Peter Fisher Epstein

Curriculum Vitae

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Pembroke College
University of Cambridge
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United Kingdom

EMPLOYMENT

Pembroke College, University of Cambridge, 2017-2020
Junior Research Fellow (Randall Dillard Research Fellowship)

VISITING POSITION

New York University, Department of Philosophy, 2017-2019
Visiting Scholar

AREAS OF SPECIALIZATION

Philosophy of Mind
Epistemology (including Formal Epistemology)
Philosophy of Science

AREAS OF COMPETENCE

Metaphysics
Philosophy of Physics
Early Modern Philosophy

EDUCATION

University of California, Berkeley, 2008-2017
Ph.D., Philosophy, August 2017
Dissertation: *Sensible Concepts: Experience and the A Priori* (Committee: John Campbell (co-chair); Barry Stroud (co-chair); Geoffrey Lee; Tania Lombrozo)

Harvard University, 2000-2004
A.B., *summa cum laude*, Philosophy (with Certificate in Mind, Brain, and Behavior), June 2004
Thesis: *Comparing Qualia* (Supervisor: Susanna Siegel; Readers: Mike Martin and Richard Heck)
Awarded George Plimpton Adams Prize for best dissertation or undergraduate thesis in philosophy

PUBLICATIONS

"*A Priori* Concepts in Euclidean Proof," *Proceedings of the Aristotelian Society* (forthcoming)
"Shape Perception in a Relativistic Universe," *Mind* (2018)
"The Fine-Tuning Argument and the Requirement of Total Evidence," *Philosophy of Science* (2017)

GRANTS AND FELLOWSHIPS

"Grounding Sensible Qualities" Project (Co-Principal Investigator), New Directions in the Study of the Mind, University of Cambridge (led by Tim Crane), 2016-2017
Competitive £10,000 research grant, awarded for year-long project on metaphysics of color and shape

Mabelle McLeod Lewis Fellowship, Mabelle McLeod Lewis Memorial Fund, 2015-2016
One of four research fellowships awarded annually to humanities Ph.D. candidates in Northern California

Mary Gordon Roberts Fellowship, Harvard University, 2003
Research grant awarded by Mind, Brain, and Behavior Interfaculty Initiative (faculty sponsor: Ned Block)

HONORS AND AWARDS

Faculty Essay Prize, Canadian Philosophical Association Annual Congress, 2018
For best essay amongst those submitted by non-tenured faculty ("A Priori Concepts in Euclidean Proof")
Fink Prize, UC Berkeley Philosophy Department, 2015-2016
For best essay by a graduate student ("Shape Perception in a Relativistic Universe")
Outstanding Graduate Student Instructor Award, UC Berkeley, 2013-2014
Campus-wide honor for teaching excellence
George Plimpton Adams Prize, Harvard University, 2004
*For best dissertation or undergraduate thesis in philosophy (*Comparing Qualia*)*
Certificate in Mind, Brain, and Behavior, Harvard University, 2004
First philosophy concentrator to receive interdisciplinary research certificate

TALKS AND PRESENTATIONS (* = refereed; ** = invited)

"*A Priori* Concepts in Spatial Experience"
***Philosophy Department Colloquium, York University (Toronto), February 2018*
"*A Priori* Concepts in Euclidean Proof"
**Canadian Philosophical Association Annual Congress, UQAM, June 2018 (Faculty Essay Prize)*
***Philosophy Department Colloquium, University College London, March 2018*
***Center for Science and Thought, University of Bonn, November 2017*
***Philosophy Department Colloquium, University of York, October 2017*
***Philosophy of Mind Discussion Group, NYU, October 2017*
**Society for the Metaphysics of Science Conference, Fordham University, New York, October 2017*
**European Society for Philosophy and Psychology Conference, University of Hertfordshire, August 2017*
**Postgraduate Session, 91st Joint Session of the Aristotelian Society, University of Edinburgh, July 2017*
"Shape Perception in a Relativistic Universe"
**Objectivity, Space and Mind BPPA Masterclass, University College London, May 2015*
**Berkeley-London Graduate Conference, UC Berkeley, May 2015*
"Rethinking Decision Theory's Foundation"
**Formal Epistemology Workshop (FEW), University of Southern California, May 2011*

