

Curriculum Vita

Edward S. Awh

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updated 10.26.9

Education:

University of Michigan, Ph.D. in Psychology, 1996.
University of Michigan, M.A. in Psychology, 1992.
Northwestern University, B.A. in Psychology, 1989.

Professional Experience:

September 2008 to present
Professor, Department of Psychology, University of Oregon.
September 2004 to September 2008
Associate professor, Department of Psychology, University of Oregon.
January 1999 to September 2004
Assistant professor, Department of Psychology, University of Oregon.
November 1996 to 1998:
Postdoctoral fellow at the Center for Human Information Processing, Department of Psychology,
University of California San Diego.
1990 to 1996:
Research Assistant for Dr. John Jonides, and Dr. Edward E. Smith, Department of Psychology,
University of Michigan, Ann Arbor.
1989 to 1990:
Senior Research Technician at the Franklin McClean Positron Emission Tomography Research
Center, University of Chicago.

Awards and Honors

Posner-Bois Fellow, University of Oregon Department of Psychology 2004
Departmental Associate, University of Michigan Department of Psychology 1995-96
Rackham Dissertation Fellowship, University of Michigan, 1995.
Rackham Graduate Fellowship, University of Michigan, 1990-1994.
Graduated with honors, Northwestern University Department of Psychology, 1989.
Benton J. Underwood Research Fellowship, Northwestern Department of Psychology, 1988.
National Merit Scholarship, Northwestern University 1985-1989.

Grant Support

R01 National Institutes of Mental Health, 2001-2005
“Neural and Behavioral Mechanisms of Distractor Exclusion”
Total direct costs: \$450,000
Principal Investigator: Edward Awh

Oregon Medical Research Foundation, 2006-2007
“Diagnostic Tools for ADHD”

Total direct costs: \$30,000

Principal Investigator: Edward Awh

R01 National Institutes of Mental Health, 2007-2012

Impaired Resolution of Visual Interference as an Endophenotype for ADHD

Total direct costs, \$1,125,000

Principal Investigator, Edward Awh

R01 National Institutes of Mental Health, 2009-2013

“On the Distinction between Number and Resolution in Visual Working Memory”

Total direct costs: \$3,440,000

Principal Investigator: Edward Awh

Peer Reviewed Publications

(in chronological order: *papers co-authored with students in my lab, §corresponding/senior author)

1. Jonides, J., Smith, E. E., Koeppe R.A., Awh, E. S., Minoshima, S., and Mintun, M.A. (1993). Spatial working memory in humans as revealed by PET. *Nature*, 363, 623-625.
2. Minoshima, S., Koeppe, R.A., Smith, E.E., Awh, E., & Jonides, J. PET investigations of working memory. *Experimental Medicine*, 1994, 12, 70-72.
3. Smith, E.E., Jonides, J., Koeppe, R.A., Awh, E., Schumacher, E.H. and Minoshima, S. (1995). Spatial vs. Object working memory: PET investigations. *Journal of Cognitive Neuroscience.*, 7, 337-356.
4. Awh, E., Jonides, J., Smith, E.E., Schumacher, E.H., Koeppe, R.A., Katz, S. (1996). Dissociation of storage and rehearsal in verbal working memory: evidence from PET. *Psychological Science*, 7(1), 25-31.
5. Schumacher, E.H., Lauber, E.J., Awh, E., Jonides, J., Smith, E.E., Koeppe, R.A. (1996). PET evidence for an amodal verbal working memory system. *Neuroimage*, 3(2), 79-88.
6. Jonides, J., Schumacher, E. H., Smith, E. E., Lauber, E., Awh, E., Minoshima, S., & Koeppe, R. A. (1997). The task-load of verbal working memory affects regional brain activation as measured by PET. *Journal of Cognitive Neuroscience*, 9(4), 462-475.
7. Jonides, J., Schumacher, E.H., Smith, E.E., Koeppe, R.A., Awh, E., Reuter-Lorenz, P.A., Marshuetz, C., & Willis, C.R. (1998). The role of parietal cortex in verbal working memory. *The Journal of Neuroscience*, 18 (13):5026-5034.
8. Awh, E., Jonides, J., & Reuter-Lorenz, P.A. (1998). Rehearsal in Spatial Working Memory. *Journal of Experimental Psychology: Human Perception and Performance*. 24(3), 780-790.
9. Awh, E., Jonides, J., Smith, E.E., Buxton, R.B., Frank, L.R., Love, T., Wong, E.C., & Gmeindl, L. (1999). Rehearsal in spatial working memory: Evidence from neuroimaging. *Psychological Science*, 10(5), 443-437.
10. Awh, E. & Pashler, H. (2000). Evidence for split attentional foci. *Journal of Experimental Psychology: Human Perception and Performance*, 26(2), 834-846.

