
When, where and why does evidence matter to policy-makers?

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In the case of BSE we were repeatedly told by MAFF ministers and senior officials that UK policy was based on, and only on, ‘sound science.

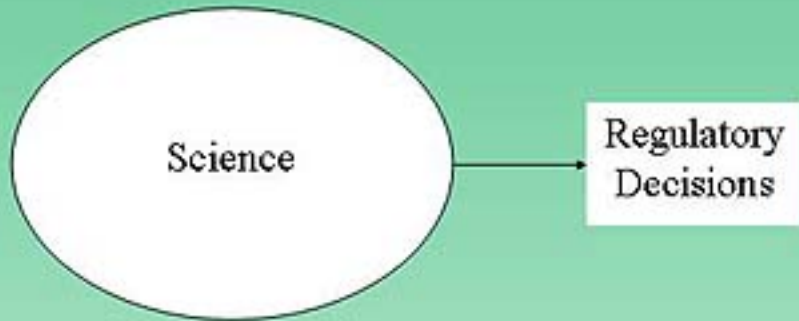
That was always misleading: the science was always uncertain and equivocal; **evidence could never have been decisive.**

MAFF’s implicit model of policy making was a **technocratic** one:



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Model II: The Technocratic Model – ‘Policy is based on sound science’



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The technocratic narrative is useful to policy-makers by providing a way to de-politicize issues and insulating them from controversy and scrutiny.

It enables ministers to hide behind their experts, and to use them ‘as their shield’, but it also appeals to the experts by flattering their intellectual and social authority. But it has crucial drawbacks.

Once MAFF policy-makers had claimed that their knowledge was sufficiently complete, consistent and robust to enable them to be certain that the risks were vanishingly slight, they painted themselves into a corner. They lost the capacity to respond to new evidence, they became deaf, and could no longer learn.



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By reiterating that they knew enough to be certain that BSE was perfectly safe, and that policy was based on and only on sound science, civil servants eventually concealed from ministers the fact that policy-decisions were being made and needed to be made.

At various stages, several ministers indicated that they wanted to modify BSE policy, making it more precautionary.

MAFF officials told them that they could not do so unless and until they had new evidence to justify those changes.



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Some interpret evidence-based policy as meaning that policies can be based **on, and only on**, evidence. Others recognise that, however useful and indispensable **evidence** may be, it is **all too often incomplete and equivocal**, but even when it is robust and unequivocal it is never by itself sufficient to decide policy.



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Ministers and senior officials repeatedly asserted that their scientific understanding of BSE was sufficiently complete and secure, and that British beef was perfectly safe and that policy was based on, and only on sound science; and that any challenge was scientifically illegitimate.



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In practice, the available evidence did not support that narrative, but nor could it prove it wrong. The uncertainties were massive, and the reassuring narrative was consistent with only a fraction of the evidence.

The official narrative was: ‘cattle are a dead end host’ for BSE and so it would not transmit to other species. It progressively unraveled.



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In May 1990 it emerged that a domestic cat, **Max**, had succumbed to a novel Spongiform Encephalopathy, in subsequent weeks and months several other cats were diagnosed with a similar novel SE. The government's reassuring narrative had been based on the premise that BSE was just scrapie in cattle, but scientists had repeatedly been unsuccessful when trying to infect cats with scrapie. This evidence therefore undermined the claim that BSE was just like, and no more transmissible than, scrapie. It also undermined the suggestion that the disease was confined to ruminants.



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MAFF's response was to discount the feline evidence, and that tactic was repeated when evidence of infectivity in other zoo and laboratory species emerged.

When, in February 1990, MAFF was told by the Chartered Institute for Environmental Health that compliance with the SBO and MBM regulations was poor, no action was taken because officials argued (privately) that those regulations were necessary only to reassure consumers. Since they were certain BSE could not infect people, undisclosed non-compliance did not matter.



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**Comparisons of private advice from officials to ministers
and subsequent public ministerial glosses:**

In private [1988]: “we cannot answer the question is BSE transmissible to humans.”

In public [1989]: “I am totally and completely sure that there is no risk to man from eating beef.”

In private [1990]: “it would not be justified to state categorically that there was no risk to humans.

In public [1990]: “...clear scientific evidence that British beef is perfectly safe.”

In private [1990]: “such agent that does remain may ...still accompany some preparations of meat.”

In public [1992]: “it isn't possible for BSE to enter the human food chain.”



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It is often entirely reasonable to insist that policies should be more evidence-based than they have been.

My questions are:

What will more, and better use of, evidence enable policy-makers to do? and

What are the challenges that more evidence will *not* enable us to meet? i.e. what are the scope and limits of evidence?



