

Benjamin Eva – Curriculum Vitae

Department of Philosophy
Duke University
1364 Campus Dr
27705, Durham, North Carolina, USA
Email: benjamin.eva@duke.edu
WEBSITE: <http://beo367.wixsite.com/benevaphilosophy>
GOOGLE SCHOLAR: <https://tinyurl.com/Eva-scholar>

Academic Appointments

From 2020	Assistant Professor, Duke University
2019 - 2020	Zukunftskolleg Research Fellow, University of Konstanz
2017 - 2020	Alexander von Humboldt Postdoctoral Research Fellow, University of Konstanz
Continuing	External Member of the Munich Center for Mathematical Philosophy
2016-2017	Postdoctoral Research Fellow, Munich Center for Mathematical Philosophy/LMU Center for Advanced Studies

Education

10/2015	PhD in Philosophy, University of Bristol
07/2011	MA in Philosophy, University of Bristol
07/2010	BA in Philosophy, University of Exeter

Publications

PEER REVIEWED JOURNAL ARTICLES

- (29) (In Press, Accepted 12/02/2024) 'An Impossibility Theorem for Base Rate Tracking and Equalised Odds' (with Rush Stewart, Reuben Stern and Shanna Slank), *Analysis*.
- (28) (In Press, Accepted 16/11/2023) 'Individual Fairness, Base Rate Tracking and the Lipschitz Condition', *Journal of Artificial Intelligence Research*.
- (27) (2024) 'Comparative Learning', *Philosophy of Science*, 91(1): 1 – 17.
- (26) (2023) 'Anti-Reductionist Interventionism' (with Reuben Stern), *British Journal for the Philosophy of Science*, 74(1).

- (25) (2023) 'How a Minimal Learning Agent can Infer the Existence of Unobserved Variables in a Complex Environment' (with Katja Ried, Thomas Müller and Hans Briegel), *Minds and Machines*, 33: 185–219.
- (24) 2022. 'Comparative Opinion Loss' (with Reuben Stern), *Philosophy and Phenomenological Research*, <https://doi.org/10.1111/phpr.12921>.
- (23) 2022. 'Algorithmic Fairness and Base Rate Tracking', *Philosophy and Public Affairs*, 50(22): 239–266.
- (22) 2022. 'Chancy Covariance and the Mind Body Problem', *Oxford Studies in Philosophy of Mind*, Volume 2, Uriah Kriegel (ed), Oxford University Press: 177–216.
- (21) (2022) 'Four Approaches to Supposition' (with Branden Fitelson and Ted Shear), *Ergo*, 8(26).
- (20) (2021) 'The Logic of Partial Supposition' (with Stephan Hartmann), *Analysis*, 81(2): 215–224.
- (19) (2020) 'A Bridge Between Q-Worlds' (with Andreas Döring and Masanao Ozawa), *Review of Symbolic Logic*, 14(2): 447–486.
- (18) (2020) 'The Logic of Conditional Belief', *Philosophical Quarterly*, 79(281): 759–779.
- (17) (2020) 'Learning from Conditionals' (with Stephan Hartmann and Soroush Rafiee Rad), *Mind*, 129(154): 461–508.
- (16) (2019) 'On the Origins of Old Evidence' (with Stephan Hartmann), *Australasian Journal of Philosophy*, 98: 481–494.
- (15) (2019) 'Principles of Indifference', *The Journal of Philosophy*, 116(7): 390–411.
- (14) (2019) 'A New Probabilistic Explanation of the Modus Ponens–Modus Tollens Asymmetry' (with Henrik Singmann and Stephan Hartmann), *Proceedings of the 41st Annual Meeting of the Cognitive Science Society*.
- (13) (2019) 'The Similarity of Causal Structure' (with Stephan Hartmann and Reuben Stern), *Philosophy of Science*, 86(5): 821–835.
- (12) (2019) 'Causal Explanatory Power' (with Reuben Stern), *British Journal for the Philosophy of Science*, 70(4): 1029–1050..
- (11) (2018) 'Bayesian Argumentation and the Value of Logical Validity' (with Stephan Hartmann), *Psychological Review*, 125(5).

