

Curriculum Vitae
Eddy J. Davelaar
(July 20, 2004)

Full name: Edward Jeronimo Davelaar
Date of Birth: 23 September 1974
Address: School of Psychology
Birkbeck University of London,
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United Kingdom
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Nationality: Dutch

Current Research Interests

Models of memory in healthy adults and neuropsychological patients
The role of short-term memory in language comprehension
Neurocomputational models of executive attentional control

Degrees

2003 Ph.D., Psychology, Birkbeck, University of London Thesis Title: Active memory: its nature and its role in mnemonic and linguistic behaviour (under supervision of Dr. M. Usher)
1999 MSc., Psychology, Maastricht University Thesis Title: The effect of semantic coherence on working memory in on-line sentence comprehension: evidence from self-paced reading (under supervision of Dr. H. J. Haarmann and Dr. L. Blomert)
1999 MSc., Biological Health Sciences, Maastricht University Thesis Title: The influence of caffeine on information processing and heart rate variability: a review and experiments (under supervision of Dr. W. J. Riedel and Dr. M. van Baak)

Professional Employment

2004 – Research Fellow, School of Psychology, Birkbeck, University of London, United Kingdom (semantic inhibition in short-term memory)
2003 – 2004 Post-Doctoral Research Fellow, School of Psychology, Birkbeck College, University of London, United Kingdom (memory and language)
2002 Part-time lecturer in course PY251, Cognitive Psychology (University of North London)
1998 – 1999 Part-time research assistant to Dr. F. T. Y. Smulders, Department of Psychology, Maastricht University, The Netherlands (Chronopsychophysiology)
1996 – 1999 Part-time research assistant to Dr. S. Bögels, Department of Differential and Experimental Psychology, Maastricht University, The Netherlands (social phobia)

Grants

The role of short-term memory in language processing. ESRC postdoctoral fellowship T026271312, 1 March 2003 – 31 March 2004. Total award: £ 29385.
Investigating semantic inhibition due to short-term retention of words. ESRC grant RES-000-22-0655, 1 April 2004 – 31 January 2005. Total award: £ 44499.
Individual differences in memory and language: executive control and short-term memory capacity. (with M. Usher). British Academy grant SG-38634, 1 August 2004 – 31 December 2004. Total award: £ 3417.

Honours & Awards

2004 EPS-Grindley Grant (£ 450)
2004 Faculty Research Conference Grant (£ 500)

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- 2003 Faculty Research Conference Grant (£ 450)
- 2003 Brain Travel Grant (£ 500)
- 2001 Brain Travel Grant (£ 350)
- 1999 – 2002 Departmental Studentship, Birkbeck College £ 8060 per annum
- 1999 Award for traineeship in USA, Maastricht University Fl 1724 (£575)
- 1999 Award for traineeship in USA, Österreichische Philips Industrie GmbH f 1250 (£ 417)
- 1999 Award for traineeship in USA, H. J. Haarmann \$ 3300 (£ 2200)

Professional Activities

1. Teaching

- 2003 – 2004 Supervision of student projects (undergraduate). Lecturing in courses on Psychobiology (P1.2), General Foundations of Psychology (P1.1) and Cognitive and Affective Disorders (P5.15).
- 2000 – 2004 Teaching Assistant (Birkbeck College) in courses on Research Methods (undergraduate), Critical Analysis (undergraduate) and second marker on essays and theses from the Cognitive Neuropsychology (MSc level) course.
- 1996 – 1999 Teaching Assistant (Maastricht University) in courses, practicals and training courses on various aspects of psychology, including development, memory, psycholinguistics, ethology, neuropsychology, basic neuroanatomy, psychophysiology (electro- and cardiophysiology), experimental psychology, computer programming (Pascal and Delphi), presentation skills and methodology.

2. Reviewing

Journal of Experimental Psychology: General
Psychological Review
Quarterly Journal of Experimental Psychology

3. Society Memberships

Cognitive Science Society

4. Other Activities

- 2003 – Organiser of Internal Computational Seminar Series

Publications

1. Refereed Journal Articles

- Usher, M., & Davelaar, E. J. (2002). Neuromodulation of decision and response selection. *Neural Networks*, 15, 635-645.
- Haarmann, H. J., Davelaar, E. J., & Usher, M. (2003). Individual differences in semantic short-term memory capacity and reading comprehension. *Journal of Memory and Language*, 48, 320-345.
- Davelaar, E. J., Goshen-Gottstein, Y., Ashkenazi, A., Haarmann, H. J., & Usher, M. (in press). The demise of short-term memory revisited: empirical and computational investigations of recency effects. *Psychological Review*.
- Haarmann, H. J., Ashling, G. E., Davelaar, E. J., & Usher, M. (in press). Age-related declines in context maintenance and semantic short-term memory. *Quarterly Journal of Experimental Psychology*.

