WILLIAM GOODWIN
CURRICULUM VITAE

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Department of Philosophy
University of South Florida
4202 E. Fowler Avenue
Tampa, FL 33620

AREAS OF SPECIALIZATION: Kant, Metaphysics, Philosophy of Mathematics, Philosophy of Science, Environmental Philosophy, Philosophy of Chemistry, Philosophy of Medicine.

AREAS OF COMPETENCE: Epistemology, History of Modern Philosophy (17th & 18th century), Logic (through advanced level), Contemporary Analytic Philosophy, History of Analytic Philosophy, Biomedical Ethics.

EDUCATION

Ph.D.	University of California, Berkeley Logic and the Methodology of Science, 2003
M.A.	University of California, Berkeley Mathematics, 2003
M.S.	University of California, Berkeley Chemistry, 1994
B.A.	The Johns Hopkins University Philosophy and Chemistry, 1991

EMPLOYMENT

University of South Florida
Associate Professor (Fall 2015-)
Department of Philosophy, Spring 2012 to present

Rowan University
Visiting Assistant Professor
Department of Philosophy, Fall 2009 to Fall 2011

Swarthmore College
Visiting Assistant Professor
Department of Philosophy, Fall 2005 to Spring 2009

Virginia Polytechnic Institute and State University
Visiting Assistant Professor
Department of Philosophy, Fall 2003 to Spring 2005

PUBLICATIONS

1) "Conflicting Conceptions of Construction in Kant's Philosophy of Geometry" *Perspectives on Science* (January-February 2018) 26(1): 97-118.

2) "Wheat can become Rye" in *1984 and Philosophy*, Open Court, 2018.

3) "La Signification de la Structure: Chimie Quantique et Synthèse Organique" translated by Lucio Mare to appear in La Chimie, Cette Inconnue?, forthcoming from Hermann.

4) "The Origins of the Reaction Mechanism" in *The Routledge Handbook of Mechanisms and Mechanical Philosophy,* Routledge, 2018.

5) "Models of Chemical Structure" in the *Springer Handbook of Model-Based Science*, Springer, 2017.

6) "Volatile Spirits: Scientists and Society in Gulliver's Third Voyage" in *Jonathan Swift and Philosophy*, Lexington/Rowman & Littlefield, 2017.

7) "Missing the Forest for the Fish: How much does the Hawkmoth Effect Threaten the Viability of Climate Projections?" with Eric Winsberg, *Philosophy of Science* (December 2016) 83: 1122-1132.

8) "Adventures of Climate Science in the Sweet Land of Idle Arguments" with Eric Winsberg, *Studies in History and Philosophy of Science Part B: Studies in History and Philosophy of Modern Physics* 54: 9–17, May 2016.

9) "Global Climate Modeling as Applied Science," *Journal for the General Philosophy of Science* (2015) 46: 339-350.

10) "Revolution and Progress in Medicine" *Theoretical Medicine and Bioethics* (February 2015) 36(1): 25-39.

11) "Sustaining a Controversy: The Non-Classical Ion Debate" in *British Journal for the Philosophy of Science* (2013) 64 (4): 787-816.

12) "*Structure* and Scientific Controversies" *Topoi* (2013) 32: 101-110.

13) "Quantum Chemistry and Organic Theory" *Philosophy of Science* 80(5): 1159-1169, 2013.

14) "The Significance of Structure: Quantum Chemistry and Organic Synthesis" in *Philosophy of Chemistry: Practices, Methodologies and Concepts*, edited by Jean-Pierre Llored, Cambridge Scholars Publishing, 2013.

15) "Experiments and Theory in the Preparative Sciences" *Philosophy of Science* 79(4): 429-447, 2012.

16) "Visual Representations of Structure and the Dynamics of Scientific Modeling" in *Spontaneous Generations* **6** (1), 2012. http://spontaneousgenerations.library.utoronto.ca/index.php/SpontaneousGenerations/article/view/17155.

17) "Structure, Function, and Protein Taxonomy" in *Biology and Philosophy* **26** (4): 533-545, 2011.

18) "The Philosophy of Chemistry" in *Oxford Bibliographies Online: Philosophy*. Editor Duncan Pritchard. New York: Oxford University Press, 2011. <http://oxfordbibliographiesonline.com/view/document/obo-9780195396577/obo-9780195396577-0018.xml>.

