

# Joe Roussos

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## Employment

**Researcher, 2023–**, *Institute for Futures Studies, Stockholm*

**Postdoctoral Researcher, 2019–2023**, *Institute for Futures Studies, Stockholm*

## Education

**PhD Philosophy, 2016–2020**, *London School of Economics*

Thesis: [Policymaking under scientific uncertainty](#)

Supervisors: Roman Frigg, Richard Bradley; Examiners: Richard Pettigrew, Wendy Parker

**MASt Theoretical Physics, 2011–12**, *University of Cambridge*

**BSc Physics, Philosophy, Mathematics, 2006–2011**, *University of the Witwatersrand*

## Research interests

**AOS:** Formal epistemology, Social epistemology, Philosophy of Climate Science/Meteorology, Decision Theory

**AOC:** General Philosophy of Science, Philosophy of Social Science, Philosophy and Public Policy

## Research funding

2023-25: PI, *Expertise in crises*, Project grant: Vetenskapsrådet (The Swedish Research Council), (€330,000)

2023-24: Named applicant, *Mimir Center for Long-term Futures Research*, PI: Karim Jebari, Effective Giving, (€1,800,000)

2021-22: Named applicant, *Progress in ethics*, PI: Folke Tersman, Research Initiation grant: Riksbankens Jubileumsfond (€35,000)

2021-22: PI, *Rational Foundations of Longtermism*, Longview Philanthropy (€55,000)

2021-23: Named applicant, *Sustainable population levels in the time of climate change*, PI: Gustaf Arrhenius, Global Challenges Foundation (€600,000)

## Research publications

### Papers

- Forthcoming: Awareness revision and belief extension, *The Australasian Journal of Philosophy*
- Forthcoming: [Normative Formal Epistemology as Modelling](#), *The British Journal for the Philosophy of Science*
- 2023: [Usability of climate information: Toward a new scientific framework](#), *WIREs Climate Science*, co-author: Julie Jebeile
- 2022: [Modelling in Normative Ethics](#), *Ethical Theory and Moral Practice*
- 2022: [The value of values in climate science](#), *Nature Climate Change* 12, 4-6, co-authors: Pulkkinen, K., S. Undorf, F. Bender, P. Wikman-Svahn, F. Doblus-Reyes, C. Flynn, G. Hegerl, A. Jönsson, G-K. Leung, T. Shepherd, E. Thompson
- 2021: [Making confident decisions with model ensembles](#), *Philosophy of Science* 88(3), co-authors: Richard Bradley, Roman Frigg
- 2021: [Following the Science: Pandemic Policy Assessment and Reasonable Worst-case Scenarios](#), *LSE Public Policy Review* 1(4), co-author: Richard Bradley
- 2021: [Expert deference as a belief revision schema](#), *Synthese* 199(1), 3457-3484

### Chapters

- Forthcoming: "Possibilities in climate science" in *Modelling the Possible*, ed. Grüne-Yanoff, Knuuttila, Koskinen and Sjölin Wirling. Routledge
- 2023: "Climate Change", in *The SAGE Encyclopedia of Theory in Science, Technology, Engineering, and Mathematics*, ed. Mattingly. SAGE
- 2022: ["Environmental Decision-Making Under Uncertainty"](#), in *Current Trends in Philosophy of Science: A Prospective for the Near Future*, ed. Gonzalez. Springer

### Other

- 2023: [Fragile Futures: The Uncertain Economics of Disasters, Pandemics, and Climate Change](#), Vito Tanzi. Cambridge University Press, 2021. *Economics and Philosophy*. 40(1):250-256
- 2020: [What's hot in uncertain reasoning? Awareness growth](#), *The Reasoner* 15(5)

### Editor

- 2022: [Working Papers Vol. IV](#), *Climate Ethics and Future Generations* (IFFS)
- 2021: [Working Papers Vol. III](#), *Climate Ethics and Future Generations* (IFFS)

## Works in progress

Below, "Manuscript" means there is a stable draft, being presented/circulated, submission likely in  $\approx 6$  months. "In preparation" means I am still writing the paper/have presented preliminary versions of it, submission ready in  $\approx 9-12$  months.

