



Which publics? When?

EXPLORING THE POLICY POTENTIAL OF INVOLVING DIFFERENT PUBLICS IN DIALOGUE AROUND SCIENCE AND TECHNOLOGY.

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Executive summary

How should we understand 'the public' in public dialogue given the dominant assumption within policy-making that the people brought together in these events must constitute a representative sample of the wider population? To improve the prospects for public dialogue and clarify what it can contribute to policy-making, this report explores 'who or what is the public' to make better sense of why and when public dialogue is carried out.

This report makes a case for why public dialogue can make a valuable and legitimate contribution to good governance in the context of the UK Government's commitment to instituting 'open policy-making'. Good governance, under increasingly complex and contested policy conditions, requires a policy-making process that is open to challenge and improvement from a broader range of inputs. Public dialogue is perfectly positioned to make a valuable contribution to this process. There is also an important case for public input into the process of structuring complex policy problems where there is a lack of consensus on fundamental judgments of fact or value and where particular policy solutions may be seen to exacerbate rather than ameliorate the situation of concern.

Central to the philosophy of public dialogue are democratic qualities such as interaction, diversity and inclusivity. To pursue such qualities in the practice of public dialogue, we highlight the importance of the idea of 'publics'. While the term 'citizen' is commonly used in political discourse to refer to individuals belonging to a nation-state with rights, responsibilities and private preferences, the term 'public' draws attention to the need to address and legitimate action around issues of common concern. In this process, preferences are seen not just as private and pre-given but as negotiated in the context of other perspectives. Rather than the singular term 'the public' and the emphasis on majority opinion, 'publics' are plural, dynamic and capable of mobilising around shared interests. Some publics may be well-organised with a clear voice on the issue at stake (campaigning publics). Others may come together as registered charities, community groups or internet-based collectives, though not specifically engaged with the same issue (civil society publics). Still others may be atomised and lacking the resources to become an organised public, though could be mobilised by civil society groups or organisers of public dialogues (latent publics). The report highlights ways in which each of these publics might play a role in public engagement for good governance.

Drawing on the lessons learnt from three prominent public dialogue projects, the report emphasises how the publics involved in dialogue might differ from the publics the organisers thought they were engaging with. Publics are provisional, always in the process of being formed and re-formed in response to certain conditions, and may be transformed through the process of engagement. For example, apparently disengaged publics may become more knowledgeable and feel they now have a 'stake' in the matter. Alternatively, they may have been prevented from fulfilling their role due to a lack of sufficient resources and feel disenfranchised by the process. Thus, it is important that dialogue processes remain open to the unexpected inputs which arise because publics act or respond in different ways to the particular circumstances of a dialogue.

The report concludes by making the case for more experimental dialogue processes that have the potential and capacity to embrace the unexpected. Such experimentation is evident in more recent dialogue projects that:

- explore the prospects for ongoing dialogue
- are better able to explore more diverse publics
- build lasting relationships
- improve the timeliness, quality and depth of discussion.

Table of contents

1	Introduction	1
2	Why?: Public engagement and good governance	2
3	Who or what is the public?	4
3.1	Diffuse public	5
3.2	The nature of public dialogue and the shift to 'publics'	6
3.3	Campaigning publics	8
3.4	Civil society publics.....	9
3.5	Latent publics.....	9
4	When should public dialogue take place? The role of dialogue in good governance	11
5	Conclusion.....	14
	Appendix: Case studies.....	15

1 Introduction

The recently published UK Civil Service Reform Plan contains a prominent commitment to 'open policy-making'¹. The Plan acknowledges that the sphere of policy development is dominated by Whitehall with the result that 'policy is often drawn up on the basis of too narrow a range of inputs and is not subject to rigorous external challenge'. To counter this, an open policy-making approach is proposed to stimulate 'maximum possible openness' to new ideas, insights and evidence. A key part of this philosophy is to get experts and organisations on board who would not otherwise be involved in policy discussion. But, the vision set out in the Plan is not just restricted to expanding the range of experts or 'stakeholders'. Rather, it refers to harnessing public engagement so that policies might reflect the experiences of citizens. According to the Plan, web-based crowdsourcing and deliberative media could contribute public inputs right across the policy process from the definition of problems to policy implementation.

In the field of policy-making involving matters of science and technology (e.g. decisions relating to new areas of potentially controversial research), the UK is recognised as a pioneer in developing new modes of engaging with the public. In 2000, the House of Lords Select Committee on Science and Technology published its influential 'Science and Society' report. Since that time, research councils and Government departments have sponsored dialogues around several prospective technologies and associated policy options including the commercialisation of genetically modified (GM) crops (UK Government), stem-cell research (Biotechnology and Biological Sciences Research Council (BBSRC), Medical Research Council (MRC)), nanotechnology (Environment Agency (EA), BBSRC, (Engineering and Physical Sciences Research Council (EPSRC)) and synthetic biology (BBSRC, EPSRC). The 2003 'GM Nation?' public debate was described as a remarkable experiment in constructing novel forms of citizen deliberation around an emerging technology². The Sciencewise Programme and the subsequent creation of Sciencewise-ERC, a Government-funded expert resource centre dedicated to supporting public dialogue around science and technology, provides further evidence of the way organised dialogue activities have taken off in this country. Recent activities include efforts to engage people on the diverse challenges of low-carbon energy futures (e.g. My2050, Low Carbon Communities Challenge) as well as specific technologies (e.g. the ongoing Bioenergy Distributed Dialogue).

However, the recent prominence of public dialogue around the governance of science and technology in the UK has, in turn, generated new questions.

- **First, how do specific dialogue events actually relate to policy-making?** Even when dialogues appear to have taken place early ('upstream') in the innovation cycle, there is concern that they simply help rubber-stamp policy decisions that have already been taken (thus organisers must ensure that the aims and expectations of engagement are clarified in advance). Alternatively, they have been framed too narrowly to allow for meaningful public input into the very definition of policy problems, which the Civil Service Reform Plan document now recognises as important.
- **Second, how should we understand 'the public' in public dialogue in the first place?** Within policy-making, there seems to be an assumption that the people brought together in these events must constitute a representative sample of the wider population³. Statistical representativeness is taken to be the 'gold standard' for organised efforts to engage the public in dialogue. Yet, this seemingly obvious requirement for the fundamental legitimacy of dialogues has been challenged, notably by social scientists responding to controversy over the representativeness of the public in GM Nation?⁴. More broadly, a lively debate has

¹ The Civil Service Reform Plan, June 2012. Available: www.civilservice.gov.uk/reform/part-2-improving-policy-making-capability (29 January 2013).

² Jasanoff, S. (2005). *Designs on Nature: Science and Democracy in Europe and the United States*. Woodstock, UK. Princeton University Press, p. 127.

³ This expectation came up several times in the 5 stakeholder interviews we conducted plus a stakeholder workshop organised on 28 January 2013 in London to discuss the issues considered in this paper.

⁴ For the official evaluators' perspective, see: Horlick-Jones, T., Walls, J., Rowe, G. et. al. (2006). On evaluating the *GM Nation?* public debate about the commercialisation of transgenic crops in Britain. *New Genetics and Society*, 25(3): 265-288. For responses to this perspective, see:

emerged in the past decade challenging taken-for-granted assumptions around the meaning of the public in public engagement more generally⁵. How do policy makers and stakeholders, who have a stake in the outcomes of these events, envision the public? How are members of the public brought into engagement exercises? What assumptions govern the translation of discussions in dialogue events into a collective public view? Understanding what lies at the heart of these investigations is essential for improving the prospects for public dialogue and clarifying what it can contribute to policy-making (the first point above).

