

Curriculum Vitae Dingmar van Eck

Personal details

Name: Dingmar van Eck
Gender: male
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Title: Dr. (MSc Theoretical Psychology, PhD Philosophy)
Doctorate date: April 21, 2011

Education

Master's ('Doctoraal') exam Theoretical Psychology, Free University Amsterdam, The Netherlands, August 2003

Doctorate

PhD Philosophy of Science and Technology
Delft University of Technology, Department of Philosophy, The Netherlands, April 2011
Title of dissertation: "Functional Decomposition: on Rationality and Incommensurability in Engineering"

Employment

Postdoctoral researcher, Department of Philosophy and Moral Science, Centre for Logic and Philosophy of Science, Ghent University, Belgium, November 2014 – present (until November 2017, 1 fte.)

- Research project: "Explanatory power of mechanistic and functional explanations" (funded by Special Research Fund (BOF), Ghent University, Belgium).

Postdoctoral researcher, Department of Philosophy and Moral Science, Centre for Logic and Philosophy of Science, Ghent University, Belgium, November 2012 – November 2014 (November 2012-March 2013: .5 fte; April 2013 – October 2014: 1 fte).

- Research project: "methodological and epistemological analysis of scientific reasoning processes".

Lecturer Philosophy of Science & Philosophy of Mind, Department of Psychology, Research group Psychological Methods, University of Amsterdam, The Netherlands, August 2011-August 2013 (.5 fte)

PhD researcher, research project: "Functional Decomposition: on Rationality and Incommensurability in Engineering", Department of Philosophy, Delft University of Technology, October 2006-September 2010.

Assistant-lecturer, course "History and Philosophy of Psychology", bachelor program Psychology, Free University, Amsterdam, The Netherlands, 2000-2006.

Publications

International (peer-reviewed) journals

- Van Eck, D. & Weber, E. (2016). In defense of co-existing engineering meanings of function. *Artificial Intelligence for Engineering Design, Analysis, and Manufacturing* (in press). A1
- Van Eck, D. & Gervais, R. (2016). Difference making, explanatory relevance, and mechanistic models. *Theoria*, 31 (1), pp. 125-134. A1
- Van Eck, D. & Mennes, J. (2015). Design explanation and idealization. *Erkenntnis*, online first. DOI 10.1007/s10670-015-9782-6. A1
- Van Eck, D. (2015). Dissolving the ‘problem of the absent artifact’: design representations as means for counterfactual understanding and knowledge generalization. *Design Studies*. Online first, DOI: 10.1016/j.destud.2015.04.001. A1
- Van Eck, D. (2015). Mechanistic explanation in engineering science. *European Journal for Philosophy of Science*, 5, pp. 349-375. A1.
- Van Eck, D. (2015). Reconciling ontic and epistemic constraints on mechanistic explanation, epistemically. *Axiomathes*, 25 (1), pp. 5-22. DOI 10.1007/s10516-014-9243-x. A1
- Van Eck, D. (2015). Validating function-based design methods: an explanationist perspective. *Philosophy and Technology*, 28, pp. 511-531. A1.2
- Van Eck, D. & Weber, E. (2014). Function ascription and explanation: elaborating an explanatory utility desideratum for ascriptions of technical functions. *Erkenntnis*, 79, pp. 1367-1389. DOI 10.1007/s10670-014-9605-1. A1
- Vermaas, P.E., Van Eck, D., & Kroes, P. (2013). The conceptual elusiveness of engineering functions: a philosophical analysis. *Philosophy and Technology*, 26 (2), pp. 159-185. A1.2
- Van Eck, D. (2011). Incommensurability and rationality in engineering design: the case of functional decomposition. *Techné: Research in Philosophy and Technology*, 15 (2), pp. 118-136. A1.2
- Van Eck, D. (2011). Supporting design knowledge exchange by converting models of functional decomposition. *Journal of Engineering Design*, 22 (11-12). pp. 839-858. DOI 10.1080/09544828.2011.603692. A1
- Van Eck, D. (2010). On the conversion of functional models: bridging differences between functional taxonomies in the modeling of user actions. *Research in Engineering Design*, 21 (2). pp. 99-111. A1
- Van Eck, D., Schouten, M.K.D., and Looren de Jong, H. (2006). Evaluating New Wave Reductionism: the case of vision. *British Journal for the Philosophy of Science*, 57. pp. 167-196. A1
- Van Eck, D. (2005). Review of William. R. Uttal, “Psychomythics: sources of artifacts and misconceptions in scientific psychology”. *Philosophical Psychology*, 18 (6). pp. 788-793. A1

Books

Van Eck, D. (2016). *Function and explanation: where philosophy of science meets engineering design and its philosophy*. Springer Briefs, Springer. (in press)

Book chapters

Van Eck, D. (Forthcoming 2016). Engineering and Mechanisms. *Routledge Handbook of Philosophy and Mechanisms*, Eds. Illari, P & S. Glennan, Routledge.

