

How is scientific knowledge made, communicated and understood?

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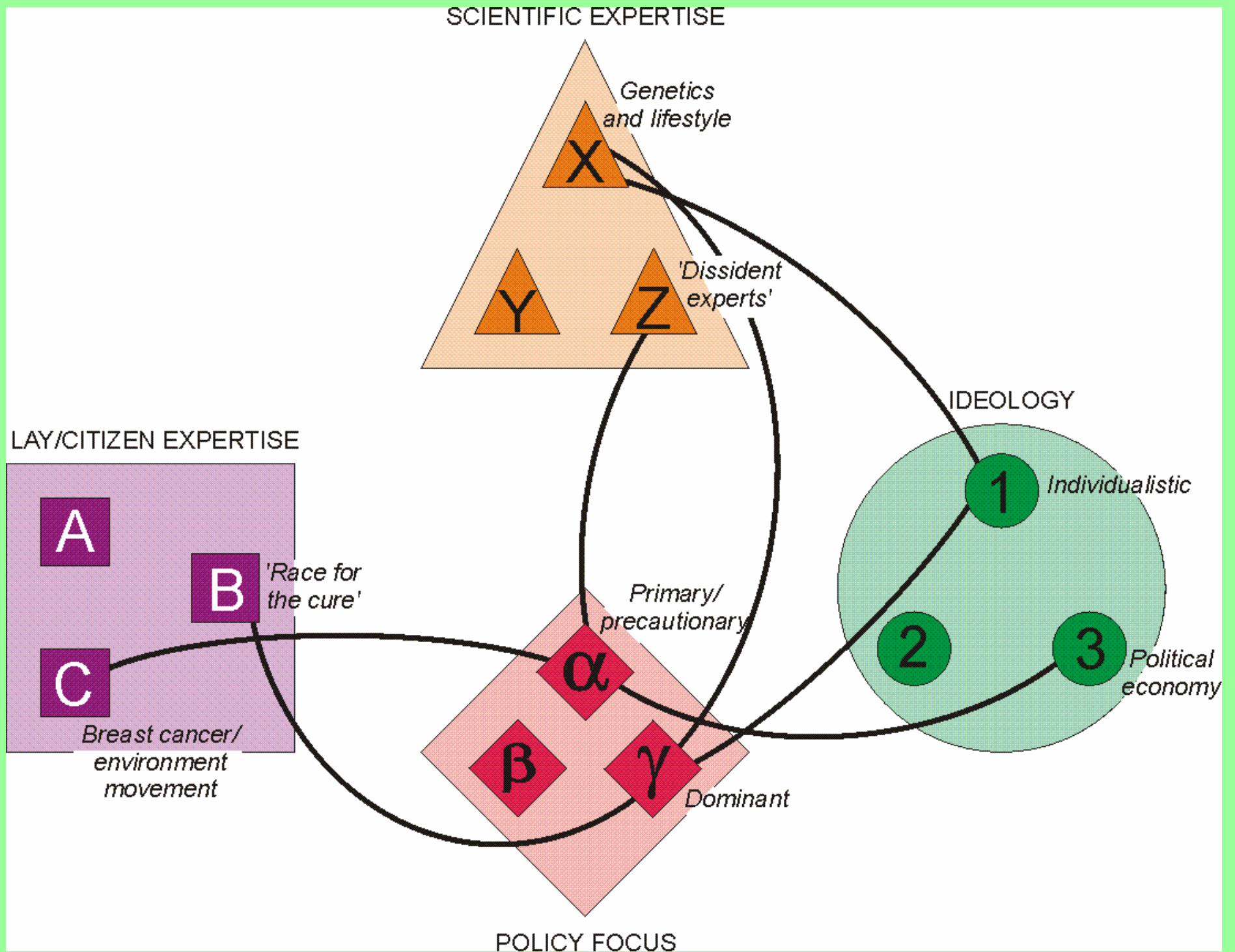
Chair: Juliet Upton, Chair, Science, Technology, Engineering and Medicine PR Association





**‘DIVIDED WE STAND: BRIDGING
DIFFERENTIAL UNDERSTANDING
OF ENVIRONMENTAL RISK’**

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Aims of the project:

1. To contribute to the legitimation of citizen expertise in relation to the governance of risk
2. To establish collaborative public engagement of a range of communities of interest
3. To mediate knowledge claims about environmental risk

What we did...

