

CURRICULUM VITAE**Elliott Sober****November 2009****EDUCATION**

Harvard University, 1972-74, Ph.D.
 Cambridge University, 1970-72, Research Student.
 University of Pennsylvania, 1969-70, Master of Science in Education.
 University of Pennsylvania, 1965-69, B.A.

POSITIONS HELD

William F. Vilas Research Professor, Department of Philosophy, University of Wisconsin-Madison, 1993-present.
 Hans Reichenbach Professor, Department of Philosophy, University of Wisconsin-Madison, 1989-present.
 Visiting Professor, London School of Economics and Political Science, 2003-2008.
 Professor, Department of Philosophy, Stanford University, 2003-2004.
 Centennial Professor, London School of Economics and Political Science, 1999-2002.
 President, Philosophy of Science Association, 2003-2005.
 President, American Philosophical Association Central Division, 1998-1999.
 Secretary, International Union for History and Philosophy of Science, Division of Logic, Methodology, and Philosophy of Science, 1991-1999.
 Chair, Department of Philosophy, University of Wisconsin, Madison, 1993-1997.
 Professor, Department of Philosophy, University of Wisconsin-Madison, 1984-present.
 Associate Professor, Department of Philosophy, University of Wisconsin-Madison, 1980-1984.
 Assistant Professor, Department of Philosophy, University of Wisconsin-Madison, 1974-1980.
 Co-Director, International Summer School, Institute Vienna Circle, University of Vienna, 2001.
 Member, Advisory Committee of the Center for the Humanities, 2004-2007.
 Adjunct Member of the Institute for Research in the Humanities, University of Wisconsin, Madison, 1993-1997.
 William Evans Visiting Fellow, Department of Philosophy, University of Otago, Dunedin, New Zealand, 1990.
 Visiting Scientist, Museum of Zoology, University of Michigan, Ann Arbor, Spring 1988.
 Fellow in Population Genetics, Harvard University, 1980-81.

HONORS AND AWARDS

NEH Summer Fellowship (1978); John Simon Guggenheim Fellowship (1980-81); H. I. Romnes Faculty Fellowship (1982); NSF Summer Fellowship (1982, 1983, 1984); Travel grants from American Council of Learned Societies and the Hewlett Fund, University of Wisconsin (1984); National Science Foundation Fellowship (1985-86); National Endowment for the Humanities Fellowship (1986); National Research Council Travel Grant (1987); NSF Summer Fellowship (1987); NSF Fellowship (1989-90); Lakatos Award (1991); NSF Summer Fellowship (1992, 1993); Fellow, American Academy of Arts and Sciences (1999-present); Distinguished Guest of the Hungarian Philosophical Society (2000); Member, International Academy of Philosophy of Science (2001-present); NSF Summer Grant (2000-2003); Fellow, American Association for the Advancement of Science (2003-present); APA Prometheus Laureate (2008); APA Patrick Romanell Lecturer (2008); Fellow, Linnean Society of London (2009-present).

RESEARCH AND PUBLICATIONS

A. Books and Two Edited Anthologies

Did Darwin Write the Origin Backwards? Prometheus Books, in preparation.

Evidence and Evolution — the Logic Behind the Science, Cambridge University Press, 2008.

(edited with Steven Orzack) *Adaptationism and Optimality*, Cambridge University Press, 2001.

(with David S. Wilson) *Unto Others — The Evolution and Psychology of Unselfish Behavior*, Harvard University Press, 1998 (Spanish edition, Siglo Veintiuno de España Editores, 2000).

From a Biological Point of View — Essays in Evolutionary Philosophy. Cambridge University Press, 1994.

Philosophy of Biology, Westview Press (in UK: Oxford University Press), 1993; 2nd edition, 1999. Spanish edition (Alianza, 1996); Chinese edition (2000); Korean edition (Chul Hak Kwa Hyun Sil Sa Publishing Co., 2004); Japanese edition (Shunju Sha, 2009); Turkish Edition (Imge, 2009).

(with Erik Wright and Andrew Levine) *Reconstructing Marxism — Essays on Explanation and the Theory of History*, Verso Press, 1992; Portuguese edition, 1993.

