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Degrees

MSc Mathematics (1988), Delft University of Technology
PhD Economics (1992), University of Amsterdam

Teaching qualifications

First degree teaching qualification in mathematics (1988)
Basiskwalificatie Onderwijs (BKO) (2014) (Dutch qualification for science education)

Research Fellowships

Senior Research Fellow, Center for the History of Political Economy at Duke University, Durham, NC (September–December 2012)
Tinbergen Institute fellow (since 2002)
NAKE fellow (Netherlands Network of Economics) (2002–2010)
Visiting Scholar, project The Nature of Evidence: How Well Do 'Facts' Travel?, LSE Department of Economic History (2006–2008)
Fellow-in-Residence, Netherlands Institute for Advanced Study in Humanities and Social Sciences (NIAS) (2001–2002)
Research associate, LSE Centre for Philosophy of the Natural and Social Science (since 1995)

Employment History

Visiting professor, Department of Philosophy, Bayreuth University (October 2013)
Visiting associate professor, Department of Economics, Duke University (September–December 2012)
Associate professor History and Methodology of Economics, Faculty of Philosophy, Erasmus University Rotterdam (since 2012)
Associate professor History and Methodology of Economics, Department of Economics, University of Amsterdam (since 2003)
Assistant professor History and Methodology of Economics, Department of Economics, University of Amsterdam (1992–2002)
Consultant economics library, University of Amsterdam (1994–1998)
Extraordinary employee Centrum voor Bedrijfsontwikkeling, Rotterdam (1991)

Researcher History and Methodology of Economics, Tinbergen Institute and
Department of Economics, University of Amsterdam (1988-1992)
Teacher mathematics, Polytechnische Faculteit, Hogeschool Rotterdam (1988)
Teacher mathematics, Erasmiaans Gymnasium Rotterdam (1988)
Student-assistant Methodology, Department of Mathematics, Delft University of
Technology (1987)

Professional and Academic Activities

A. Invited lectures and conference presentations (last five years)

Graph-Based Inductive Reasoning. TRiP 2015: Pictures and Proofs. University of South Carolina. March 19-21, 2015.

Big Social Data. SEO Economic Research. University of Amsterdam. February 16, 2015.

The Epistemological Difference between Science In- and Outside the Laboratory.
Seminar Writing the History of Experimental Economics. University of Utrecht.
January 30, 2015.

Data-Intensive Economics. ERC Exploratory Workshop 'What is Data-Intensive
Science?.' University of Exeter. December 17-19, 2014.

Philosophy of Science-Outside-the-Laboratory. Approaches in the Philosophy of
Science in Practice. Philosophy of Science Association Meeting, PSA 2014.
Chicago. November 6-9, 2014.

Measurement in Field Science and Economics: Science Outside the Laboratory. NiCE
seminar. Radboud University Nijmegen. October 6, 2014.

Friedman and the Cowles Commission. Special Econometric Society History Initiative
Session. Joint Congress of the European Economic Association and the
Econometric Society, EEA-ESEM. Toulouse School of Economics, France. August
25-29, 2014.

Friedman and the Cowles Commission. Annual Meetings of the History of Economics
Society. UQAM, Montreal, Canada. June 20-22, 2014.

Economics, History and the Blogosphere: a roundtable on the history of recent
macroeconomics. Annual Meetings of the History of Economics Society. UQAM,
Montreal, Canada. June 20-22, 2014.

Measurement Outside the Laboratory. Spring Workshop of the Dutch Society for the
Philosophy of Science in collaboration with the Institute for the History and
Foundations of Science 'Observation and Measurement'. University of Utrecht.
April 24, 2014.

Friedman and the Cowles Commission. Utrecht-Nijmegen Annual Research Day in
History and Methodology of Economics. University of Utrecht. January 30, 2014.

Affordance Affords Measurement. Conference on 'What Affordance Affords'.
Technische Universität Darmstadt, Germany. November 25-27, 2013.

Measurement: Objective Procedures and Subjective Judgments. Conference on 'The
Theory and Practice of Measurement: Perspectives from Economic History and
the History and Philosophy of Economics'. London School of Economics, UK.
September 4-5, 2013.

