

## Michael S. Cohen

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### **EDUCATION AND PROFESSIONAL EXPERIENCE**

**Northwestern University** – Postdoctoral Associate, May 2015-present

Advisor: Dr. Paul Reber

Research Topics: Cognitive and neural mechanisms of implicit learning as modulated by value

**University of California, Los Angeles** – Ph.D. in Psychology (Cognitive Neuroscience), June 2015

Dissertation Committee Co-Chairs: Dr. Barbara Knowlton, Dr. Jesse Rissman

Dissertation Title: Neural Mechanisms of Value-Directed Remembering in Young and Older Adults

**Yale University** – Research Assistant (Full-time), July 2007-July 2009

Supervisor: Dr. Jeremy Gray

Topic: Behavioral and fMRI studies of cognition, personality, emotion, and intelligence

**Villanova University** – Master of Science in Psychology, September 2007

Thesis Advisor: Dr. Thomas Toppino

Thesis Title: “How do subjects use judgments of item difficulty to guide study strategies in selection of massed or spaced practice?: A comparison of theories”

**Swarthmore College** – Bachelor of Arts, May 2005

Major in Psychobiology, Minor in History

Cumulative Undergraduate GPA: 3.61; Psychology/Biology GPA: 3.65

### **PUBLICATIONS**

#### **Published:**

Green, A.E., **Cohen, M.S.**, Raab, H., Yedibalian, C.G., Gray, J.R. (2015). Frontopolar activity and connectivity support dynamic conscious augmentation of creative state. *Human Brain Mapping*, 36, 923-934.

**Cohen, M.S.**, Rissman, J., Suthana, N.A., Castel, A.D., & Knowlton, B.J. (2014). Value-based modulation of memory encoding involves strategic engagement of fronto-temporal semantic processing regions. *Cognitive, Affective, and Behavioral Neuroscience*, 14, 578-592.

**Cohen, M.S.**, Yan, V.X., Halamish, V., Bjork, R.A. (2013). Do students think that difficult or valuable materials should be restudied sooner, rather than later?. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 39, 1682-1696.

Green, A.E., **Cohen, M.S.**, Kim, J.U., & Gray, J.R. (2012). Put your thinking cap on: An explicit cue improves creative analogical reasoning. *Intelligence*, 40, 598-603.

Toppino, T.C. and **Cohen, M.S.** (2010). Metacognitive control and spaced practice: Clarifying what people do and why. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 36, 1480-1491.

Toppino, T.C., **Cohen, M.S.**, Davis, M., Moors, A.C. (2009). Metacognitive control over distribution of practice: When is spacing preferred?. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 35, 1352-1358.

Toppino, T.C. and **Cohen, M.S.** (2009). The testing effect and the retention interval: Questions and answers. *Experimental Psychology*, 56, 252-257.

**Submitted or in preparation:**

**Cohen, M.S.,** Rissman, J., Suthana, N.A., Castel, A.D., Knowlton, B.J. (invited resubmission under review). Neural evidence for age-related similarities in semantic processing, but differences in proactive control, during value-directed memory encoding.

**Cohen, M.S.,** Rissman, J., Castel, A.D., Knowlton, B.J. (in preparation). Dual process correlates dissociate strategy-driven from automatic effects of value on memory.

Reggente, N., **Cohen, M.S.,** Zheng, Z., De Shetler N.G., Castel, A.D., Knowlton, B.J., Rissman, J. (in preparation). Memory recall for high value items correlates with individual differences in white matter pathways associated with reward processing and fronto-temporal communication.

Toppino, T.C., Litke, M.D., **Cohen, M.S.,** & Halamish, V. (in preparation). Learners' metacognitive predictions fail to predict benefits of spacing prior to restudy.

**Cohen, M.S.,** Friedman, M.C., Soderstrom, N.C., Castel, A.D., & Bjork, R.A. (unpublished manuscript). Dissociations between learners' predicted and actual effects of level of processing and assigned point value on subsequent memory performance.

**GRANTS**

NIH Ruth L. Kirchstein Predoctoral NRSA award, F31 AG047048, Dates: 4/1/2014-4/30/2015

Scientific Research Network on Decision Neuroscience and Aging (SRNDNA) pilot grant (\$15,000)  
Dates: 2/1/12-10/1/13; Role: Lead author and coordinator; PI: Barbara Knowlton

**OTHER AWARDS**

Scientific Research Network on Decision Neuroscience and Aging conference travel award, March 2015

UCLA Brain Research Institute (BRI) SfN travel award, 2013

Mechanisms of Motivation, Cognition, and Aging Interactions conference travel award, May 2013

UC Davis/UCSB Summer Institute in Cognitive Neuroscience fellow, June 2012

Graduate Summer Research Mentorship Program fellowship, 2010 and 2011, UCLA

UCLA NITP Advanced Neuroimaging Summer Program fellowship, 2010

Ingeborg L. and O. Byron Ward Outstanding Thesis Award, 2007, Villanova University