Under Review: Metaphilosophy/Ethics: modelling is a useful method in ethics (co-authored)

Under Review: Formal epistemology: awareness growth, reverse Bayesianism, and Steele and Stefánsson's book *Beyond Uncertainty*

Manuscript: Social epistemology: how expert advisers should react to disagreement when on expert panels

Manuscript: Philosophy of science: scientists' uncertainty attitudes should be considered as "values in science"

In preparation: Social epistemology: desirable character traits for an expert adviser

In preparation: Philosophy of science: opinion piece for a science journal on the "values in climate science" literature and how climate scientists should engage with it

In preparation: Epistemology: criticism of "longtermism" on the grounds that it does not treat uncertainty about the far future correctly

In preparation: Epistemology: evidence of rational polarisation suggests that Bayesians are subject to a troubling form of skepticism (co-authored)

## Talks and Conference participation

### Refereed talks

#### **Usability of climate information: toward a new framework**

- *EPSA 2023*, Belgrade, Sep 2023

#### **Norms of disagreement for experts in research and advising**

- *INEM 2023*, Venice, May 2023

#### **Awareness growth and belief revision**

- *FEW 2022*, Irvine, (cancelled due to illness)

- *PROGIC 2021*, MCMP, Sep 2021

- *British Society for the Philosophy of Science*, Symposium presentation (cancelled due to COVID-19), Kent, Jun 2020

#### **Making confident decisions with model ensembles**

- *European Philosophy of Science Association*, Geneva, Sep 2019

- *Philosophy of Science Association*, Seattle, Nov 2018

- *Models 2 Decisions*, Isaac Newton Institute, Cambridge, Jun 2018

- *London Graduate Philosophy Conference*, Senate House London, Nov 2017

#### **Formal epistemology as modelling**

- *PROGIC 2019*, Frankfurt, Jul 2019

- *INEM Summer School*, Como, Jun 2019
- *Formal Epistemology Workshop* (poster), Turin, Jun 2019
- *Formal Methods and Science in Philosophy III*, IUC Dubrovnik, Apr 2019

### **Scoring rules and expert disagreement**

- *BPPA Masterclass on Social Epistemology*, COGITO Glasgow, Apr 2019

### **Against Model Aggregation**

- *Models & Simulations 8*, U South Carolina, Mar 2018

### **Invited talks**

#### **Intellectual humility: a challenge for expert advising during crises**

- *SciBeh workshop: Epistemic Boundaries*, online, Mar 2024

#### **Normative models in economics and finance**

- *Phinance* seminar series, online, Feb 2024

#### **The significance of moral convergence in the modelling view**

- *Progress in ethics* workshop, IFFS Stockholm, Jun 2023

#### **Norms of disagreement for experts in research and advising**

- *Expertise in crisis* workshop, London School of Economics, May 2023
- *Nordic Institute for Theoretical Physics*, Stockholm, May 2023
- *Expertise & Democracy: Challenges from Within and Without* workshop, Uppsala, Mar 2023
- *Epistemic and normative uncertainty seminar*, IUSS Pavia, Apr 2023

#### **The scientist's role in policy decisions**

- *Local Climate Knowledge*, PhD Summer School, Bielefeld, Jul 2023
- *Climate Change and Studies of the Future*, XXVI Conference on Philosophy and Current Methodology of Science, A Coruña, Oct 2021

#### **Rational polarisation, a skeptical problem for Bayesianism** (with Anandi Hattiangadi)

- *Workshop on empirical approaches to philosophy of mind*, Uppsala, Sep 2022
- *British Society for the Theory of Knowledge*, Sep 2022
- *Virtual Consortium for Truth Research*, Apr 2022
- *LSE Choice Group*, March 2022

