

JORDAN WILLIAM SUCHOW

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<http://suchow.io>

EMPLOYMENT

2014— University of California, Berkeley
Institute of Cognitive and Brain Sciences
Postdoctoral Fellow
Advisor: Tom Griffiths

EDUCATION

2014 Harvard University
Department of Psychology
Ph.D. in Psychology — Cognition, Brain, & Behavior
Advisor: George Alvarez

2012 Harvard University
A.M. in Psychology

2009 Brandeis University
B.S. in Computer Science

2003–2008 New York University
Center for Neural Science
Research Assistant
Advisor: Denis Pelli

PAPERS

Reprints are available at <http://suchow.io>.

1. Suchow, J. W. & Alvarez, G. A. (2011). Motion silences awareness of visual change. *Current Biology*, 21, 140–143.
2. Suchow, J. W. & Pelli, D. G. (2012). Learning to detect and combine the features of an object. *Proceedings of the National Academy of Sciences*, 110(2), 785–790.
3. Fougnie, D., Suchow, J. W., & Alvarez, G. A. (2012). Variability in the quality of visual working memory. *Nature Communications*, 3(1229), 1–8.
4. Suchow, J. W.*, Brady, T. F.*, Fougnie, D., & Alvarez, G. A. (2013). Modeling visual working memory with the MemToolbox. *Journal of Vision*, 13(10):9, 1–8.

5. Suchow, J. W., Fougner, D., Brady, T. F. & Alvarez, G. A. (2014). Terms of the debate on the format and structure of visual memory. *Attention, Perception, & Psychophysics*, 76(7), 2071–2079.
6. Suchow, J. W. (2015). Building a social network one choice at a time. *PLoS ONE*, 10(7), e0133463.

CHAPTERS, ESSAYS, COMMENTARIES, DISSERTATIONS, & FICTION

7. Suchow, J. W. (2005). Seeing things: Visual perception research at NYU. *Imagine Magazine*, March 2005.
8. Suchow, J. W. (2011). A specific policy on authorship. *Nature*, 477, 244.
 ♡ Translated to audio in episode 397 of *StarShipSofa* in 2015.
9. Fan, J. E., & Suchow, J. W. (2014). The crowd is self-aware. Commentary on “Mapping collective behavior in the big-data era.” *Behavioral and Brain Sciences*, 37(01), 81–82.
10. Suchow, J. W. (2014). Measuring, monitoring, and maintaining memories in a partially observable mind. PhD Thesis, Harvard University.
11. Suchow, J. W. and Alvarez, G. A. (*in press*). Silencing the awareness of change. *The Oxford Compendium of Visual Illusions*. Oxford: Oxford University Press.

MANUSCRIPTS — IN PREP, SUBMITTED, & BEYOND

Drafts are available on request; write to suchow@berkeley.edu.

Suchow, J. W., Allen, B., Nowak, M. A. & Alvarez, G. A. (*submitted*). Evolutionary dynamics of visual memory.

Suchow, J. W. & Griffiths, T. L. (*submitted*). Deciding to remember: memory maintenance as a Markov Decision Process.

Suchow, J. W., Fougner, D. & Alvarez, G. A. (*submitted*). Looking inwards and back: realtime monitoring of visual working memory.

Herman, L. M., Suchow, J. W. & Alvarez, G. A. (*in prep*). Frequency-based synesthetic associations between letters and color.

Haberman, J., Suchow, J. W. & Alvarez, G. A. (*in prep*). Adaptation to the average orientation is revealed by dissociating local and global changes.

Fougner, D., Suchow, J. W. & Alvarez, G. A. (*in prep*). Degradation and death by natural causes in working memory.

Suchow, J. W., et al. (*in prep*). Individual differences in the perception of age.

VISUAL DEMONSTRATIONS

1. "Silencing." <http://visionlab.harvard.edu/silencing/>.
(with George Alvarez)
Presented at the Vision Sciences Society's *Demo Night* in 2010.
✂ 1st prize, Neural Correlate Society's 2011 *Best visual illusion of the year* contest
2. "Disembodied eyes and mouth illusion." visionlab.harvard.edu/upsidedown/.
(with Ken Nakayama and Maryam Vaziri-Pashkam)
Presented at the Vision Sciences Society's *Demo Night* in 2011.
3. "Touching and interpreting hallucinated patterns in dynamic visual noise."
(with Justin Jungé and George Alvarez)
Presented at the Vision Sciences Society's *Demo Night* in 2012.
4. "Reflections on a true mirror."
(with Jason Haberman)
Presented at the Vision Sciences Society's *Demo Night* in 2013.

