



The Use of Experts in Public Dialogue – Report

Introduction

The Sciencewise Expert Resource Centre (Sciencewise-ERC) aims to create excellence in public dialogue and to inspire and inform better policy in science and technology by helping policy makers commission and use public dialogue in emerging areas of science and technology. The Sciencewise-ERC is funded by the Department for Business, Innovation and Skills (BIS). Sciencewise-ERC provides practical support to policy makers and over the past year has undertaken innovative research into six key strategic issues in public dialogue.

This report is one of a series of six covering research undertaken by Sciencewise-ERC. The research was carried out by Suzannah Lansdell, a member of the Sciencewise-ERC Dialogue and Engagement Specialist team.

Others in the series:

- Enabling and Sustaining Citizen Involvement (Diane Beddoes)
- Widening Public Involvement in Dialogue (Pippa Hyam)
- Working with the Media (Melanie Smallman)
- Evidence Counts - Understanding the Value of Public Dialogue (Diane Warburton)
- Departmental Dialogue Index (Lindsey Colbourne)

Other reports in the series are available at www.sciencewise-erc.org.uk

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by Suzannah Lansdell

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1 Introduction

This report, commissioned by the Sciencewise Expert Resource Centre for Public Dialogue in Science & Innovation (Sciencewise-ERC) explores how experts have been involved in public dialogue on science and technology issues in the past and investigates how they could be used more effectively in the future. It has done this by examining current cases and thinking from a selection of opinion with the aim of improving the experience for participants and experts alike.

This report assumes that the case for public dialogue in science is universally understood and accepted. However, there are also other drivers that prompt the examination of the role and involvement of experts. The main ones are:

- Helping to shape the future direction of science, technology and innovation including how they are developed and governed in line with society's expectations
- Creating opportunities for people to engage more effectively in scientific developments so that social values can help shape decisions alongside technical and scientific considerations (as advocated in 2000 through the House of Lords Select Committee on Science and Technology) ¹
- **Encouraging scientists to engage with, listen to, and learn from public views and values**

The report is primarily intended for:

- commissioners or 'owners' of public dialogue – to help set the scene and encourage clarity about the objectives and expectations surrounding expert involvement
- deliverers of public dialogue activities – to help them plan both the 'bigger picture' and the detail of expert involvement
- experts from many fields who are engaged in public dialogue – as a tool to help them reflect on their own potential input and to explore some of the issues and barriers to expert involvement

The report focuses on the people who are invited to take part in a public dialogue because they have specific knowledge or expertise and the way in which those people relate to the public dialogue. The fundamentals will apply whoever that person is, or whatever their input may be. The report aims to reflect stakeholder interests as well as the role of scientists as experts and therefore, for simplicity, it uses the term 'expert' in its broadest sense. In doing this, the report also principally focuses on:

- dialogue on science and technology issues
- dialogue on national rather than locally-based issues
- dialogue approaches as opposed to wider public engagement activities (i.e. deliberative workshops with public participation).

The above areas represent the type of dialogue funded by Sciencewise-ERC: however, many of the examples are from other projects which can also provide valuable lessons in how to involve experts. Many of the lessons are also relevant to dialogues that only involve stakeholders (rather than the public), although additional issues may arise in these different contexts.

¹ House of Lords, Science and Technology – Third Report
<http://www.publications.parliament.uk/pa/ld199900/ldselect/ldsctech/38/3801.htm>

1.1 Aims & Objectives

The Sciencewise-ERC has undertaken studies in a number of areas that pose particular challenges when planning and delivering public dialogue. The studies aim to help central Government departments and agencies and the deliverers of dialogue (process practitioners) deal with those challenges.

The role of experts, however, should not be looked at in isolation. This report has particular links to other distinct Sciencewise-ERC research topics, namely:

- Evaluating public dialogue, so that there is firm evidence of value and impact which can be used to build the credibility of public dialogue in the minds of experts
- Sustaining citizen involvement which has parallels in supporting expert involvement and how that might be achieved

Working with science communicators and the media to see how the results of public dialogue are disseminated to wider expert audiences

The report offers guidance on how to make the best use of 'expert' advice in public dialogue and within the wider policy-making process. Specifically it offers:

- guidance on how to commission expert advice in science and technology dialogues and on the actual role of the expert
- identification of the challenges facing experts and how these can be overcome
- development of the evidence base for good practice
- an exploration of the cultural issues which create or contribute to the challenges faced by experts within the science community, commissioning organisations and in society more generally

This study marks the end of a particular piece of research but is also intended to be the beginning of a continuing development of ideas leading to expanded and improved guidelines over time. The report should therefore be seen as work in progress and as part of the continuing development of good dialogue practice.

1.2 Background

Sciencewise-ERC's own Guiding Principles for Public Dialogue in Science and Technology² encourage experts to take part in public dialogue and, indeed, require their involvement as part of the criteria for Sciencewise-funded projects. Whilst this report focuses purely on the involvement of experts, it is taken as read that all the other key principles for effective dialogue are also followed.

The report examines some of the practical aspects of involving experts in public dialogue, an approach confirmed by feedback from the Sciencewise-ERC Steering Group. This group places particular emphasis on exploring the 'real things' that have to be considered in creating and carrying out public dialogue, not simply examining the theory of participation. The practicalities cover everything from recruitment and briefing of experts and the roles they might take, to guidelines for their active participation in dialogue sessions and their continuing input after the project has finished. Underlying this guidance is the need to improve the experts' experiences of being involved in dialogue and to make it a valuable exercise with greater impact not just for themselves but for all the participants.

1.3 Summary Findings

An early observation from the research carried out for this report is that a great deal of attention has been placed in the past on the public participants and the process by which they are engaged in a dialogue. Somewhat less attention has been given to the

² <http://www.sciencewise-erc.org.uk/cms/assets/Uploads/Other-SW-Docs/Guiding-Principles-Full-Version-final.pdf>

reasons why experts are involved and the process by which they are recruited, and yet their input can be a key factor in whether the dialogue is a success or not.

As a result, a number of steps have been identified which will guide the recruitment and involvement of experts. These steps are divided into three areas as follows:

PREPARATION & PLANNING PHASE

The key steps in the planning and preparation of a public dialogue with respect to expert involvement are:

- Understanding the issue and its context to help define the type of information and expert input that may be required
- Defining the aims and objectives of a dialogue and how expert input can help achieve them
- Ensuring a fair representation of views in the selection of experts (whether in person or via written information)
- Defining the exact role and purpose of experts and what they are expected to contribute to the dialogue
- Employing the most appropriate mechanism for engaging experts
- Considering the different ways of sourcing an expert
- Setting out what particular attributes experts should ideally have and how they will work within the project
- Ensuring that all expert input is on an 'equal' footing and is not biased in favour of one viewpoint or another
- Investing enough time in briefing and supporting the chosen experts.

1.3.1.1 PARTICIPATION

Key steps in looking after the experts during the dialogue are:

- Making sure the experts are properly introduced to other participants and that their role is clearly outlined
- Making sure their input is on the right level for the audience, that written materials and presentations are jargon-free and in a language that everyone can understand
- Being prepared to be flexible and responsive to the use of experts throughout a dialogue process.

POST-WORKSHOP AND DIALOGUE

Key steps to be taken after the dialogue project has finished are:

- Following up and evaluating the expert's contribution and its impact on the other participants (and themselves)

- Keeping in touch with experts after the activities to make sure they know the outcomes and how they have been used
- Offering them further opportunities to stay in touch with the issues, such as publicising the dialogue in the media or giving them an advocacy role
- Providing introductions to other support mechanisms

The research carried out for this report shows that the use of experts is a fast evolving area with a spectrum of ways to involve them, in both new and more familiar roles (see page 14 Defining the purpose of the expert for the project). Each type of involvement will bring its own rewards. If scientists and experts become more involved in dialogue, they will have an opportunity to develop their own work further by taking into account the wider social context of their science. At the same time, the involvement of more scientists will give the public participants a much greater insight into the science under discussion.

The practice of involving the public in the policy-making process has increased rapidly over the past few years, but the systems and structures needed to support public dialogue activities have not necessarily developed at the same pace. The final section of this report therefore touches on some of the challenges in the wider institutional context relating to expert involvement. These include:

- Aligning what is good for public dialogue in terms of expert involvement, with what supports and encourages experts to take part
- Developing measures to account for expert involvement in public dialogue
- The need to understand the drivers for expert participation
- The need to find new ways of capturing and sustaining expert involvement that will benefit all those involved in the dialogue.
- Finding ways to place expert participation more centrally in public dialogue as a way for scientists to reflect social values in innovation and new scientific directions

There are very few examples of processes that seek to have experts as an integral part of a project. This is an area of future opportunity, not least to enable greater reflection of public thinking into research and science and technological developments.

2 Methodology

The research underpinning this report has been gathered through:

- Interviews with practitioners, commissioners and ‘opinion-formers’ (see Appendix 1) the majority of whom have been in some way involved in a public dialogue on science and technology. The interviews had two key purposes:
 - To inform the recommendations on expert involvement and identify future areas for research by discussing individuals’ experiences both positive and negative
 - To gather learning from those experiences and to develop materials to be used for case studies
- A desk-based review of relevant literature on expert involvement (see Appendix 2) to help provide context and background for the discussions
- Two workshop sessions to review interim findings from the research, held at the Sciencewise research topic workshop on 29 October 2008 (*Meeting the challenges of dialogue in science and technology policy making: A workshop to explore and test emerging solutions*)³
- A testing of the key findings at a Sciencewise–ERC *Drop in for Dialogue*⁴ session on 19 January 2009, involving interested policy makers from across Government
- Review and comment on the draft paper from the Sciencewise-ERC Dialogue and Engagement Specialist team
- A final review of the work at a Sciencewise-ERC workshop held on 19 March, 2009 (*Research Topics Results Workshop – getting the word out*)

3 Expert - what expert? Defining the terms

The term ‘expert’ raises many questions and what appears a quite simple description at first glance can potentially become more complex. What exactly do we mean by ‘expert’ and does that definition change in different settings?

*“It seems odd to claim that expertise might be more of an intellectual problem than, say, creating a unified theory of gravity, decoding the genome or understanding the early universe. But expertise – what it is and what role it plays – is surprisingly difficult to describe when looked at carefully.”*⁵

Some rigorous academic work has been undertaken in an effort to define the different types of expert and expertise available and their relation to public dialogue and decision-making (see Chilvers, 2007 ⁶ and the work of Harry Collins and Robert Evans⁷ from Cardiff University who have developed a periodic table of expert contributions). This report does not specifically aim to add to that work, primarily because the guidance it provides is intended to be applied regardless of the form or

³ This workshop was attended by an invited audience of policy makers, practitioners, academics and delivery and funding organisations engaged in public dialogue.