Van Eck, D. (Forthcoming 2016). Design, explanation, and constitutive relevance. *Philosophy of Design: an exploration*, Eds. Vermaas, P & S. Vial, Springer

International (peer-reviewed) proceedings

Van Eck, D. (2010). Supporting functional knowledge exchange between functional taxonomies by establishing function-behaviour links. *Proceedings of the eight international symposium on tools and methods of competitive engineering-TMCE 2010, April 12-16, 2010, Ancona, Italy*. pp. 1583-1595.

Van Eck, D. (2010). Explaining and relating different engineering models of functional decomposition. *Proceedings Design Research Society (DRS) International Conference, 07-09 July 2010, Montréal, Canada*. pp. 122.1-122.11.

Van Eck, D. (2009). On relating functional modeling approaches: abstracting functional models from behavioral models. *Proceedings of the International Conference on Engineering Design (ICED 09), 24-27 August 2009, Stanford, CA, USA*. pp. 2.89- 2.100.

Van Eck, D. (2009). Translation failures, truth-value status gaps and methodological incommensurability. *Proceedings of the 6th Conference of the Spanish Society for Logic, Methodology, and Philosophy of Science*, 18-21 November 2009, Valencia, Spain. ISBN: 978-84-370-7655-3. pp. 455-459.

Van Eck, D., McAdams, D.A. and Vermaas, P.E. (2007). Functional decomposition in engineering: a survey. *Proceedings of the ASME 2007 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC/CIE)*, September 4-7, 2007, Las Vegas, Nevada, USA. DETC2007-34232. pp. 1-10.

PhD thesis

Van Eck, D. (2011). *Functional Decomposition: on Rationality and Incommensurability in Engineering*. Simon Stevin Series in the Philosophy of Technology, volume 8. ISBN: 978-90-386-2463-1. Editors: Kroes, P. & Meijers, A. Delft University of Technology and Eindhoven University of Technology. PhD thesis. Online access: <http://repository.tudelft.nl/search/ir/?q=dinmar+van+eck&faculty=&department=&type=&year>

Conference papers

- Van Eck, D. (2014). Rethinking the explanatory power of extended cognition. Conference paper *European Society for Philosophy and Psychology (ESPP) conference*, September 2014, Sicily, Italy.
- Van Eck, D., Looren de Jong, H., Schouten, M. (2003). Intertheoretic relations: the case of vision research. Conference paper, *European Society for Philosophy and Psychology (ESPP) conference*, July 2003, Torino, Italy.

Other

- Van Eck, D. (2014). Review of Gijsbert Kuijpers (2014), *Wetenschap en doelbegrip. Nieuw onderscheid als bron van inspiratie*. Dordrecht: Republic of Letters Publishing. *Algemeen Nederlands Tijdschrift voor Wijsbegeerte*, 106 (4), pp. 347-349.

Talks

- “Co-evolution in cognitive neuroscience”, Dutch-Flemish Conference for General and Special Philosophy of Science, Leusden, The Netherlands, May 2004
- “Functional decomposition and mechanistic role functions”, Society for Philosophy and Technology (SPT) Conference, Charleston, South Carolina, USA, July 2007
- “Functional Decomposition in engineering: a survey”, American Society for Mechanical Engineering (ASME) Conference, Las Vegas, Nevada, USA, September 2007
- “On engineering meanings of functional decomposition”, Workshop Philosophy and Engineering (WPE), London, UK, November 2008
- On the prospects of establishing a common frame for functional modelling, Society for Philosophy and Technology (SPT) Conference, Twente, The Netherlands, July 2009
- “On relating functional modeling approaches: getting behavior models into the picture”, International Conference on Engineering Design (ICED), Stanford, CA, USA, August 2009
- “Elaborating functional decompositions in mechanistic explanations”, Mechanisms and Causality in the Sciences (MACITS) Conference, Canterbury, UK, September 2009
- “Functional decomposition and mechanistic explanation”, Colloquium series Department of Philosophy, Delft University of Technology, The Netherlands, October 2009
- “Translation failures, truth-value status gaps and methodological incommensurability”. 6th Conference of the Spanish Society for Logic, Methodology, and Philosophy of Science, Valencia, Spain, November 2009
- “Converting models of functional decomposition via behavior models”. Eight international symposium on tools and methods of competitive engineering (TMCE) 2010, Ancona, Italy, April 2010.
- “Explaining engineering models of functional decomposition”. Design Research Society (DRS) International Conference, Montréal, Canada, July 2010
- “Functional decomposition: on rationality and incommensurability in engineering” Colloquium series Department of Philosophy, Delft University of Technology, The Netherlands, August 2010
- Kroes, P.A., Vermaas, P.E., and Van Eck, D, “Functional decomposition in engineering”, Invited lecture, October 2010, Zhejiang University, Hangzhou, China. (Lecture given by Kroes, P.A.)

