

# **SPECIAL SESSION: Communicating Risk and Uncertainty**

Specialist: **Catherine Butler**



# COMMUNICATING RISK AND UNCERTAINTY


---

Dr Catherine Butler

University of Exeter

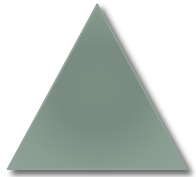
[c.butler@exeter.ac.uk](mailto:c.butler@exeter.ac.uk)

@drcbutler



PROCESS  
IS  
MESSY.

# Key debates in communicating risk and uncertainty



Interpretation of risk and uncertainty



Public participation, engagement and uncertainty



Communication beyond 'formal' modes

# Interpretations of risk and uncertainty

- Different ways of interpreting risk information and engaging with uncertainty
- Social process – multiple interactions, forms of experience, values, and views influencing decisions and how information is processed
- Not purely rational and calculative – emotional, political, serving diverse interests
- Risk as one lens for viewing problems – constraints and limitations

## Interpretations and experience...

“The risk was quite small... Yes it flooded but John over the road, he’s lived here 50 years, the flood, not this one but the one before was the first time in those 50 years he’d flooded so didn’t really, I mean yes obviously there is a risk but it didn’t feel that it was a ...

...They say it’s 1 in 100 years and that’s 0.5% every year so we thought, “Okay, we can live with that risk”, unfortunately we weren’t so lucky with that 0.5% seven weeks later! We weren’t quite prepared to be here seven weeks before it flooded but...”

# Interpretations and politics...



# Interpretations and sheep farming...a classic example

Wynne (1992) Misunderstood, misunderstandings – explains disputes between science and sheep farmers over risk and decision-making about nuclear fall out from Chernobyl





# Interpretations and sheep farming... a classic example

'Understanding' or knowledge, its precision and resilience, is a function of social solidarity, mediated by the relational elements of trust, dependency and social identity; constructing that 'intellectual' understanding should be seen as a process of social identity-construction'.

(Wynne, 1992)

# Public engagement and uncertainty

- Debates in public engagement concerning approaches to decision-making and efforts to manage uncertainty (Leach et al. 2007; 2010; Stirling et al. 2007)
- Conventional approaches to decision making often poorly adapted to account for challenges in complex dynamic systems where indeterminacy can be inherent.
- Frameworks for decision-making that can be responsive and more robust in light of the inevitability of shocks – multiple pathways

# STEPS Centre

‘Narratives prioritise different aspects of systems dynamics and propose different strategies to deal with them’. (Leach et al. 2011)

## Stability

System assumed to  
move along  
unchanging path -  
control

## Resilience

Limits to control  
acknowledged –  
more responsive

## Durability

System subject to  
stresses and shifts –  
control change

## Robustness

Embrace limits to  
control and openness  
to enduring shifts

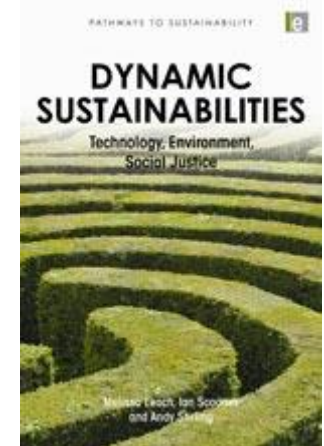
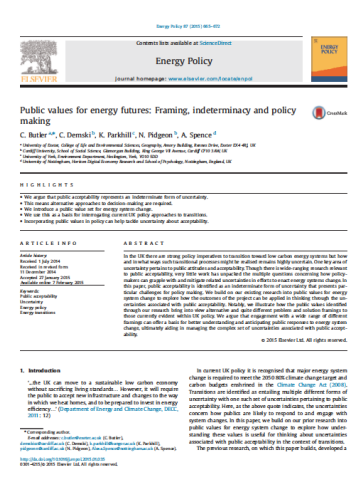
# Public engagement and uncertainty

- Central to creating an alternative approach is an understanding of the ways that different people and groups value different aspects of systems and goals or outcomes, and frame the issues in fundamentally different ways.
- Narrow framing results in narrow range of options being considered (e.g. risk and control, singular tech responses) – reduces ability for responses to account for inevitable changes and surprises over time.

(Stirling et al. 2007; Leach et al, 2011)

# Two (imperfect) examples

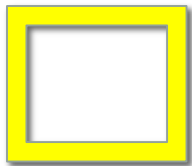
- Public values for energy system change – plural framings evident in public discourse about energy systems beyond the tri-lemma framing (Butler et al. 2015)
- Seeds in Africa – explication of diverse pathways to mitigating crises in global food (Leach et al. 2011)



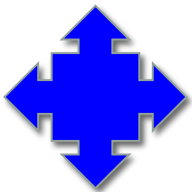
# Communication beyond 'formal' modes



Beyond participation as a means to solve problems of deficits in information, legitimacy, trust, or acceptability



Engage with plurality, open-up, reflexivity



Institutional body language (Otway and Wynne, 1988)



Emergent publics and generative events (Marres, 2011; Whatmore and Landstrom, 2011)

# Some issues for discussion...

- Problem framings and their influence in decision-making processes
- Relationship between forms of knowledge and other aspects important in decision making (e.g. experience, politics, emotions)
- Critical reflection on some prevalent concepts – e.g. trade-offs, acceptability
- Interaction across scales and between different areas of concern (e.g. energy-food-water)

# THANK YOU

---

Dr Catherine Butler, University of Exeter

[c.butler@exeter.ac.uk](mailto:c.butler@exeter.ac.uk)

@drcbutler



notes