Curriculum Vitae February 2011

Personal details

Title(s), initial(s), first name, surname: Dr. M.E.J., Maartje, Raijmakers
Male/female: Female
Date and place of birth: 16/03/1967 Vessem CA
Nationality: Dutch
Children: 3 children (1999, 2001, 2005).

Education
Doctorate
    University: Department of Psychology, University of Amsterdam. Date: 19/12/1996, *Cum Laude.* Supervisor (*Copromotor & Promotor*): Prof. dr. P. C. M. Molenaar & Prof. dr. M.W. van der Molen. Title of thesis: Epigenesis in neural network models of cognitive development.

Master (*doctoraal*)
    University: Department of Philosophy, University of Amsterdam. Date: 24/08/1992, *Cum Laude*. Main subject: Philosophical Logic and Artificial Intelligence. Supplementary courses in Biology and Psychology. Master thesis supervision: Pauline Hogeweg (Theoretical Biology, University Utrecht) & Frank Veltman (Philosophical Logic, University of Amsterdam).

Other education
    Technical University Delft: Industrial Design (1985 – 1986). Vrije Academie-werkplaats voor beeldende kunsten, Den Haag (1987). Voortgezet wetenschappelijk onderwijs, Anton van Duinkerkencollege Veldhoven (1979-1985).

Work experience since graduating

- Affiliated Professor (bijzonder hoogleraar), Dept. of Psychology, University of Amsterdam (01/09/2011 – present; fte = 0.2). Affiliated to Nationaal Centrum voor Wetenschap en Technologie/science center NEMO.
- Associate Professor (universitair hoofddocent), Dept. of Psychology, University of Amsterdam (01/01/2008 – present; fte = 1.0 vanaf 01/08/2008, fixed term)
- Assistant Professor (universitair docent), Dept. of Psychology, University of Amsterdam (01/04/2007 – 01/01/2008; fte = 0.8, fixed term)
- Postdoc (extension of KNAW-fellowship), Dept. of Psychology, University of Amsterdam (01/04/2005 – 31/03/2007; fte = 0.8, fixed term). Grant from the Royal Netherlands Academy of Art and Sciences: *Qualitative differences in categorization learning*.
- Postdoc (KNAW-fellow), Dept. of Psychology, University of Amsterdam (01/04/2002 – 31/03/2005; fixed term, fte = 0.8). Grant from the Royal Netherlands Academy of Art and Sciences: *Constructivist models of cognitive development*
- Postdoc MaGW/NWO, Dept. of Psychology, University of Amsterdam (01/04/1999 – 31/03/2002; fte = 1.0 until 10/1999, fte = 0.8, fixed term) Personal grant MaGW, NWO: *Experimental-psychological and statistical validation of cognitive neural network models*.
- Postdoc SGW/NWO, Dept. of Psychology, University of Amsterdam (01/04/1997 – 31/03/1999; fte = 1.0, fixed term). Personal grant SGW, NWO: *Bifurcation analysis of neural network models of cognitive development*.
- PhD. (*Assistent in Opleiding*), Dept. of Psychology, University of Amsterdam (01/09/1992 until 31/08/1996), fte = 1.0, fixed term: *Epigenesis in neural network*

models of cognitive development.

Teaching activities
- *Propedeuse Ontwikkelingspsychologie, (2009 – 2012).*
- *Basisprogramma Ontwikkelingspsychologie, incl. werkgroepen* (2008 - heden). 3rd year BA. Design and Coordination.
- *Cognitive Development* (2007 - 2011 in Dutch). 3rd year BA. Design, teaching, coordination.
- *Advanced Topics in Cognitive Development* (2006, 2007, 2008, 2010 in English). Reseach Master. Design, coordination, teaching.
- *Summerschool of the CSCA: Developmental Disorders* (2006). Visiting prof. A. Karmiloff-Smith. Design, coordination, teaching.
- *Bachelor Theses*, (Reseach) Master Reseach Projects, (2 students are PhD in Londen, Birkbeck college).
- *Intern-ships (begeleiding externe stages Deventer Ziekenhuis, science center NEMO).*
- *Infant development* (2002 – 2005, Dutch), MA course. Master course. Design, coordination, teaching.
- *Simulation of Growth and Development* (1998 – 2002), Master course. Co-design, coordination, teaching.
- (2003) Co-designing of diagnostics-education with developmental section and Psychology Department.
- (2002-2004) Representative of Dept. of Psychology in the Master's education committee of the Cognitive Science Center Amsterdam. Design of the first interdisciplinary teaching program of the Master's Cognitive Science.

