PATH
participatory approaches in science & technology

PATH Policy Brief

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REPRESENTING DIVERSITY IN PARTICIPATORY APPROACHES



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PATH was an EC Coordination Action on **'Participatory Approaches to Science and Technology'** that ran from April 2004 until December 2006, SAS6-CT-2004-510636 which was coordinated by Wendy Kenyon and Claudia Carter. The aim of the PATH project was to form a network of interested parties concerned with the involvement of society in the deliberation of science-based policy issues. The project facilitated a group of academics, practitioners, policy-makers and stakeholders to exchange knowledge and develop future directions for public participation in science and technology issues. It focused specifically on two persistent and ongoing challenges: scale and representation. These two cross-cutting themes were explored at a generic level, and also analysed via three case study areas. The case study areas of genetically modified organisms (GMOs) in agriculture, biodiversity conservation and nanotechnology were selected to represent ongoing areas of debate, areas of current policy development and upcoming issues respectively.

More information on the project, its partners, events and outputs can be found at:
http://www.macaulay.ac.uk/serp/research/path/index.html

The project produced two research-based briefs for those interested in using and further developing deliberative institutions for scientific & technological development and environmental governance:

Representing Diversity in Participatory Approaches
by O'Neill, J., C. Carter, K. Ekeli and W. Kenyon
PATH Policy Brief 1. Aberdeen, UK: Macaulay Institute. 2008.

Scales and Participation in Environmental Decision-Making
by Carter, C. and V. Castan-Broto
PATH Policy Brief 2. Aberdeen, UK: Macaulay Institute. 2008.

REPRESENTING DIVERSITY IN PARTICIPATORY APPROACHES

1. Introduction

New modes of formal public participation such as citizens panels and consensus conferences have become increasingly popular in decision-making and policy formulation. However, their use has also been the subject of criticism as ad-hoc and for a lack of legitimacy, especially when processes have been claimed to favour certain groups, issues or opinions and the recommendations perceived to contravene the status quo. Even those who generally welcome these new developments are concerned that fundamental problems of representation and legitimacy have not been sufficiently considered (e.g. Allen, 1998, Brown 2006, Parkinson, 2003).

This policy brief critically examines recent thinking and practice on the issues of representation and public participation, especially in the area of science and technology. We use the term 'deliberative panels' to refer to a range of approaches and initiatives that involve ordinary citizens in deliberating complex and far-reaching policy issues. These participatory approaches – as summarised in the Glossary (section 6) – also often involve scientific experts, academics and decision-makers. We also refer to them as 'deliberative institutions' signalling the way that these processes have become more formalised.

Approaches such as consensus conferences and planning cells were initially specifically developed for participatory technology assessment although they now have wider application. Others, such as citizens' juries began with more general applications, but have had particular use in the sphere of technology assessment. Modern scientific and technological developments provide society with great challenges: they offer important opportunities to address problems, but at the same time can introduce their own potential risks and uncertainties. The consequences of such developments may be invisible and require good science for their identification. At the same time science is fallible and developing and we may be ignorant about the long-term consequences of new developments. In addition choices about new technologies raise normative issues concerning the futures we envisage, what kinds of risks people are willing to take and what sorts of social world people want to live in. Hence, relying on expert knowledge and regulation alone to develop policy may be insufficient and inappropriate.

New technologies, such as genetically modified organisms (GMOs), have resulted in a distance between policy-makers who for reasons of economic competitiveness are often strongly in favour of such technologies and a public that is more sceptical and precautionary (see Box 1). The use of deliberative institutions that engage the public in debates about science and technology is one means that has been offered to help deal with these challenges.

The development of deliberative institutions can also be seen as a response to failings in traditional formal representative institutions such as local, national and regional parliaments. Levels of participation in formal electoral processes and degrees of trust in politicians and political parties have been declining in a number of European countries. At the same time more direct forms of participation have increased, for example through petition, protest and direct action, and engagement in local, regional and global civil society groups and NGOs. Deliberative institutions are often presented as more formal forms of engagement that address the declining participation in formal elections but still include citizens in the policy-making process.

However, both direct participation and more formal deliberative institutions have problems of representativeness at their heart. Civil society groups may not be directly accountable to those for whom they claim to speak. The power of voice can be as unequally distributed in informal civil society as in formal electoral processes. Table 1 reveals the differences in levels of participation across class, income and education in the UK in a variety of political activities from voting through to signing petitions, demonstrating or engaging in consumer boycotts.

Number of political actions	0 %	1-4 %	4+ %
All	15	52	33
Class			
Professional and managerial	8	45	47
Intermediate	14	51	36
Manual	18	58	24
Income			
Under £10,000	19	56	25
£10,000 up to £19,999	15	54	31
£20,000 up to £29,999	10	51	39
£30,000 up to £39,999	10	47	44
£40,000 up to £49,999	9	41	50
£50,000 and above	3	43	54
Education			
15 years and under	19	57	24
16-18	15	42	33
19 years and over	7	43	50

Table 1: Variation in Political Participation in the UK (Pattie et al 2004 p.86)

As Pattie et al. note 'political engagement is very much dominated by the already well-resourced; in other words, the most highly educated, the rich and those from the top occupational echelons' (Pattie et al. 2004 p.109). For example, those with a household income of over £50,000 are twice as likely to have taken five or more political actions than those with a household income of less then £10,000. The same pattern of uneven participation is to be found in civil society associations (Table 2): 'As with political engagement, much of this diverse and rich associational activity is dominated by the rich, the well-educated and those from professional and managerial backgrounds' (Pattie et al 2004 p.109). For example, those with a household income of £50,000 or more are eleven times more likely to be a member of five or more groups than a person with a household income of under £10,000. The growing shift from collective to more individualistic forms of political participation is increasing this uneven pattern of engagement. Data from the European Election Survey shows similar patterns of uneven participation are reproduced across the European Union (Cain et al. 2006, p.263).

