

papers

Journal Articles

Alessandroni, Nicolás, Drew Altschul, Marina Bazhydai, Krista Byers-Heinlein, Mahmoud Elsherif, Biljana Gjoneska, Ludwig Huber, Valeria Mazza, Rachael Miller, Christian Nawroth, Ingmar Visser, and others (2024). “Comparative Cognition Needs Big Team Science: How Large-Scale Collaborations Will Unlock the Future of the Field”. In: *Comparative Cognition & Behavior Reviews* 19, pp. 67-72. DOI: <https://doi.org/10.31234/osf.io/rynvu>.

Hoogeveen, Suzanne, Denny Borsboom, Šimon Kucharsk‘ y, Maarten Marsman, Dylan Moleenaar, Jill de Ron, Nikola Sekulovski, Ingmar Visser, Michiel van Elk, and E-J Wagenmakers (2024). “Prevalence, patterns and predictors of paranormal beliefs in The Netherlands: a several-analysts approach”. In: *Royal Society Open Science* 11.9, p. 240049.

Kucharsk‘ y, Šimon, Martina Zaharieva, Maartje Raijmakers, and Ingmar Visser (2024). “Habituation, part II. Rethinking the habituation paradigm”. In: *Infant and Child Development* 33.1, p. e2383.

Schaaf, Jessica V, Annie Johansson, Ingmar Visser, and Hilde M Huizenga (2024). “What’s in a name: The role of verbalization in reinforcement learning”. In: *Psychonomic Bulletin & Review*, pp. 1-12.

Zaharieva, Martina S, Eliala A Salvadori, Daniel S Messinger, Ingmar Visser, and Cristina Colonnese (2024). “Automated facial expression measurement in a longitudinal sample of 4-and 8-month-olds: Baby FaceReader 9 and manual coding of affective expressions”. In: *Behavior research methods*, pp. 1-23.

Geambaşu, Andreea, Sybren Spit, Daan van Renswoude, Elma Blom, Paula JPM Fikkert, Sabine Hunnius, Caroline CMM Junge, Josje Verhagen, Ingmar Visser, Frank Wijnen, and others (2023). “Robustness of the rule-learning effect in 7-month-old infants: A close, multi-center replication of Marcus et al.(1999)”. In: *Developmental Science* 26.1, p. e13244.

Lichtenberg, L, I Visser, and MEJ Raijmakers (2023). “Latent Markov Models to Test the Strategy Use of 3-Year-Olds in a Rule-Based Feedback-Learning Task”. In: *Multivariate Behavioral Research*, pp. 1-14.

Spit, Sybren, Andreea Geambaşu, Daan van Renswoude, Elma Blom, Paula Fikkert, Sabine Hunnius, Caroline Junge, Josje Verhagen, Ingmar Visser, Frank Wijnen, and others (2023). “Robustness of the cognitive gains in 7-month-old bilingual infants: A close multi-center replication of Kovács and Mehler (2009)”. In: *Developmental Science*, p. e13377.

Visser, Ingmar, Šimon Kucharsk‘ y, Claartje Levelt, Angelika M Stefan, Eric-Jan Wagenmakers, and Lisa Oakes (2023). “Bayesian sample size planning for developmental studies”. In: *Infant and Child Development*, p. e2412.

Wesarg-Menzel, Christiane, Rutmer Ebbes, Maud Hensums, Eline Wagemaker, Martina S Zaharieva, Janneke PC Staaks, Alithe L van den Akker, Ingmar Visser, Machteld Hoeve, Eddie Brummelman, and others (2023). “Development and socialization of self-regulation from infancy to adolescence: A meta-review differentiating between self-regulatory abilities, goals, and motivation”. In: *Developmental Review* 69, p. 101090.

Jepma, Marieke, Jessica V Schaaf, Ingmar Visser, and Hilde M Huizenga (2022). “Impaired learning to dissociate advantageous and disadvantageous risky choices in adolescents”. In: *Scientific Reports* 12.1, pp. 1-14.

