

Michael A. Cohen

Amherst College
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Academic Positions

2018-Present *Amherst College*
Assistant Professor
Department of Psychology and Program in Neuroscience

2018-Present *Massachusetts Institute of Technology*
Research Scientist
Department of Brain and Cognitive Sciences

2014-2018 *Massachusetts Institute of Technology*
Postdoctoral Fellow
Department of Brain and Cognitive Sciences
(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)

Research Support & Awards

2024 – Young Investigator Award, Vision Sciences Society

2022 – 2025 – Templeton World Charity Foundation Award (PI: \$459,117)

2021 – 2024 – CIFAR Azrieli Global Scholars Fellowship (PI: \$100,000)

2020 - 2021 – American Psychological Foundation Mary Whiton Calkins Grant (PI: \$20,000)

2018 - 2022 – National Science Foundation – Cognitive Neuroscience Grant (PI: \$350,764)

2014 - 2017 – National Institute of Health – NEI - National Research Service Award

2010 - 2013 – National Science Foundation - Graduate Research Fellowship

Manuscripts

*Undergraduate co-authors

Cohen, M.A. (*invited review*) Identifying the neural mechanisms supporting visual awareness.
Vision Research.

Cohen, M.A., *Rios, A., *Min, E., & Lafer-Sousa, R. (2024) Top-down knowledge affects perception when the input is ambiguous. *PsyArXiv*

Cohen, M.A., Dembski, C., Ortego, K., Steinhilber, C., & Pitts, M.A. (2023) Neural signatures of visual awareness independent of post-perceptual processing. *bioArxiv*.

Cohen, M.A., Lydic, K. & Murty, A.P.R. (2022) Perceptual awareness is limited by higher-level visual features: Evidence from convolutional neural networks. *bioArxiv*.

Publications

*Undergraduate co-authors

†Postdoctoral trainee

Kosakowski, H., **Cohen, M.A.,** Herrera, L., Nichoson, I., Kanwisher, N., & Saxe, R. (*in press*) Face-selective responses in FFA and MPFC emerge early in human infancy. *eNeuro*†

Cohen, M.A., *Sung, S., *Aloui, Z. (2024) Familiarity alters the bandwidth of perceptual experience. *Journal of Cognitive Neuroscience*. 22, 1-11.

Cohen, M.A., Keefe, J., & Brady, T.F. (2023) Perceptual awareness occurs along a graded continuum: No evidence from all-or-none failures in continuous reproduction task. *Psychological Science*. 34, 1033-1047.

†Hatamimajoumerd, E., Murty, N. A., Pitts, M., **Cohen, M.A.** (2022) Decoding perceptual awareness across the brain with a no-report fMRI masking paradigm. *Current Biology*. 32, 1-11.

Pramod, R.T., **Cohen, M.A.,** Tenenbaum, J., & Kanwisher, N. (2022) Representation of physical stability in the human brain. *eLife*. e71736.

Kosakowski, H.L., **Cohen, M.A.,** Takahashi, A., Keil, B., Kanwisher, N., & Saxe, R. (2022) Selective responses to faces, scenes, and bodies in human infant cortex. *Current Biology*, 32, 1-10.

Cohen, M.A., *Ostrand, C., *Frontero, N., *Pham, P-N. (2021) Characterizing a snapshot of perceptual experience. *Journal of Experimental Psychology: General*, 150, 1695-1709

Cohen, M.A., Botch, T.L., Robertson, C.E. (2020) The limits of color awareness during active, real-world vision. *Proceedings of the National Academy of Sciences USA*, 117, 13821—13827.

Cohen, M.A., Ortego, K., Kyroudis, A., Pitts, M. (2020) Distinguishing the neural correlates of perceptual awareness and post-perceptual processing. *Journal of Neuroscience*, 40, 4925-4935.

Cohen, M.A. & *Rubenstein, J. (2020) How much color do we see in the blink of an eye? *Cognition*, 104268.

Cohen, M.A., Dilks, D., Koldewyn, K., Weigelt, S., Feather, J., Kell, A., Keil, B., Fischl, B., Zollei, L., Wald, L., Saxe, R., Kanwisher, N. (2019) Representational similarity precedes category selectivity in the developing ventral visual pathway. *NeuroImage*, 197, 565-574.

