13 JUNE 2025 11.30 - 13.30

Panel 82. Novel Methodologies in Ascertaining Scientific Consensus and Issues in their Institutionalised Applications

Convenors:

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Keywords: agreement, opinion, consensus, dissensus, dissent, survey, policy, social epistemology, science communication

Information regarding scientific consensus, or lack thereof, is widely considered important for decision-making for governments, policymakers, and individuals alike. For scientific subject matters, such as climate change, knowing whether there is a significant degree of agreement within the scientific community can be pivotal for inspiring action and implementing required policy changes. The use of consensus information within science communication is limited, yet recent studies apparently demonstrate that consensus messaging can be effective for influencing public opinion (van der Linden, 2021), and relevant actions such as vaccinating against Covid-19 (Bartoš et al. 2022). However, there is currently neither the infrastructure nor requisite surveying methodologies to support scientific consensus-oriented communication channels for policy or personal decision-making. Both domains would greatly benefit from being able to readily access and leverage the combined views of the international scientific community.

Thus far, the views of the international scientific community have remained largely un-surveyed. When surveys have occurred, it is often with high degrees of survey fatigue, low response rates, and/or with highly exclusivist community selection. Recently, the Institute for Ascertaining Scientific Consensus (IASC) pilot project has demonstrated how it is possible to establish a global network to quickly ascertain scientific opinion regarding selected statements. The project operates on a large international scale, with high response rates, low opt-out rates, and in a way that incurs little survey fatigue, thus allowing for significant repeatability (Alfano and Vickers 2024). The real possibility of establishing a means to rapidly and repeatedly ascertain scientific community opinions on select topics, and utilise such for public communication and informing policy, is growing.

The emergence of such an institution could be revolutionary to our epistemic landscape and infrastructure and merits a deep-dive interrogation into its, methodologies, ethical frameworks of application, sociological impacts, and the theoretically implicit concepts of consensus and expertise.

Beginning from the demonstrated viability of an institute for ascertaining global scientific community opinion, this panel will present the results of the IASC pilot project and begin to explore, examine, and constructively improve the possibility of an Institute for Ascertaining Scientific Consensus and its place in the technoscientific landscape. This proposed technoscientific institute is tacitly intertwined with our social, political, and epistemic spheres. We suggest that there is great potential for it to be a force for good, so long as we have pre-emptively examined its potential for harm. We believe an interdisciplinary discussion on this will enable greater collaboration between science, philosophy, sociology, and policymaking which have all differently examined the topic of consensus.

References:

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13 JUNE 2025 11.30 - 13.30

ID 951 - Regarding the Very Concept of an "Institute for Ascertaining Scientific Consensus"

Peter Vickers, University of Durham

Peter Vickers will speak about the very concept of an "Institute for Ascertaining Scientific Consensus", noting the steps that have been taken so far, and identifying the major obstacles to progress. In particular he will consider the objection that stakeholders such as policymakers need information on very specific topics, where rather few scientists have sufficient specialist knowledge to comment, suggesting that a global survey of scientists would be misplaced. A suggestion will be made that statements at an intermediate level of abstraction are good candidates for global scientific opinion surveys: neither so vague that they have no bearing on on-the-ground decision making, nor so specific that very few scientists have a properly informed opinion.

13 JUNE 2025 11.30 - 13.30

ID 952 - Narratives as Sculpting Tools in Public Understanding of Scientific Consensus

Mariann Hardey, University of Durham

This contribution will focus on (i) evaluating the level of agreement on evidence-based practices and guidelines, and (ii) analysing the consensus on social issues, and how this approach can improve public understanding of scientific agreement and disagreement.

Scientific consensus determining projects will not exist in informational isolation. As levels of scientific community agreement are determined, this information will be consumed, regurgitated, and remixed by various actors.

Imagine scientific findings as raw clay, capable of being moulded into different sculptures depending on the artist's hand. Media outlets, politicians, and advocacy groups act as these sculptors, each shaping the narrative to align with their own agendas. A study on sugar consumption, for instance, takes different forms depending on who wields the tools. A health organization, chiselling for public good, sculpts a stark warning about diabetes and systemic inequities. A food industry lobby, carving with economic interests, moulds the same data into a defence of its product, perhaps downplaying health risks. These aren't just interpretations—they are deliberate acts actively shaping perception, often designed to undermine evidence-based guidelines. A carefully constructed scientific consensus, built on years of research and meta-analysis, can be chipped away, piece by piece, by narratives that prioritise profits or ideological agendas over long-term public health.

While scientific terminology and media literacy are increasingly recognized as crucial tools, they are not enough. We need to move beyond simply recognizing that framing is happening and allow space to consider how it works – how it sculpts the ways scientific consensuses are understood by the public.

