

Curriculum Vitae for:

Dr. James E. Strick

Chair, Program in Science, Technology and Society
Franklin and Marshall College
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Education

Doctor of Philosophy, History, Princeton University, 1997

Dissertation Topic: "The British Spontaneous Generation Debates of 1860-1880:
Medicine, Evolution and Laboratory Science in the Victorian Context"

Dissertation Advisor: Dr. Gerald L. Geison

Master of Arts, History, Princeton University, 1993

Master of Science, Microbiology, SUNY College of Environmental Science and Forestry, 1983

Bachelor of Science, Biology and Secondary Education, SUNY College at Cortland, 1981

Employment

Assistant Professor, Program in Science, Technology and Society, Franklin and Marshall College, 2002-2008; tenure and promotion to Associate Professor, spring 2008; promotion to full Professor, May 2015

Visiting Assistant Professor, History Department, Princeton University, Spring 2002

Visiting Assistant Professor, Department of History of Science, Johns Hopkins University, Fall 2001; Smithsonian Fellow, Fall 2000.

Assistant Professor, Program in Biology and Society, Arizona State University, August 1998-Spring 2001 (on research leave, 2000-2001)

Postdoctoral Teaching Fellow, Program in Biology and Society, Arizona State University, August 1996 - July 1998

Teaching Assistant, Program in History of Science, Princeton University, Spring 1996

Princeton Friends School, 1990-1994, Middle School General Science

Park School of Baltimore, 1987-1990, Sciences, Biomedical Ethics, Nuclear Issues, Science and Society

Instructor, Empire State College, Spring and Fall 1986, Introductory Ecology

Columbia Preparatory School, New York City, 1985-1987, Biology, Nuclear Issues, Science and Society

Hewitt School, New York City, 1983-1985, Biology, Chemistry

Grants and Fellowships

CPC Mellon Grant for newly tenured faculty research, 2008-2009

Smithsonian Fellow, Department of History of Science and Medicine, Johns Hopkins University, Fall 2000

Visiting Research Fellow, Center for History of Recent Science, George Washington University, 2000-2001

National Aeronautics and Space Administration, 1999-2001, with Steven J. Dick, grant for an historical study: "Birth of a New Science: the Exobiology Program in NASA"

Dibner Postdoctoral Fellowship in History of Biology and Medicine, awarded by the History of Science Society, Program in Biology and Society, Arizona State University, 1996-1997 and 1997-1998

National Science Foundation grant to fund research in US and British archives, 1994-1996

Schoen-Rene Memorial Fellowship for research affecting water quality, 1981-1982, and 1982-1983 (first recipient twice so honored), at SUNY College of Environmental Science and Forestry

Honors and Prizes

Richardson lecture in history of psychiatry (invited), Cornell-Weill Medical College, New York, 19 October 2106

Bradley R. Dewey Distinguished Faculty Research Award, Franklin and Marshall College, May 2016

Elected to History of Science Society Council, 2005-2008

Advisory Editor, *Isis*, 2005-2007

Invited co-organizer, 2005 Dibner History of Biology Workshop, MBL, Woods Hole, Mass.

Invited Speaker, AAAS Panel on the Social, Ethical and Philosophical Implications of Astrobiology, 21-23 Feb. 2003, Washington, DC (also a member of the workshop series)

SUNY College at Cortland, College of Liberal Arts and Sciences Visiting Scholar, April 2002

Arizona State University, College of Liberal Arts and Sciences Distinguished Teaching Award, 1999-2000

Invited Keynote Lecturer on History of Microbiology, American Society for Microbiology, May 1996, "Spontaneous Generation Controversies: What Can We Learn from Historical Studies?"

Henry and Ida Schuman Prize, History of Science Society, 1994, for outstanding graduate student research paper “Swimming Against the Tide: Adrianus Pijper and the Debate Over Bacterial Flagella”

Publications

Books

Wilhelm Reich, *Biologist* (Cambridge, MA: Harvard U. Press, 2015)
<http://www.hup.harvard.edu/catalog.php?isbn=9780674736092>

Editor, *The Origin of Life Debate: Molecules, Cells, and Generation*, a six volume series reissuing the primary sources of the doctrine of “histological molecules,” from Buffon and Needham (1748) through 1880 (Bristol, UK: Thoemmes Press, 2004)

With Steven Dick, *The Living Universe: NASA and the Development of Astrobiology*, (Rutgers U. Press, 2004)

