

**Anya Plutynski**  
*Curriculum Vitae*  
July 2016

**Current Position:**

Associate Professor, Department of Philosophy, Washington University in St. Louis

**Websites:**

<https://philosophy.artsci.wustl.edu/people/anya-plutynski>

[https://scholar.google.com/citations?user=PkS\\_32cAAAAJ&hl=en](https://scholar.google.com/citations?user=PkS_32cAAAAJ&hl=en)

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Work Address: 1 Brookings Dr. Wilson Hall, Department of Philosophy, Washington University in St. Louis, St. Louis, MO 63130

Home Address: 6305 Southwood Ave. 1E Clayton, MO 63105

**Former Positions:**

Associate Professor, Department of Philosophy, University of Utah, 2001-2013

**Education:**

University of Pennsylvania, Ph.D., Philosophy, 2002

University of Pennsylvania, MA, Biology, 2000

University of Chicago, AB, Philosophy, with Honors, 1994

**Publications:**

Books:

*Explaining Cancer; Philosophical Issues in Cancer Causation, Evidence, and Explanation.* (forthcoming, Oxford University Press.)

*The Routledge Companion to Philosophy of Biodiversity.* 2016, coedited with Justin Garson and Sahotra Sarkar. Routledge.

*The Blackwell's Companion to Philosophy of Biology.* 2008. Sahotra Sarkar and Anya Plutynski, Editors. Blackwell Publishing.

Articles:

"Speciation since the Modern Synthesis" (forthcoming) in *Journal for the History of Biology*: Special Issue on the Modern Synthesis's Impact on Biology.

"The Evolution of Failure: Cancer from an Evolutionary Perspective" with Christopher Lean (2015) in *Biology and Philosophy*. 31 (1), 39-57.

"Integrative perspectives on the prevalence of brain tumors in males" (2015) *Cellular and Molecular Life Sciences* (CMLS). (Co-author with Tao Sun, Stacey Ward, Joshua Rubin.) <http://www.ncbi.nlm.nih.gov/pubmed/25985759>

"Cancer Research and the Goals of Integration" 2013. *Studies in the History and Philosophy of the Biological and Biomedical Sciences*. 44 Issue 4, Part A Pages 466-476.

"Ethical and Scientific Issues in Cancer Screening and Prevention." 2012. *Journal of Medicine and Philosophy*. 37(3): 310-323

"Four Problems of Abduction: A brief history" 2011. vol. 1, issue 2. *HOPPOS: The Journal of the International Society for the History of Philosophy of Science*.

"Should Intelligent Design be taught in Public School Science Classrooms?" 2010. *Science and Education*. Special Issue on Darwin and Darwinism: Pedagogical Studies, Vol. 19, No. 6-7: 779-795.

"The Rise and Fall of the Adaptive Landscape?" 2008. *Biology and Philosophy*, 23: 605-623.

"Explaining How and Explaining Why: Developmental and Evolutionary Explanations of Dominance." 2008. *Biology and Philosophy*. 23: 363-381.

- "Drift: a Historical and Conceptual Overview" 2007. *Biological Theory*. Vol. 2, No. 2:156-167.
- "Strategies of Model Building in Population Genetics." 2006, *Philosophy of Science: Proceedings*. Volume 73, Issue 5, Page 755-764.
- "What was Fisher's Fundamental Theorem and what was it for?" 2006. *Studies in the History and Philosophy of the Biological and Biomedical Sciences*. 37: 59-82.
- "Explanatory Unification and the Early Synthesis," 2005. *British Journal for the Philosophy of Science*. 56(3):595-609
- "Parsimony and the Fisher-Wright Debate," 2005. *Biology and Philosophy*. 20: 697-713.
- "Explanation in Classical Population Genetics," 2004. *Philosophy of Science, Proceedings*. 71: pp. 1201-1215.
- "Modeling Evolution in Theory and Practice," 2001. *Philosophy of Science Association, Proceedings*, 68: pp. S. 225-S236.