#### **Does risk aversion undermine expert objectivity?**

- *Epistemology of climate change seminar*, Universität Bern, April 2022
- *Workshop on climate ethics and sustainable population levels*, IFFS Stockholm, Mar 2022

#### **A plea for modelling in ethics**

- *Higher seminar in practical philosophy*, Stockholm, Feb 2022

#### **Inquisitive awareness growth: questions as guides to identifying propositions across changes of awareness**

- *Unawareness and Awareness Growth*, IFFS Stockholm, Oct 2021

#### **Reverse Bayesianism in "Beyond Uncertainty"**

- *Book launch symposium for Beyond Uncertainty, Steele and Stefánsson*, IFFS Stockholm, Sep 2021

### **Unawareness for Longtermists**

- *7th Oxford workshop on Global Priorities research*, GPI Oxford, Jun 2021

### **“Usability” in climate science: from natural science to science-for-policy**

- *Values in science workshop*, IFFS Stockholm, May 2021

### **Awareness growth and belief revision**

- *Higher Seminar in Theoretical Philosophy*, Stockholm, Jan 2021

### **Modelling in moral philosophy**

- *PH500 seminar on distributive justice and social choice*, LSE, May 2021

- *Higher Seminar in Practical Philosophy*, Stockholm, Oct 2020

### **Making confident decisions with model ensembles**

- *Epistemology of Climate Change Seminar Series*, Bern, Dec 2020

- *CHESS Workshop: Adequacy for Purpose*, Durham, May 2019

- *Atmospheric and Climate Science Colloquium*, ETH Zurich, May 2018

- *Choice Group*, LSE, Apr 2018

### **Experts, Which Ones Should You Trust? Sweden’s COVID-19 Response**

- *Online workshop on climate change and the coronavirus pandemic*, IFFS Stockholm, May 2020

### **Expert deference as a belief revision schema**

- *Choice Group*, LSE, Oct 2019

### **The Role of Values in Aggregating Expert Opinions**

- *Climate Ethics and Future Generations Annual Conference*, IFFS Stockholm, Sep 2019

### **Formal epistemology as modelling**

- *Choice Group*, LSE, May 2019

### **Policy- and policymaker-oriented talks and activities**

- Workshop participant: Foresight Workshop on Circular Economy for Carbon-Intensive Materials, European Commission Joint Research Center, Feb 2024  
Futures exercise using scenarios to imagine the nature of the circular economy in four carbon-intensive materials industries. I was a generalist participant, in the cement and concrete sector group, tasked with assisting specialists to perform the scenario exercise.

- Presentation to Rifo group, Swedish Parliament. “The use of models in pandemic policymaking”, Feb 2021  
Lunchtime presentation of my research to 25 Swedish MPs, covering the sources and nature of model uncertainty and how they are relevant in policy decision-making contexts.

- Presentation to the UK Department of Business, Energy, and Industrial Strategy, "Using model ensembles to support decision-making", Sep 2019  
Presentation to members of the UK's climate science diplomatic support team and climate economics support team at BEIS. I have maintained contact with several scientists there, including inviting them to my modelling workshop for science advisers in Sep 2020.
- Consultation participant, "Planning Complex Infrastructure under Uncertainty" for the *Centre for Digital Built Britain*, Nov 2018  
Interdisciplinary consultation. I participated on a panel on the use of models and management of uncertainty. I was invited to participate as a member of the "Models 2 Decisions" network.
- Research collaboration with the Natural Catastrophes team at AXA XL, the global insurance and reinsurance company  
One part of my PhD project involved working with scientists employed by AXA XL. Their job is to make probabilistic estimates for various natural catastrophes, to support insurance pricing. I worked with their hurricane insurance team, studying the models that they use. The academic output of this is my 2021 *Philosophy of Science* paper, but over the course of the 2-year engagement I had dozens of meetings with scientists, actuaries and decision-makers across their organisation. Some of these were interviews, others were presentations of our work on model uncertainty and decision-making under severe uncertainty. The intention was to inform the company's decision procedures when pricing hurricane insurance.

