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CURRICULUM VITAE

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Areas of Specialization

Philosophy of Science, Philosophy of Biology

Areas of Competence

Environmental Ethics, Bioscience Ethics, Evolutionary Biology, Early Modern Natural Philosophy

ACADEMIC APPOINTMENTS

University of Auckland, Lecturer in Philosophy (2015–present)

The Australian National University, Visiting Fellow, School of Philosophy (2018)

Visiting Scholar, School of Philosophy (2012, 2013)

Arizona State University, Visiting Scholar, Center for Biology and Society (2015)

EDUCATION

PhD, University of Pennsylvania, Department of Philosophy (2015)

National Science Foundation Graduate Research Fellow

Dissertation: *Experiments, Simulations, and Lessons from Experimental Evolution*

Supervisor: Michael Weisberg

Committee: Karen Detlefsen, Daniel Singer, Paul Sniegowski (Biology)

BA, Reed College, Philosophy (2004)

PUBLICATIONS

Articles and Book Chapters:

Parke, E. C. and Russell, J. C. (2018). Ethical Responsibilities in Invasion Biology. *The Ecological Citizen*, forthcoming.

Parke, E. C. (2014). Experiments, Simulations, and Epistemic Privilege. *Philosophy of Science*, 81(4), 516–536.

Parke, E. C. (2014). Flies from Meat and Wasps from Trees: Reevaluating Francesco Redi's Spontaneous Generation Experiments. *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences*, 45, 34–42.

Parke, E. C. (2013). What Could Arsenic Bacteria Teach Us About Life? *Biology and Philosophy*, 28(2), 205–218.

Bedau, M. A., **Parke, E. C.**, Tangen, U., and Hantsche-Tangen, B. (2009). Social and Ethical Checkpoints for Bottom-Up Synthetic Biology, or Protocells. *Systems and Synthetic Biology*, 3, 65-75.

Parke, E. C. and Bedau, M. A. (2009). The Precautionary Principle and its Critics. In M. A. Bedau and E. C. Parke (Eds.), *The Ethics of Protocells* (pp. 69–87). The MIT Press.

Bedau, M. A. and **Parke, E. C.** (2008). Social and Ethical Issues Concerning Protocells. In S. Rasmussen et al. (Eds.), *Protocells: Bridging Nonliving and Living Matter* (pp. 641–654). The MIT Press.

Edited Volumes:

Bedau, M. A. and **Parke, E. C.** (Eds.) (2009). *The Ethics of Protocells: Moral and Social Implications of Creating Life in the Laboratory*. The MIT Press.

Bedau, M. A., Hansen, P. G., **Parke, E. C.**, and Rasmussen, S. (Eds.) (2010). *Living Technology: Five Questions*. Automatic Press/VIP.

Under review:

Finding, Explaining, and Engineering Life

Treasured Exceptions: Surprise and its Role in Science

Microbes, Mathematics, and Models (with Maureen O'Malley)

A Cautionary Note for Claims about the Microbiome's Impact on the "Self" (with Brett Calcott and Maureen O'Malley)

In preparation:

Tapes of Life on Ice: Philosophical Lessons from Experimental Evolution

The Middle Ground Between Hypothesis-Testing and Exploration

What is the Nature of Models and Theories in Biology? (with Anya Plutynski, for *Philosophy of Science for Biologists*, under contract with Cambridge University Press)

Dynamics of Fitness Evolution in Populations with High and Extremely High Mutation Rates (with Chris Gentile and Paul Sniegowski)

MEDIA

Science Media Centre NZ: "Caution urged over gene drives for conservation—Expert reaction" (17 November 2017)

BBC CrowdScience: Interviewed as part of an episode on "Should we kill one species to save another?" (22 September 2017)

The New Zealand Herald: "Q&A: Predator-free NZ's tricky ethical issues" (19 September 2017)

PRESENTATIONS

* = Refereed, ◇ = Invited

Title TBD

NZMS/NZSBMB (Joint meeting of the New Zealand Microbiological Society and the New Zealand Society for Biochemistry and Molecular Biology), Dunedin, November 2018 ◇

Philosophy Seminar, The Australian National University, June 2018 ◇

Exploratory Microbial Models

PSA 2018 (Philosophy of Science Association), Seattle, November 2018*

Introduction to the Bioethics Panel Report on Predator Free New Zealand

SCBO (Society for Conservation Biology Oceania), Wellington, July 2018 ◇

Finding, Explaining, and Engineering Life

Philosophy Seminar, Victoria University of Wellington, September 2017 ◇

PBDB11 (Philosophy of Biology at Dolphin Beach), Moruya, August 2017 ◇

Sensors, Motors and Behaviour at the Origin of Life, Earth-Life Sciences Institute, Tokyo, July 2017 ◇

Philosophy Seminar, University of Waikato, July 2017 ◇

Pacific APA, Seattle, April 2017 (Invited Symposium: The Shadow Biosphere and the Nature of Life) ◇

Are Experiments Better than Models?