Number of groups	0 %	1 %	2-4 %	5+ %
All	55	21	22	3
Class				
Professional and managerial	36	24	34	6
Intermediate	57	21	20	2
Manual	67	19	14	1
Income				
Under £10,000	76	15	9	1
£10,000 up to £19,999	56	22	21	1
£20,000 up to £29,999	42	27	28	1
£30,000 up to £39,999	36	28	32	3
£40,000 up to £49,999	35	20	40	5
£50,000 and above	28	16	56	11
Education				
15 years and under	65	20	22	3
16-18	56	21	21	2
19 years and over	36	21	36	7

Table 2: Variation in Group Membership in the UK (Pattie et al 2004 p.104)

Citizens' juries, consensus conferences and so on can in principle be designed to be more inclusive of different socio-economic groups and other demographic variables. However, practice varies. Moreover, even given wider inclusion, the power to speak and be heard within deliberative institutions can still be distributed unequally. Finally, many new deliberative institutions are small and open to the criticism that they are 'unrepresentative' of the populations that will be affected by decisions.

Having defined 'deliberative panels' and provided a context we will next focus on how a population can be legitimately represented in the decision-making processes and how deliberative panels perform in the light of this discussion (section 2). Section 3 considers more recent views on the legitimacy and benefits of representing populations in deliberative panels. Section 4 suggests ways that deliberative panels can improve their representation. We conclude with a summary of key points and recommendations based on the issues discussed in this policy brief (section 5).

Box 1: Deliberative panels and GM agriculture

Genetically Modified Organisms (GMOs) in agriculture is an area in which deliberative panels have been used extensively in a variety of forms and settings. One reason for their use in the European context has been the divergence between the perspectives of government who have tended for economic reasons of global competitiveness to be favourably disposed to the technological developments such as those in GM agriculture, and wider publics who have been more sceptical and precautionary in their approach (Dryzek et al., 2006). The following examples from recent deliberative panels illustrate theses differing perspectives. They also point to a number of the questions concerning representative legitimacy that such panels raise.

France: Conférence de Citoyens 1998 set up by Office Parlementaire d'Evaluation des Choix Scientifique et Technologiques which was officially in favour of GM agriculture but recognised public scepticism. The conference steering committee contained no representatives critical of GMOs. The lay panel was selected by gender, age, occupation, political background, religious affiliations and geographic spread and to include 'a variety of opinions with regard to science and more especially to biotechnology'. The final report was not opposed to GM, with only a minority endorsing a moratorium and the majority endorsing claims to potential economic benefits. However, the report included more sceptical observations about the affects of the development of GMOs for example concerning the economic independence of farmers, the absence of consumer demand and problems of irreversibility. (http://www.loka.org/pages/Frenchgenefood.htm)

Denmark: The consensus conference organised in 1999 by the Danish Board of Technology was made up of 14 lay citizens who invited a panel of 12 experts that included natural and social scientists and representatives of interest groups to present information to them. The final report was sceptical of GMOs and included concerns about the concentration of GM in monopolistic companies, the concentration of research in the private sector, the implications for developing countries of access to gene-technology patents, health impacts and the preservation of biodiversity. The report also concluded that 'ethical aspects be given the same priority as purely technical aspects in relation to applications for testing, production and marketing of genetically-modified foods.'
(http://www.tekno.dk/subpage.php3?article=512&language=uk&category=11&toppic=kategori11)

UK: The PEALS citizens' juries 2003 were organised from Newcastle University and funded by the Consumers Association, Greenpeace, Unilever and the Cooperative Group. An oversight group included representatives of the funding bodies and experts with a variety of positions on GM. This framed the issue and selected expert witnesses from a variety of different positions. The jurors were chosen by stratified random selection and met over 10 evenings. Their conclusions were strongly sceptical of GM, the government policy processes on GM and science policy, and in particular the privatisation of scientific research
(http://www.gmjury.org/).

UK: GM Nation? 2003 took place against the background of a government broadly in favour of GM and a sceptical public. Eight foundation discussion workshops of 18-20 members of the public and one foundation workshop of GM experts, both pro-GM and anti-GM framed the

questions for the subsequent debate which included: 675 open meetings in local communities where participants were issued with questionnaires; an internet site in which materials and the questionnaire were posted which was visited by over 24,000 visitors, 60% of whom completed forms; 10 focus groups involving 77 citizens which acted as 'narrow but deep' controls on the results of local community meetings. Both focus groups and workshops were chosen by age and socio-economic criteria. Participants in local meetings and those who responded on the internet were self-selecting. The results of the process showed participants to be generally sceptical of the need for GM and opposed to its commercialization in both the open meetings and focus groups, although this was more marked in the open meetings. (http://www.gmnation.org.uk/)

Source: Friends of the Earth

2. What makes representation legitimate?

On what grounds can a person or body, *A*, claim to be able to legitimately speak and act on behalf another, *B*?
There have traditionally been four main answers:

1. **Authorisation:** *A* can claim to legitimately speak and act on behalf of *B* because *A* has been authorised by *B* to do so.
2. **Accountability:** *A* can claim to legitimately speak and act on behalf of *B* because *A* is accountable to *B*.
3. **Shared identity:** *A* can claim to legitimately speak and act on behalf of *B* because *A* shares certain significant characteristics with *B*.
4. **Epistemic:** *A* can claim to legitimately speak or act on behalf of *B* in virtue of knowledge of the interests or perspectives of *B*.

The sources of representative legitimacy have been much debated by political theorists. On the standard liberal model of modern representative democracy the relationship between representative and represented is primarily legitimised through authorisation and accountability: in representative democracy representatives are **authorised by** and **accountable to** those they represent through electoral procedures. Elections act as both forward looking acts of authorising new representatives and backward looking acts for holding existing representatives to account (Pitkin, 1967; Mansbridge, 2003).