2. Refereed Conference Proceedings

- Davelaar, E. J., & Usher, M. (2002). An activation-based theory of immediate item memory. In J. A. Bullinaria, & W. Lowe (Eds.), *Connectionist Models of Cognition and Perception: Proceedings of the 7th Neural Computation and Psychology Workshop*. (pp. 118-130). Singapore: WorldScientific.

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- Davelaar, E. J., & Usher, M. (2003). Semantic clustering in free recall: evidence for a semantic buffer? In F. Detje, D. Dörner, & H. Schaub, (Eds.), *The logic of cognitive systems. Proceedings of the 5th International Conference on Cognitive Modeling*. (pp. 239-240). Bamberg: Universitäts-Verlag.
- Davelaar, E. J., & Usher, M. (2003). Modeling dissociations in short- and long-term recency effects. In F. Detje, D. Dörner, & H. Schaub (Eds.), *The logic of cognitive systems. Proceedings of the 5th International Conference on Cognitive Modeling*. (pp. 241-242). Bamberg: Universitäts-Verlag.
- Davelaar, E. J., & Usher, M. (2003). A neurocomputational account of short- and long-term recency effects. In R. Alterman & D. Kirsh (Eds.), *Proceedings of the 25th Annual Meeting of the Cognitive Science Society*. (pp. 288-293). Boston, MA: Cognitive Science Society.
- Davelaar, E. J., & Usher, M. (2004). An extended buffer model for active maintenance and selective updating. In H. Bowman, & C. Labiouse (Eds.), *Connectionist Models of Cognition and Perception II: Proceedings of the 8th Neural Computation and Psychology Workshop*. Singapore: WorldScientific.
- Davelaar, E. J. (2004). Semantic inhibition due to short-term retention of prime words: the prime-retention effect and a controlled center-surround hypothesis. In (Eds.), *Proceedings of the 26th Annual Meeting of the Cognitive Science Society*. (pp. Xx-xx) Chicago: Cognitive Science Society.
- Davelaar, E. J. (2004). Towards a model of the prime-retention effect. In (Eds.), *Proceedings of the 26th Annual Meeting of the Cognitive Science Society*. (pp. Xx-xx) Chicago: Cognitive Science Society.

3. Submitted Papers

4. Papers in Preparation

- Davelaar, E. J., Haarmann, H. J., & Ruchkin, D. (in preparation). The role of semantic short-term memory in sentence processing: a self-paced reading study of filler-gap sentences.
- Davelaar, E. J., Haarmann, H. J., Goshen-Gottstein, Y., & Usher, M. (in preparation). Semantic similarity dissociates short- from long-term recency: testing a neurocomputational model of list memory.
- Davelaar, E. J. (in preparation). Semantic inhibition due to short-term retention of prime words: the prime-retention effect.

5. Invited Talks

- School of Psychology, University of London, London, United Kingdom, Birkbeck Computational Seminar, 10 October 2002. A neurocomputational process model of free recall: modeling a dissociation between short- and long-term recency.
- School of Psychology, University of London, London, United Kingdom, Birkbeck Cognitive Science Seminar, 26 March 2003. A biologically constrained framework of recall memory based on temporary activation and contextual change.
- Institute of Cognitive Neuroscience Memory Seminar, 24 April 2003. Active memory and episodic context: a connectionist approach to free recall.
- Department of Psychology, University of Birmingham, Birmingham, United Kingdom, 26 June 2003. An activation-based process model of recall memory.

6. Conference Posters

- Smulders, F. T. Y., & Davelaar, E. J. (1999, October). Chronopsychophysiology: the temporal localization of effects of loud auditory stimuli and aging foreperiods on reaction time. Poster presented at the 39th Annual Meeting of the Society for Psychophysiological Research, Granada, Spain.
- Haarmann, H. J., & Davelaar, E. J. (2000, June). Conceptual short-term memory, meaning integration, and conscious experience. Poster presented at the 4th annual conference of the Association for the Scientific Study of Consciousness, Brussels, Belgium.
- Davelaar, E. J., & Usher, M. (2001, July). Exploring a computational account of item short-term memory. Poster presented at the 3rd International Conference on Memory, Valencia, Spain.
- Davelaar, E. J., Usher, M., & Haarmann, H. J. (2001, September). Individual differences in semantic short-term memory capacity and language comprehension. Poster presented at the 18th Annual Meeting of the British Psychological Society Cognitive Psychology Section, Edinburgh, Scotland.