Book Chapters:

- "How Good Decisions Result in Bad Outcomes," (forthcoming) in *Measurement in Medicine: Philosophical Essays on Assessment and Evaluation* edited by L. McClimans. Rowman & Littlefield.
- "The Origins of "Dynamic Reciprocity": Bissell's Expansive Picture of Cancer Causation" (forthcoming) in Dietrich, M. and Harman, O. Editors. *Dreamers, Visionaries and Romantics in the Life Sciences*. University of Chicago Press.
- "Safe, or Sorry? Cancer Screening and Inductive Risk," In *Exploring Inductive Risk*. (forthcoming) Oxford University Press, Ted Richards and Kevin Elliott (Eds.)
- "Evolutionary Perspectives on Molecular Medicine." (2016) In *Philosophy of Molecular Medicine: Foundational Issues in Research and Practice*. Edited by G. Boniolo and M. Nathan. Routledge.
- "Chance in the Modern Synthesis" (2016) in *Chance in Evolution*. Edited by Grant Ramsey and Charles Pence. University of Chicago Press.
- "Putting Biodiversity Conservation into Practice: the Importance of Local Culture, Economy, Governance and Community Values" (forthcoming), coauthored with Yayoi Fujita-Lagerquist, *Routledge Companion to the Philosophy of Biodiversity*. Routledge
- "Biomedical Research Ethics" 2013. In *The Philosophy of Biology: A Companion for Educators*. Editor: Kampourakis, Kostas. Springer.
- "In Defense of Rationalist Science," 2011. Creager, Will, ed. *Science at the Frontiers: Perspectives in History and Philosophy of Science*. Lexington Books.
- "Speciation and Macroevolution," in the *Blackwell's Companion to Philosophy of Biology*, 2008. Edited by Sahotra Sarkar and Anya Plutynski. Blackwell Publishing.
- "Ecology and the Environment," in *Oxford Handbook to Philosophy of Biology*, 2008. Michael Ruse and David Hull, Editors. Oxford University Press.
- "Neutralism," in *The Handbook of the Philosophy of Science: Philosophy of Biology*, 2007. Edited by Mohan Matthen and Christopher Stevens, Amsterdam: Elsevier, pp. 129-141.

Encyclopedia Entries:

- "Crow, James" *Encyclopedia of the Life Sciences*. Published online 2009.  
(<http://www.els.net/WileyCDA/ElsArticle/refId-a0006247.html>) John Wiley & Sons, Ltd.
- "Water, the West and our Changing Climate: Political and Ethical Challenges," Keller, David, ed. *Environmental Ethics Case Studies: an Archive*.  
(<http://environmentalethics.posteros.com/water-the-west-and-our-changing-climate-polit-0>)
- "Ethics and Science" Green Series Volume 8: Green Ethics and Philosophy, SAGE E- Reference. Edited by Julie Newman and Paul Robbins.
- "Karl Popper" Jan 2009. *Literary Encyclopedia Online*.  
(<http://www.litencyc.com/php/speople.php?rec=true&UID=3600>)
- "The Modern Synthesis" 2008. *La Recherche*. (<http://www.larecherche.fr/>)
- "The Modern Synthesis" In E. Craig, Editor, *Routledge Encyclopedia of Philosophy Online*. Routledge [[http:// www.rep.routledge.com](http://www.rep.routledge.com)]
- "Theoretical Population Genetics," (coauthored with Warren Ewens), 2006. Sahotra Sarkar and Jessica Pfeiffer, eds., *Routledge Encyclopedia for Philosophy of Science*. Routledge.
- "Evolution" 2006. Sahotra Sarkar and Jessica Pfeiffer, eds., *Routledge Encyclopedia for Philosophy of Science*. Routledge.

