

Ulrich Meyer

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Areas Metaphysics, Philosophy of Science, Logic, Philosophy of Time

Employment **Colgate University** Hamilton, New York
Associate Professor of Philosophy. Assistant Professor, 2003–2008. Director of the Philosophy Study Group at the University of St. Andrews, Spring 2008. Chair of the University Committee on Information Technology, 2008–present.

Davidson College Davidson, North Carolina
Visiting Assistant Professor of Philosophy, 2001–2003.

Education **Massachusetts Institute of Technology** Cambridge, Massachusetts
Ph.D. in Philosophy, 1995–2001. Dissertation: *Mathematics, Time, and Confirmation*. Committee: Robert Stalnaker (chair), Stephen Yablo and Michael Glanzberg. Work as a graduate teaching assistant at M.I.T., Harvard University and the Harvard Summer School. Visiting Assistant Professor, University of Illinois at Chicago, 2000–2001.

University of Cambridge Cambridge, England
Ph.D. in Applied Mathematics, 1992–1995. Dissertation: *Braided Geometry and the q -Deformation of Spacetime*. Committee: Shahn Majid (chair), Alan MacFarland and Anthony Sudbury. Certificate of Advanced Study in Mathematics, 1991–1992. Dissertation: *Virasoro Algebras and Two-Dimensional Physics*. Advisor: Adrian Kent.

Ruprecht-Karls Universität Heidelberg Heidelberg, Germany
Undergraduate degree in Physics; minors in Mathematics and Philosophy, 1988–1991.

Awards

Josephine de Kármán Fellowship	1999
Graduate Fellowship, Massachusetts Institute of Technology	1997–2000
Research Fellowship, <i>Deutscher akademischer Austauschdienst</i> (DAAD)	1996
Ph.D. Scholarship, <i>Studienstiftung des deutschen Volkes</i>	1994–1997
Travel Grant, Cambridge Philosophical Society	1994
J. T. Knight Prize in Mathematics, University of Cambridge	1994
Travel Grant, A. J. Pressland Fund	1994
Human Capital and Mobility Fellowship, Commission of the European Union	1993
Horne Scholarship, St. John's College, Cambridge	1992–1995
Graduate Fellowship, Science and Engineering Research Council (SERC)	1992–1995
College Prize, St. John's College, Cambridge	1992
Undergraduate Scholarship, <i>Studienstiftung des deutschen Volkes</i>	1991–1994
Heidelberg–Cambridge Exchange Scholarship	1991–1992
Travel Grant, <i>Deutscher akademischer Austauschdienst</i> (DAAD)	1991

Scholarship A. Book Project

I am currently completing a manuscript entitled *The Nature of Time*. It defends a ‘modal’ view of time on which times are more similar to the possible worlds in modal logic than they are to places. Part I of the book explains what is wrong with ‘spatial’ views of time; Part II spells out my own modal view of time; Part III is about the present. The final Part IV explains how a modal view of time can be reconciled with the theory of relativity.

B. Publications in Philosophy

- [1] Time and Modality. In Craig Callender, ed., *The Oxford Handbook on Time*. Clarendon Press, Oxford (forthcoming).
- [2] Modal Property Comprehension. In Vincent Hendricks, et al., *Between Logic and Intuition: David Lewis and the Future of Philosophy*. Dordrecht, Springer (forthcoming).

Abstract. To define new property terms, we combine already familiar ones by means of certain logical operations. Given suitable constraints, these operations may presumably include the resources of first-order logic: truth-functional sentence connectives and quantification over objects. What is far less clear is whether we can also use *modal* operators for this purpose. This paper clarifies what is involved in this question, and argues in favor of modal property definitions.

- [3] Times in Tense Logic. *Notre Dame Journal of Formal Logic* 50 (2009): 201–19.

Abstract. Tense logic is often said to possess insufficient expressive resources to serve as a theory of the nature of time. This paper counters this objection by showing how one can obtain quantification over times in a tense logic in which all temporal distinctions are ultimately spelled out in terms of the two simple tense operators “it was the case that” and “it will be the case that.” This account of times is similar to what is known as “linguistic ersatzism” about possible worlds, but there are noteworthy differences between these two cases. In particular, while linguistic ersatzism would support actualism, the view of times defended here does not support presentism.

- [4] ‘Now’ and ‘Then’ in Tense Logic. *Journal of Philosophical Logic* 38 (2009): 229–47.

Abstract. According to Hans Kamp and Frank Vlach, the two-dimensional tense operators “now” and “then” are ineliminable in quantified tense logic. This is often adduced as an argument against tense logic, and in favor of an extensional account that makes use of explicit quantification over times. This paper shows that “now” and “then” are eliminable in a quantified tense logic that has enough quantificational structure. The operators might not be redundant in some other systems of tense logic, but this merely indicates a lack of quantificational resources and does not show any deep-seated inability of tense logic to express claims about time. The paper closes with a brief discussion of the modal analogue of this issue, which concerns the role of the actuality operator in quantified modal logic.

- [5] Review of Yuval Dolev, *Time and Realism* (The MIT Press, 2007). *Iyyun: The Jerusalem Philosophical Quarterly* 58 (2009): 92–101.
- [6] Worlds and Times. *Notre Dame Journal of Formal Logic* 47 (2006): 25–37.

Abstract. There are many parallels between the role of possible worlds in modal logic and that of times in tense logic. But the similarities only go so far, and it is important to note where the two come apart. This paper argues that even though worlds and times play similar roles in the model theories of modal and tense logic, there is no tense analogue of the possible-worlds analysis of modal operators. An important corollary of this result is that presentism cannot be the tense analogue of actualism.

- [7] Dummett on the Time-Continuum. *Philosophy* 80 (2005): 135–40.

