# **Huw Price**

Contact details

MSc in Mathematics, Oxford

ment and contribution to University life', 1975)

1976-1977

1971-1975

#### mail@huwprice.uk www.cst.uni-bonn.de/en (Centre for Science and Thought, Bonn) prce.hu/w/ (Personal) (Please use email to request mailing address) Current positions Distinguished Professor Emeritus, Center for Science and Thought, University of Bonn FROM 2022 Emeritus Bertrand Russell Professor of Philosophy, Cambridge FROM 2020 Emeritus Fellow, Trinity College, Cambridge FROM 2020 Board Member, Ada Lovelace Institute 2019-2023 Previous appointments Academic Director, Leverhulme Centre for the Future of Intelligence 2016-2021 Bertrand Russell Professor of Philosophy, Cambridge 2011-2020 Professorial Fellow, Trinity College, Cambridge 2011-2020 Founding Academic Director, Centre for the Study of Existential Risk 2012-2018 Second ARC Federation Fellowship, University of Sydney 2007-2012 Challis Professor of Philosophy, University of Sydney 2003-2012 Director, Centre for Time, University of Sydney 2002-2012 ARC Federation Fellowship, University of Sydney 2002-2007 Professor of Logic and Metaphysics, University of Edinburgh 2001-2003 Professor of Natural Metaphysics (Personal Chair), University of Sydney 1997-2001 Lecturer (1989-90), Senior Lecturer (1991-94), Reader (1995-97), University of Sydney 1989-1997 Research Fellow in Philosophy, RSSS, ANU 1988-1989 ARC National Research Fellow in Philosophy, UNSW 1985-1987 Rothmans Postdoctoral Fellow, ANU 1981-1983 Education PhD in Philosophy, Cambridge 1977-1981

BA with Double First Class Honours in Pure Mathematics (1974) & Philosophy (1975)

(University Medal in Pure Mathematics, 1974; the Tillyard Prize for 'Academic achieve-

