

*This brief explores the tensions of representation that arise in public engagement exercises and proposes a few strategies for the Center for Nanotechnology in Society to pursue.*

### **Background**

There has been a recent wave of interest in public participation in science. In 2008, CNS held the US's first national-level consensus conference, the NCTF, on nanotechnology and human enhancement.

Discourse-oriented deliberation such as consensus conferences have been criticised on a number of levels.

Chantal Mouffe has argued that deliberative democracy ignores the inherently antagonistic nature of the political. Its emphasis on consensus and persuasion hides inescapable hegemonies.

Lynne Sanders and Iris Marion Young suggest, in somewhat different ways, that deliberation is undemocratic in excluding, through its emphasis on reasoned argument, particular voices, knowledges, and modes of interaction.

STS scholars have complained that much deliberation on science lacks solid impacts, incorporates 'deficit model' perspectives, or suffers from procedural flaws.

### **Materiality and affect in deliberation**

We have argued, based on these critiques, that public engagement with science should move to incorporate 'material deliberation': attentiveness to, and inclusion of, the material and affective dimensions of science-society interactions in deliberation (see: Davies et al in press / *Cities*; Davies in press / Pereira & Wakeford book; Davies under review / *STHV*).

This is both an analytic and a praxis-oriented argument.

Scholars of public engagement and deliberation on science should be attentive to the material and affective in their analyses of such practices.

Practitioners of public engagement and deliberation on science should seek to incorporate:

non-traditional modes of interaction (storytelling, art, music, gossip) into deliberation;

awareness of technoscience's material and affective entanglements into deliberation.

### **Science, the deliberative society, and citizenship**

There has also been attention paid to the purposes and desired outcomes of participatory processes. Should they (aim to) have a direct and measurable impact on the political or scientific process? And if not, what are they for?

For instance, it is increasingly acknowledged that governance is messily contingent upon multiple inputs and is thus emergent rather than straightforwardly directed from the top down. It is by no means clear that it would be possible to trace or engineer a linear flow between public deliberation, recommendation, and policy decision.

Various scholars have also argued that the purposes of engagement should be seen as going beyond a specific policy outcome to incorporate results such as mutual learning, empowerment, and political legitimacy.

We have started to argue (Davies in press / CNS Yearbook) that some of these tensions can be negotiated through reimagining deliberation not as a one-off event but as part of a 'deliberative society', in which an ecosystem of diverse events and processes, incorporating different forms of representation, together help shape sociopolitical outcomes.

This draws on the work of John Parkinson, Iris Marion Young, and Simone Chambers, all of whom have, in the context of political theory, emphasised that deliberative democratic theory must look beyond 'mini-publics'. Mark Brown has also discussed this in the context of science.

There are also connections to scholarship on 'civic engagement' which has argued that participation in activities and processes not directly linked to the political process – such as volunteering – is valuable for (amongst other things) the potential to develop 'citizenly' capacities.

All of this connects to ongoing research on hackerspaces and to the question of whether such informal, serious leisure-type activities<sup>1</sup> can be understood as having any democratic traction. Can scientific citizenship be construed as pleasurable and self-directed? And do hackers and makers ever understand their activities in these terms?

We may also wish to draw this work together in the context of anticipatory governance to build on its emphasis on 'societal capacity building' through a suite of activities which encourage reflection on the potential futures of technoscience.

### **Representation**

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<sup>1</sup> If that is what hacking is. This remains an open question.

Even within such a deliberative society model, questions of representation remain. What should representation look like within organised deliberative processes?

Mark Brown, in his treatment of science in democracy, outlines five 'elements' of representation: authorisation, accountability, participation, deliberation, and resemblance. These, he says, "contribute to democratic representation" whilst also being "sites of contestation" (p.206). In keeping with the arguments above, he writes that the "elements of representation discussed here require different types of institutions to facilitate them ... The degree to which citizens enjoy democratic representation, therefore, should be judged with respect to the ecology of institutions to which they have access, rather than with regard to any single institution" (p.237).

To some degree this frees mini-publics and other focused deliberative activities from seeking some kind of 'perfectly' representative composition. A practical question remains: how should recruitment be conducted?

An important starting point is that the answer to this question will depend on the purpose of the deliberative mini-public. What the deliberations are for, or towards, will influence who is asked to be there.

Hannah Pitkin makes a fundamental distinction between representatives as those who *speak for* or *act for* those that they represent. In her work, and that which has drawn on it over the past decades, the key issue at stake is the exact relationship between actors and those they are representing.

Davies et al 2005, for instance, further distinguish between representatives as delegates, trustees, guardians, and individuals ('proxies'), based on the exact accountability relationships implied by a representative's mandate. They outline the problems of tracing accountability within mini-publics which recruit 'the public' (cf O'Neill 2001; Brown 2009).

The question then becomes: what should be represented in a mini-public? One might seek to represent:

particular interests, or stakeholder groups (the danger here is that such interests become calcified, negating deliberation's emphasis on the potential for persuasion);

particular arguments (Davies et al 2005, p.608): "we suggest that the appropriate stratification category is '*what people think*', which represents both the arguments they make and the beliefs they hold which lead them to make those arguments. ... From this perspective, the only way to ensure a 'representative' sample of discourses is to start from the discourses themselves");

particular affects, emotions, or non-discursive expressions of personal perspectives (Castán Broto's notion of 'expressive representation').

All of these require a significant degree of research in advance of the deliberative process, if organised through a 'top-down' approach.

### **The CNS-ASU city tours**

These problems of representation are heightened in future-oriented deliberation, as it is often unclear where interests, arguments and affects will emerge.

CNS-ASU will run a follow up to the NTCF in 2013. The focus will be on nanotechnology in the city, and the process will seek to build on work on 'material deliberation' by ensuring that participants spend time 'in the field', at sites where nano is being developed and could potentially be used, and that there are opportunities to reflect upon the material embedding of urban technologies.

What are the city tours for?

Most traditionally, we might say that the city tours seek to produce mini-publics: to enable 'representative' deliberation on nanotechnology's urban applications which will, in its reporting, have wider applicability. Here we would recruit according to regional demographics and structure the deliberation around policy relevance.

Given the problems of deliberation around emerging technologies (including problem and stakeholder definition), we might instead orient the process around the future of the city more generally. Recruitment here would be based on existing interests / discourses / affects around the city.

Alternatively, we might embrace the deliberative society / capacity building arguments and divorce the process from any attempt to straightforwardly influence policy. Here the process would be rooted in the informal public sphere and would emphasise mutual learning and the development of citizens. Recruitment would not be traditionally 'representative' but be led by the interests and enthusiasms of local organisers.

If we are to take arguments around a deliberative society seriously, we might ask: what is the 'ecology' of deliberative democracy around US nanotechnology? And where are there gaps – places where citizens are not being represented – that we might plug through the city tours?

### **Some references**

Brown, Mark B. 2009. *Science in Democracy: Expertise, Institutions, and Representation*. MIT Press.

Davies, Ben B., Kirsty Blackstock, and Felix Rauschmayer. 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 (4): 599 – 615.

Davies, Sarah R., Cynthia Selin, Gretchen Gano, and Ângela Guimarães Pereira. In Press. "Citizen Engagement and Urban Change: Three Case Studies of Material Deliberation." *Cities* (0).

O'Neill, John. 2001. "Representing People, Representing Nature, Representing the World." *Environment and Planning C: Government and Policy* 19 (4): 483 – 500.

Parkinson, John. 2006. *Deliberating in the Real World: Problems of Legitimacy in Deliberative Democracy*. Oxford; New York: Oxford University Press.