

March 01, 2009

## *Curriculum Vitae*

### **Michael Weisberg**

Department of Philosophy  
University of Pennsylvania  
433 Cohen Hall  
Philadelphia, PA 19104-6304  
(215) 417-5305 (h)  
(267) 738-0676 (c)  
weisberg@phil.upenn.edu

### **EDUCATION** \_\_\_\_\_

#### **Leland Stanford Junior University**

Ph.D. in Philosophy, 2003  
M.A. in Philosophy, 2002  
National Science Foundation Pre-doctoral Fellow

#### **University of California, San Diego**

B.S. Chemistry, B.A. Philosophy, 1999  
Honors with Highest Distinction in Philosophy

### **AREAS OF SPECIALIZATION** \_\_\_\_\_

Philosophy of Science  
Philosophy of Biology  
Philosophy of Chemistry  
Public Understanding of Science

### **AREAS OF COMPETENCE** \_\_\_\_\_

History of Philosophy of Science  
Cognitive Science and Philosophy of Mind  
Metaphysics and Epistemology  
Ethics of Science

## ACADEMIC APPOINTMENTS

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- 2003–present **University of Pennsylvania**  
Associate Professor of Philosophy (July 2009 – )  
Assistant Professor of Philosophy (July 2003 – June 2009)  
Member of the Graduate Group, History and Sociology of Science  
Affiliate Faculty, Institute for Research in Cognitive Science  
Affiliate Faculty, Center for Cognitive Neuroscience  
Faculty Fellow, Fisher-Hassenfeld College House
- 2006–present **Center for Philosophy of Science, University of Pittsburgh**  
Associate
- 2006, 2009 **Australia National University, Research School of Social Sciences**  
Philosophy Program Visitor
- 2006–2007 **Chemical Heritage Foundation**  
Visiting Scholar

## GRANTS AND AWARDS

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National Science Foundation Scholar Award SES-0620887 (\$115,376)  
Stanford University Centennial Teaching Award (2002)  
National Science Foundation Pre-Doctoral Fellowship (1999-2003)

## PUBLICATIONS

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### Journal Articles (\* indicates refereed articles)

1. Kawahata, N. H., M. Weisberg, and M. Goodman (1999). "Synthesis of  $\beta$ ,  $\beta$ -Dimethylated Amino Acids Utilizing the 9-Phenylfluorenyl Protecting Group." *Journal of Organic Chemistry*, 64, 4362–4369.\*
2. Weisberg, M. and R. Wood (2003). "Richard Rufus's Theory of Mixture." *Chemical Explanations: Characteristics, Development, Autonomy*, volume 988, *Annals of the New York Academy of Sciences*, 282–292.\*
3. Weisberg, M (2004). "Qualitative Theory and Chemical Explanation." *Philosophy of Science*, 71, 1071–1081.\*
4. Wood, R. and M. Weisberg (2004). "Interpreting Aristotle on Mixture: Problems of Elemental Composition from Philoponus to Cooper." *Studies in the History and Philosophy of Science*, 35, 681–706.\*

5. Weisberg, M (2006). "Robustness Analysis," *Philosophy of Science*, 73, 730–742.\*
6. Lombrozo, T., A. Shtulman, and M. Weisberg (2006). "The Intelligent Design Controversy: Lessons from Psychology and Education." *Trends in Cognitive Sciences*, 10, 56–57.\*
7. Weisberg, M (2006). "Forty Years of 'The Strategy': Levins on Model Building and Idealization," *Biology and Philosophy*, 21(5), 623–645.\*
8. Weisberg, M (2007). "Who is a Modeler?," *British Journal for Philosophy of Science*, 58, 207–233.\*
9. Weisberg, M. (2007) "Three Kinds of Idealization," *The Journal of Philosophy*, 104 (12) 639–59.\*
10. Weisberg, M. and K. Reisman (2008). "The Robust Volterra Principle," *Philosophy of Science*, 75, 106–131.\*
11. Weisberg, M. (2008) "Challenges to the Structural Conception of Bonding," forthcoming in *Philosophy of Science*, volume 75, 20pp.\*
12. Weisberg, M. and R. Muldoon (2008?). "Epistemic Landscapes and the Division of Cognitive Labor," forthcoming in *Philosophy of Science*, 32pp.\*
13. Mathewson, J. and M. Weisberg (2008), "The Structure of Tradeoffs in Scientific Modeling," forthcoming in *Synthese*, 28pp.\*
14. Lombrozo, T., A. Thanukos, and M. Weisberg (2008). "The Importance of Understanding the Nature of Science for Accepting Evolution," *Evolution: Education and Outreach*, 1(3), 290-298.\*
15. Leiter, B. and M. Weisberg (2009). "Why Evolutionary Biology is (so far) Irrelevant to Legal Regulation," forthcoming in *Law and Philosophy*, 48pp.\*