Core Questions in Philosophy — A Text with Readings. Macmillan 1990; Prentice Hall 2nd edition 1995, 3rd edition 2000; 4th edition 2005; 5th edition 2008.

Reconstructing the Past — Parsimony, Evolution, and Inference. Bradford/MIT Press, 1988. 1st Japanese edition, Souju Publishers, Tokyo, 1996; 2nd Japanese edition, Keiso Shobo Publishing Company, Tokyo, 2010.

The Nature of Selection — Evolutionary Theory in Philosophical Focus. Bradford/MIT Press, 1984; 2nd edition, University of Chicago Press, 1993.

(edited) *Conceptual Issues in Evolutionary Biology — An Anthology*, Bradford/MIT Press, 1984; 2nd edition 1993; 3rd edition 2006.

Simplicity, Oxford University Press, 1975.

B. Papers

227. (with Malcolm Forster) “AIC Scores as Evidence – A Bayesian Interpretation.” In Malcolm Forster and Prasanta Bandyopadhyay (eds.), *The Philosophy of Statistics*, Kluwer, forthcoming.

226. (with Martin Barrett) “The Surprise Examination Problem as a Game of Matching Pennies – a General Framework.”

225. (with Joel Velasco) “Testing for Treeness – Lateral Gene Transfer, Phylogenetic Inference, and Model Selection.” *Biology and Philosophy*, forthcoming.

224.

223. “Why Methodological Naturalism?”

222. “Did Darwin Write the *Origin Backwards*?” *Proceedings of the National Academy of Science USA*, 2009, 106: 10048-10055; Spanish translation (¿Escribió Darwin el *Origen* al revés?) in *Revista Filosofía Teorema*, 2009, 28: 45-69.

221. "Parsimony Arguments in Science and Philosophy — A Test Case for Naturalism_p." *Proceedings and Addresses of the American Philosophical Association*, 2009, 83:2, pp. 117-155.
220. "Realism, Conventionalism, and Causal Decomposition in Units of Selection — Reflections on Samir Okasha's *Evolution and the Levels of Selection*." *Philosophy and Phenomenological Research*, forthcoming.
219. "Parsimony and Models of Animal Minds." In R. Lurz (ed.), *The Philosophy of Animal Minds*. Cambridge University Press, 2009, pp. 237-257.
218. "Reichenbach's Cubical Universe and the Problem of the External World." *Synthese*, forthcoming.
217. "A Philosopher Looks at the Units of Selection Problem – a Review of Samir Okasha's *Evolution and the Levels of Selection*." *Biosciences*, 2008, 58: 78-79.
216. "Intelligent Design, Irreducible Complexity, and Minds – A Reply to John Beaudoin." *Faith and Philosophy*, 2008, 25: 443-446.
215. "Absence of Evidence and Evidence of Absence – Evidential Transitivity in Connection with Fossils, Fishing, Fine-Tuning, and Firing Squads." *Philosophical Studies*, 2009, 143: 63-90.
214. "Evolution without Naturalism." In J. Kvanvig (ed.), *Oxford Studies in Philosophy of Religion*, forthcoming.
213. "Fodor's *Bubbe Meise* Against Darwinism." *Mind and Language*, 2008, 23: 42-49.
212. (with Alan Attie, Ronald Numbers, Richard Amassino, Beth Cox, Terese Berceau, Thomas Powell, and Michael Cox) "Defending Science Education against Intelligent Design – a Call to Action." *Journal of Clinical Investigation* 116: 1134-1138.
211. "What's Wrong with Intelligent Design Theory?" *Quarterly Review of Biology*, 2007, 82: 1-8. Translated into Polish as "Co jest nie takz Inteligentnym Projektem,?" In K. Jodkowski (ed.), *Teoria Inteligentnego Projektu - nowe rozumienie naukowości?* Warsaw, Poland: Wydawnictwo Megas, 2007, pp. 181-189. Reprinted in R. Pennock and M. Ruse (eds.), *But is it Science? The Philosophical Question in the Creation/Evolution Controversy*, New York: Prometheus Books, updated edition, 2009, pp.495-505.
210. "Empiricism." In S. Psillos and M. Curd (eds.), *The Routledge Companion to Philosophy of Science*, 2008, pp. 129-138.
209. "Émergence et survéance." *Science et Avenir*, 2005, 143: 10-15.
208. (with Larry Shapiro) "Epiphenomenalism – The Do's and the Don'ts." In P. Machamer and G. Wolters (eds.), *Thinking about Causes*. University of Pittsburgh Press, 2007, pp. 235-264.
207. "Intelligent Design Theory and the Supernatural – the 'God or Extra-Terrestrials' Reply," *Faith and Philosophy*, 2007, 24: 72-82.
206. Review of James Woodward's *Making Things Happen*. *Metascience*, 2006, 15: 45-53.
205. "Evolutionary Theory and the Reality of Macro-Probabilities." In E. Eells and J. Fetzer (ed.), *Probability in Science*, Boston Studies in the Philosophy of Science, Springer, 2009.
204. "Coincidences and How to Think about Them," 2004, on my web site.
203. "Parsimony and its Presuppositions." In V. Albert (ed.), *Parsimony, Phylogeny, and Genomics*, Oxford University Press. 2005.