Book Reviews:

- “Explanatory Pluralism in the Life Sciences” (2016) Review of Pierre-Alain Braillard and Christophe Malaterre (eds) (2015) *Explanation in Biology: An Inquiry into the Diversity of Explanatory Patterns in the Life Sciences*. Springer, Science and Education.
- "Hail the Platypus! Review of *Outsider Scientists: Routes to Innovation in Biology*." Feb. 2015. Edited by M. Dietrich and O. Harman, University of Chicago Press. Science and Education. Springer.
- Review of Chao, Chen, and Millstein, 2013. *Causality and Mechanism in Biology and Economics*, Springer. *Notre Dame Philosophical Reviews*. (Online at: <https://ndpr.nd.edu/news/47038-mechanism-and-causality-in-biology-and-economics/>)
- Review of Broadbent's *Philosophy of Epidemiology*. 2014. *Studies in History and Philosophy of the Biological and Biomedical Sciences*. Volume 46: 1070111.
- Review of Peter Godfrey-Smith's *Darwinian Populations and Natural Selection*, Fall 2010. *Philosophical Books*. 51 (2):83-101.
- Evolutionary Biology: Causes, Consequences and Controversies (A Survey Review of Okasha's *Evolution and the Levels of Selection* & Pigliucci and Kaplan's *Making Sense of Evolution: The Conceptual Foundations of Evolutionary Biology*.) *Metascience*. 16 (3): 437-445.
- A Philosopher Goes Wild: A Review of Sarkar, *Biodiversity and Environmental Philosophy*." 2007. *Studies in the History and Philosophy of the Biological and Biomedical Sciences, Part C*. 38 (1): 289-296.
- Seeing the Forest for the Trees: A Review of *Tangled Trees: Phylogeny, Coevolution, Cospeciation in Biology and Philosophy*. 19 (2): 299-303.
- Review of Mitchell's *Biological Complexity and Integrative Pluralism*, 2004. In *Notre Dame Philosophical Reviews* (online at: <https://ndpr.nd.edu/news/23759-biological-complexity-and-integrative-pluralism/>)

#### **Invited Talks and Conference Presentations:**

##### 2016:

- “Cancer Modeling: The Advantages and Limitations of Different Perspectives” Workshop on Perspectival Modeling: Pluralism and Integration, July 2016, hosted by Michela Massimi, University of Edinburgh, funded by the ERC (European Research Council)
- “Cancer Systems Biology: The Promises and Pitfalls of a New Paradigm” Pacific Meetings of the AAAS (American Association for the Advancement of Science), San Diego, June 2016.
- “What, if anything, does Systems Biology of Cancer Explain?” Pacific APA (American Philosophical Association Meetings, San Francisco, June 2016.

##### 2015:

- “Cancer Causation, Explanation and the Metaphysical Commitments of Theory” (December 2015), Paris, "New trends in the metaphysics of science" Conference at the Sorbonne, organized by Thomas Pradeau, and Maximilian Kistler.
- “Cancer from a Multi-Level Perspective: Tumors as Proto-Organisms?” (December 2015) Bordeaux.
- "Cancer from a Multi-Level Perspective: Tumors as Proto-Organism" Organismality Workshop, Washington University in St. Louis, sponsored by the Templeton Foundation, May 23, 2015.
- "Cancer: Disunified Kind, Unified Explanation?" Boston Colloquium for Philosophy of Science, April 10, 2015.
- "Pluralism and Integrative Explanations in Cancer Research" DEX3: 3rd annual Davis Extravaganza, March 30, 2015.
- "The Evolution of Failure: Cancer from a Multi-Level Perspective" Virginia Tech Annual Burian-McNabb Lecture, sponsored by STS and Philosophy, Virginia Tech, December 2014.
- "Speciation Since the Modern Synthesis" Workshop on History of Evolutionary Biology since the Modern Synthesis, University of Chicago, Sponsored by Philippe Hunneman and Jean Gayon, CNRS, Paris. November 10, 2014.
- "The Evolution of Failure," Keynote Address at Evolutionary Thinking: 7th Munich-Sydney-Tilburg Conference in the Philosophy of Science, Sponsored by the Munich Center for Mathematical Philosophy (MCMP), the Sydney Centre for the Foundations of Science (SCFS) and the Tilburg Center for Logic and Philosophy of Science (TiLPS), March 20, 2014.

"Nothing in evolution makes sense except in light of population genetics?" St. Louis Area Philosophy of Science Association (SLAPSA) February 15, 2014.