Biology Seminar, Massey University, May 2017 ◇

Auckland Bioengineering Institute, University of Auckland, October 2016 ◇

Biology Seminar, University of Auckland, September 2016 ◇

Treasured Exceptions: Surprise and its Role in Science

Philosophy Colloquium, Reed College, November 2016 ◇

ENSO Seminar Series (ENactive Seminars Online), October 2016 ◇

Philosophy Seminar, University of Otago, September 2016 ◇

Physics Seminar, University of Auckland, July 2016 ◇

Empirical Philosophy Workshop IV, Victoria University of Wellington, October 2015 ◇

Philosophy Seminar, University of Auckland, September 2015 ◇

Hypothesis Testing, Exploratory Experiments, and the Space in Between

SPSP2016 (Society for the Philosophy of Science in Practice), Rowan University, June 2016*

NZAP 2015 (New Zealand Association of Philosophers), Massey University, December 2015

The Many Faces of Model Organisms

Philosophy and Practice of Modelling, University of Sydney, August 2015 ◇

Experiments, Simulations, and Epistemic Privilege

Biology Interest Group, Minnesota Center for Philosophy of Science, October 2014 ◇

Experiments, Simulations, and Surprises

PSA 2014, Chicago, November 2014*

POBAM (Philosophy of Biology at Madison), Madison, May 2014*

PSX4 (Philosophy of Scientific Experimentation), Pittsburgh, April 2014*

Ecolunch Ecology & Evolution Seminar, University of Pennsylvania, December 2013 ◇

The Value of Surprise in Simulations and Experiments

ALIFE 14 (International Conference on Artificial Life), New York, July 2014 (presented poster)*

MS6 (Models and Simulations in the Sciences), Notre Dame, May 2014*

What's the Difference Between Experiment and Simulation?

ISHPSSB 2013, Montpellier, July 2013*

Extrapolation Claims in Experimental Evolution

PBDB6, Moruya, July 2012 ◊

PSX3, Boulder, October 2012*

External Validity and Experimental Evolution

AAP 2012 (Australasian Association of Philosophy), Wollongong, July 2012

Commentary on John Beatty's "What Does it Mean to Say that 'History Matters?'"

Philosophical Perspectives on Causal Reasoning in Biology, Minnesota Center for Philosophy of Science, May 2012 ◊

Lessons from Arsenic Bacteria

EPSA '11 (European Philosophy of Science Association), Athens, October 2011*

ISHPSSB 2011, Salt Lake City, July 2011*

Social and Ethical Impact of Artificial Cells

Blueprint for an Artificial Cell, European Center for Living Technology, Venice, May 2008 ◊

Efficient Discovery and Optimization using High-Throughput Experimentation and Predictive Design Technology

Symyx Global Symposium, Prague, May 2008 (presented poster)*

FELLOWSHIPS, AWARDS, AND HONORS

Visiting Fellowship, Research School of Social Sciences, The Australian National University (2018)

2017 Marjorie Grene Prize, International Society for the History, Philosophy, and Social Studies of Biology, awarded for the best manuscript based on a presentation at one of the two previous ISHPSSB meetings by someone who was, at the time of presentation, a graduate student

National Science Challenge for Biological Heritage, New Zealand, \$60,000 to investigate ethical and conceptual issues arising as part of the "High Tech Solutions For Invasive Mammal Pest Control" project (2017–2018)

Vice-Chancellor's Strategic Development Fund, University of Auckland, \$100,000, "Establishment of a New Research Centre in the Faculty of Science: The Foundational Questions Initiative." With Kathleen Campbell (Environment) and Richard Easther (Physics) (2017–2018)

Vice-Chancellor's Strategic Development Fund, University of Auckland, \$20,000, "Creation of the Auckland Genome Biology Research Centre." Co-applicant on a project led by Anthony Poole (Biology) (2017–2018)

Faculty Research Development Fund, University of Auckland, \$24,644, "Addressing Conceptual Questions about Life and its Origins" (2016–2018)

National Science Foundation (NSF) Graduate Research Fellowship, three years of full funding for PhD students in STEM disciplines (2011–2014)

