

# Michael A. Cohen

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## Academic Positions

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2017-Present Amherst College  
Assistant Professor  
Department of Psychology and Program in Neuroscience

2014-2017 Massachusetts Institute of Technology  
Postdoctoral Fellow  
Department of Brain and Cognitive Sciences  
(Advisor: Nancy Kanwisher)

## Education

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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

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2021 – 2023 – CIFAR Azrieli Global Scholars Program Fellowship

2020 - 2021 – American Psychological Foundation Mary Whiton Calkins Grant (PI)

2018 - 2022 – National Science Foundation –Cognitive Neuroscience Grant (PI).

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

2010 - 2013 – National Science Foundation - Graduate Research Fellowship

## Publications

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\* Students who are co-authors on publications or conference abstracts

Pramod, R.T., **Cohen, M.A.**, Tenenbaum, J., & Kanwisher, N. (submitted) Representation of physical stability in the human brain. *bioRxiv*, doi: 10.1101/2021.03.19.385641

Kosakowski, H.L., **Cohen, M.A.**, Takahashi, A., Keil, B., Kanwisher, N., & Saxe, R. (submitted) Selective responses to faces, scenes, and bodies in human infant cortex. *PsyArXiv*, doi: 10.31234/osf.io/7hqcu.

**Cohen, M.A.**, \*Ostrand, C., \*Frontero, N., \*Pham, P-N. (*in press*) Characterizing a snapshot of perceptual experience. *Journal of Experimental Psychology: General*

**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.
- 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 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. (2018) 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

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Kosakowski, H.L., **Cohen, M.A.**, Takahashi, A., Keil, B., Herrera, L., Nichoson, I., Kanwisher, N., & Saxe, R. (submitted) In the infant brain, faces are not just visual, but social.

## Award and Honors

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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

## Teaching Experience (Amherst College only)

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### Courses taught (listed by course number)

Psychology 100 (*Introduction to Psychology*): Spring 2018, Fall 2019  
Psychology/Neuroscience 211 (*Cognitive Neuroscience*): Spring 2020, Fall 2020  
Psychology 212 (*Behavioral Neuroscience*): Fall 2017  
Psychology/Neuroscience 361 (*Consciousness and the Brain*): Spring 2018, Fall 2019, Spring 2021  
Psychology/Neuroscience 367 (*Human Neuroscience*): Spring 2020, Spring 2021  
Psychology 490 (*Perception/ Cognition Lab*): Spring 2018  
Psychology 490 (*Sensation and Perception*): Fall 2018  
Neuroscience 490 (*Physiology of Perception*): Spring 2018  
Psychology 498/499 (*Senior Honors Thesis*): Fall 2017, Spring 2018, Fall 2019, Spring 2020  
Neuroscience 498/499 (*Senior Honors Thesis*): Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020  
First Year Seminar 132 (*Brain Sciences of the Future*): Fall 2017

### Courses taught (listed in chronological order)

Fall 2017: *Brain Sciences of the Future, Behavioral Neuroscience, Senior Honors Thesis*  
Spring 2018: *Introduction to Psychology, Consciousness and the Brain, Perception and Cognition Lab, Physiology of Perception, Senior Honors Thesis*  
Fall 2018: *Sensation and Perception, Senior Honors Thesis*  
Spring 2019: *Senior Honors Thesis*  
Fall 2019: *Introduction to Psychology, Consciousness and the Brain, Senior Honors Thesis*

Spring 2020: *Cognitive Neuroscience, Human Neuroscience, Senior Honors Thesis*

Fall 2020: *Cognitive Neuroscience*

Spring 2021: *Consciousness and the Brain, Human Neuroscience*

## Invited Talks

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*Yale University* – Spring 2021 – TBD

*University of Sydney (Australia)* – Spring 2021 - TBD

*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?

*Amherst College* – Fall 2016 – The organization of the brain limits visual cognition.

*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.

