

# Welcome to Newcastle

## #FPRN4

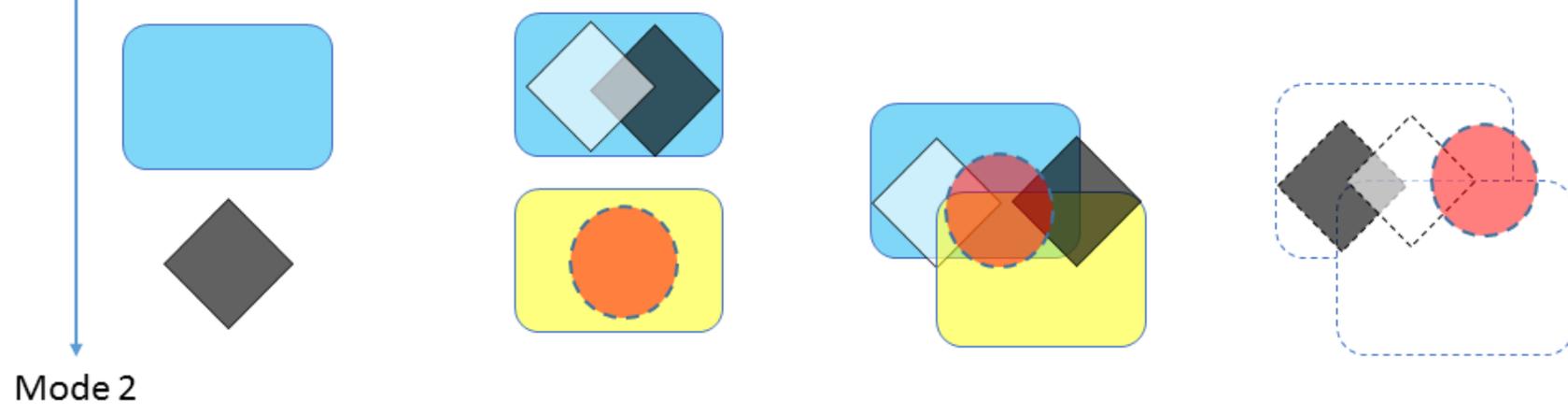
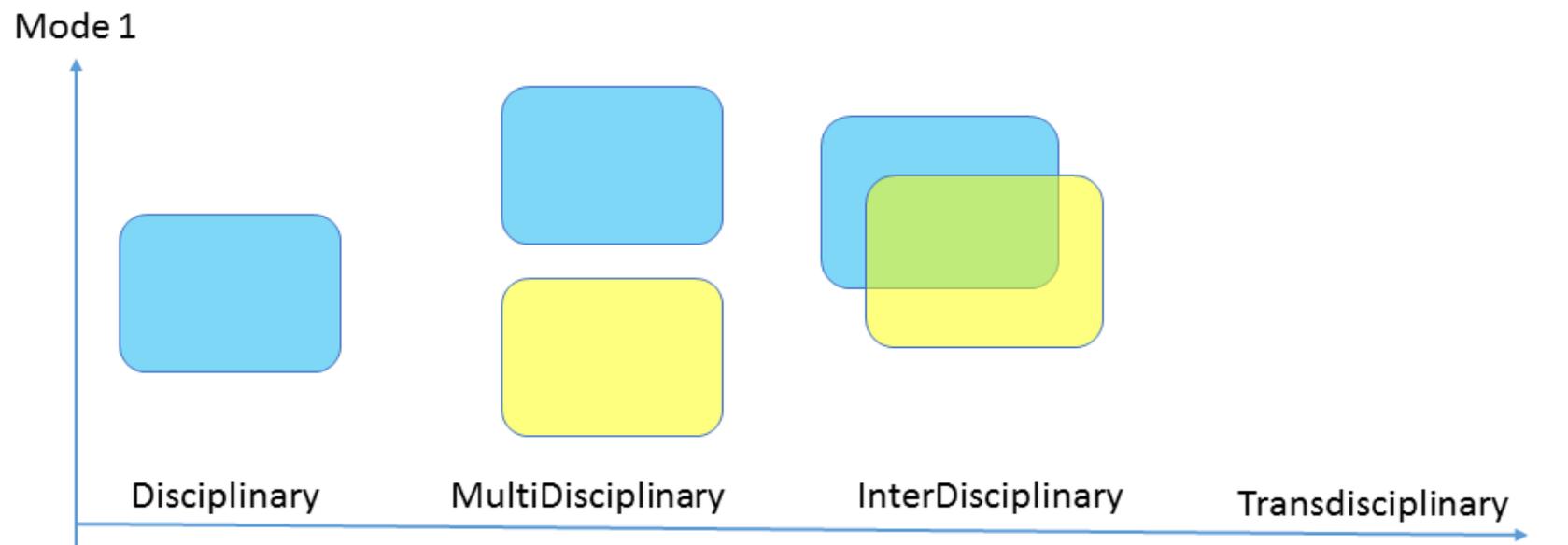
Dr Gareth Powells

