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# Gilles Dutilh

Curriculum Vitae



## Contact

Clinical Trial Unit,  
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Date of birth: 10th of January, 1981  
Place of birth: Warnsveld, The Netherlands  
Citizenship: Dutch, CH: B-permit

## Education

- 2007–2011 **PhD (Summa Cum Laude) at the University of Amsterdam**, Department of Psychology, Psychological Methods Group.  
Promotor: Prof. Dr. Han L. J. van der Maas, Co-Promotor: Prof. Dr. Eric-Jan M. Wagenmakers. Thesis title: *The Temporal Dynamics of Speeded Decision Making*.
- 2000–2006 **Master Psychological Methods, University of Amsterdam**. Thesis (empirical): *Speed-Accuracy Trade-Off in Reaction Time Experiments: Testing the Hypothesis of Hysteresis in the Phase Transition between Guessing and Stimulus Controlled Discrimination*; Supervisor: Prof. Dr. Han L. J. van der Maas.  
**Bachelor Psychology, University of Amsterdam**., Thesis (literature): *Development of Theories and Methods in Heuristics Research*; Supervisor: Dr. P. Koele.  
**Internship. Methodology Shop**: Offering methodological and statistical advice for students and employees of the Psychology Department of the University of Amsterdam.

## Languages

Dutch	Mother tongue.
English	Highly proficient both spoken and written.
German	Proficient both spoken and written.
French	Basic.

## Skills

### Statistical skills

- Full general linear model framework
- Hierarchical/multilevel modeling
- Phase transition modeling (hidden Markov models)
- Latent class analysis
- Test and survey construction (classical and IRT)
- Simulation techniques
- Thorough acquaintanceship with both frequentist and Bayesian framework
- Psychological applications
  - Models of risky choice behavior
  - Decision time modeling
  - Various cognitive models

### Software skills

Expert	R
Experienced with	Winbugs/JAGS
	Python
	SPSS
	Matlab
	L <sup>A</sup> T <sub>E</sub> X
	HTML
	Neurobs Presentation
Familiar with	SQL
	Authorware
	E-prime
	Joomla
	Netlogo
OS's	Windows
	Mac OS
	Linux

## Employment

2017–present	<b>Statistician at the Clinical Trial Unit</b> at the University Hospital (Universitätsspital) Basel. The team of statisticians of the CTU facilitates statistically sound research at the Universitätsspital, both through teaching and consulting.
2011–2016	<b>Post–Doc at the University of Basel</b> , Department of Psychology, Economic Psychology Group. The central goal of the research at the Economic Psychology Group is the development and testing of cognitive models that explain economic decisions. I studied how people make very elementary (risky) decisions. Furthermore, I scrutinized the validity of methodological techniques that are applied in this field of research. Besides my research, I taught Bachelor and Master students and advised my PhD student.
2007–2011	<b>PhD Researcher at the University of Amsterdam</b> Department of Psychology, Psychological Methods Group. Project title: <i>The Temporal Dynamics of Speeded Decision Making</i> ; Supervisor: Dr. E.–J. Wagenmakers; Promotor: Prof. Dr. H.L.J. van der Maas. I studied how participants strategically adjust their performance on elementary cognitive tasks. In my work, I applied mathematical cognitive models to obtain a deeper insight into response time data than would be possible by just inspecting mean response time and accuracy. Two phenomena that I studied in particular are sequential effects and phase transitions in behavior. I defended my thesis in March, 2012, and was rewarded with a PhD (Summa Cum Laude).
2006–2007	<b>Research assistant at the University of Amsterdam</b> , Department of Psychology, <i>Developmental Psychology Group</i> . Experimental design and software implementation.
2006–2007	<b>Research assistant at the University of Amsterdam</b> , Department of Psychology, <i>Psychological Methods Group</i> . Experimental design, software implementation, collecting data, data analysis.

## Teaching Experience

2012–2016	Supervising Bachelor students writing their theses.
2011–2016	Seminar applied statistics in R. The materials of my course are available on my website.
2010	Bayesian Modeling tutorial using WinBUGS for Master students.
2010	R–practicals for master Students
2007–present	Project Seminar: supervising experimental research practical for Bachelor students.

