

Erik Marsja

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Current research

I am examining how sudden and unexpected changes in our environment captures our attention and, thus, causes distraction from what we currently are engaged in. Specifically, my Ph.D. work is examining how sudden and unexpected changes in auditory, tactile, and the combination of both auditory and tactile (multisensory) stimulation affects performance in speeded and short-term memory tasks.

Research ambition

My goal is to create my academic career in cognitive psychology. Mainly doing ground research but also more applied (e.g., multisensory alarms). Specifically, in the areas of attention and cognitive control. I aspire to eventually be able to work as an established researcher in these, and related, areas (i.e., cognitive neuroscience).

Education and Degrees

- 2012-Present Ph.D. Student in Psychology
- 2011-2012 M.Sc. in Cognitive Science (*Thesis*: Attention Capture: The Impact of Change in Spatial Sound Source on Behavior- Department of Psychology, Umeå University.
- 2008-2011 B.Sc. in Cognitive Science (*Thesis*: Attention Capture: Studying the Distracting Effect of One's Own Name. Department of Psychology, Umeå University. Available from DiVA Database (<http://urn.kb.se/resolve?urn=urn:nbn:se:umu:diva-46607>).

Publications

International peer-reviewed journals

Ljungberg, K. J., Parmentier, F. B. R., Jones, D. M., **Marsja**, E., & Neely, G. (2014). "What's in a name?" "No more than when it's mine own". Evidence from auditory oddball distraction. *Acta Psychologica*, 150C, 161–166. doi:10.1016/j.actpsy.2014.05.009.

Publications In Preparation/Submitted/Under Revision

Rosa, E., **Marsja**, E., Ljungberg K.J. (Submitted). Tactile warnings constitute an efficient alarm during high mental workload in simulated flight tasks

Marsja, E., Neely, G., Ljungberg K.J. (Submitted). Investigating deviance distraction and the impact of the modality of the to-be-ignored stimuli.

Marsh, J.E., Sörqvist, P., **Marsja**, E., Röer J.P., & Ljungberg, K.J. (Under revision). Irrelevant vibro-tactile stimuli produce a changing-state effect: Implications for theories of interference in short-term memory.

Marsja, E., Neely, Ljungberg, K.J (Under revision). Deviance distraction in the auditory and tactile modalities after repeated exposure: differential aspects of tactile and auditory deviants.

Current research collaborations

- Associate Professor Jessica K. Ljungberg, Department of Psychology, Umeå University, Umeå, Sweden
- Professor Gregory Neely, Department of Psychology, Umeå University, Umeå, Sweden
- Dr. Patrik Hansson, Department of Psychology, Umeå University, Umeå, Sweden
- Dr. John E. Marsh, School of Psychology, University of Central Lancashire, UK
- Professor Patrik Sörqvist, Faculty of Engineering and Sustainable Development, Högskolan i Gävle, Gävle

Conference Presentations

Marsja, E., Marsh, J.E., Neely G., Hansson P., Ljungberg K.J., (2017, April). Domain-general or domain-specificity of the short-term memory: insights from a multisensory distraction paradigm. Re-thinking the Senses Spring School, Dubrovnik, Croatia. **Poster**.

Marsja, E., Marsh, J.E., Neely G., Hansson P., Ljungberg K.J., (2016, September). Do Spatial Changes in Sounds and Vibrations Affect Visuo-spatial and Verbal Short-Term Memory? Attention and Control: Insights from Distraction, Workshop, University of Central Lancashire, Preston, UK. **Invited Talk**.

Marsja, E., Marsh, J.E., Neely G., Hansson P., Ljungberg K.J., (2016, June). Spatial Change in Multisensory Distractors Impact on Verbal and Spatial Short Term Memory. International Multisensory Research Forum 17th annual meeting, Suzhou, CHN. **Oral presentation**.

Marsja, E., Neely G., Ma, L., Ljungberg K.J., (2015, August). Cross-modality matches of intensity and attention capture dimensions of auditory and vibrotactile stimuli. Fechner Day 2015. The 31st Annual Meeting of the International Society for Psychophysics, Québec, CA. **Poster**.

Marsja, E., Neely, G., Parmentier, F.B.R., Ljungberg, K.J., (2014, October) Deviance Distraction Is Contingent on Stimuli Being Presented within the Same Modality. Psychonomic Society's 55th Annual Meeting. Long Beach, CA, USA. **Poster**.

Ljungberg, K.J., Parmentier, F.B.R., **Marsja**, E., Neely, G., Jones, D., (2014, January). Any Tom, Dick, or Harry will do: Hearing one's own name distracts no more than any other in a cross-modal oddball task. Experimental Psychology Society Meeting. London, UK. **Poster**.

Marsja, E., Neely, G., Parmentier, F.B.R., Ljungberg, K.J., (2013, October). Maintenance of the distractive effect of deviating vibrotactile stimuli in a cross-modal oddball paradigm. the 29th Annual meeting of the International Society of Psychophysics, Freiburg, DE. **Poster**.

Funding and Grants

15000 SEK from Lars Hiertas Minnesfond for the project *Är korttidsminnet domän-generellt eller domän-specifikt? (Is short-term memory domain-general or domain specific?)*, 2016.

8000 SEK from the Department of Psychology for participating the conference 17th International Multisensory Research Forum 15-18 June, Suzhou, China, 2016.