- (10) (2018) 'Emerging (In)Determinacy', *Thought: a Journal of Philosophy*, 7(1): 31–39.
- (9) (2018) 'When No Reason For is a Reason Against' (with Stephan Hartmann), *Analysis*, 78(3): 426–431.
- (8) (2017) 'A-Symmetric Confirmation and Anthropic Skepticism', *Synthese*, <https://doi.org/10.1007/s11229-017-1486-9>.
- (7) (2017) 'Topos Theoretic Quantum Realism', *British Journal for the Philosophy of Science*, 68(4): 1149–1181.
- (6) (2016) 'Category Theory and Physical Structuralism', *European Journal for the Philosophy of Science*, 6(2): 231–246.
- (5) (2016) 'Modality and Contextuality in Topos Quantum Theory', *Studia Logica*, 104(6): 1099–1118.
- (4) (2015) 'Towards a Paraconsistent Quantum Set Theory', *Electronic Proceedings in Theoretical Computer Science (Proceedings of the 12th International Workshop for Quantum Physics and Logic, University of Oxford)*, 195: 158–169.

EDITED VOLUMES

- (3) 'Reasoning in Physics', forthcoming Special issue of *Synthese* (co-edited with Stephan Hartmann).

INVITED CONTRIBUTIONS

- (2) (2017) Review of Jeffrey Bub's 'Bananaworld: Quantum Mechanics for Primates', *Metascience*, 26(2): 251–255.
- (1) (2016) 'Paraconsistency and Quantum Theory', In Aerts, De Ronde, Freytes and Giuntini (eds): *Probing the Meaning and Structure of Quantum Mechanics: Superpositions, Semantics, Dynamics and Identity*, World Scientific.

Major Research Grants

(Total value of external research funding acquired is approximately \$770,000)

- 2019–2024 Zukunftskolleg Research Fellowship at the University of Konstanz (~ €400,000): ended early to take up position at Duke.
- 2018–2021 Member of DFG funded international research network 'Category Theory in Philosophy of Science'.
- 2017–2020 Alexander von Humboldt Research Fellowship (~ €150,000).

2011-2014 Full AHRC Doctoral Scholarship (~ £45,000 plus fees).

Selected Conference Presentations and Commentaries

61 in total (32 invited, 28 refereed, 13 presented by co-authors)

- 02/2024 **Commentary on “Moral AI: and How We Get There”**
Book Symposium, Duke University.
- 10/2023 **“The Case for Incomparability ”**
UNC Work in Progress Seminar, UNC Chapel Hill.
- 10/2023 **“Presumptions of Innocence (with Reuben Stern)”**
UNC Applied Epistemology Seminar, UNC Chapel Hill.
03/2023 *Orange Beach Epistemology Workshop*, Orange Beach Alabama.
- 11/2021 **“Of Confidence and Credence”**
Northeastern Epistemology Workshop, Northeastern University.
10/2021 *Orange Beach Epistemology Workshop*, Orange Beach Alabama.
- 03/2023 **“Colliding Intuitions’ (with Reuben Stern and Kevin O’Neil)’**
Southern Society for Philosophy and Psychology, Louisville, KY.
06/2021 *Society for Psychology and Philosophy*, Princeton University.
- 08/2019 **“Four Approaches to Supposition” (with Branden Fitelson and Ted Shear)**
2019 Pacific Rim Conference on Artificial Intelligence, Fiji.
07/2019 *2019 Australasian Association of Philosophy Conference*, Woolongong.
06/2019 *2019 Formal Epistemology Workshop*, Turin.
09/2018 *Foundations of Probability Seminar*, Rutgers University.
09/2018 *MIT Philosophy Colloquium*, MIT.
- 10/2019 **“How a minimal learning agent can infer the existence of unobserved variables in a complex environment” (with Katja Ried, Hans Briegel and Thomas Müller)**
AI CON 2019, Bosch Center for Artificial Intelligence.
10/2019 *German Physical Society 2019 Workshop on Quantum Science and Information Technologies*, Freiburg.
- 11/2018 **“The Logic of Conditional Belief”**
Departmental Seminar, University of Illinois at Urbana-Champaign.
- 11/2018 **“The Similarity of Causal Structures” (with Reuben Stern and Stephan Hartmann)**
Philosophy of Science Association Biennial Meeting, Seattle.
07/2018 *Decision Theory and the Future of Artificial Intelligence*, LMU Munich.