202. "Is Drift a Serious Alternative to Natural Selection When it Comes to Explaining Adaptive Complexity?" In A. O'Hear (ed.), *Philosophy, Biology and Life*, Cambridge University Press, 2005.
201. "An Information-Processing Model of Privileged Access."
200. "It Had to Happen" (a review of Simon Conway Morris' *Life's Solution in a Lonely Universe*). *New York Times*, November 30, 2003, Book Review Section, p. 18.
199. (with David Wilson) "On Group Selection and Methodological Individualism – a Reply to Douglas Whitman." In R. Koppl (ed.), *Advances in Austrian Economics*, Elsevier, 2004, 7: 251-259.
198. "The Contest between Likelihood and Parsimony." *Systematic Biology*, 2004: 53: 6-16.
197. "Sex Ratio Theory, Ancient and Modern – An 18th Century Debate about Intelligent Design and the Development of Models in Evolutionary Biology." In J. Riskin (ed.), *Genesis Redux – Essays on the History and Philosophy of Artificial Life*, University of Chicago Press, 2007, pp. 131-162.
196. "A Modest Proposal – a Review of John Earman's *Hume's Abject Failure – the Miracles Argument*." *Philosophy and Phenomenological Research*, 2004, 118: 487-494.
195. "Likelihood, Model Selection, and the Duhem-Quine Problem." *Journal of Philosophy*, 2004, 101: 1-22.
194. "Intelligent Design is Untestable. What about Natural Selection?" In A. Zilhão (ed.), *Evolution, Rationality and Cognition - A Cognitive Science for the Twenty-First Century*. London, Routledge, pp. 17-39, 2005. Shorter version in P. Hajek, L. Valdes-Villanueva, and D. Westerstahl (eds.), *Proceedings of the 11th Congress of the International Union for History and Philosophy of Science, Division of Logic, Methodology, and Philosophy of Science*. Elsevier, pp. 5-22, 2005.
193. "La Selection Naturelle." *Science et Avenir*. Avril/Mai 2003: 22-27.
- 190-192. "Altruism," "Natural Selection," and "Parsimony." In S. Sarkar and J. Pfeifer (eds.), *The Philosophy of Science – an Encyclopedia*. pp. 8-11, 497-502, 531-538, Routledge, 2006.
189. (with David Sloan Wilson) "Perspectives and Parameterizations – A Commentary on Benjamin Kerr and Peter Godfrey-Smith's 'Individualist and Multi-Level Perspectives on Selection in Structured Populations'." *Biology and Philosophy*, 2002: 529-37.
188. (with Christopher Hitchcock) "Prediction versus Accommodation and the Risk of Overfitting." *British Journal for the Philosophy of Science*, 2004, 55: 1-34.
187. "Intelligent Design and Probability Reasoning." *International Journal for the Philosophy of Religion*, 2002, 52: 65-80.
186. (with David S. Wilson) "Precis of *Unto Others*" and "Replies to Commentators (Barrett and Godfrey-Smith, Dennett, Jamieson, and Skyrms)," *Philosophy and Phenomenological Research*, 1999, 59: ///-///.
185. "Two Uses of Unification." In F. Stadler (ed.), *The Vienna Circle and Logical Empiricism -- Vienna Circle Institute Yearbook 2002*. Kluwer, 2003, pp. 205-216.
184. (with Mehmet Elgin) "Cartwright on Explanation and Idealization." *Erkenntnis*, 2002, 57: 441-50.
183. "Comparative Psychology Meets Evolutionary Biology – Morgan's Canon and Cladistic Parsimony." In L. Daston and G. Mitman (eds.), *Thinking with Animals – New Perspective on Anthropomorphism*. Columbia University Press, 2005, pp. 85-99.
182. "Evidence and Value Freedom." In H. Kinkaid, J. Dupre', and A. Wylie (eds.), *Value-Free Science – Ideal or*