History of Macroeconomics. Conference of the History of Economics Society. The
University of British Columbia. Vancouver, Canada. June 20-22, 2013.

Rational consensus of expert judgments in economics. LogiCIC/LIRa Seminar. Amsterdam Dynamics Group. University of Amsterdam. April 2, 2013.

Model-based Expert Consensus in Economic Forecasting. Conference on the History of Business and Economic Forecasting. Centre for Economic History, University of Reading and Royal Statistical Society. Reading, UK. March 22, 2013

Clinical Measurement. International Conference 'Dimensions of Measurement'. Zentrum für interdisziplinäre Forschung Bielefeld, Germany. March 16, 2013.

Mathematics as Quasi-matter to Build Models. University of East Anglia and Mind Association Conference 'The conceptual structure of mathematical economics.' University of East Anglia. Norwich, UK. February 15, 2013.

Model-Based Uncertainty Evaluation. Lecture jointly sponsored by the Center for the History of Political Economy and the Department of Philosophy. Duke University. Durham, USA. November 16, 2012.

Haavelmo's Methodology of Empirical Science Outside the Laboratory. Lunch seminar Center for the History of Political Economy. Duke University. Durham, USA. October 19, 2012.

Haavelmo's Methodology of Empirical Science Outside the Laboratory. Conference of the History of Economics Society. Brock University. St. Catherines, Canada. June 22-25, 2012.

Three lectures: Early Metrics, Interwar Metrics, Postwar Metrics. 2012 CHOPE Summer Institute 'The Emergence of Modern Economics.' Duke University. Durham, USA. June 10-22, 2012.

The Problem of Rational Consensus in Economics. Research Workshop 'Experts and Consensus in Economics and the Social Sciences.' University of Bayreuth, Germany. May 25-26, 2012.

A Methodology for an Inexact Science. EIPE Spring Seminar. Erasmus University Rotterdam. April 16, 2012.

The Trade-off between Rigor and Relevance. Mark Blaug Memorial Conference. Erasmus University Rotterdam, NL. March 28, 2012.

A Methodology for Inexact Sciences. Qualitative/Quantitative Divide, Choices of Evidence: Tacit philosophical assumptions in the debates within the Campbell Collaboration. London School of Economics, UK. March 26, 2012.

Haavelmo's Methodology of Empirical Science Outside the Laboratory. The Trygve Haavelmo Centennial Symposium. University of Oslo, Norway. December 13-14, 2011.

Haavelmo's Methodology of Empirical Science Outside the Laboratory. Research Forum. Department of Philosophy and Economics. University of Bayreuth, Germany. November 29, 2011.

A Methodology for Inexact Sciences. Workshop 'New Trends in the Philosophy of the Social Sciences.' UNED, Madrid, Spain. September 28-29, 2011.

Economics as a Field Science: Towards a methodology of expert knowledge. Conference of the International Network for Economic Method. Helsinki, Finland. September 1-3, 2011.

The Role of Mathematical Models in Measurement outside the Laboratory. Plenary session on 'The role of mathematical models in measurement.' Joint International IMEKO Symposium. Jena, Germany. August 31 – September 2, 2011.

A History of the Treatment of Observational Errors. Conference of the History of Economics Society. Notre Dame, USA. June 17-20, 2011.

Observations of a Hostile Environment. Morgenstern on the accuracy of economic observations. Histories of Observations in Economics, History of Political Economy Conference. Duke University, USA. April 16-18, 2011.

The Mathematical Molding of Causal Relations. International Conference on the Philosophy of Economics and Biology. National Tsing Hua University, Hsinchu, Taiwan. March 24-26, 2011.

Observational Error from Gauss to Morgenstern. HES session, Allied Social Sciences Associations meetings. Denver, USA. January 6-9, 2011.

Mathematics as Quasi-matter to Build Models as Instruments. ESF-PSE Workshop on 'The Debate on Mathematical Modeling in the Social Sciences'. University of A Coruña, Spain. September 23-24, 2010.

Measurement Outside the Laboratory. Philosophy and Ethics seminar. Eindhoven Center for Innovation Studies, Eindhoven University of Technology. September 14, 2010.