Supervisory responsibilities
  Current
- Supervision Postdoc T. van Schijndel (*Talentenkracht* February 2012).
- Supervision PhD-student T. van Schijndel (*Talentenkracht/Aspasia*-project October 2007 – October 2011, April 2012).
- Supervisory responsibilities for postdoc D. Mandell (VIDI-project October 2007 – October 2011; priority program Brain & Cognition – October 2012).
- Supervision (promotor) PhD-student B. van Bers (VIDI-project October 2007 – Februari 2013).
- Supervision (promotor) PhD-student R. Franse (Curious Minds, January 2012 –).
- Co-promotor PhD-student E. Aktar, promotor S. Bögels (Zwaartepunt-project October 2010 – October 2014).
- Co-promotor PhD-student B. Meijering, promotor R. Verbrugge (RUG 2009 – 2013).
- Supervision postdoc Dr. M. Counihan/Dr. N. Gierasimczuk (*TalentenKracht*-project *kwartetten en kinderlogica* (January 2009 – December 2010).
- Supervision (co-promotor) of PhD. V. A. Schmittmann (2003 – December 2009). Project: *Analysis of qualitatively different learning forms by testing multi-modality and other catastrofe flags*. Cum Laude
- Co-Supervision (co-promotor) of PhD. A. Ploeger (2004 – December 2008). Project: *Integrating developmental psychology, dynamical systems theory and evolutionary theory*.
- Supervision postdoc I. Visser with personal NWO-grant VENI (2003 – 2005). Project: *Implicit learning and explicit knowledge: the associative acquisition of rule following behaviour*

- Supervision postdoc I. Visser in FAR6-project: ESF grant from the European Committee (01/01/2006 – 01/01/2008). Project: *The development of rational and associative learning: Statistical mixture models of sequential behavior.*
- Supervision (co-promotor) PhD. I. Visser (1997 – 2002; Doctorate 16/05/2002). Title: *Rules and Associations: Hidden Markov models and neural networks in the psychology of learning.*
- Supervision junior researcher T. van Schijndel at (*Talentenkracht* project March 2006 – October 2007).
- Supervision graduating (research-) master/doctoraal students (1992 - present).

International activities
- Working visit at the Exploratorium, science center San Francisco. October 2010.
- 2005: International cooperation in writing a proposal for an EC 6th Framework Programme - Priority 2 "Information Society Technologies". (Cristiano Castelfranchi, Università degli Studi di Siena; Dario Floreano, Ecole Politechnique Federale de Lausanne; Angela Sirigu, Institut des Sciences Cognitives, Centre National de la Recherche Scientifique, Lyon; Frank Veltman, Universiteit van Amsterdam; Elizabeth J. Robinson, University of Warwick; Silvana Quaglini, Università degli Studi di Pavia; Stefania Manca, Istituto Tecnologie Didattiche, Consiglio Nazionale delle Ricerche, Genova). Proposal was not granted.
- 2005-2007: International cooperation financed by the European Committee (prof. dr. B. French, University of Liege, Belgium; dr. D. Mareschal, Birbeck College, University of London, UK; Dr. E. Pothos, University of Crete, Greece/University; Professor S. E. G. Lea, University of Exeter, UK; Prof. dr. H.L.J. van der Maas, UvA, The Netherlands). Title: *From Associations to Rules in the Development of Concepts.*
- 1996 Summerschool complex systems Santa Fe Institute
- 1992 – 1996 working visits Prof. dr. T. Kendler, UCSB, Santa Barbara, Prof. dr. S. Grossberg, Prof. Dr. G. Carpenter, dr. D. Bullock, Boston University; Prof. dr. K. Fischer, Harvard University.

Other academic activities/management
- Member of the board of Section Developmental Psychology (2006 – present).
- Membership editorial board Infant and Child Development (2004-present).
- Member of the Master's educational committee of the Cognitive Science Center Amsterdam, which developed a accredited Master's program Cognitive Science (2002-2004). Currently, occasional adviser of the Master's program.
- Occasional reviews for the following international journals: Neural Networks, Philosophical Psychology, Developmental Science, Biological Psychology, Journal of Experimental Psychology: Learning, Memory and Cognition, Cognitive Psychology, Journal of Experimental Child Psychology, Journal of Neuropsychology. (conferences) IEEE ICDL 2007, EpiRob-08
- Occasional reviews for NWO-grants and NSF-grants.
- Full membership of the IOPS research school (Interuniversity Graduate School of Psychometrics and Sociometrics).
- (1994-1996) Scientific committee Department of Psychology, UvA.