10 000 SEK from JC Kempes minnesfond for the project *Is everyday distractibility related to attention capture by vibrating deviants?*, 2014.

9 000 SEK from Knut och Alice Wallenbergs Stiftelse for participating in the conferences Psychonomic Society's 55th Annual Meeting, 20-23 November, and APCAM, 20 November, Long Beach, USA, 2014.

6000 SEK from the Department of Psychology for participating the conference Fechner Day 2013 (the 29th Annual Meeting of the International Society for Psychophysics) 21-25 October, Freiburg i.Br., Germany, 2013.

Teaching responsibilities

Past & current areas at undergraduate level

Primarily in:

- Attention
- Perception
- Applied Cognitive Psychology
- Cognitive Psychology
- Research Methods
- Project work

Lectures, seminars, lab demonstrations, supervision of group project (both involving empirical and applied projects) and supervision of thesis' have been given at the Department of Psychology Umeå University, Sweden. I have so far taught 695 clock hours. See Table for an overview of teaching topics.

Teaching responsibilities - an overview of type of teaching, hours, etc.

Period	Subject	Type	Clock Hours	Course/Program	Level	Language
VT 2014	Cognitive Psychology Research Methods	Supervision of projects	20	Introduction to Psychology	UG	Swe
		Lectures	60	Developmental Psychology and Personality Theory, Psychology Program	UG	Swe
HT 2014	Cognitive Psychology Cognitive Science	Supervision of projects	20	Introduction to Psychology	UG	Swe
		Supervision of projects	40	Master Thesis 30 ECTS, Psychology Program Project in Cognitive Science, Bachelor's Program in Cognitive Science	G UG	Swe Swe
VT 2015	Cognitive Psychology Cognitive Psychology, Attention, Perception, Memory Cognitive Psychology, Psychophysics, Attention Cognitive Science	Supervising projects	24	Introduction to Psychology	UG	Swe
		Lectures, seminars, supervision of projects, Supervision	20	Basic psychology and sport psychology	UG	Swe
HT 2015	Cognitive Psychology Research Methods	Supervision of projects	15	Master Thesis 15 ECTS, Master's Program in Cognitive Science	G	Eng
		Supervision of projects	110	Project in Cognitive Science, Bachelor's Program in Cognitive Science	UG	Swe
VT 2016	Cognitive Psychology Applied Cognitive Psychology, Auditory Cognition, Attention Research Methods Cognitive Science	Supervision of projects	24	Cognitive Psychology, Psychology Program	UG	Swe
		Seminars in Qualitative research methods	20	Psychology of Organizations, Environment and Work, Psychology Program	UG	Swe
HT 2016	Cognitive Psychology Research Methods Perception, Attention, Consciousness, Psychology	Lab demonstrations	30	2:1 Cognition, Psychology Program	UG	Eng
		Lectures, seminars, supervision of projects, examination	60	Applied Cognitive Psychology, Bachelor's Program in Cognitive Science	UG	Swe
VT 2017	Cognitive Psychology Applied Cognitive Psychology, Perception and Attention Cognitive Science Research Methods	Seminars in Qualitative research methods, SPSS Computer labs	30	Psychology of Organizations, Environment and Work, Psychology Program	UG	Swe
		Supervision of projects	40	Project in Cognitive Science, Bachelor's Program in Cognitive Science	UG	Swe
HT 2017	Cognitive Psychology Research Methods	Supervision of projects	24	2:1 Cognition, Psychology Program	UG	Eng
		Lectures	8	Psychology of Organizations, Environment and Work, Psychology Program	UG	Swe
VT 2018	Cognitive Psychology Research Methods	Examining defense and opposition of Thesis	8	Perception, Bachelor's Program in Cognitive Science	UG	Swe
		Lectures, seminars, examination	20	Master Thesis 30 ECTS, Psychology Program	G	Swe
HT 2018	Cognitive Psychology Research Methods	Supervision of projects	40	2:1 Cognition, Psychology Program	UG	Eng
		Lectures, seminars, examination	20	Applied Cognitive Psychology, Bachelor's Program in Cognitive Science	UG	Swe
VT 2019	Cognitive Psychology Research Methods	Supervision of projects	40	Applied Cognitive Psychology, Bachelor's Program in Cognitive Science	UG	Swe
		Lectures, seminars, examination	20	Psychology of Organizations, Environment and Work, Psychology Program	UG	Swe

Total of clock hours: 815 UG = Undergraduate, G = Graduate

Supervision of master students

Ma, L. (2015). Department of Psychology, Umeå University. “Cross-Modal Matching of Distractibility in Auditory and Tactile Stimuli”. Master Thesis in Cognitive Science (15 ECTS).

Blide, M. (2014). Department of Psychology, Umeå University. “Att orka lämna ett misshandelsförhållande: Anknytningens betydelse (To cope leaving abusive relationships: The importance of attachment). Master Thesis in Clinical Psychology (30 ECTS).

Additional skills

- Good skills in Microsoft Word and Excel
 - Good skills in statistical software such as SPSS and R
 - Good programming skills in Python (v2.7.x) and R
 - Basic skills in Markdown (i.e., RMarkdown) and L^AT_EX
 - Basic programming skills in Visual Basic, E-basic (E-prime), and MATLAB
 - Programming and performing experiments using both E-prime, MATLAB, and Python (i.e., PsychoPy & Experiment)
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