### **Book Chapters**

1. Weisberg, M (2005). "Water is Not H<sub>2</sub>O." *Philosophy of Chemistry: Synthesis of a New Discipline*. Eds. D. Baird, et al. New York: Springer, 337-345.\*
2. Weisberg, M (2005). "The Key to Electricity." *The Autobiography of Benjamin Franklin*. Penn Reading Project Edition. Ed. Peter Conn. Philadelphia: University of Pennsylvania Press, 159-162.
3. Weisberg, M (2009). "New Approaches to the Division of Cognitive Labor," forthcoming in *New Waves in Philosophy of Science*.\*

### Book Reviews and Essays

1. “Why Not a Philosophy of Chemistry?” Review of *Of Minds and Molecules*, *American Scientist*, 89 (6), November 2001.
2. Review of *Science, Truth, and Democracy*, by Philip Kitcher. *Angewandte Chemie* 2000, 114 (16), 3189-3190 (German) and *Angewandte Chemie International Edition in English* 2002, 41 (16) 3064-3066.
3. “Chemistry and the Scientific Method” Review of *Chemical Discovery and the Logicians’ Program* by Jerome A. Berson. *Chemical and Engineering News*, 82 (12), 2004.
4. Review of *In Mendel’s Mirror*, by Philip Kitcher, *The Philosophical Review*, 119, 2005, 419–423.
5. “Darwin’s Bash.” *The Philadelphia Inquirer*, February 12, 2006.
6. “Richard Levins’ Philosophy of Science [editor’s introduction],” *Biology and Philosophy*, 21(5) 2006, 603–605.

### Under Review and In Preparation

1. Weisberg, M. “Models for Modeling,” under review, 70pp.
2. Muldoon, R. and M. Weisberg. “Robustness and Idealization in Models of Cognitive Labor,” under review, 18pp.
3. Weisberg, D. S. and M. Weisberg, “The Death of Similarity?” in preparation.
4. Weisberg, M. “Simplicity and Generality in Biological Modeling,” in preparation.
5. Weisberg, M. “Target and Non-target Directed Modeling,” in preparation.
6. Weisberg, M. R. Muldoon, and T. Smith. “Clustering and Repulsion in Agents with Maximally Heterogeneous Preferences,” in preparation.

## TEACHING

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### **University of Pennsylvania, 2003-present**

Topics in Metaphysics  
Topics in Philosophy of Science  
Philosophy of Biology  
Evolution of Scientific Thought / Intro to HPS  
Evolution, Altruism, and Human Nature  
Philosophy of Social Science  
Graduate Proseminar

### **Ph.D. Thesis Supervisor**

Matthew Bateman (current)

### **Ph.D. Committee Member**

Matthew Katz (defended AY 2008)  
Scott Edgar (defended AY 2009)

### **Undergraduate Research and/or Thesis Advisor**

Shivana Naidoo (AY 2004)  
Rosemary McKenna (AY 2005)  
Samuel Bookler (AY 2006)  
Eric King (AY 2006)  
Jack Cohen (AY 2006)  
Jaclyn Link (AY 2006)  
Anna Tuchman (AY 2007)  
Daniel Singer (AY 2007, AY2008)  
Joshua Matz (AY 2008)  
Martin Bouda (AY 2008)  
Benjamin Naecker (AY2009)  
Marc Werner (AY 2009)  
Varun Balan (AY 2009)  
Jennifer Marsh (AY 2009)

### **MLA Thesis Advisor**

Max Kimbrough

### **Instructor, Stanford University 2001-2003**

Seminar for *The Dualist* (Stanford's undergraduate journal of philosophy)

### **Teaching Assistant, Stanford University, 2000-2002**

Introduction to History and Philosophy of Science  
Philosophy of Biology  
Mind, Matter, and Meaning (writing in the major course)

**Teaching Assistant, UC San Diego, 1996-1999**

Organic Chemistry  
General Chemistry for non-science majors  
Organic Chemistry for non-science majors  
Warren College Scholars Seminar

