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Limitations of Public Dialogue in Science and the Rise of New 'Experts'

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Introduction

On 18 June 2003, just before the first strand of the UK government's three-strand (scientific, economic and social) inquiry into genetically modified (GM) foods was to publish its conclusions,[1] *The Times* ran a little-commented-on one-column inch statement behind its front page, entitled 'GM exclusion', that read as follows:

> Lord Sainsbury of Turville, the Science and Innovation Minister, is to have no say on the policy over GM foods, the Government said. His place at any Whitehall meeting to discuss the issue is to be taken by Nigel Griffiths, Minister for Small Business and *Enterprise*. (*The Times*, 18 June 2003, p.2).

No doubt many of the detractors of GM will have welcomed this decision. But is it a good thing that the one minister who knows something about these matters should participate no further in the decision-making process?

Those who would argue that this was the right move to make, because Lord Sainsbury, who owns the supermarket chain bearing his name, 'has an interest' in this debate, seem to assume that we cannot separate or distinguish subjective interests from objective judgements. Indeed, they believe that there is no such thing as objective knowledge in the first place. But if that were truly the case, why would 'independence' matter at all?

This approach to these issues, which appears to be becoming increasingly widespread nowadays, is nothing more than a recipe for institutionalised ignorance.

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Confusions

There has, over the recent period, been a growing clamour to include what are held to be 'lay values' in the scientific decision-making process.[2] This often takes the form of a demand for public dialogue. But this confuses two distinct issues or trends that have emerged over the recent period – the demise of political participation or engagement in society, and a growing disillusionment with science and its consequences.

Public participation in science seeks in part to restore some limited measure of legitimacy to the former, by forcing dialogue in the latter. One of the leading authorities of this tendency, Professor Brian Wynne, of the University of Lancaster, has made his assumptions and intentions clear in one of his major essays on the subject, 'May the sheep safely graze?'. For him, the aim is to explore 'the democratic possibilities of science *and thus* of the reconstruction of politics' (1997: 47, emphasis added). In this essay, I argue that this is an inversion and confusion of that which is truly necessary. We need to restore the centrality of and reinvigorate political debate first, if we are to generate a healthy interest in science.

In fact, the 'democratic possibilities of science' are pretty close to zero. The sun does not revolve around the earth irrespective of how many people would vote that it appears so to them, and no matter where they were located on the planet, their gender, their ethnicity or how wealthy they were.

Science is an unashamedly elitist activity. But it is an elite that is open to all those with the time, interest, talent and initiative to pursue and develop it. Science is not value-free, but it should strive to become so, rather than seeking to include 'unheard voices' into its deliberative processes.

Limitations

Public participation in science, as currently pursued and promoted by a variety of organisations and institutions, is problematic for four main reasons;

Demoralising Scientists

First, by demanding the inclusion of so-called 'lay opinions', it effectively marginalises actual scientific evidence and thereby leads to the demoralization of scientists themselves. But science is not 'just another point of view'. It may be culturally situated, but this does not mean that it is only contextually valid.

Notably, Brian Wynne argues, in relation to the perceived need to *include 'local knowledge'* in science, that 'It is important not to misunderstand this as a claim for intellectual superiority *or even* equivalence for lay knowledges' (1997: 74, emphasis added).

So what are we meant to conclude? That we include the public just to confuse matters, or simply to be different?

This relativisation and marginalisation of science now occurs at the highest level. For example, the UK government's own inquiry into the purported adverse health effects of mobile phones, convened under the chairmanship of Sir William Stewart, concluded that in future 'non-peer reviewed papers and anecdotal evidence should be taken into account' (Independent Expert Group On Mobile Phones 2000: 102) as part of the process for reaching decisions on these matters.

This effectively fetishises information and opinion over evidence and explanation. It reflects and prioritises a narrow, empirical obsession with the quantity of views expressed over their actual quality. However, emphasising the local over the universal leaves us with no basis upon which to evaluate opinions or to pass judgement as to what really matters.

This approach limits and constrains the dynamism of science, further facilitating the demise in its popularity. Today we see major academic departments having to close as they attract fewer funds and fewer students. It has also led to a form of constant equivocation on the part of those who ought to be making decisions. Many reports into controversial scientific matters today seem to conclude 'it's safe, but'. By this means, politicians, regulators and sadly, increasingly some scientists too, try to have it both ways. In effect, on an issue like GM foods for example, they are saying;

> We would like to develop GM, for all the possibilities it provides, and in order not to miss out on the potential of this technology. We think, based on all the evidence we have available before us, that there is nothing particularly wrong with it. But as we need to be seen to have consulted widely in order to preserve our fragile democratic mandate, let's hear what you, the public, have to say. And let's organise some further trials as if there were a problem, even if no-one will be able to agree upon the results.

