

Citizen engagement in science and technology policy: a commentary on recent UK experience

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Science, governance and the 'mad cow' crisis

The publication in October 2000 of the Phillips Report on BSE ('mad-cow disease') marked a low ebb in UK science-public relations, but also a possible turning point. Among the various, diplomatically-worded criticisms made by this official inquiry, one major identified problem concerns the relationship between governmental reassurances of safety and the declining public trust in such statements. As the report concluded, the government did not actually lie to the public about the risks. However, it was so preoccupied with preventing an alarmist over-reaction that it undertook a major campaign of reassurance. As a direct consequence, *'[w]hen on 20 March 1996 the Government announced that BSE had probably been transmitted to humans, the public felt that they had been betrayed. Confidence in public pronouncements about risk was a further casualty of BSE'* (Phillips Report, 2000, p.xviii). It would appear that at the heart of government activity in this area, and especially of the communication of risk, was a *'consuming fear of provoking an irrational public scare'* (ibid, p. 264). In the case of BSE, this fear of public response led to a characteristic denial of risk and a very British concern among officials not to 'rock the boat' when presenting public information.

Whilst it might be tempting to consign this unhappy episode in science-public relations to history, the initial response to the other great British risk debate of the 1990s, namely, genetically modified (GM) foods, demonstrated many similarities in its treatment of the general public. Thus, Prime Minister Tony Blair was widely criticised in February 1999 for his attempts at reassuring citizens about the safety of GM food. As one tabloid newspaper reported, Blair was 'frustrated' that the 'potential benefits of GM food are being ignored in the escalating row'. The depressing implication was that very little had been learnt from the BSE case in terms of the need for more than blanket reassurances when dealing with public concerns. Once again, a complex area of scientific, social and ethical debate was being dealt with in an apparently arrogant and high-handed manner. At the same time, and as in the BSE episode, the public's

legitimate questions over risk and technological development were dismissed as irrational and ignorant.

Whilst the BSE and GM food cases suggest a difficult relationship between science, the public and policy-making, a series of governmental publications and initiatives has attempted to establish a more open and accountable basis for future activities. The Chief Scientific Adviser, Sir Robert May, published new guidelines on scientific advice and policy making in 1997 and these have recently been amended. In 2000, a new code of practice for scientific advisory committees was proposed which stressed the need for an 'inclusive' approach, for effective communication with the media and the wider public, for transparency and for high standards in working practices. Such governmental moves suggest a growing belief that public confidence in decision-making can only be maintained through a more accountable relationship between science, policy and the wider public. As Sir Robert May is quoted in the Phillips report... *'My view is strongly that... the full messy process whereby scientific understanding is arrived at with all its problems has to be spilled out into the open.'* (ibid, p. 265)

Such moves towards greater transparency in decision-making are undoubtedly overdue. However, they also raise larger questions about the best role for public groups within scientific and technological decision-making. Greater openness may be a worthy objective but it does not in itself create a more active public engagement with such important issues as food safety and technology development. Whilst scientific advice is an essential element within decision-making, the case can also be made that such experts are not necessarily best-placed to make ethical and social judgements over, for example, the need for GM food or the desirability of new technologies. As the Royal Commission on Environmental Pollution put it back in 1998: *'When environmental standards are set or other judgements made about environmental issues, decisions must be informed by an understanding of people's values. Traditional forms of consultation... are not an adequate method of articulating values'* (RCEP 1998, p. 105).

Put bluntly, it is only right that those who will be directly affected by technological decisions should have a say in their making. Equally, one positive lesson from the BSE saga is that wider consultation and discussion could actually improve the quality of decision making (Irwin 1995).

At this point, we move from questions of greater public *accountability* to those of public *engagement and democratic participation*. As a recent report from the House of Lords on 'science and society' puts this: '*Today's public expects not merely to know what is going on, but to be consulted; science is beginning to see the wisdom of this, and to move "out of the laboratory and into the community"... to engage in dialogue aimed at mutual understanding.*' (House of Lords 2000, p.37). The remainder of this paper is concerned with the form such dialogue might take and the wider issues raised. As one immediate comment on this, it is potentially very significant that the 2000 Government white paper on science and innovation policy considers such issues under the heading of 'Confident Consumers'. Whilst the importance of public dialogue is still emphasised, the framework has become primarily economic in character.