⁴ Regular training sessions held by Sciencewise-ERC at Future Focus in the Department for Business, Innovation and Skills

⁵ Robert P Crease, Critical Point – Experts, Physics World, August 2007
http://www.iop.org/News/Community_News_Archive/2007/file_25019.pdf

⁶ Chilvers, Jason, Towards Analytic-deliberative Forms of Risk Governance in the UK? Reflecting on Learning in Radioactive Waste, Journal of Risk Research – Vol 10, No2, 197-222, March 2007

⁷ Expertise: A New Analysis – Harry Collins and Robert Evans

<http://www.cf.ac.uk/socsi/contactsandpeople/harrycollins/expertise-project/expert-chapters.doc>

type of expertise sought to enlighten the public dialogue. Whilst it can be useful to categorise those involved in a dialogue, it has to be recognised that an individual may well wear different 'hats' in different situations.

So, for example, someone may be brought in as a straightforward knowledge expert, as an expert stakeholder, as an 'experiential public', or as a 'representative' public, as follows:

- **Experts (scientific/technical/legal)** provide technical and scientific-based inputs from the whole range of science, from social science and philosophy through to physical and life sciences
- **Stakeholders** largely provide views and evidence based on a particular standpoint and often represent lobbying or special interest groups, e.g. the Renewable Energy Association, Greenpeace
- **Experiential publics** are members of the public who have a specific knowledge who can contribute by sharing their personal insights into an issue e.g. parents of children with a chronic medical condition, who have gained considerable knowledge of that particular condition over time but who also have direct experience as users of a medical service
- **Representative publics** are brought in to reflect the nature of the wider public, i.e. selected on gender, location or class, rather than on their knowledge of the issues

The term 'expert' is used in this report as a general description of all the above types of expertise, not just to describe scientific input. In many cases, the richness of the dialogue stems from bringing together people from very different backgrounds and with very different views, which encourages more creative thinking. (See Chilvers 2007 for a fuller description of the interactions between citizen and scientific expertise).

3.1 Why is expert input needed?

In order for the public or stakeholders to deliberate effectively, it is essential to give them information on the subject matter under discussion. The assumption in most public dialogues is that members of the public who have been recruited to take part, will probably know little about the subject matter. They will therefore need to be given information or, at least, be made aware of the context so they can begin to ask questions, interrogate the experts, think about the issues and participate more effectively in the dialogue.

Often, the question is asked: what sort of information, how should it be provided and how much is enough?

Too much information and the organisers risk spending valuable time getting the participants conversant with the topic in question and may also end up confusing them with too much detail. Too little information and there is a risk of not giving the participants enough of an overview to enable them to get to grips with the subject. Too little information could also open up the project deliverers to accusations of deliberately leaving out critical information.

3.2 Forms of expert input

Appropriate input can take a range of forms and one of the early tasks in planning a public dialogue is to consider how this can best be provided. Some of the materials that may be used are:

- Written information provided in advance and/or on the day of a workshop

- Written information provided on prompt cards (e.g. in the Sciencewise-funded dialogue project, Democs⁸) to facilitate and prompt the discussion
- Videos or films that show a variety of views from other experts or members of the public
- Newspaper clippings or posters highlighting a range of views
- Presentations given by invited experts
- Remote but real time inputs e.g. via web discussions, online Skype conversations or telephone calls
- Web-based inputs before or after the 'in room' sessions

In an ideal world, there should be enough time and resources available to allow the participants themselves to define their own information needs early on in the process. This can help to avoid the information being challenged, either by participants or by others outside the dialogue process. Such challenges could take the form of provenance (who provided the information, who paid for it) or the methodology (how the studies were conducted).

Either way, such challenges can seriously undermine the credibility of a dialogue and are best ironed out at an early stage. It is important to avoid the accusation that people came to a particular conclusion because they heard only from biased speakers using flawed research.

However, time constraints often mean that participants are not able to take part to any large extent in selecting the experts or deciding on how much and what type of information they may need. This could have an impact on the outcomes of a dialogue to a greater or lesser degree, depending on the issue under discussion. In shorter deliberative sessions (i.e. meetings held over one or two days) the role of an advisory or oversight group can be crucial in helping to shape what information is provided to the public. (See page 18 for more on mechanisms for engaging experts.)

Case study: Articulating public values in environmental policy development

In 2007, the UK research organisation, People, Science and Policy, ran a Citizens' Jury on air quality for the Department for the Environment, Food and Rural Affairs⁹. As is common in Citizens' Juries, the initial phase of the project determined what evidence or witnesses the jurors wanted to hear. In this case, at the initial hearing, the science advisor to the project provided an overview of the topic and jurors identified further information they felt they needed. This included information on:

- the causes of poor air quality
- the composition of air pollution
- the role of the weather in air quality
- the relationship, if any, of air quality to global warming
- the impact of poor air quality on health

3.3 Getting the information right

- A range of views should be provided on a topic and from a diverse range of sources
- Participants should be asked to review their information needs and say what they believe they may require (this could be from first principles or by giving them a shortlist of options from which to select or agreeing the selection criteria)

⁸ <http://www.neweconomics.org/gen/democs.aspx>

⁹ *Articulating public values in environmental policy development - Report on the Citizens' Jury on Air Quality*, prepared for Defra, October 2007
<http://www.defra.gov.uk/environment/airquality/publications/citizens-jury/index.htm>

- In some situations, the *process* by which information is gathered can also be usefully defined by participants (this tends to be more a feature of stakeholder and citizen-led processes than of dialogue commissioned by a Government department or agency)

Case study: Joint fact finding - building consensus out of information ¹⁰

In potentially contentious areas it is common that the science is challenged, often on grounds of provenance or methodology. In 1998, British Nuclear Fuels Limited (BNFL) was involved in a local controversy surrounding a proposal to switch marshalling trains carrying spent nuclear fuel to a new purpose-built facility in Cricklewood North London. Local people raised concerns about whether there would be any residual contamination on the outside of the waste containers and, if so, whether this could find its way onto the tracks or into the marshalling yard. A Government-commissioned study was set up to address these concerns at a cost of £50k. It was carried out with little or no stakeholder involvement and within hours of the report being published, people who disputed the findings had tracked down a connection between the contractors, Nukem, and BNFL¹¹. This immediately discredited the report, regardless of the soundness of the scientific evidence put forward.

As a result, BNFL subsequently funded a joint fact-finding study into the same issues, but this time convened by The Environment Council. The scope of the study and choice of contractor was informed by a task group made up of a variety of interests – from nuclear experts and company representatives to local campaigners. Whilst costing some £25k more than the original study (principally in allowing for convening costs), the joint fact-finding report's contents were not disputed. The positive experiences of the way the study was undertaken led to further joint fact-finding studies being commissioned in BNFL's national stakeholder dialogue in subsequent years (e.g. West Cumbria Socio-Economic Study, 2001 <http://www.the-environment-council.org.uk/bnfl-national-stakeholder-dialogue.html>).

- It is advisable to recruit a specific stakeholder review group, which is tasked with providing, agreeing or reviewing the information needs of the participants. This may take time but will add significantly to the credibility of the information provided and is particularly important when handling contentious issues. The Human Fertilisation and Embryology Authority (HFEA) Hybrid and Chimera Embryos project¹² used a mixed group of stakeholders to agree on the information requirements and review the drafted materials in order to avoid accusations of bias.

"It is so difficult to provide balanced and unbiased information, to provide enough information for people to be able to discuss, but not too much so they can't take it all in. But in the end I was very impressed." **(Stakeholder Advisory Panel member, HFEA Hybrid & Chimera Embryos dialogue)**¹³

- Skilled science writers are often best placed to turn expert materials into accessible information for the public. The European Meeting of Minds

¹⁰ Case study taken from conversation with Steve Robinson on 27-11-08 (Chief Executive of The Environment Council during the Cricklewood Jointly Agreed Sampling and Monitoring dialogue) from his personal recollections

¹¹ <http://www.independent.co.uk/news/firm-linked-to-bnfl-ran-nuclear-inquiry-1096496.html>

¹² Sciencewise-funded dialogue carried out in 2007 on public attitudes to hybrid-chimera stem cell research. See www.hfea.org/uk and www.sciencewise-erc.org.uk

¹³ Evaluation of the HFEA public consultation on hybrid and chimera embryos, Diane Warburton, 2007. <http://www.sharedpractice.org.uk/Downloads/HFEA%20Report.pdf>

dialogue¹⁴ on brain science employed a science writer at the start of the project and together with the Steering Group, the writer compiled all the materials for the deliberations. This worked well because the writer was engaged from the beginning, understood the content and was able to turn it into the best type of material for participants

- The provision of good quality information may become even more relevant if there are not enough experts available to take part in workshops, therefore the time needed to get this particular aspect of the dialogue right should not be underestimated.
- If information is given in advance to participants, it may not necessarily have been read or understood, so it is still likely that expert input will be needed at workshops

Extract from A Summary of Fourteen Principles of Effective Participatory Appraisal Emerging from Practitioner Deliberation (Chilvers, 2008¹⁵)

Access to information and specialist expertise:

- Information provided should be appropriate, meaningful and understandable from the perspective of those participating
- Information provided within the process should faithfully represent the range/diversity of views that exist on the issue under consideration
- Information provided within the process should be responsive to the needs of participants
- Participants within the process should have access to specialist expertise and a degree of control over who provides this assistance

Deliberation conducted within the Participatory Appraisal process should:

- Ensure a highly interactive, symmetrical, and critical relationship between participants and specialists
- Emphasise diversity and difference through representing alternative viewpoints, exploring uncertainties and exposing underlying assumptions
- Allow enough time for participants to become informed and develop competent understandings

¹⁴ European Citizens' Deliberation on Brain Science, 2006. See <http://www.meetingmindseurope.org/europe>

¹⁵ Chilvers, Jason, *Deliberating Competence: Theoretical and Practitioner Perspectives on Effective Participatory Appraisal Practice, Science, Technology & Human Values*, 2008

4 Guidelines for effectively involving experts in public dialogue

This section provides guidance for involving experts in the preparation, planning, delivery and post-workshop phases of public dialogue. Its purpose is to encourage discussion and the guidelines will therefore be subject to development over time and with use. Whilst presented in a linear fashion, inevitably the guidelines will require revisiting from time to time to ensure that, as a project progresses, new information and circumstances can be taken into account.