2013:

"The Evolution of Failure" University of Calgary, Department of Philosophy, Colloquium (Invited Speaker) Sept. 27, 2013.

"Cancer and the Evolution of Failure," University of Cincinnati, Colloquium, (invited speaker), October, 2013.

"The Evolution of Failure: On Cancer as an Evolutionary Process," Missouri Philosophy of Science Workshop (MOPS) Oct., 2013.

"Preventative Medicine, Overdiagnosis and Overtreatment: Challenges Facing Estimates of Effectiveness of Medical Intervention." Brocher Foundation (Geneva) Workshop on Evidence in Healthcare Reform, organized by Alex Broadbent, July 2013.

"The Evolution of Failure: Cancer as an Evolutionary Process." Washington University in St. Louis Philosophy Colloquium, Invited Speaker, Feb. 2013.

2012:

"Women in the Sciences before and After Rachel Carson" Wallace Stegner Center 17<sup>th</sup> Annual Symposium, Silent Spring at 50: The Legacy of Rachel Carson 2012.

"Laws in Biology: A Commentary on Lange and Mitchell," American Philosophical Association Meeting, December 2012.

"Overdiagnosis: A Risk of Cancer Screening?" *Philosophy of Science Association* Meetings, for a Symposium on Risk and Cancer, November 2012.

2011:

Darwin Day Keynote Speaker, North Dakota State University, Feb. 2011.

"Water, Conflict, and Human Rights: Emerging Challenges and Solutions," conference sponsored by the Barbara and Norman Tanner Center for Nonviolent Human Rights Advocacy. February 2011.

"Darwin's Importance for Modern Biology" Darwin Day Lecture, SHIFT (Secular Humanism, Inquiry and Free Thought), University of Utah, Feb. 2011

"Health Care: Access and Justice: What is a "decent minimum?" Annual LEAP (Learning, Engagement, Achievement, and Progress) Lecture, University of Utah, September 2011.

"Microbial Evolution: Breaking the Rules." with Fred Adler and Steve Peck, International Society for the History, Philosophy and Social Studies of Biology, (ISHPSSB) (refereed paper) July 2011.

2010:

"Breast Cancer from a Patient's Perspective," Guest Speaker 2010, 2011, 2012, University of Utah Medical School.

2009:

"From Darwin to Darwinism" Darwin Day Talk at Pacific University Feb. 2009.

2008:

"Evo-Devo meets Macro-Micro: A New Synthesis" Washington University Working Group in History and Philosophy of Biology, Hosted by Gar Allen. December 2008. "Return of the Hopeful Monsters" University of Chicago, Committee on the Conceptual and Historical Studies of Science, Colloquium. Hosted by W. Wimsatt. October 2008.

2007:

"Peirce and the Theory of Abductive Inference." International Society for the History of Philosophy of Science (HOPOS) (refereed paper), 2007.

2006:

"Life from Life: Speciation and the Nature of Evolutionary Explanation." Tanner Work in Progress Series, Tanner Humanities Center, University of Utah, October, 2006

"The Rise and Fall of the Adaptive Landscape," University of British Columbia, Spring Colloquium invited speaker.

2005:

"Cause for concern: A comment on Causation and Genic Selection," UC Davis, Fall Colloquium speaker.

"Levels of Drift" International Society for the History, Philosophy, and Social Studies of Biology (ISHPSSB) (refereed paper) July 2005.

"Darwin and Darwinism" Utah Valley State, Spring Colloquium Series, 2005.

"Darwin and Darwinism," Speaker Series for University of Utah Honors Program, Spring 2005.

2004:

"Drift as a Cause of Evolutionary Change," Department of Philosophy, University of Wisconsin, Madison, Colloquium Series, December 2004.

"The Molecular Revolution, Idealization, and Population Genetics" Philosophy of Science Association Meetings, (refereed paper) November 2004.

"The Molecular Revolution, Idealization and Classical Population Genetics," UT Austin Colloquium Series, Oct 1, 2004.

