Workshop on the Legacy of the Value-Free Ideal of Science
16-17 February 2023
On-site: Uppsala University, Engelska Parken campus, House 22, rooms 22-0031 then 22-1009
On-line: Zoom link (for both days): https://uu-se.zoom.us/j/62123409616 (please contact philippe.stamenkovic@icloud.com for passcode)

Organisation: Philippe Stamenkovic (Marie Curie Fellow, Uppsala Univ.) & Adam Tuboly (MTA Lendulet Values and Science Research Group)
Funding: European Research Executive Agency

	16-02-23, room 22-0031	**17-02-23, room 22-1009**
09:30-10:00	Welcome, fika	Welcome, fika
10:00-11:00	Collins, Harry: Competing Reactions to the Failure of Value-Freedom.	Bardos, Daniel: Cryptozoology, the search for thylacine and the value-free ideal of science.
11:00-11:10	Break	Break
11:10-12:10	Cat, Jordi: Democracy in metascience and meta-democracy in science	Karakas, Alexandra: Are artefacts value-laden? The epistemic value of scientific artefacts
12:10-13:40	Lunch	Lunch
13:40-14:40	Hansson, Sven Ove: The science–value issue in context	Kourany, Janet: The Two Value-Related Ideals Shaping Science
14:40-14:50	Break	Break
14:50-15:50	Rolin, Kristina: Trust in Science: Why Do Values Matter?	de Melo-Martin, Inmaculada: Worrying about Contextual Values in Science: Value Conflicts and Epistemic Integrity.
15:50-16:20	Fika	Fika
16:20-17:20	Intemann, Kristen: Understanding the Role of Non-Epistemic Values in Trusting Scientists	Elliott, Kevin: Navigating Dissent by Managing Value Judgments: The Case of Lyme Disease
17:20-17:30	Optional aperitif at Williams Pub	Break
17:30-18:30		Douglas, Heather & Branch, Ty: The Social Contract for Science and the Value-Free Ideal
19:00	Dinner at Hambergs Fisk	Dinner at Domtrappkällaren

Programme

Abstracts

Bardos, Daniel: Cryptozoology, the search for thylacine and the value-free ideal of science.
Cryptozoology is the study of animals known from anecdotal evidence, traditional local ethno-knowledge and are not accepted by conventional zoology. Examples of such famous cryptids include the Bigfoot, the Yeti, the Loch Ness monster, and the alleged Congo dinosaur, the Mokele Mbembe. Although cryptozoology is not an established science and usually considered as a pseudoscience, many of the criticisms against it are either too weak and unspecified or outdated from the perspective of current philosophy of science.
One of the counterarguments to cryptozoology runs as follows: cryptozoology is a pseudoscientific enterprise because of its value-laden practices, such as being funded by various young Earth creationist organizations. These criticisms often assume a value-free image of science, and claims that while conventional zoology is headed by facts and scientific measures, cryptozoology is mostly framed by non-scientific values. I argue, on the one hand, that the difference between conventional

zoology and cryptozoology can be fruitfully approached in terms of the value-laden nature of public communication instead of focusing on certain epistemic practices, and on the other hand, the very notion of the cryptid is also value-laden.
My case study comes from the boundary between zoology and cryptozoology: My primary focus relates to the question of what this kind of value-laden communication means practically in those debates that concern the extinction of the marsupial Tasmanian tiger or thylacine. These practices and contexts involve not just scientific or epistemic practices (which are the targets of traditional critiques of the science-pseudoscience discussion), but also public communities and public framings of epistemic findings, or—especially in the context of cryptozoology—the lack of findings. While most conservation biologists claim, based on various mathematical extinction models, that the continued existence of the thylacine to the present day can be almost certainly ruled out, some groups believe that the species is not extinct. As I will show, the difference between conventional zoology and cryptozoology is not in terms of value neutrality, but rather in the value-laden communication practices that different actors employ when addressing the public.

Cat, Jordi: Democracy in metascience and meta-democracy in science
This paper explores how ideals and projects of democratic politics and social problem-solving can go hand in hand with ideals of scientific practice and values also in philosophy; in specific and limited ways, political and epistemic practices inform, enable and stimulate each other. The paper discusses episodes in the rise of scientific philosophy and subsequent others. In the case of, for instance, logical empiricism, Carnap and Neurath embedded their epistemological proposals within political projects guided by specific social aims and values. Neurath's evolving proposal of coordinated science expressed his evolving socialist ideals and planned economic models. But what was the role of democracy in either? What can or should democracy be? As a matter of political philosophy and social epistemology, can and should models of science guide models of society? Or vice versa? Or? One possible answer, from and to philosophy and science, might be contextual and value a plural and meta-democratic standard *in science and metascience*.