# Professional honours

2022 FROM 2020 2018 2016 2016 FROM 2012 2011 2008 2008–2010 FROM 2008 1998–1999 FROM 1994	Dewey Lecturer, Fudan University, Shanghai (postponed from 2020 due to Covid) Fellow of the Royal Society of New South Wales Jacobsen Lecturer, London Gottlob Frege Lecturer, Tartu Itamar Pitowsky Lecturer, Jerusalem Fellow of the British Academy Nordic Pragmatism Lecturer, Helsinki René Descartes Lecturer, Tilburg Member of Council, Australian Academy of the Humanities Elected member & Australian representative, Institut International de Philosophie President, Australasian Association of Philosophy Fellow of the Australian Academy of the Humanities
	Editorships
FROM 2010	Editorial board, The Rutherford Journal, NZ
FROM 2009	Editorial board, European Journal for the Philosophy of Science
FROM 2004	Editorial board, Contemporary Pragmatism (USA)
2002-2004	Editorial board, Philosophical Quarterly (UK)
FROM 1997	Associate editor, Australasian Journal of Philosophy
1995–2003	Founding consulting editor, Stanford Encyclopedia of Philosophy
	Adding a support titing a support of the support of
	Major competitive research grants and fellowships
2016–2021	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m)
2016–2021 2015–2018	
	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m)
	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical
2015-2018	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k).
2015-2018	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k). (Lead Investigator, with Dean Rickles, Kristie Miller & Alex Holcombe) New Agendas
2015-2018 2014-2016 2012-2014	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k). (Lead Investigator, with Dean Rickles, Kristie Miller & Alex Holcombe) New Agendas for the Study of Time: Connecting the Disciplines, John Templeton Foundation (Us\$1.5m)
2015-2018	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k). (Lead Investigator, with Dean Rickles, Kristie Miller & Alex Holcombe) New Agendas for the Study of Time: Connecting the Disciplines, John Templeton Foundation (Us\$1.5m) (International Collaborator, with Sungho Choi, Principal Investigator, and Alexander
2015-2018 2014-2016 2012-2014	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k). (Lead Investigator, with Dean Rickles, Kristie Miller & Alex Holcombe) New Agendas for the Study of Time: Connecting the Disciplines, John Templeton Foundation (us\$1.5m) (International Collaborator, with Sungho Choi, Principal Investigator, and Alexander Bird and Toby Handfield, International Collaborators) The Semantics and Metaphysics of
2015-2018 2014-2016 2012-2014	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k). (Lead Investigator, with Dean Rickles, Kristie Miller & Alex Holcombe) New Agendas for the Study of Time: Connecting the Disciplines, John Templeton Foundation (Us\$1.5m) (International Collaborator, with Sungho Choi, Principal Investigator, and Alexander
2015-2018 2014-2016 2012-2014 2009-2010	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k). (Lead Investigator, with Dean Rickles, Kristie Miller & Alex Holcombe) New Agendas for the Study of Time: Connecting the Disciplines, John Templeton Foundation (Us\$1.5m) (International Collaborator, with Sungho Choi, Principal Investigator, and Alexander Bird and Toby Handfield, International Collaborators) The Semantics and Metaphysics of Dispositions, National Research Foundation of Korea (KRW200m)
2015-2018 2014-2016 2012-2014 2009-2010	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k). (Lead Investigator, with Dean Rickles, Kristie Miller & Alex Holcombe) New Agendas for the Study of Time: Connecting the Disciplines, John Templeton Foundation (Us\$1.5m) (International Collaborator, with Sungho Choi, Principal Investigator, and Alexander Bird and Toby Handfield, International Collaborators) The Semantics and Metaphysics of Dispositions, National Research Foundation of Korea (KRW200m) (Lead Investigator, with Guido Bacciagaluppi & Max Schlosshauer) ARC Discovery
2015-2018 2014-2016 2012-2014 2009-2010	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k). (Lead Investigator, with Dean Rickles, Kristie Miller & Alex Holcombe) New Agendas for the Study of Time: Connecting the Disciplines, John Templeton Foundation (Us\$1.5m) (International Collaborator, with Sungho Choi, Principal Investigator, and Alexander Bird and Toby Handfield, International Collaborators) The Semantics and Metaphysics of Dispositions, National Research Foundation of Korea (KRW200m) (Lead Investigator, with Guido Bacciagaluppi & Max Schlosshauer) ARC Discovery Grant, Time-asymmetry and the Bohmian View of the Quantum World (AU\$208k) Second ARC Federation Fellowship (AU\$1.5m) (Lead Investigator, with Jenann Ismael & Guido Bacciagaluppi) ARC Discovery Grant,