Public events
- Franse, R., van Schijndel, T.J.P., Raijmakers, M.E.J. et al. (Jan. 2010 – Dec. 2011). Kleuters aan zet: exhibition in science center NEMO for young children (4

– 6 years) about the theme of shadow.
- Raijmakers, M.E.J., van Schijndel, T.J.P., Franse, R., Gierasimczuk, N. & van Es, S. TalentenKrachtdag in Naturalis (2008, 2009, 2010, 2011). Organised by *TalentenKracht* (Platform Bèta Techniek), Den Haag.

Scholarships and prizes
- 2012 Raijmakers M.E.J. (2012). Guided Discovery Learning Adapted to the Individual Child. Grant from *Platform Bèta Techniek* -program *TalentenKracht*. January 2012. € 400k
- 2009 Raijmakers M.E.J., vanderMaas, H.L.J. & vanBenthem, J.F.A.K. (2009). Causaal redeneren en experimenteren door kinderen van 3 tot 5 jaar; Kwartetten en Kinderlogica. Grant from *Platform Bèta Techniek* -program *TalentenKracht*. January 2009. € 170k
- 2009 Boersma, P. Raijmakers, M.E.J., Bögels, S. (2009). Models and tests of early category formation: interactions between cognitive, emotional, and neural mechanisms. Subsidie in het kader van het Cognition Program, Cognitive Science Center Amsterdam. December 2009. € 350k.
- 2007 *Talentenkracht* (*Platform Bèta Techniek*) - Grant for research on the scientific reasoning of preschoolers € 100.000 (3e geldstroom)
- 2007 *Talentenkracht* (*Platform Bèta Techniek*) - Grant for research on the scientific reasoning of preschoolers 2008-2010 – € 220k (3e geldstroom)
- 2006 *Talentenkracht* (*Platform Bèta Techniek*) Grant for research on the scientific reasoning of preschoolers - € 60.000 (3e geldstroom)
- 2006 NWO – VIDI grant 2007-2012: The dynamics of simple rule learning in infants and preschoolers. € 600.000 (€ 400.000 from NWO). postdoc, .8 fte for 4 years. PhD. 1.0 fte for 4 years.
- 2006 NWO - ASPASIA grant for adequate representation of women in higher positions in science. - €100.000.
- 2004 PhD. Grant NWO in the Evolution & Behaviour program. Project: *Integrating developmental psychology, dynamical systems theory and evolutionary theory*. Co-applicant.
- 2004 Grant from the European Committee, EC Framework 6 project 516542 (NEST), *From Associations to Rules in the Development of Concepts*. International project with partners in 5 European countries. (At the UvA: post-doc 2 years + research assistant + additional financing). 213K€
- 2004 Extension of KNAW-fellowship (post-doc 2 years + additional financing). Grant from the Royal Netherlands Academy of Art and Sciences: *Qualitative differences in categorization learning*.
- 2003 Preparatory grant of the NWO Cognition Program, which resulted in an international workshop on *The Origin of Novelty*.
- 2001 KNAW-fellowship (post-doc 2 years). Grant from the Royal Netherlands Academy of Art and Sciences: *Constructivist models of cognitive development*.
- 1999 Personal post-doc grant MaGW, NWO (post-doc 3 years): *Experimental-psychological and statistical validation of cognitive neural network models*.
- 1997 Personal post-doc grant SGW, NWO (post-doc 2 years): *Bifurcation analysis of neural network models of cognitive development*.

Active cooperations
- Prof. Bill Batchelder, University of Irvine (Mathematical modelling)
- Prof. Stephen Lea, Exeter University (comparative research)
- Dr. Emmanuel Pothos, Cardiv University; Swansea University, (modelling

implicit learning).
- Prof. Eveline Crone, University of Amsterdam/Leiden University (development of learning).
- Prof. Scot Johnson, University of California, LA. (Infant research).
- Dr. Paola Escudero, MARCS Laboratories, University of Western Sydney.
- Prof. Susan Bögels, Pedagogics, FMG, UvA. (Infant research).
- Prof. Paul Boersma, Institute of Phonetic Sciences, UvA. (Infant Research).
- Dr. Jay Coldren, University of Kansas (modelling infant data).
- Prof. Rineke Verbrugge, Institute of Artificial Intelligence, University of Groningen (logical reasoning).
- Prof. Johan van Benthem, FNWI, UvA (project *TalentenKracht*)
- Science Learning Center NEMO (NEMO/NCWT: R. Franse, A. Haarhuis, project *TalentenKracht*).
- Satellite groups *TalentenKracht* (Platform Beta Techniek) P. van Geert/H. Steenbeek (RUG), L. Verhoeven (KUN), J. Jolles (VU), H. Swaab (UL), M. van den Heuvel-Panhuizen (FI).