4.1 Understanding the context

The context of any dialogue process is crucial and understanding it will determine:

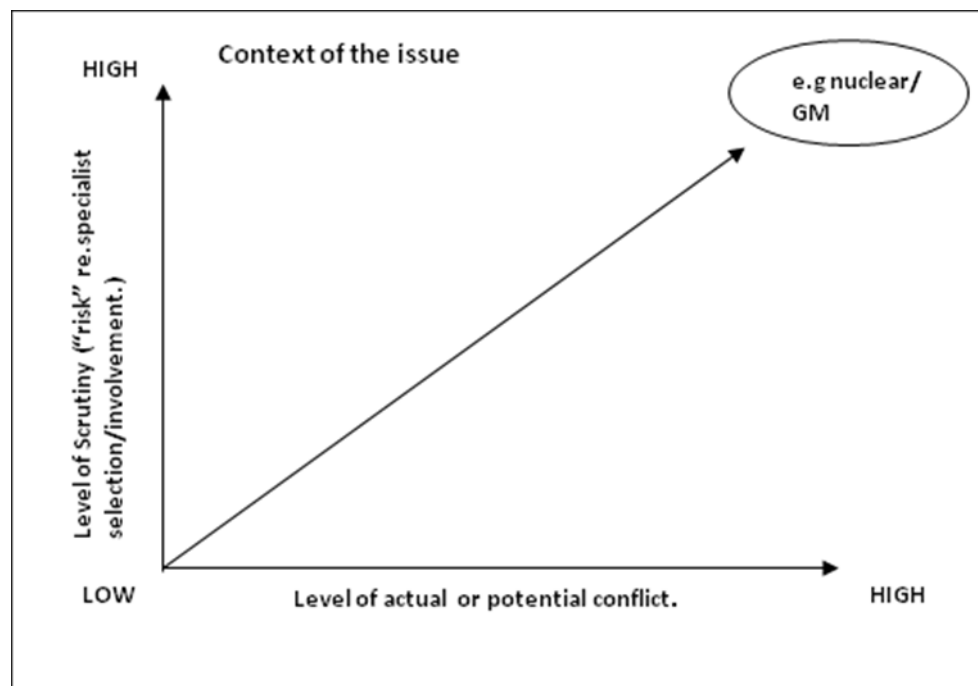
- the sort of expertise to be engaged
- the mechanism by which the expert is engaged
- the role an expert might take

Issues that are likely to affect the sort of expertise needed are:

- Levels of actual or potential conflict within the topic
- How 'mature' the topic is and how familiar people are with issues surrounding it
- How familiar or relevant the topic is to everyday lives e.g. a discussion on the provision of local healthcare will be more familiar to most people than hybrid and chimera embryo research
- The likely number of stakeholders and variety of viewpoints
- Media and public awareness around the topic

In general, the greater the level of actual or potential controversy surrounding the project topic, the greater scrutiny it will come under and, therefore, the more time and attention should be spent in considering each step of the dialogue (see Diagram 1 below). A highly contentious topic is not the occasion to skimp on timeframes and resources as doing so may seriously jeopardise the credibility and robustness of the outcomes.

Diagram 1: Assessing the context of the dialogue and likely scrutiny on expert involvement



4.2 Defining the aims and objectives of a dialogue and how expert input can help achieve them

Clarity of purpose is fundamental in thinking about expert involvement – what is the aim of the input and what outcomes are expected by the end of the process?

A dialogue that seeks to encourage innovation and conversation will be very differently planned to one that seeks to inform the recommendations of an Advisory Group. Clearly establishing the aims and expected outcomes will help shape both the information and expert input that is required at different phases of a dialogue process. For example:

- What perspectives need to be brought into the project beyond pure information?
- How can this be achieved so that participants have a solid basis on which to deliberate on the issues?
- Will it be better to have input from the users of a service or from the scientific perspective or both?

At the most basic level, experts are there to impart information but there is also a real opportunity to engage those experts more fully in the process and potentially to influence *their* thinking. If this is one of the aims of the dialogue, it must be defined in the project plan early on, otherwise it is likely to be a coincidental rather than a planned outcome and so may not necessarily happen.

Evaluations of many dialogue projects have shown that the effect on experts themselves can be considerable and that with hindsight, involving them to an even greater extent in the process may have proved even more beneficial. In particular, scientists are becoming increasingly open to taking a more substantive part in public dialogue and it is advisable to reflect this fully in the overall aims and objectives of the dialogue.

Planning for the evaluation of the dialogue will take place at an early stage; it is worth considering building in assessing the impact of the dialogue on the experts themselves as well as noting their views on the success (or not) of the dialogue activities.

4.3 Representing all views in the selection of expert inputs

A key message arising out of this research is that dialogues need to find a way of faithfully representing the widest range of views and opinions. In this respect, a restricted or narrow view of who constitutes an 'expert' is insufficient. When designing a dialogue, it is important to think about the full range of potential inputs, including from people with experience of a condition or service as well as all types of scientists, academics, and stakeholders.

"It was also particularly valuable to have a variety of viewpoints among the speakers. This helped ensure that participants did not feel manipulated towards a particular conclusion, and also helped them feel there was no 'right' answer which, in turn, made them feel more comfortable about expressing their own views." (HFEA Hybrid & Chimera Embryos dialogue)¹⁶

Participants are entitled to expect a diversity of views and if such a range is not present, they may sense that something is being withheld. A range of different views can also stimulate debate amongst participants and enable them to quickly see that there is no 'right' or 'wrong' answer. If people feel comfortable about expressing their views among many others, they are likely to do so with more confidence. They will more easily challenge what is presented and recognise that their views are as valid as anyone else's.

It may be difficult with some issues to find experts who can fairly cover the variety of viewpoints that exist. This may be because there are not enough scientists with detailed knowledge of a subject, especially if the issue is very new, or they may be unwilling to challenge publicly what may be perceived as an official Government view.

"Debates about science should involve different opinions/viewpoints and a plurality of expertise and recognition of other types of knowledge that take into account minority opinions"¹⁷

4.4 Defining the role and contribution of experts

Being clear about the different purposes of expert input will help the dialogue deliverers to design workshops. For example, if one of the objectives is to enable experts to listen and respond to the views of the public, but the process only allows for the expert to take part in a panel discussion, this will hinder achievement of that objective.

What happens on the day cannot be totally controlled, but a key way to reduce this risk is to spend time carefully briefing the expert beforehand. It should also be remembered that while a person may have been brought into the dialogue to share

¹⁶ Evaluation of the HFEA public consultation on hybrid and chimera embryos, Final report - Diane Warburton, Shared Practice, November 2007 - <http://www.sharedpractice.org.uk/Downloads/HFEA%20Report.pdf>

¹⁷ Participatory Science and Scientific Participation: The role of Civil Society Organisation in decision making about novel developments in biotechnology. http://www.participationinscience.eu/psx2/final/PSX2_final%20report.pdf

their expert knowledge or expertise in one particular area, they can quickly become non-expert once the discussions extends past their own specialism. At that point, the expert becomes a member of the public and acts in a different role.

4.4.1 Facilitators as experts and the role of a ‘technical friend’

A tension that can sometimes exist in dialogue processes centres on the knowledge that the meeting or the workshop facilitators may have themselves about the subject matter. Whilst it can be extremely useful for a facilitator to know about the content of the deliberations, their primary role is to guide and support the conversations, not to provide comment or information. If they stray too far into this area it can confuse the participants and interfere with the facilitator’s impartiality in conducting the dialogue.

In some cases, an additional ‘translator’ or ‘technical friend’ can complement the dialogue delivery team if the facilitator does not have enough subject knowledge to adequately guide the participants. This person can support both the facilitator and any experts or scientists and can also usefully enhance communications between experts and participants. Such a role can be particularly useful if the subject matter is very scientifically or technically complex. It becomes even more relevant during a long dialogue process where the depth of complexity is likely to increase.

4.4.2 Defining the purpose of the expert for the project

Experts can take on a variety of roles. They may be formal roles assigned by the dialogue commissioner or delivery contractor or be more informal to help describe the ‘mode’ they would like the expert to take. These two roles are not necessarily mutually exclusive and a single expert may take on more than one role during the course of the dialogue.

Depending on the situation any of the roles is likely to have validity and also likely to overlap somewhat. Designers and commissioners of the process must be clear firstly on what they want from expert involvement and, secondly, ensuring that the expert is properly briefed on their role.

The following are some types of expert role that may fit the aims, objectives and context of a dialogue.

- **Informers: ‘I’ll tell you’**
 - Likely to be brought in to impart knowledge of the issue, perhaps as part of a panel of speakers. Little chance for interaction with participants, with information mainly flowing one-way. Often part of a Question & Answer panel which can be a useful way of participants getting to grips with the subject matter
- **Teachers: ‘I’ll show you’**
 - Probably more appropriate in public engagement than actual two-way dialogue. Enables participants to physically get their hands on information and artefacts (e.g. the Big Draw¹⁸ which allows people to handle and draw museum artefacts that would otherwise be behind glass)
- **Enablers: ‘I’ll help you’**
 - Creating space and facilities for the encouragement of engagement (e.g. Community University Engagement East (cueast), one of the UK’s new Beacons for Public Engagement, which has set up in an off-campus building to provide a ‘one-stop-

¹⁸ A national art initiative supported by the Beacons for Public Engagement. See <http://www.publicengagement.ac.uk/beacons/london/default.htm>

shop' contact point for the public and facilities for University of East Anglia staff and students to use in public engagement activities¹⁹.) Process practitioners and convening organisations also play this role in enabling the right conversations to happen

- **Listeners: 'I'll hear you'**
 - Principally one-way information flow, with participants telling the expert what they think. This could be seen as an 'observer' role taken by an expert or sometimes by a member of the dialogue project's Advisory Group who may want to hear what is being said but may not want, or be given the opportunity, to enter into the discussions. In the Sciencewise-funded *Drugsfutures* project²⁰ members of the Academy of Medical Sciences Working group attended workshops to hear the deliberations at first hand
- **Informers and Listeners: 'I'll discuss with you'**
 - The expert is brought in to impart knowledge but also has the opportunity to engage with participants in a discussion. The HFEA's Hybrid and Chimera Embryos dialogue²¹ held an open public meeting with a 'BBC Question Time-type' panel enabling a lively discussion with the audience
- **Networkers: 'I'll work with you'**
 - Bringing different experts and interested individuals together to meet and share ideas and develop new ones. (e.g. the Beacon for Wales Science Alliance Cymru²²)
- **Overseers: 'I'll advise you'**
 - Likely to be part of an advisory or steering group that may help shape the framing and content of the dialogue
- **Supporters: 'I'll support you'**
 - Experts brought in to support and aid the deliberations of the public including working with break-out groups, advising, clarifying points and answering questions. For example, the Research Councils UK (RCUK) successfully used this approach in its recent public dialogue on UK energy research.
*"The involvement of expert speakers worked very well, both in terms of holding impromptu question and answer sessions and in the role the experts played in supporting the discussions in small groups and in fully engaging in dialogue with the public.(Energy Dialogue evaluation)"*²³
- **Participants: 'I'll be one of you'**
 - Likely to be deliberating alongside the public on the issues, helping shape and guide discussions. May be participating as an individual or as an expert but is integrated into the group and participating with others.
"A really good feature of this facilitated interaction was its ability to move beyond a two-way citizen-scientist discussion towards a multi-way dialogue that included exchanges between scientists. This was valuable in helping public participants to see 'scientists

¹⁹ <http://www.cueeast.org/>

²⁰ A public dialogue run in 2007 by the Academy of Medical Sciences into public attitudes on the future use of drugs.