In other words, we need to clarify who or what is 'the public' to make better sense of why and when public dialogue is carried out. Therefore, this report aims to increase understanding and promote debate regarding the following questions:

- **Why:** Why is public input important for good governance and policy-making? Why is public dialogue a relevant form of engaging the public around science and technology policy matters?
- **Who:** How should we understand 'the public' in public dialogue and why is the concept of 'publics' valuable in this regard? What is the value of involving publics other than as representative samples? When might the use of self-selected samples in dialogue be legitimate?
- **When:** How does the concept of 'publics' help us make sense of the relationship of public dialogue to good governance and the science/technology innovation cycle?

This report begins by examining the case for considering public input in good governance and policy decision-making, including in areas related to science and technology.

2 Why?: Public engagement and good governance

A key element of good governance is the ability to define and deliver public goods in a complex, contested and changing environment⁶. Policy design takes place in a crowded space consisting of prior initiatives, attempts to challenge or rethink these efforts based on experience and a range of other overlapping policies⁷. Therefore, in assessments of good policy-making, public administration scholars highlight the need to assess improvements in the process of decision-making and the nature of policy learning as well as the content of specific decisions. Does the policy process have the capacity to improve over time⁸? This key question opens up the possibility of thinking more creatively about the role of different inputs beyond the necessary, but limited, one-off consultations related to specific policy decisions that are based on particular formulations of the policy problem being devised at any one time.

As noted in the Civil Service Reform Plan, inputs from the public are expected to play a significant role in the policy-making process over time. At its broadest, this expectation is rooted in the idea that policy makers in democratic societies must engage with the public for decision-making to be considered legitimate. However, since public legitimacy is sometimes seen as being in tension with making 'good' policy decisions, it is worth revisiting a key point from an influential scholar of environmental regulation, Peter May. May argued that the lack of organised publics can actually hinder the development of policy, especially in environments requiring individuals or corporations to act in the public interest. He suggested that policies without publics appear to be a policy designer's

Lezaun, J. and Soneryd, L. (2007). Consulting citizens: technologies of elicitation and the mobility of publics. *Public Understanding of Science* 16: 279-297; Reynolds, L. and Szerszynski, B. (2006). Representing GM Nation. *PATH conference*, 4-7 June 2005, Edinburgh, Scotland. Available: www.macaulay.ac.uk/pathconference (24 February 2013); Wynne, B. (2007). Public participation in science and technology: performing and obscuring a political-conceptual category mistake. *East Asian Science, Technology and Society*, 1(1): 99-110.

⁵ Barnes, M., Newman, J., Knops, A. and Sullivan, H. (2003) Constituting 'the public' in public participation. *Public Administration*, 81(2): 379-399; Newman, J. (2007). Rethinking 'the public' in troubled times: unsettling nation, state and the liberal public sphere. *Public Policy and Administration* 22(1): 27-47; Mahony, N. (2010). 'Mediating the Publics of Public Participation Experiments' in Mahony, N., Newman, J. and Barnett, C. (ed.). *Rethinking the Public: innovations in research, theory and politics* Policy Press, Bristol; Walker, G., Cass, N., Burningham, K. and Barnett, J. (2010). Renewable energy and sociotechnical change: Imagined subjectivities of 'the public' and their implications. *Environment and Planning A*, 42(4): 931-947.

⁶ Knill, C. and Lehmkuhl, D. (2002). Private actors and the State: Internationalization and changing patterns of governance. *Governance: An International Journal of Policy, Administration and Institutions*, 15(1): 41-63.

⁷ Colebatch, H. K. (1998). *Policy: Concept in the Social Sciences*. Buckingham, UK: Open University Press.

⁸ Linder, S.H. and Guy Peters, B. (1990). An Institutional Approach to the Theory of Policymaking: The Role of Guidance Mechanisms in Policy Formulation. *Journal of Theoretical Politics*, 2(1): 59-83.

dream as the 'political environment is unlikely to be a severe constraint'⁹. However, in practice, there are a number of problems:

- the 'capture' of policy problems by small groups of stakeholders and difficulties in identifying wider attitudes in policy-making
- negative reactions from individuals or existing groups that may be difficult to predict until the policy is put in place
- lack of momentum or non-response so that policy efforts fall flat and are difficult to implement

In this context, good policy-making or what has been described as 'politically rational' decision-making is defined by the ability of balancing the twin requirements for:

- openness (making it possible for different perspectives, value judgments and interpretations of evidence to be articulated and considered), and
- closure (producing a resolution that incorporates a good part of this diversity)¹⁰

However, when it comes to policy-making involving scientific evidence and the governance of scientific research, there is a strong tendency to treat this domain as a special case exempt from normal considerations of what makes good practice. For example, in debate around a recent piece by Brian Cox and Robin Ince, it has been suggested that policy makers must not elevate mere 'opinion' over listening to scientific experts who are in the best position to produce and test the evidence relevant for complex issues¹¹. In this view, the legitimacy of policy decisions is determined only by the legitimacy of scientific evidence on which they are based. However, this only seems plausible insofar as we take the public meaning of these complex issues to be already given and if we take these scientific experts to be speaking in one consensual voice¹². Research on science-based controversies over 30 years has shown that:

- scientific experts might disagree with good reason and some of these disagreements relate to questions of what the evidence means or what counts as evidence
- in trying to deal with these disagreements, we may need forms of institutional resolution to controversy over evidence (e.g. how much certainty is required to take action on environmental hazard? Can we create institutions, such as boundary-mediating organisations, or procedures, such as the 'precautionary principle', which might credibly bring closure to controversy?)¹³
- disagreements may be immune to resolution without more open debate on underlying value judgments and differences in framing what the policy issue is about¹⁴

Where policy problems are 'ill-structured' or 'wicked', a lack of consensus on fundamental judgments of fact or value and particular policy solutions may be seen to exacerbate rather than ameliorate the situation of concern. Here, there is an important case for public input into the process of problem structuring¹⁵. Equally, in complex, unpredictable and interconnected domains, conflicts over problem structuring may not always be evident. However, policy makers may need to stimulate public interest in the articulation of new perspectives, not least because public authorities may have little control over how things turn out¹⁶.

But all this still leaves us with the question of who or what is the public, which the next section addresses.

⁹ May, P.J. (1991). Reconsidering Policy Design: Policies and Publics. *Journal of Public Policy*, 11(2): 187-206, p. 198.

¹⁰ Diesing, P. (1962). *Reason in Society: five types of decisions and their social conditions*. Urbana: University of Illinois Press.

¹¹ Cox, B. and Ince, R. (18 December 2012). *New Statesman*. Available: www.newstatesman.com/sci-tech/sci-tech/2012/12/brian-cox-and-robin-ince-politicians-must-not-elevate-mere-opinion-over-sc (19 January 2013).

¹² Collingridge, D. and Reeve C. (1986). *Science speaks to power: the role of experts in policy making*. London: Pinter.

¹³ Jasanoff, S. (2012). *Science and Public Reason*. Abingdon: Routledge. On boundary organisations, see Guston, D. (2000). *Between Politics and Science: assuring the integrity and productivity of research*. Cambridge, UK: Cambridge University Press.

¹⁴ Wynne, B. (2010). When doubt becomes a weapon. *Nature*, 466(7305): 441-442.

¹⁵ Hisschemöller, M. and Hoppe, R. (1995). Coping with intractable controversies: The case for problem structuring in policy design and analysis. *Knowledge Technology and Policy*, 8(4): 40-60.

¹⁶ Andersson, E., Burali, S. and Fennell, E. (2010). *Talking For A Change: A distributed dialogue approach to complex issues*. London: Involve.

3 Who or what is the public?

In asking how we should understand the public, it is useful to distinguish between questions of 'what is the public?' (assuming a static, ready-made public to be discovered and represented) and 'who are the public?' (assuming a dynamic, self-defining and active public whose positions are formed through a process of engagement with others)¹⁷. From a static perspective, the public have specific views or forms of behaviour that can be accurately captured by research. Policy makers likewise present this public with a fixed policy future or, sometimes, a range of options that are predefined. From a dynamic perspective, the public cannot be known in advance of a process of interaction and engagement. The public is formed and capable of reforming through social interaction, rather than assumed to have fixed views and aspirations.

