

The Science Communication Conference 24th - 25th May 2004

Keynote Address – 'Science in Society: its key role in maintaining the UK's position at the forefront of international science and technology'

Lord Whitty of Camberwell, Minister for Farming, Food and Sustainable Energy (Defra)

Thanks very much Kathy and thank you for inviting me. I'm glad you said that bit about not understanding because one of the key things about people who are designated by governments as having responsibility for science is that by and large they are not scientists and this is one of the issues that we are supposed to represent the public but we have not necessarily a general view of science that the public have, but we certainly have similar instincts to the public.

Everybody, the public, politicians, industrial leaders accept that science is a major contributor to our quality of life and that huge advances have been made. Everybody accepts that the UK punches above its weight in relation to science, both in terms of quality and in terms of quantity, and you will all know the statistics there. Everybody also knows that creating the science as such is not enough and that we have to put a lot of effort into translating the science through the development process into real use and through that by familiarising the general public with the ideas of science and the potential use of science. So I think everybody accepts that science presents great opportunities and huge benefits and has already done so and will do so for the future. But, we are in an era of lack of deference. Lack of deference to politicians, lack of deference to industrial leaders, lack of deference to academics, but there is also a very clear lack of deference to what, when I was 20 or so, were the new high priests of our society. Actually after I worked in aviation I worked in nuclear energy and at that time the men in white coats actually seemed to hold the future as well as the knowledge. Over time from the 60s onwards that began to be questioned very substantially and now all the research into public attitudes into science shows that there is enthusiasm for science, there is understanding that science is part of our lives, there is also very, very substantial scepticism about what they are told about science.

If we see in the debates which have followed some of the problems and some of the opportunities, problems like BSE, opportunities as some would argue like GM and even mundane things like MMR, there has been a whole range of anxieties. People only want to accept solutions and products from institutions that they trust, and therefore there is a wide range of opportunity to challenge science. That means, as you said Kathy, that we do need a new era of engagement. It means developing science in partnership with a wider range of people who can perhaps begin to negotiate and create some understanding of risk, of opportunity, of the relationship between scientific

advance and actually turning that into something which is useful or appropriate.

In Defra we have a whole range of science which we fund and which we support and which we make use of, for a whole range of policies, as you said, with climate change all the way through to food and farming. And we have some very important institutions which are part of the Defra family. We have the Hadley Centre on climate change, we have Kew Gardens, we have a whole range of animal health and plant health institutions, and we are therefore very much engaged in using that science to inform our policies, both our immediate policies and responsibilities for regulation and guidance, and also on our future policies.

For very little of that have the public been really very substantially engaged. And building public confidence in our science and the way we use it is therefore a key challenge for the future of Defra as it is for other government departments. And we have to recognise that this is not all about knowledge or even about understanding. Confidence and engagement is about a lot more than knowledge and possibly a lot less than knowledge in certain circumstances and there are issues as to whether more knowledge is actually the way in which we can help convince people that they need to understand any changes in their behaviour and they need to accept new ways of doing things. Knowledge of itself will not produce that reaction. They say a little knowledge is a dangerous thing, and sometimes a little bit more is downright catastrophic, and the wide range of access to knowledge quite a lot of it is non-quality controlled through the internet and so on, is one of the problems of our society but its also one of the opportunities. And its also important that scientists recognise that ignorance is not necessarily a malevolent feature. After all that fear of the unknown is in any sense irrational, most people fear the unknown in one way or another and that is why we need to guide people through the way in which new developments, new science is actually being communicated and in which new products and new ways of doing things will come into effect.

We have felt at Defra that we need to take a number of steps to build public confidence and public trust. Our overall policies I think represent a significant shift towards a more environmentally based agenda in line with the need for science to tackle global environmental problems, air pollution, climate change, depletion of national resources, but also in a sense to express society's values in conservation, in looking after our planet. This year we are investing more than £51,000,000 into the science needed to improve our understanding of climate change and a further £16,000,000 in conservation. Science that will hopefully make our resources work more efficiently for us, but also to ensure that we preserve our biodiversity and develop new and renewable sources of energy for example. And alongside that we are trying to improve the quality and robustness of the science, both within the scientific community, through effective programmes, through a more efficient system of peer review, and for ensuring that the quality of the science is consistently high.

That's first base, but the research into public trust also shows that people are more trusting of organisations that listen and which demonstrate public values and organisations and individuals who are clearly acting in what the general public would perceive as the public interest. And we need to know what we should do more to reflect the priorities and the values of society as a whole. That doesn't mean we are running science policy on the basis of public opinion polls but we are recognising where there are public concerns and where we need to engage the public more. We must retain the confidence in our leadership to take decisions which sometimes may be unpopular but at least they understand why we are taking them.