Sub-editor for “Evolution,” *Dictionary of Nineteenth Century British Scientists*, ed. Bernard Lightman (Bristol, UK: Thoemmes Press, 2004)

Editor, *Evolution and the Spontaneous Generation Debate*, a six volume series, reissuing the primary works of Henry Charlton Bastian and a selection of his critics (Bristol, UK: Thoemmes Press, 2001)

Sparks of Life: Darwinism and the Victorian Debates over Spontaneous Generation (Cambridge, Mass.: Harvard University Press, 2000)

Articles in History of Science

Essay review: “The Cycle of Life Concept: Soil Microbiology and Soil Science Restored to the History of Ecology,” *Studies in History and Philosophy of Biological and Biomedical Sciences* 48 (2014): 119-121 <http://dx.doi.org/10.1016/j.shpsc.2014.08.009>

“Exobiology at NASA: Incubator for the Gaia and Serial Endosymbiosis Theories,” in Bruce Clarke, ed., *Earth, Life, and System: Interdisciplinary Essays on Environment and Evolution* (Bronx, NY: Fordham Univ. Press, 2015), pp. 80-104

“Introduction,” *The Works of Alfonso Herrera in Translation*, H.J. Cleaves, ed. (New York: Springer, 2014)

“A History of Origin of Life Ideas from Darwin to NASA,” in *Genesis—In the Beginning: Prebiotic Life, Chemical Models and Early Biological Evolution*, Joseph Seckbach, ed. (New York: Springer, 2012), DOI: 10.13140/2.1.3657.2167

“Introduction,” *Where Is the Truth?: Diaries and Letters, 1948-1957*, Mary Higgins, ed. (New York: Farrar, Straus and Giroux, 2012)

“Darwin and the Origin of Life: Public vs Private Science,” *Endeavour* (Dec. 2009) 33: 148-151

“Exobiology,” in *Evolution: the First Four Billion Years*, Michael Ruse and Joe Travis, eds. (Harvard U. Press, 2009)

"Definitions of Life and Debates on its Origin from Darwin to Freeman Dyson," in E. McMullin, H. Morowitz, and J.W. Szostak, eds., *Exploring the Origin, Extent, and Future of Life: Philosophical, Ethical and Theological Perspectives* (Cambridge U. Press, 2009)
<https://doi.org/10.1017/CBO9780511806506.003>

"Spontaneous Generation," in Moselio Schaechter, ed., *Encyclopedia of Microbiology*, 3rd ed., (New York: Academic Press, 2009)

"Wilhelm Reich as Laboratory Scientist, 1934-1939," in Birgit Johler, ed., *Wilhelm Reich Revisited* (Vienna: Turia & Kant, 2007)

Entries in Noretta Koertge (editor-in-chief), *The New Dictionary of Scientific Biography* (New York: Charles Scribners Sons, 2007): Norman Horowitz
Harold P. Klein
H. Charlton Bastian

"Darwin and the Origin of Life: A Historical Perspective," in C. Bertka, N. Roth, and M. Shindell, eds., *Workshop Report: Philosophical, Ethical and Theological Implications of Astrobiology* (American Assoc. for Advancement of Science, 2007), 41-51

"Creating a Cosmic Discipline: The Crystallization and Consolidation of Exobiology, 1957-1973," *J. of History of Biology* 37: 131-180 (2004) see
<http://www.fefox.com/ARTICLES/Strick.pdf>

"Louis Pasteur," in John L. Heilbron, ed., *Oxford Companion to the History of Modern Science* (Oxford, 2003)

"History of Microbiology," in Brian Baigrie, ed., *History of Modern Science and Mathematics* (Scribners, 2002)

"Pasteur and Tyndall on Spontaneous Generation: The Role of Textbooks in Creating an *Experimentum Crucis*," DOI: [10.13140/RG.2.1.5016.2328](https://doi.org/10.13140/RG.2.1.5016.2328) also
www1.umn.edu/ships/updates/pasteur1.htm

"Henry Charlton Bastian," in *Dictionary of Nineteenth Century British Philosophers* (Bristol: Thoemmes Press, 2002)

"The Cambrian Explosion (of Books on Origin of Life): Essay Review," *Journal of History of Biology* 33 (2000): 371-384

"Evolution of Microbiology as Seen in the Textbooks of Edwin O. Jordan and William H. Park," *Yale Journal of Biology and Medicine* 72 (1999): 321-328

Foreword to *Robert Koch: a Life in Medicine and Bacteriology* by Thomas Brock (Washington, DC: American Society of Microbiology Press, 1999)