Sometimes, members of the public come together or mobilise as a dynamic collective in 'the public interest'. In this view, the public voice may be mediated (become visible) in specific ways (through people speaking or claiming to speak on behalf of a collective), but this is always open to being amended, rejected or reinforced (people standing up to say they do or do not share the view ascribed to them)¹⁸.

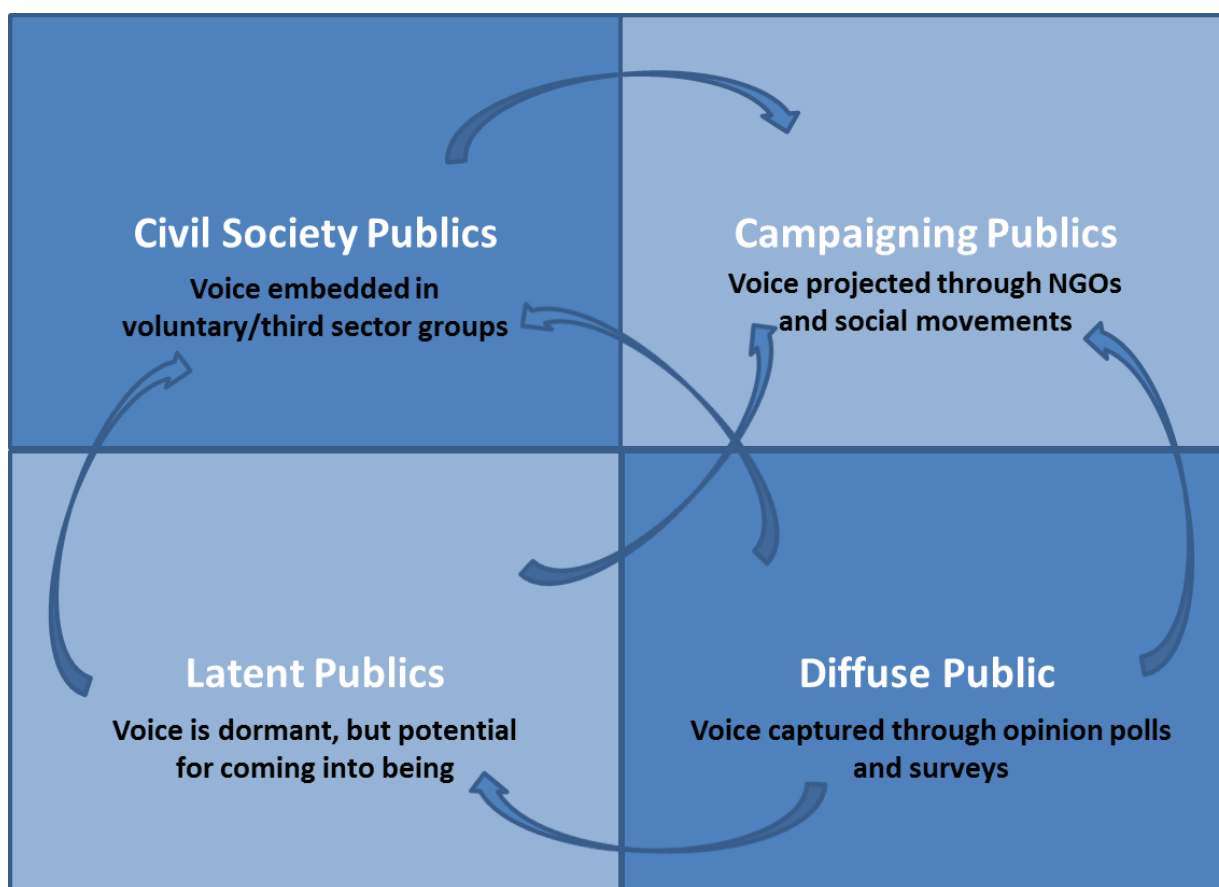
Thus, the public can be imagined and may come together in different ways as shown in Figure 1.

As is explained below, the notion of multiple 'publics' is more productive for public engagement and dialogue than a singular notion of 'the public'. However, our knowledge of how publics exist or mobilise in practice is always provisional because our expectations are likely to be challenged or open to surprise. Publics do not always behave the way they are expected to, and democratic life and policy-making rest on keeping political processes open to the unexpected inputs of this sort (e.g. those thought to be 'unengaged' expressing various 'engaged' views). This fluidity is represented by the arrows showing how members of the public may be thought to belong in one category, but may be part of another (because prior expectations of who they are have been challenged or because they have themselves changed over time).

¹⁷ Wickson, F., Delgado, A. and Kjølberg, K.L. (2010). Who or what is 'the public'? *Nature Nanotechnology* 5: 757-758; Mahony, N. and Clarke, J. (February 2012). Public crises, public futures. Available: www.opendemocracy.net/nick-mahony-john-clarke/public-crises-public-futures (3 March 2013).

¹⁸ This discussion draws from Barnett, C. (2008). 'Convening publics: the parasitical spaces of public action' in Cox, K., Low, M. and Robins, J. (ed.). *The SAGE Handbook of Political Geography*. London: Sage Publications, 403-417; and Mahony, N. and Clarke, J. (February 2012), see footnote 17.

Figure 1: Who are the public?



The following sections describe these different ways of thinking about the public, specifically in terms of the implications for public dialogue.

3.1 Diffuse public

Dialogue can be thought of as producing evidence of public opinions on specific fields of science and technology (whether these are about the social meaning of technologies or the value of specific forms of evidence or just attitudes to various technological prospects). In these cases, it seems clear that confronted with a diffuse population who obviously cannot all be brought together for a dialogue, some proxy methods are required to capture the public voice. Unless it is believed that the population is homogeneous (i.e. everyone has the same view in which case it doesn't matter who exactly is consulted), which is unlikely, then a way of selecting people is needed. In some cases, where public dialogues are open events as in the GM Nation? public debate, people are essentially self-selected. So, we also need to understand what to make of the self-selected public that come together in this fashion.

From a statistical perspective, self-selection is problematic as it distorts the meaning of public opinion, tilting it towards those perspectives that are over-represented in the sample. From this perspective, only a random sample of the population, corrected for known biases in the sampling process, can capture the full range of opinions and avoid the problem of relying on people with an interest/stake in the matter to volunteer their views. Self-selected groups claiming to speak on behalf of the public are viewed with suspicion – questions might be raised about how representative they are of the public at large, how can they claim to know other people's views, which might differ from theirs, and so on.

For example, the GM Nation? public debate was criticised as having been 'captured' by select members of the public who were critical of the technology. The point was made that these people were disproportionately represented at the public meetings. Therefore, the picture that emerged of public attitudes was considered unrepresentative of the population as a whole (two national surveys

conducted by MORI on behalf of the official evaluators had shown that the majority were less critical and 'hard-line' on the matter with relatively little prior engagement or knowledge of the matter¹⁹).

However, there are a number of problems with this assessment.