Abstract. Michael Dummett claims that the classical model of time as a continuum of instants has to be rejected. In his view, “it allows as possibilities what reason rules out, and leaves it to the contingent laws of physics to rule out what a good model of physical reality would not even be able to describe.” This paper argues otherwise.

Dummett’s response to this paper was published in: Hume’s Atomism about Events: a Response to Ulrich Meyer. *Philosophy* 80 (2005): 141–44.

- [8] The Presentist’s Dilemma. *Philosophical Studies* 122 (2005): 213–225.

Abstract. This paper defends three theses: (i) that presentism is either trivial or untenable; (ii) that the debate between tensed and tenseless theories of time is not about the status of presentism; and (iii) that there is no temporal analogue of the modal thesis of actualism.

Reprinted in Ernâni Magalhães and Nathan Oaklander, eds., *Presentism: Essential Readings*. Rowman & Littlefield, Lanham, Md., 2010.

- [9] How to Apply Mathematics. *Erkenntnis* 61 (2004): 17–28.

Abstract. This paper presents a novel account of applied mathematics. It shows how we can distinguish the physical content from the mathematical form of a scientific theory even in cases where the mathematics applied is indispensable and cannot be eliminated by paraphrase.

- [10] The Metaphysics of Velocity. *Philosophical Studies* 112 (2003): 93–102.

Abstract. Some authors argue that an object’s velocity is logically independent of its locations throughout time. Their aim is to deny the Russellian view that motion is merely a change of location, and to promote a rival account on which the connection between velocities and trajectories is provided by the laws of nature. I defend the Russellian view of motion against these attacks.

- [11] Is Science First-Order? *Analysis* 62 (2002): 305–308.

Abstract. It is a popular view amongst some philosophers, most notably those with Quinean views about ontological commitment, that scientific theories are first-orderizable; that we can regiment all such theories in an extensional first-order language. I argue that this view is false, and that any acceptable account of science needs to take some modal notion as primitive.

- [12] Prior and the Platonist. *Analysis* 62 (2002): 211–216.

Abstract. This paper draws attention to a conflict between two popular views about time: A. N. Prior’s proposal for treating tense on the model of modal logic, and the “Platonic” thesis that some objects (God, forms, universals, or numbers) exist eternally. I argue that anyone who accepts the former ought to reject the latter.

C. Publications in Mathematical Physics

- [13] Wave Equations on q -Minkowski space. *Communications in Mathematical Physics* 174 (1996): 457–75.

- [14] New interactions in q -scalar electrodynamics? In Jerzy Lukierski, Ziemowit Popowicz, and Jan Sobczyk, eds., *Quantum Groups: Formalism and Applications*, XXX Karpacz Winter School of Theoretical Physics, 555–60. Polish Scientific Publishers, Warsaw, 1995.

- [15] Projective Quantum Spaces. *Letters in Mathematical Physics* 35 (1995): 91–97.
- [16] q -Lorentz Group and Braided Coaddition on q -Minkowski space. *Communications in Mathematical Physics* 168.2 (1995): 249–264.
- [17] (with Shahn Majid). Braided Matrix Structure of q -Minkowski Space and q -Poincaré group. *Zeitschrift für Physik C* 63 (1994): 357–62.

Talks

- Comments on Barak Krakauer, “Content and Counterpossibles.” Pacific Division of the American Philosophical Association, Vancouver, April 2009.
- Comments on Craig Callender and Jonathan Cohen, “A Better Best System Account of Lawhood.” Bellingham Summer Philosophy Conference, August 2008.
- Comments on Thomas Sattig, “Compatibilism about Coincidence.” LOGOS Conference on Meta-Metaphysics, Barcelona, June 2008.
- Comments on P. D. Magnus, “What species can teach us about theory.” The Creighton Club (New York State Philosophical Association), Geneva, New York, November 2007.
- “Modal Property Comprehension.” First Annual *Synthese* Conference, Copenhagen, Denmark, October 2007.
- “Times in Tense Logic.” Metaphysics of Time Conference, Università degli Studi di Bergamo, Italy, September 2007.
- “‘Now’ and ‘Then’ in Tense Logic.” 13th International Congress of Logic, Methodology and Philosophy of Science, Beijing, China, August 2007.
- “Modal Property Comprehension.” Pacific Division of the American Philosophical Association, San Francisco, April 2007. Commentator: Chris Swoyer, Oklahoma.
- “Action at a Temporal Distance.” Mount Holyoke College, May 2006.
- “Presentism and Actualism.” Philosophy of Time Society, Chicago, April 2006. Commentator: Joshua Mozerky, Queen’s University, Ontario.
- “Eternal Tense Logic.” Philosophy of Time Society, Portland, Oregon, March 2006. Commentator: Steven Savitt, University of British Columbia.
- “Action at a Temporal Distance.” Massachusetts Institute of Technology, January 2006.
- “A Definition of ‘Disposition’.” Pacific Division of the American Philosophical Association, San Francisco, April 2005. Commentator: John Heil, Washington University.
- “A Definition of ‘Disposition’.” The Creighton Club (New York State Philosophical Association), Skaneateles, November 2004. Commentator: Michael Fara, Cornell University.
- “A Puzzle about Velocity.” Joint Session of the Aristotelian Society and Mind Association, University of Kent, Canterbury, England, 2004.
- “The Presentist’s Dilemma.” Joint Session of the Aristotelian Society and Mind Association, Queen’s University, Belfast, Northern Ireland, 2003.

Service

Work as a referee for Oxford University Press, *Analysis*, *Australasian Journal of Philosophy*, *Erkenntnis*, *Notre Dame Journal of Formal Logic*, *Philosophical Quarterly*, *Philosophical Studies*, and *Synthese*.