Awarded by the Psychology department faculty for the best M.S. thesis in the department in 2007

Philip Evans Scholarship, Swarthmore College, 2001-2005

Selected based on criteria including intellectual potential and financial need

National Merit Scholarship, 2001-2005

**CONFERENCE PRESENTATIONS (NATIONAL/REGIONAL)**

**Cohen, M.S.,** Rissman, J., Castel, A.D., Hovhannisyan, M., Knowlton, B.J. (2015). Dual process dissociations reveal how free recall tests interspersed during learning can bolster the efficacy of value-driven strategy use. Poster to be presented at the 56<sup>th</sup> annual meeting of the Psychonomic Society, Chicago, IL.

**Cohen, M.S.,** Knowlton, B.J., Castel, A.D., Rissman, J. (2015). Deactivation of brain regions associated with subsequent forgetting predicts effects of value on recognition memory in both young and older adults. Poster to be presented at the 45<sup>th</sup> annual meeting of the Society for Neuroscience, Chicago, IL.

**Cohen, M.S.,** Rissman, J., Castel, A.D., Hovhannisyan, M., Knowlton, B.J. (2015). Dual process dissociations reveal how free recall tests interspersed during learning can bolster the efficacy of value-driven strategy use. Talk to be presented at the 12<sup>th</sup> annual Bay Area Memory Meeting, Davis, CA.

**Cohen, M.S.,** Rissman, J., Castel, A.D., Knowlton, B.J. (2014). The value of studied items enhances recall and the recollection of non-recalled items. Poster presented at the 55<sup>th</sup> annual meeting of the Psychonomic Society, Long Beach, CA.

- Cohen, M.S.,** Rissman, J., Suthana, N.A., Castel, A.D., Knowlton, B.J. (2014). Age differences in brain response to cues that signal the value of to-be-remembered information. Poster presented at the 44<sup>th</sup> annual meeting of the Society for Neuroscience, Washington, DC.
- Cohen, M.S.,** Rissman, J., Castel, A.D., Knowlton, B.J. (2013). Dual process analysis of effects of value on recognition memory subsequent to free recall. Talk presented at the 11<sup>th</sup> annual Bay Area Memory Meeting, Stanford, CA.
- Cohen, M.S.,** Rissman, J., Suthana, N.A., Giebl, S., Castel, A.D., & Knowlton, B.J. (2014). Age differences in prefrontal contributions to selective encoding of valuable to-be-remembered words. Poster presented at the 21st annual meeting of the Cognitive Neuroscience Society, Boston, MA.
- Cohen, M.S.,** Rissman, J., Harbert, E., Castel, A.D., Knowlton, B.J. (2013). Enhancement of recognition memory by point value is associated with increased recollection. Poster presented at the 54<sup>th</sup> annual meeting of the Psychonomic Society, Toronto, ON, Canada.
- Cohen, M.S.,** Rissman, J., Castel, A.D., Knowlton, B.J. (2013). Enhanced functional connectivity associated with strategic enhancement of encoding for valuable items. Poster presented at the 43<sup>rd</sup> annual meeting of the Society for Neuroscience, San Diego, CA.
- Reggente, N., **Cohen, M.S.,** Zheng, Z., DeShetler, N.G., Castel, A.D., Knowlton, B.J., Rissman, J. (2013). Memory recall for high value words correlates with individual differences in white matter pathways associated with reward processing and fronto-temporal communication. Poster presented at the 43<sup>rd</sup> annual meeting of the Society for Neuroscience, San Diego, CA.
- Cohen, M.S.,** Rissman, J., Harbert, E., Castel, A.D., Knowlton, B.J. (2013). Enhancement of recognition memory by point value is associated with increased recollection. Talk presented at the 10<sup>th</sup> annual Bay Area Memory Meeting, San Francisco, CA.
- Cohen, M.S.,** Rissman, J., Castel, A.D., Knowlton, B.J. (2013). Memory selectivity is associated with greater engagement of areas involved in deep semantic encoding for high-value items. Poster presented at the Mechanisms of Motivation, Cognition, and Aging Interactions (MoMCAI) conference, Washington, DC.
- Cohen, M.S.,** Rissman, J., Castel, A.D., Knowlton, B.J. (2013). Memory selectivity is associated with greater engagement of areas involved in deep semantic encoding for high-value items. Poster presented at the 20<sup>th</sup> annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.
- Cohen, M.S.,** Rissman, J., Castel, A.D., Knowlton, B.J. (2012). Memory selectivity is associated with greater engagement of areas involved in deep semantic encoding for high-value items. Data blitz talk presented at the Center for Neurobiology of Learning and Memory conference, Irvine, CA.
- Cohen, M.S.,** Rissman, J., Castel, A.D., Knowlton, B.J. (2012). Activity in brain regions associated with deep semantic encoding predicts enhanced memory for high-value items. Talk presented at the 9<sup>th</sup> annual Bay Area Memory Meeting, Davis, CA.
- Green, A.E., **Cohen, M.S.,** Kim, J.U., Gray, J.R. (2012). Looking under your thinking cap: Deliberately trying to think more creatively increases frontopolar recruitment. Poster presented at the 19<sup>th</sup> annual meeting of the Cognitive Neuroscience Society, Chicago, IL.
- Cohen, M.S.,** Halamish, V., Bjork, R.A. (2011). Learners Fail To Appreciate Benefits of Longer Spacings Over Shorter Spacings in Repeated Practice. Poster presented at the 52<sup>nd</sup> annual meeting of the Psychonomic Society, Seattle, WA.

