

Marshall Abrams

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Current position

Assistant Professor, Department of Philosophy, University of Alabama at Birmingham

Education

A.B. in Ontology and Cognition, with honors, University of California, Davis, June, 1983.

Ph.D. in Philosophy, University of Chicago, March 26, 2002.

Dissertation: *Probabilistic Foundations of Teleology and Content*.

Committee: William C. Wimsatt, Ruth G. Millikan, Murat Aydede

NSF-sponsored Post-Doctoral Fellow, Center for Philosophy of Biology, Duke University, 2004–2005. Courses: Evolutionary Genetics, Animal Communication and Behavior

NEH Institute for Advanced Topics in the Digital Humanities: Computer Simulations in the Humanities, June 1–17, 2011 and June 1–3, 2012.

Areas of specialization: Philosophy of science, philosophy of biology, philosophy of probability, philosophy of cognitive science, philosophy of social science.

Areas of competence: Metaphysics, epistemology, philosophy of language, symbolic logic, decision theory.

Publications

“Mechanistic Social Probability: How Individual Choices and Varying Circumstances Produce Stable Social Patterns”, forthcoming in *Oxford Handbook of Philosophy of Social Science*.

“Mechanistic Probability”, forthcoming in *Synthese*. Accepted October 2010.

“Natural selection at genomic regions associated with obesity and type-2 diabetes: East Asians and sub-Saharan Africans exhibit high levels of differentiation at type-2 diabetes regions”, by Klimentidis, Abrams, Wang, Fernandez, Allison; *Human Genetics* 129(4), 2011.

“The Unity of Fitness”, *Philosophy of Science* 76(5), December 2009.

“Fitness ‘Kinematics’: Biological Function, Altruism, and Organism-Environment Development”, *Biology and Philosophy* 24(4), September 2009.

“What Determines Biological Fitness? The Problem of the Reference Environment”, *Synthese* 166(1), January 2009.

“How Do Natural Selection and Random Drift Interact?”, *Philosophy of Science* 74(5), December 2007.

“Fitness and Propensity’s Annulment?”, *Biology and Philosophy* 22(1), January 2007.

“Infinite Populations and Counterfactual Frequencies in Evolutionary Theory”, *Studies in History and Philosophy of Biological and Biomedical Sciences* 37(2), June 2006.

“Teleosemantics without Natural Selection”, *Biology and Philosophy* 20(1), January 2005.

Under review, in preparation, etc.

“A Causal Formulation of Statisticalist Pluralism about Evolution”

“Individual Fitness and Environmental Grain”

“Implications of Uses of Wright’s F_{ST} for the Role of Probability and Causation in Evolution”

“A Moderate Role for Cognitive Models in Agent-Based Simulation of Cultural Change”

“Muller’s Ratchet and the Maintenance of Culture”

“Mechanistic Probability and the Forces of Evolution”

Presentations, etc.

“Mechanistic Probability and the Forces of Evolution”, conference on Johannes Von Kries’ conception of probability, University of Bonn, Germany, September 13–14, 2012 (invited).

“Metaphor and Coherence: A Moderate Role for Cognitive Models in Agent-Based Simulation of Cultural Change”, Human Complexity 2012, University of North Carolina, Charlotte, NC, May 31, 2012.

“Capturing the Complexity of Human Culture in a Computer Simulation”, Haddin Humanities Forum, University of Alabama at Birmingham, April 13, 2012.

“A Moderate Role for Cognitive Models in Agent-Based Modeling of Cultural Change”, Philosophy of Social Science Roundtable, University of Nebraska, Lincoln, NE, March 9, 2012.

“Simulating Coherence in Cultural Evolution”, International Association for Computing and Philosophy, American Philosophical Association, Central Division, Chicago, February 16, 2012.

“Coherence in Cultural Evolution: A Computer Simulation of Sanday’s Hypothesis in *Female Power and Male Dominance*” (poster), American Anthropological Association, Montréal, November 17, 2011.

“Mechanistic Social Probability: How Varying Circumstances Produce Stable Social Patterns”, Institut d’Histoire et de Philosophie des Sciences et des Techniques, Université de Paris 1, September 23, 2011 (invited).

“Sometimes a Heart is Just like a Wheel of Fortune: How the Complexity of Organisms’ Interactions Makes Natural Selection a Cause”, CaEitS2011, Causality and Explanation in the Sciences, Ghent University, Belgium, September 21, 2011.

“Selection and Drift: Distinguishable Causal Factors—Not Processes, Not Independently Manipulable”, International Society for the History, Philosophy, and Social Studies of Biology, Salt Lake City, Utah, July 11, 2011.

“Symbolic Cultural Evolution: Simulating Coherence in Cultural Evolution” (poster), International Society for the History, Philosophy, and Social Studies of Biology, Salt Lake City, Utah, July 12, 2011.

“Sometimes a Heart Is Just Like a Wheel of Fortune: The Role of Causal Structure in Biological Probability”, Workshop on the Metaphysics of Microevolutionary Processes, University of Alabama at Birmingham, April 9, 2011.