That means integrating into our science decisions social intelligence, through social research, opinion data, participatory exercises and so on and it's also important to recognise that that is not just a constraint on policy it is actually a quality input to policy so it improves the process of that policy-making itself. And the process of engagement is one which we would like to think we are now started on to engage with a wider range of the community and create some degree of trust. But it is not easy and the most high profile of our exercises in this respect has been in relation to GM. Now, I think there is certainly frequent comment about the debate that we started on GM, 'GM Nation', that could probably be extended to most science and society activities. Are you really engaging in a process to gauge public opinion or are you trying to clear the way for policy decisions that you have already, broadly spoken, taken? All of these are as usual motives for consultation of all sorts by governments, sometimes there are uncertainties of outcomes, and sometimes we are clearing the avenues and in relation to GM it was somewhere between the two. But we do need to develop in the light of that experience more thought to developing ways of engaging people from wider backgrounds and some of the surveys which I have referred to, the Wellcome Trust OST survey for example shows attitudes to science are bound to other views and experiences that people have, so it's vital that we develop methods that enable us to hear from people close to their normal experience.

But the GM Nation debate indicated that you need to start earlier in the process if you are to have a really very substantial and robust discussion. Views were taken both pro and anti GM in very broad brush terms by large sections of the public and by the media very early in the debate. That made the process difficult, and it also made the formal evaluation of the GM Nation debate difficult. And I think this conclusion that we need to involve people in a relatively formal way, at a much earlier stage, is something that we all need to dwell on, and how we get much more upstream in the R & D process is something which I think you will no doubt be debating today, and how we do so in a constructive partnership between the scientists and others who have responsibility for these areas.

In Defra we are involved in processes trying to look forward. In the immediate period the Science Forward Look which is due to be published over

this summer which will enable us to identify major areas of public concern where our science policy should be focussing, and also to ensure that we properly understand the context in which we are doing so, and beyond that we also have our horizon scanning research, looking to shape the decade after next and to look at a very early stage at things which are on the horizon, so as to anticipate and consider how best we engage the public in those.

So there are a whole range of them, some of them which are pretty obvious and some of which we are obviously going to have to identify as we go on. The issues relating to climate change are manifold. The issues relating to the future of food technology and diet and food health are others which some of which we can identify now and some of which will come further downstream. Issues relating to future energy sources for low carbon or nil carbon technologies including some which present all sorts of societal issues whether you are talking about nuclear power and already well-established views in relation to nuclear power or whether you are talking about wind farms which whenever you actually propose a wind farm half the community who have hitherto been largely green in their views towards energy suddenly say "not in my back yard". Or whether you are talking about new and relatively untried forms of energy such as hydrogen cells and beyond to replace the carbon technology and the carbon fuelling of our transport systems.

So some of them are pretty identifiable already. Others will not be and others will need some close attention over the coming years, and the key challenge for us at Defra is encouraging actions which support sustainable development which means changing behaviour as well as changing the products and the production process and the distribution process. We tried doing this at an earlier stage for example in engaging people in the programme on environmental concerns, a programme called 'Are You Doing Your Bit?' which is a fairly high profile environmental public service broadcast. This had a huge level of awareness in that it actually, the feedback from it that a lot of people had seen various showbiz personalities telling you to 'save more water, save more energy, take a walk' etc, but it had virtually nil effect on changes of behaviour. So even the basic awareness needs to be translated into recognition and responsibility by the population as a whole. And we need to develop new activities, new means of communication, new means of training and education, new ways of producing statements from people who the general population trust, as to the way in which science is developing options and maybe developing in the long-term the options for future change of lifestyle for us all. This is of course in immediate terms presenting us with quite a conundrum because on the one hand people are demanding more and more information as to what science means and what the output and outturn will be and on the other they are telling us that we, the government, the industrial leaders, scientists are not trusted, and why would we believe them anyway? There is also, to some extent, an overload of information and people cannot discern what is important information and what is information which they can begin to sift and discard. Even on the simple things like food

labelling people think they've probably got more information than they need rather than 'the' information that they need and that will become more so as we develop longer-term issues. So we have to look at new ways of communicating, often through trusted third parties rather from the front organisations of government themselves, and we have to look at how we can build a greater degree of trust, and I think a number of you here are from areas which are more informal communicators than government or indeed more informal educators than the education system itself. People who work in science centres, museums, science festivals, science exhibitions, people who work in aspects of the private sector communicating science knowledge and science opportunities and of course the institutions of scientific endeavour and engineering institutions and so forth.

Now all of those probably frankly have a greater degree of trust amongst the public than do either scientists or politicians. This is not frankly saying a lot but on the other hand as intermediaries you are in a role that is important for developing understanding of the opportunities and risks that scientific advances presented us with.

So we are engaged in the beginning of that process and it is a process of confidence building and of engagement and it is one which government cannot afford to be heavy handed about any more than it can particular proponents of particular industrial or scientific advances. We need to take people with us, or at least a fair section of the people with us, if we are to develop a proper understanding and acceptance and indeed positive engagement with scientific advance. So the challenge for all of us, and I think some of this you will be discussing in these couple of days is to place the institutional organisational framework for those changes and to make sure that all the organisations represented here and beyond who do have the interface with the public, and do have a responsibility for imparting knowledge can do so in a way which maximises the benefits of the science and minimises the fear of science which undoubtedly many of our population suffer from at present.