- “Adding precision to norms of mechanistic explanation: disambiguating functional reasoning in mechanistic explanation”. Invited lecture, Ghent University, Centre for logic and Philosophy of Science, September 10, 2012
- “Explanatory power of mechanisms”. Invited contribution workshop “Mechanisms, causality, and explanation”, Ghent University, Centre for Logic and Philosophy of Science, 14-15 may 2013
- “Function ascription and explanation: elaborating a utility desideratum for theories of technical functions” (with Weber, E.). EPSA conference, August 2013, Finland.
- “Reconciling ontic and epistemic constraints on mechanistic explanation, epistemically”. Conference Philosophy of Science in the 21 st century: challenges and tasks, Lisbon, Portugal, December 2013.
- Explanatory power of mechanistic and functional explanations: a framework. Eight European Conference of Analytic Philosophy (ECAP08), August-September 2014, Bucharest, Romania.
- Rethinking the explanatory power of extended cognition. Conference European Society for Philosophy and Psychology, September 2014, Sicily, Italy.
- Design explanation and idealization, Society for Philosophy in Scientific Practice (SPSP) Conference, June 2015, Aarhus, Denmark.
- Gervais, R. & van Eck, D. (2015). Idealization and causal relations in mechanistic models. Conference Causality and Modeling in the Sciences, June 2015, Madrid, Spain.
- Van Eck, D. (2015). Ontic, mechanistic, and idealized explanations. Workshop 50 shapes of scientific explanation, November 2015, Ghent, Belgium.
- Rethinking the explanatory power of extended cognition: an explanation-driven view on cognitive systems demarcation. Invited keynote lecture, workshop ‘New directions in Philosophy of Psychology’, forthcoming February 2016, University of Milan, Italy.

Reviewing activities

- Reviewer *Dialectica*, present
- Reviewer *Philosophy and Technology*, present
- Reviewer *Philosophical Psychology*, present.
- Reviewer *Theory and Psychology*, present
- Reviewer *Journal of Engineering Design*, present
- Reviewer *Research in Engineering Design*, present
- Reviewer Special Issue “Causality in the Social Sciences”, *Studies in History and Philosophy of Biological and Biomedical Sciences*, 43 (4), pp. 741-830, December 2012

Conference organization

- Co-organizer Congress on Logic and Philosophy of science, Ghent University, 16-18 September, 2013
- Organizer & Chair Symposium “Functional analysis and explanation”, Congress on Logic and Philosophy of science, Ghent University, 16-18 September, 2013
- Member program committee Congress on Logic and Philosophy of science, Ghent University, 16-18 September, 2013
- Member program committee Workshop “Abduction and explanation”, Ghent University, May 2015
- Organizer (with joke Meheus) Workshop “50 shapes of scientific explanation:”, Ghent University, November 2015

Teaching

- Assistant-lecturer, course “History and Philosophy of Psychology”, bachelor program Psychology, Free University, Amsterdam, The Netherlands, 2000-2006
- Invited lecture, “Psychoneural reductionism and levels of explanation”; master course Knowledge, Information, and Technology (KIT), master program Philosophy of Science, Technology and Society (PSTS), University of Twente, The Netherlands, June 2007
- Course instructor, course “Philosophy of Science”, bachelor program Technology, Policy, and Management, Delft University of Technology, 2007-2009
- Course instructor, course “Philosophy of Science”, bachelor program Physics, Delft University of Technology, 2007-2009
- Course instructor, course “Methodology of Science and Engineering”, master program Computer Engineering, Delft University of Technology, 2008
- Lecturer Philosophy of Science and Philosophy of Mind, (2nd year) bachelor program Psychology, University of Amsterdam, The Netherlands. August 2011-August 2013.
- Lecturer Philosophy of Psychology/philosophical controversies, (3rd year) bachelor program Psychological Methods, University of Amsterdam, The Netherlands. 2012-2013
- Supervisor, course “advanced academic writing”, (2nd year) bachelor program Psychology, University of Amsterdam, The Netherlands. 2011-August 2013.
- Bachelor thesis supervision, (3rd year) bachelor program Psychological Methods, University of Amsterdam, The Netherlands. 2011-August 2013
- Lecturer Philosophy of Science, (2nd year) bachelor program psychology, Ghent University, 2013-2016
- Lecturer Philosophy of science, (1st and 2nd year) bachelor program Philosophy, Ghent University, 2014-2016
- Master thesis Supervision, master program Philosophy, Ghent University, 2015-2016
- Reading committee Doctorate/PhD thesis R. Gervais (2013). “Explanation in biology and cognitive science. Mechanisms, laws, and their explanatory virtues”.

Research grants

- Postdoctoral research project: “Explanatory power of mechanistic and functional explanations”, funded by Special Research Fund (BOF), Ghent University, Belgium, November 2014-November 2017

References

Upon request.