- It assumes that 'true' public opinion refers only to a picture of the majority view. In the case of public dialogue around science and technology, this has been equated with a category of people who were considered neutral by virtue of not having any prior or particular interest in the subject. Yet, in practice, the public is already segmented and mediated in various ways through commercial activity and Government action²⁰. For example, the commercial sector may target 'ethical' consumers to expand sustainable product markets while governments may seek to improve general public health standards by altering the behavioural patterns of certain members of the public through the passing of legislation (such as the UK Health Act 2006 that bans smokers from smoking in almost all public places). In opinion polls, demographic diversity in a statistical sample is also usually translated into reporting of majority opinion, so different views are aggregated to present a singular picture of the public view. Therefore, diversity is narrowed or lost in the process.
- Given the history of efforts to educate the public about science, it is ironic that lack of knowledge was seen as a key criterion of whether the public view was being represented²¹. The point here is not to suggest that lack of knowledge should disqualify people, but that these judgments of the quality and level of engagement tend to be assumed and taken as fixed, *per se* criteria, rather than aspects which are themselves subject to debate.
- There is a fundamental problem with the assumption that public dialogue is the same as doing research on public opinion²². There is a view that public dialogue needs to be based on high-quality, rigorous methods for its outputs to be considered credible and to make a difference to policy²³. Clearly, quality and rigour are very important, but it is equally crucial to ensure that these are not weakened by making dialogue to be something it is not. Representative sampling of public opinion can be done by established survey methods that have proved their value in the case of electoral polls (notably in the recent re-election of President Obama). However, these methods have known weaknesses when it comes to engaging (rather than studying) the public on 'wicked problems' where knowledge is still emerging and often contested, future impacts are uncertain, and multiple values and meanings of the central issue are still in play. Matters relating to new domains of scientific research and technology often fall into this category, and require more interactive discussion.

3.2 The nature of public dialogue and the shift to 'publics'

3.2.1 Interaction

In the context of dialogue, the public are called to participate in an activity where views and preferences are subject to deliberation – a process that is conducted 'in public' and is about matters of shared or 'public interest'²⁴. This is quite different from the way in which members of the public express preferences in the marketplace as consumers. The equation of public dialogue with a process of eliciting private opinions has, therefore, been criticised for framing what is essentially market research with a public-deliberative activity. From a Sciencewise perspective, open policy-making, as set out in the Civil Service Reform Plan, should involve sharing and co-designing policy with the public, rather than simply surveying public attitudes. However, the distinction is not meant to be a rigid one²⁵. Indeed, at certain points in time, new insights emerging from such a survey may well be valuable for policy makers who had not encountered them before. Rather, the broader point here is

¹⁹ Horlick-Jones, T., Walls, J., Rowe, G. et al. (2007). *The GM Debate: Risk, politics and public engagement*. Abingdon, UK. Routledge.

²⁰ For example, see Barnett, C. and Mahony, N. (2011). *Segmenting Publics*. (National Co-ordinating Centre for Public Engagement, Bristol) on the segmenting of publics in social marketing by government agencies.

²¹ Reynolds, L. and Szerszynski, B. (2006), Lezaun, J. and Soneryd, L. (2007), for both see footnote 4; Irwin, A. (2006). The Politics of Talk: coming to terms with the 'new' scientific governance. *Social Studies of Science*, 36(2): 299-320.

²² Mohr, A. and Raman, S. (2012). Representing the Public in Public Engagement: The case of the 2008 UK stem cell dialogue. *PLOS Biology*, 10(11): e1001418.

²³ A strong view expressed in our stakeholder workshop on 28 January 2013.

²⁴ Barnett, C. (2008), see footnote 18.

²⁵ Jackson, R. (15 January 2013). *Open policymaking and public dialogue*. A blog post by Roland Jackson, Executive Chair of Sciencewise. Available: www.sciencewise-erc.org.uk/blog/?p=826 (11 February 2013).

that opinion surveys should not be taken to stand in for ‘the public view’ (usually a majority view), especially on complex issues where actively engaging with different formations of the public is important.

Interaction between different perspectives is central to the philosophy of public dialogue.

3.2.2 Diversity

How is representativeness understood in the context of dialogue? The attraction of representative sampling is that, in theory, it can capture a diversity of perspectives, not all of which have been heard in a policy debate to date. But, since this is usually translated into a majority view, diversity of perspective is, in fact, lost in practice.

By contrast, when it comes to science and technology issues that are perceived to be remote from everyday life, dialogues can capture a greater diversity of perspectives than can be found from large-scale surveys. Diversity has to be actively sought out by dialogue organisers. Therefore, in principle, people from different backgrounds could be brought together so long as they are given – or claim for themselves – a stake in the policy process²⁶. Diversity also relates to dialogue as a mode of public engagement – surveys may turn up a more homogeneous picture of a diffuse public if survey respondents find it difficult to engage with a topic they have not thought much about. By contrast, since public dialogues are designed to stimulate a process of engaging with relevant perspectives, rather than simply discovering opinions, there is the potential to produce diverse positions and new insights in the course of discussion²⁷.

Diversity of perspectives is a second important principle of public dialogue, but it is an outcome of the process of dialogue rather than something that pre-exists it.

3.2.3 Inclusivity

Finally, in bringing people together in dialogue, we need to recognise the likelihood that higher-status people with better resources (e.g. social, linguistic, educational and monetary) end up dominating the discussion. So, in addition to producing interaction between diverse perspectives, public dialogue is also expected to be sensitive to the need for actively facilitating the inclusion of different views and the participation of different people present²⁸. These need to be addressed by the quality and rigour of dialogue facilitation, summing and reporting – and, importantly, to be supported by policy-making sponsors of dialogue.

Inclusivity is a third key principle of public dialogue, though it needs to be achieved throughout the dialogue including inputs into and outputs from the process.

3.2.4 Publics

This report has stated that the idea of a diffuse, general public with fixed, pre-given views and preferences is inadequate for good policy-making in democratic societies, and where issues are complex and still emerging. So, how then should the public be thought of?

The term ‘publics’ has become more prominent in scholarly work in recent years for the following reasons.

- It helps draw attention to plurality and differences in the context of apparently straightforward majority perspectives on ‘public opinion’. The different groups that came together in GM Nation?, for example, cannot be dismissed as unrepresentative of the public because majority opinion by itself is inadequate to sustain the legitimacy of policy-making. Legitimacy is shaped

²⁶ Andersson, E., McLean, S., Parlak, M. and Melvin, G. (2013). *From Fairy Tale to Reality: dispelling the myths around citizen engagement*. London: Involve.

²⁷ On public engagement as a process for articulating diverse positions, see Brown, M.B. (2004). The Political Philosophy of Science Policy - Essay Review of Science, Truth, and Democracy by Philip Kitcher, in *Minerva: A Review of Science, Learning and Policy* 42(1): 77-95; Burgess, J. and Chilvers, J. (2006). Upping the ante: A conceptual framework for designing and evaluating participatory technology assessments. *Science and Public Policy*, 33(10): 713-728.

²⁸ The threat to inclusivity from the domination of particular views and exclusion of others has been a key criticism of deliberative models of engagement put forward by different theorists of democracy, notably, Young, I.M. (2000). *Inclusion and Democracy*. Oxford, UK: Oxford University Press.

also by substantive arguments about the content of policy, assessments by experts, and how dissenting or minority views (of publics or experts) are handled in the policymaking process.

- The term ‘publics’ helps make the point that when the public is mentioned in democratic discourse, it is not just referring to a collection of individuals, each with their own preferences and views. Rather, the appeal to the public highlights issues of collective or shared interest around which people may sometimes mobilise to articulate a common perspective.

The idea of publics fixes our attention on the space of ‘civil society’, which may be permeated by market forces or Government (which seek to influence public views and behaviour), but cannot be reduced to either market or the state. However, the shape and form of civil society is likely to look very different depending on the nature and type of public issue that dialogue organisers intend to pursue. Some civil society actors may already be relatively well organised with a clear voice staked out on the issue at hand (campaigning publics). Others may be likewise organised as registered charities, community groups or exist mainly as an Internet-based collective, but not specifically engaged with this particular issue (for purposes of this report, the term ‘civil society publics’ is used for such groups). Still others may not be part of such organised collectives, so might tend to be seen as atomised individuals in a diffuse public. However, they could be brought together or mobilised into specific activities by other civil society actors or, indeed, by organisers of public dialogues (latent publics). Each of these publics might play a role in public engagement for open policy-making, but in somewhat different ways as explained below.