1. Interviews and focus groups
2. Local hearings, local knowledge
3. Mapping
4. Graffiti exercise
5. National hearing

What we learned...

ideological and
epistemological paradigms
shape science and its
governance

Ideological positions

(ie. the ideas and concepts a person holds to make sense of society and their role in it)

regarding :

- the nature of scientific enquiry
- political processes
- the role of capitalism in relation to the state

FENCES AND DEFENCES



- Cancer charities



- MPs/APPG



- Participation in hearings



Setting:

public

vs.

private



‘Michael Meacher syndrome’

Political
constraints.
The civil service.

(occupational and
environmental
health researcher)



‘Vested interests’

personal and
career,
capitalism and
industry

(oncologist and
occupational and
environmental
health researcher)



Nervousness of media

Pernicious anxiety -
misinformation
misrepresentation

(epidemiologist,
oncologist,
environmental
health officer)



Epistemological positions

provide a framework for

- the sorts of questions that can be asked,
- the kind of evidence or proof required
- the accepted procedures for generating knowledge: a paradigm.

The search for explanation

- Consensus that the reasons for the significant increased incidence of breast cancer remains unexplained.
- Such a search may be personal or political, or part of the scientific enterprise.
- ‘Cancer professionals’ tended to distance themselves from this search for explanation: looking for causes was part of a bigger picture with which they are not qualified to engage.

‘not my specialism’



The complexity of the aetiology of breast cancer

- “...incredibly complicated, for most people that get [breast cancer] there isn't a simple answer, I don't think so anyway”(research scientist)
- “...she'll say forget it, we know what the causes of breast cancer are, what are you on about...” (an epidemiologist)

Differing interpretations of the data and 'flawed methodologies'

- the lack of comparable studies,
- problems of confounding variables and controls,
- differing interpretations of the same data,
- 'despite the inconclusive nature of the science, each side within the debate uses and interprets that data to suit its claims'. (Driedger & Eyles 2001:1598)

The translation of science into policy

- While the approach to breast cancer causality is not agreed, the adoption of precautionary public health actions remains impossible.
- Dissident research scientists claim there is adequate evidence but that policy makers, and journal editors, are frightened to act on what is known.



The NHS Cancer Plan

A plan for investment
A plan for reform

September 2000

2

Improving prevention

- new national and local targets to reduce smoking in disadvantaged groups
- new local alliances for action on smoking
- support in primary care to help people quit smoking
- £2.5 million for research into smoking cessation
- national five-a-day programme to increase fruit and vegetable consumption
- National School Fruit Scheme
- raising public awareness

State of the Evidence

<http://www.bcaction.org/PDF/StateofEvidence.pdf>

“There is no shortage of advice for women about things they can do in their personal lives to possibly reduce the risk of breast cancer. But breast cancer is more than a personal issue; it is a public health crisis that demands action by society as a whole.”

Adjournment debate

- THE DREAM:

Speech for MPs requested by APPG,
raising questions for ministers to answer
– a public health approach

- THE REALITY:

Hansard transcript with emphasis on
individual lifestyle responsibility

The tyranny of evidence ...

Evidence based decision making is crucial, but evidence cannot always keep up with the pace of issues to be addressed in policy terms – which is to say that epidemiology is not fast enough to protect health.

For instance, California introduced anti-smoking legislation before all the evidence was collated on the risks of passive smoking – to the benefit of the health of the population.

Common ground

“Said had an uncommon talent for finding a common ground. While this was undoubtedly a matter of charm and personality, it is also important to recognise the ***intellectual effort that goes into this at the deepest level.*** Identifying and occupying such common ground are not easy tasks because they are activities that can involve ***a questioning rather than a fortifying of self,*** and usually mean ***giving up the sense of security that comes with the absolute denigration of your opponent.*** Finding common ground became, for Said, the expression of a fundamental moral and political principle...”

From a review of Edward Said's last works in *Times Higher*, July 9th 2004,

John Higgins: 'Engaged on every front'.



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