This approach led one commentator, responding to the latest report from the Royal Society on GM, to remark that the scientists were no more hesitant than before about GM itself – they had just become more hesitant about saying so (Gilland 2002).

That may be understandable. After all, scientists have been on the receiving end of a lot of adverse publicity over the last decade, ranging over all manner of things from BSE (mad-cow disease), to GM, to mobile phones and more recently, the controversy surrounding the MMR triple-vaccine.[3]

However, whilst it may make those who seek to re-invent themselves in such a way, as 'science in society' communicators, popular – courted by parliament, research councils, the media and social scientists alike – it is also little more than an act of moral and intellectual cowardice.

Rather than saving their image or reputation and somehow restoring public trust, this approach is both symptomatic of and could further entrench the very demoralisation they seek to combat. It may indeed discredit those who engage in such activities and simply bring the individuals concerned, and their once august institutions, into further disrepute.

Patronising the Public

The second major difficulty with calls for public dialogue in science is that they pander to popular prejudice and patronise the public. By having to make science more 'accessible' in order to be 'inclusive', this ends up by diluting the detail, eroding the evidence and trivialising the theory. This is not access to science but access to science as simplistic morality tales for a nervous society.

For instance, much has been made over the recent period of the supposed link between exposure to the sun and skin cancer. We teach our children from an early age, even in the UK where the sun hardly shines, to cover up when they go outside to play, or to put on some increasingly high-factor sun creams. It has been a major public health campaign around the world, so one could assume that it must be true.

But in fact the evidence is not clear cut. Most moles are benign, and basal-cell and squamous-cell cancers, that occur on exposed areas and cause concern, can relatively easily be treated. The real killer; malignant melanomas – that people worry about most – commonly occur on unexposed areas of the skin, and have little to do with exposure to sunlight. So we end up exaggerating the risk of treatable conditions and worrying about things we can do little about, all in the name of being more 'aware'. A case, amongst many others that could be pointed to, of making ourselves more sorry than safe.

Another way by which the public is patronised is the contemporary obsession with having to listen to the 'voices of victims' or their relatives. This approach took off in the UK at the time of the inquiry under the

auspices of Lord Phillips into the BSE fiasco.[4] This placed relatives centre stage to discipline the industry and civil servants concerned, a trend that has since continued with the public inquiries into the Alder-Hey Hospital human body-parts 'scandal' and the Bristol Hospital child cardiology unit 'cover-up'.

But why should this be so? Whilst we can all sympathise with, and respect, the loss of the bereaved, whether this be through the incredibly rare variant CJD (the human form of BSE that has killed just under 150 in almost a decade), or some other tragedy, such terrible events provide those involved with no particular or special insight into pathology, health-care reform or any other area of expertise.

In actual fact, the public are neither particularly insightful in such matters and nor are they particularly stupid. They are quite often ignorant of the facts and usually unmediated in their responses to them, displaying an understandable proclivity to prioritise emotion over reason. We should accordingly neither condemn or dismiss them; nor, however, should we celebrate their views or pander to them. The greatest respect you can pay anyone in any form of debate is to challenge their understanding with a view to transcending it or moving it on.

However, even the Royal Society's own first 'National Forum for Science' sought 'to ensure the participants *feel* that they have participated in the debate' (Feedback and Evaluation Summary, emphasis added).[5]

This prioritisation of feelings shows the extent to which the process in these debates is considered to be far more important than the content itself. For the advocates of public dialogue, inclusion ends up trumping insight at every turn.

Ironically, the more gestures the authorities make in this direction, whether through the form of establishing 'citizens' juries', 'focus groups', 'stakeholder forums' or 'consensus conferences', the more we see that the public actually disengages from the real process of political contestation. It is a wonder that those who promote these forms of so-called 'participative democracy' have yet to notice.

Elevating New 'Experts'

The third problem with promoting public dialogue in science, as currently proposed, is that it flatters those who claim to represent the public or truly know what public opinion demands. Thus, a new breed of self-appointed 'expert' has now emerged in all manner of fields from parenting to pollution. Indeed, you increasingly need to be an expert in expertise in order to know who to believe nowadays.

I have already examined the new role played by relatives of victims. Apart from being patronised, these have also gained an undeserved but privileged place to set, determine or change important agendas.

There also exist now all manner of self-defined 'ethicists' who sit on a plethora of scientific committees deliberating over the issues of the day. Indeed, one astute commentator recently remarked, at the time of the 50th anniversary of the discovery of DNA, that it was amazing that Crick and Watson had managed to do what they did without first having to have it cleared by an ethics committee.[6]

In these new arenas we can observe one of the more visible successes of recycling today. The clergy, 500 years on from debating Galileo, and often in difficulty filling their own places of worship, now seek to pontificate again to us all over everything from GM to human embryos. They may be qualified to preach to the faithful, but certainly not to scientists and the rest of us as to the rights and wrongs of major issues. The problem is that their views are not rooted in, or disciplined by, experience, or any particular relevant expertise.