²¹ Evaluation of the HFEA public consultation on hybrid and chimera embryos, Final report - Diane Warburton, Shared Practice, November 2007 -

<http://www.sharedpractice.org.uk/Downloads/HFEA%20Report.pdf>

²² <http://www.publicengagement.ac.uk/beacons/wales/default.htm>

²³ Evaluation of public dialogue on energy research, Diane Warburton, Shared Practice 2007-08. <http://www.rcuk.ac.uk/cmsweb/downloads/rcuk/scisoc/energyevaluationfull.pdf>

and citizens' as well as for the scientists to explore their differing positions on nanotechnology. (Nanodialogues evaluation)²⁴

Case Study: community x-change

Through the Sciencewise-funded series of *community x-change* dialogue projects²⁵ the British Science Association engaged both scientists and members of the public as participants in a process designed to enable discussion on key science issues. *"Non-scientists remarked that the scientists involved in the workshops were quite able to relate to and discuss issues, scientific or non-scientific, without resorting to jargon. By creating a constructive and mutually respectful atmosphere the project seemed to create a safe environment in which scientists and citizens could discover a common language."* (community x-change case study)²⁶

- **Learners: 'I'll be shown/I'll learn from you'**
 - Experts engaged at the outset to hear and take on board what is said, perhaps with a view to helping to shape the future direction of their own work. For this to succeed it would have to be a specific aim of the dialogue, although as a minimum it could be billed as a session to encourage the experts to understand the public viewpoint and also more about public dialogue
- **Champions: 'I'll promote for you'**
 - Experts working throughout a dialogue in a more intensive way (perhaps via a Steering Group) and asking them to champion the process or the outcomes. This is often not explicitly done, however it is apparent that many experts are enthused by what they hear yet often do not have an outlet for that energy and enthusiasm in the dialogue process
- **Provokers: 'I'll challenge you'**
 - Specifically brought in to enable participants to think through some of the issues or aspects of issues they may not have considered
- **Critiquers/Reflectors: 'I'll critique/reflect for you'**
 - Critiquing proposals or developments or the course of deliberations or providing a reflector role to help give immediate reaction and thought to proposals being developed

Case Study: Nanodialogues

The People's Inquiry on Nanotechnology and the Environment, run by Demos²⁷, sought to find out how members of the public understand novelty, uncertainty and regulation and to contribute to shaping policy on new technologies. Thirteen people from East London were engaged in the three days of public dialogue. The project brought in 12 VIPs – very important perspectives – and part of their job was to encourage the public participants to think through different aspects of nanotechnology. Experts were selected to represent a spread of opinion to provide a balance but also to empower people to look at different viewpoints.

²⁴ Engaging Research Councils? An evaluation of a Nanodialogues experiment in upstream public engagement – Independent Evaluators Report – November 2006 – Dr Jason Chilvers.

²⁵ <http://www.sciencewise-erc.org.uk/cms/community-x-change/>

²⁶ <http://www.sciencewise-erc.org.uk/cms/assets/Uploads/CaseStudies/Full-Case-Studies/J3793-Community-X-Case-Study-150508LR.pdf>

²⁷ Nanodialogues: Experiments in public engagement with science, Jack Stilgoe, Demos <http://www.demos.co.uk/publications/nanodialogues>

Case Study: European Citizens' Consultation

The 2009 European Citizens' Consultation will enable citizens to develop ideas on the economic and social future of Europe via an online forum and face-to-face national meetings, culminating in a summit in May 2009. A set of recommendations will be drawn from the summit and will then be critiqued by the newly-elected members of the European Parliament and opinion leaders.²⁸

4.4.3 'Ladders of Participation'

There are many different so-called 'ladders of participation', which are used by dialogue practitioners throughout the world to identify the roles and responsibilities of experts. One that is widely used has been developed by the International Association of Public Participation (IAP2)²⁹. This ladder usefully frames the different options for public engagement and dialogue and an extract from it is given below in Diagram 2.

Diagram 2: IAP2's Public Participation Spectrum ©³⁰ (extract)

	Public Participation Goal
Empower	To place final decision-making in the hands of the public
Collaborate	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution
Involve	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered
Consult	To obtain public feedback on analysis, alternatives and/or decisions
Inform	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions

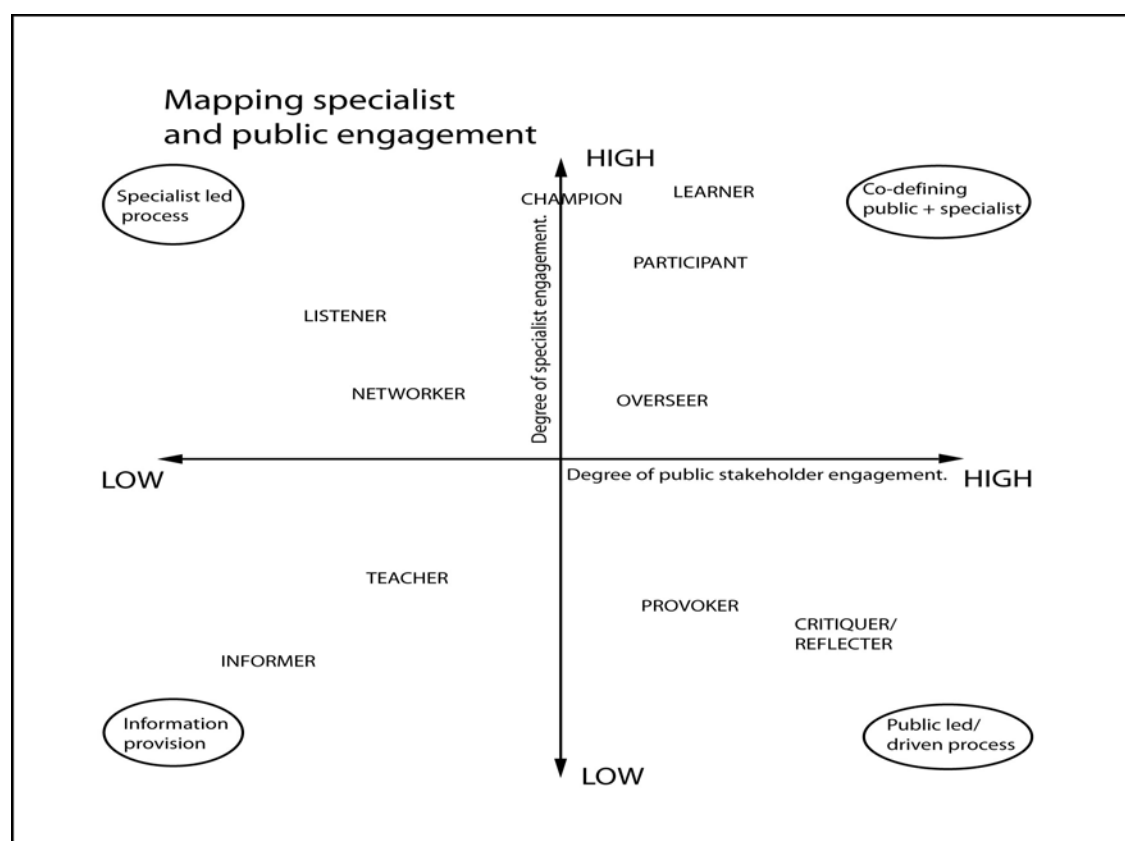
In addition to thinking about the level of public engagement or dialogue, it is useful to consider the level of expert engagement or dialogue. Diagram 3 below shows how this may fit in with the different roles outlined above - though it is worth saying that these roles are not fixed and, depending on the specific dialogue, could move to different positions on the diagram.

²⁸ <http://www.european-citizens-consultations.eu/>

²⁹ <http://www.iap2.org/>

³⁰ http://www.iap2.org/associations/4748/files/IAP2%20Spectrum_vertical.pdf

Diagram 3: Mapping expert and public dialogue or engagement



4.5 Mechanisms for engaging experts in dialogue activities

How experts take part in a process requires careful consideration but usually, the role they take and the way they carry it out will depend on the purpose for which they were recruited. There are no hard and fast rules as each dialogue process will have its own unique qualities. However, there are some basic guidelines that will help guide their successful participation:

- Mechanisms that foster more ‘natural conversations’ between participants and experts should be encouraged. This will involve setting simple ground rules, such as ‘there are no invalid questions’ to encourage openness and to break down the divides that can sometimes inhibit questioning
- Maximum time should be given for clarifications throughout the activity. A ten-minute general plenary session after a panel discussion may not be enough and deliverers should always be looking for new and better ways to exchange information between experts and participants. ‘Expert fairs’ is one alternative mechanism highlighted by those who took part in this study; this is where participants work in pairs to question experts around the room

4.5.1 Advisory/Steering/Oversight groups or panels

Different terms are used (not always consistently) for the formal groups which are commonly involved before, during and after a dialogue. Broadly these are:

- An existing group that commissions the dialogue, receives the results, and makes policy recommendations based on the findings (often called an Advisory or Steering Group)

- A group that brings together expert stakeholders from the commissioning body and other departments to help create and plan the dialogue and choose the delivery contractor (often called Working Groups or Steering Groups)
- A group formed once the dialogue has started, usually by the dialogue delivery organisation, which contains stakeholders, scientists and other experts. This group's role is to advise the delivery contractor on the process and content of the dialogue, including the information provided (often called Oversight Groups).

