Michael A. Cohen

Massachusetts Institute of Technology
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Academic Positions

2014-present *Massachusetts Institute of Technology*
Department of Brain and Cognitive Sciences
Postdoctoral Fellow
(Advisor: Nancy Kanwisher)

Education

2014	*Harvard University*	Ph.D. Cognitive Psychology (Advisors: Ken Nakayama & George A. Alvarez)
2007	*Tufts University*	B.A. Philosophy (Advisor: Daniel C. Dennett)

Awards, Fellowships, & Honors

2014 – present – National Institute of Health - National Research Service Award
2010 – 2013 – National Science Foundation - Graduate Research Fellowship
2013 – Derek Bok Teaching Award – Consciousness Explored
2012 – Elsevier/Vision Research Travel Award
2012 – Derek Bok Teaching Award – Intro. to Cognitive Neuroscience
2012 – Mind, Brain, and Behavior Graduate Student Award, Harvard University
2011 – Association for the Scientific Study of Consciousness Travel Award
2011 – Derek Bok Teaching Award – Intro. to Cognitive Psychology
2007 – Phi Beta Kappa – Tufts University
2007 – Summa Cum Laude – Tufts University
2007 – Helen M. Cartwright Prize in Philosophy – Tufts University

Publications

Cohen, M.A., Alvarez, G.A., Nakayama, K., & Konkle, T. (*in press*) Perceptual processing of object categories can be predicted across all of higher-level cortex. *Journal of Neurophysiology*.

Jackson-Nielsen, M.*, **Cohen, M.A.,** & Pitts, M. (*2017*) Ensemble perception requires attention. *Consciousness and Cognition*, 48, 149-160.

Cohen, M.A., Dennett, D.C., & Kanwisher, N. (*2016*) What is the bandwidth of perceptual experience? *Trends in Cognitive Science*. 20, 324-335.

Cohen, M.A., Rhee, J.Y.*, & Alvarez, G.A. (2016) Limits on perceptual encoding can be predicted from known receptive field properties of human visual cortex. *Journal of Experimental Psychology: Human Perception & Performance,* 42, 67-77.

Long, B.L., Konkle, T., **Cohen, M.A.**, & Alvarez, G.A. (2016) Visual shape features distinguish objects of different real-world sizes. *Journal of Experimental Psychology: General*, 145, 95-109.

Cohen, M.A., Nakayama, K., Konkle, T., Stantić, M.*, & Alvarez, G.A. (2015) Visual awareness is limited by the representational architecture of the visual system. *Journal of Cognitive Neuroscience,* 27, 2240-2252.

Cohen, M.A., Konkle, T., Rhee, J.Y.*, Nakayama, K., & Alvarez, G.A. (2014) Processing multiple visual objects is limited by overlap in neural channels. *Proceedings of the National Academy of Sciences, USA*. 111, 24, 8955-8960.
(F1000 Prime Recommended: http://f1000.com/prime/718431295?bd=1)

Cohen, M.A., Cavanagh, P., Chun, M.M., & Nakayama, K. (2012) The attentional requirements of consciousness. *Trends in Cognitive Sciences*, 16, 411-417.

Cohen, M.A., Cavanagh, P., Chun, M.M., & Nakayama, K. (2012) Response to Tsuchiya et al.: considering exogenous and endogenous attention. *Trends in Cognitive Sciences*, 16, 528.

Cohen, M.A., Alvarez, G.A, & Nakayama, K. (2011) Natural scene perception requires attention. *Psychological Science,* 22, 1165-1172.

Cohen, M.A., & Dennett, D.C. (2011) Consciousness cannot be separated from function. *Trends in Cognitive Sciences*, 15, 358-364.

Cohen, M.A., & Dennett, D.C. (2012) Response to Fahrenfort and Lamme: defining reportability, accessibility, and sufficiency in conscious awareness. *Trends in Cognitive Sciences*, 16, 157.

Pinto, Y., Otten, M.A., **Cohen, M.A.**, Horowitz, T.S., & Wolfe, J.M. (2011) The boundary conditions for Bohr's law: When is reacting faster than acting? *Attention, Perception and Psychophysics,* 73, 613-620.

Cohen, M.A., Evans, K.K., Horowitz, T.S., & Wolfe, J.M. (2011) Auditory and visual memory in musicians and nonmusicians. *Psychonomic Bulletin and Review*, 18, 586-591.