Hopkinson Fellowship, University of Pennsylvania, \$5,000, research funding awarded to humanities graduate students for outstanding academic performance (2012–2013)

Penn Prize for Excellence in Teaching by Graduate Students, Honorable Mention, University of Pennsylvania (2011)

Benjamin Franklin Fellowship, University of Pennsylvania (2009–2011, 2014–2015)
Commendation for Academic Excellence, Reed College (2002–2004)

TEACHING AND SUPERVISION

UNIVERSITY OF AUCKLAND (2015–PRESENT)

Graduate (Biology)

Dialogues in Biology (co-taught with James Russell)

Graduate (Philosophy)

Philosophy of Science I: Modelling, Representation, and Inference in Science

Philosophy of Science II: Concepts and Categories in Biology

Undergraduate (Philosophy)

Philosophy of Science

Philosophy of Biology

Philosophy and the Environment (co-taught with Tim Mulgan)

Applied Ethics (co-taught with Vanya Kovach)

Supervision

David Kelley (PhD, current)

Fiona Miles (PhD, current) (co-supervisor)

Sidney Diamante (PhD, 2018), *Armed with Information: Cognition and Consciousness and the Octopus Nervous System*

Cameron Hyde (BAHons, 2017), *Notions of Minimal Cognition*

Shawn Tan (BAHons, 2017), *Personal Identity, Mind Uploading, and the Future of the Self*

Sam Woolley (BAHons, 2017), *Life as an Individual Versus Life as a Collective*

UNIVERSITY OF PENNSYLVANIA (2010–2013)

Undergraduate (Philosophy)

Ethics and the Environment (sole instructor)

Philosophy of Biology (teaching assistant)

History of Modern Philosophy (teaching assistant)

The Social Contract (teaching assistant)

Introduction to Philosophy (teaching assistant)

OTHER ACADEMIC AND PROFESSIONAL ACTIVITY

Co-Convenor (with James Russell), Biological Heritage Bioethics Panel on ethical and social issues regarding Predator Free New Zealand 2050 (2016–2018)

Executive Committee, Te Ao Mārama Centre for Fundamental Inquiry (Faculty of Science, University of Auckland) (2017–present)

Member of Paul Sniegowski's laboratory (Penn Biology Department) (2010–2015)
Business Manager at ProtoLife Srl. (an Italian synthetic biology company) (2005–2009)
Editorial Assistant for *Artificial Life* (MIT Press quarterly journal) (2003–2005)

SERVICE AND OUTREACH

Service to the Profession:

Referee for: *Acta Biotheoretica* • *Animal Studies Journal* • *Artificial Life* • *Astrobiology* • *Biology and Philosophy* • *British Journal for the Philosophy of Science* • *Current Organic Chemistry* • *Erkenntnis* • *European Journal of Analytic Philosophy* • *International Studies in the Philosophy of Science* • *Philosophia* • *Philosophy of Science* • *Studies in History and Philosophy of Biological and Biomedical Sciences* • *Synthese*

Editorial Board, *Studies in History and Philosophy of Biological and Biomedical Sciences* (2017–2019)

ISHPSSB Council (2017–2021)

NZAP Committee (2016–present)

NZAP Committee on Hiring and Gender (2015–present)

Mentor, The Job Candidate Mentoring Program for Women in Philosophy (2016–2017)

ISHPSSB Student Advisory Committee (Chair 2011–2013; Member 2013–2015)

ISHPSSB Graduate Student Representative (2011–2013)

Service to the University:

Seminar Leader, Science Scholars Program, University of Auckland Faculty of Science (2016–2018)

Service to the Department:

Undergraduate Adviser (2018)

Philosophy Seminar Organizer (2017)

Outreach and Organization:

Science Correspondent for RadioLIVE's Weekend Variety Wireless with Graeme Hill (2017–present)

Student Workshop Leader, ISSP (Initiative for Science, Society and Policy), Odense, Denmark (2010)

Co-Organizer of a four-part workshop series on ethical, legal, and social issues in bottom-up synthetic biology, for the PACE (Programmable Artificial Cell Evolution) project of the EU's Future and Emerging Technologies Program, held at the European Center for Living Technology and Los Alamos National Laboratories (2005–2008)

PROFESSIONAL MEMBERSHIPS

American Philosophical Association (APA)

Australasian Association of Philosophy (AAP)

International Society for the History, Philosophy, and Social Studies of Biology (ISHPSSB)

New Zealand Association of Philosophers (NZAP)

Philosophy of Science Association (PSA)