- Green, A.E., Kraemer, D.J.M., DeYoung, C.G., Fossella, J., **Cohen, M.S.**, Kim, J.U., Muller, K., Gray, J.R. (2011). A Gene-Brain-Cognition Pathway for the Effect of COMT on Executive Attention and IQ. Poster presented at the 18<sup>th</sup> annual convention of the Cognitive Neuroscience Society, San Francisco, CA.
- Cohen, M.S.**, Castel, A.D., Friedman, M.C., Bjork, R.A. (2010). The Interactive Influences of Level of Processing and Item Value on Recall and Metamemory Judgments. Poster presented at the 51<sup>st</sup> annual meeting of the Psychonomic Society, St. Louis, MO.
- Cohen, M.S.** and Toppino, T.C. (2009). Metacognitive Control and Spaced Practice: Clarifying What People Do and Why. Poster presented at the 50<sup>th</sup> annual meeting of the Psychonomic Society, Boston, MA.
- Kim, J.U., **Cohen, M.S. (co-first author)**, DeYoung, C.G., Green, A.E., Braver, T.S., Gray, J.R. (2009). Individual differences in emotional awareness moderate the effects of affective stimuli on working memory performance. Poster presented at the 16<sup>th</sup> annual CNS meeting of the Cognitive Neuroscience Society, San Francisco, CA.
- Cohen, M.S.**, Davis, M., Moors, A.C., Toppino, T.C. (2008) Metacognitive Control Over Distribution of Practice: When is Spacing Preferred? Poster presented at the 20<sup>th</sup> annual convention of the Association for Psychological Science, Chicago, IL.

### **RELEVANT COMPUTER EXPERIENCE**

Programming: E-Prime, PsyScope, AppleScript (including Studio), Matlab, Visual Basic (rudimentary)  
 Data analysis: FSL, SPSS, BioImageSuite (volumetric brain analysis), Unix command line, Excel

### **TEACHING EXPERIENCE**

#### **Teaching Assistant, UCLA**

Winter 2011: Psychology 10 (Introductory Psychology), Instructor: Dr. Paul Abramson

Guest lecture on Metacognition and Eyewitness memory

Spring 2011: Psychology 100B (Research Methods in Psychology), Instructor: Dr. Elizabeth Bjork

Winter 2012: Psychology 120A (Cognitive Psychology), Instructor: Dr. Martin Monti

Spring 2012: Psychology 121 (Cognitive Psychology Lab), Instructor: Dr. Ed Geiselman

Summer 2012: Psychology 100A (Psychological Statistics), Instructor: Dr. Tom Dehardt

Fall 2012: Psychology 186D (Functional Neuroimaging Lab), Instructor: Dr. Martin Monti

Winter 2013: Psychology 100A (Psychological Statistics), Instructor: Dr. Rajesh Nandy

Spring 2013: Psychology 120B (Sensation and Perception)

Instructors: Dr. Ladan Shams and Dr. Hakwan Lau

Summer 2013: Psychology 100B (Research Methods in Psychology), Instructor: Dr. Ed Geiselman

Winter 2014: Psychology 120A (Cognitive Psychology), Instructor: Dr. Martin Monti

Spring 2014: Psychology 15 (Introductory Psychobiology), Instructor: Dr. Jared Wong

Guest lecture on Aging and the Brain

### **ACADEMIC SERVICE EXPERIENCE**

#### **Ad-hoc reviewer for:**

Neurobiology of Aging

Frontiers in Decision Neuroscience

Aging, Neuropsychology, and Cognition (co-authored review with Alan Castel)

**Swarthmore College alumni admissions interviewer, 2011-present**

**Student Member, Swarthmore College Biology Department Faculty Search Committees, 2003, 2004**

### **SOCIETY MEMBERSHIPS**

Cognitive Neuroscience Society, Psychonomic Society, Society for Neuroscience, International Association for Metacognition, Psi Chi

**PATIENT-RELATED EXPERIENCE**

**Volunteer** (4 hr/week), Hospital of the University of Pennsylvania, May 2006-December 2006

Experience included 12 weeks on a neurology unit, primarily helping with administrative work, and 13 weeks in the ER, observing treatment of trauma patients and interacting with waiting patients