

Joe Roussos

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Employment

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

Projects: [Climate Ethics and Future Generations](#) (2019-2023, 30%)

Sustainable population in the time of climate change (2021-2023, 20%)

Rational Foundations of Longtermism (2021-22, 50%)

Education

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

Department of Philosophy, Logic, and Scientific Method

Thesis: [Policymaking under scientific uncertainty](#)

Supervisors: Roman Frigg, Richard Bradley

Examiners: Richard Pettigrew, Wendy Parker

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

Specialisation: Particle Physics, Effective Field Theories

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

Witwatersrand (included Honours year specialising in Theoretical Physics)

Research interests

AOS: Decision Theory, Formal Epistemology, Philosophy of Science

AOC: Philosophy and Public Policy, Philosophy of Economics, Philosophy of Climate Science

Research funding

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

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

Research publications

Papers

Forthcoming: Modelling in Normative Ethics, *Ethical Theory and Moral Practice*

2022: [Normative Formal Epistemology as Modelling](#), *The British Journal for the Philosophy of Science*

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. Doblas-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

2020: [Expert deference as a belief revision schema](#), *Synthese* 199(1), 3457-3484

Revise & Resubmit: A paper on awareness growth and belief revision

Revise & Resubmit: A comment on value management and policy usefulness in climate science

Chapters

Forthcoming: Climate Change, *The SAGE Encyclopedia of Theory in Science, Technology, Engineering, and Mathematics*, Ed. James Mattingly

Under review: *A chapter on the role of possibilities in climate science*, for a collected volume on modal epistemology and scientific modelling

Non-peer reviewed

2020: [What's hot in uncertain reasoning? Awareness growth](#), *The Reasoner* 15(5)

Editor

2022: [Working Papers Vol. IV](#), *Climate Ethics and Future Generations* pre-print series

2021: [Working Papers Vol. III](#), *Climate Ethics and Future Generations* pre-print series

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

Talks and Conference participation

Refereed talks

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

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

- *Workshop on empirical approaches to philosophy of mind*, Uppsala, September 2022
- *British Society for the Theory of Knowledge*, September 2022
- *Virtual Consortium for Truth Research*, April 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, March 2022

A plea for modelling in ethics

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

The scientist's role in policy decisions: a decision theory perspective

- *Climate Change and Studies of the Future*, XXVI Conference on Philosophy and Current Methodology of Science, A Coruña, Oct 2021

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

- Presentation to Swedish Parliament. "The use of models to support 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.

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

11. *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*
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.

Teaching

Lecturer

2021-23: Environmental Risks and Decision Making. *Stockholm University.* MSc. (Course title changed.) Philosophical introduction to risk, decisions under uncertainty, 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.* First course in philosophy for undergraduates in theoretical philosophy.

2020/21: Environmental risk management. *Stockholm University.* MSc. 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

- 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

- 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
- 2017-20: Reviewer for LSE-Bayreuth Student Conference

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: September 2022]