# What we do (too)

1. **Collaborating** and creating opportunities for collaborative working within and between sectors
2. **Uniting** policy, practice and academia
3. **Disseminating and communicating**
4. **Impacting:** maximising opportunities for informing and shaping policy and practice.

# Energy and the Social at Newcastle

- School of Geography, Politics Sociology / Architecture, planning & Landscape (Faculty of HASS)
  - Energy and the Built Environment (Calderon)
  - Urban energy (Powells, Wood)
  - Vulnerability (Social Geography and Sociology)
  - Economic Geography of Energy (Dawley , Pike)
- School of Engineering
- Institute of Sustainability
- Sir Joseph Swann Centre for Energy Research



	Academic Discipline		Public / Voluntary Sector Research Partners		Private Sector Research Partners		Community / Respondents
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# FrESH



*Action for Warm Homes*

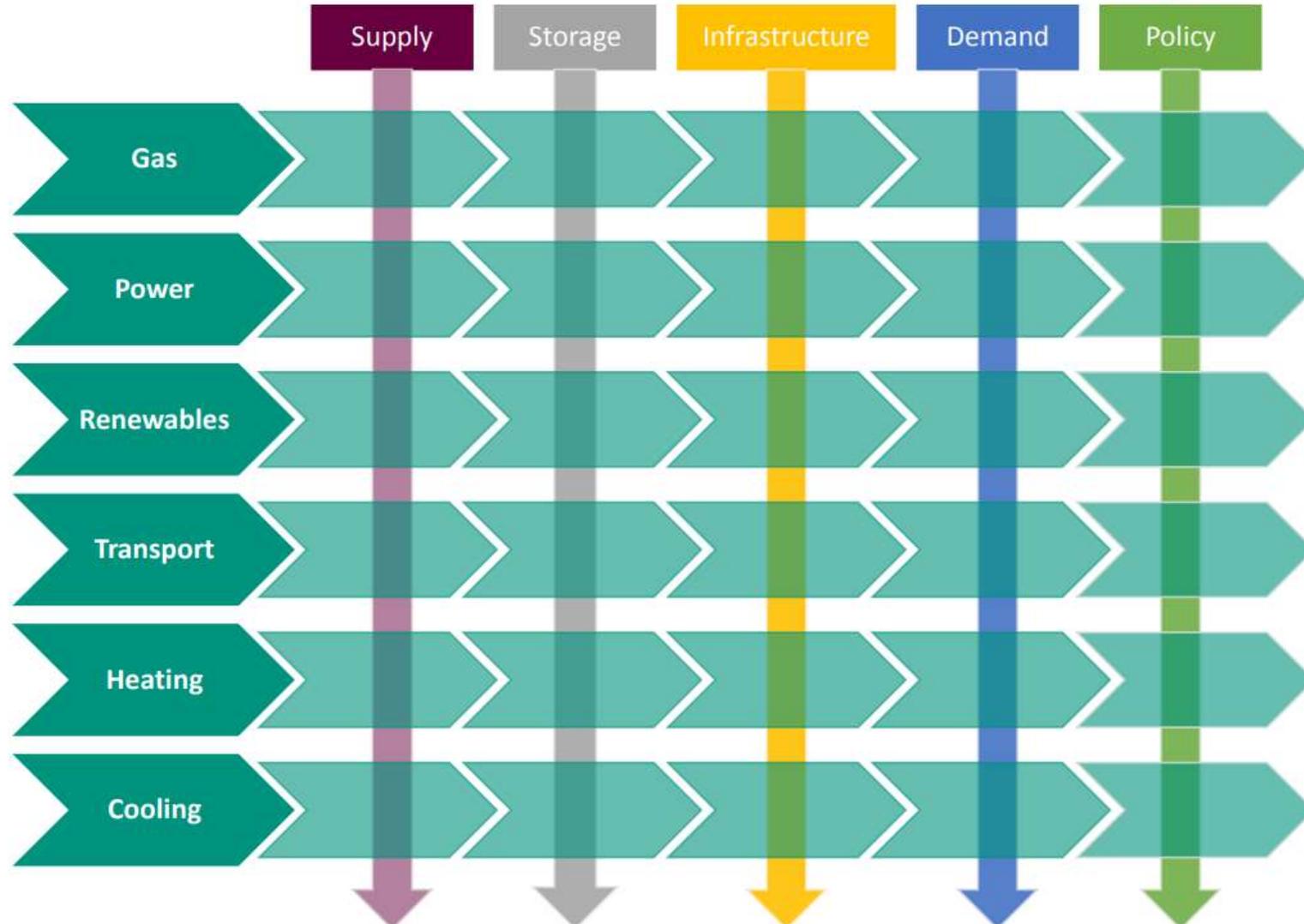


# EPSRC National Centre for Energy Systems Integration



National Centre for  
Energy Systems  
Integration

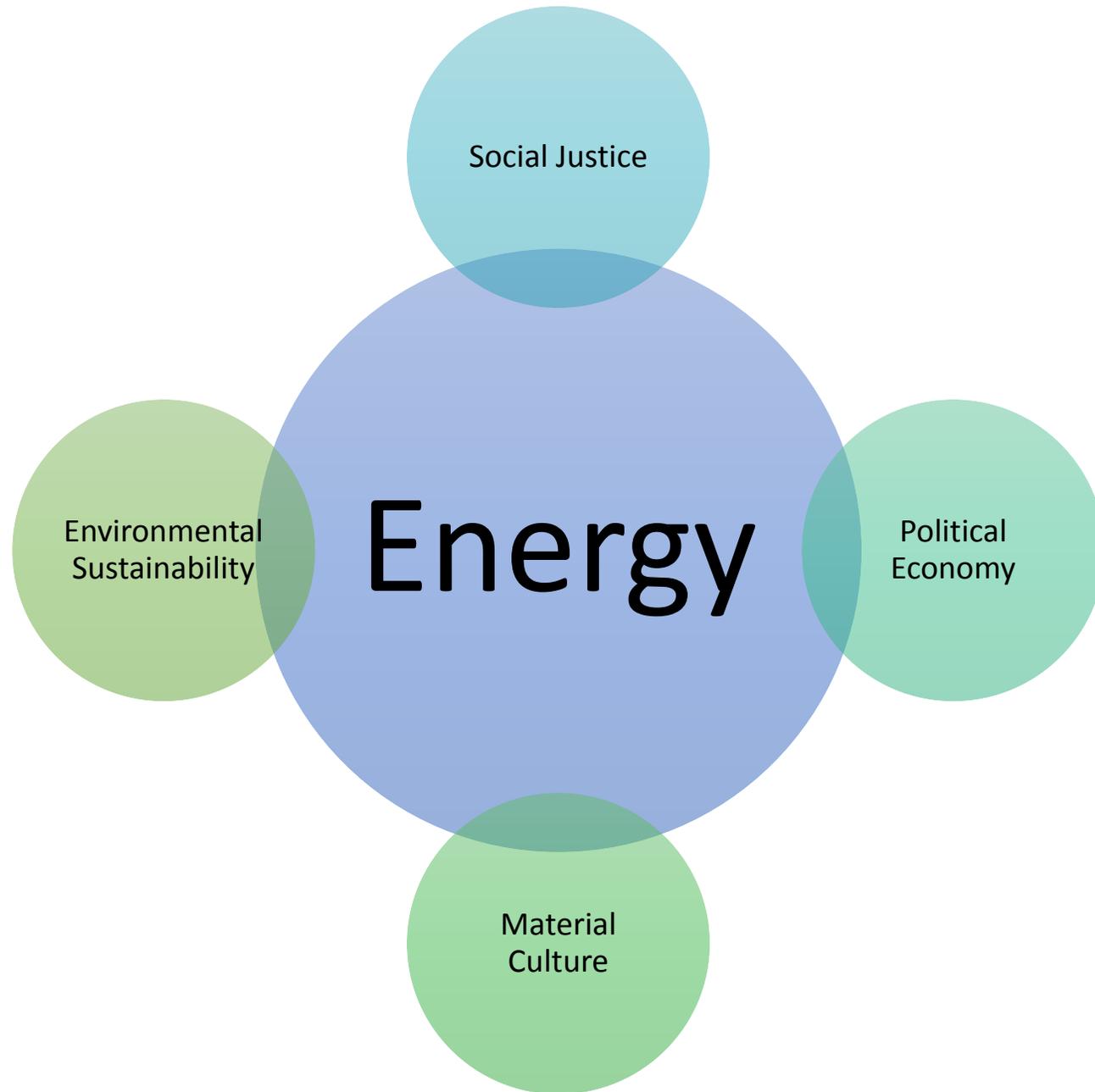
Energy Vector and  
Research Discipline  
cross cutting