Illusion? Oxford University Press, 2007, pp. 109-119.

181. (with Michael Steel) "Testing the Hypothesis of Common Ancestry," *Journal of Theoretical Biology*, 2002, 218: 395-408.

180. (with Christopher Lang and Karen Strier), "Are Human Beings Part of the Rest of Nature?" *Biology and Philosophy*, 2002, 17: 661-671. Reprinted in G. Boniolo and G. De Anna (eds.), *Evolutionary Ethics and Contemporary Biology*, Cambridge University Press, 2006, pp. 43-55.

179. "Bayesianism – Its Scope and Limits." In R. Swinburne (ed.), *Bayesianism*, Proceedings of the British Academy, vol. 113, Oxford University Press, 2002, pp. 21-38.

178. "Reconstructing Ancestral Character States – A Likelihood Perspective on Cladistic Parsimony." *The Monist*, 2002, 85: 156-176.

177. "The Design Argument." In W. Mann (ed.), *The Blackwell Guide to Philosophy of Religion*, 2004, pp. 117-147. Reprinted in N. Manson (ed.), *God and Design: the Teleological Argument and Modern Science*, Routledge, forthcoming and in W. Dembski, A. Menuge, and M. Ruse (eds.), *Debating Design – from Darwin to DNA*. Cambridge University Press, 2004, pp. 98-129.

176. "Instrumentalism, Parsimony, and the Akaike Framework." *PSA 2000*, Proceedings of the Philosophy of Science Association, 2002: 69: S112-S123.

175. (with David S. Wilson) "Reply to Commentators on *Unto Others*." *Metascience*, 2001, 10: 202-208.

174. "Is Egalitarianism Part of Human Nature? A Review of Christopher Boehm's *Hierarchy in the Forest – the Evolution of Egalitarian Behavior*." *Imprints*, 2000, 5: 85-91.

173. "A Critique of Two Versions of the Doomsday Argument – Gott's Line and Leslie's Wedge," *Synthese*, 2003, 135: 415-30.

172. (with Steve Orzack) "Common Ancestry and Natural Selection." *British Journal for the Philosophy of Science*, 2003, 54: 423-437.

171. "Venetian Sea Levels, British Bread Prices, and the Principle of the Common Cause." *British Journal for the Philosophy of Science*, 2001, 52: 331-346.

170. "Metaphysical and Epistemological Issues in Modern Darwinian Theory." In G. Raddick and M.J.S. Hodge (eds.), *The Cambridge Companion to Darwin*, 2003, pp.267-287.

169. "Philosophy of Biology." In N. Bunnin and E.P. Tsui-Jones (eds.), *Blackwell's Companion to Philosophy*, 2nd edition, Blackwell's Publishers, forthcoming.

168. "Evolution and the Problem of Other Minds." *Journal of Philosophy*, 2000, 97: 365-386. Reprinted in *The Philosopher's Annual*, 2001, Stanford CSLI Publications, pp. 295-315.