2015-2018 2014-2016 2012-2014 2009-2010 2008-2010 2007-2012 2005-2009	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k). (Lead Investigator, with Dean Rickles, Kristie Miller & Alex Holcombe) New Agendas for the Study of Time: Connecting the Disciplines, John Templeton Foundation (us\$1.5m) (International Collaborator, with Sungho Choi, Principal Investigator, and Alexander Bird and Toby Handfield, International Collaborators) The Semantics and Metaphysics of Dispositions, National Research Foundation of Korea (krw200m) (Lead Investigator, with Guido Bacciagaluppi & Max Schlosshauer) ARC Discovery Grant, Time-asymmetry and the Bohmian View of the Quantum World (Au\$208k) Second ARC Federation Fellowship (Au\$1.5m) (Lead Investigator, with Jenann Ismael & Guido Bacciagaluppi) ARC Discovery Grant, Time and Perspective in the Quantum World (Au\$750k)
2015-2018  2014-2016  2012-2014  2009-2010  2008-2010  2007-2012 2005-2009	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k). (Lead Investigator, with Dean Rickles, Kristie Miller & Alex Holcombe) New Agendas for the Study of Time: Connecting the Disciplines, John Templeton Foundation (Us\$1.5m) (International Collaborator, with Sungho Choi, Principal Investigator, and Alexander Bird and Toby Handfield, International Collaborators) The Semantics and Metaphysics of Dispositions, National Research Foundation of Korea (krw200m) (Lead Investigator, with Guido Bacciagaluppi & Max Schlosshauer) ARC Discovery Grant, Time-asymmetry and the Bohmian View of the Quantum World (AU\$208k) Second ARC Federation Fellowship (AU\$1.5m) (Lead Investigator, with Jenann Ismael & Guido Bacciagaluppi) ARC Discovery Grant, Time and Perspective in the Quantum World (AU\$750k) ARC Federation Fellowship, inaugural round (AU\$1.25m)
2015-2018  2014-2016  2012-2014  2009-2010  2008-2010  2007-2012 2005-2009  2002-2007 2001-2003	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k). (Lead Investigator, with Dean Rickles, Kristie Miller & Alex Holcombe) New Agendas for the Study of Time: Connecting the Disciplines, John Templeton Foundation (Us\$1.5m) (International Collaborator, with Sungho Choi, Principal Investigator, and Alexander Bird and Toby Handfield, International Collaborators) The Semantics and Metaphysics of Dispositions, National Research Foundation of Korea (Krw200m) (Lead Investigator, with Guido Bacciagaluppi & Max Schlosshauer) ARC Discovery Grant, Time-asymmetry and the Bohmian View of the Quantum World (Au\$208k) Second ARC Federation Fellowship (Au\$1.5m) (Lead Investigator, with Jenann Ismael & Guido Bacciagaluppi) ARC Discovery Grant, Time and Perspective in the Quantum World (Au\$750k) ARC Federation Fellowship, inaugural round (Au\$1.25m) ARC Large Grant, The Nature of Naturalism (Au\$1.25m)
2015-2018  2014-2016  2012-2014  2009-2010  2008-2010  2007-2012 2005-2009	(PI) The Future of Intelligence, Leverhulme Trust Major Research Centre (£10m) (PI with Sean Ó hÉigeartaigh, Martin Rees & Partha Dasgupta) Managing Extreme Technological Risk, Templeton World Charity Foundation Foundation (£1.7m) (With Chris Timpson & Owen Maroney, Oxford) Information at the Quantum Physics/Statistical Mechanics Nexus, Templeton World Charity Foundation (£760k). (Lead Investigator, with Dean Rickles, Kristie Miller & Alex Holcombe) New Agendas for the Study of Time: Connecting the Disciplines, John Templeton Foundation (Us\$1.5m) (International Collaborator, with Sungho Choi, Principal Investigator, and Alexander Bird and Toby Handfield, International Collaborators) The Semantics and Metaphysics of Dispositions, National Research Foundation of Korea (krw200m) (Lead Investigator, with Guido Bacciagaluppi & Max Schlosshauer) ARC Discovery Grant, Time-asymmetry and the Bohmian View of the Quantum World (AU\$208k) Second ARC Federation Fellowship (AU\$1.5m) (Lead Investigator, with Jenann Ismael & Guido Bacciagaluppi) ARC Discovery Grant, Time and Perspective in the Quantum World (AU\$750k) ARC Federation Fellowship, inaugural round (AU\$1.25m)