Organization of symposia/workshops/summerschools
- Schmittmann, V.D. & Raijmakers M.E.J. (2009). Formal models for learning processes: Old tricks and new developments. Symposium at the University of Amsterdam, September 2009.
- Huizinga M. & Raijmakers M.E.J. (2009). CSCA Symposium: The brain, cognition, and atypical development. A symposium to celebrate the honorary doctorate of Prof. dr. Annette Karmiloff-Smith at the University of Amsterdam
- Raijmakers M.E.J. & Visser, I. (2009). Development of Rule-based learning: Process and Mechanisms. Symposium at the Biennial meeting of the Society for Research in Child Development. April 2009, Denver, USA.
- Visser, I. & Raijmakers M.E.J. (2009). Getting the grips with individual learning and Development. Symposium at the Biennial meeting of the Society for Research in Child Development. April 2009, Denver, USA.
- Raijmakers M.E.J. (2009). Modeling in Developmental Psychology. Invited symposium at the Annual meeting of the Society for Mathematical Psychology, Amsterdam, August 2009.
- Raijmakers, M.E.J. (2009). ECSITE, Milan.
- Organisation of the 2008 first Conference of the Dutch Society of Developmental Psychology (Vereniging Nederlandse Ontwikkelingspsychologie).
- Organisation meeting FAR6 (ism I. Visser), Januari 2007, including hands-on workshop.
- Organisation of the 2006 summerschool for master's students organized by the Cognitive Science Center Amsterdam. Title: *Cognitive Developmental Disorders.* A three weeks summerschool including a one-day international symposium.
- Organisation of a one-day international workshop on *The Origin of Novelty* (October 2003).

List of Publications

International refereed journals

Mandell, D.J. & Raijmakers M.E.J. (in press). Using a single feature to discriminate and form categories: The interaction between color, form and exemplar number. Infant Behavior & Development.

Visser, I., & Raijmakers, M. E. J. (2012). Developing Representations of Compound Stimuli. *Frontiers in Psychology, 3(March)*, 1-11.

Schmittmann, V. D., van der Maas, H. L. J., & Raijmakers, M. E. J. (2012). Distinct discrimination learning strategies and their relation with spatial memory and attentional control in 4- to 14-year-olds. *Journal of experimental child psychology, 111(4)*, 644-62.

van Bers, B. M. C. W., Visser, I., van Schijndel, T. J. P., Mandell, D. J. and Raijmakers, M. E. J. (2011). The Dynamics of Development on the Dimensional Change Card Sorting task. Developmental Science.

Van Schijndel, T. J. P., Franse, R. K., & Raijmakers, M. E. J. (2010). The Exploratory Behavior Scale: Assessing young visitors' hands-on behavior in science museums. *Science Education*, *94*(5), 794-809.

Van Schijndel, T.J.P., Singer, E., Maas, H. van der, & Raijmakers, M. (2010). A sciencing programme and young children's exploratory play in the sandpit. *European Journal of Developmental Psychology*, 7: 5, 603 — 617.

Schmittmann, V. D., Dolan, C. V., Raijmakers, M. E. J., & Batchelder, W. H. (2010). Parameter identification in multinomial processing tree models. *Behavior research methods*, *42*(3), 836-46.

Kan, KJ, Ploeger, A. , Raijmakers M.E.J., Dolan, C.V., & van der Maas, H.L.J. (2010). Nonlinear Epigenetic Variance: Review and Simulations. *Developmental Science, 1 - 17.*

Raijmakers, M. E. J., Coffey, E., Stevenson, C., Winkel, J., & Berkeljon, A. (2009). An ART neural network model of discrimination shift learning. *The annual meeting of the cognitive science society Amsterdam*, p. 791 – 796.

Visser, I., Pothos, E., and Raijmakers, M.E.J. (2009). Individual Strategies in Artificial Grammar Learning. *American Journal of Psychology, 122* (3), p, 293-308.