"Darwinism and the Origin of Life: the Role of H.C. Bastian in the British Spontaneous Generation Debates, 1868-1873," *J. Hist. Biol.* 32 (1999): 51-92

"New Details Add to our Understanding of Spontaneous Generation Controversies," *ASM News* (Amer. Soc. Microbiol.) 63 (1997): 193-198

"Swimming Against the Tide: Adrianus Pijper and the Debate Over Bacterial Flagella, 1946-1956," *Isis* 87 (1996): 274-305

Articles in Microbiology

With J.R. Heckman, "Teaching Plant-Soil Relationships with Color Images of Rhizosphere pH," *Journal of Natural Resources and Life Sciences Education* 25 (1996): 13-17

With J.P. Nakas, "Calibration of a Microbial Sulfur Technique for Use in Forest Soils," *Soil Biology and Biochemistry* 16 (1984): 289-291

With M.B. David, S.C. Schindler, and M.J. Mitchell, "Importance of Organic and Inorganic Sulfur to Mineralization Processes in a Forest Soil," *Soil Biol. Biochem.* 15 (1983): 671-677

With S.C. Schindler, M.B. David, M.J. Mitchell, and J.P. Nakas, "Importance of Organic Sulfur Constituents and Microbial Activity to Sulfur Transformations in a Forest Soil," *Northeastern Environmental Science* 1 (1982): 161-169

Opinion Pieces

With Joe Karlesky and Richard Pepino, "Let the Restoration Begin," *Inside Higher Education*, 5 March 2009, <http://www.insidehighered.com/views/2009/03/05/karlesky>

Book Reviews

Creatures Born of Mud and Slime by Daryn Lehoux, *HOPOS: The Journal of the International Society for the History of Philosophy of Science* (2018)

A Crack in Creation by Jennifer Doudna and Samuel Sternberg, *Books Cover to Cover* (28 Aug. 2017) <https://bookscov2cover.com/2017/08/a-crack-in-creation-the-new-power-to-control-evolution/>

Ivan Pavlov: A Russian Life in Science by Daniel Todes, *Bulletin of the History of Medicine* 90: 344-345 (June 2016)

Astrobiology, History and Society: Life Beyond the Earth and the Impact of its Discovery ed. by Douglas Vakoch, *J. of History of Astronomy* (June 2016)

"Origin Stories," *Science* 351: 131 (8 Jan. 2016)

Vision, Science and Literature, 1870-1920: Ocular Horizons by Martin Willis, *Annals of Science* (2013)

Laboratory Disease: Robert Koch's Medical Bacteriology by Christoph Gradmann, *Brit. J. Hist. Sci.* 44: 140-141 (March 2011)

Alien Ocean: Anthropological Voyages in Microbial Seas by Stefan Helmreich, *Isis* 100 (2009): 949-950

Rene Dubos, Friend of the Good Earth: Microbiologist, Medical Scientist, Environmentalist by Carol Moberg, *Science* 311 (3 March 2006): 1243

Impossible Extinction: Natural Catastrophes and the Supremacy of the Microbial World by Charles Cockell, *Endeavour* (March 2005)

Life's Origin: The Beginnings of Biological Evolution by J. William Schopf, *History and Philosophy of the Life Sciences* (2003)

Things Come to Life: Spontaneous Generation Revisited by Henry Harris, *Isis* 94 (2003): 171-172

Louis Pasteur by Patrice Debré and *The Private Science of Louis Pasteur* by Gerald Geison: Essay review, *Ambix* 49 (2002): 80-82

The Spark of Life: Darwin and the Primeval Soup by Christopher Wills and Jeffrey Bada, *Isis* 93 (2002): 163-164

Microbial Musings by Debra Jan Bibel, *J. Hist. Biol.* 35 (2002): 203-204

Carl Sagan's Universe, eds. Yervant Terzian and Elizabeth Bilson, *Isis* 92 (2001): 804-805

Shaping Biology: The National Science Foundation and American Biological Research, 1945-1975 by Toby Appel, *Science* 293 (2001): 1052-1053

Many Faces, Many Microbes by Ronald M. Atlas, *Endeavour* 25 (2001): 88

Picture Control: the Electron Microscope and the Transformation of Biology in America, 1940-1960 by Nicolas Rasmussen, *Historical Studies in the Physical and Biological Sciences* 28 (1998): 358

Life's Splendid Drama by Peter Bowler, *Metascience* (n.s.) issue 12 (1997): 75-78