Economics as a Hard Science: Early postwar adoption of the computer in economics. Conference of History of Economics Society. Syracuse, USA. June 26, 2010.

History of Economics as a History of Tools and Techniques. Summer Institute for the History of Economic Thought. University of Richmond, USA. June 20-23, 2010.

The History of Economics as a History of Tools and Techniques. Mini-Symposium on the History of Postwar Economics. University of São Paulo, Brazil. August 20-21, 2010.

Chart session on the History of the Histories of Econometrics. The History of Econometrics. History of Political Economy Conference. Duke University, Durham, USA. (2010, 24 April).

Empirical Models in the Social Sciences. Workshop Modelling in Engineering and the Sciences. Dutch-Flemish Network for Philosophy of Science and Technology. Radboud University Nijmegen, NL. April 19, 2010.

Economics as a Modern Science: Early postwar adoption of the computer in economics. Meeting of the European Society for the History of Economics. Amsterdam, NL. March 27, 2010.

Evidence outside the Laboratory. PSE-ESF Workshop 'Explanation, Prediction, and Confirmation in the Social Sciences: Realm and Limits.' University of Amsterdam, NL. October 26-27, 2009.

Modeling Strategies for Measuring Phenomena In- and Outside the Laboratory. Conference of the European Philosophy of Science Association (EPSA09). Vrije Universiteit Amsterdam, NL. October, 21-24, 2009.

Decision Making outside the Laboratory. Workshop on Combining Probability and Logic (Prolog 2009). University of Groningen, NL. September 17-19, 2009.

Observations of an Expert. Conference of the History of Economics Society. Denver, USA. June 26-29, 2009.

Twentieth Century Debates on Positive Economics. Summer Institute for the History of Economic Thought. University of Richmond, USA. June 19-22, 2009.

Logical Positivism and Leontief. Conference in the History of Recent Economics (Hisreco). University of Antwerp, Belgium. June 11-13, 2009.

Observation of an Expert. Workshop 'Observation in Economics and Natural Sciences, Historically Considered.' University of Amsterdam, NL. March 12-13, 2009.

Looking under the hood: Leontief versus Statistical Econometricians. HES session, Allied Social Sciences Associations meetings. San Francisco, USA. January 2-5, 2009.

B. Societies and networks

Advisory board member ERC grant Data Science, University of Exeter (since 2014)
Advisory board member, Society for Philosophy of Science in Practice (since 2014)
Board member, Nederlandse Vereniging voor Wetenschapsfilosofie (since 2010)
Member of team (C) Philosophy of the Cultural and Social Sciences of The Philosophy of Science in a European Perspective, an ESF Research Networking Programme (2008-2013)
Co-programme leader (with John Davis), History and Methodology of Economics, University of Amsterdam (2006-2012)
Member organisation committee, Society for Philosophy of Science in Practice (2005-2012)
Board member, Dutch-Flemish Network for Philosophy of Science and Technology (since 2004)
Board member, manager membership directory, INEM (International Network for Economic Method) (2004-2009)

C. Editorships

Member advisory board, *History of Political Economy* (2006-2008, 2015-2021)
Co-editor (with Evelyn Forget, University of Manitoba, Canada), *Journal of the History of Economic Thought* (2008-2013)
Associate editor, *The Journal of Economic Methodology* (2005-2011)
Member editorial board, *The Journal of Economic Methodology* (since 2012)
Member scientific committee, *Revue de Philosophie Économique* (since 2008)
Member advisory board, *Erasmus Journal for Philosophy and Economics* (since 2007)

D. Doctoral Dissertations Supervised as Co-promotor:

Ricardo F. Crespo, Theoretical and Practical Reason in Economics: Capacities and Capabilities. Promotion date: September 7, 2011.
Peter Rodenburg, Measurement strategies of unemployment. Promotion date: July 5, 2006.
Hsiang-Ke Chao, Representation and Structure: The Methodology of Econometric Models of Consumption. Promotion date: December 12, 2002.