**EPSRC**

Engineering and Physical Sciences  
Research Council





Social Justice

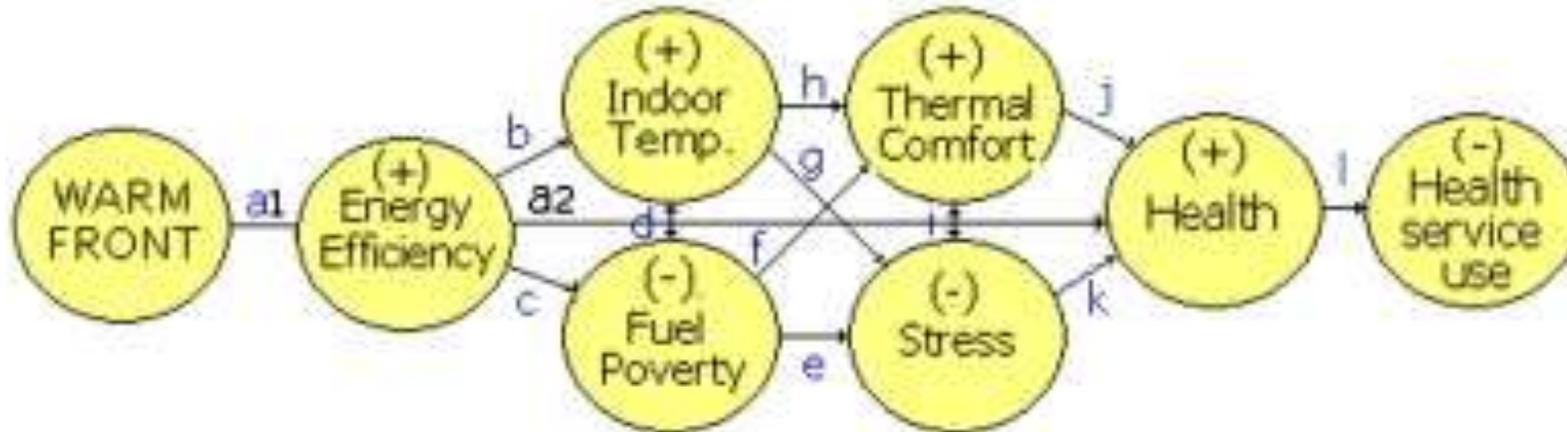
Energy

Political  
Economy

Material  
Culture

Environmental  
Sustainability

### PSYCHOSOCIAL PATHWAYS TO HEALTH



Gilbertson, J., Grimsley, M., & Green, G. (2012). Psychosocial routes from housing investment to health: Evidence from England's home energy efficiency scheme. *Energy Policy*, 49, 122–133. <https://doi.org/10.1016/j.enpol.2012.01.053>

# HIP: Reflecting on Research Methods and Context

Dr Gareth Powells

School of Geography, Politics and Sociology

# Outline

- 1. ROLE OF NU AS CRITICAL FRIEND**
- 2. METHODOLOGICAL AND ETHICAL DIALOGUE**
- 3. EPISTEMOLOGY**
- 4. RESEARCH CONTEXT**
  - **SOCIO-TECHNICAL ENERGY STUDIES**
  - **HEALTH AND ENERGY**

# Role of Newcastle University in HIP

- Dr Gareth Powells and Prof Phil Taylor of Newcastle University
- contributed to the HIP project by acting as critical friends to the project evaluators.
- This has involved:
  - attendance at regular evaluation meetings
  - reviewing methodology documents
  - consulting on the design of evaluation instruments
  - encouraging reflection on the evaluation process at key moments in the project.
- long standing relationships and dialogue between Newcastle University
- Most relevant among previous collaborations was the Customer Led Network Revolution Project
  - challenges of managing a large research project with large amounts of diverse data