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- Davelaar, E. J., Haarmann, H. J., & Usher, M. (2002, September). Semantic effects in free recall. Poster presented at the 19th Annual Meeting of the British Psychological Society Cognitive Psychology Section, Canterbury, England.
- Davelaar, E. J., & Haarmann, H. J. (2002, September). Semantic working memory and on-line sentence reading. Poster presented at the 19th Annual Meeting of the British Psychological Society Cognitive Psychology Section, Canterbury, England.
- Davelaar, E. J., & Usher, M. (2003, April). Modeling dissociations in short- and long-term recency effects. Poster presented at the 5th International Conference on Cognitive Modeling, Bamberg, Germany.
- Davelaar, E. J., & Usher, M. (2003, April). Semantic clustering in free recall: evidence for a semantic buffer? Poster presented at the 5th International Conference on Cognitive Modeling, Bamberg, Germany.
- Davelaar, E. J., & Usher, M. (2003, July). Modeling serial position functions of neuropsychological patients. Poster presented at the Meeting of the Experimental Psychological Society, Reading, England.
- Usher, M., Davelaar, E. J., Goshen-Gottstein, Y., & Ashkenazi, A. (2003, September). Short/long term memory in terms of activation versus weight based processes. Poster presented at the 13th Meeting of the European Society for Cognitive Psychology, Granada, Spain.
- Haarmann, H. J., Martin, R. C., Davelaar, E. J., & Usher, M. (2003, November). The role of semantic short-term memory in on-line sentence production. Poster presented at the 44th Annual Meeting of the Psychonomic Society, Vancouver, Canada.
- Davelaar, E. J., Usher, M., Goshen-Gottstein, Y., & Ashkenazi, A. (2004, January). A context/activation model of list memory. Poster presented at the Meeting of the Experimental Psychological Society, London, England.
- Davelaar, E. J., & Feely, M. P. (2004, June). Activating semantic inhibition in the mental lexicon: the prime-retention effect. Poster presented at the 8th annual conference of the Association for the Scientific Study of Consciousness, Antwerp, Belgium.
- Davelaar, E. J. (2004, August). Semantic inhibition due to short-term retention of prime words: the prime-retention effect and a controlled center-surround hypothesis. Poster to be presented at the 26th Annual Meeting of the Cognitive Science Society, Chicago, USA.
- Davelaar, E. J. (2004, August). Towards a model of the prime-retention effect. Poster to be presented at the 26th Annual Meeting of the Cognitive Science Society, Chicago, USA.
- Davelaar, E. J. (2004, August). Random generation of items from memory: empirical and computational explorations. Poster to be presented at the 2nd International Conference on Working Memory, Kyoto, Japan.
- Davelaar, E. J., & Haarmann, H. J. (2004, September). The role of semantic short-term memory in filler-gap processing. Poster to be presented at the 21st Annual Meeting of the British Psychological Society Cognitive Psychology Section, Leeds, England.
- Haarmann, H. J., & Davelaar, E. J. (2004, November). The role of semantic short-term memory in filler-gap processing. Poster to be presented at the 45th Annual Meeting of the Psychonomic Society, Minneapolis, USA.

7. Conference Presentations

- Usher, M., Davelaar, E. J., & Haarmann, H. J. (2000, September). Semantic effects and capacity limitations in STM. Paper presented at the 17th Annual Meeting of the British Psychological Society Cognitive Psychology Section, Essex, England.
- Usher, M., & Davelaar, E. J. (2001, July). Presentation rate effects in cued recall: support for an activation based version of the STS. Paper presented at the 3rd International Conference on Memory, Valencia, Spain.
- Usher, M., & Davelaar, E. J. (2001, September). An activation-based theory of immediate item memory. Paper presented at the 7th Neural Computation and Psychology Workshop, Brighton, England.
- Usher, M., Davelaar, E. J., & Haarmann, H. J. (2002, November). Dissociating short- and long-term recency. Paper presented at the 43rd Annual Meeting of the Psychonomic Society, Kansas City, USA.
- Davelaar, E. J., & Usher, M. (2003, July). A neurocomputational account of short- and long-term recency effects. Paper presented at the 25th Annual Meeting of the Cognitive Science Society, Boston, USA.

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- Davelaar, E. J., & Usher, M. (2003, August). On the nature of active memory. Paper presented at the 8th Neural Computation and Psychology Workshop, Canterbury, England.
- Usher, M., & Davelaar, E. J. (2003, August). Short/long term memory in terms of activation versus weight based processes. Paper presented at the 8th Neural Computation and Psychology Workshop, Canterbury, England.
- Davelaar, E. J., & Usher, M. (2003, September). An integrative approach to free recall memory. Paper presented at the 20th Annual Meeting of the British Psychological Society Cognitive Psychology Section, Reading, England.
- Davelaar, E. J. (2004, June). Retention of words suppresses semantic associates: the prime-retention effect. Paper presented at the Meeting of the Experimental Psychological Society, Lancaster, United Kingdom.
- Davelaar, E. J. (2004, September). A further look at the “prime-retention effect”. Paper to be presented at the 21st Annual Meeting of the British Psychological Society Cognitive Psychology Section, Leeds, England.
- Davelaar, E. J. (2004, September). A neurocognitive theory of attentional modulation of semantic spread of activation. Paper to be presented at the 9th Neural Computation and Psychology Workshop, Plymouth, England.