167. (with Malcolm Forster), "Why Likelihood?" In M. Taper and S. Lee (ed.), *The Nature of Scientific Evidence*, University of Chicago Press, 2004, pp. 153-165.

166. "The ABC's of Altruism." In S. Post, L. Underwood, J. Schloss, W. Hurlbut (eds.), *Altruism and Altruistic Love*. Oxford University Press, 2002, pp.17-28.

165. "The Principle of Conservatism in Cognitive Ethology." In D. Walsh (ed.), *Naturalism, Evolution, and Mind*. Cambridge University Press, 2001, pp.225-238.

164. (with David S. Wilson), Summary of *Unto Others* and replies to commentators, *Journal of Consciousness Studies*, 2000, 7:185-206, 257-268.
163. "Interview on *Unto Others*." *Imprints*, 1999, 3: 195-213.
162. (with Branden Fitelson and Christopher Stephens), "How Not to Detect Design -- Critical Notice of W. Dembski's *The Design Inference*." *Philosophy of Science*, 1999, 66: 472-488. Reprinted in R. Pennock (ed.) *Intelligent Design Creationism and its Critics*, MIT Press, 2002, pp. 597-618.
161. (with David S. Wilson) "The Golden Rule of Group Selection -- a Reply to R. Trivers' Review of *Unto Others*." *The Skeptic*, 1999, 6: 83-85.
160. "Testability." Presidential Address, American Philosophical Association Central Division. *Proceedings and Addresses of the APA*, 1999, 73: 47-76.
159. "The Multiple Realizability Argument against Reductionism." *Philosophy of Science*, 1999, 66: 542-564.
158. "Modus Darwin," *Biology and Philosophy*, 1999, 14: 253-278.
157. "Quine's Two Dogmas." *Proceedings of the Aristotelian Society*, 2000, Supplementary Volume 74: 237-280.
156. "Instrumentalism Revisited." full version in *Crítica*, 1999, 31: 3-38; short version in *Proceedings of the 20th World Congress of Philosophy*, forthcoming.
155. "Psychological Egoism." In H. LaFollette (ed.), *The Blackwell Guide to Ethical Theory*, 2000, pp.129-48. Spanish translation in *Isegoria* 1998 18: 47-70; Chinese translation in *Foreign Social Science*.
154. (with M. Barrett, E. Eells, and B. Fitelson) "Ethics as Evolved Irrationality -- a Review of Brian Skyrms' *The Evolution of the Social Contract*." *Philosophy and Phenomenological Research*, 1999, 59: 237-242.
153. "Black Box Inference -- When Should an Intervening Variable be Postulated?" *British Journal for the Philosophy of Science*, 1998, 49: 469-498.
152. (with David S. Wilson) "The Fall and Rise and Fall and Rise and Fall and Rise of Altruism in Evolutionary Biology." In S. Post, L. Underwood, J. Schloss, W. Hurlbut (eds.), *Altruism and Altruistic Love*. Oxford University Press, 2002, pp.182-191.
151. "Physicalism from a Probabilistic Point of View" with a "Reply to Godfrey-Smith," *Philosophical Studies*, 1999, 95: 135-174.
150. "What is the Problem of Simplicity?" In A. Zellner, H. Keuzenkamp, and M. McAleer (eds.) *Simplicity, Inference, and Modelling*. Cambridge: Cambridge University Press, 2002, pp. 13-32.
149. (with Branden Fitelson) "Plantinga's Probability Arguments Against Evolutionary Naturalism." *Pacific Philosophical Quarterly*, 1998, 79: 115-129. Reprinted in R. Pennock (ed.), *Intelligent Design Creationism and its Critics*, MIT Press, 2002, pp. 411-428.
148. "Two Outbreaks of Lawlessness in Recent Philosophy of Biology." *Philosophy of Science*, 1997, 64: S458-S467.
147. "The Two Faces of Fitness." In R. Singh, D. Paul, C. Krimbas, and J. Beatty (eds.), *Thinking about Evolution: Historical, Philosophical, and Political Perspectives*. Cambridge University Press, vol. 2, 2001, pp. 309-321. Reprinted in A. Rosenberg and R. Arp (eds.), *Philosophy of Biology -- An Anthology*, Wiley-Blackwell, 2009.
146. "The Meaning of Genetic Causation." In A. Buchanan, D. Brock, N. Daniels, and D. Wikler, *From Chance to Choice -- Genetics and Justice*, Cambridge University Press, 2000.