## Professional Activities

- Member of the organizing committee for the 42nd annual meeting of the Society for Mathematical Psychology, August 1st to August 4th, 2009, in Amsterdam, the Netherlands.
- Building and maintaining website of the Erasmus Seminar for Mathematical Psychology (ESMP, [esmp.socsci.uva.nl](http://esmp.socsci.uva.nl))

## Ad Hoc Reviewing

Acta Psychologica  
Aging, Neuropsychology and Cognition  
British Journal of Psychology  
Cognition  
Decision  
Frontiers in Cognition  
FWO (Research Foundation Flanders)  
Journal of Experimental Psychology: Applied  
Journal of Experimental Psychology: General  
Journal of Experimental Psychology: Human Perception and Performance  
Journal of Experimental Psychology: Learning, Memory and Cognition  
Journal of Quantitative Analysis in Sports  
Judgment and Decision Making  
PLoS ONE  
Psychological Methods  
Psychonomic Bulletin & Review  
Quarterly Journal of Experimental Psychology  
Swiss Journal of Psychology

## Grants

2012 | In 2012, the project “Comparing Perceptual and Preferential Decision Making” PhD project was awarded a 3-year, CHF 235,559 grant from the Swiss National Science Foundation (SNSF).

## Publications

- 2017 Andreas Pedroni, Renato Frey, Adrian Bruhin, Gilles Dutilh, Ralph Hertwig, and Jörg Rieskamp. The risk elicitation puzzle. *Nature Human Behaviour*, page online, 2017
- 2017 G. Dutilh, J. Vandekerckhove, A. Ly, D. Matzke, J. Rieskamp, and E.-J. Wagenmakers. A confirmatory test of the diffusion model explanation for the worst performance rule. *Attention, Perception, & Psychophysics*, provisionally accepted
- 2016 E.-J. Wagenmakers and G. Dutilh. Seven selfish reasons for preregistration. *APS Observer*, 29, 2016
- R. Wetzels, D. Tutschkow, C. Dolan, S. van der Sluis, G. Dutilh, and E.-J. Wagenmakers. A Bayesian test for the hot hand phenomenon. *Journal of Mathematical Psychology*, 72:200–209, 2016
- G. Dutilh and J. Rieskamp. Comparing perceptual and preferential decision making. *Psychonomic Bulletin and Review*, 23:723–737, 2016
- E.-J. Wagenmakers and G. Dutilh. Preregistration: Why, what, where? Column for the *Psychology Research Institute* of the University of Amsterdam, section on Scientific Integrity, June 2016
- 2013 G. Dutilh, B. U. Forstmann, J. Vandekerckhove, and E.-J. Wagenmakers. A diffusion model account of age differences in post-error slowing. *Psychology and Aging*, 28:64–76, 2013
- 2012 G. Dutilh, Van Ravenzwaaij, S. Nieuwenhuis, H. L. J. Van der Maas, B. U. D. Forstmann, and E.-J. Wagenmakers. How to measure post-error slowing: A confound and a simple solution. *Journal of Mathematical Psychology*, 56:208–216, 2012
- G. Dutilh, J. Vandekerckhove, B. U. Forstmann, and E.-J. Wagenmakers. Testing theories of post-error slowing. *Attention, Perception, & Psychophysics*, 74:454–465, 2012
- D. van Ravenzwaaij, G. Dutilh, and E.-J. Wagenmakers. A diffusion model decomposition of the effects of alcohol on perceptual decision making. *Psychopharmacology*, 219:1017–1025, 2012
- 2011 G. Dutilh, E.-J. Wagenmakers, I. Visser, and H. L. J. Van der Maas. A phase transition model for the speed-accuracy trade-off in response time experiments. *Cognitive Science*, 35:211–250, 2011
- G. Dutilh, A.-M. Kryptos, and E.-J. Wagenmakers. Task-related vs. stimulus-specific practice: A diffusion model account. *Experimental Psychology*, 58:434–442, 2011
- D. van Ravenzwaaij, G. Dutilh, and E.-J. Wagenmakers. Cognitive model decomposition of the BART: Assessment and application. *Journal of Mathematical Psychology*, 55:94–105, 2011
- 2010 Birte U Forstmann, Scott Brown, Gilles Dutilh, Jane Neumann, and E.-J. Wagenmakers. The neural substrate of prior information in perceptual decision making: a model-based analysis. *Frontiers in human neuroscience*, 4, 2010
- 2009 G. Dutilh, J. Vandekerckhove, F. Tuerlinckx, and E.-J. Wagenmakers. A diffusion model decomposition of the practice effect. *Psychonomic Bulletin & Review*, 16:1026–1036, 2009
- 2008 B. U. Forstmann, G. Dutilh, S. D. Brown, J. Neumann, D. Y. von Cramon, K. R. Ridderinkhof, and E.-J. Wagenmakers. Striatum and pre-SMA facilitate decision-making under time pressure. *Proceedings of the National Academy of Sciences*, 105:17538–17542, 2008