Störmer, V.S., **Cohen, M.A.,** Alvarez, G.A. (2019) Tuning attention to object categories: Spatially global effects of attention to faces in visual processing. *Journal of Cognitive Neuroscience*, 16, 1-11.

- Lee, H., Margalit, E., Jozwik, K., **Cohen, M.A.**, Kanwisher, N., & DiCarlo, J.J. (2019) Topographic deep artificial neural networks reproduce the hallmarks of the primate inferior temporal cortex face processing network. *bioRxiv*, doi: 10.1101/2020.07.09.185116
- Cohen, M.A.** (2019) What is the true capacity of visual cognition? *Trends in Cognitive Sciences*, 23, 83-86.
- Cohen, M.A.**, Alvarez, G.A., Nakayama, K., & Konkle, T. (2017) Perceptual processing of object categories can be predicted across all of higher-level cortex. *Journal of Neurophysiology*, 117, 388-402.
- 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.**, Dennett, D.C., & Kanwisher, N. (2016) Ensemble perception, summary statistics, and perceptual awareness: A response. *Trends in Cognitive Sciences*, 20, 643.
- 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.
- 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., Horowitz, T.S., & Wolfe, J.W. (2011) Does visual expertise affect 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. (2018) Attention and consciousness: Change blindness, inattention 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.

Teaching Experience

Courses taught (listed by course number)

- Psychology 100 (*Introduction to Psychology*): Spring 2018, Fall 2019, Spring 2023; Spring 2024
- Psychology/Neuroscience 211 (*Cognitive Neuroscience*): Fall 2017, Spring 2020, Fall 2020, Fall 2022

Psychology/Neuroscience 361 (*Consciousness and the Brain*): Spring 2018, Fall 2019, Spring 2021, Fall 2022

Psychology/Neuroscience 367 (*Human Neuroscience*): Spring 2020, Spring 2021, Spring 2023; Spring 2024

First Year Seminar 132 (*Brain Sciences of the Future*): Fall 2017

Invited Talks

Dartmouth College – Spring 2024 – What is a snapshot of perceptual experience?

Villanova University – Spring 2024 – The cognitive and neural limits of perceptual awareness

Swarthmore College – Spring 2024 – The cognitive and neural limits of perceptual awareness

York University – Spring 2023 – The cognitive and neural limits of perceptual awareness

Cornell University – Spring 2023 – The cognitive and neural limits of perceptual awareness

Vrije University (Amsterdam) – Spring 2023 – The cognitive and neural limits of perceptual awareness

New York University – Spring 2023 – What is the bandwidth of perceptual experience?

University College London – Fall 2022 – What is the bandwidth of perceptual experience?

University of Chicago – Spring 2022 – What is the bandwidth of perceptual experience?

Yale University – Spring 2022 – What is the bandwidth of perceptual experience?

University of Sydney (Australia) – Spring 2021 – How much color do we see in the world?

UCLA – Fall 2020 – The future of the scientific study of consciousness in the brain

Johns Hopkins University – Fall 2019 – Characterizing the richness of perception under different attentional states.

Dartmouth College – Spring 2019 – What is a snapshot of perceptual experience?

University of Wisconsin, Madison – Fall 2018 – What is a snapshot of perceptual experience?

University of California, Berkeley – Fall 2017 – Ensemble statistics and the richness of visual perception.

Rhodes College – Summer 2017 – How the organization of the brain limits what we see.

Aarhus University (Denmark) – Spring 2017 – Ensemble statistics and the richness of visual perception.

Dartmouth College – Fall 2016 – The functional organization of the visual system: How does it constrain behavior and develop?

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.

Journal Reviewing

Ad-Hoc Reviewing: Nature Communications; Nature Human Behaviour; Proceedings of the National Academy of Sciences USA; Trends in Cognitive Sciences; Current Biology; eLife; Journal of Neuroscience; PLoS Computational Biology; 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 One; Quarterly Journal of Experimental Psychology; Minds and Machines; Linguistic Sciences.