Collins, Harry: Competing Reactions to the Failure of Value-Freedom.
Collins and Evans partition the history of 'science studies' into three 'waves'. The first wave lasted until around the end of the 1950s and took science to be the most secure form of knowledge about the observable world; Wave 2 was the 'cultural turn', arguably triggered by Kuhn's notion of paradigm revolution and was attacked in the 'science wars' by scientists and many Wave 1-type philosophers; Wave 3 is an attempt to re-establish the central role of science in the generation of knowledge but without going back to Wave 1. A central support of Wave 1 was the value-free ideal, though it was already under attack, notably by Duhem and Lakatos. It is a pity that the science warriors did not use their energy to try to re-understand science rather than start a witch hunt in respect of Wave 2 because one legacy of the value-free ideal has been a revival of a polemical version of the 'two cultures' debate between upholders of Wave 1 and Wave 2. A serious consequence is that certain groups of Wave 2 proponents have found it easier to continue to erode the authority of science, reinforced by the appeal of 'democracy' versus elite scientists, irrespective of the support this gives to the growth of populism, foreseen but not properly addressed by the science warriors. But pluralist democracy cannot survive without elites: it needs legal and scientific elites as checks and balances even though we now know the absolute certainties thought to justify science under Wave 1 are no longer attainable. A better legacy would be political value-freedom as an aspiration, this aspiration being a warrant for science. This would allow the aspirational values of science, such as honesty, integrity and universalism, to be an object lesson for the kind of decision-making under uncertainty needed in politics.

de Melo-Martin, Inmaculada: Worrying about Contextual Values in Science: Value Conflicts and Epistemic Integrity.

Philosophers of science have come to accept that science is a value-laden enterprise, and that it is all the better for it. Many philosophers of science thus now acknowledge that non-epistemic or contextual values --e.g. political, ethical, etc.— can play not only unavoidable but desirable roles in experimental design, choice of methodologies, characterization of the data, and interpretation of results. This has raised concerns about the need to distinguish between legitimate and illegitimate uses of values in scientific inquiry and has led to several demarcation proposals. In this paper, I argue that the concern about the legitimacy/illegitimacy of contextual values fails to separate different –even if related—problems. One involves worries about epistemic integrity. A second one is related to procedural legitimacy. The third one involves questions about which and whose values should be guiding research. I contend that these problems call for different strategies: the need for conceptual clarifications about what values and biases involve, the need to determine appropriate procedures for value selection, and the need to attend to, and address, value conflicts. For at least this last concern, the legitimacy/illegitimacy distinction is unhelpful.

Douglas, Heather & Branch, Ty: The Social Contract for Science and the Value-Free Ideal

While the Value-Free Ideal (VFI) had many precursors, it became a solidified bulwark of normative claims about scientific reasoning and practice in the mid-twentieth century. Since then, it has played a central role in the philosophy of science, first as a basic presupposition of how science should work, then as a target for critique, and now as a target for replacement. In this paper, we will argue that a narrow focus on the VFI is misguided, because the VFI became solidified in the midst of other important shifts in the relationship between science and society. In particular, the mid-twentieth century saw the acceptance of the "social contract for science," which was built around three core conceptions: a distinction between basic and applied science, a justification for public basic science funding in the form of the linear model, and a conception of scientific freedom that limited social responsibility for scientists. The social contract, and the resulting relationship between science and society, made the VFI an obvious result. In other words, the VFI was a result of the post WWII science society relationship, not a cause of that relationship. With the backdrop of the social contract in view, it is clear both 1) how challenging the VFI within the social contract seems to be an ill-founded idea, and 2) how developing alternatives to the social contract, (i.e., developing a better account of the science-society relationship) is central to replacing the VFI properly. To fully challenge the VFI, one must understand the conceptual and institutional structures that made it seem so obviously correct, and replace them with better conceptual structures for the relationship between science and society.

Elliott, Kevin: Navigating Dissent by Managing Value Judgments: The Case of Lyme Disease

Scientific dissent has recently received a great deal of discussion in the philosophical literature. On one hand, it has been used strategically by the "merchants of doubt" to undermine important environmental and public-health initiatives. On the other hand, scientific dissent is often important for promoting scientific objectivity, progress, and public engagement. Some authors have responded to this tension by suggesting criteria for distinguishing normatively appropriate and inappropriate dissent, while other authors have suggested that it is more fruitful to alter the social context in which science operates in order to alleviate the negative effects of dissent over the long term. This paper proposes another approach to navigating challenging cases of scientific dissent. It argues that instances of scientific dissent can often be characterized as debates over value judgments and that the literature on managing value judgments can provide a rich array of strategies that can be used to help navigate scientific dissent. After providing an overview of many of the available strategies,

the paper illustrates how these strategies could be implemented by examining a case study of dissent over the treatment of long-term symptoms associated with Lyme disease.