Lüken, Malte, Šimon Kucharsk‘ y, and Ingmar Visser (2022). “Characterising eye movement events with an unsupervised hidden markov model”. In: *Journal of Eye Movement Research* 15.1.

Schaaf, Jessica V, Bing Xu, Marieke Jepma, Ingmar Visser, and Hilde M Huizenga (2022). “(Mal) Adaptive Learning After Switches Between Object-Based and Rule-Based Environments”. In: *Computational Brain & Behavior* 5.2, pp. 157-167.

Visser, Ingmar (2022). “No data left behind”. In: *Infant and Child Development* 31.5, p. e2339.

Visser, Ingmar, Christina Bergmann, Krista Byers-Heinlein, Rodrigo Dal Ben, Wlodzislaw Duch, Samuel Forbes, Laura Franchin, Michael Frank, Alessandra Geraci, J Kiley Hamlin, and others (2022). “Improving the generalizability of infant psychological research: The ManyBabies model”. In: *Behavioral and Brain Sciences* 45.

Byers-Heinlein, Krista, Rachel Ka-Ying Tsui, Daan Van Renswoude, Alexis K Black, Rachel Barr, Anna Brown, Marc Colomer, Samantha Durrant, Anja Gampe, Nayeli Gonzalez-Gomez, and others (2021). “The development of gaze following in monolingual and bilingual infants: A multi-laboratory study”. In: *Infancy* 26.1, pp. 4-38.

Jepma, Marieke, Jessica V Schaaf, Ingmar Visser, and Hilde M Huizenga (2021). “Effects of advice on experienced-based learning in adolescents and adults”. In: *Journal of Experimental Child Psychology* 211, p. 105230.

- Kucharsk' y, Šimon, Daan van Renswoude, Maartje Raijmakers, and Ingmar Visser (2021). "WALD-EM: Wald accumulation for locations and durations of eye movements." In: *Psychological Review* 128.4, p. 667.
- Kucharsk' y, Šimon, N-Han Tran, Karel Veldkamp, Maartje Raijmakers, and Ingmar Visser (2021). "Hidden Markov models of evidence accumulation in speeded decision tasks". In: *Computational Brain & Behavior* 4, pp. 416-441.
- Kuijpers, Renske E, Ingmar Visser, and Dylan Molenaar (2021). "Testing the within-state distribution in mixture models for responses and response times". In: *Journal of Educational and Behavioral Statistics* 46.3, pp. 348-373.
- Speekenbrink, Maarten and Ingmar Visser (2021). "Ignorable and non-ignorable missing data in hidden Markov models". In: *arXiv preprint arXiv:2109.02770*.
- Bers, Bianca MCW van, Tessa JP van Schijndel, Ingmar Visser, and Maartje EJ Raijmakers (2020). "Cognitive flexibility training has direct and near transfer effects, but no far transfer effects, in preschoolers". In: *Journal of Experimental Child Psychology* 193, p. 104809.
- Jepma, Marieke, Jessica V Schaaf, Ingmar Visser, and Hilde M Huizenga (2020). "Uncertainty-driven regulation of learning and exploration in adolescents: A computational account". In: *PLoS computational biology* 16.9, p. e1008276.
- Kucharsk' y, Šimon, Ingmar Visser, Gabriela-Olivia Trușescu, Paulo G Laurence, Martina Zaharieva, and Maartje EJ Raijmakers (2020). "Cognitive strategies revealed by clustering eye movement transitions". In: *Journal of Eye Movement Research* 13.1.
- Mulder, Kees, Irene Klugkist, Daan van Renswoude, and Ingmar Visser (2020). "Mixtures of peaked power Batschelet distributions for circular data with application to saccade directions". In: *Journal of Mathematical Psychology* 95, p. 102309.
- Renswoude, Daan R van, Maartje EJ Raijmakers, and Ingmar Visser (2020). "Looking (for) patterns: Similarities and differences between infant and adult free scene-viewing patterns". In: *Journal of Eye Movement Research* 13.1.
- Bayarri, MJ, James O Berger, Woncheol Jang, Surajit Ray, Luis R Pericchi, and Ingmar Visser (2019). "Prior-based Bayesian information criterion". In: *Statistical Theory and Related Fields* 3.1, pp. 2-13.
- Berger, James, Woncheol Jang, Surajit Ray, Luis R Rericchi, and Ingmar Visser (2019). "Rejoinder by James Berger, Woncheol Jang, Surajit Ray, Luis R. Pericchi and Ingmar Visser". In: *Statistical Theory and Related Fields* 3.1, pp. 37-39.
- Renswoude, Daan R van, Linda van den Berg, Maartje EJ Raijmakers, and Ingmar Visser (2019). "Infants' center bias in free viewing of real-world scenes". In: *Vision research* 154, pp. 44-53.