Evans, K.K., **Cohen, M.A.**, Tambouret, R., Horowtiz, T.S., & Wolfe, J.W. (2011) Does visual expertise effect visual recognition memory? *Attention, Perception and Psychophysics*, 73, 30-35.

Cohen, M.A., Pinto, Y., Howe, P.D.L., & Horowitz, T.S. (2011) The what/where trade-off in multiple object tracking. *Attention, Perception and Psychophysics*, 73, 1422-1434.

Horowitz, T.S. & **Cohen, M.A.** (2010) Direction information in multiple object tracking is capacity limited by a graded resource. *Attention, Perception, and Psychophysics*, 72, 1765-1775.

Pinto, Y., Howe, P.D.L., **Cohen, M.A.**, Horowitz, T.S. (2010) The more often you see an object, the easier it becomes to track. *Journal of Vision*, 4, 1-15.

Howe, P.D.L., **Cohen, M.A.,** Pinto, Y., & Horowitz, T.S. (2010) Distinguishing between parallel and serial accounts of multiple object tracking. *Journal of Vision,* 11, 1-13.

Cohen, M.A., Horowitz, T.S., & Wolfe, J.M. (2009) Auditory recognition memory is inferior to visual recognition memory. *Proceedings of the National Academy of Sciences, USA*. 106, 14, 6008-6010.

Horowitz, T.S., Wolfe, J.M., Alvarez, G.A., **Cohen, M.A.**, & Kuzmova, Y.I. (2009) The speed of free will. *Quarterly Journal of Experimental Psychology*, 62, 2262-2288.

Kunar, M.A., Carter, R., **Cohen, M.A.**, & Horowitz, T.S. (2008) Telephone conversation impairs sustained visual attention via a central bottleneck. *Psychonomic Bulletin and Review*, 15, 1135-1140.

Book chapters

Cohen, M.A. & Chun, M.M. (*in press*) Attention and consciousness: Change blindness, inattentional blindness, and the attentional blink. *Blackwell Companion to Consciousness.* (ed.) Max Velmans.

Howe, P.D.L., Evans, K.K., Pedersini, R. Horowitz, T.S., Wolfe, J.M., & **Cohen, M.A.** (2009) Attention: Selective Attention and Consciousness. *Encyclopedia of Consciousness,* (ed.) William P. Banks. Vol. 1, pp. 61-75. Oxford: Elsevier.

Manuscripts

Cohen, M.A., Dilks, D.D., Feather, J., Koldweyn, K.K., Weigelt, S., Hoke, H.* & Kanwisher, K. (*in progress*) Common representational structures across the visual hierarchy in children and adults.

Yamins, D., **Cohen, M.A.,** Hong, H., Kanwisher, N. & DiCarlo, J.J. (*in progress*) The emergence of face-selective units in a convolutional neural network that has never seen a face.

Störmer, V.S., **Cohen, M.A.,** & Alvarez, G.A. (*in progress*) Tuning attention to high-level objects: Spatially global effects of attention to faces in visual processing

Teaching Experience

*Awarded the Derek Bok Center Teaching Award – Harvard University

Cognitive and Brain Sciences of the Future (Instructor) –Tufts University, Fall 2016.

Consciousness and the Brain (Instructor) –MIT, Spring 2016.

Consciousness Explored (Co-Instructor: Daniel C. Dennett) – Tufts University, Spring 2015.

*Consciousness Explored (Teaching Assistant) – Harvard University, Spring 2013 (Dr. Ken Nakayama).

*Cognitive Neuroscience (Teaching Assistant) – Harvard University, Fall 2012 (Dr. Daniel Schacter and Dr. George Alvarez).

*Cognitive Psychology (Teaching Assistant) – Harvard University, Fall 2011 (Dr. Jennifer Wagner).

Introduction to Psychology (Teaching Assistant) – MIT, Fall 2009 (Dr. Jeremy Wolfe).

Introduction to Psychology (Teaching Assistant) – MIT, Fall 2008 (Dr. Jeremy Wolfe).

Invited Talks

Wellesley College – Spring 2016 – Restoring the senses with gene therapy and brain machine interfaces.

Vassar College – Spring 2016 – How the organization of the brain limits what we see.

University of Arizona – Spring 2016 - How the organization of the brain limits what we see.

Skidmore College – Spring 2016 - How the organization of the brain limits what we see.

Computational and Systems Neuroscience Workshop – Spring 2016 – Massive readout of object categories across higher-level visual cortex.