19) "Mechanisms and Chemical Reaction" in *Handbook of the Philosophy of Science: Philosophy of Chemistry*, edited by A. Woody, R.F. Hendry, and P. Needham. Elsevier Science, December 2011.

20) "The Passes-For Fallacy and the Future of Critical Thinking" in *Argumentation* **24**: 363-374, 2010.

21) "How do Structural Formulas Embody the Theory of Organic Chemistry?" *British Journal for the Philosophy of Science* **61**(3): 621-633, 2010.

22) "Coffa's Kant and the Evolution of Accounts of Mathematical Necessity" in *Synthese* **172**: 361-379, 2010.

23) "How does the Theologizing of Physics Contribute to Global Warming?" in *Environmental Philosophy* **6**(2): 21-42, 2009.

24) "Visual Representations in Science" in *Philosophy of Science* **76**: 372-390, 2009.

25) "Scientific Understanding and Synthetic Design" in *British Journal for the Philosophy of Science* **60**: 271-301, 2009.

26) "Implementation and Innovation in Total Synthesis" in *Foundations of Chemistry*, **10**, 177-186, 2008.

27) "Structural Formulas and Explanation in Organic Chemistry" in *Foundations of Chemistry*, **10**, 117-127, 2008.

28) "Scientific Understanding after the Ingold Revolution in Organic Chemistry" in *Philosophy of Science*, **74**: 386-408, 2007.

29) "Explanation in Organic Chemistry" in Chemical Explanation: Characteristics, Development, Autonomy, *Annals of the New York Academy of Sciences*, **988**: 141-153, 2003.

WORKS-IN-PROGRESS OR UNDER REVIEW

- "Gaining a Foothold: Integrating Novel Concepts into the Experimental Life of Organic Chemistry" is in preparation.
- "Resolving a Controversy: The Non-Classical Ion Debate" is in preparation.
- "Syntheticity and Generality in Kant's Philosophy of Geometry" is available in draft.

DISSERTATION

Title: **Kant's Philosophy of Geometry**
Committee: Professors Charles Chihara (Chair), Paolo Mancosu, and Daniel Warren.

My dissertation presents and defends a novel interpretation of Kant's philosophy of geometry. By focusing on how Kant understands his philosophical account of mathematics to relate to his overall philosophical project, I argue that a full appreciation of Kant's account requires close attention to the practice of Euclidean geometry. Close attention to this practice, and particularly the role of diagrams in Euclidean proof, sheds new light on the role of intuition in Kant's philosophy of mathematics. My interpretation of Kant's account of geometry, and the role of intuition in this account, emerges as a more plausible middle ground between the two most prominent alternative interpretations by preserving the best aspects of both while overcoming some of their limitations.

PAPERS DELIVERED AND OTHER PROFESSIONAL PARTICIPATION

- "Syntheticity and Generality in Euclidean Proof" at Model-Based Reasoning 18, University of Seville, Spain, October 2018.
- "The Novel as Intuition Pump" at Forms of Knowledge: Literature and Philosophy Conference, University of Edinburgh, Scotland, November 2017.
- Moderator for "A City by the Sea: Philosophical and Practical Implications of Climate Change" USF Humanities Institute, November 2016.
- "Lessons from the Baconian Sciences: The case of Preparative Chemistry," at PSA 2016, Atlanta, November 2016.
- "Articulating Organic Chemistry into Structural Biochemistry" Society for the Philosophy of Science in Practice, Glassboro NJ, June 2016.
- "What role can philosophers of science play in supporting Climate Science?" Inland Northwest Philosophy Conference, Pullman WA, April 2016.
- "Science and Common Sense in Gulliver's Third Voyage." Science Versus Common Sense?, Vrije Universiteit, Amsterdam, Netherlands, February 2016.
- "Bringing Biology Into the Fold," Egenis Seminar Series, University of Exeter, Exeter, UK, December 2015.