145. (with Steven Orzack) "Adaptation, Phylogenetic Inertia, and the Method of Controlled Comparisons." In S. Orzack and E. Sober (eds.), *Adaptationism and Optimality*, Cambridge University Press, 2001, pp. 45-63.
144. "Is the Mind an Adaptation for Coping with Environmental Complexity? A review of Peter Godfrey-Smith's *Complexity and the Function of Mind in Nature*." *Biology and Philosophy*, 1997, 12: 539-550.
143. "Some Comments on Rosenberg's Review of *Philosophy of Biology*." *Philosophy of Science*, 1996, 63:465-469.
142. (with Steven Orzack) "How to Formulate and Test Adaptationism." *American Naturalist*.
141. "To Give a Surprise Exam, Use Game Theory," *Synthese*, 1998, 115: 355-373.
140. "Kindness and Cruelty in Evolution." In R. Davidson and A. Harrington (eds.), *Visions of Compassion – Western Scientists and Tibetan Buddhists Examine Human Nature*. Oxford University Press, 2002, pp. 46-65.
139. "Morgan's Canon." In C. Allen and D. Cummins (eds.), *The Evolution of Mind*, Oxford University Press, 1998, pp.224-242.
138. "Evolution and Optimality -- Feathers, Bowling Balls, and the Thesis of Adaptationism." In A. Boyer and J. Gayon (eds.), *Cahiers du CREA* and in the *Council on Philosophic Exchange Annual*, 1996, 26: 40-57. Excerpted as "Six Sayings About Adaptationism" in D. Hull and M. Ruse (eds.), *Oxford Readings in Philosophy of Biology*. Oxford University Press, 1998; German translation in G. Schlosser and M. Weingarten (eds.), *Formen der Erklarung in der Biologie* (Verlag fuer Wissenschaft und Bildung, Berlin), forthcoming.
137. "Separating Nature and Nurture." In D. Wasserman and R. Wachbroit (ed.), *Genetics and Criminal Behavior: Methods, Meanings, and Morals*. Cambridge University Press, 2001, pp. 47-78.
136. "Altruism -- Evolutionary and Psychological." *La Repubblica*, March 25, 1995, p. 31.
135. "Natural Selection and Distributive Explanation -- A Reply to Neander." *British Journal for the Philosophy of Science*, 1995, 46: 384-397.
134. "Three Differences between Evolution and Deliberation." In P. Danielson (ed.), *Modeling Rationality, Morality, and Evolution*. Vancouver Studies in Cognitive Science. Oxford University Press, 1998, pp. 408-422.
133. Invited reply to reviews by Griffiths, Rasmussen, Illi, and Wodak of *Philosophy of Biology* in *Metascience*, 1994, 5: 61-63.
132. "Parsimony and Predictive Equivalence." *Erkenntnis*, 1996, 44: 167-197.
- 128-131. "Innate Knowledge" (pp. 794-797, vol. 4), "Evolutionary Theory and Social Science" (pp. 483-487, vol. 3), "Simplicity" pp. 780-783, vol. 8), "Evolution and Ethics" (pp. 472-476, vol. 3). *Encyclopedia of Philosophy*, Routledge, 1998.
127. (with Steven Orzack), "How (Not) to Test an Optimality Model." *Trends in Ecology and Evolution*, 1994, 9: 265-67.
126. (with Martin Barrett) "The Second Law of Probability Dynamics." *British Journal for the Philosophy of Science* 1994: 941-954.
125. "Simplicity" in W. Newton-Smith (ed.), *A Companion to the Philosophy of Science*, Blackwell, 2000, pp. 433-441.
124. "Prospects for Evolutionary Ethics." In L. Pojman (ed.), *Ethical Theory*, Wadsworth, forthcoming.