E. Organization of conferences (last six years)

INEM session 'Consensus of expert judgments and economic forecasting.' Conference of the International Network for Economic Method (INEM). Erasmus University Rotterdam, NL. June 13, 2013.
Member scientific committee. Conference of the International Network for Economic Method (INEM). Erasmus University Rotterdam, NL. June 13-15, 2013.
INEM session 'Expert and Consensus in Economics.' Allied Social Sciences Associations meetings. San Diego, USA. January 5, 2013
Center for the History of Political Economy Summer Institute 'The Emergence of Modern Economics.' Duke University. Durham, USA. June 10-22, 2012.

Member program committee. Research Workshop 'Experts and Consensus in Economics and the Social Sciences.' University of Bayreuth, Germany. May 25-26, 2012.

Mark Blaug Memorial Conference. Erasmus University Rotterdam, NL. March 28, 2012.

Member scientific committee. Graduate Conference in Philosophy of Science. Erasmus University Rotterdam, NL. March 8-9, 2012.

Error in the Sciences. Lorentz Center Workshop, with G. Hon and A. Petersen. Leiden, NL. October 24-28, 2011.

Member programme committee. EPSA11. Third Conference of the European Philosophy of Science Association. University of Athens, Greece. October 5-8, 2011.

Member programme committee. Third Biennial Conference Society for Philosophy of Science in Practice. University of Exeter, UK. June 22-24, 2011.

The History of Econometrics. History of Political Economy Conference, with A. Dupont-Kieffer and D. Qin. Duke University, Durham, USA. April 23-25, 2010.

Member program committee. The Future of Philosophy of Science. Tilburg University, NL. April 14-16, 2010.

PSE-ESF Workshop 'Explanation, Prediction, and Confirmation in the Social Sciences: Realm and Limits,' with W. Gonzalez. University of Amsterdam, NL. October 26-27, 2009.

Member programme committee. Second Biennial Conference Society for Philosophy of Science in Practice. University of Minnesota, USA. June 18-20, 2009.

HES session 'The Real Debate of the 1950's: Marshallian versus General Equilibrium Approaches.' Allied Social Sciences Associations meetings. San Francisco, USA. January 4, 2009.

F. Referee (last five years)

Auckland University Press
 Cambridge University Press
 DFG (German Research Foundation)
Erasmus Journal of Philosophy and Economics
European History of Political Economy
European Journal of the History of Economic Thought
 FWF (Austrian Science Fund)
Historia Mathematica
Journal for Philosophy of Science
Journal of the History of the Behavioral Sciences
 MIT Press

OEconomia
 Oxford University Press
Perspectives on Science
 Pickering & Chatto Publishers
Review of Social Economy
Social Epistemology
Synthese
Theory and Decision

Cambridge Journal of Economics
Current Sociology
 Earhart Foundation
Erkenntnis
European Journal for Philosophy of Science
 European Science Foundation
 FWO (Research Foundation – Flanders)
History of Political Economy
Journal of Economic Methodology
 London School of Economics and Political Science
 NWO (Netherlands Organisation for Scientific Research)
Oxford Economic Papers
 Palgrave Macmillan
Philosophical Quarterly
Rationality and Society
 Routledge/Taylor & Francis
Studies in History and Philosophy of Science
Theoria
 US National Science Foundation

G. Ph.D. committees and (pre-)examiner

December 2011. Julia Mensink, Poverty Measures: From Production to Use. Supervisors: M.S. Morgan and P. Howlett. London School of Economics, UK.

December 2010. Kai Eigner, *Understanding Psychologists' Understanding*. Supervisors: J.A. Radder and H.W. de Regt. Vrije Universiteit Amsterdam, NL.

December 2006. Arthur Petersen, *Simulating Nature*. Supervisors: J.A. Radder and P.P. Kirschenmann. Vrije Universiteit Amsterdam, NL.

December 2006. Erika Mattila, *Questions to Artificial Nature*. Supervisors: R. Miettinen and M. Sintonen. University of Helsinki, Finland.