Van der Maas, H. L. J., & Raijmakers, M. E. J. (2009). Transitions in cognitive development: prospects and limitations of a neural dynamic approach. In J.P. Spencer, M. Thomas, & J. McClelland (Eds). *Toward a New Grand Theory of Development: Connectionism and Dynamic Systems Theory Re-Considered.* To be published by Oxford University Press.

Visser, Ingmar, Verena Schmittmann, & Maartje E.J. Raijmakers (2009). Hidden Markov Models for Individual Time Series. To appear in Valsiner, J. & Molenaar, PCM (eds). *Dynamic Process Methodology in the Social and Developmental Sciences.* Springer Verlag New York.

Ploeger, A., van der Maas, H.L.J., Raijmakers, M.E.J., & Galis, F. (2009). Why did the savant syndrome not spread in the population? A psychiatric example of a developmental constraint. *Psychiatry Research, 166*, 85-90.

vanEs, S.E., vanSchijndel, T.J.P., Franse, R., & Raijmakers, M. E. J. (2009). Children's thoughts on unborn babies: Representational redescription in preconceptions of children on fetal development. *The annual meeting of the cognitive science society Amsterdam*, p. 112 – 117.

Ploeger, A., van der Maas, H.L.J., & Raijmakers, M.E.J. (2008). Is evolutionary psychology a metatheory for psychology? A discussion of four major issues in psychology from an evolutionary developmental perspective. *Psychological*

Inquiry, 19, 1-18.

Ploeger, A., van der Maas, H.L.J., & Raijmakers, M.E.J. (2008). Is evolutionary developmental biology a viable approach to the study of the human mind? (Reply to commentaries). *Psychological Inquiry,* 19, 41-48.

van Duijvenvoorde, A.C.K., Zanolie K., Rombouts, S.A.R.B., Raijmakers, M.E.J., and Crone E.A. (2008). Evaluating the Negative or Valuing the Positive? Neural Mechanisms Supporting Feedback-Based Learning across Development. *J. Neurosci.* 28: 9495-9503

Jansen, Brenda R. J., Maartje E. J. Raijmakers, and Ingmar Visser (2007). Belief change on the balance scale task. Synthese, 155(2), p. 211-236.

Visser, I., Raijmakers, M.E.J. & Molenaar, P.C.M. (2007). Characterizing Sequence Learning: Online Measures and Hidden Markov Models Show Associations and Dissociations. *Memory & Cognition, 35(6)*, p.1502-1517.

Schmittmann, V. D., Visser, I., & Raijmakers, M. E. J. (2006). Multiple learning modes in the development of performance on a rules-based category-learning task. *Neuropsychologia,* 44 (11), 2079 -91.

van der Maas, H.L.J., Dolan, C.V., Grasman, R.P.P.P., Wicherts, J.M., Huizinga, H.M., Raijmakers, M.E.J. (2006). A dynamical model of general intelligence: The positive manifold of intelligence by mutualism. Psychological Review, Vol. 113 (2006), p. 842-861

van der Maas, H.L.J. , M.E.J. Raijmakers, & Visser, I. (2005). Inferring the Structure of Latent Class Models Using a Genetic Algorithm. *Behavior Research Methods, Instruments & Computers*, 37(2), pp. 340-352.

Raijmakers, M.E.J. & Molenaar, P.C.M. (2004). Modeling developmental transitions in Adaptive Resonance Theory. *Developmental Science*, 7(2), 149-157.

Raijmakers, M.E.J., Jansen, B.R.J. & van der Maas, H.L.J. (2004). Rules and Development in Triad Classification Task Performance. *Developmental Review,* 24(3), 289-321.

Visser, I., Raijmakers, M.E.J. & Molenaar, P.C.M. (2002) Fitting hidden Markov models to psychological data. *Scientific Programming*, 10, 185-199.

Raijmakers, M.E.J., Dolan, C.V. & Molenaar, P.C.M. (2001). Finite Mixture Distribution Models of Simple Discrimination Learning. *Memory & Cognition.*

Molenaar, P.C.M. & Raijmakers, M.E.J. (2000). A causal interpretation of Piaget's theory of cognitive development: Reflections on the relationship between epigenesis and nonlinear dynamics. *New ideas in psychology*, 18(1), p. 41-56.

Molenaar, P.C.M. & Raijmakers, M.E.J. (2000). A phase transition between localist and distributed representation. *Behavioral & Brain Sciences*, 23 (4), 486.