“Probability in Social Contexts: How Individual Choices and Varying Circumstances Produce Stable Social Patterns”, International Network for Economic Method Conference, University of Alabama at Birmingham, November 12, 2010.

“Implications of Use of Wright’s F_{ST} for the Role of Probability and Causation in Evolution”, Philosophy of Science Association, Montreal, Quebec, November 5, 2010.

“What Sort of Environmental Grain is Relevant to Biological Fitness?”, Integrating Complexity: Environment and History, University of Western Ontario, October 8, 2010.

“What is Probability in the Social Sciences? How Individual Choices and Varying Circumstances Produce Stable Patterns”, Current Issues in the Philosophy and Methodology of the Social Sciences, University of Alabama at Birmingham, April 18, 2010.

“Individuals have no Fitnesses if Fitness Differences Cause Evolution”, 150 Years After *Origin*: Biological, Historical, and Philosophical Perspectives, University of Toronto, November 24, 2009.

“Fitness Tradeoffs and Component Effects”, European Philosophy of Science Association, Amsterdam, The Netherlands, October 24, 2009.

“What Kind of Environmental Grain is Relevant to Biological Fitness?”, Symposium on the Philosophy of Evolution, University of Groningen, The Netherlands, October 20, 2009 (invited).

“A Causalist Reformulation of Statisticalist Pluralism”, International Society for History, Philosophy, and Social Studies of Biology, Brisbane, Australia, July 13, 2009.

“Borrowing Laplacean Children’s Toys: On the Utility of Largely Unknowable Models”, Australian Association of Philosophy, Melbourne, Australia, July 5–10, 2009.

“Toward a Mechanistic Interpretation of Probability”, Metaphysics of Science, Melbourne, Australia, July 5, 2009

“Toward a Mechanistic Interpretation of Probability”, Society for Exact Philosophy, Edmonton, Alberta, May 7–9, 2009

“Borrowing Laplacean Children’s Toys: On the Utility of Largely Unknowable, Ideal Models”, Models and Simulations 3, Charlottesville, Virginia, March 6, 2009

“A Causal Formulation of Statisticalist Pluralism about Evolution”, Workshop on Probability in Physics and Biology, Institut d’Histoire et de Philosophie des Sciences et des Techniques, Université de Paris 1, February 14, 2009 (invited).

“Toward a Mechanistic Interpretation of Probability”, Florida Philosophical Association, Daytona Beach, Florida, November 16, 2008.

“The Unity of Fitness”, Philosophy of Science Association, Pittsburgh, Pennsylvania, November 7, 2008.

“Radical Pluralisms about Units of Selection”, European Philosophy of Science Association, Madrid, Spain, November 17, 2007.

“The Unity of Fitness”, International Society for the History, Philosophy, and Social Studies of Biology, Exeter, UK, July 29, 2007.

“Evolution by Natural Selection despite the Vagaries of Lives”, University of Alabama (Tuscaloosa), April 13, 2007 (invited).

“What Determines Biological Fitness? The Problem of the Reference Environment”, Florida Philosophical Association, Tampa, Florida, November 9-11, 2006.

“How Do Natural Selection and Random Drift Interact?”, Philosophy of Science Association, Vancouver, British Columbia, November 4, 2006.

“Comments on Scott James’ ‘The Caveman’s Conscience: Evolution and Moral Realism’”, Central States Philosophical Association, Memphis, Tennessee, October 14, 2006.

“What Determines Biological Fitness? The Problem of the Reference Environment”, selected by Duke University Center for Philosophy of Biology Reading Group, September 12, 2006.

“Why Did Human Cognition Evolve?”, Department of Philosophy, George Washington University, November 18, 2005.

“The Interaction of Evolutionary Forces: Drift, Selection, and Components of Fitness”, DC History and Philosophy of Biology Group, Washington, DC, November 17, 2005.

“What is Chance? Philosophical Problems of Probability”, Physics and Philosophy Club, George Washington University, November 16, 2005.

“The Path Space Conception of Components of Fitness”, International Society for the History, Philosophy, and Social Studies of Biology, Guelph, Ontario, July 16, 2005.

“Biological Fitness as a Function of Interval-Valued Mechanistic Probabilities”, Society for Exact Philosophy, Toronto, Ontario, May 20, 2005.

“What Kind of Environmental Complexity Selects for Decision Theory?”, Conference on Recent Work in Biology and Philosophy: The Evolution of Cognition: Niche Construction, Culture, and Environmental Complexity, Duke University, April 23, 2005

“Comments on Lane’s ‘Oak Trees and Ashes: An Argument that Identity is Vague and Non-Transitive’”, Southern Society for Philosophy & Psychology, Durham, North Carolina, March 24, 2005.

“The Propensity Interpretation of Fitness without Propensity”, Duke University Center for Philosophy of Biology Reading Group, September 7, 2004.

