

RESEARCH

Areas of Specialization: philosophy of biology, history and philosophy of science

Areas of Competence: environmental ethics, bioethics, early modern philosophy of science, philosophy of art

EDUCATION

<i>May 2025 (Expected)</i>	Duke University Ph.D. in Philosophy Dissertation: “Groundwork of the Metaphysics of Models” <i>Committee: Alex Rosenberg (co-advisor), Robert Brandon (co-advisor), Dan McShea, Marc Lange, and Charles Pence</i> M.S. in Biology <i>Committee: Dan McShea, V. Louise Roth, and Alex Rosenberg</i>
<i>July 2019</i>	Georgia State University M.A. in Philosophy <i>Committee: Dan Weiskopf and Andrea Scarantino</i>
<i>December 2016</i>	Missouri Western State University B.S. in Biology and Philosophy

AFFILIATIONS

<i>July 2023-June 2024</i>	University of Pennsylvania Visiting Scholar, Department of Philosophy <i>Hosts: Michael Weisberg and Quayshawn Spencer</i>
<i>June 2023</i>	Université catholique de Louvain Visiting Researcher, Centre de Philosophie des Sciences et Sociétés <i>Host: Charles Pence</i>

PUBLICATIONS

9. **Hazelwood, Caleb.** (Forthcoming). “Beanbag Holobionts.” *Philosophy of Science*.
8. Zipple, Matthew, **Caleb Hazelwood**, Mackenzie F. Webster, Marcela Benítez. (Forthcoming). “Animal Emotions and Consciousness: Researchers’ Perceptions, Biases, and Prospects for Future Progress.” *Royal Society Open Science*.
7. **Hazelwood, Caleb.** (2023). “An Emerging Dilemma for Reciprocal Causation.” *Philosophy of Science*, 1-43. doi:10.1017/psa.2023.124
6. **Hazelwood, Caleb.** (2023). “Newton’s ‘law-first’ epistemology and ‘matter-first’ metaphysics.” *Studies in History and Philosophy of Science*, 101, 40-47. <https://doi.org/10.1016/j.shpsa.2023.08.005>
5. **Hazelwood, Caleb.** (2023). “Reciprocal causation and biological practice.” *Biology and Philosophy* 38, 5 <https://doi.org/10.1007/s10539-023-09895-0>

4. D'Aguillo, Michelle, **Caleb Hazelwood**, Brandie Quarles, Kathleen Donohue. (2021). "Genetic Consequences of Biologically Altered Environments." *Journal of Heredity*. <https://doi.org/10.1093/jhered/esab047>
3. **Hazelwood, Caleb**. (2021). "Practice-Centered Pluralism and a Disjunctive Theory of Art." *The British Journal of Aesthetics*. <https://doi.org/10.1093/aesthj/ayaa039>
2. Nijhout, H. Frederik., Anna M. Kudla, and **Caleb C. Hazelwood**. (2021). "Genetic assimilation and accommodation: Models and mechanisms." *Current Topics in Developmental Biology*. S. F. Gilbert, Academic Press. 141: 337-369.
1. **Hazelwood, Caleb**. (2018). "The species category as a scientific kind." *Synthese*. <https://doi.org/10.1007/s11229-018-02025-4>

BOOK REVIEWS

3. **Hazelwood, Caleb**. (2024). Dickins, T.E. and Dickins, B.J. eds., 2023. *Evolutionary biology: contemporary and historical reflections upon core theory*. Springer Nature. *The Quarterly Review of Biology*.
2. **Hazelwood, Caleb**. (2023). "Review of Charles H. Pence's *The Causal Structure of Natural Selection*." *Philosophy of Science*.
1. **Hazelwood, Caleb**. (2022). Bruce S. Grant, *Observing Evolution: Peppered Moths and the Discovery of Parallel Melanism*. Baltimore, Maryland: Johns Hopkins University Press, 2021. *History and Philosophy of the Life Sciences* 44, 52 <https://doi.org/10.1007/s40656-022-00543-6>

PRESENTATIONS (** = invited)