11. Awh, E., Anllo-Vento, & Hillyard, S.A. (2000). The role of spatial selective attention in working memory for locations: evidence from event-related potentials. *Journal of Cognitive Neuroscience*, 12(5), 840-847.
12. *§Awh, E., Dhaliwal, H., Christensen, S., Matsukura, M. (2001). Evidence for two components of object-based selection. *Psychological Science*, 12(4), 329-334.
13. Awh, E., & Jonides, J. (2001). Overlapping mechanisms of attention and working memory. *Trends in Cognitive Sciences*, 5(3), 119-126.
14. *Awh, E., Matsukura, M., Serences, J. (2003). Top-down control over biased competition during covert orienting. *Journal of Experimental Psychology: Human Perception and Performance*, 29(1), 52-63.
15. *Mayr, U., Awh, E., & Laurey, P. (2003). Conflict adaptation effects in the absence of executive control. *Nature Neuroscience*, 6(5), 450-452.
16. *Awh E., Serences, J., Laurey, P., Dhaliwal, H., van der Jagt, T., & Dassonville, P. (2004). Evidence against a central bottleneck during the attentional blink: multiple channels for configural and featural processing. *Cognitive Psychology*, 48, 95-126.
17. Postle, B.R., Awh, E., Jonides, J., Smith, E.E., D'Esposito, M. (2004). The where and how of attention-based rehearsal in spatial working memory. *Cognitive Brain Research*, 20, 194-205.
18. *Serences, J., Yantis, S., Culbertson, A. & Awh, E. (2004). Preparatory activity in visual cortex indexes distractor suppression during covert spatial orienting. *Journal of Neurophysiology*, 92, 3538-3545.
19. *Awh, E., Sgarlata, A.M., Kliestik, J. (2005). Resolving visual interference during covert spatial orienting: Online Attentional Control Through Static Records of Prior Visual Experience. *Journal of Experimental Psychology: General*, 134(2), 192-206.
20. Awh, E., Vogel, E., & Oh, S.-H. (2006). Interactions between attention and working memory. *Neuroscience*, 139, 201-208.
21. Awh, E., Armstrong, K.M. & Moore, T. (2006). Visual and oculomotor selection: links, causes and implications for spatial attention. *Trends in Cognitive Sciences*, 10(3), 124-130.
22. *§Scolari, M., Kohlen, A. Barton, B., & Awh, E. (2007). Spatial attention, preview, and popout: Which factors influence critical spacing in crowded displays? *Journal of Vision*, 7(2):7, 1-23.
23. *§Awh, E., Barton, B., Vogel, E.K. (2007). Visual working memory represents a fixed number of items, regardless of complexity. *Psychological Science*, 18(7), 622-628.
24. *§Ester, E. & Awh E. (2008). The locus of interference from salient singleton distractors. *Visual Cognition*, 16(2/3), 166-181.
25. *§Scolari, M., Vogel, E., & Awh, E. (2008). Perceptual expertise enhances the resolution but not the number of representations in working memory. *Psychonomic Bulletin and Review*, 15(1), 215-222.