- Renswoude, Daan R van, Ingmar Visser, Maartje EJ Raijmakers, Tawny Tsang, and Scott P Johnson (2019). “Real-world scene perception in infants: What factors guide attention allocation?” In: *Infancy* 24.5, pp. 693-717.
- Schaaf, Jessica Vera, Marieke Jepma, Ingmar Visser, and Hilde Maria Huizenga (2019). “A hierarchical Bayesian approach to assess learning and guessing strategies in reinforcement learning”. In: *Journal of Mathematical Psychology* 93, p. 102276.
- Dutilh, Gilles, Jeffrey Annis, Scott D Brown, Peter Cassey, Nathan J Evans, Raoul PPP Grasman, Guy E Hawkins, Andrew Heathcote, William R Holmes, Angelos-Miltiadis Kryptos, and others (2018). “The quality of response time data inference: A blinded, collaborative assessment of the validity of cognitive models”. In: *Psychonomic bulletin & review*, pp. 1-19.
- Hofman, Abe D, Ingmar Visser, Brenda RJ Jansen, Maarten Marsman, and Han LJ van der Maas (2018). “Fast and slow strategies in multiplication”. In: *Learning and Individual Differences* 68, pp. 30-40.
- Renswoude, Daan R van, Maartje EJ Raijmakers, Arnout Koornneef, Scott P Johnson, Sabine Hunnius, and Ingmar Visser (2018). “Gazepath: An eye-tracking analysis tool that accounts for individual differences and data quality”. In: *Behavior research methods* 50, pp. 834-852.
- Schijndel, Tessa JP van, Kim Huijpen, Ingmar Visser, and Maartje EJ Raijmakers (2018). “Investigating the development of causal inference by studying variability in 2-to 5-year-olds’ behavior”. In: *Plos one* 13.4, p. e0195019.
- Molenaar, Dylan, Ingmar Visser, and others (2017). “Cognitive and psychometric modelling of responses and response times”. In: *British Journal of Mathematical & Statistical Psychology* 70.
- Visser, Ingmar and Rens Poessé (2017). “Parameter recovery, bias and standard errors in the linear ballistic accumulator model”. In: *British Journal of Mathematical and Statistical Psychology* 70.2, pp. 280-296.
- Blakey, Emma, Ingmar Visser, and Daniel J Carroll (2016). “Different executive functions support different kinds of cognitive flexibility: Evidence from 2-, 3-, and 4-year-olds”. In: *Child development* 87.2, pp. 513-526.
- Jansen, Brenda RJ, Abe D Hofman, Alexander Savi, Ingmar Visser, and Han LJ van der Maas (2016). “Self-adapting the success rate when practicing math”. In: *Learning and Individual Differences* 51, pp. 1-10.
- Souverein, Fleur A, Catherine L Ward, Ingmar Visser, and Patrick Burton (2016). “Serious, violent young offenders in South Africa: Are they life-course persistent offenders?” In: *Journal of interpersonal violence* 31.10, pp. 1859-1882.
- Van Renswoude, DR, SP Johnson, MEJ Raijmakers, and I Visser (2016). “Do infants have the horizontal bias?” In: *Infant Behavior and Development* 44, pp. 38-48.