13 JUNE 2025 11.30 - 13.30

ID – 953 Science Without Borders? Political Legitimacy When Scientific Agreement Fractures

Jesse Hamilton, University of Oxford

Mercury is dangerous. There is broad scientific agreement that it poses serious risks to both human health and the environment. While scientific agreement alone does not make a coercive rule politically legitimate, it is necessary for science-based policies. Without it, policies like the Minamata Convention—a global treaty that restricts mercury use to prevent toxic exposure—would lack the epistemic foundation that distinguish-

es evidence-based governance from arbitrary rule.

The Institute for Ascertaining Scientific Consensus (IASC) is designed to survey scientific opinion and holds tremendous promise for measuring agreement on a range of policy-relevant issues. With its global network of scientists, it could one day provide granular descriptions of scientific consensus across different regions. If IASC were to poll scientists on whether mercury poses a serious risk to human health and ecosystems, it would almost certainly find overwhelming agreement. But what if, instead, its survey revealed near-unanimous global consensus—except in one region, where a majority of scientists dissent?

This hypothetical scenario raises a question about the role of scientific agreement in legitimizing coercive global policies. If broad agreement among scientists is what distinguishes evidence-based policy from arbitrary rule, does regional dissent undermine the political legitimacy of global policy? Or does the way we conceive of scientific knowledge as transcending regional boundaries—the claim that red blood cells carry oxygen and that DNA has a double helix structure is true regardless of one's location—imply that localized disagreement carries little justificatory weight?

So while IASC could help clarify the strength and scope of scientific agreement, its potential to poll scientific opinion on a global scale presents a challenge: How should we treat global scientific consensus when it conflicts with regional opinion? If the political legitimacy of global governance depends on the authority of scientific agreement, what happens when that agreement is not universally recognized?

13 JUNE 2025 11.30 - 13.30

ID – 954 Consensus Determining Projects, STS and Realpolitik

Rory Jubber, University College London

This contribution to the panel will focus on a set of objections to consensus determining projects (like IASC) derived from the STS tradition and the realities of operating in the political space. I will outline two classic STS objections, along with what I will call the problem of realpolitik. To each I will offer defences of consensus determining projects.

The overarching feature of the objections from STS, as well as the objection from realpolitik, build off problems of naivety – theoretical and practical naivety. The first STS type objection will focus on consensus determining projects' realist assumptions and a naïve approach to the conception of experts. The defence I will give is that this project does not necessarily assume a realist approach to truth – it is consistent with realism, pragmatism and various forms of relativism. The second STS type objection orientates around consensus determining projects operating unwittingly on a form of deficit model in science communication. I will set out to show that our project does not operate on a form of the deficit model. The final objection, and what I take to be the most troubling, is the objection from realpolitik. This comes in a weaker and stronger form. The weaker form is that the project would be used by those working in the policy and the political domain for their own narrow purposes, perhaps even in a harmful way contrary to the aims of the project. The stronger form is that a project of this nature would just be irrelevant to those working and operating in policy and politics. There are two possible solutions- bite the bullet and accept the risks and/or operate in a properly informed political manner ourselves. I hope to begin the process of showing STS scholars that the philosophers running this project are not ignorant of STS style problems.

13 JUNE 2025 11.30 - 13.30

ID – 955 Institutes for Scientific Consensus Messaging's Orwellian Subtext

Owen Towler, University College London

This contribution explores the potential for IASC-like projects to become, or even merely become perceived as being, Orwellian "Ministries of Truth". The "Orwellian" objection fundamentally argues that projects aiming at ascertaining and communicating levels of scientific community opinion may be able to, in some way, monopolise a specific "scientifically justified" narrative or agenda. By leveraging the prevailing wisdom of

scientific authority such project could wield (relatively) unquestionable authority. By and large, the public tends to trust scientists and, by extension, trust in high degrees of agreement among scientists as being an indication of a 'scientifically informed truth'. Institutions designed to ascertain levels of agreement in the scientific community, therefore, may appear to possess the authority to inform the public on what is or isn't a 'scientifically informed truth' - and consequently, in some sense, determine what is or isn't legitimate knowledge. Even if well intentioned, such institutions risk resembling a "Ministry of Truth", as they hold the power to survey various scientifically informed claims and proclaim its veracity or falsehood.

I will be exploring some of the issues that culminate in this "Orwellian" objection, particularly examining how IASC could fit into the 'epistemic basic structure of society' – the network of institutes enabling the public to obtain knowledge – and how the breakdowns in this structure produce epistemic crises, like Orwellian perceptions of IASC-like institutions.

Particularly exploring how we should understand 'Orwellian' objection as being an extension of an endemic of mis/distrust in epistemic authorities, itself a symptom of an "epistemic crisis" – a break-down of the epistemic basic structure of society. Through this we can explore: (i) what role could IASC-like projects play in our societal 'epistemic basic structure'?, and (ii) would this be contributory or ameliorative to 'epistemic crises'?