If representation is just a matter of authorisation and accountability, the identities of representative and represented do not matter as such: the representative need not share particular characteristics with the person represented. The claim that **shared identities** are also important has been central to recent calls for procedures such as quotas to ensure that bodies and processes are more representative over characteristics such as gender, ethnicity and class (Mansbridge, 1999). Quotas are justified as a means to bring marginalised and disadvantage groups into the political process. It is often argued that members of marginalised groups need people like themselves to speak for them if their interests and perspectives are to be properly heard. If this is accepted, then shared identity may be considered necessary for legitimate representation. However, it does not follow that it is sufficient. Merely sharing characteristics does not mean that representatives and represented will share their views of their interests. Moreover, given that individuals have complex sets of identities, their interests may diverge in significant ways. Hence the questions raised by Phillips (1997, p.181): “Can Asians be represented by Afro-Caribbeans, Hindus by Muslims, black women by black men? Or do these groups have nothing more in common than their joint experience of being excluded from power?”

Epistemic grounds for legitimacy appeal to knowledge claims as a basis for representative status: representatives claim to have knowledge of the interests or perspectives of those they represent. Appeals to knowledge as a ground for representative legitimacy are often associated with more elitist approaches to politics which are in tension with representation legitimated through shared identity. However, epistemic grounds for legitimacy need not necessarily be in tension with legitimation through shared identity. One reason a shared identity might matter is that it is a condition of good knowledge of the perspectives of particular groups.

Knowledge claims in modern societies are more normally invoked to legitimate the claims of experts in the policy process. Scientific expertise is indispensable to policy-making in modern societies but democratically problematic. It is indispensable to understanding problems that emerge from technological change in modern society. Many sources of controversy for example around GM crops, nuclear power or nanotechnology would not exist without scientific and technological expertise. Many of the predicaments the world faces, such as climate change and biodiversity loss would not be identifiable without scientific expertise. At the same time scientific claims are fallible and many consequences are uncertain or unknown. Appeals to expertise are democratically problematic: the asymmetries in knowledge between experts and citizens raise particular difficulties in ensuring that experts are democratically accountable. The tension between expertise and democracy is a perennial problem to which deliberative institutions are sometimes seen as a response.

3. Deliberative institutions and democratic legitimacy

Can new deliberative institutions claim representative legitimacy? Deliberative institutions can play a variety of different roles within the policy-making and political process (Box 2). Whether they are legitimate, depends on the role they are expected to fulfil.

3.1 Authorisation and accountability

A clear feature of most recent deliberative institutions is that participants are neither authorised to speak by a wider population which they might be taken to represent, nor are they accountable to them (O'Neill, 2001, 2007 ch.10). On the standard model of representative democracy they lack key sources of democratic legitimacy as decision-making bodies. However, they do not normally serve a direct decision-making role. Whilst deliberative institutions are not themselves directly accountable to any constituency they might be understood as part of a wider process of accountability for public bodies and representative institutions.

Deliberative accountability and representative legitimacy: On the standard model, in an electoral system a representative makes certain promises to a constituency and is held accountable retrospectively for their actions during a period as representative through electoral process. This sanction is enforced by exit, the withdrawal of support and authorisation of the representative by the represented. However, a more deliberative theory of democracy suggests that there is something inadequate about this model of accountability since there is no space for "voice" through which those represented can scrutinise policy in public debate. According to the deliberative account legitimate decisions require those affected are able to give 'reflective assent through participation in authentic deliberation' (Dryzek, 2001, p.651; cf. Dryzek, 2000; Smith, 2003). Whilst representation in deliberative institutions may not be representatively legitimate in terms of the traditional model of authorisation and accountability as the system of elected representatives is, the public deliberation and scrutiny they facilitate offers what might be called **deliberative accountability**. Accountability might be thought of not just a matter of retrospective sanction, but a continuing ability of citizens to question, criticise and revise the grounds on which policy is made and enacted. Deliberative institutions may therefore offer a form of deliberative accountability and belong to a wider body of processes to create a more 'conversational democracy'.

> "[T]he problem we have is, in great part, one of representation – people don't feel they are being properly represented – and that we need to move to a richer, more conversational form of representation… [D]emocracy works best when voters and representatives connect: exchanging views, accounting for themselves to each other…" (Coleman, 2005, p.1)

Deliberative accountability and scientific expertise: As we noted above, many deliberative institutions are concerned with the accountability of scientific expertise. How can science be made accountable? Scientific expertise is already accountable in a variety of different ways in different contexts by peer reviews, professional bodies and legal processes. The direct scrutiny of expert knowledge claims themselves normally requires specific expert knowledge. However, while deliberative institutions may not be the place

for the scrutiny of scientific claims themselves, deliberative accountability of science is both possible and democratically desirable (European Commission, 2001). Scientific experts bring particular institutional framings of questions to be addressed and definitions of the options available that may import hidden values prior to public deliberation. Moreover, the range and credibility of scientific testimony can be open to public scrutiny.

Deliberative accountability in this context will include at least some of the following:

- Examination of how the issue has been framed. For example the political economy of GM technology and the social and economic consequences of the increased power of large commercial enterprises are more salient in deliberative panels than they are in expert framing of the issue.
- Examination of which experts and what knowledge is appropriate. For example, in the case of GM a framing of the problem purely in terms of the health and environmental impacts calls upon a narrower range of expertise than one that is concerned with the wider social and economic implications of the introduction of GM agriculture.
- Consideration of what options are possible. Particular framings often define a particular range of options. For example, the assumption that the problems of GM can be resolved by labelling and consumer choice relies upon taking for granted a particular institutional and regulatory regime that might itself be open to challenge.
- Consideration of whose knowledge claims are credible and trustworthy. For example, in the panels on GM a question often raised is whether commercial scientific research is credible and trustworthy.

