Mark Hurlstone

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Personal

Full name Mark John Hurlstone

Date of birth June 21, 1980

Nationality British

Employment

2013–Present Assistant Professor
School of Psychology, University of Western Australia

2012–2013 Postdoctoral Research Associate (Stephan Lewandowsky & Carmen Lawrence)
School of Psychology, University of Western Australia

2010–2011 Postdoctoral Research Associate (Robert Hughes & Dylan jones)
School of Psychology, University of Cardiff

2010 Postdoctoral Research Associate (Simon Farrell)
Department of Experimental Psychology, University of Bristol

Education

2006–2010 PhD Experimental Psychology
School of Psychology, University of York

Thesis title: The problem of serial order in visuospatial short-term memory
Supervisors: Prof. Graham Hitch & Prof. Alan Baddeley

2005–2006 MSc Reading, Language, & Cognition
School of Psychology, University of York

Award: Prize for highest scoring MSc student

2001–2004 BSc (Hons.) Psychology
School of Psychology, University of Leicester

Award: Wladyslaw Sluckin prize for highest scoring BSc student

Research Interests

Auditory distraction	Testing a duplex mechanism account of auditory distraction and attentional selectivity in which some forms of distraction are resistible and others are ineluctable.
Behavioural economics	Applying insights from laboratory experiments and psychology to economics, particularly the economics of climate change and other ecosystem issues.
Cognitive modelling	Computational and mathematical modelling of cognitive processes; model evaluation and selection issues; models of choice behaviour and response time.
Human memory	Short-term and long-term memory; serial recall memory; free recall memory; sequence learning; relationship between time and memory.

Competitive Grants

2015	Australian Research Council Discovery Project: Simon Farrell, Gordon Brown, Geoff Ward, & Mark Hurlstone: *Developing a integrated memory-based model of evaluation and choice* ($347,000).
2010	Department of Psychology, University of York: Graham Hitch, Mark Hurlstone, & Tom Hartley: *An oscillator model account of effects of the timing of items in short-term memory* (£2,500).
2008	Experimental Psychology Society (Study Visit Grant): Mark Hurlstone & Simon Farrell: *Modelling fill-in and in-fill errors: Constraints for theories of serial order memory* (£1,200).
2007	Nuffield Foundation (undergraduate science bursary): Mark Hurlstone & Graham Hitch: *Auditory distraction in verbal and spatial short-term memory* (£1,360).
2006	Economic and Social Research Council (1+3 postgraduate studentship): Mark Hurlstone: *Serial order in short-term memory*.

Publications

Peer Reviewed Manuscripts - in preparation

Hurlstone, M. J., Price, A., Wang, S., Leviston, Z., & Walker, I. (2015, in preparation). Building affinity with future generations mitigates intergenerational discounting in the climate game.

Hurlstone, M. J., & Hitch, G. J. (2015, in preparation). How is the serial order of a visual sequence represented? Insights from transposition latencies.

Hurlstone, M. J., Farrell, S., & Lewandowsky, S. (2015, in preparation). Modelling sequential dependencies in serial recall: Constraints for theories of serial order memory.

Hurlstone, M. J., Ecker, U. K. H., & Lewandowsky, S. (2015, in preparation). Scientific certainty argumentation methods (SCAMs) and climate change: Exposing SCAMs shields against climate change misinformation.

Hurlstone, M. J. (2015, in preparation). Modelling immediate serial spatial recall in a macaque (*Macaca mulatta*).

Peer Reviewed Manuscripts - submitted

Rossen, I., **Hurlstone, M. J.,** & Lawrence, C. (2015, submitted). Going with the Grain of Human Cognition: Applying insights from psychology to build support for vaccination.

Hurlstone, M. J., Price, A., Wang, S., Leviston, Z., & Walker, I. (2015, submitted). Cooperation studies of catastrophe avoidance: Implications for climate negotiations.

Hartley, T., **Hurlstone, M. J.**, & Hitch, G. J. (2014, submitted). Effects of rhythm on memory for spoken sequences: A model and tests of its stimulus-driven mechanism. *Cognitive Psychology*.

Hurlstone, M. J., & Hitch, G. J. (2014, submitted). Functional similarities and differences between the coding of positional information in verbal and spatial short-term memory. *Memory & Cognition*.

Peer Reviewed Manuscripts - published

Hurlstone, M. J., & Hitch, G. J. (2015). How is the serial order of a spatial sequence represented? Insights from transposition latencies. *Journal of Experimental Psychology: Learning, Memory & Cognition, 41,* 295-324.

Hurlstone, M. J., Lewandowsky, S., Sewell, B., & Newell, B. (2014). The role of framing and normative messages in building support for climate policies. *PLoS ONE*.

Hurlstone, M. J., Hitch, G. J., & Baddeley, A. D. (2014). Memory for serial order across domains: An overview of the literature and directions for future research. *Psychological Bulletin, 140,* 339-373.

Unsworth, K. L., Russell, S. V., Lewandowsky, S., Lawrence, C., Fielding, K., Heath, J., Evans, A., **Hurlstone, M. J.**, & McNeill, I. (2013). Individual adaptation to climate change and psychological drivers: What about me? Factors affecting individual adaptive coping capacity across different population. *National Climate Change Adaptation Research Facility*.