- "Structure, Function, and Protein Taxonomy," to ProBio Group, University of Exeter, Exeter, UK, December 2015.
- "Volatile Spirits: Scientists and Society in Gulliver's Third Voyage," to the Biological Interest Group, University of Exeter, Exeter, UK, December 2015.
- "Kant and Diagrammatic Reasoning," at TRiP 2015: Pictures and Proofs, Columbia SC, March 2015.
- "Missing the Forest for the Fish," with Eric Winsberg, at PSA 2014, Chicago, November 2014.
- "Triumphs of Normal Science: Tales from 20th Century Chemistry" Center for the Philosophy of Science Annual Lecture Series, University of Pittsburgh, February 2014.
- "Revolution and Progress in Medicine" Philosophy of Medicine Roundtable, New York, November 2013.
- "Gaining a Foothold: Integrating Novel Concepts into the Experimental Life of Organic Chemistry" SPSP, Toronto, June 2013
- "The Social Resolution of a Controversy of Articulation: A Case Study from Chemistry" at University of South Florida, January, 2013.
- "Quantum Chemistry and Organic Theory" at PSA 2012, San Diego, November 2012.
- "The significance of structure: quantum chemistry and organic synthesis" at *Structure in Chemistry*, Institute of Advanced Study, Durham University, Durham, UK, July 2012.
- "Visual Representations of Structure and the dynamics of scientific modeling" at *Structure in Chemistry: A One-Day Workshop*, Chemical Heritage Foundation, Philadelphia, April 2012.
- "Experiments and Theory in the Preparative Sciences" at the 2nd International Workshop on the Philosophy of Scientific Experimentation, University of Konstanz, October 2011.
- "What is the Philosophy of Science and why should you care about it?" Department of Philosophy and Religion, Rowan University, April 2011.
- "Model Dynamics: The Development of Mechanistic Models of Chemical Reactions." Poster presented at Epistemology of Modeling and Simulation, Pittsburgh, April 2011.
- "Structure, Function, and Protein Taxonomy" at PSA 2010, Montreal, November 2010.
- "Resolving a Controversy: The Non-Classical Ion Debate" at The Chemical Heritage Foundation, November 2010.
- "Resolving a Controversy: The Non-Classical Ion Debate" at &HPS3, Bloomington, September 2010.
- Commentator on Owen Flanagan's "The Really Hard Problem: Meaning in a Material World" at the conference, "The Meaning of Life" at Swarthmore College, April 2010.
- "What is the Philosophy of Science and why should you care about it?" at University of the West Indies – St. Augustine, March 2010.
- Co-Chair (w/ Miriam Solomon) of the symposium, "The Medical Humanities" at Temple University School of Medicine, November 2009.
- "How does the Theologizing of Physics Contribute to Global Warming?" Department of Philosophy and Religious Studies, Rowan University, November 2009.
- "The 'Passes-For' Fallacy and the Future of Critical Thinking in the Humanities" Department of Philosophy, Swarthmore College, October 2009.

- "Sustaining a Controversy: The Non-Classical Ion Debate" International Society for the Philosophy of Chemistry, Chemical Heritage Foundation, August 2009.
- "Global Climate Modeling as Applied Science" Models and Simulations III, Charlottesville, March 2009.
- "Kant's Revolution in the Philosophical Foundations of Mathematics" Department of Philosophy, Wellesley College, January 2009.
- "The 'Passes-For' Fallacy" Eastern Division Meeting of the APA, Philadelphia, December 2008.
- "Comments on 'Macromolecular Pluralism' by Matthew Slater" Eastern Division Meeting of the APA, Philadelphia, December 2008.
- "How does the Theologizing of Physics Contribute to Global Warming?" Department of Philosophy, Haverford College, December 2008.
- "How do Structural Formulas Embody the Theory of Organic Chemistry?" PSA 2008, Pittsburgh, November 2008.
- "How does the Theologizing of Physics Contribute to Global Warming?" International Association for Environmental Philosophy, Pittsburgh, October 2008.
- Panelist on the topic, "Why integrate the history and philosophy of science?" Conference in Integrated History and Philosophy of Science, University of Pittsburgh, October 2007.
- "Scientific Understanding and Synthetic Design", International Society for the Philosophy of Chemistry, University of San Francisco, August 2007.
- "Kant's Philosophy of Geometry", Department of Philosophy, George Washington University, March 2007.
- "Visual Representations in Science", PSA 2006, Vancouver, November 2006.
- "Coffa's Kant and the Evolution of Accounts of Mathematical Necessity", Sixth International History of Philosophy of Science Congress, Paris, June 2006.
- "What is the Philosophy of Mathematics?", Department of Mathematics, Swarthmore College, April 2006.
- "Diagrams and Explanation in Organic Chemistry", Scientific Images: Learning from Pictures, Virginia Tech, April 2006.
- "Scientific Understanding and the Ingold/Robinson Revolution in Organic Chemistry", International Society for the Philosophy of Chemistry, University of Tennessee at Knoxville, August 2005.
- "Explanation, Understanding, and Mechanism in Organic Chemistry", Philosophy Department, Montclair State University, February 2005.
- "Kant's Account of Mathematics: Metaphilosophy and Syntheticity", Philosophy Department, Washington University in St. Louis, February 2005.
- "Kant's Account of Mathematics: Metaphilosophy and Syntheticity", Philosophy Department, Swarthmore College, January 2005.
- "Explanation, Understanding, and Mechanism in Organic Chemistry", Philosophy Department, The University of Chicago, January 2005.
- "Syntheticity and Generality in Kant's Philosophy of Geometry", The History of the Philosophy of Science Working Group—5th Congress, San Francisco, June 2004.