# PRACTISING CRITICAL FRIENDSHIP

- Valuable to both parties
- Ongoing, peer to peer evaluation
  - most often associated with learning environments (schools)
  - Increasingly popular form of reflective practice
- Meta-evaluation
  - a learning focused dialogue through which NEA's internal evaluation team could talk, reflect and learn about their evaluation
- Aims
  - to identify flaws or weaknesses in-project (ad-hoc) not post-hoc
  - develop a conversation and vocabulary about kinds of knowledge & claims the evaluation team would be in a position to make about their work
- Contrasts with more conventional, formal evaluator role which focuses on the degree to which a project or practice meets or exceeds targets or baselines

# METHODOLOGICAL AND ETHICAL DIALOGUE

1. Are the research methods being used to perform the evaluation were as effective, well designed and appropriate for the context as possible?
2. Is the research ethically sound?
  - i. would not cause any harm to participants
  - ii. captured the full range of experiences wherever possible so that vulnerable customers voices were heard
    - would be as accessible as possible to the widest range of participants
  - iii. would not ignore signs of distress or dire need

While the evaluation team **did not** take responsibility for addressing or solving extreme cases of need, they felt that a duty of care to such households:

- i. commitment to research ethics
- ii. NEA's role as a Fuel Poverty charity

# *VULNERABLE CUSTOMER: INCLUSION*

- The SRA establish as a moral obligation the, “responsibility to ensure inclusion in research projects of relevant individuals or groups who might otherwise be excluded for reasons of communication, disability, comprehension or expense” (The Social Research Association, 2003, p. 37).
- format of the paper survey to make it readable for those with visual impairment in line with current research methods literature (Kaczmirek & Wolff, 2007)
  - avoiding the use of very small fonts
  - leaving blank space on the sheet to reduce the ‘density’ of the text,
  - offering a brail or telephone version for those who would prefer that
  - giving participants the alternative option of choosing to take part in a telephone or face to face interview rather than complete a survey.

# *VULNERABLE CUSTOMERS: DUTY OF CARE*

- Extends beyond the harm / Hippocratic principal of not causing suffering to participants
  - does not cover in full the approach taken.
- “What ought a researcher (or evaluator) do when made aware of suffering that he or she has not caused?”
  - Duty of care toward participants was adopted from NEA’s other work
  - No participant found to be in urgent need of support (whether financial, medical or other) was left without a serious attempt being made to direct them to sources of support.
  - At times, could be in tension with the right to anonymity (and thus conventional research ethics)
    - acknowledged in advance and only breached in the most extreme circumstances
    - This is a more utilitarian approach (the ends do justify the means)

# *MINIMISING EVALUATION FATIGUE*

- fatigue can be a real problem for both the researcher but more significantly for the participant
  - can degrade the value of the data being as well as the likelihood of being able to maintain ongoing research relationships with participants (Clark, 2008).
  - This was actively managed
    - number of times participants were returned to,
    - Avoidance of overburdening some participants with a very minor intervention with evaluation activity.

# EPISTEMOLOGY

- HIP is not, first and foremost, a research project.
  - a program for the installation of innovative measures
  - albeit, one which seeks to learn as much as possible from that process.
- The evaluation team have had to develop an evaluation approach which works with rather than against this,
  - not claim to be a series of 'trials', (randomly controlled or otherwise).
  - This has manifested itself in the design of measurement approaches concerning the technical performance of the measures,
    - good practice and the best available equipment has been used wherever possible
    - This was a pragmatic approach that avoided holding up delivery of measures until 'perfect' monitoring equipment and 'trial design' could be put in place.

# Epistemology - Social Evaluation

- The social evaluation has adapted to and worked around the emergent and changing nature of the program
- Baseline data was created in order to *illuminate the changes experienced by trial participants*
- while efforts have been made to use research instruments (an adaptive survey) that capture these changes, attributing causality to the intervention is inherently problematic.
- explanatory qualitative data to explain any changes
  - sometimes attributing the improved health to the measure
  - sometimes explaining that the change is nothing to do with the measure.
  - Where no explanation is given, statistical testing may be able to identify significant **associations** in the data (i.e. associations that are unlikely to be found by chance) but strict attribution of causality is, inherently, not possible in research like this.