Case Study: Sustainable Development Commission - Supplier Obligation – Stakeholders developing information for public discussion³¹

Specialist energy consultants were commissioned to work alongside a multi-stakeholder group tasked with developing a range of possible propositions for reducing household emissions as part of Supplier Obligation policy work carried out by the Sustainable Development Commission. The specialists helped the stakeholder group achieve its task in the given timeframe, for example, by assisting with drafting of materials between meetings. The propositions were then explored by consumers in discussion groups around the country. The evaluation of the process notes: *“the breadth of stakeholders participating is a key strength of the process...the process has encouraged Defra to use the model in other engagement situations and to engage a broad range of stakeholders when addressing complex, multi position issues.”*³²

In practice, Advisory, Steering and Oversight groups may all have some crossover and therefore there is a need to be crystal clear about roles and expectations. These groups can help to make the dialogue both legitimate and fair, particularly by ensuring there is a proper spread of stakeholder representation. However, they do need to have a clearly-defined role and suitable terms of reference and they need to be well managed.

Inviting key stakeholders to join such groups early on in the process can help build value and encourage participation throughout the dialogue. However, the membership of the group needs to be carefully considered with particular regard given to who each member is and what they represent (i.e. themselves or their organisation) and what different ‘agendas’ each may have. As with other areas of expert involvement in Government programmes, those who sit on an Advisory, Steering or Oversight group will come under increasing scrutiny as the level of conflict over an issue rises.

If a group has been in existence before a process is commissioned and includes experts in their own field, their role in the dialogue should be clarified. The group may already have an existing role in making policy recommendations and therefore properly integrating a public dialogue into the group’s existing deliberations is crucial.

Interviews and evaluations reviewed for this study showed that those who were engaged were much more supportive of the value and outcomes from the public dialogue process. There is little to replace the value of seeing and hearing views first hand

³¹ SDC Supplier Obligation Project - An Evaluation of the Sustainable Development Commission’s stakeholder and public engagement process, Icarus Collective http://www.sd-commission.org.uk/publications/downloads/Supplier_obligation_evaluation_summary.pdf

"It was interesting to attend the events and listen at first hand to how the public thinks aloud about these issues." (Working Group member interviewee – Drugsfutures dialogue evaluation report³³).

Case study: Citizens' Inquiry into the Forensic Use of DNA and the National DNA Database³⁴

One of the first stages of the inquiry process was to bring together a diverse group of stakeholders and individuals who would act as an Advisory Panel (AP). The AP had three aims:

- to ensure that the selection and recruitment process to the Citizens' Inquiry Panel was fair and transparent
- to guide and advise meeting facilitators on the best experts, representing as many dimensions of the debate as possible
- to advise and, wherever possible, take forward the recommendations of the Citizens' Inquiry Panel

Members of the AP were drawn from the public, private and voluntary and community sectors. They brought with them a wide range of perspectives and expertise; some had a detailed understanding of the National DNA Database and others a more nuanced understanding of its direct impact at a local grass-roots level. This created a unique blend of interests and expertise.

4.6 The practicalities of sourcing experts

Having defined the role of the expert in relation to the aims and objectives of the dialogue, the very practical action of sourcing an expert then comes into play.

In an ideal world, there would be time to allow the public participants to define what expertise they may need and then seek to meet that need. Opening up a selection process can significantly aid trust but does slow down the dialogue process; however, selection can sometimes be accommodated where there is time between a group's first and subsequent meetings.

Other options include:

- pre-selecting expert input based on the ideas of the commissioner and delivery organisation
- pre-selecting experts based on Steering or Advisory group recommendations
- enabling participants to define the criteria by which experts are selected
- enabling participants to choose from a long list of experts with biographies
- opening up a discussion by participants to define the input they may require during the dialogue

Getting the right expert involved at the right time will always be a challenge for public dialogue and particularly for some issues that are in their formative stages and may not yet have a wealth of experts available. Options to help expert recruitment include:

- Linking with a professional association/funding source or network to help access expertise, for example the British Science Association
- Accessing networks via the steering or advisory group and, if appropriate, asking them to make initial introductions and enquiries

³³ Evaluation of the Drugsfutures project, Diane Warburton, Shared Practice, 2008. http://www.sharedpractice.org.uk/Downloads/Drugsfutures_evaluation_report.pdf

³⁴ A Citizens' Inquiry into the Forensic Use of DNA & the DNA National Database, Contractors Report. Dr Bano Murtuja, Komal Adris, Junaid Ahmed, Vis-à-vis, July 2008. <http://www.hgc.gov.uk/UploadDocs/DocPub/Document/Citizens%20Inquiry%20-%20Contractors%20Report.pdf>

- Providing a financial or other incentive to experts to take part in the dialogue. Time is likely to be a constraining factor for many experts, often exacerbated by the fact that most public dialogues are held at the weekends. It is worth building in some potential funding for experts into the dialogue budget
- Considering the location of the dialogue and whether a 'local' expert will be just as appropriate as bringing someone in from further afield with its associated time and cost implications. Dialogue evaluations have shown that often participants more readily listened to experts, if they were from the local area rather than 'out of town'. At its simplest level this is because they immediately have something in common with the public participants
- Considering who can provide the best, most appropriate expertise. For example, some dialogues work just as well with PhD students guiding participants, and these are far more likely to be available than a specialist Professor. For other dialogues, science journalists can be used to translate complex issues and help participants get to grips with the subject matter
- Thinking about how expert input may be provided. In person is very much the best option; however, if participants need to question experts who are not available to attend on the day, (e.g. in a citizens' jury type approach) the compromise may be that the input is provided by telephone or on computers via Skype. Video clips of experts speaking can also work well for deliberative events held at the same time in different locations

Case Study: Enlightening participants – creative thinking

The specialist dialogue company Dialogue by Design ran workshops with stakeholders on future science and technology issues as part of a stakeholder dialogue on the Government-funded initiative, *Wider Implications of Science and Technology*³⁵. The issues discussed were based well into the future and to help participants get to grips with the information, science journalists were brought in to assist the understanding of the science involved. In contrast, for the HFEA dialogue on hybrid and chimera embryos³⁶, the delivery contractor, Opinion Leader Research, brought in PhD students from Imperial College, London to help participants follow the science behind the subject.

4.7 The attributes needed by experts and how they will work for the project

- Expertise alone may well not be the only requirement for a dialogue. Talking in plain English, rather than scientific shorthand, is an important skill for experts going into public dialogue processes. Experts need to use accessible language and to explain technical and scientific terms in a way that everyone can understand.
"Very formal talk is quite hard to understand, with their big words and the names of lots of organisations ... they could have made it simpler." (Participant response, *Forensic Use of DNA*)³⁷
- Engaging young scientists has, in many projects, proved extremely successful, although there are challenges in doing so in terms of their availability (see Future Challenges section on Page 27). Commissioners and deliverers need therefore to

³⁵ Run by the former Department of Trade and Industry's Office for Science and Innovation unit under their Horizon Scanning work. See

<http://www.foresight.gov.uk/Horizon%20Scanning%20Centre/WIST.asp>

³⁶ <http://www.sciencewise-erc.org.uk/cms/hybrid-and-chimera-embryos-for-stem-cell-research/>

³⁷ A Citizens' Inquiry into the Forensic Use of DNA & the DNA National Database, Evaluation Report, Dr Max Farrar, Leeds Metropolitan University, July 2008 <http://www.sciencewise-erc.org.uk/cms/assets/Projects-Reports/Citizens20Inquiry20-20Evaluation20Report.pdf>

consider whether the issue may require the weight of academic experience or the freshness that younger scientists may offer

- Above all, it is important to consider the project subject, the project audience and the participants – what attributes may suit or jar with the audience?

4.8 Making all expert input ‘equal’

If the project involves a number of contributing experts it is vital to offer consistency in the type of input, give parity to all the inputs and to give fair and equal exposure to the range of views. Some experts may be deemed more ‘trustworthy’ simply by virtue of their style or presentational skills or with whom they are associated. The question of parity needs to be considered when a choice of experts is available and therefore those who are likely to have similar status, skills and abilities should be looked at first. Taking an extreme example to illustrate the point - if a largely unknown, inexperienced speaker was chosen to present the ‘anti’ perspective on an issue and a slick, confident and appealing speaker delivered the ‘pro’ perspective, this could be interpreted as an attempt to create bias in the deliberations. This is always potentially contentious, and although the luxury of choice may not always be available, it is nevertheless something that should be thought about carefully.

Practical ways to try to ‘level the playing field’ include:

- ensuring that all experts have the same time allocation if giving talks and that they stick to those times
- setting a limit on the number of PowerPoint presentation slides allowed for each speaker or having no PowerPoint at all can help keep things on an equal footing and avoids experts falling into a lecture style ‘comfort zone’
- vetting talks or PowerPoint slides in advance to ensure they meet the brief and that they use accessible language

In addition, where a dialogue runs over a long period, it is much easier to deal with any sensitivities and to find ways of helping participants to get to know the experts.

Case study: Talking Energy

Talking Energy, the series of deliberative events run by Opinion Leader Research in 2007 on the Government’s proposition to build new nuclear power stations, came under scrutiny by a number of parties. One complaint to the Market Research Standards Council filed by the environmental group, Greenpeace,³⁸ related to the quality of the information provided for participants. They alleged that it was biased, leading participants towards a particular view – in this instance, favouring new nuclear build.

Clearly, matters regarding nuclear new build are extremely contentious and therefore any dialogue on this subject is likely to arouse passionate and opposing viewpoints. Therefore, the way the information is provided is absolutely fundamental and can affect the credibility of the outcome. OLR stood by its process and was of the view that it had taken all the necessary measures to ensure that the information was robust and did not influence the deliberations of the public one way or another³⁹. The Market Research Standards Council took a different view and ruled against OLR on that point. This case highlights the absolute need to consider how information is provided and put together in particularly controversial areas and underlines that such aspects of public dialogue require significant time and effort to get right.