SOFTWARE, HARDWARE, & INVENTIONS

1. MemToolbox, <http://memtoolbox.org>. A MATLAB toolbox for Bayesian modeling of visual working memory.
2. Wallace, <http://github.com/suchow/Wallace>. A platform for simulating cultural evolution in structured populations online.
3. Dissertate, <http://dissertate.io>. Beautiful L^AT_EX templates for a dissertation.
4. Autonudger. An iPhone-based commitment device that monitors movement and exercise, nudging the user towards better behavior.
5. LQQK, an Arduino-based wristband that facilitates visual experience sampling.
6. "Antisilencing," <https://vimeo.com/34934039>.
Invention reported to Harvard's *Office of Technology Development* in 2012.
7. "Methods and compositions for determining differences in taste perception."
Invention reported to UC Berkeley's *Office of Intellectual Property and Industry Research Alliances* in 2015.

CONFERENCE PRESENTATIONS & TALKS

Suchow, J. W., Morgan, T. J. H., Hamrick, J., Pacer, M., Meylan, S. C. & Griffiths, T. L. (2015). Wallace: A platform for simulating cultural evolution in structured populations online. Presented as a talk at the *Crowdsourcing and Online Behavioral Experiments* workshop at the *ACM Conference on Economics and Computation* in Portland, OR.

- Suchow, J. W. & Alvarez, G. A. (2014). The more you try to remember, the faster you forget: Load dependent forgetting and overreaching. Presented as a talk at the *Vision Sciences Society* conference in St. Petersburg, FL.
- Suchow, J. W. (2013). Maintaining memories in a partially observable mind. Presented as an invited talk at the *Visual Attention Seminar* at Brigham & Women's Hospital in Cambridge, MA.
- Suchow, J. W., Allen, B., Nowak, M. A. & Alvarez, G. A. (2013). Evolutionary dynamics of visual memory. Presented as a poster at the *Vision Sciences Society* conference in Naples, FL.
- Herman, L., Suchow, J. W., & Alvarez, G. A. (2013). Frequency-based synesthetic associations between letters and colors. Presented as a poster at the *Vision Sciences Society* conference in Naples, FL.
- Fougnie, D., Suchow, J. W., & Alvarez, G. A. (2013). Gradual decay and death by natural causes in visual working memory. Presented as a poster at the *Vision Sciences Society* conference in Naples, FL.
- Alvarez, G. A., Brady, T. F., Fougnie, D. & Suchow, J. W. (2013). Beyond slots vs. resources. Presented as a talk in the symposium *The structure of visual working memory* at the *Vision Sciences Society* conference in Naples, FL.
- Herman, L., Suchow, J. W., & Alvarez, G. A. (2013). Frequency-based synesthetic associations between letters and colors. Presented as a poster at the *Seventeenth International Conference on Cognitive and Neural Systems* in Boston, MA.
- Brady, T. F., Suchow, J., Fougnie, D. & Alvarez, G. A. (2012). MemToolbox: A MATLAB toolbox for analyzing visual working memory experiments. Presented as a poster the *Portland Working Memory Conference*, Portland, OR.
- Fougnie, D., Suchow, J. W., & Alvarez, G. A. (2012). Gradual decay and death by natural causes in visual working memory. Presented as a poster at the *Portland Working Memory Conference*, Portland, OR.
- Suchow, J. W., Fougnie, D., & Alvarez, G. A. (2012). Visual working metamemory. Presented as a poster at the *Vision Sciences Society* conference in Naples, FL.
- Fougnie, D., Suchow, J. W., & Alvarez, G. A. (2012). The volatility of working memory. Presented as a talk at the *Vision Sciences Society* conference in Naples, FL.
- Suchow, J. W. (2012). Metamemory and evolutionary dynamics in cognitive processes. Presented as a talk at the *Cognition, Brain, and Behavior Seminar* at Harvard.
- Fougnie, D., Suchow, J. W., & Alvarez, G. A. (2011). Variable precision among working memory representations. Presented as a talk at the *Object Perception, Attention, & Memory* conference in Seattle, WA.

Suchow, J. W. & Alvarez, G. A. (2011). Background motion silences awareness of foreground change. Presented as a poster at *SIGGRAPH* in Vancouver, Canada.

♣ Semifinalist, ACM Student research competition

Suchow, J. W. & Alvarez, G. A. (2011). Silencing awareness of change by background motion. Presented as a poster at the 15th annual meeting of the *Association for the Scientific Study of Consciousness* in Kyoto, Japan.

Haberman, J., Suchow, J. W., & Alvarez, G. A. (2011). The visual system adapts to mean orientation. Presented as a poster at the *Vision Sciences Society* conference in Naples, FL.

Suchow, J. W., & Alvarez, G. A. (2011). Which kinds of motion silence awareness of visual change? Presented as a poster at the *Vision Sciences Society* conference in Naples, FL.

Suchow, J. W., & Alvarez, G. A. (2010). Silent updating: cross-dimensional change suppression. *Journal of Vision*, 10(7), 299. Presented as a talk at the *Vision Sciences Society* conference in Naples, FL.