**COLLOQUIA AND PRESENTATIONS** \_\_\_\_\_

1. "Jean Perrin and Molecular Reality"  
UCSD History of Chemistry Summer Colloquium July, 1998  
Stanford Undergraduate Philosophy Association, Winter 2001
2. "Water is Not H<sub>2</sub>O"  
International Society for Philosophy of Chemistry, August, 1999  
UCSD History of Chemistry Summer Colloquium July, 1999  
Berkeley–Stanford Graduate Philosophy Conference, June 2001
3. "Can Quine 'Quine' Similarity?"  
International Society for the Philosophy of Chemistry, August 2001  
Berkeley–Stanford Graduate Philosophy Conference, May 2000
4. "Reaction Mechanisms and Underdetermination"  
American Chemical Society, August 2001
5. "Has Neurath's Raft Sprung a Leak? An Assessment of Friedman's Challenge to Epistemological Holism"  
Berkeley–Stanford Graduate Philosophy Conference, May 2002
6. "Richard Rufus' Theory of Mixture"  
International Society for Philosophy of Chemistry, August 2002
7. "Qualitative Theory and Chemical Explanation"  
Philosophy of Science Association, November 2002
8. "Tradeoffs in Biological Modelling"  
International Society for History, Philosophy, and Social Study of Biology,  
July 2003

9. "Modeling in Chemistry"  
International Society for Philosophy of Chemistry, August 2004
10. "Who is a Modeler?"  
Institute for Research in Cognitive Science, September 2004  
Indiana University HPS Department, October 2004  
Center for Philosophy of Science (Pittsburgh), November 2004
11. "Darwin's Theories of Evolution"  
Ursinus College, March 2005  
Washington and Lee University, April 2006
12. Evolution and Intelligent Design (varia)  
Anti-Defamation League Civil Rights Committee, Spring 2005  
Spruce College House, Spring 2005  
Penn Science Cafe, September 2005  
Fisher-Hasenfeld College House, October 2005  
Philomethan Society, October 2005  
Penn ACLU, November 2005  
King's Court College House, November 2005  
BBC World Service TV, December 2005  
BBC Channel 4 TV News, December 2005  
BBC World Service Radio, December 2005  
BBC "Up All Night" Radio Program, December 2005  
Cafe Scientifique Philadelphia, February 2009
13. "Robustness Analysis"  
Department of Biology, University of Pennsylvania, November 2004  
Philosophy of Science Association Meeting, November 2004  
ISHPSSB, Guelph, Ontario, July 2005  
Sage School of Philosophy, Cornell University, March 2006
14. Comments on "Mereological and Modal Features of Substance Properties"  
International Society for Philosophy of Chemistry, August 2005
15. "Idealization and the Ends of Science"  
University of Pennsylvania, September 2005  
Washington and Lee University, April 2006
16. "A Rift in Quantum Chemistry?"  
Department of History and Sociology of Science, University of Pennsylvania, October 2005

17. “Evolution, Intelligent Design, and Public Misconceptions about Science”  
 Program on Ethics and Public Life, Cornell University, March 2006  
 Washington and Lee University, April 2006  
 Penn School of Arts and Sciences Alumni event, May 2006  
 Pre-performance talk at “Great Tennessee Monkey Trial,” Annenberg  
 Center, April 2007  
 Free Thought Society, May 2007
18. “Tradeoffs and Idealization in Biological Model Building”  
 Instituto de Investigaciones Filosóficas, Universidad Nacional Autónoma de  
 México, June 2006
19. “Robust Properties of Chemical Bonds”  
 Stockohlm University, May 2006  
 Philosophy of Science Association, November 2006
20. “Robustness Analysis and the Volterra Principle”  
 Australasian Association of Philosophy, Canberra, Australia, July 2006  
 London School of Economics, March 2007  
 University of Bristol, March 2007
21. “Are Chemical Bonds Real?”  
 Research School of Social Sciences, Australia National University, August  
 2006  
 Center for Philosophy of Science (Pittsburgh), February 2007
22. “Science, Faith, and Darwin” panel  
 Co-panelists: The Honorable John E. Jones III, Michael Shermer, Eric  
 Rothchild, Stephen Harvey  
 The Franklin Institute, December 2006
23. Commentary on Philip Kitcher’s Prometheus Lecture “Darwin and  
 Democracy”  
 Eastern APA, December 2006
24. “Three Kinds of Idealization”  
 University of Durham, February 2007  
 Minnesota Center for Philosophy of Science, October 2007
25. “Simplicity and Generality in Biological Modeling”  
 ISHPSSB, Exeter, UK, July 2007  
 Models and Simulations 2, Tilburg University, October 2007