"Evolution and the Molecular Revolution," International Society for the History of the Philosophy of Science, (HOPOS) (refereed paper) June 2004.

2003:

"Whatever Happened to the Unity of the Genotype?" ISHPSSB, (refereed paper) July 2003.

"Speciation and the Concept of the Population in 20<sup>th</sup> Century Biology" Canadian Society for the History and Philosophy of Science, (refereed paper) May 2003.

"Parsimony and the Fisher-Wright Debate," Duke Center for Philosophy of Biology, Second Annual Conference: 25 Years after the Panglossian Spandrels: A Conference on Adaptationism, (invited paper) April 2003. Comment on Sarkar, *Biodiversity and Environmental Philosophy: An Introduction to the Issues*, Pacific American Philosophical Association Meetings, (APA) (invited speaker) March 2003.

"Will Molecular Biology Solve/Dissolve the Problems of Phylogenetic Systematics?" (Coauthor with Alex Rosenberg), 2003 Spring Symposium, *The Field Museum, Chicago: Systematics at a Crossroads Again: Biological and Philosophical Arguments in Contemporary Phylogenetics*

"The Place of Molecular Evolution in Evolutionary Biology: Ongoing Synthesis, Reduction, or Neither?" Carnegie Mellon University, Department of Philosophy Colloquium, February 2003

2002:

"Explanatory Pluralism and Evolutionary Biology," Philosophy of Science Association, (refereed paper) November 2002.

"R.A. Fisher and Sewall Wright: Philosophy of Science for Population Genetics" International Society for the History of Philosophy of Science (HOPOS) (refereed paper) 2002.

"Parsimony and the Wright-Fisher Debate," University of Cincinnati, Department of Philosophy Spring Colloquium, April 2002.

"Pluralism, Politics, and Parsimony: Issues in Biological Explanation," February 2002, University of Utah Rosenblatt Lunch.

2001:

"Saving Unification: A Reply to Morrison," International Society for History Philosophy and Social Study of Biology (ISHPSSB), (refereed paper) July 2001.

"Wright v. Fisher: Fact or Fiction?" University of Utah Department of Biology Colloquium, December 2001.

2000:

"Ethical Implications of Genetic Patenting," with David Magnus, Western American Philosophical Association (APA) 2000.

"Modeling Evolution," Presented at the Colloquia for the History and Philosophy of Science, Fall 2000, University of Texas, Austin.

1999:

"Competing Research Traditions and the Speciation Question," ISHPSSB, 1999, "Explanation in the Biological Sciences," University of Pennsylvania Department of Biology Eco lunch Seminar, Fall 1999.

"Problems with Deductivist Models of Explanation," University of Pennsylvania Department of Philosophy Graduate Student Seminar, Fall 1999.

**Teaching:**

*Washington University in St. Louis:*

Philosophy of Medicine, Philosophy of Biology, Biomedical Ethics, Philosophy-Neuroscience and Psychology Senior Seminar

*University of Utah Medical School:*

Facilitator, Medical Ethics, University of Utah Medical School, Spring 2009, 2010, 2011, 2012

*University of Utah Department of Philosophy:*

Biomedical Ethics, Biomedical Research Ethics, Philosophy of Biology, Philosophy of Science, History and Philosophy of Science, Science and Society, History of 20<sup>th</sup> C. Ecology, History of Science: From Darwin to Darwinism, Environmental Ethics, Early Modern Philosophy, Honors, Intellectual Traditions, the Rise of Modernity, Independent Study: Wittgenstein, Introduction to Philosophy, Ethics, Early Modern Philosophy

*University of Pennsylvania:*

Scientific Reasoning in the Biological Sciences, Critical Thinking, Introduction to Philosophy

### **Selected Service:**

National Science Foundation Science Technology and Society Review Panel, Spring 2015

Associate Editor, *British Journal for the Philosophy of Science* (Spring 2015-continuing)

Secretary, ISHPSSB (International Society for the Study of the History, Philosophy, and Social Studies of Biology) Summer 2011-current

Program Review Committee, European Philosophy of Science Association (Fall 2014-Spring 2015)

Program Committee for *Philosophy of Science Association* Meetings, November 2012.