## **Publications**

#### Monographs

1996

Facts and the Function of Truth (Second Edition), Oxford University Press (2023–24). Expanded edition of my 1988 book, with five new chapters.

Expressivism, Pragmatism and Representationalism, Cambridge University Press.

Based on my René Descartes Lectures, delivered in Tilburg, May 2008. The lectures appear in this volume with commentary essays by Simon Blackburn, Robert Brandom, Paul Horwich and Michael Williams, and a Postcript and Replies by me.

Naturalism Without Mirrors, Oxford University Press.

A collection of thirteen of my previously published essays on truth, naturalism, expressivism and representationalism, with a new Introduction. (Chinese translation forthcoming from Fudan University Press.)

- 'Huw Price's new book amplifies and elaborates themes from his quiet masterpiece, Facts and the Function of Truth. Those who know him better as a philosopher of science will be pleased to see that these interlocking essays on the foundations of language (and metaphysics) are every bit as rich and incisive as his celebrated work on Time's Arrow.' Alexis Burgess, Phil Review.
- 'This book deserves the attention of anyone working in contemporary metaphysics or philosophy of language. ... Price's views are tantalizing and even inspiring to the pragmatically and naturalistically inclined ...' Willem deVries, NDPR.

Time's Arrow and Archimedes' Point: New Directions for the Physics of Time, Oxford University Press. Translated into Polish (1997), Japanese (2001), Mandarin (2001) and Hebrew (2002), this book reached the New Scientist best-seller list in 1997, and was enthusiastically reviewed, both by philosophers and by physicists:

- 'Time's Arrow is ... a highly original and important contribution to the philosophy and physics of time. It is path-breaking in many areas, since it covers topics rarely treated by philosophers and offers novel solutions to many problems.' Craig Callender, BJPS, 1998.
- 'The book is a tour de force. Price addresses some of the most difficult issues in physics and philosophy, and offers highly original solutions.' David Papineau, TLS, 13 June 1997.
- 'Price is a philosopher with a real grasp of fundamental physics. He offers an original slant on some profound issues, where our understanding has advanced little since the time of St. Augustine.' Martin Rees, *The Times*, 25 July 1996.
- 'The author has done physicists a great service in laying out so clearly and critically the nature of the various time-asymmetry problems of physics.' John Barrow, *Nature*, 19 September 1996.
- '[A] significant contribution, remarkable for its scope. ... written with great clarity and conviction.' Ilya Prigogine (Nobel Laureate in Chemistry), *THES*, 27 September 1996.
- '[A] splendidly provocative book. ... [Price] has taken a subject understood by a few experts and thrown open the door to the masses.' John Gribbin, *The Sunday Times*, 21 July 1996.

1988 Facts and the Function of Truth, Blackwell.

# EDITED VOLUMES AND SPECIAL ISSUES

- (Edited with Yang Liu and Stephan Hartmann) *Decision Theory and the Future of AI*. [Originally a special issue of *Synthese*, 198, 6413–6414; now also a book from Springer.]
- (Edited with Helen Beebee and Chris Hitchcock) *Making a Difference*, Oxford University Press. Contributors: Helen Beebee, Thomas Blanchard, David Braddon-Mitchell, Rachael Briggs, Nancy Cartwright, Chris Hitchcock, Christian List, Cei Maslen, Peter Menzies, Daniel Nolan, Philip Pettit, Huw Price, Jonathan Schaffer, Brad Weslake, and James Woodward.
- (Edited with Cheryl Misak) The Practical Turn: Pragmatism in Britain in the Long Twentieth Century, Oxford University Press.
  - CONTRIBUTORS: David Bakhurst, Simon Blackburn, Anna Boncompagni, Hanjo Glock, Jane Heal, Hallvard Lillehammer, Cheryl Misak, Huw Price, and Ian Rumfitt.
- (Edited with Guido Bacciagaluppi and David Miller) Time-symmetric Approaches to Quantum Mechanics. [Focus issue of Studies in the History and Philosophy of Modern Physics, Vol. 39, Issue 4]
- 2008B (Edited with Luca Moretti) Ontological Commitment. [Special issue of Phil Studies, Vol. 141.]
- (Edited with Richard Corry) Causation, Physics and the Constitution of Reality: Russell's Republic Revisited, Oxford University Press.

Contributors: Arif Ahmed, Helen Beebee, Richard Corry, Antony Eagle, Adam Elga, Mathias Frisch, Chris Hitchcock, Douglas Kutach, Barry Loewer, Peter Menzies, John D. Norton, Huw Price, and James Woodward.

### JOURNAL ARTICLES AND BOOK CHAPTERS

- Risk and scientific reputation: lessons from cold fusion. Forthcoming in Catherine Rhodes, ed., *Managing Extreme Technological Risk* (World Scientific).
- To APPEAR Time for pragmatism. Forthcoming in Joshua Gert, ed., Neopragmatism (OUP).
- The practical arrow. *Australasian Philosophical Review*, commentary on Jenann Ismael, 'The open universe: totality, self-reference and time.'
- From non-cognitivism to global expressivism: Carnap's unfinished journey? Forthcoming in C. Dambock & G. Schiemer, eds., *Carnap Handbuch*. Metzler Verlag.
- 2023 Gibbard on quasi-realism and global expressivism. *Topoi*.
- Global expressivism and alethic pluralism. Synthese, 200, 386.
- Family feuds? Relativism, expressivism, and disagreements about disagreement. *Philosophical Topics*, 50, 293–394.
- (With Travis Norsen) Lapsing quickly into fatalism: Bell on backward causation. *Entropy*, 23, 251.
- (With Ken Wharton) Entanglement swapping and action at a distance. *Foundations of Physics*, 51:105.
- 2020 (With Ken Wharton) A live alternative to quantum spooks. *International Journal of Quantum Foundations*, 6, 1–8.
- Global expressivism by the method of differences. Royal Institute of Philosophy Supplement, 86, 133-154.
- 2019B (With Yang Liu) Heart of DARCness. Australasian Journal of Philosophy, 97, 136-150.
- Carnapian voluntarism and global expressivism: reply to Carus. *Monist*, 101, 468–474.
- (With Yang Liu) "Click!" Bait for Causalists. In Arif Ahmed (ed), *Newcomb's Problem*, Cambridge University Press, 160–179.
- 2018c (With Yang Liu) Ramsey & Joyce on deliberation and prediction. Synthese, 197, 4365–86.