Van der Maas, L.J. van der & Raijmakers, M.E.J. (2000). A Phase Transition Model for Mother-Child Interaction: Comment on Olthof et al., 2000. Infant and Child Development, 9, 75-83.

Visser, I., Raijmakers, M.E.J. & Molenaar, P.C.M. (2000). Confidence intervals for hidden Markov model parameters. *British Journal of Mathematical and Statistical Psychology*, 53, 317-327.

Molenaar, P.C.M. & Raijmakers, M.E.J. (1999). Additional aspects of third source variation for the genetical analysis of human development and behaviour: a commentary on Eaves et al. *Twin Research*, 2, 49-62.

Raijmakers, M.E.J. & Molenaar, P.C.M. (1997): Exact ART: A complete implementation of an ART network. *Neural Networks*, 10(4), 649-669.

Raijmakers, M.E.J. (1997). Is the learning paradox refuted? *Behavioral and Brain Sciences*, 20(4), p. 573.

Raijmakers, M.E.J. (1997): Book review van J.L. Elman, E.A. Bates, M.H. Johnson, A. Karmiloff-Smith, D. Parisi, K. Plunkett. Rethinking innateness: a connectionist

perspective on development. *Acta Psychologica*, 97, p. 307-311.

Raijmakers, M.E.J. van der Maas, L.J. & Molenaar, P.C.M. (1996): Numerical Bifurcation Analysis of Distance-Dependent On-Center Off-Surround Shunting Neural networks. *Biological Cybernetics*, 75, 495-507.

Raijmakers, M.E.J., Van Koten, S., & Molenaar, P.C.M. (1996): On the validity of Simulating Stagewise Development by means of PDP Networks: Application of Catastrophe Analysis and an Experimental Test of Rule-Like Behavior. *Cognitive Science*, 20 (1): 101-136.

Raijmakers, M.E.J. & Molenaar, P.C.M. (1995): How to decide whether a neural representation is a cognitive concept? *Behavioral & Brain Sciences*, 18 (4).

Dutch journals/publications

van Schijndel, T.J.P., Franse, R, Raijmakers, M.E.J. (2010). Kleuters aan zet. In: de Lange, J. & Post, A. (eds.). TalentenKracht magazine, November 2010, p. 6 - 14. Den Haag: TalentenKracht/Platform Beta Techniek.

Segers, E., Raijmakers, M.E.J. (2010). Logisch redeneren tijdens het spelen van spelletjes. In: de Lange, J. & Post, A. (eds.). TalentenKracht magazine, November 2010, p. 63 - 64. Den Haag: TalentenKracht/Platform Beta Techniek.

Raijmakers, M.E.J., van Schijndel, T.J.P., Franse, R. & vanEs, S. (2010). De ideeënwereld van kinderen. In: de Lange, J. & Post, A. (eds.). TalentenKracht magazine, November 2010, p. 110 - 114. Den Haag: TalentenKracht/Platform Beta Techniek.

Molenaar, P.C.M. & Raijmakers, M.E.J. (1994) Reflections on Genetics, Epigenetics and Nonlinear Dynamics. *Tijdschrift voor Ontwikkelingspsychologie*, 21, (3).

Raijmakers, M.E.J. & Molenaar, P.C.M. (1994): Simulating Transitions in Cognitive Development by Means of Neural Networks. *Tijdschrift voor Ontwikkelingspsychologie*, 21(3).

Contributions to books/proceedings
(incomplete)

Visser, I., Schmittmann, V.D. & Raijmakers, M.E.J. (2009). Hidden Markov Models for Individual Time Series. To appear in Valsiner, J. & Molenaar, PCM (eds). *Dynamic Process Methodology in the Social and Developmental Sciences.* Springer Verlag New York.

van Es, S. E., Schijndel, T. J. P. V., Franse, R., & Raijmakers, M. E. J. (2009). Children's thoughts on unborn babies Representational redescription in preconceptions of children on fetal development. *Proceedings of the cognitive science society* (pp. 112-117).

Raijmakers, M. E. J., Coffey, E., Stevenson, C., Winkel, J., & Berkeljon, A. (2009). An ART neural network model of discrimination learning. *2009 Conference of the Cognitive Science Society* (pp. 169-174).

Van der Maas, H. L. J., & Raijmakers, M. E. J. (2009). Transitions in cognitive development: prospects and limitations of a neural dynamic approach. In J.P. Spencer, M. Thomas, & J. McClelland (Eds). *Toward a New Grand Theory of Development: Connectionism and Dynamic Systems Theory Re-Considered.* To be published by Oxford University Press.