3.3 Campaigning publics

In mass democratic societies, people have always come together (mobilised) to form social movements, community groups or membership charities (e.g., non-governmental organisations (NGOs) such as Friends of the Earth, Greenpeace, Soil Association) to articulate community rights, raise wider public awareness of specific issues of collective interest and put pressure on governments. Policy makers and various other stakeholders have, likewise, mobilised public opinion to marshal support, articulate specific positions, and produce political settlements in complex and contested domains. In this respect:

‘Publics are entities that must be summoned, mediated, assembled and performed; entities that require resources, infrastructure and platforms to be developed and sustained; and, entities that are heterogeneous and always in a process of becoming’²⁹.

Acknowledging and maintaining this tension between collective mobilisation around ‘the public’ and ‘the public interest’, and the diversity of publics and public perspectives is central to the vitality of democratic life³⁰. The key point here is that public opinion is not fixed – it is formed and reformed through a process of engagement with various perspectives. Public dialogue is a legitimate part of this landscape of formation of publics.

Campaigning publics, in the form of the larger NGOs, tend to mobilise around specific issues that they investigate. They produce knowledge and aim to raise visibility of these issues and articulate a version of the public interest. In this respect, their work is less about simply representing their members’ views (depending on how closely members are involved in the organisation’s activities) and more about actively setting out positions that seek to reflect a wider ‘public interest’³¹. They may be described as experts in the sense that they have in-depth knowledge of the issue, though this knowledge and their policy positions may differ from or challenge those of other experts or policy makers³². At any given time, it may also be that particular NGOs have established a place in the policy-making apparatus – they have become stakeholders who are recognised by policy makers as knowledgeable and with particular perspectives to articulate.

²⁹ Mahony, N. ‘Creating Publics’ project website, Nick Mahony, The Open University. Available: www.open.ac.uk/ccig/about/projects/creating-publics (18 January 2013).

³⁰ Barnett, C. (2008), see footnote 18.

³¹ Interview with public dialogue stakeholder, 26 February 2013.

³² Evans, R. and Plows, A. (2007). Listening Without Prejudice? Re-discovering the value of the disinterested citizen. *Social Studies of Science*, 37(6): 827-853.

When dialogue is conducted around specific technologies, it will be important that these include some representation of NGO perspectives alongside others such as scientists engaged in research or research councils. Typically, this might take the form of ‘stakeholder’ dialogue rather than public dialogue where stakeholders are those who have already visibly established a stake in the issue at hand (this is not the same as assuming others have no stake in the issue, merely that stakes have not been recognised or articulated as such). However, NGO voices ought to also have a place in ‘public’ dialogues via expert presentations or stimulus materials prepared for discussion.

Some NGOs may prefer to remain outside of stakeholder dialogues or the policy-making process altogether as they feel better able to campaign and stake out their positions outside these organised domains. It is also important to recognise that not all campaigning formations have the resources and visibility of large, well-known NGOs at any given time. Some may be smaller campaign groups working at the community level around local issues such as the siting of nuclear waste facilities or wind farms, and articulating their right to be heard on policy and planning decisions. Even when these publics become visible, public authorities may simply assume or take for granted the motivations for their campaigns. Yet, research on public attitudes towards a variety of technologies has shown that such campaigns often reveal fundamentally different ways of framing the issues at stake that have never been made explicit³³.

3.4 Civil society publics

Like campaign groups (though not more fluid social movements), civil society publics are also collectives with a level of organisation that makes them visible to policy makers and others. Like NGOs, they may be registered charities or voluntary groups operating in the public interest (e.g. the Women’s Institute) or looser informal or virtual entities, but still with a distinctive face (e.g. Mumsnet). In British policy-making, there is a long history of policy makers seeking to co-opt and engage with various ‘third sector’ groups (voluntary and community organisations (VCOs)) for the delivery of public services, though this has proved to be problematic where the state has remained in control and where VCOs have struggled to fulfill different objectives without adequate support³⁴. However, as social policy scholars point out, VCOs (much like ‘the public’) cannot be taken to represent a homogeneous group with similar objectives³⁵.

For purposes of public dialogue, VCOs differ from other campaign groups in terms of the position they occupy in relation to the policy issue at stake. As they have not yet engaged with the issue, they may be seen to have a neutral perspective, which is valuable for dialogue (insofar as engaging with this could throw up fresh insights). Since they have an existing organisation and member base, they may be able to help stimulate greater awareness and engagement with their members (e.g. on complex matters, such as climate change, that cannot be addressed by public authorities alone and require public mobilisation to explore embedded social norms and expectations of energy use)³⁶. Equally, they may have their own standpoints on the issue at stake with which policy makers need to engage.

3.5 Latent publics

Public dialogue is especially oriented towards including or giving voice to people who seem to be unengaged, or who perceive themselves to be unaffected by concrete science and technological developments. Such latent publics are generally valued by dialogue organisers for not having pre-existing or established views on a particular issue. These publics are latent in the sense that at any point in time, they may be part of the diffuse public captured through opinion polls (perhaps to reveal and confirm their lack of affiliation, engagement or interest). But they may also come to be mobilised by campaign groups, VCOs or, indeed, public dialogue organisers and policy makers (the civil society publics in The Department of Energy and Climate Change’s (DECC) Low Carbon Communities Challenge were successful in reaching out to the latent publics of young teenagers and local residents

³³ For example, on resistance to large-scale renewable energy applications, see Walker, G. and Cass, N. (2007). Carbon reduction, ‘the public’ and renewable energy: engaging with socio-technical configurations. *Area*, 39(4): 458-469.

³⁴ Carmel, E. and Harlock, J. (2008). Instituting the ‘third sector’ as a governable terrain: partnership, procurement and performance in the UK. *Policy & Politics*, 36(2): 155-171(17).

³⁵ Harris, M., Halfpenny, P. and Rochester, C. (2003). A social policy role for faith-based organisations? Lessons from the UK Jewish voluntary sector. *Journal of Social Policy*, 32(1): 93-112.

³⁶ On the issue of energy futures and demand, see the work of the new RCUK-funded DEMAND centre, www.demand.ac.uk/.

who had previously resisted engagement on community issues)³⁷. Some may be significantly affected by policy developments, but have not been able to mobilise around it with the result that they become disenfranchised or effectively excluded from policy debates conducted so far. Some may find it difficult to articulate their positions when faced with the practiced and established voices of organised publics (engaged in campaigning or other civil society organisations). For example, in the GM Nation? public debate, some participants were curious to learn about the potential health benefits they thought the technology might bring, but did not feel this was adequately explored in the face of oppositional voices³⁸. So, from a public dialogue perspective, latent publics are especially important to engage with.

However, it is not always possible for dialogue organisers to know in advance if people have taken part in campaign activity, if they actually hold strong positions or articulate their own identity in ways that might differ from the roles they are expected to perform. Recent studies on public participation show that policy makers are often not prepared for some participants in dialogue to have strong self-identities and to be politically articulate. Policy makers may seek to exclude or discount such voices as they are not considered to be sufficiently neutral and, therefore, not a 'legitimate' voice in public engagement³⁹. However, this is problematic as it is based on a limited view of 'the public'.

So, the search for people not known to be previously engaged with the topic is important for bringing in silent or unheard voices into a policy debate. But it cannot be assumed that these 'invisible' voices will or should be neutral or politically inarticulate.. The difference between campaigning, civil society and latent (or currently unengaged) publics is not a rigid one – and nor should it be expected to be established firmly so that dialogue can focus on the latter to the exclusion of the former. Not being an organised stakeholder is not the same as having no stake in the matter.