In practical terms, both the Royal Commission and the House of Lords Select Committee have outlined a number of possible routes to public consultation in this area. Options as raised by the Royal Commission include focus groups, citizen's juries, consensus conferences and deliberative polls. Other possibilities for gaining active citizen participation and engagement include stakeholder dialogues, internet debates, local and national consultations and consultative panels. Most of these have already been tried out either in the UK or nations such as Denmark and The Netherlands (and, increasingly, across the world).

Despite these different forms of consultation, common issues can be identified. The Lords report was particularly keen to distinguish between 'market research exercises' (designed to improve policy makers' understanding of the public) and 'public consultation exercises' (which engage directly with the public at large). Whilst this can seem a minor distinction, it can have great significance (as we will see) for the form of consultation adopted and its procedural basis. Secondly, practical experience and social scientific research (Irwin and Wynne 1996, Satya Murty & Wakeford, this issue) suggests the value of a deliberative rather than a 'snap shot' approach to public consultation. When confronted with complex technical issues (for example, alternative methods of food production or the ethics of xenotransplantation) people need time to ponder, to talk matters through and consider different arguments. A third issue concerns the ownership and control of any exercise: are members of the public free to

select questions and evidence as they consider relevant or have these been pre-selected?

To these general issues and questions can be added the treatment and presentation of scientific evidence within public consultations. One implicit assumption within the institutional handling of BSE was that the public was incapable of treating technical questions in a mature and balanced manner. Rather than revealing the 'messy process' involved, government departments offered a carefully packaged account designed to reassure and avoid awkward questioning. Of course, this approach backfired when legitimate scientific doubts could no longer be suppressed, but this experience has not necessarily dissuaded other governmental bodies from attempting to sanitise the presentation of scientific evidence to the public. One important test of any consultation must therefore be its willingness to acknowledge uncertainties and areas of contention within scientific discussion.

In order to explore some of these issues in practice, we can briefly consider one important UK initiative in 'science and democracy': the Public Consultation on Developments in the Biosciences (PCDB). Conducted between 1997 and 1999, this government-led consultation aimed to engage with the public about the 'biosciences' (including xenotransplantation, animal and human cloning, GM food, and genetic testing). The exercise broke new ground in governmental consultation with the public over scientific issues. However, and as I will discuss, it was also marked by a series of assumptions about scientific democracy which restricted its openness to public concerns and questions.

Consulting the public

In November 1997, the Science Minister announced his intention to hold a public consultation exercise on bioscience issues. The main purpose of the exercise was to identify and explore public hopes and concerns but also to feed these into the policy process. In June 1998, an advisory group to the consultation was appointed with membership from a range of bodies including the Green Alliance, Wellcome Trust, a key industrial company, a research council and a supermarket chain.

Right from the start, this body was confronted with challenging questions concerning the form and focus of the consultation. At least one member of the group queried the feasibility of maintaining a broad coverage across the biosciences as a whole. Shouldn't issues like GM food be kept apart from medical applications? Could anything useful be concluded about public assessments across such a range of different issues and contexts? Certainly, previous exercises like the Citizen Foresight

consultation and Lancaster University's *Uncertain World* report had kept a much narrower focus. For the new exercise, government officials were keen to focus on generic issues and to consider in particular the operation of advisory and regulatory bodies.

Immediately, we can identify the institutional framing of this exercise and its significance. The consultation was designed to feed into the policy process in a very direct fashion. As later became apparent, it was essential for the civil servants involved that the exercise should inform a major policy review of biotechnology regulation which was being simultaneously conducted. On the one hand, this imposed a very tight time-scale on the project since final results would be needed by April/May 1999. On the other, it gave the consultation an enhanced status, especially when one of the familiar criticisms of public consultation exercises is that they often have only limited practical relevance. However, it soon became apparent that government was providing more than a broad framework for the exercise and a time-scale. In October 1998, the Minister also established a number of specific aims for the initiative.

- What is the level and nature of people's awareness of technological advances in the biosciences?
- What issues do people see arising from these developments in the biosciences and how important are these compared to other major scientific issues?
- What is the extent of people's knowledge of the oversight and regulatory process in the United Kingdom and Europe?
- What issues do people believe should be taken into account in any oversight of developments in the biosciences?
- What information should be made available to the general public from the regulatory system and about advances in the biosciences?