We have also witnessed the inexorable rise of the risk managers. These believe that the solution to all of these debates is simply to quantify everything. Here I have some sympathy with science's detractors, although they may not have fully understood that this phenomenon is itself merely a positivist reaction to the school of thought that holds that everything is 'just an opinion'.

There are also a growing number of social scientists who believe that they know what it is that the public wants, or at least that they have the means for extracting it from them. Brian Wynne has described his own technique as recording what gets said, as well as 'what is not being said'.[7] This would seem to provide him with tremendous latitude to conclude anything at all. Others seek to provide 'a voice' for those who do not have one – animals, the environment, children or future generations. This ability to speak on behalf of the dumb, the inert, the innocent and the unconscious, provides them with a tremendous unelected constituency as well as an incredible opportunity to project their own prejudices and views onto the debate.

However, another problem with all of these new self-appointed voices of authority, whether they be relatives, ethicists, risk managers or social scientists, is: why should we believe them? It is often remarked that as a society our level of trust in politicians, corporations and scientists is at an all-time low. But why trust the new auditors? Who audits them?[8]

It is worth pointing out the extent to which the issue of 'trust' has become one of the key components within these debates, as there are two significant, but quite distinct, ways this term is used (Durodié 2003a). When I say that 'I trust you' to do something, this usually implies a degree of confidence in your abilities based upon my experience of your competence at getting related tasks completed in the past. It is a kind of probabilistic, rational calculation as to the outcome.[9]

However, when somebody says 'trust me', they usually mean something else. It is a paraphrase for 'let me be', in a situation where there is no prior evidence to go on. Trust, in this more authentic and stronger sense, is a demand for freedom based on the suspension of reciprocal calculation. It necessitates respecting the autonomy of others and as it inevitably occurs around an unknown it requires taking a risk.

But if trust necessitates risk, then the constant demand we face today to regulate risks precludes the granting of trust, as well as narrowing the scope for genuine innovation. Sadly, today we demand constant reassurances from those in authority, but we neither trust those who provide us with this, nor allow them the latitude necessary actively to restore that trust.

Deflecting Blame

Finally, public dialogue in science deflects blame from those whom we ought to hold to account and, far from making matters more transparent, it ends up by further politicising the decision-making process. Public dialogue allows the authorities to claim that we were all consulted should things go wrong in the future, but it is also an abdication of responsibility and leadership by those best placed to decide.

Nowadays, Doctors are increasingly expected to provide us with an 'informed choice' in matters relating to how we are to be treated for particular conditions or ailments. This appears to challenge the traditional hierarchy of knowledge and to 'include' us in the process. However, it also allows those who ought to know best to avoid having to pass judgement themselves. For people who are ill, there is rarely a good time to make such decisions and they can never be as informed as those who have spent a lifetime practising for such moments and rehearsing the options.

Ironically, we now see this growing demand for science and scientists to be held to account, emanating from politicians and officials who are increasingly not. This lets them off the hook and makes for bad science in the process.

Also, as so-called public panels are invariably vetted, approved and appointed by those in authority, this process allows for greater political interference. The Bristol and Alder Hey inquiries mentioned earlier are a case in point. They may have appeared as an exercise whereby arrogant scientists and hospital consultants were made to listen to the public, but in fact the agenda had been set a long time before, in Professor Ian Kennedy's 1981 Reith lectures *The Unmasking of Medicine* (Kennedy 1981).

Professor Kennedy went on to be a major advocate and campaigner for reform of the medical profession and he headed-up the Bristol inquiry, the outcome and manner of which went on to influence that at Alder Hey. In fact, the so-called public, who intriguingly echoed almost precisely the government line on these matters, were unwittingly wheeled out to fulfil their role and even funded by those who sought the reforms they apparently supported (Appleton 2001).

Ironically, the demand for openness, transparency, accountability and elevating the centrality of uncertainty in all things seems to come from those who are most prone to continuously obfuscate and are the most prescriptive in their conclusions. They posture as radical and democratic but actually they oppose real change and stifle innovation and ambition.

Conclusion

As the aspiration for real social change has receded, so science has been inflated in terms of import and impact, out of all proportion. This has been both by those who see science as a danger as well as by those who see it as the solution to everything. Brian Wynne argues that the 'increasing dependence on the scientific has given science a new role'. In fact, it is the failure of politics that has done so.

We should not include 'lay values' or 'local knowledge' into science, peer review or anywhere else, as there is no such thing. These are in fact mere opinions that need to be interrogated just as much as the scientific evidence itself. Labelling them 'values', as many now seem prone to do, is in fact a conscious attempt to set this debate off-limits by suggesting that we should not offend people's values.[10]

But science is not about making us feel good about ourselves. It can reveal some quite disconcerting truths. Indeed, we owe a debt to those who, in the past, were prepared to put their heads above the parapet of perception, prejudice and power, in order to expose the real workings of the world. This was not done by accommodating to majority, or even minority, views.