- "Kant's Account of Mathematics: Metaphilosophy and Syntheticity", Philosophy Department, Union College, May 2004.
- "Naturalistic Approaches to the Ontology of the Sciences and Mathematics", Philosophy Department Colloquium, Virginia Tech, February 2004.
- "Kant's Account of Mathematics: Metaphilosophy and Syntheticity", Philosophy Department Colloquium, Virginia Tech, October 2003.
- "Explanation in Organic Chemistry", International Society for the Philosophy of Chemistry, Georgetown University, Washington D.C., August 2002.
- "Intuition and *Reductio* Proofs in Kant's Philosophy of Geometry", The History of the Philosophy of Science Working Group— 4th Congress, Montreal, June 2002.
- "On the Content of a Geometrical Concept in Kant", Berkeley-Stanford Graduate Philosophy Conference, Stanford, May 2001.
- "Kant on *Reductio* Proofs in Mathematics", Berkeley Philosophy Graduate Student Discussion Group, Berkeley, January 2001.
- "Friedman's Account of Intuition in Kant's Geometry", Berkeley-Stanford Graduate Philosophy Conference, Berkeley, May 2000.

TEACHING EXPERIENCE

Philosophy, University of South Florida

• Graduate Seminar: Kuhn	Fall 2017
• Capstone Seminar: Truth, Lies, and Literature	Fall 2017
• Capstone Seminar: Ethics of Climate Change	Fall 2016
• Graduate Seminar: Values in Science	Fall 2016
• Capstone Seminar: Lies, BS, and Bias	Spring 2016
• Philosophy of Science	Spring 2016
• Graduate Seminar on Quine	Fall 2015
• History of Modern Philosophy	Fall 2014
• Graduate Seminar on Modeling in Science	Fall 2014
• Introduction to Philosophy	Spring 2014, 2015, Fall 2015
• Philosophy of Mind	Fall 2012 (two classes), 2013
• Graduate Seminar in Metaphysics/Stroud	Fall 2013
• Bioethics	Spring 2012-3, 2017-8, Fall 2018
• Formal Logic	Spring 2012, 2013
• Graduate Seminar in Philosophy of Medicine	Fall 2012

Philosophy, Rowan University

• Philosophy of Science (four classes)	Fall 2010, 2011
• Symbolic Logic	Spring 2010
• Philosophy of Biology and Chemistry	Spring 2010, 2011
• World Philosophy II	Spring 2010, 2011
• Symbolic Logic (two classes)	Fall 2009

- Philosophy of Science (two classes) — Fall 2009

Philosophy, Swarthmore College

- Philosophy and the Environment — Spring 2009
- Logic — Fall, Spring 2008
- Lies, B.S., and Bias — Fall 2007, 2008
- Kant: Critique of Pure Reason — Fall 2008
- Introduction to the History and Philosophy of Science (Writing Course) — Fall 2006, Spring 2008
- Philosophy and the Environment — Spring 2008
- From Classical Empiricism to Transcendental Idealism (Locke, Berkeley, Hume, and Kant) — Fall 2007
- Contemporary Analytic Philosophy — Spring 2007
- Seminar in the Philosophy of Science — Fall 2006
- Intro to the History and Philosophy of Science — Spring 2006
- Knowledge and Reality — Fall 2005