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In the event i.e. on 20 March 1996, **the evidence** of a new disease (new variant Creutzfeldt-Jakob Disease) **destroyed the policy**, the credibility of policy-makers and their institutions.

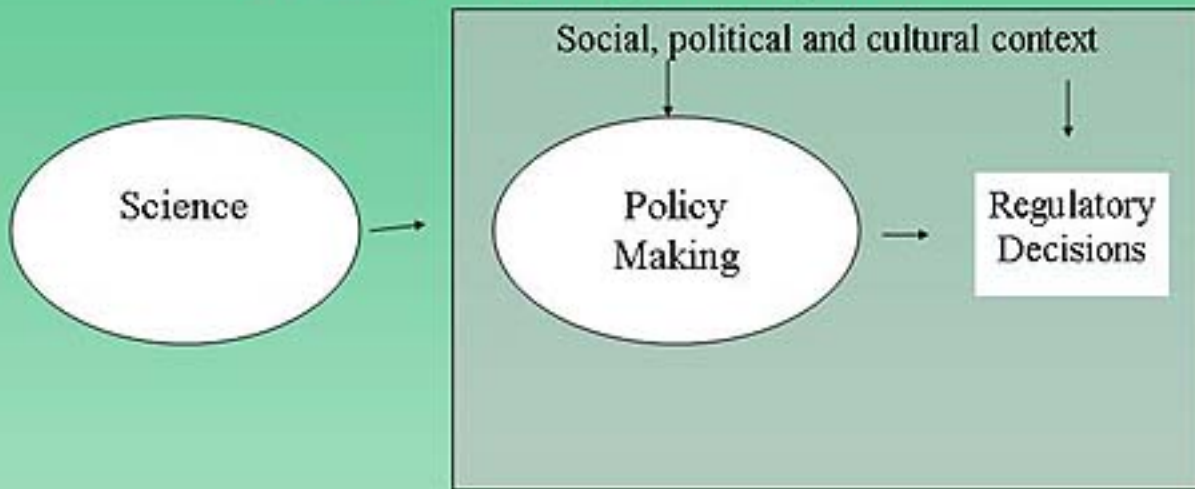
Those events show that you construct a policy on evidence alone, but new evidence can destroy a policy.

In the UK (and EU) a new orthodoxy has subsequently been adopted; it is called the **decisionist** model:



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Model III: The Democratic Model 'Science first, policy-making second'



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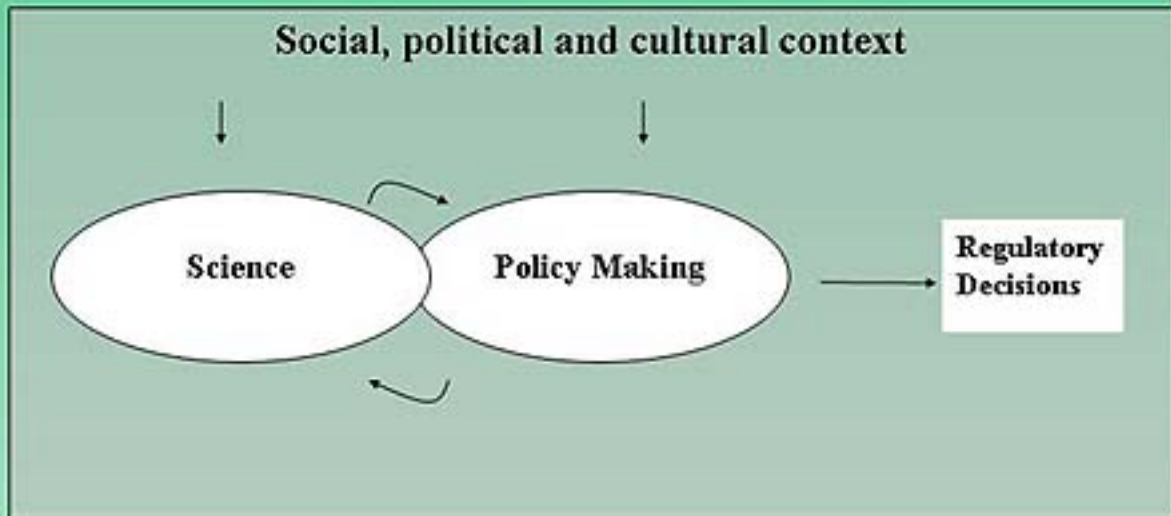
The democratic model is a considerable improvement on the technocratic model. It abandons the pretence that scientific and evidential considerations alone can determine policy, but also because it recognises that policy judgements necessitate evaluating trade-offs, but it is not entirely adequate because it continues to represent scientific and evidential gathering activities as if they operate in a socio-political vacuum.

