The MAFF veterinary surveillance system was currently under review, and in Scotland the Thurso veterinary investigation centre had been scheduled for closure. The laboratories which now formed part of the Institute for Animal Health, a major centre for work on BSE and foot-and-mouth disease, had been through many reviews and reorganisations. The scrapie programme at the Institute was nearly shut down before the emergence of BSE and the Pirbright laboratory which was the international reference laboratory for foot-and-mouth disease had almost been merged with the Compton laboratory. The poultry research institute at Houghton had been closed, in spite of the importance of *Salmonella* strains for human health. Expertise which would be needed in the long term tended to fall victim to the search for short-term economies.

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The discussion was held under the Foundation's Rule that the speakers may be named but those who contribute in the discussion are not. None of the opinions stated are those of the Foundation, since by its nature and constitution, the Foundation is unable to have an opinion.