- Hofman, Abe D, Ingmar Visser, Brenda RJ Jansen, and Han LJ van der Maas (2015). “The balance-scale task revisited: A comparison of statistical models for rule-based and information-integration theories of proportional reasoning”. In: *PLoS One* 10.10, p. e0136449.
- Hosenfeld, Bettina, Elisabeth H Bos, Klaas J Wardenaar, Henk Jan Conradi, Han LJ van der Maas, Ingmar Visser, and Peter de Jonge (2015). “Major depressive disorder as a nonlinear dynamic system: bimodality in the frequency distribution of depressive symptoms over time”. In: *Bmc psychiatry* 15.1, pp. 1-9.
- Schijndel, Tessa JP van, Ingmar Visser, Bianca MCW van Bers, and Maartje EJ Raijmakers (2015). “Preschoolers perform more informative experiments after observing theory-violating evidence”. In: *Journal of experimental child psychology* 131, pp. 104-119.
- Andersen, Lau M, Ingmar Visser, Eveline A Crone, PCMP Koolschijn, and Maartje EJ Raijmakers (2014). “Cognitive strategy use as an index of developmental differences in neural responses to feedback.” In: *Developmental psychology* 50.12, p. 2686.
- Bers, Bianca MCW van, Ingmar Visser, and Maartje Raijmakers (2014). “Preschoolers learn to switch with causally related feedback”. In: *Journal of Experimental Child Psychology* 126, pp. 91-102.
- Raijmakers, Maartje EJ, Verena D Schmittmann, and Ingmar Visser (2014). “Costs and benefits of automatization in category learning of ill-defined rules”. In: *Cognitive psychology* 69, pp. 1-24.
- Van Bers, BMCW, I Visser, and MEJ Raijmakers (2014). “The distinctive effects of exogenous factors on preschoolers’ DCCS performance”. In: *Manuscript submitted for publication*.
- Visser, Ingmar and Maarten Speekenbrink (2014). “Comments on: Latent Markov models: a review of a general framework for the analysis of longitudinal data with covariates”. In: *Test* 23, pp. 478-483.
- Ihrke, Matthias, Jörg Behrendt, Hecke Schrobsdorff, Ingmar Visser, and Marcus Hasselhorn (2013). “Negative priming persists in the absence of response-retrieval”. In: *Experimental psychology*.
- Visser, Ingmar and Maartje EJ Raijmakers (2012). “Developing representations of compound stimuli”. In: *Frontiers in psychology* 3, p. 73.
- Bers, Bianca MCW van, Ingmar Visser, Tessa JP van Schijndel, Dorothy J Mandell, and Maartje EJ Raijmakers (2011). “The dynamics of development on the Dimensional Change Card Sorting task”. In: *Developmental Science* 14.5, pp. 960-971.
- Dutilh, Gilles, Eric-Jan Wagenmakers, Ingmar Visser, and Han LJ van der Maas (2011). “A phase transition model for the speed-accuracy trade-off in response time experiments”. In: *Cognitive Science* 35.2, pp. 211-250.