Hansson, Sven Ove: The science–value issue in context
The traditional science-value issue will be extended in two ways. First, we will extend it to similar issues in other fact-finding practices, of which there are many in modern society. Secondly, the issue of value influence does not only concern full beliefs but also uncertain beliefs (credences). Based on the (individual and social) functions of credences and full beliefs, it will be argued that they differ in the roles that values can legitimately have in their determination. Concerning the full beliefs in science (the elements of the scientific corpus), which have been at the centre of this debate, it is essential to distinguish between decisions that require less stringent criteria than the (intra-scientific) criteria for corpus inclusion and decisions that require more stringent criteria than the (intra-scientific) criteria for corpus inclusion.

Intemann, Kristen: Understanding the Role of Non-Epistemic Values in Trusting Scientists
Maya Goldenberg (2022) argues that laypersons are more likely to have epistemic trust in scientific experts when scientists and scientific institutions demonstrate i) epistemic competency, ii) moral reliability, and iii) a commitment to the public interest. It is often assumed that public skepticism about particular areas of science (e.g., research on climate change or on the safety and efficacy of COVID-19 treatments and vaccines) is the result of false beliefs about the state of scientific evidence or the epistemic competency of certain methodologies. Thus, scientists and philosophers of science often focus on defending or improving the actual or perceived epistemic competency of scientific research to promote public acceptance and trust. Yet the ethical dimensions of epistemic trust (moral reliability and a commitment to the public interest) are often neglected and can play more significant roles in public acceptance or rejection of science. Moral reliability and a commitment to the public interest require researchers to engage with stakeholders about non-epistemic values and to conduct research in ways that can promote stakeholder wellbeing. How best to do this is considered, given complex challenges related to: 1) worries that this might be inconsistent with (at least some versions of) the value-free ideal of science 2) disagreement among stakeholders about non--epistemic values, and 3) that certain aspects of moral reliability, such as transparency and honesty may actually exacerbate unwarranted distrust amongst those whose trust in experts is already "fragile" (John 2018).

Karakas, Alexandra: Are artefacts value-laden? The epistemic value of scientific artefacts
In scientific practice, it is crucial to be aware of the boundaries of knowledge, let they be social, philosophical, or material limits, and at the same time, the epistemic and non-epistemic values that influence scientific thinking. However, the supposed integrity of science is influenced by countless actors and other things: among these forces, I will focus on the material aspect of science. In natural sciences, artefacts are used frequently: bacteria are examined through microscopes, MR machines inspect the human body, and stars are explored with telescopes, to name a few. Scientific knowledge is conveyed through instruments in many cases, so many parts of knowledge production are tied to technical artefacts. Consequently, scientific artefacts are necessary conditions for some aspects of producing knowledge about the world.
I claim that objects bear, facilitate, and constitute knowledge too and that scientific instruments do not just transmit information, but they play a much more intertwined, epistemic role in knowledge production. For instance, not only the choice of tools can be a value-laden decision, but later the properties of artefacts that were designed because of certain value-laden choices will also be an integral part of science. Consequently, multiple layers of epistemic and non-epistemic values in a

scientific artefact can steer the direction of science, research, and the different phases of the production of scientific knowledge in general.
Do artefacts reflect a period's values, or do they actively influence them? Do particular properties of scientific tools have epistemic values in the production of scientific knowledge? If so, how to detect these influences to maintain the supposed epistemic integrity of science? A tell-tale sign of the value-laden notion of scientific objects is to analyse their dysfunctional performances. The talk incorporates case studies from the history of science, such as the mission of the Venus' moon search and anatomical wax models to point out artefact related epistemic values in science through the notion of malfunctional performances.