³⁸ <http://www.greenpeace.org.uk/files/pdfs/nuclear/MRScomplaint.pdf>

³⁹ <http://www.opinionleader.co.uk/news.asp?pageid=530>

4.9 Briefing and supporting experts

The role of any expert should be clearly agreed with them as well as being made clear to other participants. Feedback shows that people who invest in pre-dialogue briefing regard it as time well spent, not only in facilitating the process, but also in helping the experts and participants gain most value out of a dialogue.

“Scientists who did take part were provided with guidance by the Demos/Lancaster team on how to act in public dialogue, the sorts of questions they might be asked, and so on. This was deemed very helpful, especially by those scientists with limited experience of public dialogue. Both scientists interviewed noted that one’s competence in this regard not only develops through undertaking public engagement but also varies between different types of scientist (eg a biologist such as Ruth Duncan who develops medical applications has interacted with members of the public in the role of patients throughout her career, whereas Philip Moriarty, as a physicist, has not been exposed to the public in the same way)”. (Nanodialogues evaluation report, Chilvers, November 2006⁴⁰)

It is worth remembering that an expert is not necessarily going to be skilled in communications, and may require additional support to fulfil this role. Bringing experts together, ideally the night before a workshop or, as a minimum, on the morning of an event, will enable them to run through materials and allow them to meet other participants and gain an idea of their audience and how the subject should be best approached.

Will Rifkin, Director of the Science Communication Program at the University of New South Wales in New Zealand⁴¹ believes that ‘communication = information and relationship’. The aspect of relationships is often forgotten in expert communications, yet it is the relational part that wields most influence. In addition to finding practical ways to enhance that relationship (e.g. through making opportunities for experts and participants to meet together), experts should also be given some briefing on how their language may help or hinder the dialogue process. Arguably there is a fine line to be drawn between ‘coaching’ experts on their performance and potentially influencing the outcome. A guiding principle should always be to offer the same to all experts – i.e. a level playing field and no special treatment.

Common phrases⁴² heard from experts (and many others in public life) that do little to encourage dialogue include:

- “You can’t argue with the facts...”
- “The science says...”
- “The evidence is incontrovertible...”
- “You haven’t read the literature...”
- “You obviously don’t understand...”
- “If you’ve studied this as long as I have...”

More helpful approaches, which can acknowledge differing viewpoints (without necessarily agreeing with them) and uncertainty, include:

- “There is a view that... though I see it this way...”
- “In my view... though others may disagree...”
- “The evidence suggests...”

⁴⁰ Engaging Research Councils? An evaluation of a Nanodialogue experiment in upstream public engagement, Independent Evaluators Report, Dr Jason Chilvers, University of Birmingham, November 2006. See <http://www.sciencewise-erc.org.uk/cms/assets/Uploads/nanodialoguesevaluation.pdf>

⁴¹ <http://www.med.monash.edu.au/cmhse/docs/dec-07-seminar-presentation.ppt>

⁴² With thanks to Steve Robinson, Dialogue and Engagement Specialist, Sciencewise-ERC.

- “On balance...”
- “Currently we believe...”
- “More work needs doing to...”

Do what you can to enable the experts to leave the dialogue happy and better informed themselves.. Evaluations suggest that the value for experts of being part of public dialogue includes learning about public engagement and dialogue, learning about public views on their subject, and just hearing debate on a different level from their usual experience.

Case Study: The Forensic Use of DNA – Red Card

During the Citizens’ Inquiry a ‘red card’ system was operated, allowing facilitators and panelists to interrupt an expert whenever something was said that was not understood. The facilitator’s use of the red card was an important way to ensure that everyone understood what external experts were saying, even if panelists were too shy or uncomfortable to use the red card themselves.⁴³ As one participant noted: *“The red card system was good – it made the experts explain themselves more clearly.”*⁴⁴

There are therefore a number of things that commissioners and deliverers can do, and ways in which experts can be briefed to make sure they, and the participants, get the most out of a dialogue. These include:

- In recruitment – being clear about the nature of input that you require – tone, format etc. If you are asking them to talk outside their direct area of expertise then give them reassurances on the level of detail the public might expect
- Providing an overview of the history, aims etc of the dialogue and how the workshops and other sessions will run (many experts may well not have had previous experience of a dialogue process)
- Giving verbal briefings as well as providing written materials. Documents may not always be thoroughly read by experts and a verbal briefing will provide an opportunity to hear any questions or concerns they have that can be resolved before the event
- Giving an overview of what should be covered and how this has been defined, e.g. if it is the product of a previous workshop with participants who said this was what they specifically wanted to hear about
- Emphasising the difference (probably) from anything they have done before and therefore the necessity of preparing for a dialogue – it is not an academic or conference-style lecture and needs to be approached with a different set of values in mind
- Finding out what the expert may want to get out of being involved in the dialogue and making sure those aspirations are attainable

⁴³ A Citizens’ Inquiry into the Forensic Use of DNA and the National DNA Database – Contractors Report. Vis a vis, July 2008. <http://www.hgc.gov.uk/UploadDocs/DocPub/Document/Citizens%20Inquiry%20-%20Contractors%20Report.pdf>

⁴⁴ A Citizens’ Inquiry into the Forensic Use of DNA and the National DNA Database – Evaluation Report, Dr Max Farrar, Leeds Metropolitan University, July 2008 <http://www.sciencewise-erc.org.uk/cms/assets/Projects-Reports/Citizens20Inquiry20-20Evaluation20Report.pdf>

- Clarifying the roles of the dialogue facilitators and the other delivery team members
- Clarifying how the expert will be introduced to the group
- Making clear the expectations of them in both formal and informal roles e.g. are they expected to interact as participants or be merely observers? Is it appropriate for them to stay after giving their presentation or taking part in a panel question and answer session, and if so, what is their further role?
- Making sure that if the experts are there in a 'roving' capacity, that all tables of participants are able to access similar levels of input
- Obtaining presentations in advance to ensure they are in an appropriate language and are broadly similar in length to other inputs and running through them with the expert in advance.
- Making sure that experts know the housekeeping and ground rules such as keeping to time and who will be enforcing these rules (e.g. facilitator)
- Ensuring experts meet participants before they give their input in order to 'get to know' the audience a little better
- Running through any questions the expert may have about their role or discussing any worries they may have about unduly influencing the participants (many experts who have not taken part in dialogue are often concerned about this possibility)
- Making sure that ALL experts are briefed as an issue of fairness.

PARTICIPATION

5 Expert participation in the dialogue

5.1 Introducing experts and outlining their role

It is essential that the experts themselves are clear about in what capacity they are taking part and who they are representing. Experts can have many different 'hats' including:

- a citizen who just happens to be a scientist
- a scientist who is representing a particular standpoint e.g. from business or industry or a voluntary or community group
- an expert who is part of a special interest group e.g. Greenpeace
- a Government-appointed scientist who is representing the dialogue funders or commissioners

Clarity on who the experts are representing for those running the process, the experts themselves and the participants is vital if people are to trust the information being provided and are able to see it in its proper context. Similarly the roles of the facilitators and other team members should be explained so that everyone is clear exactly who these people are and their role in the process.

5.2 Responding flexibly to the role and requirements for experts throughout a dialogue process

During a dialogue it can sometimes become apparent that additional expert input is needed that is not currently available and there needs to be flexibility in handling this new requirement. For example, the facilitator or scientist may be able to call in appropriate experts as the need arises and have their responses relayed on speakerphone or via a computer on Skype.

It is also important to ensure that the role of the facilitator/dialogue deliverer is not compromised. Facilitators should not offer expert input in the absence of an expert; their job is to enable full discussions among the participants and identify areas where further expert input might be needed based on what they are hearing from participants. However interested, or indeed experienced, they may be in the particular issue being discussed, their expertise lies in dialogue – not science – and their role is to enable discussions, not to provide information or comment on the issue itself.

POST-WORKSHOP AND DIALOGUE

6 Post workshop and dialogue

6.1 Follow up, evaluation and continuing engagement with experts

Often, the end of a workshop can be seen as the end of the dialogue, except for the production of the final report. Yet as a minimum, it is important to ensure that experts, as well as participants are kept in the loop about the outcomes from the dialogue and what has happened to the results. Too often experts feel as though they are simply 'wheeled in and wheeled out' to give their opinions and then forgotten. It is therefore

advisable to keep in contact with them after the dialogue and offer them connections to other support mechanisms.

Throughout this study, it has become apparent that there is a real opportunity to capitalise on the involvement of experts in dialogue processes by keeping them up to speed with outcomes and developments and considering whether there are further roles they can play. Suggestions on how to do this include:

- As a minimum, linking the expert to organisations such as the British Science Association which runs programmes encouraging dialogue and engagement (<http://www.britishtscienceassociation.org>)
- Using the dialogue evaluation as an opportunity to assess how experts felt about the dialogue and what impact it had on them (for example, this was specifically done in the evaluations of the HFEA hybrid-chimera embryo and Academy of Medical Sciences Drugsfutures dialogues)
- Considering whether there is a role for experts after the workshop or dialogue, for example a 'champion' or media role concerning the dialogue itself or a role in promulgating the learning to other expert networks
- Increasing the validity of dialogue and encouraging expert uptake into public dialogue processes by including the expert community as a whole in disseminating dialogue results

Whilst these are the last points in the list of practical steps – they should not be left until last – thinking about evaluation, the role of experts beyond specific events and dissemination plans need to be planned in right at the beginning of the project.

7 Future challenges in involving experts in public dialogue

If it is assumed that there will be increasing opportunities for public dialogue in the future then there will also be an increasing need for expert involvement in those processes. Public dialogue is a fast developing field and one where the systems to support it are not yet necessarily all in place. A number of challenges have emerged from this study concerning areas that will need to be addressed to enhance and improve expert engagement in public dialogue.

Some of these challenges will be familiar; some have been raised through evaluations and reports on public dialogue and many apply to both public dialogue and wider public engagement. Many of these challenges are already being addressed, but until the right structures and support are in place, experts will continue to be at the margins of public dialogue. The result will be poorer dialogue and a lost opportunity to reflect the societal context in future science and technology developments.

7.1 Demonstrating the value of public dialogue

Work is still needed to raise awareness of what exactly public dialogue is and how it can be used to make better policy decisions and further science and technology. It appears there are still some questions and areas of debate among scientists about the place and value of public dialogue. Unless these experts can see value for their own work and for better policy and decision-making, it will continue to be a struggle to get their involvement.