30. ** Comments on Grant Ramsey and Alejandro Fabregas-Tejada: "Driftability and Niche Construction"
98th Meeting of the APA Pacific Division
San Francisco, CA, 15-20 April 2025
29. "Beanbag Holobionts"
The 29th Biennial Meeting of the Philosophy of Science Association
New Orleans, LA, 14-17 November 2024
28. "Beanbag Holobionts"
Philosophy of Biology at the Mountains
University of Utah, 17-19 July 2024
27. "Natural Selection, the Microbiome, and the Boundaries of a Biological Individual"
Philosophy and Biology Shop Talks
Greensboro, North Carolina, 10-13 June 2024
26. "Natural Selection, Scientific Practice, and the Boundaries of a Biological Individual"
The Tenth Biennial Conference of the Society for Philosophy of Science in Practice
University of South Carolina, 15-18 May 2024
25. ** "Beanbag Holobionts"
Brandonfest: A Conference in Honor of Robert Brandon's Career
Duke University, 3-4 May 2024
24. ** "Natural Selection, the Microbiome, and the Boundaries of a Biological Individual"

23. ** “An Emerging Dilemma for Reciprocal Causation”
Lake Geneva Biological Interest Group
University of Geneva, 28 November 2023
22. ** “Reciprocal Causation and Biological Practice”
Evolvability: a bridge between the proximate and the ultimate?
Australian National University, 26-28 June 2023
21. ** “Metaphysics and the Philosophy of Biology”
With Charles Pence at the *Philosophy of Biology Workshop*
Australian National University, 21-23 June 2023
20. “The Unbearable Lightness of Intervening: Realist Metaphysics for Manipulability Theories of Causation”
With Yasmin Haddad at *Mechanisms and Ontic Causation in Life Sciences*
Université catholique de Louvain, 15-16 June 2023
19. ** “Revisiting the Metaphysics and Models of ‘Reciprocal Causation’”
Consortium for the History and Philosophy of Biology
Université Paris 1 Panthéon-Sorbonne, 10-11 May 2023
18. “Newton’s ‘Law-First’ Epistemology and ‘Matter-First’ Metaphysics”
9th Conference of Integrated History and Philosophy of Science
University of South Carolina, 16-18 March 2023
17. “An Emerging Dilemma for Reciprocal Causation”
The 28th Biennial Meeting of the Philosophy of Science Association
Pittsburgh, PA, 10-13 November 2022
16. “Non-Causal Explanations of Complex Evolutionary Systems”
Causality and Complexity: A Conference for Philosophy and Science
University of Salzburg, 29-30 September 2022
15. “The Limitations of Biological Examples in Evolutionary Explanations”
The Ninth Biennial Conference of the Society for Philosophy of Science in Practice
University of Ghent, 2-4 July 2022
14. “An Emerging Dilemma for Reciprocal Causation”
New Perspectives on Causation in the Life Sciences
University of Kent, 27-28 June 2022
13. “Newton’s Solution to the Problem of Bodies”
Fourteenth Biennial Congress of the International Society for the History and Philosophy of Science
University of California, Irvine, 20-23 June 2022
12. “Niche construction alters the expression of genetic variance and covariance”
American Genetics Association President’s Symposium, “Genes as Environment”
(hosted virtually due to COVID-19), 15-18 November 2020
11. “Evolutionary Causation and Biological Practice: An Experimental Approach”
Philosophy of Biology at the Mountains

(hosted virtually due to COVID-19), 29 June 2020

10. “Niche Construction Theory: Difficulties for a Practice Approach to Scientific Metaphysics”
The 5th Annual Society for the Metaphysics of Science Conference
University of Toronto, 7-9 November 2019
9. “Niche Construction Theory: Difficulties for a Practice Approach to Theoretical Pluralism”
The Second Meeting of Philosophy in Biology and Medicine
University of Bordeaux, 14-15 October 2019
8. Poster: “Dismantling the Holobiont Problem for Evolutionary Individuality”
With Lane DesAutels at *The 26th Biennial Meeting of the Philosophy of Science Association*
Seattle, WA, 1-4 November 2018
7. Comments on Philippe Huneman: “Revisiting the Modern Synthesis: The Case of Ecology”
The Fifth European Advanced Seminar in the Philosophy of the Life Sciences
Konrad Lorenz Institute for Evolution and Cognition Research, 10-14 September 2018
6. “The Species Category as a Scientific Kind”
The Seventh Biennial Conference of the Society for Philosophy of Science in Practice
University of Ghent, 29 June-2 July 2018
5. “Navigating a plurality of ontological thresholds in practice-based theories of natural kinds”
The 7th Annual University of Calgary Graduate Philosophy Conference
University of Calgary, 3-4 May 2018
4. “Navigating a plurality of ontological thresholds in practice-based theories of natural kinds”
Learning from Empirical Approaches to HPS
University of Pittsburgh Center for Philosophy of Science, 6-7 April 2018
3. “Extending Evolutionary Individuality: An Appeal to Multi-Dimensional Heredity”
With Lane DesAutels at *The Generalized Theory of Evolution*
Dusseldorf Center for Logic and Philosophy of Science, 31 January-3 February 2018
2. “Extended Evolutionary Individuality: Revisiting the problem of biological individuality within the extended evolutionary synthesis”
Interdisciplinary Workshop on Holobionts
University of Bordeaux, 6-8 November 2017
1. “CRISPR and Commercialization”
The Hastings Center, July 2016