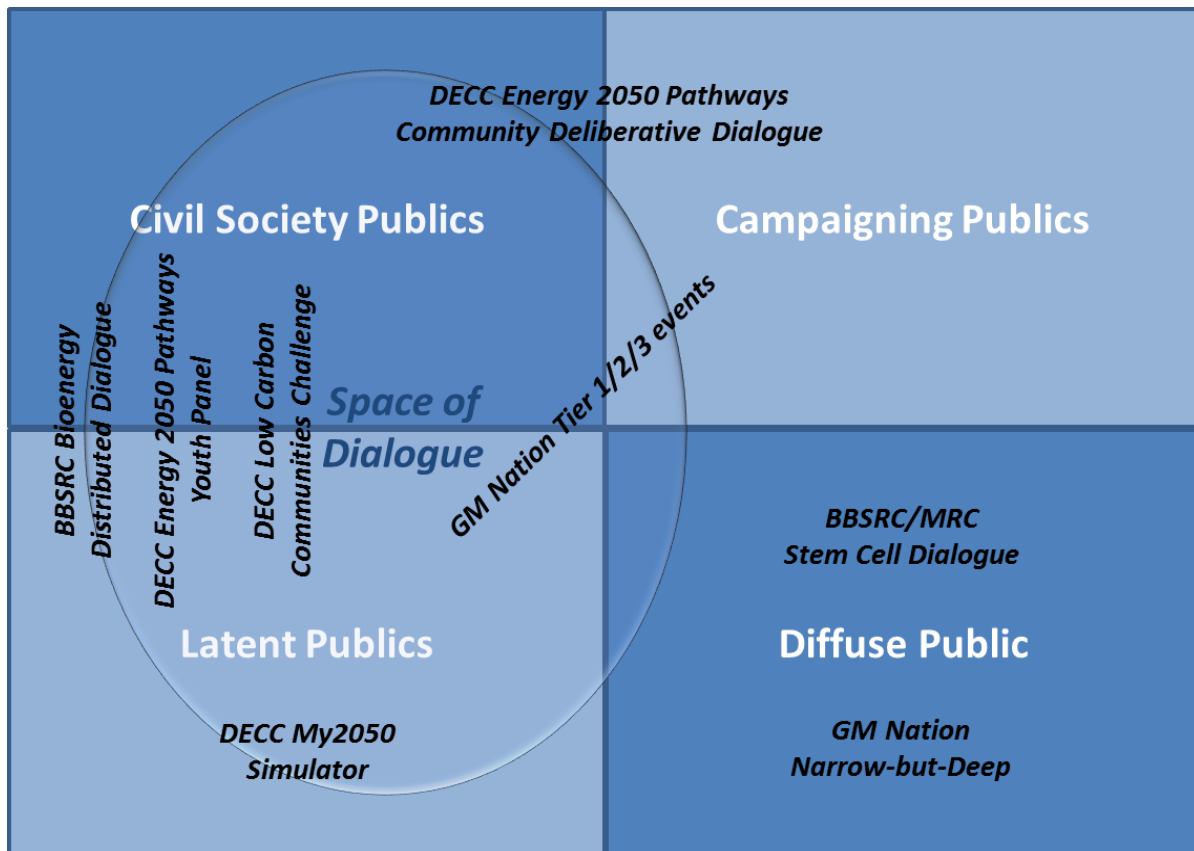
Figure 2 shows the relationship between different notions of the public to the space of public dialogue activities as it has evolved in the UK over the past 10 years. The small sample shown suggests that dialogue organisers have shifted from structuring dialogue as a way of capturing public opinion from a representative sample of the population (e.g. part of the GM Nation? debate; the Stem Cell Dialogue) to more recent experimental, multi-activity events (e.g. a number of activities related to low carbon energy futures). This may be a response to policy makers needing to reach broader public audiences. It also shows an interest in engaging latent and civil society publics who have not yet carved out a stake or a voice on particular issues. Rather than looking for 'neutral' voices, it appears that this activity is about actively mobilising publics to engage with a complex issue such as climate change. Campaigning publics also have a role to play here as they have articulated knowledge and new experimental practices in response to concerns around climate change.

³⁷ DECC (2012). Evaluation of the process and outputs of the Low Carbon Communities Challenge (LCCC). Available: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48459/5790-opm-evaluation-of-the-process-and-outputs-of-the-l.pdf (12 March 2013).

³⁸ Observation of one of the authors who attended numerous Tier 1-3 events.

³⁹ Barnes, M., J. Newman, A. Knops & H. Sullivan (2003). 'Constituting 'the public' in public participation initiatives' *Public Administration*, 81 (2): 275-295.

Figure 2: The publics in public dialogue



4 When should public dialogue take place? The role of dialogue in good governance

How does thinking of multiple, dynamic publics (rather than a static, representative public) help to make sense of the relationship of public dialogue to good governance and the science/technology innovation cycle? What does this relationship reveal about 'when' to do dialogue?

The 'when' question has been usually framed in terms of a need to engage publics before a technology becomes locked in and its impacts established. 'Upstream' engagement has been embraced as a way to get a productive dialogue going before positions become hardened and to develop policies on the back of this exercise. Yet, in practice, even at this upstream stage, recent experience suggests that:

- policy commitments may have already been put in place
- some public responses have, in turn, become established (though this should not be seen as a problem as the goal of dialogue is to engage across different perspectives rather than to change public reaction)
- dialogue is still framed too narrowly on the technology itself rather than on the broader innovation system about which critical questions are asked.

Rather than thinking of dialogue as a one-off input into making a discrete policy decision around science and technology, the notion of good governance as a process open to improvement over time lends itself to other ways of understanding the role of public inputs. In the former model, a representative sample of public opinion is needed to gain legitimacy for the decision in question. In the latter, specific policy decisions may be taken in the normal way, but the settlements achieved by

'policy-making as usual' are subject to transformation by multiple publics that come together at any time. Importantly, these publics may help build legitimacy for some political decisions (though these may not always be the decisions favoured by public authorities) as well as challenge the legitimacy of others.

To consider the relationship between publics and a notion of policy-making as a process over time, the following is a review of the implications of a selected number of prominent public dialogue events from the past decade.

The 2003 GM Nation? public debate (see case study in the Appendix) included a number of 'narrow-but-deep' focus groups with (apparently latent) participants selected for their lack of prior interest or engagement with the GM issue. Therefore, a conception of a 'diffuse public' was built into the process. This was to balance the picture emerging at the time of campaigning publics who dominated the nationwide open meetings. In theory, such a framework could open up the range of public inputs to include those which were marginalised by these oppositional voices. Yet, in practice, this exercise did not produce the purely 'disinterested citizen' voice that was imagined by the sponsors. Instead, the organisers noted a rather unexpected outcome – the more that people engage in the issues, the harder their attitudes and more intense their concerns become⁴⁰. Thus, the ostensibly neutral public were transformed via their engagement to become engaged, interested and mobilised publics⁴¹.

Viewed through the lens of open policy-making with multiple publics, GM Nation? had significant political (and democratic) value. It stimulated a wide range of inputs that successfully challenged the narrow framing of the policy problem around the benefits and risks of commercialising GM crops. It also opened up the debate to take into account broader social and political questions about the underlying commitments of science and industry, as well as the Government's stance, that still have political resonance today. The publics engaged in the debate seemed to imagine their own role as not just providers of 'public opinion', but rather as politically and socially engaged actors in their own right raising new questions and providing valid inputs into the process of policy-making around GM crops.

By contrast, the 2008 Stem Cell Dialogue (see Appendix) helped build legitimacy for the Government's policy decisions as the exercise revealed high levels of support for stem-cell research among participants in a series of 15 nationwide focus groups. As in the GM Nation? narrow-but-deep exercise, a representative sample screened for their prior views on the topic were brought together as a 'diffuse public' to reflect on issues presented by scientific and social science experts (but not any organised publics of the kind discussed in this report). In this case, since stakeholders (including campaigning publics opposed to stem-cell research) were consulted separately from public participants, there was little opportunity for different public voices to interact with each other. Unlike the GM Nation? case, public dialogue did not reveal or produce oppositional voices, a result that may have been helpful from the standpoint of public authorities and research councils funding new areas of research. However, from the lens of open policy-making, more space could have been created for critical voices or those aiming to reframe the terms of the public debate and raise new questions about innovation policy⁴². This could help 'open up' policy options on emerging technologies rather than 'close them down' before different options have been fully articulated and made visible⁴³.