There are a number of aspects of these questions that deserve our attention. First of all, it is important to note that they were set by government rather than by those being consulted, and as such, they closely mirror the concerns of officials rather than (necessarily) public groups. Secondly, they assume that 'scientific' issues are separable in the public mind from other, perhaps larger, issues (e.g. the need for rapid technological change or the quality of existing food and healthcare provision). Thirdly, they emphasise knowledge and information as if they can be discussed apart from wider questions of institutional legitimacy and public trust. Fourthly, they seem to assume that there is indeed a general awareness of the biosciences as a distinct category: actually, most members of the public initially expressed themselves as quite unfamiliar with such topics. Overall, the Minister's questions emphasise the point that the agenda for this consultation was being set by government (and, to a limited degree, the steering group) rather than by the

wider public. In that way, the exercise does indeed seem to fall into the Lords' category of 'market research' rather than 'public consultation'.

Two further characteristics of the biosciences exercise reinforce this point. There was great concern within the initiative that the scientific content of briefing materials should be beyond reproach. Whilst this emphasis on 'getting the facts straight' seems very laudable, it does assume that 'scientific facts' can and should be removed from public debate and questioning. Rather than adopting the citizens' jury and consensus conference approach of experts undergoing direct cross-examination (so that the public set the agenda), such matters were centrally pre-determined. Whilst the Phillips report emphasises the 'messiness' of science-policy relations, the biosciences consultation sought to separate the 'hard facts' from 'public opinion'.

Finally, and perhaps most significantly for the conduct of the exercise, it was considered essential that the exercise should generate both qualitative and quantitative data. Accordingly, the consultation consisted of both a series of generally lively focus groups and over a thousand statistically-coded individual interviews. Such an approach immediately raises questions as to whether the public could be consulted on such a complex and unfamiliar range of topics in what was essentially a questionnaire format. Certainly, the quantitative phase allowed no opportunity for personal reflection or for informal discussion. The major justification offered was that quantitative data was essential if the study was to be taken seriously by Ministers and other observers. The government-led nature of this exercise was again very apparent. By this stage, and despite its billing as a 'public consultation', the initiative had become a sophisticated social research project designed to tell government what the public think.

The results of the consultation were published in May 1999 alongside the Government announcement of a new regulatory structure for biotechnology (MORI 1999).

Among the key findings were:

- 'that the public believe advances in human health represent the biggest benefit to arise from scientific developments';
- 'the vast majority of people (97%) believe it is important that there are rules and regulations to control biological developments and scientific research';
- 'The main issues people say should be taken into account when determining whether a biological development is right or wrong are whether people will benefit from it and whether it is safe to use';
- 'The thing that people most want in relation to the biosciences is more information on the rules and regulations'.

The professional quality of the exercise was undoubtedly high (especially given the time constraints). However, and as the Lords noted in their report, the framework was 'closer to market research than public consultation' (House of Lords 2000, p.37). Whilst the initiative was a significant step forward from previous institutional practice, its democratic limitations are clear. Thus, the research ethos of the exercise meant that civil servants and members of the advisory group did not meet directly with any members of the public since this would contaminate the data. Whilst the avoidance of contact might be justifiable in professional research terms, it did prevent any real dialogue between scientists, policy makers and the wider public. Rather than being able to speak for themselves, public voices were channelled according to the needs and constraints of the policy process. It is, meanwhile, very hard to say whether public groups would have reached similar or different conclusions had the exercise been conducted in a 'citizen led' and more democratic manner.

Conclusion

What general lessons for citizen engagement with science and technology emerge from this discussion?

- That it is not sufficient simply to call for 'scientific democracy'. Instead, it is necessary to consider carefully the *form* of any initiative and its *operating principles*;
- That there may indeed be a significant difference between *public consultation and engagement* and exercises designed to improve *policy makers' understanding of the public*;
- That there are particular advantages to forms of dialogue which allow members of the public to *set their own agenda* and also to *reflect* upon their own and others' views, especially when issues are both unfamiliar and complex;
- That public groups are capable of treating *scientific information* in a considered and responsible fashion. However, consultation should be allowed to open up and challenge areas of science rather than simply treating them as sacrosanct;
- That, based on the qualitative phase of the biosciences consultation in particular, it seems clear that members of the public can bring a range of relevant and useful *observations, questions and opinions* to policy debate once proper deliberation has been allowed;
- That, whilst this initiative was undoubtedly valuable and important, it only represents a *first step* towards citizen engagement and dialogue in the UK. Further experimentation and critical reflection are now essential.

In the wake of BSE, openness, democracy and the maintenance of public confidence have become standard terms within UK science and technology policy. The next few years will reveal whether 'public dialogue' is a serious political goal or simply a convenient slogan.

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