26. Mednick, S.C., Drummond, S.P., Boynton, G.M., Awh, E., Serences, J. (2008). Sleep-dependent learning and practice-dependent deterioration in an orientation discrimination task. *Behavioral Neuroscience*, 122(2), 267-72.
27. Vogel, E. K. & Awh, E. (2008). How to exploit diversity for scientific gain: Using individual differences to constrain cognitive theory. *Current Directions in Psychological Science*, 17(2), 171-176.
28. §Serences, J., Scolari, M., & Awh, E. (2008). On-line response-selection and the attentional blink: multiple-processing channels. *Visual Cognition*.
29. *§Serences, J., Ester, E., Vogel, E.K., & Awh, E. (2009). Stimulus-specific delay activity in human primary visual cortex. *Psychological Science*, 20(2), 207-214.
30. Mayr, U., & Awh, E. (in press). The elusive link between conflict and conflict adaptation. *Psychological Research*
31. *§Barton, B., Ester, E., & Awh, E. (in press). Discrete resource allocation in visual working memory. *Journal of Experimental Psychology: Human Perception and Performance*.
32. *§Williamson-Worden, K.; Scolari, M, Jeong, S., Kim, M., Awh, E. (in press). Experience-dependent changes in the topography of visual crowding. *Journal of Vision*.
33. *§Ester, E.F., Serences, J.T., & Awh, E. (in press). Spatially global representations in human primary visual cortex during working memory maintenance. *Journal of Neuroscience*.

Invited reviews, commentaries, book chapters, edited volumes

1. Awh, E., Smith, E.E., Jonides, J. (1995). Human rehearsal processes and the frontal lobes: PET evidence. In J. Grafman, K. Holyoak, & F. Boller (Eds.) *Structure and functions of the human prefrontal cortex Annals of the New York Academy of Sciences*, vol. 769, 97-119 New York, NY:, New York Academy of Sciences.
2. Jonides, J., Reuter-Lorenz, P.A., Smith, E.E., Awh, E., Barnes, L.L., Drain, M., Glass, J., Lauber, E., Patalano, A., Schumacher, E.H. (1996). Verbal and Spatial Working Memory in Humans. *The Psychology of Learning and Motivation*, 4, Medin, D. (ed.). Academic Press.
3. Awh, E., & Jonides, J. (1998) Spatial Selective Attention and Spatial Working Memory. *The Attentive Brain*. Parasuraman, R. (Ed.), pp. 353-380, Cambridge, Mass: M.I.T. Press.
4. Awh, E. & Gehring, W.J. (1999). The anterior cingulate lends a hand in response selection. *Nature Neuroscience*, 2(10), 853-854.
5. Jonides, J., Sylvester, C-Y.C., Lacey, S.C., Wager, T.D., Nichols, T.E., and Awh E. (2002). Modules of working memory. In R.H. Kluwe, G. Luer, and F. Rosler (Eds.). *Principles of Working Memory*. Boston: Birkhaeuser Publishing Ltd.
6. Jonides, J. & Awh, E. (2003). What Is The Source Of Activation For Working Memory? *Behavioral and Brain Sciences*, 26 (6), 741 – 742.

7. Mayr, U., Awh, E. & Keele, S.W. (eds.) (2005). *Developing Individuality in the Human Brain: A Tribute to Michael I. Posner*. Washington, DC: American Psychological Association.
8. Stevens, C., & Awh, E. (2007). Commentary: Specificity, mechanisms, and timing in the study of spatial cognition. *The Emerging Spatial Mind*. J. Plumert & J.P. Spencer (Eds). Oxford University Press.
9. Awh, E., & Vogel, E. (2008). The bouncer in the brain. *Nature Neuroscience*, 11(1), 5-6.

Selected Presentations

- Awh, E. On the distinction between number and resolution in visual working memory. Copenhagen University, Workshop on visual attention and short term memory, March 4-7, 2008.
- Awh, E. Behavioral and neural measures of capacity in visual working memory. Yale University Psychology Department, Cognitive Seminar Series, October 2007.
- Awh, E. Complexity, categories and capacity in visual working memory. Invited address at the Rovereto Attention Workshop, Rovereto, Italy, October 2007.
- Awh, E., Barton, B., Vogel, E.K. Visual working memory represents a fixed number of items, regardless of complexity. Spoken presentation at the Vision Science Society Annual Meeting, May 2007.
- Awh, E., Barton, B., Vogel, E. Complexity, number and resolution in visual working memory. Paper presented at the Psychonomics Society annual meeting. November 2006, Houston, TX.
- Awh, E. Top-down control and the resolution of visual interference. Invited colloquium for the Psychology Department at Michigan State University. September 2006.
- Awh, E., Mayr, U., & Kohnen, A. Top-down control over unconscious response priming through stimulus-specific gating. Spoken presentation at Vision Science Society Annual Meeting, May 2005.
- Awh, E. Attentional control during visual selection and unconscious response priming. Cognitive and Cognitive Science Colloquium. January 2005. Department of Psychology, Vanderbilt University.
- Awh, E. Attentional control and the resolution of interference during visual selection. Invited presentation at the International Conference on Attentional control. January, 2005, Taipei, Taiwan.
- Awh, E. Object-based control over distractor suppression during covert spatial orienting. Paper presented at the Psychonomics Society annual meeting. November 2004, Minneapolis, MN.
- Awh, E., Vogel, E., & Culbertson, A. (2004). The role of distractor suppression during attentional modulations of early visual processing. Society for Neuroscience Abstracts.
- Awh, E., Sgarlata, A.M., Kliestik, J. Object-based control over spatial selective attention via retinotopic maps of distractor probability. Poster presented at the Psychonomics Society annual meeting. November 2003, Vancouver, Canada.