## Students Supervised

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\* Students who are co-authors on publications or conference abstracts

^ Thesis students

Sebastian Montesinos (Amherst College) –Spring 2019-Present

^Sydney Baumgardt (Amherst College) –Fall 2019-Spring 2020

^Kayla Hall (Amherst College) –Fall 2019-Spring 2020

^Illyas Tezekbaev (Amherst College) –Fall 2019-Spring 2020

\*^Jordan Rubinstein (Amherst College) –Fall 2018-Spring 2019

\*Nicole Frontero (Amherst College) –Spring 2018-Spring 2019

\*Caroline Ostrand (Amherst College) –Spring 2018-Spring 2019  
\*^Phuong-Nghi Pham (Amherst College) –Fall 2017-Spring 2018  
^Jason Darrell (Amherst College) –Fall 2017-Spring 2018  
\*^Mirta Stantic (Harvard University) – Spring 2013-Spring 2015  
Morgan Henry (Harvard University) – Spring 2013 – Spring 2014  
\*Juliana Rhee (Harvard University) – Spring 2010 – Summer 2012  
Ilana Bergelson (University of Chicago) – Summer 2010

## Presentations

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\* Students who are co-authors on publications or conference abstracts

**M.A. Cohen**, \*Botch, T.L., Robertson, C.E. (2020) How colorful is visual experience? Evidence from gaze-contingent virtual reality. Presented at the Vision Sciences Society, Florida, USA.

Ortego, K., Pitts, M., **Cohen, M.A.** (2020) Neural correlates of visual awareness and task-relevance in a no-report masking paradigm. Presented at the Vision Sciences Society, Florida, USA.

Kosakowski, H., **Cohen, M.A.**, Keil, B., Takahashi, A., Nicholson, I., Alvez, L., Saxe, R. (2020) Face selectivity in human infant ventral temporal cortex. Presented at the Vision Sciences Society, Florida, USA.

Pramod, R.T., **Cohen, M.A.**, Lydic, K., Tenenbaum, J., & Kanwisher, N. (2020) Evidence that the brain's physics engine runs forward simulations of what will happen next. Presented at the Vision Sciences Society, Florida, USA.

\*Kyroudis, A., **Cohen, M.A.**, & Pitts, M. (2019) Neural activity linked with visual awareness and task-relevance in a novel 2x2 design. Presented at the Association for the Scientific Study of Consciousness, Ontario, Canada.

**Cohen, M.A.**, & \*Rubenstein, J. (2019) Characterizing a snapshot of perception under different attentional states. Presented at the Association for the Scientific Study of Consciousness, Ontario, Canada.

**Cohen, M.A.**, \*Ostrand, C., & \*Frontero, N. (2019) Characterizing a snapshot of perceptual experience. Presented at the Vision Sciences Society, Florida, USA.

Kyroudis, A., **Cohen, M.A.**, & Pitts, M. (2018) Neural activity linked with visual awareness and task-relevance in a novel 2x2 design. Presented at the Annual Meeting of the Society for Neuroscience, San Diego, California.

**Cohen, M.A.**, \*Ostrand, C., & \*Pham, P-N. (2018) What is a snapshot of perceptual experience? Presented at the Cognitive Science Association for Interdisciplinary Learning, Portland, Oregon.

**Cohen, M.A.**, \*Ostrand, C., & \*Pham, P-N. (2018) What is a snapshot of perceptual experience? Presented at the Association for the Scientific Study of Consciousness, Krakow, Poland.

**Cohen, M.A.** (2017) Ensemble statistics and the richness of visual perception. Presented at the Association for the Scientific Study of Consciousness, Beijing, China.

**Cohen, M.A.** (2017) Ensemble statistics expand the richness of visual perception. Presented at the Vision Sciences Society, Florida, USA.

**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, France.

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

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*Editorial Board:* Frontiers in Consciousness Research (2015-2018)

*Ad-Hoc Reviewing:* Proceedings of the National Academy of Sciences USA; Trends in Cognitive Sciences; Current Biology; 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.