Publications of Marcel Boumans

A. Books and Special Issues of Journals

- 2015 *Science Outside the Laboratory: Measurement in Field Science and Economics*. Oxford University Press.
2014. *Experts and Consensus in Social Science* (edited with C. Martini). Springer.
2013. *Error and Uncertainty in Scientific Practice* (edited with G. Hon and A. Petersen). Pickering & Chatto.
2013. *Mark Blaug: Rebel with Many Causes* (edited with M. Klaes). Edward Elgar.
2013. *Philosophy of Science in Practice* (guest ed.), *Journal for General Philosophy of Science* 44.2.
2011. *Histories on Econometrics* (edited with A. Dupont-Kieffer and D. Qin), *History of Political Economy*, Annual Supplement to Vol. 43. Duke University Press.
2011. *Philosophy of Science in Practice* (edited with H. Chang and R. Ankeny), *European Journal Philosophy of Science*, Special Issue, 1.
2010. *Economic Methodology: Understanding Economics as a Science* (with John B. Davis). Palgrave Macmillan.
2007. *Measurement in Economics: A Handbook* (ed.). Elsevier-Academic Press.
2005. *How Economists Model the World into Numbers*. Routledge.
2004. *Objects of Objectivity* (edited with A. Beaulieu). *Social Epistemology*, Special Issue, 18.
1992. *A Case of Limited Physics Transfer: Jan Tinbergen's Resources for Re-Shaping Economics*. Thesis Publishers.

B. Journal Articles and Book Chapters

2015. Friedman and the Cowles Commission. In *Milton Friedman: Contributions to Economics and Public Policy*, eds R. Cord and D. Hammond. Oxford University Press.
2014. Haavelmo's epistemology for an inexact science. *History of Political Economy* 46.2, 211-229.
2014. Introduction: Experts and Consensus in Social Science, with C. Martini. In *Experts and Consensus in Social Science*, eds C. Martini and M. Boumans, pp. 1-13. Cham: Springer.
2014. Model-based consensus. In *Experts and Consensus in Social Science*, eds C. Martini and M. Boumans, pp. 49-69. Cham: Springer.
2013. The regrettable loss of mathematical molding in econometrics. In *Mechanism and Causality in Biology and Economics*, eds H.-K. Chao, S.-T. Chen and R.L. Millstein, pp. 61-81. Dordrecht: Springer.
2013. A Nobel Prize for empirical macroeconomics: Assessing the contributions of Thomas Sargent and Christopher Sims, with E.-M. Sent. *Review of Political Economy* 25.1, 39-56.
2013. The role of models in measurement outside the laboratory, *Measurement* 46.8, 2908-2912.
2013. Model-based Type B uncertainty evaluations of measurement towards more objective evaluation strategies, *Measurement* 46.9, 3775-3777.