- Awh, E. Neural substrates of distractor suppression during covert spatial orienting. Invited presentation at the Psychonomics Society Annual Meeting, November 2003, Vancouver, Canada.
- Awh, E. Endogenous control over distractor suppression during covert spatial orienting. Invited colloquium for the Department of Psychology at the University of Toronto. April, 2003.
- Awh, E. Top-down control over distractor exclusions during covert spatial selection. Invited lecture for the Meeting of the Priority Program on Executive Functions. Max Planck Institute; Leipzig, Germany; November, 2002.
- Awh, E., Matsukura, M., Serences, J. & Culberson, A. Top-down control over biased competition. Invited presentation for the Institute for Cognitive and Brain Sciences at the University of California, Berkeley, October, 2001.
- Awh, E., Serences, J., Laurey, P., Dhaliwal, H., Matsukura, M., Vander Jagt, T., & Dassonville, P. Assessing the boundary conditions of the attentional blink. Paper presented at Psychonomics Society 42nd annual meeting. November 2001, Orlando, FL.
- Awh, E. Assessing the boundary conditions of the attentional blink: Faces as an exception to the rule. Invited presentation for the Center for Integrative and Cognitive Neuroscience at Vanderbilt University, August 2001. Nashville, TN.
- Awh, E. (2001) Attentional Control and Noise Suppression. Invited presentation at the Eunice Kennedy Shriver Center Colloquium Series. Waltham, MA.
- Awh, E., Serences, J., Libner, K., & Matsukura, M. Endogenous noise suppression during covert orienting. Paper presented at Psychonomics Society 41st annual meeting. November 2000, New Orleans, LA.
- Awh, E. The Role of Spatial Selective Attention during Rehearsal in Spatial Working Memory. Invited presentation at the symposium, "Attentional Processes in Selective Perception and Working Memory." April 1999. Washington, D.C.
- Awh, E. The Functional Architecture of Working Memory. Invited lectures presented for the Behavioral and Cognitive Neurosciences program at The University of Groningen, June 1998.
- Awh, E., Pashler, H., & Doan, Q. Evidence for Split Attentional Foci. Psychonomics Society, November 1997.
- Schumacher, E.H., Jonides, J., Smith, E.E., Koeppe, R.A., Awh, E., Reuter-Lorenz, P.A., Marchuetz, C., & Willis, C.R. (1997). The role of parietal cortex in verbal working memory as revealed by PET. Society for Neuroscience Abstracts.
- Marshuetz, C., Jonides, J., Smith, E.E., Reuter-Lorenz, P.A., Koeppe, R.A., Koeppe, E.H., Gmeindl, L., Awh, E. (1997). The role of dorsolateral prefrontal cortex in verbal working memory. Society for Neuroscience Abstracts.
- Awh, E., Jonides, J., Smith, E.E., Frank, L.R., Love, T., Buxton, R.B., & Wong, E.C. (1997). Neuroimaging Evidence for Attention-based Rehearsal in Spatial Working Memory. Presented at the 1997 Human Brain Mapping Conference. Copenhagen, Denmark.

Awh, E. The Role of Selective Attention in Spatial Working Memory. Presentation for the Cognition and Perception Area Forum at the University of Michigan. March 1996.