- Causation, intervention and agency: Woodward on Menzies and Price. In Beebee, Hitchcock, and Price (eds), *Making a Difference*, Oxford University Press, 73–98.
- Epilogue: Ramsey's ubiquitous pragmatism. In C Misak and H Price (eds), *The Practical Turn:* Pragmatism in Britain in the Long Twentieth Century, OUP, 149–162.
- (With Ken Wharton) Dispelling the quantum spooks: a clue that Einstein missed? In Christophe Bouton and Philippe Huneman (eds), *Time of Nature and the Nature of Time*, Boston Studies in the Philosophy and History of Science 326, Springer, 123–137.
- Wilfrid Sellars meets Cambridge Pragmatism. In David Pereplyotchik and Deborah R. Barnbaum (eds), *Sellars and Contemporary Philosophy*, Routledge, 123–140.
- Idling and sidling toward philosophical peace. In S. Gross, N. Tebben, and M. Williams (eds), Meaning Without Representation, Oxford University Press, 307–330.
- 2015B (With Ken Wharton) Disentangling the quantum world. Entropy 17:11, 7752-7767.
- From quasirealism to global expressivism and back again? In Johnson & Smith (eds), *Passions and Projections: Themes from the Philosophy of Simon Blackburn* (OUP), 134–152.
- Representationalism revisited. *Análisis. Revista de investigación filosófica,* 1, 87–99.
- Where would we be without counterfactuals? In Galavotti, M. C. et al. (eds), New Directions in the Philosophy of Science, Springer, 589–607.
- (With Peter Evans and Ken Wharton) New slant on the EPR-Bell experiment. *British Journal* for the Philosophy of Science, 64, 297–324.
- Causation, chance and the rational significance of supernatural evidence. *Philosophical Review*, 121:4, 483–538.
  - Selected for The Philosopher's Annual, 2012.
- 2012B (With Arif Ahmed) Arntzenius on "Why ain'cha rich?". Erkenntnis, 77, 15-30.
- Does time-symmetry imply retrocausality? How the quantum world says "Maybe". *Studies in History and Philosophy of Modern Physics*, 43, 75–83.
- (With Ken Wharton and David Miller) Action Duality: A Constructive Principle for Quantum Foundations. *Symmetry* 3, 524–540.
- The flow of time. In Craig Callender, ed., The Oxford Handbook of Time (OUP), 276-311.
- Expressivism for two voices. In J. Knowles and H. Rydenfelt, eds., *Pragmatism*, *Science and Naturalism* (Peter Lang), 87–113.
- (With Brad Weslake) The time-asymmetry of causation. In Helen Beebee, Christopher Hitch-cock and Peter Menzies, eds., *The Oxford Handbook of Causation* (OUP), 414–443.
- Decisions, decisions: can Savage salvage Everettian probability? In Simon Saunders, Jonathan Barrett, Adrian Kent & David Wallace, eds., *Many Worlds? Everett, Quantum Theory & Reality* (OUP), 369–390.
- One cheer for representationalism? In Randall Auxier, ed., *The Philosophy of Richard Rorty* (Open Court, Library of Living Philosophers XXXII), 269–289.
- (With Richard Rorty) Exchange on 'Truth as Convenient Friction'. In M. De Caro and D. Macarthur (eds), *Naturalism and Normativity*, Columbia University Press, 253–262.
- Time's arrow and Eddington's challenge. Séminaire Poincaré XV, Le Temps, 115–140.
- The semantic foundations of metaphysics. In Ian Ravenscroft, ed., Minds, Worlds and Conditionals: Essays in Honour of Frank Jackson (OUP), 111–140.
- Metaphysics after Carnap: the ghost who walks? In David Chalmers, Ryan Wasserman and David Manley, eds., *Metametaphysics* (OUP), 320–346.
- 2009c (With Peter Menzies) Is semantics in the plan? In David Braddon-Mitchell and Robert Nola, eds., Conceptual Analysis and Philosophical Naturalism (MIT Press), 183–200.
- Toy models for retrocausality. Studies in Hist. and Philos. of Modern Physics 39, 752-761.
- Brandom and Hume on the genealogy of modals. *Philosophical Topics* 36, 87–97.
- 2007A Quining naturalism. Journal of Philosophy 104, 375-405.
- (With David Macarthur) Pragmatism, quasi-realism and the global challenge. In Cheryl Misak, ed., *The New Pragmatists* (OUP), 91–120.