Guest Lectures

Anatomical constraints on perception and memory

Representation and the brain – Dr. James Haxby & Dr. Adina Roskies– Fall 2014 – Dartmouth College

The human face – Dr. Ken Nakayama – Fall 2013 – Harvard University

Concepts and the brain – Dr. Alfonso Caramazza – Fall 2013 – Harvard University

Consciousness (topics include attention, neural mechanisms, and clinical disorders)

Animal consciousness – Dr. Daniel Dennett – Spring 2016 – Tufts University

Conscious perceptual experience – Dr. Daniel Pollen – Spring 2015 – Harvard University

Contemporary Issues in Psychology– Dr. Mahzarin Banaji – Spring 2015 – Harvard University

Mind and Brain – Dr. Daniel Dennett – Fall 2014 – Tufts University

A Systems Neuroscience Approach to Consciousness– Dr. Daniel Pollen – Fall 2013 – Harvard University

Puzzles of the Mind: Humans, Animals, & Robots – Dr. Guven Güzeldere – Spring 2013 – Harvard University

Free will, decision-making, and Cognitive Neuroscience

Contemporary Issues in Psychology– Dr. Mahzarin Banaji – Spring 2013 – Harvard University

Contemporary Issues in Psychology– Dr. Mahzarin Banaji – Spring 2012 – Harvard University

Cognitive neuropsychology

Neuropsychology and Visual Cognition – Dr. Ariel Goldberg– Fall 2014 – Tufts University

Students Supervised

* Students who are co-authors on publications

Nikhil Kunapuli (MIT) –Spring 2016-present
Alicia Lai (MIT) –Fall 2015-Spring 2016
*Mirta Stantic (Harvard University) – Spring 2013-Spring 2015
Morgan Henry (Harvard University) – Spring 2013 – Spring 2014
Sarah Cormiea (Northeastern University) – Fall 2012 – Spring 2013
*Juliana Rhee (Harvard University) – Spring 2010 – Summer 2012
Ilana Bergelson (University of Chicago) – Summer 2010

Research Experience

2007-2009 *Brigham and Women's Hospital/Harvard Medical School*
Visual Attention Laboratory
Research Assistant
(Advisors: Jeremy M. Wolfe & Todd S. Horowitz)

2006-2007 *Tufts University*
Cognitive Neuroscience Laboratory
Research Assistant
(Advisor: Philip J. Holcomb)

Presentations

Cohen, M.A., Dilks, D.D., Feather, J., Koldweyn, K.K., Weigelt, S., & Kanwisher, K. (2016) Common representational structures across the visual hierarchy in children and adults. Presented at the Vision Sciences Society, Florida, USA.

Jackson-Nielsen, M., **Cohen, M.A.,** & Pitts, M. (2016) Ensemble perception requires attention. Presented at the Vision Sciences Society, Florida, USA.

Cohen, M.A., Konkle, T., Rhee, J.Y., Nakayama, K., & Alvarez, G.A. (2015) Processing multiple visual objects is limited by overlap in neural channels. Presented at the Association for the Scientific Study of Consciousness, Paris, Fr.

Yamins, D., **Cohen, M.A.,** Hong, H., Kanwisher, N. & DiCarlo, J.J. (2015) The emergence of face-selective units in a model that has never seen a face. Presented at the Vision Sciences Society, Florida, USA.

Cohen, M.A., Nakayama, K., Konkle, T., & Alvarez, G.A. (2015) Visual awareness is limited by the functional organization of the higher-level visual cortex. Presented at the Vision Sciences Society, Florida, USA.

Störmer, V.S., **Cohen, M.A.,** & Alvarez, G.A. (2015) Tuning attention to high-level objects: Spatially global effects of attention to faces in visual processing. Presented at the Vision Sciences Society, Florida, USA.

Cohen, M.A., Konkle, T., Nakayama, K., & Alvarez, G.A. (2014) A ubiquitous and uniform representational structure across higher-level visual cortex. Presented at the Vision Sciences Society, Florida, USA.

Cohen, M.A., Rhee, J.Y., & Alvarez, G.A. (2013) Spatial interference within receptive fields for high and low-level visual stimuli. Presented at the Vision Sciences Society, Florida, USA.

Long, B.L., Konkle, T., **Cohen, M.A.,** & Alvarez, G.A (2013) Real-world size influences visual search efficiency. Presented at the Vision Sciences Society, Florida, USA.