These features of deliberative accountability raise large issues themselves about representation. In particular, they bring to the fore issues not of the composition of the panels themselves but of the bodies organising the panels and the expert witnesses involved. The outcomes of deliberative panels can be affected by who is included in the framing of issues and the range of scientific experts called. The oversight group for the 1998 French Conférence de Citoyens was criticised for not including critics of GM technology and at least one consensus conference in New Hampshire in the US is open to similar criticism for the absence of any supporters of GM technology on its steering committee and among expert witnesses (Dryzek et al., 2006).

Box 2: Representation and the aims of deliberation

Deliberative panels can have a variety of different roles within the policy-making and political process (Goodin and Dryzek, 2006). These include:

Decision-making authority: Panels can be delegated decision-making authority. The British Columbian Citizen Assembly was mandated to make a recommendation on electoral reform that would be put to a referendum.

Decision-making inputs: Public authorities are sometimes required or expected to respond to the recommendations of panels. Parties in the Danish parliament are expected, although not legally required, to respond to recommendations from consensus conferences run by the Danish Board of Technology and there is evidence of their recommendations being involved in the development of policy on matters such as food irradiation and research involving genetically modified animals. Citizens' juries and planning cells are also often developed on the basis of similar expectations on policy-making bodies.

Informing and catalysing public debate: Widely publicised deliberative panels often serve to inform or catalyse participation in wider public debate. For example, exercises in deliberative polling are often televised and aim to foster wider discussion of the issues involved beyond those involved in the poll. Exercises such as GM Nation (see Box 1) were able to catalyse a wider public debate through local meetings.

Deliberative accountability: Panels can serve to keep both public authority and scientific expertise accountable for the reasons they offer for policy.

Policy testing: Deliberative panels can be used to test policy proposals. Focus groups in particular have their origins in market testing. Private focus groups can be used to forestall and close down options prior to public deliberation. However, adverse responses to policy recommendations in public panels can open up wider debate – witness for example the adverse reaction to the GM in the various panels designed to test public policy.

Policy legitimation: Deliberative panels can be employed to legitimate particular public policy options in contexts of controversy. Citizens' juries for example have had the effect of legitimating particular responses in public conflicts in the siting of health services (Parkinson, 2004).

Co-option: Deliberative panels can be exercises in controlled conversations and the nature of the deliberations can be determined by the framing of issues and the choice of constituencies. Panels in this context contrast with the more open and informal conversation that take place in wider civil society. As controlled conversations they can be a means in which opposition voices are co-opted into the policy-making process. For that reason civil society groups can sometimes be wary of engagement with them. However, it is also the case that the very deliberative nature of the panels can subvert co-option and legitimate opposition. For example, if one policy aim for some panels on GM was to seek support for policies to develop GM in a context of public scepticism, then the results have in the European context not had that affect and have effectively increased public scepticism.

The question of the representative legitimacy of deliberative panels will be more or less acute and will have different answers depending on what role those panels have. It matters more acutely for example if they have direct decision-making roles rather than serving to inform and catalyse wider public debate.

3.2 Shared identity

Claims for the representative legitimacy for deliberative institutions often appeal not to authorisation or accountability, but to the presence of persons who share an identity with relevant groups in the population. However, a participant's status as a representative in a deliberative institution is one that is ascribed to them and which they themselves can and do contest. Deliberative institutions cannot therefore claim representative legitimacy on the basis of shared identity alone. However, shared characteristics do matter. There are good reasons for selecting participants based on shared identity in order that deliberative panels are descriptively representative of a particular constituency.

A distinction needs to be drawn between two senses in which we talk of a body or a person X being representative of some wider population Y. The term is sometimes used to describe the relation between a person X and a wider population Y that allows X to legitimately claim to be a representative of that population. This is the sense which we employed in the last section. A person X is said to be a representative if she stands in a particular relationship to a person or persons represented, such that she can legitimately speak or act for them. However, the term 'representation' is sometimes used in a purely descriptive or depictive sense. A body of people is said to be representative in the sense that its composition mirrors that of a wider population. These two senses of representation are distinct. A sample used by a polling organisation is representative in a descriptive sense, but those polled are not representatives. Members of deliberative panels may not be representatives of a wider constituency who can legitimately speak for them on the basis of shared characteristics. However, there might be good reasons for making deliberative panels **descriptively representative** of a population even when they are not legitimate representatives of that population.

Making bodies descriptively representative often appeals to inclusivity. Descriptive representation provides a means through which relevant interests and voices are properly included in political processes through persons who share the particular identity in question. Why should a shared identity matter? A number of possible reasons have been offered. One is that it is required if the groups in question are to have recognition of their political and social standing in a particular society. A second is that individuals with a shared identity may have a better knowledge of interests, or may be better able to articulate a particular set of perspectives or views associated with a particular identity. Third, it has been suggested that if political processes are concerned with the conflict of different interests, it can ensure that different interests are represented. Fourth, defenders of deliberative democracy argue that where political processes are deliberative fora, it can ensure that different relevant voices are included in the discussion. As such shared identities can serve to improve deliberative accountability.

If one accepts arguments for descriptively representative institutions, large questions still remain. Descriptive representation involves representation across particular significant characteristics. Different procedures for selecting participants for deliberative institutions can affect how descriptively representative they are. Where larger populations are relevant, as is the case with deliberative polls and planning cells, members are often chosen by random selection. The process allows for descriptive representation in a statistical sense, but important minority voices may be absent. One solution is to combine random selection with specific measures to involve important minorities.

This consideration motivated the selection of two indigenous community members of the Citizens Assembly on Electoral Reform in British Columbia which was otherwise chosen by random selection.

In smaller panels, selection is normally by stratified random selection employing demographic variables such as age, income, gender and ethnicity. The variables chosen clearly involve a judgement as to what characteristics matter for the deliberation in question. The judgement clearly matters where numbers of small and potentially significant dimensions of representation may be lost. The question of adequacy in this context is in part a matter of what dimensions are said to be being represented. What is being represented in any procedure is not the whole person, but some aspects of the person – for example a person's interest, values, preferences, or opinions – under some description – for example, as a worker, pensioner, consumer, member of an ethnic group, citizen of a particular political community. Some of these may well conflict in just the one person. A person may have conflicting preferences as a consumer or a citizen, conflicting interests as an employee and as a member of a family.