# Experimental Energy Governance

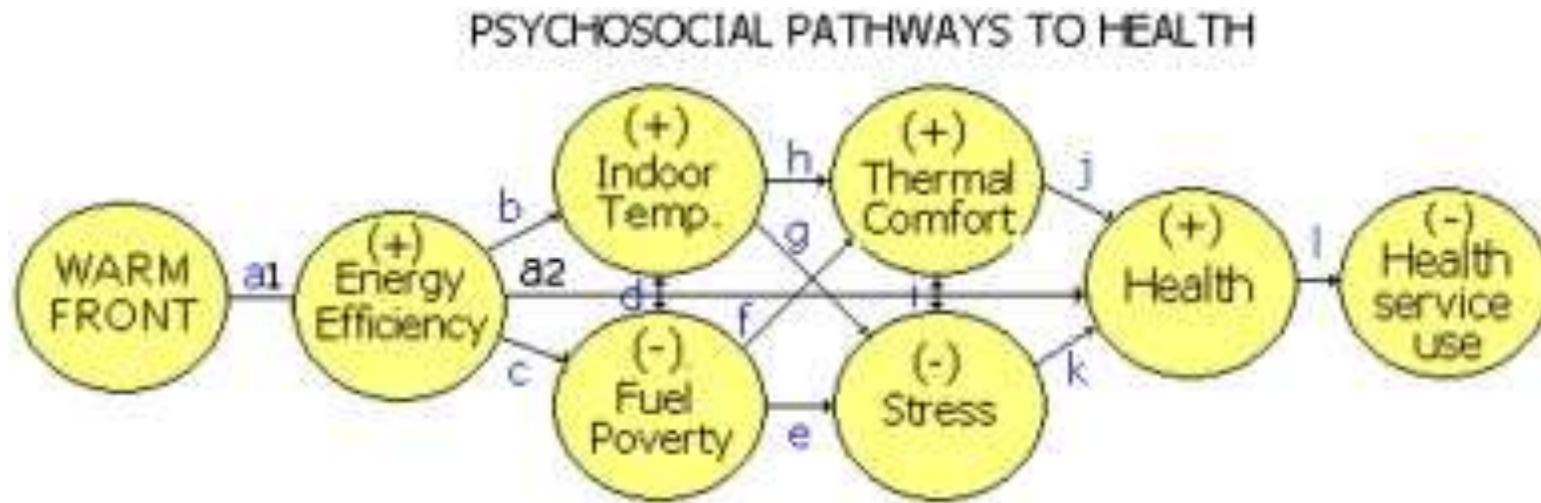
- This amounts to an epistemology,
  - one that is about learning-by-doing
  - features in the research literature about new forms of experimental governance (Bulkeley & Castán Broto, 2013; Evans, Karvonen, & Raven, n.d.; G. P. J. Verbong, Beemsterboer, & Sengers, 2013)
  - Phronesis – the development of practical wisdom (Flyberg, Hargreaves)
    - governance actors (including state and non-state actors) collaborate on governance projects and learn from the process.
    - emphasis moves from plan-based policy to project-based intervention, in fact requires this epistemology.

# SOCIO-TECHNICAL ENERGY STUDIES

- The HIP project is among a growing field of interdisciplinary studies
  - Inter-disciplinary
  - Collaborative
- inspired by the central claim that *“large technological systems such as energy networks, are deeply intertwined with the overall structure of society”* and the need for a style of research that *“acknowledges the high degree of complexity facing modern policy problems – such as the*
- despite the flourishing of this work, only a minority (albeit a significant emerging body of research) of socio-technical energy research steps out of the familiar trilemma to consider links between energy and health.

# Energy and Health

- In comparison with wider energy research, studies of energy and health are significantly less common (Thomson et al **2001**)
- (Liddell & Morris, **2010**) review the field and conclude that the links between fuel poverty and health are robust but modest
- *“Whilst the relation between poor housing and poor health may seem self-evident, there has been **a lack of good evidence** on the health improvements that result specifically from investment in housing”* (Gilbertson, Grimsley, & Green, **2012**, p. 123).
  - An evidence problem or an epistemic problem??
  - Conceptual model is well established



Gilbertson, J., Grimsley, M., & Green, G. (2012). Psychosocial routes from housing investment to health: Evidence from England's home energy efficiency scheme. *Energy Policy*, 49, 122–133. <https://doi.org/10.1016/j.enpol.2012.01.053>

# More recently

- Meta Review by the same group
- “On average ... household energy efficiency interventions led to a small but significant improvement in the health of residents.” (Maidment, Jones, Webb, Hathway, & Gilbertson, 2013, p. 583).
  - clear the need for new research in this area
  - particular focus on
    - very young
    - very old
    - very low income communities
    - found to receive the greatest health benefits from energy efficiency interventions.
- Maidment, C. D., Jones, C. R., Webb, T. L., Hathway, E. A., & Gilbertson, J. M. (2013). The impact of household energy efficiency measures on health: A meta-analysis.