## Oral Presentations

- 2016 Dutilh, G., Donkin, C., and others (2016), A Collaborative Project on the Validity of Response Time Data Inference. Presented at the Annual Meeting of the Society for Mathematical Psychology 2016, New Brunswick, NJ, USA.
- 2014 Dutilh, G., Scheibehenne, B., van der Maas, H., Rieskamp, J. (2014), The adaptive shifts of decision strategies. Presented at Decision Making Bristol 2014.
- 2013 Dutilh, G., & Rieskamp, J. (2013). Comparing Perceptual and Preferential Decision-Making. Presented at the 13. biannual congress of the Swiss psychological society.  
Dutilh, G., & Rieskamp, J. (2013). Comparing Perceptual and Preferential Decision-Making. Presented at the yearly Bernoulli Lecture at the university of Basel.  
Dutilh, G., & Rieskamp, J. (2013). Comparing Perceptual and Preferential Decision-Making. Presented at the Annual Meeting of the Society for Mathematical Psychology 2013, Potsdam, Germany.
- Dutilh G. (2013). A better understanding of response time data: The case of post-error slowing. *Invited* presentation at the Psychological Methods Group, University of Zürich.
- 2012 Dutilh G. (2012). The use of response times in judgment and decision making research. *Invited* presentation for the 5<sup>th</sup> *JDM Workshop for young researchers* at University Basel, Switzerland.
- 2011 Dutilh, G., Vandekerckhove, J., Forstmann, B. U., Wagenmakers, E.-J. (2011). Testing theories of post-error slowing. Presented at the annual meeting of the Society for Mathematical Psychology 2011, Boston.
- 2010 Dutilh, G., Kryptos, A.M., & Wagenmakers, E.-J. (2010). Task-related vs. stimulus-specific practice: A diffusion model account. Presented at the annual meeting of the Society for Mathematical Psychology 2010, Portland, OR, US.
- 2009 Dutilh, G., Wagenmakers, E.-J., Visser, I., & Van der Maas, H.L.J. (2009). A phase transition model for the speed-accuracy trade-off in response time experiments. Presented at the NVP winter conference 2009 in Egmond, NL.
- 2008 Dutilh, G., Vandekerckhove, J., Tuerlinckx, F., & Wagenmakers, E.-J. (2008). A diffusion model decomposition of the practice effect. Presented at the annual meeting of the Society for Mathematical Psychology 2008, Washington, DC, US.
- 2007 Dutilh, G., Vandekerckhove, J., Tuerlinckx, F., & Wagenmakers, E.-J. (2007). A diffusion model account of practice. Presented at the NVP winter conference 2007 in Egmond, NL.

## Poster Presentations

- 2013 | Dutilh, G., Scheibehenne, B., Rieskamp, J., & Van der Maas, H.L.J. (2013). Examining the Transitions Between Decision Strategies in Multiple-Cue Decisions. Presented at the 35<sup>th</sup> annual meeting of the Cognitive Science Society, Berlin, Germany.
- 2012 | Dutilh, G., Forstmann, B. U., Vandekerckhove, J., & Wagenmakers, E.-J. (2012). A Diffusion Model Account of Age Differences in Post-Error Slowing. Presented at Psychonomics 2012, Minneapolis, MN, USA.
- 2012 | Dutilh, G., & Rieskamp, J. (2012). Comparing Perceptual and Preferential Decision-Making. Presented at the annual meeting of the Society for Judgment and Decision Making 2012, Minneapolis, MN, USA.
- 2011 | Dutilh, G., Van der Maas, H. L. J., Visser, I., Wagenmakers, E.-J. (2011). A phase transition model for the speed-accuracy trade-off in response time experiments. Presented at the annual meeting of the Society for Mathematical Psychology 2011, Boston, MA, USA. *Awarded "Best Student Poster"*.
- 2009 | Dutilh, G., Vandekerckhove, J., Tuerlinckx, F., & Wagenmakers, E.-J. (2009). A diffusion model decomposition of the practice effect. Poster presented at Psychonomics, 2006, Long Beach LA, CA, USA.

Basel, October 27, 2017