Politics, Knowledge and Public Engagement: The Case of CCS

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(after Downs, modified by O’Riordan)

Quiescence with minor variations of original status quo

Reining in by power brokers

Counting the costs

Institutional design

Euphoric reaction

Alarmed discovery

?
Issue-Attention Cycle applied to CCS

- Climate change impacts?
  - Political activism and deal-making on climate change and CCS?

- Plans delayed, cancelled, thwarted, scaled-down? Ambitions changed?

- Climate change

- CCS as solution: mid-1990s to present

- Reaction against CCS: NGOs, publics, some industry, some parts of government

- Specific proposals on the table: costs, practicalities, roadmaps, barriers, etc.

- Policy for CCS: Incentives & regulation (early- to mid-2000s onwards)
Knowledge Production Cycle applied to CCS

Under-critical model (presence of political consensus): reliance on 'objective science', simulation models, trust in experts and lead organisations.

Over-critical model (lack of political consensus): knowledge contestation and controversy, accusation, blame, facts/values intermingled: high and low politics.

Under-/over-critical models after Collingridge & Reeve (1986).

Mode 1: disciplinary, universal, cumulative, academic.

Establishes scientific and technical validity of CCS (geology, engineering, techno-economics).

Demand from Policy for Mode 2 knowledge: context-specific, applied, multi/trans-disciplinary.

As more contestation emerges, increased urgency for Mode 2 studies but also stakes are higher: error-costs rise, 'hard values, soft facts'.

Includes costs, regulation, practicalities, acceptability, infrastructure, etc.

Mode 1 & 2 after Gibbons et al. (1994).
Does this imply a retreat to the discipline?

“A discipline is defined by possession of a collective capital of specialised methods and concepts, mastery of which is the tacit or implicit price of entry to the field. It produces a ‘historical transcendental’, the disciplinary habitus, a system of schemes of perception and appreciation (where the incorporated discipline acts as a censorship)”.


Can Mode 1 or Mode 2 science actually provide the consensual knowledge constructs needed?
Knowledge Implications of Non/Contestation

- Under-critical model: technocratic tools, knowledge-constructs adopted in Mode 2 but not sufficiently tested / scrutinised, so policies / projects are less robust and vulnerable to ‘side-swipes’ or shocks
- Over-critical model: technocratic backlash / retrenchment – i.e. *increased* use of instrumental techno-science in belief that ‘we need to convince them we’re right …’. Whilst also *diversification* of knowledge-constructs: from technical and scientific critiques, to social science critique, and range of participants in Mode 1 and Mode 2. More robust as discrete components, as more scrutinised; but less synthesis & integration – so messy, slow, confusing ……consensus elusive
Andrew Jamison: the need for a Mode 3 or hybrid imagination?

- **At discursive / macro-level:** connecting science and technology explicitly to social and environmental problems

- **At institutional or meso-level:** organising spaces or sites for collective learning across faculties and societal domains (experimentation in socio-technical transitions approach)

- **At the personal or micro-level:** combining scientific-technical competence with socio-cultural understanding
The Techno-Science of Clumsiness?

• ‘Gainly solutions & institutions’: elegant, analytical, optimising, objective, but ultimately brittle. (Mode 1 and Mode 2?).

• ‘Clumsy solutions & institutions’: messy, plural, frustrating, iterative, incremental and satisficing, but ultimately robust. (Mode 3?)

• If we need ‘clumsy solutions & institutions’, what kind of knowledge-constructs support clumsiness?

This is the complex and fraught context into which public understanding, engagement and communication studies and projects are being undertaken …..
Rationale for Studies of Public Perceptions

- **Substantive**: understanding *how* and *why* different groups of people think, perceive and feel the way that they do.

- **Instrumental**: undertaking a research and engagement activity to promote the successful design and / or implementation of a CCS project (where it is assumed *a priori* that this is desirable).

- **Deliberative**: meeting the moral imperative and legislative requirements of participative democratic decision-making.
1st Generation Studies

- Mostly focused upon gathering information on perceptions, knowledge, effect of information, role of trust, communications, etc.

