

Clara Bradley

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Research Interests

- AOS Philosophy of Physics, Philosophy of Science
- AOC Logic, Formal Epistemology, Social Epistemology

Employment

- Jan 2025 – **Lecturer, University College London**
Department of Philosophy

Education

- 2019 – 2024 **University of California, Irvine**
Department of Logic and Philosophy of Science
Ph.D. Philosophy (October 2024)
- Graduate Emphasis in Physics
Dissertation: “Symmetry and Equivalence in the Constrained Hamiltonian Formalism”
Advisor: James Owen Weatherall
- 2015 – 2019 **University of Bristol**
M.Sci. Physics and Philosophy
First-Class Honours

Publications

- 2025 **Do First-Class Constraints Generate Gauge Transformations? A Geometric Resolution**
The British Journal for the Philosophy of Science, Forthcoming.

- 2025 **Excess Structure in the Constrained Hamiltonian Formalism**
Philosophy of Science, Forthcoming.
- 2025 **The Relationship Between Lagrangian and Hamiltonian Mechanics: The Irregular Case**
Philosophy of Physics, 3(1): 9, 1-23. <https://doi.org/10.31389/pop.197>.
- 2023 **The Representational Role of Sophisticated Theories**
Philosophy of Science, pp. 1–10. <https://doi.org/10.1017/psa.2023.131>.
- 2022 **Mathematical Responses to the Hole Argument: Then and Now**
with James Owen Weatherall.
Philosophy of Science, 89 (5):1223-1232. <https://doi.org/10.1017/psa.2022.58>.
- 2021 **The Non-Equivalence of Einstein and Lorentz**
The British Journal for the Philosophy of Science, 72(4):1039-1059.
<https://doi.org/10.1093/bjps/axz014>.
Editors' Choice Article.
- 2020 **On Representational Redundancy, Surplus Structure, and the Hole Argument**
with James Owen Weatherall.
Foundations of Physics, 50:270–293. <https://doi.org/10.1007/s10701-020-00330-y>.

Works in Progress

We Have Never Been Sophisticated (with James Owen Weatherall)

Under Review [draft available].

Revisiting the 'Hole Argument' and the 'Problem of Time'

In Preparation.

A paper on dynamic deliberation and game-theoretic solution concepts (with Calum McNamara)

In Preparation.

Invited Talks

- September 2025 The Difference Between Reduction and (Internal) Sophistication Is Pragmatic
Cambridge-LMU workshop, Cambridge
- June 2025 Revisiting the 'Hole Argument' and the 'Problem of Time'
BLOC Workshop, KCL

May 2025	The Relationship Between Lagrangian and Hamiltonian Mechanics: The Irregular Case <i>Popper Seminar, LSE</i>
April 2025	The Relationship Between Lagrangian and Hamiltonian Mechanics: The Irregular Case <i>CamPos, Cambridge</i>
March 2025	Are Reduction and Sophistication Always Viable Alternatives? <i>University of Bristol Research Seminar</i>
March 2025	Are Reduction and Sophistication Always Viable Alternatives? <i>Oxford Philosophy of Physics Seminar</i>
May 2024	The Relationship Between Lagrangian and Hamiltonian Mechanics: The Irregular Case <i>New Directions in the Foundations of Physics Conference</i>
October 2023	The Relationship between Lagrangian and Hamiltonian Mechanics: The Irregular Case <i>Symmetry and Structure Workshop, Irvine</i>
May 2023	Do First-Class Constraints Generate Gauge Transformations? A Geometric Perspective <i>Quantum Spacetime in the Cosmos Conference, Perimeter Institute</i>
November 2022	Do First-Class Constraints Generate Gauge Transformations? A Geometric Perspective <i>Foundations of Physics @ Harvard Series (Online)</i>
February 2022	Partial Observables and Representational Redundancy <i>University of Bristol Philosophy of Science Seminar (Online)</i>
June 2019	The Non-Equivalence of Einstein and Lorentz <i>Oxford Philosophy of Physics Group, Oxford</i>
September 2018	The Non-Equivalence of Einstein and Lorentz <i>UC Irvine Philosophy of Physics Research Group, Irvine</i>

Refereed Talks

November 2024	The Extended Hamiltonian is Not Trivial <i>PSA 29th Biennial Meeting, New Orleans</i>
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July 2023	Do First-Class Constraints Generate Gauge Transformations? A Geometric Perspective <i>21st European Conference on Foundations of Physics, Bristol</i>
November 2022	The Representational Role of Sophisticated Theories <i>PSA 28th Biennial Meeting, Pittsburgh</i>
November 2021	Mathematical Responses to the Hole Argument: Then and Now <i>PSA 27th Biennial Meeting, Baltimore</i>
October 2021	The Significance of Isomorphic Models <i>20th European Conference on Foundations of Physics, Paris</i>
July 2017	The Non-Equivalence of Einstein and Lorentz <i>The British Society for the Philosophy of Science Annual Conference, Edinburgh</i>

Outreach Talks

January 2026	What Makes Science, “Science”? <i>Westminster School, London</i>
December 2025	Philosophy of Physics and Space-Time <i>Oxford Continuing Education Day, Oxford</i>

Teaching Experience

Lecturer, UCL

2025, 2026	Philosophy of Space and Time
2025, 2026	Formal Epistemology
2025	Science and Pseudoscience

Instructor of Record, UC Irvine

Fall 2023	Introduction to Logic <i>Outstanding Teaching Award</i>
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Guest Lecturer

Spring 2023	Structure and Equivalence, UC Santa Barbara (Thomas Barrett)
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Awards, Grants and Recognition

2024	Outstanding Scholarship Award \$500 (University of California, Irvine)
2024	Justine Lambert Paper Prize \$1000 (University of California, Irvine)
2023	Outstanding Teaching Award for Introduction to Logic (University of California, Irvine)
2019–2025	Social Science Merit Scholarship (University of California, Irvine)
2019–2022	Provost Fellowship \$20,000 (University of California, Irvine)
2019	Graduate Dean's Recruitment Fellowship \$5000 (University of California, Irvine)
2019	Peter Fowler Memorial Prize for Continued Excellence (University of Bristol)
2019	Philosophy Finalist Prize (University of Bristol)
2018	Undergraduate Faculty of Science Award (University of Bristol)

Professional Service

2025-26	Departmental Tutor for Year 2 Undergraduates (UCL)
2025-26	Head of Student Engagement (UCL)
2025-26	Department Events Liaison (UCL)
August 2023	Panelist and Speaker at LPS Summer Diversity Program (UC Irvine)
2022–2023	LPS Graduate Representative (UC Irvine)
2018–2019	Administrator for the Centre for Science and Philosophy (University of Bristol)
Journal Referee: <i>Philosophy of Science</i> , <i>The British Journal for the Philosophy of Science</i> , <i>Studies in History and Philosophy of Science</i> , <i>European Journal for the Philosophy of Science</i> , <i>Philosophy of Physics</i> .	