### **Outreach: talks to non-academic audiences**

- Expert advice during crisis, *KatMed* March 2024. Talk to a group of doctors and medical students interests in catastrophe medicine
- Longtermism, extinction risk interventions, and side-effects, *Effective Altruism Sweden* October 2023. Talk to local EA group about x-risk interventions

### **Comments and other participation**

- Reply to: Sophie Horowitz (UMass Amherst): "Learning to Guess Right" at *Cologne Knowledge Router*, Online, May 2021
- Reply to: Rush Stewart (MCMP): "On the Possibility of Testimonial Justice" at *Formal Epistemology Workshop*, Turin, July 2019
- Reply to: Marco Mariotti (Queen Mary): "Revealed Preference Theory and Bounded Rationality" at *Preference-based modeling in economics*, LSE, Nov 2018
- Reply to: Rachel Etta Rudolph (UC Berkeley), "Appearance Reports and the Acquaintance Inference" at *15th Berkeley-London Graduate Conference*, Senate House London, May 2018

## Conference and symposium organising

13. *Launch workshop for the Mimir Center*, (IFFS, 11-12 Dec 2023). Workshop to launch the new Mimir Center for Long Term Futures Research at IFFS. 8 speaker, 2 days. *Organiser*
12. *Democracy and values in science*, (IFFS, 20-21 Oct 2022). Workshop on issues at the intersection of political theory and philosophy of science. 10 speakers, 2 days. *Organiser*
11. *FATIL2022 - The First International Conference on Foundations, Applications, and Theory of Inductive Logic* (MCMP Munich, Oct 2022), Programme committee member
10. *Sustainable population levels* (IFFS, May 2022). Interdisciplinary economics/demography/sociology workshop on issues related to determining the Earth's sustainable population of humans. 6–9 speakers, 2 days. *Co-organiser*.
9. *Democracy and values in science: political theory meets philosophy of science* (IFFS, Autumn 2022). Workshop on issues related to scientific objectivity and the role of science in democracy. In planning stage. 8–12 speakers, 2–3 days. *Co-organiser*.
8. *Unawareness and awareness growth*. (IFFS, 18-19 Oct 2021) Workshop co/sponsored by my Lontermism project and Climate Ethics. Interdisciplinary, with economists and philosophers. 8 speakers. Hybrid. *Organiser*.
7. *Climate Ethics and Future Generations*. (IFFS, 9-11 Sep 2021) Annual conference for Climate Ethics project. 18 talks, 40 participants. Hybrid. *Co-organiser*.
6. *Beyond Uncertainty*. (IFFS, 8 Sep 2021) Book launch symposium for "Beyond Uncertainty" (CUP) by Katie Steele and Orri Stefánsson. Opening by authors, followed by 3 commentators on book. *Organiser*.
5. *Values in science*. (Online, 17-18 May 2021) Workshop on how moral and political values can, do, and should influence the core practice of science—with a focus on climate science. 7 speakers. *Co-organiser*.
4. *Moral Uncertainty*. (Online, 4 Feb 2021) Book launch symposium for "Moral Uncertainty" (OUP) by William MacAskill, Toby Ord, and Krister Bykvist. 3 commentators on book. *Organiser*.
3. *Democracy and future generations*. (IFFS, 16-17 Nov 2020) Workshop on how concern for future generations might impact democracy. Hybrid. *Local co-organiser*.
2. *The use of models in policymaking*. (IFFS, 10 Sep 2020) Interdisciplinary workshop on modelling as a tool for policy, comparing epidemiology, climate science and economics. Featured philosophers of science alongside scientists from those fields. Hybrid in-person and on Zoom. *Organiser*.
1. *Awareness growth*. (BSPS Annual Conference, Jun 2020) Symposium on the problem of "unawareness", focussing on rational constraints for agents who become aware of new possibilities, and how to formally model them in a probabilistic belief setting. Participants: Chloé de Canson, Anna Mahtani, Joe Roussos, Orri Stefánsson. *Co-organiser*

Outside of academia I have significant event organising experience, including organising a 600-delegate 5-day conference, numerous corporate strategy workshops, and several university debate competitions.