Having said that, mavericks do have a role to play within science. But this is by ruthlessly revealing assumed values and eliminating them, rather than by importing a few more of their own into the debate. Above all else, mavericks need to corroborate their evidence and convince their peers.[11]

We should move away from our growing obsession with the impact of science upon society and begin to examine a bit more critically the impact of society upon science. This is especially so in a society that faces no greater difficulties, or complexities, than in the past, but that despite this, has lost its sense of ambition, of the need to develop a broader vision and of the paramount importance of the will to explore and experiment, a society that appears so riddled by self-doubt and cynicism that it has become afraid of taking risks and hence unable to establish trust.

Sadly, unlike in the past, when change largely coincided with periods of social optimism or mass political engagement, what we have today is a fear of change that stems from social pessimism and mass political disengagement. It is this that will need to be addressed if we are to restore the primacy of science. Thus, irrespective of whether we benefit or not from a scientifically more literate public, the more important process of re-engaging the public cannot be forced and will need to derive from advocating a broader social vision.

There has never really been what one could call 'Science Wars',[12] fought through to a conclusion. There may be no better time to start them than now.

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This essay builds substantially on a short opinion piece I originally had published in the *Times Higher Education Supplement* in April 2002 (Durodié 2002). This in turn sought to highlight one particular aspect of a paper I presented to the Demoralization: Morality, Authority and Power conference, held at the University of Cardiff School of Social Sciences 5–6 April 2002 (available at ⟨http://www.cf.ac.uk/socsi/news/dmap/papers/Durodie.pdf⟩). The argument was then refined for a talk at the International Book Festival in Edinburgh that year, and this was subsequently reproduced on the *Spiked* web-site (⟨http://www.spiked-online.com/Articles/00000006D9F2.htm⟩. In May 2003 I was invited by the Parliamentary Office for Science and Technology to present my views on these matters as part of the third anniversary celebrations of the publication of the influential House of Lords *Science and Society* report. In its current form, the article is the transcript of a talk I gave on 29 June 2003 to the Ideas, Intellectuals and the Public conference, organised by the London-based Institute of Ideas at Goodenough College, London. I am grateful to all concerned for the opportunity they afforded me to help develop my views.

NOTES

1. The three-strand inquiry coordinated by the Department for the Environment, Food and Rural Affairs (DEFRA) was announced by Environment Secretary Margaret Beckett

on 26 July 2002 in response to advice from the Agriculture and Environment Biotechnology Committee (AEBC). Further details can be found at ⟨http://www.defra.gov.uk/environment/gm/debate/index.htm⟩.

2. See for example Royal Commission on Environmental Pollution 1999; House of Lords 2000; Parliamentary Office for Science and Technology 2001; Hargreaves & Ferguson 2001.
3. MMR stands for Measles–Mumps–Rubella. A major debate over the safety of this vaccine was generated subsequent to the allegations by a surgeon, Andrew Wakefield, that it may be linked to a rise in autism amongst infants. For an excellent critique see M. Fitzpatrick 'MMR: the truth?', and other articles linked therefrom, at ⟨http://www.spiked-online.com/Articles/00000006DCD6.htm⟩.
4. BSE stands for bovine spongiform encephalopathy, otherwise known as 'mad cow disease', a degenerative brain disorder held to have been caused by feeding animal protein to ruminants and to lead to cases of Creutzfeldt-Jakob disease, a similar and fatal condition amongst human populations.
5. *Do We trust Today's Scientists?*, National Forum for Science, Royal Society, London, 6 March 2002.
6. Dr Michael Fitzpatrick, speaking in the opening plenary of the Genes and Society Festival organised by the London-based Institute of Ideas at Battersea Arts Centre in London, 26–27 April 2003.
7. Comment made at the Risk, Democratic Citizenship and Public Policy conference, British Academy, London, 6–7 June 2001
8. On this issue, see O'Neill 2002 or ⟨http://www.bbc.co.uk/radio4/reith2002/⟩.
9. This is defined as 'confidence' rather than trust by Seligman (2000)
10. I have previously argued this with respect to the proposed new European Commission system for regulating chemicals (Durodié 2003b).
11. Like Barry Marshall, the Australian junior doctor who hypothesised a link between *Heliobacter pylori* infections and stomach ulcers. He proved the link by administering both the complaint and antibiotic treatment to himself, not once, but twice for good measure.
12. This is to draw an analogy with the so-called 'Culture Wars' which occured on US campuses in the 1980s around the contents of the proper canon to teach students. These would also need to be reinvigorated and drawn through to a more progressive conclusion if we are to move forward as a society.

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