SOCRATES
Social Credibility and Trustworthiness of Expert Knowledge and Science-Based Information
Centre for Advanced Studies

Leibniz Universität Hannover

Models And Trust: Highlighting Issues Across Science

International Workshop
6–7 June 2024

Leibniz University Hannover
Welfengarten 1, 30167 Hannover

Welfenschloss / University Main Building, Building 1101
Room F335 (Senatssaal) (3rd floor)

Schedule

Day 1 – June 6th

09:30 – 10:00	Welcome and Coffee
10:00 – 11:00	Giovanni Valente (Politecnico di Milano) *Tales of Twin Cities: What are Climate Analogues Good for?*
11:15 – 12:15	Soazig Le Bihan (University of Montana) *How to Secure Public Trust in Value-Laden Science - A Fiduciary Model*
12:15 – 13:30	Lunch
13:30 - 14:30	Nick Huggett (University of Illinois, Chicago) *Demarcating Research from Pseudo-Research*
14:45 - 15:45	Roman Frigg (London School of Economics) *Models, Understanding, and Trust*
15:45 – 16:15	Coffee
16:15 - 17:15	Craig Callender (University of California, San Diego) *When Is It Okay to Ban Research (Funding)?*
19:00	Dinner at Restaurant Soulkitchen, Lichtenbergplatz 2a, 30449 Hannover

Day 2 – June 7th

09:00 – 09:15	Coffee
09:15 – 10:15	Carl Hoefer (University of Barcelona) *Trust in Public Health Science after the Covid-19 Pandemic: A Pessimistic Outlook*
10:30 – 11:30	Eric Winsberg (University of South Florida; Cambridge University) *On Managing Values in Science: A Return to Decision Theory*
11:30 – 12:00	Coffee
12:00 – 13:00	Quill Kukla (Georgetown University) *Healthism, Elite Capture, and the Pitfalls of an Expansive Notion of Health*
13:30	Lunch at Lieb.es, Engelbosteler Damm 15, 30167 Hannover

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Abstracts

Giovanni Valente (Politecnico di Milano)

Tales of twin cities: what are climate analogues good for?

This talk, based on joint work with Hernan Bobadilla, Rawad El Skaf and Francesco Nappo, provides an epistemological assessment of climate analogue methods, with specific reference to the use of spatial analogues in the study of the future climate of target locations. Our contention is that, due to formal and conceptual inadequacies of geometrical dissimilarity metrics and the loss of relevant information, especially when reasoning from the physical to the socio-economical level, purported inferences from climate analogues of the spatial kind we consider here prove limited in a number of ways. Indeed, we formulate five outstanding problems concerning the search for best analogues, which we call the problem of non-uniqueness of the source, problem of non-uniqueness of the target, problem of average, problem of non-causal correlations and problem of inferred properties, respectively. In the face of such problems, we then offer two positive recommendations for a fruitful application of this methodology to the assessment of impact, adaptation and vulnerability studies of climate change, especially in the context of what we may prosaically dub "twin cities". Arguably, such recommendations help decision-makers constrain the set of plausible climate analogues by integrating local knowledge.

Soazig LeBihan (University of Montana)

How to Secure Public Trust in Value-Laden Science - A Fiduciary Model

Many philosophers of science agree that science cannot, and in some contexts should not, be value-free. Values, whether epistemic or not, influence scientific practices in multiple ways (See Elliott 2022 and references therein). One worry is that value influence undermines public trust (Bright 2018, Lusk 2021). Public trust in value-laden science may not be warranted unless the values involved align with the public's. The question is thus: how to conceive of value influence so as to ensure public trust in value-laden science? One proposed remedy to this conundrum is to require that scientists appeal to democratic values (Kourany 2010, Inteman 2015, Elliott 2017, Schroeder 2021, 2022 Lusk 2021). Democratic processes, after all, are a well-worn legitimization tool for authority. However, I argued that this strategy faces serious challenges, including the problems of marginalization and polarization (Le Bihan, 2023). In this talk, I offer an alternative model—The Fiduciary Model. I propose to import some of the concepts from Fiduciary Political Theory (FPT) to the field of Science and Values. FPT advocates defend a fiduciary model of government authority (Leib and Galoob 2016, Criddle at al. 2018, Galoob and Leib 2018). I argue that a fiduciary model of value-laden science could warrantee public trust.