“Causal Explanatory Power, Blameworthiness, and Negligence” (with Reuben Stern)

- 06/2018 *Explanatory Power*, University of Geneva.
06/2018 *11th MuST Conferene in Philosophy of Science*, University of Turin.

“A Bridge Between Q-Worlds” (with Andreas Döring and Masanao Ozawa)

- 06/2018 *Foundations of Quantum Mechanics*, Munich Center for Mathematical Philosophy.
03/2017 *Workshop on Foundations of Quantum Mechanics*, University of Nagoya.
09/2016 *Homotopy Type Theory in Logic, Metaphysics and the Philosophy of Physics*, University of Bristol.

“Comparative Learning”

- 05/2020 *Departmental Seminar*, Munich Center for Mathematical Philosophy.
02/2020 *Departmental Seminar*, Duke Universtiy.
01/2020 *Departmental Seminar*, Columbia University.
01/2020 *Departmental Seminar*, University of Texas, San Antonio..
05/2018 *Recent Work in the Philosophy of Probability and Conditionals*, Munich Center for Mathematical Philosophy.

“Anti Reductionist Interventionism” (with Reuben Stern)

- 01/2022 *Departmental Colloquium*, Köln University.
04/2020 *Causation and Reduction from Metaphysics to the Sciences*, University of Illinois at Urbana-Champaign.
02/2018 *Explanation and Reduction in the Science*, Hebrew University.
11/2017 *Düsseldorf Center for Logic and Philosophy of Science Colloquium*, University of Düsseldorf.
11/2017 *Causal and Explanatory Reasoning*, Venice International University.

“Causal Explanatory Power” (with Reuben Stern)

- 09/2017 *European Society for the Philosophy of Science Biannual Conference*, University of Exeter.
08/2017 *European Congress for Analytic Philosophy*, Munich Center for Mathematical Philosophy.
06/2017 *Causation, Explanation, Conditionals*, Munich Center for Mathematical Philosophy.
06/2017 *Recent Work in Formal Epistemology*, Munich Center for Mathematical Philosophy.
05/2017 *Reasoning Club 2017*, University of Turin.
05/2017 *Reasoning and Argumentation in Science*, LMU Center for Advances Studies.

“Indiscernibility, Cateorically” (with Neil Dewar)

- 04/2019 *Foundations of Categorical Philosophy of Science*, LMU Munich.
07/2017 *British Society for the Philosophy of Science Biannual Conference*, University of Edinburgh.

“Bayesian Argumentation and the Value of Logical Validity” (with Stephan Hartmann)

- 07/2017 *Poznan Reasoning Week*, University of Poznan.

“Principles of Indifference”

03/2017 *Formal Representations of Ignorance*, Pittsburgh Center for the Philosophy of Science.
12/2016 *Reasoning in Physics*, LMU Center for Advances Studies.

“The Logic of Partial Supposition” (with Stephan Hartmann)

02/2017 *Learning Conditionals*, LMU Center for Advances Studies.

“Towards a Paraconsistent Quantum Set Theory”

07/2015 *12th International Workshop on Quantum Physics and Logic*, University of Oxford.

“Topos Theoretic Quantum Realism”

07/2014 *Annual Conference of the British Society for the Philosophy of Science*, University of Cambridge.

06/2014 *12th biennial conference of the International Quantum Structures Association*, University of Olomouc.

Teaching

AS PRIMARY INSTRUCTOR

2021-2022 Supervisor for undergraduate Mellon Mays research project, Duke University.

2021-2024 Independent Study Unit (x5), Duke University.

2024 Graduate Seminar ‘Formal Methods for Philosophy’, Duke University.

2024 Undergraduate Lectures ‘Introduction to Philosophy’, Duke University.

2023 Graduate Seminar ‘Philosophy of Artificial Intelligence’ (with Walter Sinnott-Armstrong), Duke University.

2023 Undergraduate Seminar ‘Philosophy through Science Fiction’ (with Ben Sarbey), Duke University.

2022 Undergraduate Seminar ‘Paradoxes of Rational Choice’, Duke University.

2022 Graduate Seminar ‘Kripke’s Naming and Necessity’, Duke University.

2021-2022 Graduate Seminar ‘Gödel’s First Theorem’ (x2), Duke University.