- Academic-focused: advancing disciplinary knowledge and testing hypotheses, etc. (substantive + deliberative):

- Hypothetical project focused
2nd Generation Studies

• More focused upon ‘actual’, nearer-to-reality, projects

• More focused upon engagement and communication

• More instrumental

• Wider range of stakeholders involved
Main Findings Presented to IEA of Research and Demo Projects to Date

- **CCS project development is vulnerable to poor public communications and engagement and could be thwarted by effective advocacy.**

- **The local populace can (potentially dramatically) affect project development and should therefore be considered a stakeholder on a par with traditional expert and pressure groups such as government agencies, local development agencies, and NGOs.**

- **It is vital to explain CCS within the rationale of global warming, since the technology only makes sense to the public as a way of achieving deep cuts in carbon emissions to avoid the adverse impacts of climate change.**
Main Findings continued ….

- The public is not a single entity, but encompasses multiple subgroups divided across lines of geography, income, education, historical interactions with industry and public institutions, and culture.

- Communities frequently struggle to engage with the technical and scientific detail and uncertainty surrounding a new technological innovation. Instead, the perceived trustworthiness of the institutions which are involved in the project and in the planning process will have a large influence upon public perceptions.
Main Findings – continued

- The transparency and quality of the engagement process can determine whether the public finds the developer legitimate and trustworthy, and will play an important part in the public's decision-making process.

- People generally respond more positively to issues when they deem that they have been treated fairly, and responsive project planning and risk communication activities may therefore yield increased public support for CCS.
Main Findings continued ……

- While it is difficult to estimate the costs associated with adequate public engagement, the incremental costs are likely to be very small relative to the overall project costs, and must be weighed against the considerable costs of project delays or cancellation.
<table>
<thead>
<tr>
<th><strong>Project name</strong></th>
<th><strong>Team</strong></th>
<th><strong>Applications</strong></th>
<th><strong>References</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>ESTEEM</td>
<td>Einhoven, ECN (Netherlands)</td>
<td>Energy projects</td>
<td>Raven et al. (2009)</td>
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<td>Carbon Capture and Storage Communication Workshops</td>
<td>University of Calgary, IISD, Climate Change Central (Canada)</td>
<td>CCS projects</td>
<td>Climate Change Central (2007)</td>
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<td>An Integrated Roadmap of Communication Activities Around CCS in Australia and Beyond</td>
<td>Centre for Low Emission Technology, CSIRO (Australia)</td>
<td>CCS projects</td>
<td>Ashworth et al. (2007)</td>
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<tr>
<td>Breaking Ground: Engaging Communities in Extractive and Infrastructure Projects</td>
<td>World Resources Institute (USA)</td>
<td>Extractive and infrastructural projects</td>
<td>WRI (2009)</td>
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</table>

Examples of Best Practice Public Engagement in CCS, Environmental and Energy Decision-Making and Planning (Mode 2 to 3?)
Project Engagement Management Flow

Scoping the Context

Publics and Stakeholders

P&S1 → P&S2 → P&S3 → P&S4 → P&S5

Visioning

V1 → V2 → V3

Collaborative Visioning

Possible Common Vision

Collaborative Visioning Process for CCS Project

Proposed

Radical Departure from Existing Project

Decision-Making?

Clumsiness!!