- Huizenga, Hilde M, Ingmar Visser, and Conor V Dolan (2011). "Testing overall and moderator effects in random effects meta-regression". In: *British Journal of Mathematical and Statistical Psychology* 64.1, pp. 1-19.
- Visser, Ingmar (2011). "Seven things to remember about hidden Markov models: A tutorial on Markovian models for time series". In: *Journal of Mathematical Psychology* 55.6, pp. 403-415.
- Duijvenvoorde, Anna CK van, Brenda RJ Jansen, Ingmar Visser, and Hilde M Huizenga (2010). "Affective and cognitive decision-making in adolescents". In: *Developmental neuropsychology* 35.5, pp. 539-554.
- Pronk, Thomas and Ingmar Visser (2010). "The role of reversal frequency in learning noisy second order conditional sequences". In: *Consciousness and cognition* 19.2, pp. 627-635.
- Visser, Ingmar (2010). "Review of: W. Zucchini, IL MacDonald (2009) Hidden Markov models for time series: an introduction using R." In: *Journal of Mathematical Psychology* 54.
- Visser, Ingmar and Maarten Speekenbrink (2010). "depmixS4: An R Package for Hidden Markov Models". In: *Journal of Statistical Software* 36.7, pp. 1-21.
- Visser, Ingmar, Maartje EJ Raijmakers, and Han LJ van der Maas (2009). "Hidden Markov models for individual time series". In: *Dynamic process methodology in the social and developmental sciences*, pp. 269-289.
- Visser, Ingmar, Maartje EJ Raijmakers, and Emmanuel M Pothos (2009). "Individual strategies in artificial grammar learning". In: *The American journal of psychology* 122.3, pp. 293-307.
- Borsboom, Denny and Ingmar Visser (2008). "Semantic cognition or data mining?" In: *Behavioral and Brain Sciences* 31.6, pp. 714-715.
- Visser, I and others (2008). "Review of: J. Rissanen (2007) Information and complexity in statistical modeling". In: *Kwantitatieve Methoden* 2007.
- Jansen, Brenda RJ, Maartje EJ Raijmakers, and Ingmar Visser (2007). "Rule transition on the balance scale task: a case study in belief change". In: *Synthese* 155, pp. 211-236.
- Visser, Ingmar (2007). "depmix: An R-package for fitting mixture models on mixed multivariate data with Markov dependencies". In: *R-package manual* 39, p. 65.
- Visser, Ingmar, Maartje EJ Raijmakers, and Peter CM Molenaar (2007). "Characterizing sequence knowledge using online measures and hidden Markov models". In: *Memory & Cognition* 35.6, pp. 1502-1517.
- Schmittmann, Verena D, Ingmar Visser, and Maartje EJ Raijmakers (2006). "Multiple learning modes in the development of performance on a rule-based category-learning task". In: *Neuropsychologia* 44.11, pp. 2079-2091.

Van Der Maas, Han LJ, Maartje EJ Raijmakers, and Ingmar Visser (2005). “Inferring the structure of latent class”. In: *Behavior research methods* 37, pp. 340-352.

Visser, Ingmar, Maartje EJ Raijmakers, and Peter Molenaar (2002). “Fitting hidden Markov models to psychological data”. In: *Scientific Programming* 10.3, pp. 185-199.

Visser, Ingmar (2000). “Hidden Markov model interpretations of neural networks”. In: *Behavioral and Brain Sciences* 23.4, pp. 494-495.

Visser, Ingmar, Maartje EJ Raijmakers, and Peter Molenaar (2000). “Confidence intervals for hidden Markov model parameters”. In: *British journal of mathematical and statistical psychology* 53.2, pp. 317-327.

Conference Proceedings

Johnson, Tamar, Alexandra Sarafoglou, Julia M Haaf, Ingmar Visser, and Jakub Szymanik (2024). “Comparing the Threshold and Prototype Model for Gradable Adjectives”. In: *Proceedings of the Annual Meeting of the Cognitive Science Society*. Vol. 46.

Frank, Michael, Naithilee Kunda, Marvin Lavechin, Pierre-Yves Oudeyer, Rebecca Saxe, Maureen de Seyssel, and Ingmar Visser (2023). “4.3 Group 2.1: Embodied Intention Prediction Challenge”. In: *Developmental Machine Learning: From Human Learning to Machines and Back (Dagstuhl Seminar 22422)*. Ed. by James M Rehg, Pierre-Yves Oudeyer, Linda B Smith, Sho Tsuji, Stefan Stojanov and Ngoc Anh Thai. , p. 162. DOI: 10.4230/DagRep.12.10.143. https://drops.dagstuhl.de/opus/volltexte/2023/17824/pdf/dagrep_v012_i010_p143_22422.pdf#page=20.