Jonides, J., Smith, E.E., Awh, E., Schumacher, E.H., Koeppe, R.A., Lauber, E., and Minoshima, S. Double dissociation of verbal and spatial working memory. Paper presented by E. Awh at International Conference on Working Memory, July, 1994.

Awh, E., Jonides, J., Smith, E.E., Schumacher, E.H., Koeppe, R.A. Minoshima, S., Lauber, E. (1994). Dissociation of Spatial and Verbal Working Memory Systems. Invited paper presented at Midwestern Psychological Association symposium, "Neuroscientific studies of cognitive processes", 1994.

Teaching Experience

Winter 1993, Fall 1995:

Instructor, *Superlab in Psychology as a Natural Science*, University of Michigan.

Winter 1994:

Teaching Assistant, *Human Neuropsychology*, University of Michigan.

Fall 1994:

Teaching Assistant, *Introduction to Cognitive Psychology*, University of Michigan.

1999, 2000, 2004, 2005, 2006, 2007, 2008

Instructor, *Cognition*, University of Oregon.

Winter 2000, 2003

Instructor, *Research Methods*, University of Oregon.

Fall 2000, 2001

Instructor, *Mind and Brain*, University of Oregon.

Spring 2003, Fall 2003, 2004, 2005, 2006, 2007, 2009

Instructor, *Psychology and Philosophy Freshman Interest Group*, University of Oregon

Administrative Experience

University of Michigan Psychology Department Executive Committee, Fall 1995-Fall 1996.

University of Michigan Cognition and Perception admissions committee, 1992.

Member of organizing committee for Cognition and Perception Area Forum talk series, 1992-93.

Member of Graduate Admissions Committee, 1998-1999, University of Oregon.

Member of Systems Neuroscience Search Committee, 1999-2000, University of Oregon.

Member of Cognitive Neuroscience Search Committee, 2001, 2002, University of Oregon.

Member of preliminary exam committees: Amelia Adamson, Theodore Bell, Harpreet Dhaliwal, Paul Laurey, Lisa Sanders, Geeta Shivde, Anna Wilson; Elizabeth Walters

Co-chair of Colloquium Committee for the University of Oregon Psychology Dept. Colloquium Series

Member of the Undergraduate Education Committee, University of Oregon Department of Psychology

Elected Member of Psychology Department Executive Committee, University of Oregon, 2002-2004; 2005-present.

Member of Lewis Imaging Center Executive Committee, 2001-2003.

University of Oregon Institutional Review Board, Member 2006, 2007

University of Oregon Institutional Review Board, Vice Chair 2008-2009

Chair of Graduate Education Committee, University of Oregon. Spring 2006-2009.

January 2009 to present, Consulting Editor for *Memory and Cognition*.

February 2006 to 2009 Consulting Editor for *Journal of Experimental Psychology: Learning Memory and Cognition*.

January 2009 to present, Member Editorial Board for *Psychological Science*.

Ad hoc reviewer

Acta Psychologica

Behavioral Neuroscience

Brain

British Journal of Psychology

Cerebral Cortex

Cognition

Cognitive Affective and Behavioral Neuroscience

Cognitive Brain Research

Cognitive Psychology

Developmental Psychology

European Journal of Neuroscience

European Journal of Cognitive Psychology

Human Brain Mapping

Journal of Cognitive Neuroscience

Journal of Experimental Psychology: General

Journal of Experimental Psychology: Human Perception and Performance

Journal of Experimental Psychology: Learning, Memory and Cognition

Journal of Neurophysiology

Journal of Neuroscience

Journal of Vision

Memory

Memory and Cognition

Nature

Nature Neuroscience

Neuron

Neuropsychologia

Perception and Psychophysics

Personality and Social Psychology Bulletin

Proceedings of the National Academy of Sciences

Psychobiology

Psychological Bulletin

Psychological Bulletin and Review

Psychological Review

Psychological Science

Psychophysiology

Quarterly Journal of Experimental Psychology

Trends in Cognitive Sciences

Visual Cognition

Vision Research

Grant reviews:

Alzheimer's Research Partnership of Oregon

National Institutes of Mental Health – standing member Fall 2007-present.

National Science Foundation

Professional Memberships

American Psychological Association

Psychonomics Society, Member

Vision Science Society

Cognitive Neuroscience Society