This leaves the question as to how a range of different voices or perspectives can be included in a deliberative institution. It can be argued that stratified random selection using demographic variables are an indirect way of capturing different views or perspectives. However, another argument is that rather than attempting to capture different voices indirectly, we should attempt to capture different views and perspectives directly through the representatives of different relevant discourses. Davies et al. (2005) claim that "discourses" can be defined, measured and enumerated in ways that allow for the identification of relevant representatives. In particular it has been suggested that Q-methodology can be employed to systematically characterise different discourses and identify suitable representatives for deliberative institutions (Dryzek and Niemeyer, 2006).

3.3 Descriptive representation and epistemic legitimacy

One possible basis for the legitimacy of descriptive representation is epistemic: those who belong to a group bring knowledge of the perspectives of that group. Deliberative institutions may then be able to claim to be epistemically legitimate in terms of representation. However, given that perspectives change during the process of deliberation, at the end of deliberation participants' views can be expected to diverge from those represented. A standard response is to claim that descriptively representative deliberative panels represent what people would say if fully informed. Robert Dahl, in introducing the idea of what he called a 'minipopulus' made up of a 1000 randomly selected citizens who deliberate on some issue, writes:

> "The judgement of a minipopulus would 'represent' the judgement of the demos. Its verdict would be the verdict of the demos itself, if the demos was able to take advantage of the best available knowledge to decide what policies would best achieve the ends it sought. The judgements of the minipopolus would thus derive their authority from the legitimacy of democracy." (Dahl, 1989, p.340).

Fishkin makes the same claims for deliberative polls: "A deliberative poll attempts to model what the public would think, had it a better opportunity to consider the question at issue." (Fishkin 1995, p. 162).

There are however problems with extending this claim to smaller panels which are not statistically or descriptively representative of a larger population. The experience of panels suggest that participants will not necessarily converge in their judgements. Moreover, even with larger deliberative exercises, outcomes can be sensitive to the framing of the question asked as well as the quality and range of knowledge and expertise that are brought to the deliberations. Given those sensitivities there may be no determinate answer to that question 'what would the public think given the knowledge and time to deliberate'.

3.4 Direct democracy and representation

A different argument for justifying deliberative panels is to see them not as exercises in representing the public, but as exercises in direct democracy. This justification is particularly significant where deliberative panels are granted stronger decision-making powers in the policy-making process. Direct democracy persists in modern societies in the form of referenda which remain an important form of direct public participation, especially where they can be called through citizen initiatives. However, whatever the democratic virtues of referenda they are limited in the degree to which citizens are able to actively deliberate. The possibility of direct democracy in which all citizens directly participate in public deliberations appears to be ruled out for reasons of scale. One solution that goes back to Athenian democracy is to chose a subset of citizens by lot to directly participate in deliberation and decision. Indeed the use of lot to rotate office was traditionally what was taken to distinguish democracy from other political orders (Manin, 1997, chs. 1 and 2). The justification of the procedure lies in the idea of democracy as a **social order of equals** where citizens take turns in positions of power. A parallel can be drawn with membership of legal juries. The justification of ordinary citizens serving on juries is not that they are representatives of a wider public, but that the accused should be judged by their peers. Similarly the justification for taking mini-publics into the decision-making process is that responsibility for deliberation and decision should circulate among citizens who, as Aristotle puts it, "rule and are ruled in turn…" (Aristotle, 1948 II.ii).

Among the main arguments in favour of the position is that, unlike most other institutional arrangements, power is not distributed to those who desire it or to experts, and both power and responsibility are distributed among citizens. On this account members of deliberative panels are not individually representatives of any constituency in the sense outlined earlier of standing in a relationship that allows them to legitimately talk or act on behalf of others. However, while no member of a panel is a representative of a wider population there are still good reasons for it being representative in the depictive or descriptive sense. Panels themselves should still be descriptively or discursively representative to ensure the quality of deliberation, just as the make up of legal juries is held to matter to the quality of their verdicts. If deliberative panels were to fulfil this role, they would need to be more widely employed and institutionalised than they are now. Proposals for a larger and more formalised institutionalised Athenian solutions include the suggestion from Demos in the UK that the House of Lords be replaced by a citizens' assembly chosen by lot and the proposal in the Council of Europe's Green Paper *The Future of Democracy* for a randomly selected Citizens' Assembly to review controversial legislation (Smith, 2005, p.83; cf. Burnheim, 1985).

4. Improving representation in deliberative panels

Building on the insights of the previous sections, we now turn to 'good practice' issues and their scope.

4.1 Fostering equal participation

One justification for formal deliberative panels and participatory mini-publics is to improve the inclusivity of participation in political processes. As we noted above, participation in political processes and civil society is unevenly distributed across income and levels of education. Selection procedures for deliberative panels can be designed to include groups under-represented, but they do not necessarily do so currently. The nature of deliberative panels, for example the time they require, can lead to selection biases against those with particular patterns of work or care for dependents. Even if selected the ability to speak and to be heard can remain unevenly distributed across class, gender, age and ethnicity. One central challenge for improving deliberative panels is the development of methods of selection that can foster wider participation, and to design approaches that encourage the participation of marginalised groups.

4.2 Improving the design process

Representation is not just a matter of the composition of the deliberative panels themselves, but also of the oversight bodies who play a key role in framing the questions that will be addressed and the representation of expertise to the panel. Experience of deliberative panels show that both play key roles in determining outcomes.

Scrutiny of the oversight panel for a deliberative panel could become an integral part of the process, considering questions such as:

- Who is represented in the oversight bodies that organise and frame the questions that deliberative panels address?
- Who oversees the oversight panel?