Reviewer for

*Philosophy of Science*

*British Journal for the Philosophy of Science*

*Biology and Philosophy*

*Science and Education*

*Studies in the History and Philosophy of the Biological and Biomedical Sciences*

*Synthese*

*Erkenntnis*

*HOPOS: Journal of the International Society for the History of Philosophy of Science*

*European Journal for the Philosophy of Science*

*Washington University in St. Louis:*

Hiring Committee, Philosophy Fall 2014; Hiring Committee, History, Fall 2014

*University of Utah:*

Graduate Director University of Utah 2009-2013.

Program Committee for the International Society for the Study of the History, Philosophy, and Social Study of Biology (ISHPSSB)

Steering Committee for HOPOS (International Society for the History of Philosophy of Science)

Member of Philosophy of Science Association, History of Science Society, HOPOS, ISHPSSB, APA

Environmental Humanities Representative for Philosophy Department 2007-2013

International Studies Review Board 2007-2013

Intellectual Explorations Area Committee 2008-2013

Publications Council 2007-2012

Guest Lecturer for Environmental Studies 2100, Honors Program II, Tanner Humanities Center

Organized Spring 2005 Annual Colloquium in Environmental Ethics, Science and Policy

Served on University of Utah General Sciences Area Committee (University Wide Science Curriculum Committee)

Doctoral committee member for Ian Smith, Philosophy Ph.D., Keith Massie, Communications PhD, James Sage, Summer 2003, Ryan Spellecy, Spring 2002

Departmental Committee Work: Graduate Committee, Enrichment Committee, Curriculum Committee, 2004-2006

### **Honors/Fellowships:**

University of Utah Faculty Fellowship, Spring 2012

University of Utah Dean's International and Interdisciplinary Grant for Fall of 2010, for research on Cancer, the Environment, and the Science-Policy Interface

Dee Foundation Teaching Grant with Ed Barbanell for Fall of 2009: for Environmental Humanities and Environmental Ethics

Environmental Humanities Professorship for a project on Water in the West, University of Utah Environmental Humanities Program, 2008-2009, 2009-2010

Honors Professorship for 2006-2007, University of Utah

University Applied Ethics Committee Fellow award 2006-7 for "Minimization of Externalities as a Method to Frame Ethical Engineering and Business Practice." Kent Udell, Anya Plutynski, and Darrell Coleman.

Faculty Fellow, University of Utah Fall 2006.

University Applied Ethics Committee Fellow award for 2005-6, "Ethics of Ecotourism in Costa Rica" with Dan McCool

Participant at the University of Konstanz Summer School, on the subject of "Causality, Uncertainty and Ignorance," (A multidisciplinary, international conference on statistics of uncertainty), July 2004.

Dibner Institute Fellow, Summer Institute in History of Molecular Evolution, Woods Hole Marine Biological Labs, June 2004.

National Endowment for the Humanities Summer Institute in Science and Values, University of Pittsburgh, Summer 2003

Visiting Scholar, Duke University, Center for the Philosophy of Biology, Spring 2003

American Association of University Women Dissertation Fellowship, 2001-2. Fellowship declined due to academic appointment.

Chimicles Teaching Fellow, University of Pennsylvania, Fall 2000-Spring 2001, a teaching fellowship awarded to graduate students in the School of Arts and Sciences

Graduate Arts and Sciences Fellow, University of Pennsylvania, Fall 1999-Spring 2000. A non-teaching Fellowship awarded to graduate students who have completed all but the dissertation. Competition is school-wide.

Department of Philosophy Fellow, University of Pennsylvania, Spring 1998, non-teaching fellowship awarded while working on coursework towards a Masters in Biology.

DAAD (*Deutsche Akademische Austausch Dienst*) Fellow, Leipzig, Summer 1994, a fellowship awarded by the German government to graduates of American universities with an interest in German language and culture.

Kociusko Foundation Fellow, 1994-5, a fellowship awarded by the Polish-American Foundation for the promotion of the study of Polish language, history, and culture.