- Causal perspectivalism. In Huw Price and Richard Corry, eds., Causation, Physics and the Constitution of Reality: Russell's Republic Revisited (OUP), 250–292.
- Recent work on the arrow of radiation. Stud. in Hist. and Philos. of Mod. Phys. 37, 498-527.
- The thermodynamic arrow: puzzles and pseudo-puzzles. In Ikaros Bigi and Martin Faessler, eds., *Time and Matter* (World Scientific), 209–224.
- Time's arrow, time's fly-bottle. In Friedrich Stadler and Michael Stöltzner, eds., *Time and History* (Ontos Verlag), 253–273.
- Einstein and the quantum spooks. In C. Stewart and R. Hewitt, eds., *Waves of the Future* (Science Foundation for Physics), 221–233.
- Models and modals. In D. Gillies, ed., Laws and Models in Science (King's College), 49-69.
- On the origins of the arrow of time: why there is still a puzzle about the low entropy past. In C. Hitchcock, ed., *Contemporary Debates in Phil. of Science* (Blackwell), 219–239.
- Immodesty without mirrors making sense of Wittgenstein's linguistic pluralism. In M. Kölbel & B. Weiss, eds., *Wittgenstein's Lasting Significance* (Routledge), 179–205.
- Naturalism without representationalism. In David Macarthur and Mario de Caro, eds., *Naturalism in Question* (Harvard University Press), 71–88.
  - Reprinted in Italian as 'Naturalismo senza rappresentazionalismo', in *La Mente e La Natura* (Fazi Editore, Rome, 2005), 58–77.
  - Reprinted with a new Postscript in M. Milkowski and K. Talmont-Kaminski, eds., *Beyond Description: Normativity in Naturalised Philosophy* (College Publications, 2010).
  - Reprinted in Spanish as 'Naturalismo sin representacionalismo', in Análisis, 1, 1-23.
- Truth as convenient friction. Journal of Philosophy 100, 167–190.
  - Reprinted in The Philosopher's Annual, XXVI.
  - Reprinted in D. Macarthur and M. de Caro, eds., *Nature and Normativity* (Columbia University Press, 2010) with a reply by Richard Rorty and a response by me.
  - Reprinted in Talisse & Aikin, eds, *The Pragmatic Turn* (Princeton University Press, 2011).
- 2003B (With R. Holton) Ramsey on saying and whistling: a discordant note. Noûs 37, 325-341.
- Boltzmann's time bomb. *British Journal for the Philosophy of Science* 53, 83–119.
- Burbury's last case: the mystery of the entropic arrow. In Craig Callender, ed., *Time, Reality and Experience* (CUP), 19–56.
- Backward causation, hidden variables, and the meaning of completeness. *PRAMANA Journal of Physics* 56, 199–209.
- Causation in the special sciences: the case for pragmatism. In D. Costantini, M.C. Galavotti & P. Suppes, eds., *Stochastic Causality* (CSLI Publications), 103–120.
- The role of history in microphysics. In Howard Sankey, ed., *Causation and Laws of Nature* (Kluwer), 437–456.
- Three norms of assertibility, or how the MOA became extinct. *Phil. Pers.* 12, 41–54.
- Chaos theory and the difference between past and future. In J. Fraser, M. Soulsby and A. Argyros, eds., *Time, Order, Chaos* (International Universities Press), 155–162.
- Two paths to pragmatism II. European Review of Philosophy 3, 109–147.
- 1997A Carnap, Quine and the fate of metaphysics. Electronic Journal of Analytic Philosophy 5.
- What should a deflationist about truth say about meaning? In E. Villanueva, ed., *Truth*, Philosophical Issues, Vol. 8 (Ridgeview), 107–115.
- Time symmetry in microphysics. *Philosophy of Science* 64, S235–244.
- Naturalism and the fate of the M-worlds. *Proceedings of the Aristotelian Society,* Supp. Vol., LXXI, 247–267.
- Backward causation and the direction of causal processes: Reply to Dowe. *Mind* 105, 467–474.
- (With John O'Leary-Hawthorne) How to stand up for non-cognitivists. *Australasian Journal of Philosophy* 74, 275–292.