Farrell, S., **Hurlstone, M. J.**, & Lewandowsky, S. (2013). Sequential dependencies in recall of sequences: Filling in the blanks. *Memory & Cognition, 41,* 938-952.

Hughes, R., **Hurlstone, M. J.**, Marsh, J. E., Vachon, F., & Jones, D. M. (2013). Cognitive control of auditory distraction: Impact of task difficulty, foreknowledge, and working memory capacity supports duplex-mechanism. *Journal of Experimental Psychology: Human Perception and Performance, 39,* 539-553.

Hughes, R., Vachon, F., **Hurlstone, M. J.**, Marsh, J., Macken, W., & Jones, D. M. (2011). Disruption of cognitive performance by sound: Differentiating two forms of auditory distraction. In *Proceedings of the 10th International Congress on Noise as a Public Health Problem.*

Theses

Hurlstone, M. J. (2010). *The problem of serial order in visuospatial short-term memory*. Unpublished PhD thesis, University of York, UK.

Hurlstone, M. J. (2006). *Top-down processing and temporal grouping in immediate serial recall*. Unpublished MSc thesis, University of York, UK.

Hurlstone, M. J. (2004). *The modularity of ordering processes in verbal and spatial short-term memory*. Unpublished BSc thesis, University of Leicester, UK.

Conference Papers

Hurlstone, M. J. (July 2015). Cooperation studies of catastrophe avoidance: Implications for climate negotiations. WSEN, Murdoch University WA, Australia.

Hurlstone, M. J., Lewandowsky, S., Newell, B. R., & Sewell, B. (Dec, 2013). Curbing emissions: Framing and normative messages influence CO_2 abatement policy preferences. University of New South Wales, Sydney NSW, Australia.

Hurlstone, M. J., & Lawrence, C. (July, 2012). The impact of normative feedback on pro-environmental intentions and behaviour. National Climate Change Adaptation Research Facility Conference, Melbourne, Australia.

Hurlstone, M. J., & Lewandowsky, S. (July, 2012). Climate change coping and the effects of social norms and message framing on those with extreme worldviews. National Climate Change Adaptation Research Facility Conference, Melbourne, Australia.

Hurlstone, M. J., Hughes, R., & Jones, D. M. (November, 2011). Auditory distraction: The resistible and the ineluctable. Auditory Perception, Cognition and Action Meeting, Seattle, USA.

Hurlstone, M. J. (July, 2011). Memory for serial order across domains: Four common principles. Paper presented at the Fifth International Conference On Memory, York, U.K.

Hurlstone, M. J., Hitch, G. J., & Baddeley, A. D. (July, 2009). Modelling grouping effects in verbal and spatial short-term order memory. Paper presented at the Experimental Psychology Society, York, U.K.

Hurlstone, M. J., Hitch, G. J., & Baddeley, A. D. (Jan, 2009). How is the serial order of a visuospatial sequence coded? Insights from transposition latencies. Paper presented at the Experimental Psychology Society, London, U.K.

Hartley, T., **Hurlstone, M. J.**, & Hitch, G. J. (July, 2008). An oscillator model account of effects of the timing of items in short-term memory. Paper presented at the XXIXth International Congress of Psychology, Berlin, Germany.

Invited colloquia & workshops

2014, July.	Workshop: *Working memory benchmarks*. University of Zurich, Switzerland.
2013, December.	Symposium: *Psychology and climate change*. University of New South Wales, Sydney NSW, Australia.

Research Supervision

PhD Candidates:

2014–*Current*	Susie Wang (co-supervised with Carmen Lawrence, Iain Walker, & Zoe Leviston)

Honours Supervision:

2015	Matthew Andreotti, Marianne, Campbell, Grace McKie, Annabel Price
2014	Jemma Heart, Jay Kinkade, Jessica Sipes, Emily Tuckey
2013	Mei Jae Lai, Sarah Meredith, Isabelle Stacey
2012	Shaun Markovic, Brittany Sewell

Manuscript Reviewing

I am an ad hoc reviewer for the following journals:

Acta Psychologica / Canadian Journal of Experimental Psychology /Environment & Behavior / Journal of Experimental Psychology: Learning, Memory, & Cognition /Journal of Mathematical Psychology / Memory / Memory & Cognition / PLoS ONE / Quarterly Journal of Experimental Psychology.

Teaching

2015	Psychology 3310: Specialist Topics in Psychology Topic 1: Behavioural Economics Topic 2: Behavioural Economics
2014	Psychology 3310: Specialist Topics in Psychology Topic 1: Behavioural Economics Topic 2: Political Psychology
2013	Psychology 3310: Specialist Topics in Psychology Topic: Psychology and Climate Change
2012	Psychology 3310: Specialist Topics in Psychology Topic: Principles of short-term memory and episodic memory
2006–2009	Discussion group tutor
2004–2005	Statistics demonstrator

Technical Skills

I am a proficient user of LaTeX, MATLAB, Python, and R.

I have experience of developing, implementing, and testing cognitive models, including both algebraic and simulation models. The latter includes neural networks and sequential sampling models, such as random walk and accumulator models.

I am also experienced in the use of a number of model evaluation and selection methods, including: least squares and maximum likelihood parameter estimation; polytope optimization algorithms; information criteria approaches (e.g., AIC and BIC); parameter space partitioning; landscaping; cross validation and generalization methods; bootstrapping methods.

Last updated: November 1, 2015