Presentations

"The Israel-Palestine Water Conflict," guest lecture in Prof. Lloyd Ackert course "The Geopolitics of Water," Drexel U., Philadelphia, 26 July 2017

"Reich's Energetic Functionalism and its Use as a Methodology in Science" and "Reich's Bion Experiments in Historical Context," talks at conference of Wilhelm Reich Gesellschaft, Berlin, 29-31 May 2015

"Wilhelm Reich's Bion Experiments and their Connection to His Theory of Cancer," Dept. of Wissenschaftsgeschichte, Humboldt University, Berlin, 27 May 2015

"Wilhelm Reich and the US State Department," talk at annual History of Science Society meeting, Boston, 23 Nov. 2013

"Reich's Bion Experiments and the Use of Dialectical Materialist Philosophy in Life Sciences in the 1930s," also "Darwin and the Darwinians Debate the Origin of Life," Max Planck/Wellcome Institute Summer School in History of Life Sciences, Ischia, Italy, 3 July 2013

“Serial Endosymbiosis and Gaia Theories: NASA as Incubator and Multiple Cultural Valences,” invited talk at “Earth, Life, System” conference in honor of Lynn Margulis, Texas Tech U., Lubbock, 12-13 Sept. 2012

“Reich’s Bion Experiments and Countway Archives,” History of Medicine and Psychiatry Lecture Series, Countway Library of Medicine, Harvard Medical School, 18 Nov. 2011.

“Serial Endosymbiosis Theory in the history of Cell Biology,” ASU-MBL History of Biology Workshop, Woods Hole, MA (with Lynn Margulis), 17 May 2011

“Wilhelm Reich’s Bion Experiments, 1934-1939: An Unusual Origin of Life Research Program,” Washington U. of St. Louis History of Biology Seminar Series, 8 Oct. 2010

“Biosignatures, Cell Model Experiments, and Microscopy in the 1930s: Wilhelm Reich’s Bion Experiments,” History of Science Society Annual Meeting, Phoenix, AZ, 20 Nov. 2009

“Evidence from Archives and Laboratory Notebooks: Researching Reich’s Bion Experiments,” invited lecture at Wilhelm Reich Museum summer conference, 13 July 2009

“Darwin and the Origin of Life: Public vs Private Science,” NASA Ames Research Center lecture series, 12 March 2009.

“Lessons from the Living Cell: Stephen Rothman, Cell Biology and Electron Microscopy, 1967-2007,” History of Science Society Annual Meeting, Washington, DC, 4 Nov. 2007

“The History of Lovelock’s Gaia Hypothesis: from Exobiology to Neo-Darwinist Reactions” invited lecture at Conference on the Current State of Gaia Theory, George Mason Univ., Fairfax, Va., 17 Oct 2006.

“Marxism, Sex and the Origin of Life: Wilhelm Reich’s Bion Experiments, 1935-1939,” History of Science Society Annual Meeting, Minneapolis, 4 Nov. 2005

“The Place of Wilhelm Reich’s Origin of Life Experiments in the History of Twentieth Century Biology and Medicine,” invited lecture at Wilhelm Reich Museum summer conference, 18 July 2005

“Darwin, the Darwinians, Cosmic Evolution and the Origin of Life,” Dibner Institute History of Astrobiology Workshop, Marine Biological Laboratory, Woods Hole, Mass., 17 May 2005

“Life Is too Complex to be Captured in a Simple Formula: F.J. Allen’s BAAS Address, 1896,” History of Science Society Annual Meeting, Cambridge, MA, 21 Nov. 2003

“Creating a Cosmic Discipline: The Crystallization and Consolidation of Exobiology, 1957-1997,” History of Science Society Annual Meeting, Milwaukee, 8 November 2002.

“Darwin and the Darwinians Wrestle with the Origin of Life Problem,” Biology Dept. and Honors Lecture Series, Southampton College, Southampton, NY, 15 October 2001

“Darwin’s Strategy for Dealing with the Origin of Life Issue,” History Dept., The College of New Jersey, 5 April 2001

"Bacteria, The Rockefeller Foundation, and Reductionist Ideas about Life, 1933-1960," History Dept., Univ. of Maryland Baltimore County, 2 April 2001

"The NASA Exobiology Program: Funding Interdisciplinary Research," Smithsonian National Air and Space Museum, Historical Seminar on Contemporary Science and Technology, 18 January 2001

"Early Days of Exobiology: Stanley Miller, Sidney Fox and the 'Nucleic Acid Monopoly,'" History Dept., George Washington Univ., 15 December 2000