Representation of a range of expert knowledge also matters. If deliberative panels are to broaden the range of expertise brought to bear on technological change, panels need to be enabled to question problem framing and the criteria used for calling witnesses. Consideration needs to be given to such issues as:

- What range of knowledge is represented by the expert witnesses in deliberative panels?
- How are expert witnesses chosen?

4.3 Representing the voiceless

The consequences of many of the current technological developments and environmental changes will fall on future generations. Future generations along with non-human beings pose particular problems of representation. Several sources of representative legitimacy are necessarily absent. They can neither authorise representatives to speak or act for them nor hold representatives accountable to them. Shared identity and descriptive representation are not possible. How then is it possible to legitimately represent those who cannot speak and have no possibility of voice in decisions that will affect them?

In general, claims to speak or act on behalf of future generations and non-human natures tend to appeal to epistemic grounds for legitimacy. Claims to speak on behalf of those without voice appeal to knowledge of their objective interests, often combined with special care for them. Biologists and ecologists can be heard to make special claims 'to speak on behalf of nature' upon the basis of their knowledge and interests. Environmental lobby groups sometimes make similar claims on behalf of future generations. These epistemic claims can be contested and can lead to acute problems of legitimacy where the representatives of nature have a particularly powerful voice relative to groups who are already marginalised. This can be seen in conflicts around communities in the developing world who are policed in and excluded from nature reserves justified by natural scientists. The virtues of public deliberation in these contexts may not be to resolve the conflict, but to allow it to be properly articulated (O'Neill, 2007, chs. 7, 8 and 11).

A number of responses have been made to the problem of representing future generations and the voiceless through forms of proxy or incorporated representation within current generations or constitutional constraints on current decision-makers. Several of these proposals for better political and legal representation are reviewed in Box 3.

4.4 Reflecting diversity

A presumption of some deliberative panels is that the end point of deliberation is consensus. The presumption of consensus conferences as the name suggests is that consensus should be reached. However, this raises the question: consensus about what? It could be consensus on the procedures for engaging in deliberation, on the framing of questions to be addressed, but it usually relates to consensus on the substantive conclusions and recommendations from the panel. The pressure for convergence on conclusions and recommendations is moved by the desire to incorporate them easily into the decision-making process. This might then discourage the articulation of diverse and conflicting views (see e.g. Stirling, 2005).

A somewhat different presumption is taken for other deliberative panels such as deliberative mapping which is designed to reveal the variety of perspectives brought to the framing of a problem and the assessment of different options of how to deal with the issue (Davies et al., 2003). The use of Q-methodology to select participants in deliberative panels can similarly open up differences (Davies et al., 2005). If one purpose of deliberation is to properly articulate different positions, then such approaches have their virtues. At its strongest it might be argued that healthy democratic societies rely upon dissent.

> "We should look in society not for consensus, but for ineliminable and acceptable conflict, for rationally controlled hostilities, as a normal condition of mankind; not only normal, but also the best condition of mankind from the moral point of view…" (Hampshire, 1989, p.189).

Given that view, not just consensus conferences but also dissensus conferences have their place in the policy-making process.

Box 3: Representation of Future Generations

(i) Political representation

(1) Goodin's model of incorporated interests: Robert Goodin (1996 and 2000) argues that since it is impossible to bring future people into deliberative panels, the best we can hope for is that a sufficient number of people who vote and participate in a decision-making process will "internalise the interests" of future people in a given policy or course of action. This 'internal-reflective' process where we imagine ourselves in the place of others is best promoted through deliberative democracy.

(2) Dobson's restricted franchise model: Andrew Dobson (1996) has suggested that some seats in legislative assemblies should be reserved for special representatives of future people (F-representatives). The right to elect F-representatives should be granted to proxies for future generations that are drawn from the present 'environmental sustainability lobby' (i.e. environmental groups and organisations), resting on the assumption that environmental organisations and their members are better suited to represent and promote future interests than other persons and groups.

(3) Ekeli's extended franchise model: Ekeli's extended franchise model gives some seats in the legislative assembly to future generation representatives. Ekeli (2005) suggests that the whole electorate should have the right to elect F-representatives. The right to serve as F-representatives should also be open to everyone who cares about the well-being of posterity. Ekeli argues that a qualified majority of the F-representatives should have the right to demand a delay in the final enactment of a law proposal so that F-representatives could not block the decisions of a simple majority, but could slow down the process of policy-making.

(4) Stein's ecological council model: Tine Stein (1998) has proposed the establishment of an ecological council ('ein Ökologischer Rat') which would function as a 'consultative' chamber of the parliament, similar to the British House of Lords. The main task of this council is to review the impact of law proposals and regulations on the environment and recommend revisions or amendments. If the ecological council reaches the conclusion that a given bill passed by the legislature can cause serious environmental harms, it can use its veto to delay legislation passed by the legislature. Stein suggests that the members of this council ought to be elected by the legislature rather than popular elections, since the purpose is to establish a deliberative chamber, where the members should not have to worry about their popularity and re-election.

(ii) Legal representation

(1) Ekeli's guardianship model: According to this model, courts should be given the power to appoint guardians for future generations, where agents who care about the future apply for "guardianship" in relation to a specific legal dispute. This would grant the guardians of future people legal standing and the right to initiate legal proceedings on behalf of future generations (see Ekeli, 2007).

(2) Eckersley – the constitutional entrenchment of the precautionary principle: Robyn Eckersley proposes that the precautionary principle ought to be constitutionally enacted as a means to protect and represent the interests of future generations and non-human species in legal and political decision-making processes (Eckersley, 2004). The precautionary principle provides a presumption against decisions and policies that create serious or irreversible environmental risks and places the onus of proof on the proponent of decisions and policies that can expose others to such risks.

5. Summary

Deliberative panels can be an effective tool to strengthen democracy in a conversational and informative way. Well designed processes enable communication between experts, decision-makers and members of the public, bringing out shared concerns as well as dissent. Deliberative panels fit well with the notion of democracy as a social order of equals where citizens take turns in engaging with and informing policy-making.