AWARDS AND FELLOWSHIPS

8. Preparing Future Faculty Fellowship. Duke University. 2024-2025.
7. Dean’s Award for Excellence in Mentoring. Duke University. 2024.
6. Dissertation Research Travel Award. Duke University. 2023.
5. Competitive Summer Research Fellowship. Duke University. 2023.
4. Ph.D. Student Peer Mentoring Fellowship. Duke University. 2021-2022.

3. Templeton Ideas Challenge. John Templeton Foundation. 2020.
2. Ralf F. Munster Fellowship for Excellence in Research. Georgia State University. 2019.
1. Emily Murray Undergraduate Fellowship. The Hastings Center. 2016.

PUBLIC PHILOSOPHY

Podcasts

ABC: The Philosopher's Zone, "The Philosophy of Biology" [[link](#)]

The HPS Podcast, Season 1 Ep. 9, "Caleb Hazelwood on Scientific Metaphysics" [[link](#)]

The Animal Behavior Podcast, Season 3 Ep. 1, "William Kimler on Darwin and Chapter 7 of the Origin" [[link](#)]

SERVICE

Guest Editor, "Special Issue: The Concept of Adaptation in Evolutionary Biology," *Biology and Philosophy*.

Co-organizer, "Purpose, Agency, and Field Theory," May 2024.

Organizer, "Brandonfest: A Conference in Celebration of the Career of Robert Brandon," May 2024.

Organizing Committee, Meeting of the North Carolina Philosophical Society, March 2023.

University Judicial Board, Duke University, Graduate School Representative, 2022-2023

Newsletter Editor, Department of Philosophy, Duke University, 2022-2025

REFeree EXPERIENCE

The British Journal for the Philosophy of Science; *Philosophy of Science* (x2); *Philosophy, Theory, and Practice in Biology*; *Synthese* (x2); *Biology & Philosophy* (x2); *The British Journal of Aesthetics*

TEACHING EXPERIENCE

Duke University

Instructor of Record

June 2022 – Present

Philosophy of Biology (x3)
 Applied and Environmental Ethics
 Writing 101: Closing the Gender Gap in STEM (x2)
 Logic

Graduate Teaching Assistant

August 2020 – August 2023

Philosophy of Biology (Alex Rosenberg)
 Problems in the Philosophy of Science (Jennifer Jhun)
 Political Philosophy and Globalization (Alex Rosenberg)
 Introduction to Philosophy (Alex Rosenberg)
 Knowledge and Certainty (Ben Eva)

University of Pennsylvania

Graduate Teaching Assistant

Repairing the Planet: Tools for the Climate Emergency (Carlos Gray Santana)

January 2024 – May 2024

Georgia State University

Instructor of Record

Critical Thinking (x7)

May 2018 – May 2019

Writing Across the Curriculum Consultant

Philosophy and Cognitive Science (Neil Van Leeuwen)

August – December 2017

REFERENCES

Alex Rosenberg

Dissertation Co-Advisor

R. Taylor Cole Professor of Philosophy

Duke University

Email: alexrose@duke.edu

Robert Brandon

Dissertation Co-Advisor

Emeritus Professor of Philosophy

Duke University

Email: rbrandon@duke.edu

Marc Lange

Dissertation Committee Member

Theda Perdue Distinguished Professor of Philosophy

University of North Carolina at Chapel Hill

Email: mlange@email.unc.edu

Katherine Brading

Department Chair

Professor of Philosophy

Duke University

Email: katherine.brading@duke.edu

Charles Pence

Dissertation Committee Member

Chargé de cours, Institut supérieur de philosophie

Université catholique de Louvain

Email: charles.pence@uclouvain.be

Carlos Santana

Teaching Reference

Associate Professor of Philosophy

University of Pennsylvania

Email: csantana@sas.upenn.edu