"Evolution and the Origin of Life: Tyndall, Bastian and Darwinian factional In-fighting," History of Science Dept., Johns Hopkins U., 16 November 2000

"Cell Theory and the Origin of Life: H.C. Bastian's Ideas, 1880-1915," History of Science Society Annual Meeting, Vancouver, 4 November 2000

"NASA, the Cold War and Origin of Life Research, 1953-1972," HSS Annual Meeting, Pittsburgh, November 1999

"W.H. Park and E.O. Jordan: Defining the Field of Bacteriology with Textbooks," American Society for Microbiology Annual Meeting, Chicago, May 1999

"Rising Young Darwinian Star: a New View of Henry Charlton Bastian," HSS Annual Meeting, Kansas City, October 1998

"Huxley, Tyndall, and Urschleim: the Scientific Naturalists and Spontaneous Generation," HSS Annual Meeting, San Diego, November 1997

"Purity and Contamination: the X Club Agenda and John Tyndall's Campaign Against Spontaneous Generation, 1870-1878," HSS Annual Meeting, Atlanta, November 1996

"Epistemological Issues in the Bacterial Flagella Controversy," Dibner Seminar in History of Biology, Marine Biological Laboratory, Woods Hole, August 1996

"Pasteur and Tyndall on Spontaneous Generation: the Role of Biology Textbooks in Creating an *Experimentum crucis*," HSS Annual Meeting, Minneapolis, October 1995

"The Molecular Theory of Cell Structure: John Hughes Bennett's Ideas, 1845-1875," presented in session on Cell Theory at the International Society for History, Philosophy and Social Studies of Biology Biennial Meeting, Leuven, Belgium, July 1995

"John Tyndall's Campaign Against H.C. Bastian and Spontaneous Generation," presented at Royal Institution Center for History of Science and Technology, London, March 1995

"Swimming Against the Tide: Adrianus Pijper vs. Biological Electron Microscopy," HSS Annual Meeting, New Orleans, October 1994

Journal and Proposal Referee

Isis
Science

Die Naturwissenschaften
Proceedings of the National Academy of Sciences
Proceedings of the Royal Society of London
International Microbiology (and editorial board)
FEMS Microbiology Letters
Journal of the History of Biology
British Journal of History of Science
History and Philosophy of Biological and Biomedical Sciences
Canadian Bulletin of Medical History
Science in Context
Harvard University Press
American Society for Microbiology Press
NASA History Office
National Science Foundation, STS-Grants

Professional Workshop Participation

Invited Presenter at NASA Headquarters, Washington, DC, on aims and methods in current history of science, 30 April 2001

Participant, joint ASU / University of Arizona Bioethics Workshop, Biosphere 2, May 2000

Participant, Gordon Research Conference on the Origin of Life, Ventura, CA, February 1999

Invited Participant, Dibner Workshop: "Pasteur, Germs, and the Bacteriological Laboratory," Dibner Institute, November 1996

Courses Taught

Franklin and Marshall College

Environment and Human Values
Scientific Revolutions
History of Medicine
The Darwinian Revolution
Nuclear Weapons, Power and Waste Disposal
Environmental History
Ind. readings: Social History of Tuberculosis
Ind. senior thesis research supervisor

Princeton University

Graduate seminar: The Darwinian Revolution
Junior History of Biology and/or Medicine theses advisor

Johns Hopkins University

History of Modern Biology
History of Ideas About the Origin of Life

Arizona State University

Biology and Society
History of Biology

Lives of Scientists: Scientific Biography and Autobiography
Independent Study Advisor for Graduate Research
Advisor to undergraduate Humanities Council Research Award Recipient
Advisor for undergraduate Honors Thesis, Mentor for undergraduate tutors

Professional Affiliations & Service

Isis Advisory Editor, 2005-2007
Member, Dissertation committee, Carin Berkowitz, Cornell University STS Program
American Society for Microbiology, 1983-present; Archives Committee, 1997-present
History of Science Society, 1987-present; HSS Council, 2005-2008; Levinson
Prize Committee, 2006
Archives Committee, Wilhelm Reich Trust
Sigma Xi, 1991-present
American Association for History of Medicine, 1992-present
British Society for History of Science, 1992-present
International Society for History, Philosophy and Social Studies of Biology, 1992-present
International Society for Study of the Origin of Life, 1996-present

Professional Certifications

High School and Middle School Sciences: Permanent New York State Certification for
Secondary Level Biology, Chemistry, and Earth Science, 1984