Key points

Deliberative accountability: Deliberative panels cannot claim representative legitimacy through traditional notions of authorisation and accountability. However, they can serve to create a more conversational democracy that ensures that existing political authority and scientific expertise is more deliberatively accountable.

Descriptively representative: There are good reasons, for example concerning inclusivity and equality for making deliberative panels descriptively representative of a population even when they are not representatives of that population.

Representing diversity: Deliberative panels offer one way in which marginalised groups and voices can participate more fully in decision-making processes. However, it should not be assumed that inclusion necessarily leads to consensus. Sustaining dissent and conflict is central to a healthy democratic life.

Direct democracy: The direct involvement of citizens in decision-making through forms of random selection is a return to classical democratic procedures and offers a way of actively engaging citizens in civic responsibilities. However, to fully serve that purpose these forms of engagement need to become more extensive and better integrated into the political decision-making framework. They also need to be carefully conducted so as to avoid manipulation of outcomes and the exclusion of affected and interested groups.

Recommendations

Fostering equal participation: If deliberative panels are to improve the participation of marginalised groups in the decision-making process, careful design is vital so that the procedures for selection and participation do not exclude particular groups. We need to become more openly aware of how voice is unequally distributed in deliberation and to develop and adopt procedures that are aimed at overcoming such inequality. At the same time, refusal to engage should be recognised as one way in which marginalised groups can exercise their voice.

Improving the design process and expert testimony: Representation of the whole deliberative process should be considered and not just of the selected participants. Oversight bodies can have a big influence on the framing of questions to be addressed and the selection of experts to be examined in deliberative panels. Deliberative panels should be designed to allow participants to contest the framing of questions they are offered and the range of experts called.

Giving voice to the voiceless: The consequences of current technological development and environmental change fall on future persons and non-human beings who are unable to directly voice their interests. Improving their representation requires experimentation with indirect expression, either through internalising their interests, formal procedures for representation or constitutional arrangements.

Acknowledging conflict and dissent: Many existing deliberative panels make a presumption of consensus. Approaches which ensure the expression of conflicting perspectives in the formation of legitimate dissensus are crucial to opening up discussion and should be further developed.

6. Glossary of Participatory Processes

A variety of experimental and established participatory processes are used in science and technology, and more widely in public planning. These processes, which we collectively call **deliberative panels** typically involve a small number of citizens who are normally selected by some variation of stratified random selection using demographic variables who meet for a particular period to discuss an issue. These processes have been used under different names and with many variations, but here we list some common or emerging key methods used in science and technology and environmental governance.

Citizens' Juries normally contain between 12 and 20 members selected by stratified random selection by a commissioning body. Deliberations take place over three to five days. Members of the jury hear evidence and cross-examine experts who are selected by a stakeholder group, although panel members can sometimes select their own experts. Their deliberations are set out in an agreed report and a set of recommendations, which can be sent to a decision-making body, are made.

Consensus conferences were developed by the Danish Board of Technology specifically to involve ordinary citizens in assessment of scientific and technological developments. An initial pool of potential participants is selected by random sampling or through public advertisement and a final selection of between 10 and 16 participants are chosen using demographic criteria. Participants attend two courses to gain knowledge of the issues and are involved in the selection expert witnesses to represent different positions. The conference itself is held over 3 days. The first two days typically involve the cross-examination of experts. On the third deliberation is completed and a consensus report agreed which in the case of the Danish Board of Technology is sent together with expert contributions to members of Parliament.

Deliberative mapping is one of several experimental techniques that combine public deliberation with multi-criteria methodologies. Experts are selected to represent different views and citizens' panels chosen by stratified random selection. Both develop a set of options in a policy area and set of criteria with which to evaluate options. Panellists evaluate options according to weights they assign to the different criteria. The results are taken to a joint expert-citizen workshop. In subsequent panels the options are re-evaluated by both individual panellists and in group discussions. The process does not necessarily converge on an agreed position, but can rather reveal the variety of values and perspectives brought to different options.

Focus groups consist of a small group who share some particular demographic characteristics identified by the researcher who are brought together to discuss some particular policy option or question for a short period, typically of a few hours. Focus groups started their life in market research but have been used increasingly in public consultation. Their status as deliberative institutions has been questioned.

In addition to these deliberative panels formats have been developed that involve larger numbers in deliberative processes.

Planning cells developed in Germany are similar to citizens' juries but involve larger numbers. Each cell consists of about 25 people and several cells normally run in parallel, involving up to 500 participants. Participation in the cell is by random selection. Cells meet for between 2 and 5 days with a formalised structure of group discussions with expert hearings and procedures for agreeing a set of criteria for ranking options. The cells arrive at a final citizens' report that is sent to the commissioning authorities.

Participatory consultation consists of large-scale deliberative processes that involve open meetings across different local communities. A notable European example is the GM nation? consultation exercise in the UK which combined open meetings in local communities, internet site and focus groups. Participation in the open meetings and internet consultation is through self-selection.

'21st Century Town meetings' have been developed in the 'AmericaSpeaks' programme. These involve one-day meetings of between 500 and 5,000 persons selected by different methods on some dimensions representative of the wider population. To combine deliberative quality with scale, deliberations are organised though a large number of moderated round-table discussions of 10 to 12 demographically mixed participants. Groups are connected through computer networks, through which themes that emerge are pooled and feedback into subsequent discussions. Participants vote on recommendations that are developed through this process.

Deliberative opinion polls were developed by James Fishkin in the US and generally involve between 250 and 500 participants chosen by random selection. Participants are polled at the start of the process. They engage in expert hearings and small-scale deliberation for 2 to 3 days. The process finishes with a second opinion poll.