GM Nation? and the Stem Cell Dialogue were conducted as one-off exercises in seeking public inputs for policy decisions. By contrast, recent public engagement activities around energy futures appear to be informed by a more process-based notion of policy-making and policy action where public authorities need to be responsive over time and publics need to engage actively for energy systems to be transformed. In this context, the My2050 online simulator developed by DECC allows different

⁴⁰ GM Nation Public Debate Steering Board (2003). GM Nation? The findings of a public debate. London: GM Nation Public Debate Steering Board, p. 51.

⁴¹ Reynolds, L. and Szerszynski, B. (2006), see footnote 4.

⁴² A recent report on emerging biotechnologies from the Nuffield Council on Bioethics highlights the significance of some of these issues.

⁴³ Stirling, A. (2008). 'Opening Up' and 'Closing Down' Power, Participation, and Pluralism in the Social Appraisal of Technology. *Science, Technology & Human Values*, 33(2): 262-294.

members of the public to submit their own visions of future pathways for low-carbon energy transition. However, this is not a dialogic exercise as it does not allow for reflection and interaction between different visions. Therefore, the broader Energy 2050 pathways programme (see Appendix) included a series of deliberative workshops with community leaders who were conceptualised as civil society publics with a significant stake in mobilising latent and diffuse publics to act on climate change.

In practice, the potential of these activities to contribute to different ways of imagining alternative energy futures seems to be hampered by embedded notions of public engagement. These notions see it as a process for eliciting fixed public opinions (for which representative samples are the obvious route) on ways of meeting a given policy target (80% reduction in carbon emissions by 2050 as calculated by the existing procedures). In reality, even community leaders with a professional stake on the issue might depart from this policy consensus by raising questions such as ‘do you want me to portray the future of the UK energy system how I see it or do you want me to portray how to achieve this artificial 80% thing that I don’t believe in?’⁴⁴. So, while My2050 differed from its more technical predecessor, the DECC 2050 Calculator, by allowing users to imagine their own pathways, it too set some fixed parameters that effectively excluded some publics. A more diverse framework with multiple publics might allow visions of fundamentally altering current energy infrastructures and their associated ways of living, and the predominant vision of simply adjusting technology mixes to meet presently established norms of energy use. A truly open policy-making system would allow for engagement and interaction between publics articulating such different visions.

Important lessons can be learnt from the experience of GM Nation?, the Stem Cell Dialogue and the Energy 2050 Pathways programme. Public dialogue can yield diverse perspectives and mobilise multiple publics that are appropriate for science and technology futures. However, this diversity can be prematurely closed down if policy makers effectively exclude or discount public voices because they are not seen to be sufficiently ‘neutral’. A key lesson here is that publics and public opinion are not fixed – both are formed and reformed through the process of engagement with various perspectives. In that respect, public dialogue is a legitimate and important part of an open policy-making landscape.

This leads us on to consider the period over which dialogue should occur and what might be inferred about the nature of the relationship between multiple, dynamic publics and policy makers. This report has repeatedly noted the importance of an evolving policy process, one that itself seeks to be improved as it encounters and accommodates public views. How effectively can this institutional learning occur in one-off dialogues? What might be the benefits of conceptualising dialogue as an ongoing process? The Biotechnology and Biological Sciences Research Council (BBSRC) Bioenergy Dialogue⁴⁵, currently in progress, tackles some of these challenges and is (initially over the space of a year) championing a distributed dialogue approach⁴⁶. This is an experimental process, but multiple potential benefits have been identified including deeper personal reflection among participating scientists through recurring exposure to different public views and groups, and a broad conversation with different people that evolves over time and that can be responsive to a changing social or legislative (for example) environment⁴⁷.

Regardless of what this retrospective analysis reveals about when the use of multiple, dynamic publics can be seen to be legitimate, questions of ‘why do dialogue’ and ‘what counts as robust evidence’ persist. Here, it is important to remember that policy-making is inherently messy and public input is just one input among many (although a very important one). Therefore, it is misleading to suggest that a clear, unified public voice is somehow needed to prevent policy paralysis because public dialogue does not, and has never, directed policy in that instrumental way, but rather indicates how it might be sensitive to the different perspectives that inevitably emerge in a democratic society. These perspectives and the publics who articulate them are subject to change over time as they interact with each other and encounter new knowledge and ways of framing the issues at stake.

⁴⁴ Interview with public dialogue stakeholder, 28 February 2013.

⁴⁵ For further details, see: Biotechnology and Biological Sciences Research Council, Bioenergy Public Dialogue. Available: www.bbsrc.ac.uk/society/dialogue/activities/bioenergy-dialogue/bioenergy-dialogue-index.aspx (2 February 2013).

⁴⁶ Andersson, E., Burall, S. and E. Fennell, E. (2010), see footnote 16.

⁴⁷ Interview with public dialogue stakeholder, 1 March 2013.

5 Conclusion

The Civil Service commitment to open policy-making includes acknowledgement of a need to harness public dialogue so that the policy process, from the definition of problems to policy implementation, might be shared and co-designed with the public. Yet, as has been noted, our knowledge of how publics exist or mobilise in practice is always provisional. Deciding 'which publics' to engage is not something public authorities can fully control. Opinion surveys can yield new insights, but cannot be taken to represent 'the public view' on complex issues of the kind that are encountered in policy-making around science and technology. Public dialogue can thrive in this uncertain space as the philosophy of dialogue recognises the dynamic nature of a process in which views and preferences of policy makers and participants are subject to interaction.

Dialogue is also about encouraging diverse perspectives in an inclusive process seeking to draw out less confident voices as well as listen to those that are more politically articulate than expected. In this context, dialogue might be seen as operating in a space where publics that have yet to materialise or articulate a stake around a particular issue are brought together. Included in this space are 'latent' publics as well as civil society publics that are more organised, but not around the matter at hand. Established campaigning publics may be brought into this space as (counter)expert voices who provide knowledge and perspectives not considered by other experts or policy makers. But others sought out for a 'neutral' perspective might also take strong positions – or argue that the topic presented for discussion does not reflect their priorities and that it needs to be reframed. This, too, is an input into an 'open' policy-making process. The challenge for dialogue organisers is to keep dialogue open to different types of public voice – articulate and less articulate. For policy makers, the challenge is to sponsor and engage with novel experimental spaces for engaging publics in dialogue and keep policy-making open to the unexpected.

Appendix: Case studies

GM Nation? public debate (2003)

Background: In the late 1990s, GM crops met with considerable controversy in the UK – GM soya was reported to exist in a number of foodstuffs, the publication of research claiming that GM potatoes could damage rats' intestines and immune systems ('Pusztai affair'), the Prince of Wales' opposition to GM food, the Daily Mail's 'Frankenstein Foods' campaign and the de facto EU moratorium on GM crops. These events created pressure for the reform of regulatory structures around GM organisms (GMOs) in the UK. The Agriculture and Environment Biotechnology Commission (AEBEC) was established in 2000 to guide Government on its policy position. It concluded that the results of field trials would be an insufficient basis on which to make a decision on commercialisation, thus recommending a broadscale public debate.

Publics as imagined by organisers: Three tiers of public debate:

1. Six regional-level open meetings across the UK (n=>1,000)
2. Around 40 public discussion meetings, typically organised by local authorities
3. Over 630 community or 'grass-roots' meetings organised by a variety of interest groups, research organisations, churches, science centres, villagers, ad-hoc groups, etc. Control group of narrow-but-deep closed meetings comprising a representative sample of 77 citizens.