Science policy scholars have consequently developed a new co-evolutionary model.



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Model IV: The co-production model of science and policy – reciprocal links between science and policy



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On this model, scientific evidence is gathered in, and expert deliberations are framed by, specific political contexts.

That can be legitimate, but only if it is explicitly acknowledged and justified. The real objectives of policy and the ostensible objectives need to coincide.

Policy-makers are then not telling the scientists what answers they want to receive, but they are indicating which questions they want answered.



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The co-evolutionary model implies that science and evidence cannot generate **monolithic and prescriptive** advice but only **plural and conditional** advice.

Policy-makers therefore cannot hide behind experts and evidence, but they do need to be well informed.

On the other hand, both the policy-makers and society generally needs to appreciate the limitations of the evidence that is available.



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To paraphrase Kant:

policy objectives without evidence are pointless,

but data without goals are meaningless.



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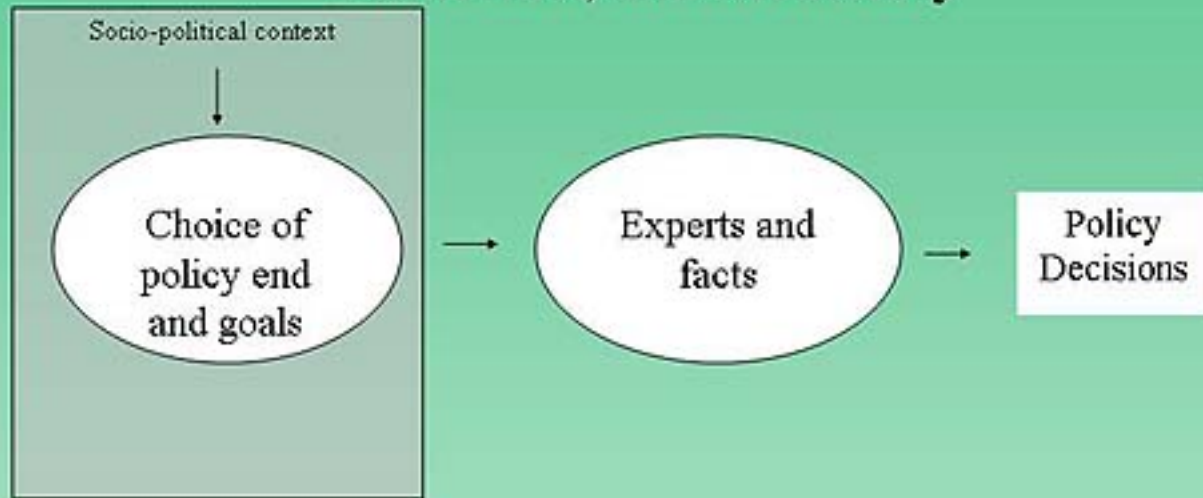
The introduction of the concept of ‘evidence-based’ policy into policy discourse can be understood from several perspectives.

It could be interpreted pragmatically as ‘*let’s do what works*’, drawing on the reasonable assumption that evidence can illuminate discussions about the means with which most effectively to reach chosen ends, **but it cannot decide the choice of ends.**



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Model I: Weber's Decisionist Model 'Politics first, then technocracy'



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When BSE policy-makers were deciding in the late 1980s and early 1990s what action, if any, to take:

- **they needed to know** if cattle products such as beef, milk, gelatin and hides were safe or hazardous.
- **they needed to know** what the available technology could achieve, in terms of tissue separation without cross-contamination
- **they also needed to know** the extent to which slaughterhouse workers were obeying, and would obey, regulations.



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On the other hand:

no amount of evidence could help policy-makers decide between the objective of eradicating the risks from BSE and the objective of reducing it to an acceptably low level, or as far as existing budgets would allow.



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In practice the decision that was taken was to diminish the risks only to the extent necessary to maintain stability in the domestic beef market, and to try to achieve that goal at the lowest possible cost -

but that was not how the policy was represented.



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Evidence may now tell policy-makers how much, and how little, is known about the possible risks to public and environmental health from e.g. GM crops, mobile phone masts or domestic waste incinerators.

But no amount of evidence will enable decisions to be taken on the crucial questions of how much evidence is sufficient, and whether or not the possible risks and uncertainties are acceptable in exchange for the evident or presumed benefits.

Those **policy decisions are hybrid** science-policy judgements that **evidence can illuminate but not settle**.



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