123. (with David S. Wilson) "A Critical Review of Philosophical Discussion of the Units of Selection Problem." *Philosophy of Science*, 1994, 61: 534-555.
122. "The Primacy of Truth-Telling and the Evolution of Lying." In *From a Biological Point of View*, Cambridge University Press, 1994.
- 120-121. (with Andrew Levine and Erik Wright) Replies to reviews of *Reconstructing Marxism* in *South African Review of Sociology* and in *Science and Society* (1994, 58: 53-59).
119. "Boundaries of a Shared Terrain: Evolution and the Human Sciences" *Times Higher Education Supplement*, June 25, 1993, 1077: 25.
118. (with Gregory Mougin) "Betting Against Pascal's Wager." *Nous*, 1994, 28: 382-395.
117. (with David S. Wilson) "Reintroducing Group Selection to the Human Behavioral Sciences." *Behavior and Brain Sciences*, 1994, 17: 585-654.
116. "Progress and Direction in Evolution." In J. Campbell (ed.), *Creative Evolution?! Jones and Bartlett Publishers*, 1994, pp. 19-33.
115. "The Adaptive Advantage of Learning and *A Priori* Prejudice." In *From a Biological Point of View*. Cambridge University Press, 1994.
114. "Why Not Solipsism?" *Philosophy and Phenomenological Research*, 1995, 65: 547-566.
113. (with Steven Orzack) "A Critical Examination of Richard Levins' 'The Strategy of Model Building in Population Biology'." *Quarterly Review of Biology*, 1993, 68: 533-546.
112. "No Model, No Inference: A Bayesian Primer on the Grue Problem." In D. Stalker (ed.), *Grue! The New Riddle of Induction*, Open Court Publishers, 1994, pp. 225-240.
111. "Epistemology for Empiricists." In H. Wettstein (ed.), *Midwest Studies in Philosophy: Philosophy of Science*, vol. 18, University of Notre Dame Press, 1993, pp. 39-61.
110. "Convergence," "Evolution," "Natural Kind," "Simplicity/Parsimony," and "Unity of Science." In J. Kim and E. Sosa (eds.), *A Companion to Metaphysics*, 1995, Basil Blackwell, pp. 100, 143, 345-6, 461-2, 501-2.
109. "Experimental Tests of Phylogenetic Inference Methods." *Systematic Biology*, 1993, 42: 85-89.
108. (with Malcolm Forster) "Lessons in Likelihood: A Critique of Jefferys and Berger's 'Ockham's Razor and Bayesian Analysis'." *American Scientist*, 1992, 80: 212-13.
107. (with Martin Barrett) "When and Why Does Entropy Increase?" In S. Savitt, ed., *Time's Arrow Today*, Cambridge University Press, 1995, pp. 230-258.
106. "When Natural Selection and Culture Conflict." In H. Rolston III (ed.), *Biology, Ethics, and the Origins of Life*, Jones and Bartlett, 1995, pp. 137-162.
105. "Mathematics and Indispensability." *Philosophical Review*, 1993, 102, 35-58. Reprinted in *Philosopher's Annual*, vol. XVI. Ridgeview Press.
104. (with Malcolm Forster) "How to Tell When Simpler, More Unified, or Less *Ad Hoc* Theories Will Provide More Accurate Predictions." *British Journal for the Philosophy of Science* 1994, 45: 1-36.

