

## EMILY C. PARKE

Philosophy  
University of Auckland  
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New Zealand

## 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

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

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

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

### EDUCATION

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

National Science Foundation Graduate Research Fellow

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

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

**BA**, Reed College, Philosophy (2004)

### PUBLICATIONS

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#### Articles and Book Chapters:

**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:**

Treasured Exceptions: Surprise and its Role in Science

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

**In preparation:**

Tapes of Life on Ice: Philosophical Lessons from Experimental Evolution

The Middle Ground Between Hypothesis-Testing and Exploration

Finding, Explaining, and Engineering Life

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

**PRESENTATIONS**

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\* = Refereed, ◇ = Invited

**Title TBD**

Philosophy Seminar, University of Waikato, July 2017 ◇

Philosophy Seminar, Victoria University of Wellington, September 2017 ◇

**Finding, Explaining, and Engineering Life**

Sensors, Motors and Behaviour at the Origin of Life, Earth-Life Sciences Institute, Tokyo, 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 (Philosophy of Science Association), 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, 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 (Philosophy of Biology at Dolphin Beach), 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**

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**Visiting Fellowship**, Research School of Social Sciences, The Australian National University (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 Profs. Kathleen Campbell (Earth Sciences) and Richard Easther (Physics) (2017–2018)

**National Science Challenge for Biological Heritage**, \$60,000 to investigate ethical and conceptual issues arising as part of the “High Tech Solutions For Invasive Mammal Pests” project (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** (2011–2014)

**Hopkinson Fellowship**, University of Pennsylvania, \$5,000 (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

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### 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

#### 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

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

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

Cameron Hyde (BAHons, current)

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

Sam Woolley (BAHons, current)

Connor McMahan (Science Scholar third-year project)

### 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**

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Researcher in Paul Sniegowski's Laboratory (Penn Biology Department) (2010–2015)  
Researcher and 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**

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### **Service to the Profession:**

Referee for: *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*

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

NZAP Committee (2016–present)

NZAP Committee on Hiring and Gender (2015–present)

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

ISHPSSB Graduate Representative (2011–2013)

### **Service to the University:**

Seminar Leader, Science Scholars Program, University of Auckland Faculty of Science (2016, 2017)

### **Service to the Department:**

Philosophy Department Seminar Organizer (2017)

### **Outreach and Organization:**

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

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**

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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)