Visser, Ingmar and Maarten Speekenbrink (2014). “It’s a Catastrophe! Testing dynamics between competing cognitive states using mixture and hidden Markov models”. In: *Proceedings of the Annual Meeting of the Cognitive Science Society*. Vol. 36. 36.

Nivard, Michel, Sophie van der Sluis, Sanja Franic, Angelique Cramer, Ingmar Visser, Christel Middeldorp, Gitta Lubke, Dorret Boomsma, and Denny Borsboom (2012). “Phenotypic complexity as genetic dark matter: A network explanation of missing heritability”. In: *Proceedings of the 42nd Annual Meeting of the Behavior-Genetics-Association*. SPRINGER.

Visser, Ingmar, Maartje EJ Raijmakers, and Peter CM Molenaar (2012). “Hidden Markov Model Interpretations”. In: *Connectionist Models of Learning, Development and Evolution: Proceedings of the Sixth Neural Computation and Psychology Workshop, Liège, Belgium, 16-18 September 2000*. Springer Science & Business Media. , p. 197.

Blaazer, Ton and Ingmar Visser (2006). “Estimating Correlations and Reliabilities of Implicit and Explicit Tests Using a Latent Variable Approach”. In: *Proceedings of the Annual Meeting of the Cognitive Science Society*. Vol. 28. 28.

Jansen, Brenda RJ, Maartje EJ Raijmakers, and Ingmar Visser (2006). “Learning on the Balance Scale Task”. In: *Proceedings of the Annual Meeting of the Cognitive Science Society*. Vol. 28. 28.

Visser, I, T Blaazer, and others (2006). “Estimating correlations and reliabilities of implicit and explicit tests using a latent variable approach”. In: *Proceedings of the Annual Meeting of the Cognitive Science Society*. Mahwah (NJ) Lawrence Erlbaum Associates.

Visser, Ingmar, Maartje EJ Raijmakers, and Peter CM Molenaar (2001). “Hidden Markov Model Model Interpretations of Neural Networks”. In: *Connectionist Models of Learning, Development and Evolution: Proceedings of the Sixth Neural Computation and Psychology Workshop, Liège, Belgium, 16-18 September 2000*. Springer Science & Business Media. , p. 197.

Visser, Ingmar, MEJ Raijmakers, PCM Molenaar, and others (1998). “Statistical properties of hidden Markov models”. In: *International Workshop on Advanced Black-Box Techniques for Nonlinear Modeling*.

Book Chapters

Visser, Ingmar, Verena D Schmittmann, and Maartje EJ Raijmakers (2017). “Markov process models for discrimination learning”. In: *Longitudinal models in the behavioral and related sciences*. Routledge, pp. 337-366.

Visser, Ingmar, Brenda RJ Jansen, and Maarten Speekenbrink (2010). “A framework for discrete change.” In: *Individual pathways of change: Statistical models for analyzing learning and development*. American Psychological Association.

Books

Visser, Ingmar and Maarten Speekenbrink (2022). *Mixture and Hidden Markov Models with R*. Springer Nature.

Visser, Ingmar and others (2002). *Rules and associations: hidden Markov models and neural networks in the psychology of learning*.

Technical Reports

Visser, Ingmar (1996). *Mind Rules: a Philosophical Essay on Psychological Rules and the Rules of Psychology*. X-96-01. Amsterdam: Institute for Logic, Language and Computation.

Other

Visser, Ingmar, Maarten Speekenbrink, and Maintainer Ingmar Visser (2021). *Package ‘hmmr’*.

Unpublished

Lüken, Malte, Simon Kucharsky, and Ingmar Visser (2020). “Preregistration: Estimating the Parameter Recovery of the Hidden Markov Model in gazeHMM”. Preregistration.

Hofman, Abe, Rogier Kievit, Claire Stevenson, Dylan Molenaar, Ingmar Visser, and Han van der Maas (2018). “The dynamics of the development of mathematics skills: A comparison of theories of developing intelligence.” preprint.