Raijmakers, M.E.J. & Molenaar, P.C.M. (2008). Modelling cognitive developmental transitions in neural networks: bifurcations in an adaptive resonance theory model. In: Mareschal, D., Sirois, S., Westermann, G. & Johnson, M. (eds.). Neuroconstructivism: Perspectives and Prospects, Volume 2. Oxford: Oxford University Press. p. 99 – 128.

Berkeljon, A. & Raijmakers, M.E.J. (2007). An ART Neural Network Model of

Discrimination Learning. *Proceedings of the IEEE ICDL, Imperial college London*, 11 – 13 july 2007 (6 pages).

Schmittmann, V.D. & Raijmakers, M.E.J. (2007). Development of reversal shift learning: An individual differences analysis. *Proceedings of the IEEE ICDL, Imperial college London*, 11 – 13 july 2007 (6 pages).

Visser, Ingmar, Verena Schmittmann, & Maartje E.J. Raijmakers (2007). Markov process models for discrimination learning. In, K. van Montfort, H. Oud & A. Satorra (Eds.), Longitudinal models in the behavioral and related sciences, European Association of Methodology, chapter 14, p. 337-366.

van der Maas, H. L. J., Jansen, B. R. J. & Raijmakers M.E.J. (2004). Developmental patterns in proportional reasoning. In A. Demetriou & A. Raftopoulos (Eds.), *Cognitive Developmental Change Theories, Models and Measurement*. Cambridge University Press.

Raijmakers, M.E.J. & Molenaar, P.C.M. (2001). A biologically plausible maturation of an ART network. In: French, R.M. & Sougné, J.P (eds.). *Connectionist models of learning, development and evolution*. Springer-Verlag: London. (p. 83 - 91)

Visser, I., Raijmakers, M.E.J. & Molenaar, P.C.M. (2001). Hidden Markov model interpretations of neural networks. In: French, R.M. & Sougné, J.P (eds.). *Connectionist models of learning, development and evolution*. Springer-Verlag: London.

Molenaar, P.C.M., Newell, K., Hartelman, P. & Raijmakers, M.E.J. (1999). Recursive estimation in nonlinear dynamics: Application to the analysis of stage transition and chaos. In: Savelsbergh, G.J.P., van der Maas, L.J. & van Geert, P.L.C. (eds.). *Nonlinear developmental processes*. Koninklijke Nederlandse Academie van Wetenschappen. Verhandelingen, afd. Letterkunde. Nieuwe reeks, deel 175.

Raijmakers, M.E.J. & Molenaar, P.C.M. (1999). A biologically plausible maturation of an ART network. In Mira, J. & Sánchez-Andrés, J.V. (eds.). Foundations and tools for neural modeling. *Lecture Notes in Computer Science*, 1606, 730-736.

Van der Maas, L.J., Raijmakers, M.E.J., Hartelman, P. & Molenaar, P.C.M. (1999). Reaction time as recovery time after perturbation. In: Savelsbergh, G.J.P., van der Maas, L.J. & van Geert, P.L.C. (eds.). *Nonlinear developmental processes. Koninklijke Nederlandse Academie van Wetenschappen*. Verhandelingen, afd. Letterkunde. Nieuwe reeks, deel 175 (p. 159 - 167).

Molenaar, P.C.M. & Raijmakers, M.E.J. (1998) Fitting Nonlinear Dynamical Models Directly to Observed Time Series. In: Newell, K.M. & Molenaar, P.C.M. (eds.). *Applications of nonlinear dynamics to developmental process modeling*. Lawrence Erlbaum Ass., Publishers, Mahwah, NJ.

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In revision/submitted/in preparation
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Raijmakers, M.E.J. & Visser, I. (in revision). Costs and benefits of automatization in category learning of ill-defined rules. *Cognitive Psychology*.

Raijmakers, M.E.J., Ryan, C.M.E., Wills, A.J., Lea, S.E.G., Visser, I. (in revision). A comparative study about the influence of stimulus similarity on category learning in pigeons and human adults.

Visser, I. & Raijmakers, M.E.J. (in revision). The development of exemplar-based and rule-based representations of compound stimuli. *Developmental Review.*

Schmittmann, V. D. & Raijmakers, M. E. J. (in revision). Discrimination learning strategies in 4- to 14-year-olds: Related to spatial working memory and attentional control.