## Graduate coursework

Rationality and choice | Models and representation | Foundations of probability | Philosophy of science | Philosophy of language for decision theorists | Topics in analytic philosophy | Philosophy of mind | Metaphilosophy | Pragmatism: Peirce and Ramsey  
*Reading groups:* Formal epistemology | Feminist philosophy

## Teaching

### Lecturer

**2023: Ethics and Philosophy of Science.** *Swedish Agricultural University.* PhD, 30 students. A methods course for science PhD students. Introduction to philosophy of science for scientists. 8hrs of lectures.

**2021-23: Environmental Risks and Decision Making.** *Stockholm University.* MSc, 15 students. (Course title changed.) Philosophical introduction to risk and uncertainty, decision making, values in science, role of science advisers. I was responsible for my module's course design, lectures, seminars, and assessments.

**2021/22: Epistemology and Philosophy of Science.** *Stockholm University.* BA, 30 students. First course in philosophy for undergraduates in theoretical philosophy.

**2020/21: Environmental risk management.** *Stockholm University.* MSc, 15 students. Philosophical introduction to risk, decision theory, and the philosophy of climate science. I was responsible for my section's course design, lectures, seminars, and assessments.

### Teaching Assistant

At the LSE, teaching assistants are responsible for small group classes, marking and feedback.

**2018: Philosophy and public policy.** *LSE.* (Part course only.) 2nd and 3rd yr UG. 2 classes, 16 students. Topics included: measuring well-being, cost-effectiveness in health care, responsibility and choice, health insurance, tax avoidance.

**2017/18: Formal methods of philosophical argumentation.** *LSE.* 1st and 2nd yr UG. 5 classes, 71 students. Introduction to propositional and first-order logic, philosophy of mathematics, set theory, and probability theory.

**2016/17: Logic.** *LSE.* 1st and 2nd yr UG. 2 classes, 30 students. Introduction to propositional logic, first order logic, and naive set theory.



## Service

### Departmental life

- 2023: Organiser, Mimir reading group, IFFS
- 2021: Organiser, New Ideas seminar for quick research discussions, IFFS
- 2021: Assistant Chair, Online/Hybrid Research Seminars, IFFS
- 2019/20: Founding convener, Conjectures and Refutations seminar series, LSE
- 2018/19: Chair, Staff-Student Liaison Committee (MPhil/PhD), LSE
- 2017/18: Representative, Research Students Consultation Forum, LSE
- 2017/18: Co-chair, Staff-Student Liaison Committee (MPhil/PhD), LSE

### Reviewer

- 2024: Ergo, WIREs Climate Change
- 2023: European Journal for the Philosophy of Science, Ergo, Australasian Journal of Philosophy, Philosophy of Science
- 2022: European Journal for the Philosophy of Science, Mind, Philosopher's Imprint, Philosophical Studies
- 2021: Climatic Change, Mind, British Journal for the Philosophy of Science, Philosophy of Science, Erkenntnis, Analysis, Ethical Theory and Moral Practice, Utilitas
- 2020: Philosophy of Science, British Journal for the Philosophy of Science, Synthese, Erkenntnis, Studies in History and Philosophy of Science, Journal of Applied Philosophy

## Awards

- 2018 LSE Award for Teaching Excellence
- 2017 LSE Award for Teaching Merit
- 2016-2020 LSE PhD Studentship
- 2011 Skye Foundation Scholarship

## Other

### Previous Employment

#### **Senior strategy manager, 2015–2016**

*Lodha Group U.K.*

#### **Strategy consultant, 2012–2015**

*Bain & Company, Inc.*

**Teacher** (part-time), Advanced Programme Mathematics (Grades 10–12), 2007-8

*Sacred Heart College, Johannesburg*

[Updated: March 2024]