



Caspar Hirschi

The limits of expert knowledge as a political problem

The book cover features a detailed illustration in a sketch-like style. A large, pale hand is shown holding a globe. A man in 18th-century attire stands on the globe, pointing towards the sky. Below him, a crowd of people is depicted, with one man prominently blowing a horn. The background is a textured, golden-brown color with faint lines suggesting a celestial or scientific theme.

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Skandal-
experten

Experten-
skandale

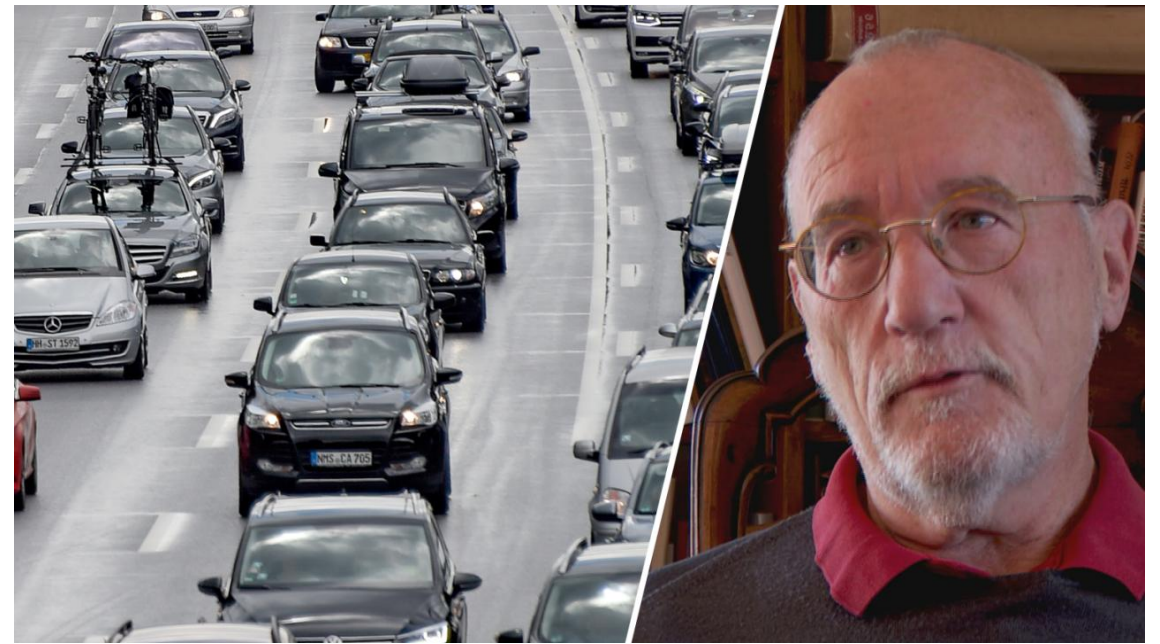
Zur Geschichte
eines
Gegenwartsproblems

Matthes
&
Seitz
Berlin

Two different cases from
different disciplines

The man who predicted an earthquake

On 6 April 2009 an earthquake devastated the Italian city of L'Aquila. A year on, it's reported that toads predicted the disaster. But there was a more vocal warning from a scientific technician - whose forecast was, fatefully, ignored



There are scientific experts communicating to decision-makers and the public...
...and there are “alternative experts” doing the same.

How do scientists deal with it?

The political functions of scientific experts

- Enabling evidence-based decisions by answering questions from decision-makers; independent and competent advice (manifest function)
- Persuading the public of the necessity of certain measures and mitigating possibly controversial issues (latent function)
- Reassuring people irritated by natural events, technological procedures or political decisions (latent function)

Three types of epistemic uncertainty by experts

WHEN THE EXPERTS ARE UNCERTAIN: SCIENTIFIC KNOWLEDGE AND THE ETHICS OF DEMOCRATIC JUDGMENT

MELISSA LANE

- Lack of knowledge intrinsic to the phenomenon under study (i.e. weather system, seismic activity etc.)
- Conditional uncertainties with respect to the current state and methods of scientific inquiry (referring to theories, data, modelling, parameters etc.)
- Disagreement between scientific experts from one or various fields about a critical issue

Epistemic uncertainty becomes a problem, when...

- ...the authority of experts is challenged by amateurs or “alternative experts” (i.e. specialists in related fields claiming superior expertise)
- ...the public expresses growing concerns about natural or technological risks related to scientific uncertainty.
- ...political decision-makers want to hide behind expert opinions in order to avoid personal risks and public debates.

All these problems are related to the latent functions of scientific expertise, which is why they cannot be properly addressed.

The problem turns into a trap, when...

- ...experts react to outside challenges by disregarding, silencing or attacking the challenger (i.e. “this person does not have peer-reviewed publications”)
- ...experts try to hide their epistemic uncertainties about natural or technological risks or exaggerate the scope of their expertise.
- ...experts give in to pressure by government or companies and act as their spokespersons or allow them to overstate the scope of scientific knowledge.

Is the trap unavoidable in critical situations?

Deal with epistemic uncertainty in public, before you are dealt with by the public!

- Admit uncertainty in public, unpack black boxes, make clear which questions by decision-makers you can answer, and which you cannot.
- Try to clarify what kind of uncertainty you are dealing with: intrinsic, conditional or competitive. Do not only emphasise scientific consensus, but also dissent!
- Address problematic expectations of experts, especially regarding the calculation of risks or the validity of predictions.

How to react to public or political pressure

- When being publicly challenged, never attack the challengers, but discuss their arguments from a scientific point of view.
- Demonstrate your independence by confronting decision-makers in government and business publicly when they claim to act evidence-based without actually doing so.
- Emphasise publicly that decision-makers are responsible for decisions – even if they are evidence-based!

Help to establish a new manifest
function of scientific expertise:

the demarcation between
scientific certainty and
uncertainty in public debates!