“Two Roles for Probability in a Theory of Fitness”, American Philosophical Association, Pacific Division, Pasadena, California, March 26, 2004.

“Teleosemantics and Natural Selection”, American Philosophical Association, Eastern Division, Philadelphia, Pennsylvania, December 29, 2002.

“Short-Run Mechanistic Probability”, Philosophy of Science Association, Vancouver, British Columbia, November 3, 2000.

“Propensities in the Propensity Interpretation of Fitness”, Southwestern Philosophical Society, Tulsa, Oklahoma, October 23, 1998.

Service

Profession

- Associate Editor, *Frontiers in Evolutionary and Populations Genetics* (2011–)
- Reviewer for *Philosophy of Science* (2010–2011)
British Journal for the Philosophy of Science (2008–2011)
Biology and Philosophy (2006–2011)
Journal of Theoretical Biology (2008–2010)
Synthese (2006, 2008)
- Editorial board member, Springer series *Philosophy and History of the Life Sciences* (2010–)
- Organized symposium for PSA 2010:
“Sewall Wright’s F-statistics: Measurement of biological population structure and its causes”

University of Alabama at Birmingham

- Interdisciplinary Innovation Forum Committee, College of Arts and Sciences, 2011–2012.
- Department of Philosophy Quality Enhancement Program student writing evaluation, Summer 2010, 2011.
- Organized Workshop on the Metaphysics of Microevolutionary Processes, April 8–9, 2011.
- Organized visit by Lenny Moss of the University of Exeter, lectures on April 4 and 5, 2011.
- Evolution, Cognition, and Culture Working Group, 2010–2012.
- Promotion and Tenure Committee, School of Arts and Humanities/College of Arts and Sciences, 2009-2011.
- Faculty Affairs Committee, School of Arts and Humanities, 2007-2009.
- Freshman Discussion Group Facilitator, Summer 2008.
- Secretary of the Faculty, School of Arts and Humanities, 2007-2008.

Pre-UAB

- Faculty participant, student-run Physics and Philosophy Club, George Washington University, 2005-2006
- Thacher Lecture Committee, George Washington University, 2005-2006
- Organized conference: The Evolution of Cognition: Niche Construction, Culture, and Environmental Complexity April 23-24, 2005.
(<http://www.duke.edu/philosophy/bio/conference.html>)
- Participated in Core Curriculum review, Colgate University, May 2004.

Grants

Spring 2012, awarded \$3000 Dean's Grant to hire student programmer to speed up work on computer simulation of cultural change.

Employment history

University of Alabama at Birmingham

- Assistant Professor, Department of Philosophy, 2006–present
Courses: The Scientific Enterprise; Minds and Machines; Evolution and Human Life; Issues in Philosophy and Biology; Meaning, Emotion, and Society; Introduction to Philosophy; Contemporary Moral Issues.
2011: Statistical Genetics-Focused Support Mentor for T32 Postdoctoral Fellowships, Section on Statistical Genetics, Department of Biostatistics, School of Public Health.
2010, 2011: Work on online teaching materials on biases in research for UAB Center for Clinical and Translational Sciences, via UAB Center for Ethics and Values in the Sciences.

George Washington University

- Visiting Assistant Professor, Department of Philosophy, 2005–2006.
(Courses: Mind, Brain, and Artificial Intelligence; Philosophy of Science; Theory of Knowledge; Introduction to Logic)

Duke University

- NSF-sponsored Post-Doctoral Fellow, Center for Philosophy of Biology, 2004–2005.
(Taught seminar: Philosophy of Biology; Organized conference: The Evolution of Cognition: Niche Construction, Culture, and Environmental Complexity, April 23-24, 2005, <http://web.duke.edu/philosophy/bio/Past%20Conference%20Stuff/conference2005.html>)

Colgate University

- Visiting Assistant Professor, Department of Philosophy and Religion, 2002–2004.
(Courses: Foundations of Scientific Explanation; Philosophy of Mind; Metaphysics; Logic; The Challenge of Modernity; Western Traditions)

University of Chicago

- Instructor, Fall 1998: Philosophical Perspectives on the Humanities.
- Teaching Assistant, Spring 1988: History of Philosophy IV: Recent Philosophy.
- Teaching Assistant, Autumn 1987: Elementary Logic.
- Grader, Spring 1986: Introduction to Metaphysics and Epistemology.

St. Xavier University

- Instructor, Spring 1998: Logic and Argument.

Center for the Advancement of Academically Talented Youth (JHU)

Lancaster, PA site. (A summer program offering college-level courses to teenagers.)

- Instructor, June 22–August 6, 1989 (two sessions): Logic.
- Instructor, July 16–August 7, 1988: Logic.

Other work

Research Assistant in the Cognitive Science laboratory of Professor Lance Rips, University of Chicago, October 1985–April 1986.

Several years of part-time computer programming and system administration. Details available on request.

Professional Affiliations

American Philosophical Association

Philosophy of Science Association

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

Society for Exact Philosophy

Languages

Reading knowledge of French.