2021 Mixed graduate/undergraduate Seminar ‘Advanced Epistemology’ (with Jennifer Jhun), Duke University.

2021-2022 Undergraduate Seminar ‘Knowledge and Certainty’ (x2), Duke University.

- 2020 Graduate Proseminar ‘Metaphysics and Epistemology’ (with Jennifer Jhun), Duke University.
- 2020 Graduate/Advanced Undergraduate seminar ‘Bayesian Epistemology’, Duke University.
- 2019 Undergraduate seminar ‘Kripke’s Naming and Necessity’, University of Konstanz.
- 2019 Undergraduate seminar ‘Philosophy of Cognitive Science’, University of Konstanz.
- 2018 Advanced undergraduate/graduate seminar ‘Causation, Responsibility and Blame’, University of Konstanz.
- 2017 Graduate seminar ‘Reasoning and Argumentation’, Munich Center for Mathematical Philosophy.
- AS SEMINAR TUTOR
- 2014 Second year undergraduate course ‘Realism and Normativity’, University of Bristol, Department of Philosophy.
- 2013 First year undergraduate course ‘Introduction to Formal Logic’, University of Bristol, Department of Philosophy.
- 2012 First year undergraduate course ‘Introduction to Philosophy B’ (Moral and Political Philosophy), University of Bristol, Department of Philosophy.
- GRADUATE STUDENT SUPERVISION
- 2021-present On the committee for three philosophy graduate students and one cognitive neuroscience graduate student at Duke.

Academic Service

JOURNAL REFEREEING

(‘*’ = multiple occasions)

*Analysis**, *Annalen der Physik**, *Australasian Journal of Philosophy**, *British Journal for the Philosophy of Science**, *Cognition**, *Erkenntnis**, *Ergo**, *European Journal for the Philosophy of Science*, *Foundations of Science**, *Frontiers Research Metrics and Analysis*, *International Journal of Theoretical Physics*, *Journal for the General Philosophy of Science*, *Journal of Philosophy**, *Journal of Philosophical Logic**, *Memory and Cognition**, *Mind**, *Minds and Machines**, *Nous**, *Philosopher’s Imprint**, *Philosophical Quarterly**, *Philosophical Review**, *Philosophical Studies*, *Philosophy and Phenomenological Research**, *Philosophy of Science**, *Psychological Review**, *Review of Symbolic Logic**, *Studies in the History and Philosophy of Modern Physics**, *Studies in the History and Philosophy of Science**, *Synthese**, *Theoria*.

GRANT REFEREEING

Research grant reviewing for the German Research Council (DFG), 2021.

PROGRAM COMMITTEES

- (i) Formal Epistemology Workshop, 2024
- (ii) North American Summer School in Logic, Language and Information 2020,
- (iii) International Conference for Philosophy of Science and Formal Methods in Philosophy 2019

CONFERENCE AND EVENT ORGANISATION

Founder and organiser of Duke-UNC Epistemology workshop, first meeting fall 2023.

Founder and organiser of the Duke Causation Group (<https://be0367.wixsite.com/du-kause/schedule>), 2022-present.

Organiser (with Stephan Hartmann and Karolina Krzyzanowska) of 'Reasoning and Argumentation in Science' Conference at the LMU Center for Advanced Studies, May 2017 (approximately 50 participants).

Organiser (with Stephan Hartmann) of 'Reasoning in Physics' workshop at the LMU Center for Advanced Studies, December 2016 (approximately 20 participants).

DEPARTMENTAL SERVICE

Philosophy department placement director, 2022-2023.

Served on selection committee for philosophy graduate admissions (x3) at Duke University, 2022-2024.

Organised philosophy faculty work in progress talk series, 2021-2022.

Served on selection committee for philosophy faculty positions at Duke University, 2021-2022.

Served on selection committee for postdoctoral research fellowships at the Munich Center for Mathematical Philosophy, April 2017.

Career Breaks

Paternity Leave: 09/2014-12/2014, 03/2019-06/2019 and 06/2023-10/2023.