2013. Introduction, with M. Klaes. In *Mark Blaug: Rebel with Many Causes*, eds M. Boumans and M. Klaes, pp. 1-8. Cheltenham, UK and Northampton, USA: Edward Elgar.
2013. An unrepentant Lakatosian. In *Mark Blaug: Rebel with Many Causes*, eds M. Boumans and M. Klaes, pp. 177-190. Cheltenham, UK and Northampton, USA: Edward Elgar.
2013. Introduction, with G. Hon. In *Error and Uncertainty in Scientific Practice*, eds M. Boumans, G. Hon and A. Petersen, pp. 1-12. London: Pickering & Chatto.
2013. Introduction: On the Philosophy of Science in Practice, with S. Leonelli, *Journal for General Philosophy of Science* 44.2, 259-261.
2012. Observations in a hostile environment: Morgenstern on the accuracy of economic observations. In *History of Observations in Economics*, eds H. Maas and M.S. Morgan, *History of Political Economy*, Annual Supplement to Vol. 44, 110-131.
2012. Mark Blaug (1927-2011). An unrepentant Lakatosian. *History of Economic Ideas* 20.1, 11-24.
2012. Visualisations for understanding complex economic systems. In *Ways of Thinking, Ways of Seeing: Mathematical and other Modelling in Engineering and Technology*, eds C. Bissell and C. Dillon, pp. 145-166. Berlin: Springer.
2012. Modeling strategies for measuring phenomena in- and outside the laboratory. In *EPSA Philosophy of Science: Amsterdam 2009*, eds H.W. de Regt, S. Hartmann and S. Okasha, pp. 1-12. Springer.
2012. Mathematics as quasi-matter to build models as instruments. In *Probabilities, Laws, and Structures*, eds D. Dieks, W.J. Gonzalez, S. Hartmann, M. Stöltzner, and M. Weber, pp. 307-318. Springer.
2012. Measurement in economics. In *Handbook of the Philosophy of Science: Philosophy of Economics*, Vol. 13, Volume ed U. Mäki, pp. 395-423. Elsevier.
2011. The two-model problem in rational decision making. *Rationality and Society* 23.3, 371-400.
2011. A history of the histories of econometrics, with A. Dupont-Kieffer. In *Histories on Econometrics*, eds M. Boumans, A. Dupont-Kieffer and D. Qin, *History of Political Economy*, Annual Supplement to Vol. 43, 5-31.
2011. Introduction: philosophy of science in practice, with R. Ankeny, H. Chang and M. Boon. *European Journal for Philosophy of Science* 1.3, 303-307.
2011. Hoe economie begrijpen. *Wijzerig Perspectief* 51.2, thema Wetenschappelijk Begrijpen, 22-31.
2011. Vertrouwen in economische modellen. In *Onzekerheid Troef? Het betwiste gezag van de wetenschap*, eds H. Dijkstelbloem and R. Hagendijk, pp. 115-136. Van Genneep.
2010. The problem of passive observation. *History of Political Economy* 42.1, 75-110.
2010. Second Biennial Conference of the Society for Philosophy of Science in Practice (University of Minnesota, 18-20 June 2009), with H. Chang, M. Boon and R. Ankeny. *Journal for General Philosophy of Science* 41, 233-235.
2009. Dynamizing stability. *Robert Solow and the Development of Growth Economics*, eds M. Boianovsky and K.D. Hoover, *History of Political Economy* Annual Supplement to Vol. 41, 127-146.

2009. Understanding in economics: Gray-box models. In *Scientific Understanding: Philosophical Perspectives*, eds H.W. de Regt, S. Leonelli and K. Eigner, pp. 210-29. University of Pittsburgh Press.
2008. Battle in the planning office: Field experts versus normative statisticians, *Social Epistemology* 22.4, 389-404.
2008. Measurement and error problems (1800-1900): Buys Ballot and Landré's critique on the method of least squares. In *The Statistical Mind in Modern Society. The Netherlands 1850-1940. Volume II: Statistics and Scientific Work*, eds I.H. Stamhuis, P.M.M. Klep and J.G.S.J. van Maarseveen, pp. 179-197. Aksant.
2008. A review essay of Philippe Le Gall's *A History of Econometrics in France: From Nature to Models*. In *Research in the History of Economic Thought and Methodology*, Vol. 26-A, eds W.J. Samuels, J.E. Biddle and R.B. Emmett, pp. 139-146. Emerald.
2007. Introduction. In *Measurement in Economics: A Handbook*, ed. M. Boumans, pp. 3-18. Elsevier.
2007. Invariance and calibration. In *Measurement in Economics: A Handbook*, ed M. Boumans, pp. 231-248. Elsevier.
2006. Introduction to the Symposium 'Applying Science', with R. Bod and M. Boon, *International Studies in the Philosophy of Science* 20, 1-3.
2006. The difference between answering a 'why'-question and answering a 'how much'-question. In *Simulation: Pragmatic Construction of Reality*, eds J. Lenhard, G. Küppers, T. Shinn, *Sociology of the Sciences Yearbook* 25, pp. 107-124. Springer.
2005. Measurement outside the laboratory. *Philosophy of Science* 72, 850-863.
2005. Measurement in economic systems. *Logical and Philosophical Aspects of Measurement*, eds L. Finkelstein, R.M. Morawski and L. Mari *Measurement*, Special Issue, 38, 275-284.
2005. Truth versus precision. In *Logic, Methodology and Philosophy of Science: Proceedings of the Twelfth International Congress*, eds P. Hájek, L. Valdés- Villanueva and D.Westerståhl, pp. 257-269. King's College Publications.
2004. The reliability of an instrument. *Objects of Objectivity*, eds M. Boumans and A. Beaulieu, *Social Epistemology*, Special Issue, 18, 215-246.
2004. Foreword to 'Objects of Objectivity', with A. Beaulieu. *Objects of Objectivity*, eds M. Boumans and A. Beaulieu, *Social Epistemology*, Special Issue, 18, 105-108.
2004. Models in economics. In *The Elgar Companion to Economics and Philosophy*, eds J.B. Davis, A. Marciano and J. Runde, pp. 260-282. Edward Elgar.
2004. Secrets hidden by two-dimensionality: The economy as a hydraulic machine, with M.S. Morgan. In *Models: The Third Dimension of Science*, eds S. de Chadarevian and N. Hopwood, pp. 369-401. Stanford University Press.
2004. Measuring instruments in economics. In *Proceedings 10th IMEKO TC7 International Symposium on Advances of Measurement Science*, ed S.V. Muravyov, pp. 28-35. Tomsk Polytechnic University.