Publics that actually participated: Public meetings were open and, hence, attracted self-selecting publics, a large proportion of which were 'oppositional' campaigning publics drawn from environmental NGOs, and organised civil society publics spanning agriculture, wildlife, biodiversity, food and health.

Lessons for good governance: The presence of campaigning publics (who had a clear stake in the issue) and civil society publics (whose extended networks enabled them to mobilise broader publics including 'latent') were successful in opening up narrow framing of the debate beyond dichotomous 'for' and 'against' positions to take into account broader social and political questions about the underlying commitments of science and industry, as well as the Government's stance, by asking such questions as:

- Why was there such an apparent rush to go ahead with the commercialisation of GM crops given the uncertainties involved?
- What was driving the political process behind GM technology?
- Could the information provided by the government be relied upon, or had scientific evidence been manipulated to suit political ends⁴⁸?

⁴⁸ Observation of one of the authors who attended a range of Tier 1-3 events.

Stem Cell Dialogue (2008)

Background: The BBSRC/Medical Research Council (MRC) Stem Cell Dialogue emerged out of a recommendation of the UK Stem Cell Initiative (UKSCI) to take into account public attitudes on the ethical issues surrounding the sources and uses of embryonic stem-cell lines, the use of animal experimentation, and the benefits and risks of stem-cell therapies⁴⁹. The UKSCI's terms of reference express a mandate for stem-cell research that involves developing a 10-year vision to make the UK the most scientifically and commercially productive location for stem-cell research. The public dialogue also coincided with the Commons debate of the Human Fertilisation and Embryology Bill that provides for updated legislation on assisted reproduction and for changes to the regulation and licensing of embryo use in research and therapy.

Publics as imagined by organisers: To obtain a representative sample of the publics' views, 200 participants were recruited according to the demographic profile of the workshop locations to reflect quotas set for age, socioeconomic status and ethnicity. Attitudes about stem cells were screened to ensure the sample was broadly representative of public attitudes profiled in the results of a BMRB UK-wide omnibus survey (n=1,000), which reported high levels of approval of stem-cell research and the use of embryos in such research.

Publics that actually participated: In practice, the 'diffuse public' selected to capture representative attitudes to the prospects of embryonic stem-cell research failed to express a diversity of perspectives. Publics were carved out at the outset into 'stakeholders' and 'the public' – the former accessed through interviews, the latter through dialogue in regional workshops. In the written project report, the discussions from stakeholder interviews and the public workshops are considered separately. However, sentiments expressed across both mingle freely in the conclusions without being attached to a particular group. Therefore, this gives the impression of a fairly homogenous, collective public voice.

Lessons for good governance: Representative sampling, in theory at least, can capture a diversity of perspectives. In practice, the diverse perspectives of the 'diffuse public' were inhibited by the methodology and the officially reported consensual outcome of 'high levels of public support' for stem-cell science and technology⁵⁰. The Stem Cell Dialogue did not create conditions for substantive disagreements or counter perspectives to emerge in the dialogue process because of the quarantining of stakeholder and public perspectives. Thus, very little open disagreement of the kind one would expect from a 'representative sample' on an ethically fraught topic was observed⁵¹. The lack of alternative or more critical/sceptical perspectives of (counter) experts (e.g. advocacy/pro-life group or religious group viewpoints) limited the range of participants' discussion. The lack of wider publicity and discussion of the Stem Cell Dialogue suggests that the dialogue was not successful in mobilising broader public awareness of the issues raised by stem-cell science and technology at the time.

⁴⁹ UK Stem Cell Initiative. (2005). *UK Stem Cell Initiative: report and recommendations*. Available: www.advisorybodies.doh.gov.uk/uksci/uksci-reportnov05.pdf (4 December 2008).

⁵⁰ BBSRC (2008). Largest ever stem cell 'dialogue' provides insight into public attitudes. Available: www.bbsrc.ac.uk/news/archive/2008/081217-pr-stem-celldialogue.aspx (19 March 2012).

⁵¹ Mohr, A., Raman, S. and Elliott, R. (2009). *An independent evaluation of the BBSRC and the MRC Stem Cell Dialogue Project 2008*. Available: www.bbsrc.ac.uk/society/dialogue/activities/stem-cell-dialogue.aspx (19 March 2012).

Energy 2050 Pathways (2010-11)

Background: The 2008 Climate Change Act and the 2009 White Paper 'The Low Carbon Transition Plan' committed the UK to reduce carbon dioxide (CO₂) emissions to 20% of 1990 levels by the year 2050, and undertook to develop pathways by which the necessary changes in generation and demand might occur. To explore and test public sensitivity to the many variables, DECC developed the user-friendly My2050 pathways simulator – a digital resource that enables members of the public to develop their own pathway to a lower-carbon society, while acknowledging some of the implicit trade-offs. The implementation of My2050 was supported by a Youth Panel which ran over 8 months and a series of three Community Deliberative Dialogues with community leaders.

Publics as imagined by organisers: The Youth Panel comprised around 15, mainly self-selected, 16-25 year old representatives of key youth and environmental Civil Society organisations (CSOs). It was formed to encourage two-way interaction between DECC decision-makers and representatives of the wider youth community. In total, 86 community leaders were selected to participate in the deliberative dialogues and trial the technical 2050 Pathways calculator. The community leaders included elected representatives and local representatives from business, and NGOs selected to meet quotas set for professional and political affiliation, location, age, gender, IT literacy and concern about climate change. The dialogues were held in locations with varying levels of sensitivity to the impacts of climate change (such as exposure to flooding, level of urbanity, proximity/prevalence of low-carbon energy sources). This was to promote informed debate in these communities and investigate local attitudes towards climate change and energy challenges. My2050 was developed to engage traditionally 'unengaged' publics such as younger members of the public. The emphasis on youth in the programme was an acknowledgement that they would be the future beneficiaries of policy decisions taken now.

Publics that actually participated: DECC's own evaluation of the programme reports that members of the Youth Panel saw their responsibility more in terms of their 'individual' contribution as young thinkers to test and challenge DECC's policies, rather than as 'representatives' of wider youth communities⁵². Thus, the hoped-for engagement with broader youth communities was limited. Selected for their (assumed) knowledge of the technical 'facts' surrounding the different energy technologies represented in the 2050 Calculator, it was found that, in practice, some community leaders demonstrated different interpretations of the 'facts' by questioning the validity of certain technological options and pathways⁵³. The self-selected 'latent' publics who submitted My2050 pathways were predominantly under the age of 45 (a significant proportion was under the age of 25)⁵⁴. Thus, My2050 was successful in engaging the views of its target audience of 'unengaged' young people. To date, tens of thousands of self-selected publics have submitted pathways on My2050.

Lessons for good governance: The fact that policy makers chose a self-selecting process as well as 'representative' stakeholders points towards a recognition of the value of engaging broader public audiences (e.g. latent and civil society publics who have not yet carved out a stake or a voice on the issue). Rather than looking for exclusively 'neutral' voices, the Energy 2050 Pathways programme was about actively mobilising a range of publics to engage with a complex issue such as our collective energy future.

⁵² DECC (2011). *Evaluation and Learning from the 2050 Engagement Programme*. London: Office for Public Management, p. 25.

⁵³ Sciencewise (2012). Case Study. Energy 2050 pathways: A public dialogue with young people and community leaders. Available: www.sciencewiseerc.org.uk/cms/energy-2050-pathways-a-publicdialogue/ (26 March 2103).

⁵⁴ Ipsos MORI (2011). My2050 Simulation Analysis. Available: www.sciencewise-erc.org.uk/cms/assets/Uploads/Project-files/My2050-Simulation-report.pdf (26 February 2013). Analysis is based on 10,215 people who submitted their My2050 worlds via the My2050 Simulation website between 3-29 March 2011.