Citizens' assemblies have been central to the experiments in participatory budgeting in Porte Alegre in Brazil which involve a large number of neighbourhood and regional assemblies setting priorities for municipal budgets. Another notable example is the Citizens Assembly on Electoral Reform in British Columbia which involved 160 participants chosen by random selection together with 2 Aboriginal members which met for a series of meetings and public hearings for a period of 11 months and issuing a final report.

Sources: De Marchi, B. and Ravetz, J. (2001) Participatory Approaches to Environmental Policy, Environmental Valuation in Europe Policy Brief No. 10, Cambridge: Cambridge Research for the Environment. Smith, G. (2005) Beyond the Ballot. London: The Power Inquiry. Rowe, G. and Frewer, L. (2000) 'Public Participation Methods', Science, Technology and Human Values 25(1): 3-29.

References

Allen, P. (1998) 'Public Participation in Resolving Environmental Disputes and the Problem of Representativeness' Risk: Health, Safety & Environment 297, 299-308.

Brown, M. (2006) 'Citizen Panels and the Concept of Representation' The Journal of Political Philosophy 14, 203–225.

Cain, B., Dalton, R. and S. Scarrow (eds.) (2006) Democracy Transformed?: Expanding Political Opportunities in Advanced Industrial Democracies. Oxford: Oxford University Press.

Coleman, S. (2005) Direct Representation: Towards a Conversational Democracy. London: IPPR.

Davies, B., Blackstock, K. and Rauschmayer, F. (2005) 'Recruitment, composition and mandate issues in deliberative processes: Should we focus on arguments rather than individuals?' Environment and Planning C: Government and Policy, 23, 599-615.

Davies, G., Burgess, J. Eames, M. Mayer, S. Staley, K. Stirling, A. and S. Williamson, (2003) Deliberative Mapping: Appraising Options for Addressing 'the Kidney Gap'. London: Wellcome Trust, http://www.deliberative-mapping.org/

Dahl, R. (1989) Democracy and its Critics. New Haven, Conn.: Yale University Press.

Dobson, A. (1996) 'Representative Democracy and the Environment', in W. Lafferty and J. Meadowcroft (eds) Democracy and the Environment. Cheltenham: Edward Elgar, pp. 124-139.

Dryzek, J. (2000) Deliberative Democracy and Beyond: Liberals, Critics, Contestations Oxford: Oxford University Press.

Dryzek, J. (2001) 'Legitimacy and economy in deliberative democracy', Political Theory, 29, 5, 651–669.

Dryzek, J. and Niemeyer, S. (2006) 'Discursive Representation' http://deliberativedemocracy.anu.edu.au/references/DiscursiveRepresentation.pdf

Dryzek, J., Goodin, R.E. and Tucker, A. (2006) 'Promethean Elites Encounter Precautionary Publics: The Case of GM Foods' http://deliberativedemocracy.anu.edu.au/documents/Dryzeketal2006.pdf

Eckersley, R. (2004) The Green State: Rethinking Democracy and Sovereignty. Cambridge, Mass.: MIT Press.

Ekeli, K.S. (2005) 'Giving a Voice to Posterity – Deliberative Democracy and Representation of Future People', Journal of Agricultural and Environmental Ethics, 18(5): 429-450.

Ekeli, K.S. (2007) 'The Principle of Liberty and Legal Representation of Posterity', Res Publica, 12 (4): 385-409.

European Commission (2001) Report of The Working Group 'Democratising Expertise and Establishing Scientific Reference System' Brussels, May 2001. http://ec.europa.eu/governance/areas/group2/report_en.pdf

Fishkin, J. (1995) The Voice of the People. New Haven, Conn.: Yale University Press.

Goodin, R.E. (1996) 'Enfranchising the Earth, and its Alternatives', Political Studies 44: 835-849.

Goodin, R.E. (2000) 'Democratic Deliberation Within', Philosophy and Public Affairs 29(1): 81-109.

Goodin, R.E, and Dryzek, J. (2006) 'Deliberative Impacts: The Macro-Political Uptake of Mini-Publics' Politics and Society 34(2): 219-244.

Hampshire, S. (1989) Innocence and Experience. Cambridge Mass.: Harvard University Press.

Manin, B. (1997) The Principles of Representative Government. Cambridge: Cambridge University Press.

Mansbridge, J. (1999) 'Should Blacks Represent Blacks and Women Represent Women? A Contingent "Yes"', The Journal of Politics 61(3): 628-657.

Mansbridge, J. (2003) 'Rethinking Representation', American Political Science Review 97(4): 515-528.

O'Neill, J. (2001) 'Representing People, Representing Nature, Representing the World' Environment and Planning C: Government and Policy 19: 483-500.

O'Neill, J. (2007) Markets, Deliberation and Environment. London: Routledge.

Parkinson, J. (2003) 'Legitimacy Problems in Deliberative Democracy' Political Studies, 51: 180-196.

Parkinson, J. (2004) 'Hearing Voices: Negotiating Representation Claims In Public Deliberation', British Journal of Politics and International Relations 6(3): 370-388.

Pattie, C., Seyd, P. and Whiteley P. (2004) Citizenship in Britain Cambridge: Cambridge University Press.

Phillips, A. (1997) 'Dealing with Difference: A Politics of Ideas or a Politics of Presence', in R. Goodin and P. Pettit (eds) Contemporary Political Philosophy. Oxford: Blackwell.

Pitkin, H. (1967) The Concept of Representation. Berkeley: University of California Press.

Smith, G. (2003) Deliberative Democracy and the Environment London: Routledge.

Smith, G. (2005) Beyond the Ballot. London: The Power Inquiry.

Stein, T (1998): 'Does the Constitutional and Democratic System Work? The Ecological Crisis as a Challenge to the Political Order of Constitutional Democracy', Constellations, 4(3):420-449.

Stirling, A. (2005) 'Opening up and closing down: analysis, participation and power in the social appraisal of technology'. In M Leach, I Scoones and B Wynne (eds) Science, Citizenship and Globalisation. London: Zed, pp. 218-231.

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