Themes that emerged from the interviews conducted for this study include:

- The need to address **concerns about the qualitative nature** of dialogue. Dialogue, by its nature is not quantitative or often representative (though it may have elements of this within it)– it relies on gathering and understanding people’s views and concerns about an issue, not in counting the number of views expressed about a specific issue - and this appears to go counter to the training of scientists in particular
- The need for an increased **understanding of what dialogue can achieve** and the need to **demonstrate its value**. One of the challenges is how to tell a better story of how the results of dialogue fit into the formulation of policy alongside other evidence and how it can add value to public policy development and decisions. The recent EPSRC Nanotechnology and Healthcare Grand Challenge⁴⁵ appears to highlight that the public process of informing decisions can at least equal to the scientific process. *“The report provides interesting and useful information on the public’s concerns and aspirations regarding nanotechnology for healthcare applications and their preferences for this call to focus on. We feel that the inclusion of this dialogue with the public added significant value in the development of the call” (EPSRC website)*⁴⁶
- The need to **dispel some of the myths of public’s input into discussions**. It has often been said by scientists and others that the ‘public do not understand science’. However, many scientists who become involved in public dialogue have been repeatedly surprised by the ability of members of the public to grasp key issues and raise new topics of interest. Overall, scientists with experience of public dialogue say that they find the public’s ability to deal with, and respond to, technically complex issues refreshing. *“There were some people there with very different views from me, people I wouldn’t necessarily meet otherwise. Some of them had no experience of science at all, and they had ideas and concerns that I’d never thought of before.” (Scientist 3, Nanotechnology, Risk, and Sustainability)*⁴⁷
- The need to be **clear what is being done and why, and maintaining its quality**. There is a spectrum of engagement and dialogue– starting at informing the public and moving through to placing decisions in the hands of the public (see IAP2 Public Participation Spectrum on page 17). Activity at any point on the spectrum is perfectly acceptable provided it fits the aims of the project. It is however important to be clear on what activity is taking place and where it lies on the spectrum. This will help to ensure that expectations can be met and confusion avoided. Public *engagement* on science is often at the ‘inform’ end of the spectrum. Public *dialogue*, whilst potentially having elements of ‘inform’, is more likely to be in the ‘consult’, ‘involve’ and ‘collaborate’ aspects. It is self evident that continuing to strive for the best quality of dialogue (and other engagement) possible will be critical to maintaining its validity and in turn encouraging expert participation.

⁴⁵ The EPSRC Grand Challenge was a funding consultation where a public dialogue on the potential applications of nanotechnology to medicine and healthcare was explicitly coupled to a decision about where to target a research funding initiative.

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<http://www.epsrc.ac.uk/ResearchFunding/Programmes/Nano/RC/ReportPublicDialogueNanotechHealthcare.htm>

⁴⁷ Democratic Technologies? The final report of the Nanotechnology Engagement Group (NEG), Karin Gavelin & Richard Wilson with Robert Doubleday, Involve, 2007 <http://www.involve.org.uk/democratic-technologies/>

7.2 Aligning what is good for dialogue with a good scientific career

There are views expressed among the scientific community and others including policy makers that public dialogue does not have a place in science. There are also perceptions about the validity of scientists who engage too much with public dialogue and engagement – that such involvement does not add to a scientist’s credibility because it is to do with science communication – the so-called soft or ‘fluffy’ side of science. So what may be good for dialogue i.e. the participation of scientists, is not necessarily seen as good for furthering an individual scientist’s career.

These perceptions however, are at odds with, for example, the summary of responses from the Government’s Science and Society consultation undertaken by the Department for Innovation, Universities and Skills in 2008. The consultation report cites as a key theme the desirability of *“a science community that values and rewards engagement and where individual scientists seek opportunities to engage with the public”*.⁴⁸

“..what you’ll find is the funding bodies and the universities will say, oh, that’s great, and then when it comes to your next grant application or particularly your promotion application with the university it’s just completely discounted...But again, part of the problem there, I think, is that public communication, public engagement is kind of soft. There’s no hard measures...whereas you can see what, how somebody’s doing in terms of the peer reviewed publications.”(extract from scientist interview by Kevin Burchell as part of LSE’s BIOS SCOPE project)⁴⁹

One concern, mentioned during this study, is that scientists will often not speak out against the flow of funding provision for research. So whilst privately they may express some concerns about the development of a particular technology, it would be extremely unlikely that they would speak against it in a public forum, if only for fear of losing future funding. The implications for public dialogue are that it may be increasingly difficult to get scientists to share an alternative perspective and therefore the public may not have access to the full range of uncertainties.

7.3 Integration of dialogue into funding, assessment and management structures

One of the biggest barriers expressed about the challenges of engaging scientists in particular, stemmed from the lack of formal value placed on public dialogue and engagement by scientific and research institutions. Currently there is little reward for people who engage in this type of work as far as career progression or funding is concerned, although the culture does appear to be changing. Cardiff University for example has changed its promotion criteria putting ‘engagement’ activities on an equal footing with teaching and learning.

- There are examples (e.g. from the Engineering and Physical Sciences Research Council) of a requirement for public engagement to be included as part of a bid for research funding; however it still appears that in general the value of public engagement and dialogue is either absent or far down the priority list. This raises the question of whether public dialogue should always be a requirement, or whether those who undertake it should be rewarded separately

⁴⁸ Science and Society – Summary of Consultation Responses
<http://interactive.dius.gov.uk/scienceandsociety/site/wp-content/uploads/2009/01/scienceandsocietyresponsesummarytextonly.pdf>

⁴⁹ <http://www.lse.ac.uk/collections/BIOS/scope/scope.htm>

- Similarly, should dialogue commissioners and deliverers fund the experts' participation? Certainly for the public, funding participants is now accepted as an inducement to give up their time to participate. Whilst funding may appear an immediate choice it is probably best considered in the light of the dialogue's aims and objectives. If simple delivery of information is required e.g. as a panel or presentation, then payment may attract greater participation. If, on the other hand, the dialogue seeks to shape future scientific direction, then arguably the expert is more of a stakeholder in the outcome and payment may result in a lack of ownership of the process and outcomes
- Currently for scientists, it can be argued that anything that is not laboratory work is a potential distraction from core research work and therefore to be discouraged. Time is a major factor preventing more scientists from engaging in public dialogue and unless there is provision for this type of work in management structures and reward systems, it will remain a barrier to participation

7.4 Creating the opportunity for expert engagement by the many rather than the few

The impact of dialogues on the participants and experts alike can be great, yet currently only a small proportion get to have this interaction – so how can this be increased? How might valid opportunities be created for larger numbers of scientists to engage with the public in dialogue on their issue? How do the results and impact of dialogues reach beyond those most directly affected in the various expert communities? As the recent Sciencewise-funded Stem Cells dialogue, managed by the Research Councils UK, described in its final report: “...*dialogue needs to permeate research culture – rather than being seen as done by special people in special places.*”⁵⁰

- It appears that often the opportunity to begin undertaking dialogue or engagement opportunities is not available until the later stages of a scientist's career. Greater involvement of younger scientists would increase the available pool for dialogue and engagement work and such interaction could also help shape future research directions. However, institutional cultures and structures may not allow time for a younger scientist to engage in such work, even though anecdotally younger scientists may have the personal attributes to enable them to interact effectively and personably with the public and they may indeed also be closer to the research. As one participant at a Sciencewise workshop expressed it “*expertise may not be with eminence.*”
- Increasingly a wider spectrum of experts is being brought into dialogue projects and this is usefully adding a wider perspective and dimension to discussions and increasing the available pool – for example bringing in social scientists, ethicists and philosophers
- Ultimately the aims and objectives of the dialogue will dictate whether many or few, young or established experts are appropriate. However, with issues of access to experts being a constraining factor, commissioners and deliverers might need to think more creatively about whom they engage, and how.

⁵⁰ Stem Cell Dialogue, Darren Bhattachary, BMRB (2008) <http://www.sciencewise-erc.org.uk/cms/assets/Projects-Reports/Stem-Cell-Dialogue-FINAL-REPORT.pdf>

Case Study: Nanotechnology Grand Challenge

This BBSRC-funded consultation explored public aspirations and concerns for potential nanotechnology applications for healthcare. The consultation was commissioned by EPSRC and specifically undertaken to inform researchers developing proposals under the call. Eighty members of the public were taken through a structured discussion with experts in the field of potential nanotechnology applications for healthcare. In addition to members of the public, BMRB recruited a scientist or engineer, and a social scientist or ethicist to take part in the workshops. The experts had two roles. First to provide a resource for the public in their deliberations on nanotechnology. Second to listen to and reflect on the public's aspirations and concerns for nanotechnology.

7.5 Building up and on the capacity of experts to undertake public dialogue

How can the capital (energy, enthusiasm, experience) that is created in those scientists and other experts who have engaged in public dialogue be harnessed for the future?

Currently there is no structured provision past the dialogue workshops themselves and yet these expert advocates could be a valuable resource. A number of the people who took part in this study felt that much more needs to be done to build up the capacity of experts, including communications skills training for scientists, together with basic awareness of dialogue and public engagement through study courses.

7.6 Exploring opportunities to inform future science direction and innovation

Expert involvement can be extremely valuable for experts themselves in terms of putting them in touch with public opinion, becoming involved in the policy-making process and interacting with other experts.

“Less appreciated, but perhaps even more significant, is the expectation that scientists who enter into public engagement will see a shift in their own knowledge and attitudes. This is the real mark of successful public engagement: Rather than insisting upon the public's deeper appreciation and understanding of science, its primary goal is scientists' deeper understanding of the public's preferences and values.”⁵¹

How can commissioners capitalise on this? The study interviewees were supportive of upstream dialogue (before decisions are actually made) and felt there were exciting opportunities in dialogue to inform research directions and align innovation more closely with the expectations of society.

“...perspective on public understanding of science, commonly known as the ‘deficit model’, is challenged by CSOs who argue that understanding works two ways and

⁵¹ Rick Borchelt and Kathy Hudson - Engaging the Scientific Community With the Public, *Communication As a Dialogue, Not a Lecture*. Monday, April 21, 2008. See <http://www.scienceprogress.org/2008/04/engaging-the-scientific-community-with-the-public/>

very little effort is spent trying to translate wider public aspirations into research questions.”⁵²

Several interviewees mentioned that whilst increasingly public dialogue is taking place for publicly funded research developments, corporate science is still relatively closed. Another challenge therefore is how to engage this whole area of science in the process. Public-funded research may include some public dialogue, but promising areas of science and technology will soon become commercially exploited, therefore, particularly in controversial areas of science and technology, public dialogue needs to continue to happen. One-off dialogues are unlikely to be sufficient as societal values and expectations shift over time.