2003. How to design Galilean fall experiments in economics. *Philosophy of Science* 70, 308-329.
2003. Tinbergen's business-cycle analysis. In *Papers and Proceedings of the Colloquium on the History of Business Cycle Analysis*, ed D. Ladiray, Monographs of Official Statistics, pp. 109-125. European Communities.
2002. Calibration of models in experiments. In *Model-Based Reasoning: Science, Technology, Values*, eds L. Magnani and N.J. Nersessian, pp. 75-93. Kluwer Academic/Plenum Publisher.
2001. *Ceteris paribus* conditions: Materiality and the application of economic theories, with M.S. Morgan. *Journal of Economic Methodology* 8, 11-26.
2001. Measure for measure: How economists model the world into numbers, *Social Research* 68, 427-453.
2001. Fisher's instrumental approach to index numbers. *The Age of Economic Measurement*, eds J.L. Klein and M.S. Morgan, *History of Political Economy Annual Supplement to Vol. 33*, 313-344.
2001. Macroeconomic approach to complexity. In *Simplicity, Inference and Modelling*, eds A. Zellner, H.A. Keuzenkamp, and M. McAleer, pp. 73-82. Cambridge University Press.
1999. Representation and stability in testing and measuring rational expectations. *Journal of Economic Methodology* 6, 381-401.
1999. Built-in justification. In *Models as Mediators*, eds M.S. Morgan and M. Morrison, pp. 66-96. Cambridge University Press. (**Reprinted** in *Recent Developments in Economic Methodology*, ed J.B. Davis, Vol. 3, pp. 66-87. Edward Elgar, 2006.)
1997. Lucas and artificial worlds. *New Economics and Its History*, ed J.B. Davis, *History of Political Economy Annual Supplement to Vol. 29*, 63-88.
1995. Frisch on testing of business cycle theories. *Journal of Econometrics* 67, 129-147.
1995. Tinbergen's cycle: An arithmetic error? *Econometric Theory* 11, 389-391.
1993. Paul Ehrenfest and Jan Tinbergen: A case of limited physics transfer. *Non- Natural Social Science: Reflecting on the Enterprise of More Heat than Light*, ed N. de Marchi *History of Political Economy Annual Supplement to Vol. 25*, 131-156.
1990. De slinger van Tinbergen. *Tijdschrift voor Politieke Economie* 13, 50-65.
1989. De constructie van de samenleving: Tinbergen en de vroege planning, *Beleid & Maatschappij* 16, 230-245.

C. Contributions to Encyclopaedia and Dictionaries

2015. Econometrics. *Handbook of the History of Economic Analysis*, eds G. Faccarello and H.D. Kurz. Edward Elgar.
2013. Econometrics: Methodological Issues. In *Encyclopedia of Philosophy and the Social Sciences*, ed B. Kaldis. Sage.