103. "Did Evolution Make Us Psychological Egoists?" In *From a Biological Point of View: Essays in Evolutionary Philosophy*. Cambridge University Press, 1994. Reprinted in G. Wolters (ed.), *Pittsburgh-Konstanz Colloquium on the Philosophy of Biology*, forthcoming.
102. "The Evolution of Altruism: Correlation, Cost, and Benefit." *Biology and Philosophy* 1992, 7, 177-88.
101. (with Steven Orzack) "Optimality Models and the Test of Adaptationism." *American Naturalist*, 1994, 143: 361-380.
100. "Stable Cooperation in Iterated Prisoners' Dilemmas," *Economics and Philosophy*, 1992, 8, 127-39.
99. "Models of Cultural Evolution." In P. Griffiths (ed.), *Trees of Life: Essays in Philosophy of Biology* (Australasian Studies in the History and Philosophy of Science), Kluwer, 1991, pp. 17-38.
98. "New Developments in the Synthetic Theory of Evolution, 1950-Present," *Storia del Secolo XX, Enciclopedia Italiana*, 1994.
97. "Hedonism and Butler's Stone," *Ethics*, 1992, 103, pp. 97-103.
96. "Temporally Oriented Laws," *Synthese*, 1993, 94: 171-189.
95. "The Logic of the Empathy-Altruism Hypothesis: Comments on Batson and Shaw's 'Evidence for Altruism: Towards a Pluralism of Prosocial Motives,'" *Psychological Inquiry*, 1991, 2, 144-7.
94. (with Martin Barrett and Michael Donoghue) "Against Consensus," *Systematic Zoology*, 1991, 40: 486-93.
93. "Extremum Descriptions, Process Laws, and Minimality Heuristics: Comments on Schoemaker's 'The Quest for Optimality: A Positive Heuristic of Science?'" *Behavior and Brain Sciences*, 1991, 24, 232-33.
92. "Evolutionary Altruism, Psychological Egoism, and Morality: Disentangling the Phenotypes." In M. Nitecki and D. Nitecki (eds.), *Evolutionary Ethics*, SUNY Press, 1993, pp. 199-216.
91. "Anatomizing the Rhinoceros: Comments on Pinker and Bloom's *Natural Language and Natural Selection*." *Behavior and Brain Sciences*, 1990, 13: 764-5.
90. "Organisms, Individuals, and Units of Selection," in A. Tauber (ed.), *Organism and the Origin of Self*. Kluwer, 1991, pp. 273-96.
89. "Simplicity" in J. Dancy and E. Sosa (eds.), *A Companion to Epistemology*, Blackwell's, 1992, 477-479.
88. "Screening-Off and Units of Selection." *Philosophy of Science*, 1992, 59: 142-52.
87. "Learning from Functionalism -- Prospects for Strong AL." In D. Farmer, C. Langton et. al.(eds.), *Artificial Life II* (Santa Fe Institute Studies in the Sciences of Complexity, vol. xii). Addison-Wesley, 1991, pp. 746-766. Reprinted in M. Boden (ed.), *The Philosophy of Artificial Life*, Oxford University Press, 1996, pp. 361-378 and in *The Nature of Life: Classical and Contemporary Perspectives*, edited by M. Bedau and C. Cleland, Cambridge University Press., 2009
86. (with Martin Barrett) "Conjunctive Forks and Temporally Asymmetric Inference." *Australasian Journal of Philosophy* 1992, 70: 1-23.
85. "Darwin's Nature", in J. Torrance (ed.), *The Concept of Nature: the Herbert Spencer Lectures 1989*, Oxford University Press, 1992, 94-116.
84. (with Martin Barrett) "Is Entropy Relevant to the Asymmetry between Prediction and Retrodiction?" *British Journal for the Philosophy of Science*, 1992, 43, pp. 141-60.

83. "Let's Razor Ockham's Razor" in D. Knowles (ed.), *Explanation and Its Limits*, Royal Institute of Philosophy Supplementary Volume 27, Cambridge University Press, 1990, 73-94.
82. (with Andrew Levine and Erik Wright) "Causal Primacy" in E. Wright, A. Levine, and E. Sober, *Reconstructing Marxism: Essays on Explanation and the Theory of History*, Verso Books.
81. (with Gabriel Segal) "The Causal Efficacy of Content," *Philosophical Studies*, 1991, 62: 155-84.
80. "Temporally Asymmetric Inference in a Markov Process," *Philosophy of Science*, 1991, 58: 398-410.
- 78-79. "Parsimony" and "Monophyly" in E. Keller and L. Lloyd (eds.), *Keywords in Evolutionary Biology*, Harvard University Press, 1992, 202-7, 249-54.
77. "Is the Theory of Natural Selection Unprincipled? A Reply to Shimony" *Biology and Philosophy*, 1989, 4, pp. 45-49.
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