- Cosmology, time's arrow and that old double standard. In S. Savitt, ed., *Time's Arrows Today* (CUP), 66–94.
  - Reprinted in L. Sklar, ed., *The Philosophy of Physics* (Garland, 2000), 392–420.
- A neglected route to realism about quantum mechanics. *Mind* 103, 303–336.
  - Reprinted in The Philosopher's Annual, XVII, 181-215.
- Psychology in perspective. In M. Michael and J. O'Leary-Hawthorne, eds., *Philosophy in Mind: The Place of Philosophy in the Study of the Mind* (Kluwer), 83–98.
- Reinterpreting the Wheeler-Feynman Absorber Theory: Reply to Leeds. *British Journal for the Philosophy of Science* 45, 1023–1028.
- Semantic minimalism and the Frege point. In S. Tsohatzidis, ed., Foundations of Speech Act Theory: Philosophical and Linguistic Perspectives (Routledge), 132–155.
- (With Peter Menzies) Causation as a secondary quality. BJPS 44, 187–203.
- Agency and causal asymmetry. Mind 101, 501-520.
- Metaphysical pluralism. Journal of Philosophy 89, 387-409.
- The direction of causation: Ramsey's ultimate contingency. In David Hull, Micky Forbes and Kathleen Okruhlik (eds.), *PSA* 1992, *Volume* 2, 253–267.
- The asymmetry of radiation: reinterpreting the Wheeler-Feynman argument. *Foundations of Physics* 21, 959–975.
- Agency and probabilistic causality. British Journal for the Philosophy of Science 42, 157–176.
- 1990 Why "Not"? Mind 99, 221-238.
- 1989A (With Philip Pettit) Bare functional desire. *Analysis* 49, 162–169.
- 1989B A point on the arrow of time. *Nature*, 20 July 1989, 181–182.
- 1989c Defending desire-as-belief. Mind 98, 119-127.
- Action explanation and the nature of mind. In Albury and Slezak, eds., *Computers, Brains and Minds: Papers in Cognitive Science* (Kluwer), 221–251.
- Truth and the nature of assertion. *Mind* 96, 202–220.
- 1986A Conditional credence. *Mind* 95, 18–36.
- 1986B Against causal decision theory. Synthese 67, 195–212.
- The philosophy and physics of affecting the past. Synthese 61, 299–323.
- Mellor, chance and the single case. British Journal for the Philosophy of Science 35, 11-23.
- 1983A Sense, assertion, Dummett and denial. *Mind* 92, 174-88.
- "Could a question be true?": Assent and the basis of meaning. Phil. Quarterly 33, 354-64.
- 1983c Does "Probably" modify sense? Australasian Journal of Philosophy 61, 396–408.

## SELECTED REVIEW ARTICLES

- Accidents and contingencies. Review of Cheryl Misak, Frank Ramsey: A Sheer Excess of Powers, Oxford University Press, 2020. In Society, 59, 52-55.
- Rebirthing pains. Review of Lee Smolin, *Time Reborn* (2013). *Science* 341, 960–961.
- Abusing one's position. Commentary on Jenann Ismael, *The Situated Self* (OUP, 2006). *Philosophy and Phenomenological Research* 82, 772–779.
- Blackburn and the war on error. Discussion review of Simon Blackburn, *Truth* (Allen Lane, 2005). *Australasian Journal of Philosophy* 84, 603–614.
- Discussion review of Philip Pettit, *The Common Mind* (OUP, 1992). *Philosophy and Phenomenological Research* 55, 689–699.
- Review of John McDowell, *Mind and World* (Harvard University Press, 1994). *Philosophical Books* 38, 169–177, with reply by McDowell.
- Review of K.G. & J.S. Denbigh, Entropy in Relation to Incomplete Knowledge (Cambridge University Press, 1985), and H.D. Zeh, The Physical Basis of the Direction of Time (Springer-Verlag, 1989).

  British Journal for the Philosophy of Science 42, 111–144.