TEACHING

Cambridge
Lecturer
Metaphysics (Third-Year Undergraduate), Lent Term 2018
Supervisor
Philosophy of Mind (Second-Year Undergraduate), Lent Term 2018
Examiner
Philosophy of Science (Second-Year Undergraduate), 2018
UC Berkeley
Graduate Student Instructor (= upper-division course)*
Nature of Mind, John Campbell, Spring 2017
Introduction to Logic, Seth Yalcin, Fall 2016
*Metaphysics, Geoffrey Lee, Spring 2015
*Hume, Michael Martin, Fall 2014
*Philosophy of Mind, John Searle, Fall 2013
*Metaphysics, Barry Stroud, Spring 2013
*Theory of Meaning, John Campbell, Spring 2012
Philosophical Methods, Daniel Warren, Fall 2011
Introduction to Logic, Paolo Mancosu, Spring 2011
*Philosophy and Game Theory, Lara Buchak, Fall 2010
Modern Philosophy, Hannah Ginsborg, Spring 2010
Ancient Philosophy, John MacFarlane, Fall 2009

PROFESSIONAL SERVICE

Organizer, International Conference and Bi-Weekly Workshop: "Grounding Sensible Qualities," New Directions in the Study of the Mind Project, UC Berkeley, 2016-2017

Book Referee, Oxford University Press

Article Referee, *Canadian Journal of Philosophy*, *Ergo*, *Erkenntnis*, *European Journal for Philosophy of Science*, *Journal for the History of Analytic Philosophy, Noûs*, *Philosophical Psychology*, *Philosophical Quarterly*, *Philosophical Studies*

Organizer of Philosophy Colloquium Series, UC Berkeley, 2009-2010

RESEARCH AND WORK EXPERIENCE

Research Assistant for Lara Buchak, Associate Professor of Philosophy, UC Berkeley, 2011
Worked 40 hours per month as Commenter on draft of Risk and Rationality *(OUP, 2013)*

D.E. Shaw & Co., 2005-2008
Investment Associate at New York-based financial firm

Harvard University, Business, Government, and International Economy Unit, 2004-2005
Research Associate for David Moss, John G. McLean Professor of Business Administration

Harvard Medical School, Department of Psychiatry, 2002-2003
Research Assistant, Laboratory of Neurophysiology (PI: Allan Hobson; Supervisor: Bob Stickgold)

PROFESSIONAL AFFILIATIONS

Member of the American Philosophical Association
Member of the Aristotelian Society
Member of the European Society for Philosophy and Psychology

LANGUAGES

French (reading and speaking proficiency)
Latin (basic reading proficiency)

REFERENCES

John Campbell
Willis S. and Marion Slusser Professor of Philosophy
University of California, Berkeley
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Barry Stroud
Willis S. and Marion Slusser Professor Emeritus of Philosophy
University of California, Berkeley
barrys@berkeley.edu

Geoffrey Lee
Associate Professor of Philosophy
University of California, Berkeley
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Lara Buchak
Associate Professor of Philosophy
University of California, Berkeley
buchak@berkeley.edu

Michael Friedman
Suppes Professor of Philosophy of Science
Stanford University
mlfriedman@stanford.edu

Michael G. F. Martin
Wilde Professor of Mental Philosophy
University of Oxford
Mills Adjunct Professor of Philosophy
University of California, Berkeley
mgfmartin@berkeley.edu

Naomi Eilan
Professor of Philosophy
Director of the Warwick Mind and Action Research Centre
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I develop a new account of spatial experience that—unlike most contemporary theories of perception—situates our experience of space within a broader context of non-sensory cognitive activities. On my account, to perceive an object as square is, in part, to deploy the very same Euclidean concept of squareness that we utilize in *a priori* mathematical reasoning. Such geometrical concepts *feature in*, but are not *derived from*, experience. I show that this connection between our *a priori* and empirical representations of spatial features has profound implications for our understanding of perceptual experience, mathematical reasoning, and the interpretation of relativistic physics.