Monitoring

Engagement Management

Toolkit
## Engagement: From Manipulation to Partnership

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Manipulation</td>
<td>Public involvement is focused upon trying to cajole the public into supporting a project</td>
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<tr>
<td>2</td>
<td>Therapy</td>
<td>Reassuring the public about a project</td>
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<tr>
<td>3</td>
<td>Informing</td>
<td>Provision of information on request</td>
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<tr>
<td>4</td>
<td>Consultation</td>
<td>Pro-active provision of information and response to questions</td>
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<tr>
<td>5</td>
<td>Placation / compensation</td>
<td>Engaging in face-to-face public consultation, but only in response to conflict, controversy, etc.</td>
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<td>6</td>
<td>Partnership I</td>
<td>Open to suggestions from members of communities / stakeholders who are met individually or in a group</td>
</tr>
<tr>
<td>7</td>
<td>Partnership II</td>
<td>Designs shaped / influenced by members of communities / stakeholders (broadly representative) who are met individually or in a group (discrete process)</td>
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<tr>
<td>8</td>
<td>Partnership III</td>
<td>On-going process of influence by members of communities / stakeholders (broadly representative) who are met individually or in a group</td>
</tr>
<tr>
<td>9</td>
<td>Veto powers</td>
<td>Local community is given veto powers over plant design, operation, etc.</td>
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The Engagement Ladder (modified after Arnstein, 1969)
Project Engagement
Process Overview

**Project Type**
- Hypothetical
- Exploratory
- Pilot
- Large-Scale Demonstration
- Post-Completion Monitoring

**Engagement Pathway**
- Consultation: 3-6 months
- Survey: 6-36 months
- Town Meeting: 2-5 years
- Citizen Jury: Min. 5 years
- Community Liaison Committee: >30 years
- Workshop: 2-5 years
- Focus Group: Min. 5 years
- Citizen Panel: >30 years

**Legend**
- Resources
- Relevance

**Notes**
- Range of possible methods for public engagement activities. List is not exhaustive.
- Arrows indicate likely time horizons of activities.
- Fading colors indicate likely resource requirements at a given stage.

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<td><strong>Public Acceptance</strong></td>
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<tr>
<td>1. Representativeness</td>
<td>Representative sample of the affected population</td>
</tr>
<tr>
<td>2. Independence</td>
<td>Process conducted in an independent, unbiased way</td>
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<td>3. Early involvement</td>
<td>The earlier the stage of involvement the greater the sense of ownership of the process, especially at the stage where value judgements are important</td>
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<tr>
<td>4. Influence</td>
<td>Any participatory process should have a visible impact on policy</td>
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<td>5. Transparency</td>
<td>The public should be able to see progress and how decisions are being made</td>
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<tr>
<td><strong>Effectiveness of process</strong></td>
<td></td>
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<tr>
<td>6. Resource accessibility</td>
<td>Access to appropriate resources (information, experts, time, materials) to enable them to fulfil their brief successfully</td>
</tr>
<tr>
<td>7. Task definition</td>
<td>The scope of the exercise, the expected output and the mechanism of the procedure should be defined at the outset</td>
</tr>
<tr>
<td>8. Structured decision making</td>
<td>To enable debate over the underlying assumptions of a decision, how the decision was made, the extent to which it was supported</td>
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Conclusions ….. Implications?

- The practice of effective & successful engagement on CCS is in its early days, but we have to learn rapidly.

- A Mode 3 clumsy knowledge-production, involving a ‘hybrid imagination’, is needed. This encompasses traditional academic knowledge, but also process-based facilitation skills and insights and other practical and socio-cultural knowledge (bureaucratic, regulatory, experiential, etc.)

- ‘Silo’ mentality of planning is convenient for government and industry, but not up-to-the-task of radical socio-technical transitions that are now required.
The Future ……

- Radical changes in project planning decision-making is desirable – e.g. how to relate CCS projects to peoples daily life experiences? How can CCS contribute to a local community’s sense of well-being and sustainability (as defined by them, not government or a company or academics)?

- This is more complex than instrumental ‘planning gain’ or compensation packages. Its more about meeting peoples’ aspirations for a better life whilst also addressing climate change.

- E.g. how can sustainable transport, domestic energy efficiency, cultivation of new energy technologies and jobs, or more sustainable communities be dealt with as part of a CCS project?
Making Clumsiness Work?

• Clumsiness can help in joining-up (finding commonality between) divergent perceptions, values, issues and agendas, but it needs a theory and practice.

• Work needs to be done to find a way of structuring clumsiness - rather than (or perhaps in addition to) a top-down theory, this might require bottom-up experimentation driven by local context and conditions ….. grounded theory + top-down heuristics?

• Learning processes likely to be vital ….. But institutions have a poor track-record here, so understanding why learning is hard is also important.