26. “Three Challenges to the Structural Conception of Bonding”  
International Society for the Philosophy of Chemistry, San Francisco,  
August 2007
27. “Distinctly Chemical Explanations”  
American Chemical Society Presidential Symposium  
Honoring Roald Hoffmann, August 2007
28. “Representational Ideals”  
Tilburg University, October 2007
29. “Models for Modeling Matter”  
Durham University, March 2008
30. “Epistemic Landscapes and the Division of Cognitive Labor”  
Tufts University, April 2008  
Penn Workshop on Formal Methods in Philosophy, May 2008  
Center for Philosophy of Science, January 2009  
Swarthmore College, February 2009
31. “The Death of Similarity?” with Deena Skolnick Weisberg  
Society for Philosophy and Psychology, June 2008
32. “Deploying Highly Idealized Models”  
Universidad Autónoma Metropolitana–Iztapalapa, Mexico, July 2008  
University of Alabama at Huntsville, October 2008  
APA Central Division, February 2009  
Franklin and Marshall College, April 2009
33. “Value and Significance on Epistemic Landscapes”  
PSA 2008, Pittsburgh, PA, November 2008
34. “Maths and Fictions”  
University of London, Institute for Philosophy, March 2009
35. “Models for Modeling”  
London School of Economics, March 2008  
California Academy of Sciences, March 2009  
San Francisco State University, March 2009
36. “Three-Sex Mating (and other models without targets)”  
University of Helsinki, May 2009  
ISHPSSB 2009, Brisbane, July 2009

**SERVICE AND PROFESSIONAL ACTIVITIES** \_\_\_\_\_

**Service to the University and the School of Arts and Sciences**

1. Faculty Fellow, Fisher-Hassenfeld College House (AY06 - )
2. Co-chair, Penn's Year of Evolution (2005 - 2009)
3. Chair, The Evolution Project at Penn Museum (2005 - 2009)
4. Pre-major advisor, College of Arts and Sciences (AY05 - )
5. Member, Penn Reading Project selection committee (AY07) and committee chair (AY08)
6. Member, SP2 Dean Reappointment Committee (AY09)

### **Service to the Department of Philosophy**

1. Search Committee (AY05, AY06)
2. Admissions Committee (AY04, AY05, AY08)
3. Colloquium Committee (AY05, AY06)
4. Library Committee (AY08, AY09)
5. Website Committee (AY09)

### **Service to the Profession**

1. Member of the advisory Committee, *Understanding Science*, UC Museum of Paleontology (2006 - ).
2. Member of the editorial board, *Foundations of Chemistry* (2005 - )
3. Member of the executive committee, International Society for the Philosophy of Chemistry (2005 - 2008)
4. Member of the program committee, *Philosophy of Science Association Meeting 2006*
5. Organizer, “New Models of the Social Structure of Science,” PSA 2008
6. Co-organizer “Strategies of Modeling in Biology and Chemistry,” PSA 2004
7. Co-organizer “Causation and Explanation in Chemistry,” PSA 2002
8. Organizer, “The Strategy of Model Building: 1966-2005,” Greater Philadelphia Philosophy Consortium, April 2005.
9. Member of American Chemical Society, American Philosophical Association, American Association for the Advancement of Science, International Society for History, Philosophy, and Social Study of Biology, International Society for the Philosophy of Chemistry, and the Society for Philosophy and Psychology.
10. Ad hoc referee for *Philosophy of Science*, *British Journal for the Philosophy of Science*, *Biology and Philosophy*, *International Studies in the Philosophy of Science*, *Foundations of Chemistry*, *Annals of the New York Academy of Sciences*, *Philosophy of the Social Sciences*, *Critica*, *Synthese*, Acumen Press, Princeton University Press, and Oxford University Press.

## REFERENCES

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Susan Meyer, Penn	(215) 898-8950	smeyer@phil.upenn.edu
Peter Godfrey-Smith, Harvard		pgs@fas.harvard.edu
Michael Strevens, NYU		strevens@nyu.edu
Philip Kitcher, Columbia	(212) 854-4884	psk16@columbia.edu
Roald Hoffmann, Cornell (Chemistry)	(607) 255-3419	rh34@cornell.edu