Management Studies, University of the West Indies, St. Augustine

- Philosophy of Science — Spring 2009-2013

Philosophy, Virginia Tech

- Knowledge and Reality (large lecture) — Spring 2005, 2004
- Contemporary Kantian Approaches to Metaphysics (graduate seminar) — Spring 2005
- 17th Century Philosophy (two classes) (Descartes, Spinoza, Locke, Leibniz) — Fall 2004
- 18th Century Philosophy (Berkeley, Hume, Kant) — Spring 2004
- Naturalism and Ontology (graduate seminar) — Fall 2003
- Knowledge and Reality (two classes) — Fall 2003

Philosophy, UC Berkeley

- History of Modern Philosophy — Summer 2002
- Formal Logic — Summer 2000

Biotechnology, Berkeley City College

- Introduction to Inorganic Chemistry — Fall terms, 1998-2000
- Introduction to Organic and Biochemistry — Spring terms, 1998-2000

As Teaching Assistant:

Philosophy, UC Berkeley

• Metaphysics	Instructor: Stroud
• Philosophy of Physics	Instructor: Bacciagaluppi
• Epistemology	Instructor: Khatchirian
• History of Modern Philosophy	Instructor: Broughton
• Philosophy of Science	Instructor: Ryckman
• Formal Logic (twice)	Instructors: Warren/Mancosu

Mathematics and Chemistry, UC Berkeley

- Vector Calculus
- Linear Algebra and Differential Equations
- Integral Calculus (twice)
- Introductory Chemistry (multiple times)
- Organic Chemistry (multiple times)

ADDITIONAL ACTIVITIES

I was a participant in both the Philosophy of Psychiatry reading group and the McDowell/Brandom/Sellars reading group at USF.

While at Swarthmore and after, I organized and participated in a reading group for the faculty in the Philosophy Department. Readings have included Robert Brandom's Articulating Reasons and Reason in Philosophy, Bernard Williams' Truth and Truthfulness, Peter Hacker's Human Nature: The Categorial Framework, Tom Scanlon's Locke Lectures, and Barry Stroud's Engagement and Metaphysical Dissatisfaction.

At Virginia Tech, I also started a reading group for colleagues and students on 'core' issues in analytic philosophy. Readings included: John McDowell's Mind and World, Gareth Evans' The Varieties of Reference, and several articles by Donald Davidson.

I was co-coordinator of the Greater Philadelphia Philosophy Consortium's Philosophy of Science Reading Group (with Michael Weisberg). This group met six times a year to discuss current work in the philosophy of science.

I was a founding member and coordinator of the Tri-College (Swarthmore, Haverford, and Bryn Mawr) Working Group in Philosophy and Mathematics. This groups met six times a year and sponsored a colloquium on contemporary work in the philosophy of mathematics.

I was the co-coordinator of Swarthmore's philosophy colloquium series for the 2007-8 academic year, and of USF philosophy speakers for the 2013-16 academic years.

I worked with a colleague to put together a special issue of *Perspectives on Science* that collected several papers presented at HOPOS 2004. The issue appeared in Spring 2007.

I have reviewed submissions to *Philosophy of Science*, *British Journal for the Philosophy of Science*, *Science and Education*, *Perspectives on Science, Synthese, Philosophy Compass, Bulletin for the History of Chemistry,* and *Foundations of Chemistry*, *Studies in the History and Philosophy of Science*, *Philosophy of Biology*, as well as multiple grant proposals for the NSF and a tenure case at KAIST.

I was the Allington Fellow at the Chemical Heritage Foundation for the academic year 2010-2011, and invited speaker for the 54th Annual Speaker Series at the Center for the Philosophy of Science and the University of Pittsburgh.

REFERENCES

Roger Ariew, University of South Florida Philosophy Department, rariew@usf.edu
Robin Hendry, Durham University Philosophy Department, r.f.hendry@durham.ac.uk
Andrea Woody, University of Washington Philosophy Department, awoody@u.washington.edu
Mathias Frisch, Leibniz Universität Hannover Institut für Philosophie,
mathias.frisch@philos.uni-hannover.de