Cohen, M.A., & Dennett, D.C. (2012) A multi-access model of consciousness. Presented at the Association for the Scientific Study of Consciousness, Brighton, UK.

Cohen, M.A., Konkle, T., Rhee, J.Y., Nakayama, K., & Alvarez, G.A.. (2012) A High-level neural similarity predicts inter-stimulus competition. Presented at the Vision Sciences Society, Florida, USA.

Cohen, M.A., & Nakayama, K. (2011) Visual attention is necessary for visual awareness. Presented at the Association for the Scientific Study of Consciousness, Kyoto, Japan.

Cohen, M.A., Nakayama, K., Konkle, T., & Alvarez, G.A. (2011) Competition for working memory resources depends on the stimuli being remembered. Presented at the Vision Sciences Society, Florida, USA.

Cohen, M.A., Alvarez, G.A. & Nakayama, K. (2010) Natural scene perception requires attention. Presented at the Vision Sciences Society, Florida, USA.

Cohen, M.A., Horowitz, T.S., & Wolfe, J.M. (2009) Auditory Recognition Memory is Inferior to Auditory Recognition Memory. Presented at the Vision Sciences Society, Florida, USA.

Horowitz, T.S., **Cohen, M.A.,** Howe, P.D.L., & Wolfe, J.M. (2009) Do Multiple Object Tracking and Letter Recognition use the Same Visual Attention Resource? Presented at the Vision Sciences Society, Florida, USA.

Howe, P.D.L, **Cohen, M.A.,** Pinto, Y., & Horowitz, T.S. (2009) Distinguishing between parallel and serial accounts of multiple object tracking. Presented at the Vision Sciences Society, Florida, USA.

Cohen, M.A., Horowitz, T.S., & Wolfe, J.M. (2009) Auditory recognition memory is inferior to visual recognition memory. Presented at the Vision Sciences Society, Florida, USA.

Howe, P.D.L, **Cohen, M.A.,** Pinto, Y., & Horowitz, T.S. (2009) Humans can simultaneously attend to eight moving objects. Presented at the Psychonomics Meeting, Boston, MA.

Horowitz, T.S & **Cohen, M.A.** (2009) Do distractors disrupt prediction in multiple object tracking? Presented at the Psychonomics Meeting, Boston, MA.

Cohen, M.A., & Horowitz, T.S. (2008) Multiple Object tracking is capacity limited by a graded resource. Presented at the Tufts University Conference on Cognitive Neuroscience, Boston, USA.

Rich, A.N., Van Wert, M.J., **Cohen, M.A.,** & Horowitz, T.S. (2008). Avoiding distraction: The effects of salient singletons on tracking moving objects. Presented at the 35th Australasian Experimental Psychology Conference, Fremantle, Australia.

Rich, A.N., Van Wert, M.J., **Cohen, M.A.,** & Horowitz, T.S. (2008). Multiple object tracking is surprisingly robust to abrupt onsets. Presented at the Vision Science Society, Florida, USA.

Kunar, M.A., Carter, R., **Cohen, M.A.,** & Horowitz, J.M. (2008) Telephone conversations impair sustained visual attention via a central bottleneck. Presented at the Vision Science Society, Florida, USA.

Cohen, M.A., Howe, P.D.L., Horowitz, T.S., & Wolfe, J.M. (2008) Support for a postdictive Account of the Flash-lag Effect. Presented at the Vision Science Society, Florida, USA.

Horowitz, T.S., & **Cohen, M.A.** (2008) Distractors are more than foils in multiple object tracking. Presented at the European Conference on Vision and perception, Utrecht, Netherlands.

Horowitz, T.S. & **Cohen, M.A.** (2008) Slots vs. resources in multiple object tracking. Presented at the Psychonomics Meeting, Chicago, USA.

Journal Reviewing

Editorial Board: Frontiers in Consciousness Research (2015-*present*)

Ad-Hoc Reviewing: Current Biology; Journal of Neuroscience; Psychological Science; Journal of Experimental Psychology: General; Cognition; Journal of Experimental Psychology: Human Perception & Performance; Experimental Brain Research; Journal of Vision; Vision Research; Consciousness and Cognition; Attention, Perception, and Psychophysics; Visual Cognition; PLoS Computational Biology; PLoS One; Quarterly Journal of Experimental Psychology; Minds and Machines; Linguistic Sciences.