In light of the discovery of consistent non-Euclidean geometries and the empirical evidence that our own universe is not perfectly Euclidean, we can no longer endorse the Kantian idea that Euclidean proof gives us *a priori* knowledge of physical space. But there is an important *cognitive* connection between the theorems we prove in Euclidean geometry and the spatial features we perceive physical objects to instantiate. Having proven the Pythagorean theorem, a carpenter will expect a particular relation to hold among the lengths of the sides of a right triangle she is constructing from wooden beams. The beams are objects of the carpenter's perceptual awareness – they show up in her experience of the world. But she takes her knowledge of right triangles—knowledge that is a product of *a priori* mathematical reasoning, rather than any experiential contact with the world—to be directly applicable to those empirical objects.

Such applications of our geometrical concepts to empirical objects have led many theorists to conclude that these concepts are not, in fact, *a priori*, and must, instead, be derived from experience. How else, they ask, could geometrical concepts be applicable to the empirical world? Against this, I argue, in Chapter 2, that our use of spatial concepts in Euclidean geometry shows that they *cannot* be derived from experience: certain aspects of these concepts, such as our grasp of geometrical continuity, outstrip anything we can glean from our sensory cognition. On the contemporary understanding of *a priori* mathematical thought, ubiquitous since Hilbert, to say that our geometrical concepts are *a priori* is to accept that they are empty schemata, that the axioms of Euclidean geometry constitute a system of pure logic. The problem with this approach, however, is that it fails to explain why we take our geometrical concepts to apply, specifically, to the *spatial* features we perceive—the shapes of chessboards, the lengths of wooden beams—but not to entities like love, law, and chimney sweeps (entities to which, as Hilbert famously noted, geometry would be equally applicable, were it in fact a system of pure logic). In Chapter 3, I argue that the geometrical concepts that we apply to objects in perception are *sui generis*: though *a priori*, they are *not* merely formal or structural; they are substantive, specifically *spatial* representations.

This account of spatial experience helps shed light on a topic with a long philosophical history: the distinction between primary and secondary qualities. In Chapter 4, I argue that, lacking any *a priori* grasp of a secondary quality like redness, we can represent that property only by way of its role in experience – as *whatever* property typically generates experiences of red. Since perception does not inform us *which* specific property plays that role, we are left in the dark about the *nature* of the secondary qualities. By contrast, in the case of a primary quality like squareness, we are not constrained to represent the property by way of its role in experience. When we experience an object as square, we grasp the nature of the property represented, in virtue of our *a priori* geometrical concepts. Color and shape, then, feature in our cognitive lives in very different ways; these *conceptual* and *experiential* differences, rather than any difference in their *metaphysical* status, are the true basis of the distinction between primary and secondary qualities.

In the final chapter of the dissertation (a version of which is forthcoming in *Mind*), I consider an objection to my account of spatial experience stemming from Einstein's special theory of relativity (STR). According to the standard interpretation, STR reveals that no purely spatial properties are instantiated in our universe; instead, all that objectively exists is a four-dimensional spatio*temporal* manifold. Since, on my account, our experience represents purely spatial properties, STR might seem to imply that our experience is never veridical. Against this, I argue that what Einstein's discoveries in fact show is that objects instantiate Euclidean spatial properties in a particular *manner*: namely, relative to various inertial frames of reference. This analysis allows us to hold onto the intuitive thought that we are *correct* in applying our *a priori* spatial concepts not only to the abstract figures of Euclidean geometry, but also to the physical world we perceive.