Van Es, S., Franse, R., Van Schijndel, T.J.P., Raijmakers, M.E.J. (in preparation). Naïve theories of fetal development.

Van Schijndel, T. & Raijmakers M. (in preparation). Individual differences in two- to five-year-olds' causal inference.

Mandell, D.J. & Raijmakers, M.E.J. (In prep) Modeling the effects of multiple exemplars on category learning with 12-month old infants.

Mandell, D.J., Guerts H., Raijmakers, M.E.J. (In prep) Age related changes in post-error slowing and inhibition: Insights into typical and atypical developmental-sex differences

Invited lectures *(other lectures at conferences are not listed)*
(incomplete)

van Schijndel, T.J.P., Raijmakers, M.E.J., Franse, R. & Haarhuis, A. (2010). Naïve Theories and Exploratory Play. Exploratorium San Francisco. October 2010.

Raijmakers, M.E.J. (2010). De ideeënwereld van jonge kinderen. Kenniscentrum voor wetenschap en techniek West (KWT-west). Den Haag.

Raijmakers, M.E.J. (2010). How can a process approach help to develop talents in children? Discussion at the symposium in the honour of Paul van Geert, Groningen, December 2010.

Raijmakers, M.E.J. & Visser, I. (2009). Stimulus Similarity Differentially Affects Rule-Based Category Learning. Invited lecture at the Annual meeting of the Society for Mathematical Psychology, Amsterdam, August 2009.

Raijmakers, M.E.J. & van Schijndel, T.J.P. (2008). Symposium of the Curious Minds. Trippenhuis, Amsterdam.

Raijmakers, M.E.J. (2008). Adaptive Resonance Theory. Lecture at the 2008 CSCA interdisciplinary summerschool on Cognitive Modelling.

Raijmakers, M.E.J. (2007). How Babies learn. Symposium on behalf of 100 year of Psychology at the UvA.

Raijmakers, M.E.J. (2007). Inter-individual differences in free classification. Invited presentation at the School of Psychology, University of Exeter.

Raijmakers, M.E.J. & VanderMaas, H.L.J. (2005). Cognitive development: The balance scale task. Invited lecture at the ESF exploratory workshop: *Understanding the Dynamics of Knowledge.* Siena.

Raijmakers, M.E.J. (2005). Rules and development in free classification. Invited lecture at the Expert Meeting *Advances in Developmental Cognitive Neuroscience*, April 2005 Amsterdam.

Raijmakers, M.E.J. (2004). Belief revisions during the cognitive development of proportional reasoning. *Workshop on belief revision of the ILLC, Amsterdam.*

Raijmakers, M.E.J. (2004) Two modes of simple discrimination learning during development. Invited lecture at the *CSCA symposium on Development of Cognitive Control: Normative Changes and Psychopathology.* Amsterdam, March 2004.

Raijmakers, M.E.J. & Schmittmann, V. D. (2004). Two modes of categorization learning during development. Invited poster presentation at the biennial workshop *Attention & Performance XXI*, 2004, Denver.

Raijmakers, M.E.J. (2003). Transities in cognitieve ontwikkeling. Invited lecture at the *Seminar Cognitive Science, CSCA*, Amsterdam, januari 2003.

Raijmakers, M.E.J. (2003). Rule-like behavior in neural networks. Invited lecture at

the RijksUniversiteit Groningen, September, 2003.

Raijmakers, M.E.J., van Someren, M. & Kamps, J. (2003). The Origin of Novelty. Invited poster at the NWO symposium of the Cognition programme, June 2003.

Raijmakers (2001): Detecting rules in free classification. Invited presentation at the Symposium on Development of Cognitive Strategies. Amsterdam, May 2001.

Raijmakers (2001): Modeling transitions in cognitive development with bifurcations in neural networks. Invited lecture at the NWO-Seminar Computational Neuroscience. NIH, Amsterdam April 2001.

Raijmakers (2000): Selforganisation in cognitive psychology. Invited lecture at the summerschool of the BCN. Groningen.

Raijmakers (1999): A Biologically Plausible Maturation of an ART network. Invited lecture at IWANN, Alicante, 1999.

Raijmakers (1998): Zelf-organisatie in Ontwikkelingspsychologie. Invited lecture at the werkgroep Socio-Cybernetica, Amsterdam.

Raijmakers (1996): Leert een neuraal netwerk cognitieve concepten? Invited lecture at the vakgroep cognitiewetenschappen (TCW) van de Rijks Universiteit Groningen.