Kourany, Janet: The Two Value-Related Ideals Shaping Science
The ideal of value-free science is as old as modern science itself, and in its long career it has garnered support from such varied sources as the seventeenth century idea that nature is merely matter in motion, devoid of qualities such as good and evil; the eighteenth century idea that science deals with facts and that facts are distinct from values; the nineteenth century idea that the sciences should be impartial resources for the solution of social problems; and the twentieth century idea that the establishment of scientific truths is a purely epistemic affair. The ideal of value-free science has also garnered support over the centuries from its aid in the critique of biased science—of Nazi and other sorts of racist and sexist science in the twentieth century, for example—and from its resultant ability to win the trust of the public for science. The ideal of value-free science, in short, has seemed to present an impressive array of credentials.
But there are important qualifications to this story. At the dawn of modern science, after all, there was also a promise. If society would but support the new enterprise, society would be richly rewarded not only with unprecedented insights into the workings of the universe but also with all the benefits such insights would provide. Indeed, Francis Bacon, one of the chief architects of the new science as well as one of its more exuberant press agents, promised that the knowledge science would offer would "establish and extend the power and dominion of the human race itself over the universe" for the benefit of all humankind. And essentially the same promise was made again and again over the next four centuries by other distinguished representatives of the scientific establishment. In short, science was not to be neutral—value-free—but was, instead, to incorporate values, humanist values, ensuring such benefits as (to cite some of Bacon's examples) the curing of diseases and the preservation and prolongation of life, the control of plant and animal generation, the development of new building and clothing and other kinds of materials, new modes of transportation ("through the air" and "under water"), and new modes of defense.
I shall suggest, then, that there have been two value-related ideals shaping the history of modern science, an ideal of value-freedom and an ideal of value-fullness, humanist-value-fullness; that the most prominent way to resolve the conflict, the pure science/applied science distinction offered in the U.S. in the nineteenth century by Henry Rowland and institutionalized in the twentieth by Vannevar Bush, was flawed from the start; and that any genuine resolution requires rethinking the grounds for both ideals and thereby seeking a clearer direction for science.

Rolin, Kristina: Trust in Science: Why Do Values Matter?
Relations between citizens and policymaker, on the one hand, and scientific experts, on the other, often involve epistemic trust – or lack of it. By epistemic trust is meant trust that provides a reason to believe in someone's testimony. In a relation of epistemic trust, one person A trusts another person B to have good reasons to believe that p, and A's trust in B is a reason for A to believe that p (Hardwig 1991). A's epistemic trust in B is thought to be well-placed when B is trustworthy in the domain in which she is trusted as a source of knowledge, A has good reasons to trust B as a source of knowledge, and A places her trust in B because of these reasons. Good reasons are often thought

to involve evidence of B's trustworthiness.
This analysis of epistemic trust gives rise to two questions: What does it take for an expert to be trustworthy and what are the social indicators of trustworthiness, the indicators on which citizens and policymakers can rely when they look for evidence of the expert's trustworthiness? While philosophers have proposed a variety of answers to the latter question, the social indicators question (Anderson 2011; Goldman 2006; John 2018), to a large extent they seem to agree on what the answer should be to the former question, the trustworthiness question. The trustworthiness of scientific experts is widely thought to have both an epistemic and a moral dimension (Almassi 2012; Frost-Arnold 2013; Hardwig 1991; Oreskes 2019; Scheman 2001; Wilholt 2013). Whereas the epistemic dimension requires a reasonable degree of expertise in a relevant domain, the moral dimension is thought to demand honesty in rendering expert testimony and goodwill towards those who are epistemically dependent on one's expertise (Baier 1986). Given this two-dimensional understanding of trustworthiness, the social indicators of trustworthiness are expected to track not only the epistemic but also the moral features of trustworthy experts.
In my paper, I will examine the implications that the moral dimension of trustworthiness (and its social indicators) has for the controversy over the value-free ideal of science (VFI) and its alternatives, including Longino's (1990) social account of objectivity and Douglas's (2009) account of scientific integrity. Insofar as trustworthiness and its social indicators have a moral dimension, what roles do moral values play in scientific research and science communication? Insofar as trustworthiness involves commitments (Hawley 2019), which commitments are important in maintaining trust in science? Do trustworthy experts need to respect and follow VFI? When citizens and policymakers look for indicators of value-free research (Elliott et al. 2017), are they relying on a false "folk philosophy of science" (John 2018)?

Zoom meeting
Join Zoom Meeting
https://uu-se.zoom.us/j/62123409616

Meeting ID: 621 2340 9616
One tap mobile
+46844682488,,62123409616# Sweden
+46850539728,,62123409616# Sweden

Dial by your location
+46 8 4468 2488 Sweden
+46 850 539 728 Sweden
+45 47 37 25 75 Denmark
+45 89 88 37 88 Denmark
+49 695 050 2596 Germany
+49 69 7104 9922 Germany
+33 1 7095 0350 France
+33 1 8699 5831 France
+44 131 460 1196 United Kingdom
Meeting ID: 621 2340 9616
Find your local number: https://uu-se.zoom.us/u/cdbcM09I6c

Join by SIP
62123409616@109.105.112.236
62123409616@109.105.112.235

Join by H.323

109.105.112.236
109.105.112.235
Meeting ID: 621 2340 9616