Nick Huggett (University of Illinois, Chicago)

Demarcating Research from Pseudo-Research

One manifestation of a lack of trust in science is the view that to 'do your own research' (say, by cherry picking online searches to find confirming opinions), is as sound a method as rigorous empirical investigation. In this talk I wish to consider ways in which the distinction between such 'pseudo-research' and (scientific) research is or is not illuminated in useful ways by familiar work on the related contrast between pseudoscience and science (such as Thagard, 1978). I will argue with examples that philosophy of experimentation can provide conceptual tools to aid public understanding of experimental research: e.g., (with qualifications), Hacking (1988) on the epistemic autonomy of experiment, and Strevens (2020) on the excruciating standards of experiment. While the importance of experiment is recognized in philosophy of science, it is sometimes neglected, and tends not to be foregrounded in more publ ic-oriented work.

Roman Frigg (London School of Economics)
Models, Understanding, and Trust

Models play an important role in many scientific contexts. Typically, models represent their respective target systems and are crucial in deriving predictions about the target. But models are often taken to be of more than instrumental value in that they are also seen as providing scientists with an understanding of the target. Understanding is epistemically crucial not only because it satisfies scientists' curiosity, but also because it increases trust in the model. In what way do models do this and what sort of understanding do models provide? This is the question that the paper explores.

Craig Callender (University of California, San Diego)
When Is It Okay to Ban Research (Funding)?

Disinformation campaigns funded by industry can distort the evidential landscape in ways that serve industry purposes. For example, fossil fuel funding of academia can be seen as part of the industry's attempt to delay climate action. Fossil Free Research and many other groups are calling for a ban on accepting fossil fuel support for climate research. As with the case of tobacco funding, these calls have been controversial. Many believe that such bans would violate academic freedom. In my talk I'll navigate us through these tricky issues, ultimately arguing that bans can be permissible if directed at agents of disinformation.

Carl Hoefer (University of Barcelona)
Trust in Public Health Science after the Covid-19 Pandemic: A Pessimistic Outlook

In 2020 a "perfect storm" of ingredients came together, with devastating results for trust in public health science and infectious-disease medicine. The storm was most powerful in America, but serious impacts were felt across the Western world. In my talk I will briefly sketch how the elements of this storm came together and produced widespread public distrust in science, a distrust that seems likely to last many years. To illustrate the just causes of the distrust I will review a sample of CDC and FDA publications related to face-masking and vaccine effectiveness, before ending by assessing whether anything can be done to remedy the situation.

Eric Winsberg (University of South Florida; Cambridge)
On Managing Values in Science: A Return to Decision Theory

There are many proposals in the literature on how to "manage values". What many of these proposals have in common is that they assume that the relevant values in science can be "packaged for transfer": that is, values are something that can be put in an envelope for scientists to hand to stakeholders or policymakers, or for members of the public or ethical experts to hand to scientists. The central aim of this paper is to argue that packaging values for transfer is a practical impossibility. Once we return to the decision theoretic definition of values (the definition implied in the Rudner/Jeffrey exchange), we see that any proposal that depends on packaging values for transfer will ultimately suffer from great difficulties. Instead, scientists working in especially policy-relevant areas, particularly scientists building policy-relevant models, must engage their stakeholders directly in their methodological decision making if they hope to address the problems that the phrase "managing values in science" is directed at.

Quill Kukla (Georgetown University)
Healthism, Elite Capture, and the Pitfalls of an Expansive Notion of Health

Many theorists and organizations have moved towards an expansive conception of health, modeled on the WHO's definition of health as "a state of complete physical, mental and social well-being, and not merely the absence of disease and infirmity". While there are advantages to this kind of flexible definition, in this presentation, I will explore the ways in which an expansive conception of health can be weaponized as a tool of oppression, surveillance, and social and embodied discipline. I look at four case studies in which this weaponization has been especially striking: healthy eating, mental health, healthy sexuality, and healthy gender identity. I argue that health is a concept that is especially vulnerable to what Olufemi Taiwo has called "elite capture," wherein elites are able to hijack the meaning of socially important concepts, and use them to serve their own social interests.