Those commissioning and delivering public dialogue also need to be aware of the tensions that currently exist and also to appreciate some of the demands placed upon experts that may not sit easily with their scientific training. Dialogue deliverers sometimes expect experts to talk outside what might be their very narrow area of expertise. Not only may this be intrinsically uncomfortable, it could also add an additional time burden on experts in preparing their material and therefore lead to a reluctance to participate. Much more therefore needs to be learned about exactly what scientists and experts want to get out of public dialogue.

8 Conclusion: Wise futures? Areas for research and exploration

As an overarching observation and recommendation, it would appear that if public dialogue on science and technology is to continue to take place and be of full value to policy makers, then experts need to play a much more central role than they do at present. Moreover, they need to be equipped with the skills to take part in a way that enriches the dialogue and also their participation.

A number of immediate areas warrant deeper exploration by the wider science policy community, including:

- An exploration of ways in which capacity can be built and shared to engender greater understanding of public dialogue. This might include:
 - Consideration of the viability of further support for experts engaged in public dialogue. As with citizens, a mechanism should be put in place for continuing to engage with the experts who have been part of public dialogue processes, in order to support their learning, stay connected and be able to use them as potential champions to encourage other expert involvement
 - Creating an expectation of more scientists in particular being participants in public dialogue projects rather than merely information providers
 - An element of the public dialogue project budget being explicitly assigned to feed back the results into the scientific community and via journals, scientific conferences and other academic platforms
 - Offering university modules and briefings for experts, including basic training on the principles of engagement and dialogue, ethics, reflection and the nature of science as well as communications skills

⁵² Participatory Science and Scientific Participation: The role of Civil Society Organisation in decision making about novel developments in biotechnology.

http://www.participationinscience.eu/psx2/final/PSX2_final%20report.pdf

- Seeking novel ways of encouraging expert participation; for example, if dialogue is not currently valued in many academic institutions are there new or different measures that can be used to assess performance on engagement and dialogue? If the number of published papers is part of the success criteria for academics, is there a similar measure for dialogue and how might that be used?
- Understanding the drivers and barriers to participation by experts and the benefits they want to get out of public dialogue. Whilst research is currently under way at the London School of Economics on expert involvement in dialogue⁵³, this is an area that is likely to pose new challenges, as more and more experts become involved in the field. Currently most of the experience that is shared is of public engagement rather than pure two-way dialogue and so evaluations of public dialogue need to continue to consistently and explicitly examine the impact on experts
- Carrying out further detailed research into how the different personalities and types of expert input can affect the choices and the decisions that are made within public dialogue activities. Can the personalities of experts truly affect how information is received and acted upon? What does this mean in terms of how the experts are prepared for their involvement and how far should facilitators try to influence how experts 'perform'?
- Looking at how far are scientists able to express fully their aspirations and concerns about new scientific developments and whether they are being hindered by funding needs. The recent research councils' Stem Cells dialogue highlighted in its findings: *"The culture of science often made it difficult for individual researchers to voice concerns over risks, making open discussions more difficult."*⁵⁴
- Exploring how additional resources can be made available to support the participation of experts in dialogue, e.g. a database of those prepared to speak on particular subjects akin to the Science Media Centre service to journalists, and a source of funding for experts' involvement
- Looking at whether the issues and guidance on how experts are engaged in public dialogue are replicated for all forms of engagement, in particular exploring whether there are common themes or ways in which best practice can be modelled in different dialogue types

In conclusion, this research has touched on a large and fruitful area of discussion which is of major importance to the future development of public dialogue. As the practice of using public dialogue for policy-making increases, there will be many more challenges facing commissioners, dialogue deliverers and experts alike; understanding these will help to develop further practical recommendations on how best to engage experts in all kinds in dialogue.

In addition, unless there is recognition (both formally and informally) of the value of expert involvement in public dialogue it will remain a marginal add-on extra for those who have the enthusiasm and inclination to participate. The opportunity that presents itself therefore is to find ways to enable expert involvement, to enable richer public dialogues and greater reflection of public thinking into future science and technological developments.

⁵³ <http://www.lse.ac.uk/collections/BIOS/scope/scope.htm>

⁵⁴ <http://www.sciencewise-erc.org.uk/cms/assets/Projects-Reports/Stem-Cell-Dialogue-FINAL-REPORT.pdf>

9 Contacts and links

This report was prepared by Suzannah Lansdell, one of the Dialogue and Engagement Specialists working for the Sciencewise-ERC programme.

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Appendix 1

List of people who were interviewed or contributed to the development of this paper:

- Edward Andersson, Involve
- Rob Angell, RK Partnership
- Helen Ashly, 3KQ
- Diane Beddoes, OPM
- Kevin Burchell & Sarah Franklin, Bios (The Centre for the Study of Bioscience, Biomedicine, Biotechnology and Society), London School of Economics
- Jo Coleman, EPSRC
- Nigel Eady & Alice Taylor-Gee, The British Science Association
- Helen Fisher
- Rebecca Morris, Opinion Leader Research
- Gilly Rendle, RCUK
- Will Rifkin, University of New South Wales
- Jack Stilgoe, Demos
- Helen Wallace, Genewatch
- Richard Wilson, Involve
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- From AEA Technology: Sarah Young, Louise de Rome, Eva Kristjansdottir
- Participants at the two Sciencewise workshops reviewing research topics and the Sciencewise Drop-in for Dialogue on 19 January 2009.

Appendix 2

Case study references

Articulating Public Values in Environmental Policy Development: Report on the Citizens' Jury on Air Quality for the Department for the Environment, Food and Rural Affairs

<http://www.defra.gov.uk/environment/airquality/publications/citizens-jury/index.htm>

Delivered by People, Science & Policy for Defra

<http://www.peoplescienceandpolicy.com/>

<http://www.defra.gov.uk>

Beacons for Public Engagement

<http://www.publicengagement.ac.uk>

Delivered through six centres and a national co-ordinating centre.

BNFL National Stakeholder Dialogue & Cricklewood Jointly Agreed Sampling & Monitoring

<http://www.the-environment-council.org.uk/bnfl-national-stakeholder-dialogue.html>

Delivered by The Environment Council for BNFL

<http://www.the-environment-council.org.uk>

<http://www.bnfl.com>

community x-change

<http://www.sciencewise-erc.org.uk/cms/community-x-change/>

Delivered by the BA and Policy, Ethics and Life Sciences Research Centre (PEALS) (together with a range of other partners)

<http://www.britishtscienceassociation.org>

<http://www.ncl.ac.uk/peals/>

Drugsfutures – Public Consultation on the Future of Drug Use

<http://www.sciencewise-erc.org.uk/cms/drugsfutures/>

Delivered by OPM and the Academy of Medical Sciences

<http://www.opm.co.uk>

<http://www.acmedsci.ac.uk/>

Meeting of Minds: European Citizens Deliberation on Brain Science

http://www.meetingmindseurope.org/europe_default_site.aspx?SGREF=14

<http://www.danacentre.org.uk/events/2006/09/08/210>

Delivered by the Dana Centre and The Environment Council (in the UK) plus a range of practitioners across Europe

<http://www.danacentre.org.uk/>

<http://www.the-environment-council.org.uk>

Nanodialogues

<http://www.sciencewise-erc.org.uk/cms/advanced-materials-projects-nanodialogues/>

Delivered by Demos (together with a range of other partners)

<http://www.demos.co.uk>

Nanotechnology for Healthcare Grand Challenge

<http://www.epsrc.ac.uk/CMSWeb/Downloads/Other/ReportPublicDialogueNanotechHealthcare.pdf>

Delivered by BMRB for BBSRC

<http://www.bmr.co.uk/>

<http://www.bbsrc.ac.uk/>

Public Dialogue on UK Energy Research Priorities

<http://www.rcuk.ac.uk/sis/energy.htm>

Delivered by Ipsos MORI for RCUK

<http://www.ipsos-mori.com/>

<http://www.rcuk.ac.uk>

Stem Cell Dialogue

<http://www.mrc.ac.uk/Utilities/Documentrecord/index.htm?d=MRC005309>

Delivered by BMRB (together with Demos and University of East Anglia)

MRC and BBSRC

<http://www.mrc.ac.uk>

<http://www.bmr.co.uk>

<http://www.bbsrc.ac.uk/>

Supplier Obligation Project

Delivered by 3KQ and Opinion Leader Research for Sustainable Development Commission

<http://www.3kq.co.uk/>

<http://www.opinionleader.co.uk>

<http://www.sd-commission.org.uk>

Talking Energy

http://nuclearpower2007.direct.gov.uk/docs/Events_070908_TalkingEnergyFinalEndOfDayReport.pdf

Delivered by Opinion Leader Research for Department for Business Enterprise and Regulatory Reform (now transferred to Department of Energy and Climate Change.)

<http://www.opinionleader.co.uk/>

<http://www.berr.gov.uk> and <http://decc.gov.uk/>

The Forensic Use of DNA Citizens' Inquiry

<http://www.sciencewise-erc.org.uk/cms/the-forensic-use-of-dna-reports/>

Delivered by Vis à Vis for the Human Genetics Commission

Human Genetics Commission

<http://www.vis-a-vis.org.uk/>

<http://www.hgc.gov.uk>

The Use of Hybrid and Chimera Embryos in Research

<http://www.sciencewise-erc.org.uk/cms/hybrid-and-chimera-embryos-for-stem-cell-research/>

Delivered by Opinion Leader Research for Human Fertilisation and Embryology Authority

<http://www.opinionleader.co.uk/>

<http://www.hfea.gov.uk/>

Wider Implications of Science and Technology

<http://www.foresight.gov.uk/Horizon%20Scanning%20Centre/WIST.asp>

Delivered by Dialogue by Design for the Horizon Scanning Centre

<http://www.dialoguebydesign.net/>

<http://www.foresight.gov.uk>

Sciencewise-ERC Research reports

This is one of a series of reports from the Sciencewise-ERC that cover a range of strategic issues in public dialogue as an input to policy on science and technology issues. These reports (and the authors) are:

- Enabling and Sustaining Citizen Involvement (Diane Beddoes)
- Widening Public Involvement in Dialogue (Pippa Hyam)
- Working with the Media (Melanie Smallman)
- Evidence Counts - Understanding the Value of Public Dialogue (Diane Warburton)
- Departmental Dialogue Index (Lindsey Colbourne)
- The Use of Experts in Public Dialogue (Suzannah Lansdell)



Contacts and links

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