Suchow, J. W., & Pelli, D. G. (2008). Letter learning: feature detection and combination. *Journal of Vision*, 9(6), 1133. Presented as a poster at the *Vision Sciences Society* conference in Naples, FL.

Suchow, J. W. (2006). Feature integration during letter learning. Presented as a talk at *The Leadership Alliance* national symposium in Chantilly, VA. Also presented at the *NYU Summer Undergraduate Research Symposium* in New York, NY.

Suchow, J. W., & Pelli, D. G. (2005). Learning to identify letters: Generalization in high-level perceptual learning. *Journal of Vision*, 5(8), 712. Presented as a poster at the *Vision Sciences Society* conference in Sarasota, FL.

TEACHING, UC BERKELEY

2015 *Lecturer*, 2 sections of “Computational models of cognition”

TEACHING, HARVARD

2013 *Instructor*, “Contemporary issues in psychology: intensive cross-level analysis”

♣ Derek Bok Center teaching award

♣ George W. Goethals teaching award

2012 *Teaching fellow*, 2 sections of “Psychological science”, taught by Dan Gilbert

2012 *Instructor*, “Contemporary issues in psychology: intensive cross-level analysis”

♣ George W. Goethals teaching award

2012 *Teaching fellow*, “MATLAB programming for behavioral testing”, taught by George Alvarez

2011 *Teaching fellow*, 2 sections of “Psychological science”, taught by Dan Gilbert

FELLOWSHIPS & GRANTS

- 2015–2016 Fellow of the Center for Technology, Society, & Policy at UC Berkeley.
- 2014 NSF Postdoctoral Research Fellowship, awarded under the *Directorate for Social, Behavioral & Economic Sciences*, for project “The dynamics of updating and transmitting individual and collective memories” (\$172,425, Co-PI w/ Tom Griffiths, UC Berkeley).
- 2011 *Mind, Brain & Behavior Graduate Student Award*, Harvard University
- 2009–2012 *Sosland Fellow*, Harvard University
- 2005–2009 *Presidential Scholar*, Brandeis University
- 2005 *Semifinalist*, Intel Science Talent Search (formerly, Westinghouse STS), for project “Learning to identify letters: Generalization in high-level perceptual learning”, advised by Denis Pelli at NYU.

TRAINING

- 2014 Participant in a 2-week graduate summer school on brains, minds and machines at the *Marine Biological Laboratory* in Woods Hole, organized by the *Center for Brains, Minds, and Machines*.
- 2012 Research assistant in Vadodara, India, running a randomized controlled trial of mental abacus training in a local primary school. The project considered the effects of this training on mathematical ability and basic cognitive capacities, such as working memory.
- 2011 Participant in a 2-week graduate summer school in probabilistic models of cognition at UCLA’s *Institute for Pure & Applied Mathematics*, organized by Josh Tenenbaum, Noah Goodman, and Alan Yuille.
- 2006 NSF Research Experience for Undergraduates, at New York University
- 2006 The Leadership Alliance Early Identification Summer Research Program
- 2003–2005 Columbia University Science Honors Program

MEDIA COVERAGE

Suchow & Alvarez (2011) was covered by *Scientific American*, *New Scientist*, The Washington Post, Slashdot, Gizmodo, Wired.co.uk and .it, MSNBC, CVC Radio, CBS, *Sciences et avenir*, and others. As of 2015, the official demo page had been seen by 150,000 visitors and the YouTube demos had been played 2,000,000 times. *The Exploratorium*, a museum of science, art, and human perception in San Francisco, runs a physical installation of silencing in its permanent collection.

Suchow & Pelli (2012) was covered in an interview by *Medical Xpress*.

Interview with *Nerve.com* published as ‘Sex advice from neuroscientists’ in June 2009.

PROFESSIONAL SERVICE & OUTREACH

- 2012 *Judge*, Neural Correlate Society’s 2012 *Best visual illusion of the year contest*

- 2011–2013 Editorial board of *The New School Psychology Bulletin*
- 2011–2013 Scientific advisor to Pubget, Inc.
- 2011–2012 e-print committee of the *Association for the Scientific Study of Consciousness*

Ad hoc reviewer for:

Attention, Perception, & Psychophysics,
Cognition,
Cognitive Psychology,
Frontiers in Human Neuroscience,
Journal of Cognitive Psychology,
Journal of Comparative Psychology,
Journal of Experimental Psychology: Human Perception and Performance,
Journal of Experimental Psychology: Learning, Memory, and Cognition
Journal of the Optical Society of America A,
Journal of Vision,
PLOS ONE,
Perception,
Psychological Research,
Psychological Science,
Psychonomic Bulletin & Review, and
The New School Psychology Bulletin.

Member of the Vision Sciences Society, American Psychological Association,
Cognitive Science Society, and the Association for Computing Machinery.

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