2012. Sims, Christopher Albert (born 1942). In *The New Palgrave Dictionary of Economics, Online Edition*, eds S.N. Durlauf and L.E. Blume. Palgrave Macmillan.
2008. Measurement Theory. In *The New Palgrave Dictionary of Economics, 2nd Edition*, eds L.E. Blume and S.N. Durlauf. Palgrave Macmillan.
2005. Economics, Strategies in social sciences. In *Encyclopedia of Social Measurement*, ed K. Kempf-Leonard, Vol. 1, pp. 751-760. Elsevier.
2005. Jan Tinbergen. In *Biografisch Woordenboek van Nederlandse Wiskundigen*, www.bwnw.nl. eds G. Alberts, A. van den Brandhof and T. Koetsier. Online.
2002. Calibration. In *An Encyclopedia of Macroeconomics*, eds B. Snowden and H.R. Vane, pp. 105-109. Edward Elgar.
2000. Tinbergen. In *Biografisch Woordenboek van het Socialisme en de Arbeidersbeweging in Nederland*, ed B. Reinalda, pp. 296-301. IISG.
1998. Tinbergen. In *The Handbook of Economic Methodology*, eds J.B. Davis, D. Wade Hands and U. Maki, pp. 501-504. Edward Elgar.

D. Reviews

2015. Review of: D. Mackenzie, *The Universe in Zero Words: The Story of Mathematics as Told Through Equations. The European Legacy. Journal of the International Society for the Study of European Ideas* 20.
2015. With such a friend of the history of economics, who needs enemies? Review of: S. Kates, *Defending the History of Economic Thought. Journal of the History of Economic Thought* 37.1: 139-144.
2014. Review of: A. Schwarz, *Experiments in Practice. Journal for General Philosophy of Science* DOI: 10.1007/s10838-014-9281-5.
2014. Review of: D. Coyle, *GDP: A Brief but Affectionate History. Business History Review* 88.4, 799-801.
2014. Review of: Z. Sng, *The Rhetoric of Error from Locke to Kleist. The European Legacy. Journal of the International Society for the Study of European Ideas* 19.6: 785-786.
2013. Review of: J.B. Davis and D.W. Hands (eds.), *The Elgar Companion to Recent Economic Methodology. Oeconomia*. 2013.2: 319-322.
2010. Review of: S.E. Kellert, *Borrowed Knowledge: Chaos Theory and the Challenge of Learning across Disciplines. History and Philosophy of the Life Sciences* 32.4: 542-544.
2009. Review of: N.E. Aydinonat, *The Invisible Hand in Economics. How Economists Explain Unintended Social Consequences. History of Economic Ideas* 17.3, 141-144.
2007. Review of: P. Fontaine and R. Leonard (eds.), *The Experiment in the History of Economics. Journal of the History of Economic Thought* 29.2, 263-265.
2005. Review of: J. Pearl, *Causality, Models, Reasoning, and Inference. Review of Social Economy* 63.1, 129-135.
2005. On bridges. Review of B.P. Stigum, *Econometrics and the Philosophy of Economics: Theory-Data Confrontations in Economics. Economica* 72.285, 180-181.
2004. Review of: J. Sutton, *Marshall's Tendencies: What Can Economists Know? Economica* 71.281, 177-178.
2003. Review of: R. Leeson (ed.), *A.W.H. Phillips: Collected Works in Contemporary Perspective. Journal of the History of Economic Thought* 25.3, 372-376.
2003. Review of: E.R. Weintraub, *How Economics Became a Mathematical Science, Philosophy of Science* 70.4, 852-855.
2003. Review of: K.D. Hoover, *Causality in Macroeconomics. History of Political Economy* 35.3, 564-566.

2002. Pragmatic view on empirical modeling. Review of Clive W.J. Granger's Empirical Modeling in Economics, Specification and Evaluation. *Journal of Economic Methodology* 9:1, 103-106.
1999. Review of: R.B. Ekelund and R.F. Hebert, Secret Origins of Modern Microeconomics: Dupuit and the Engineers. *EH.NET*.
1999. Review of: M. Blaug, Great Economists since Keynes; An Introduction to the Lives and Works of One Hundred Modern Economists. *De Economist* 147, 387-388.
1995. Review of: J. van Maarseveen (ed.), Briefwisseling van Nicolaas Gerard Pierson 1839-1909. *De Economist* 143, 77-78.