# Rebecca E. Martin, Ph.D.

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# **Research Experience**

#### Hartley Lab, New York University, New York, NY (2017-Present)

Postdoctoral Fellow

PI: Catherine Hartley, Ph.D.

# mindHIVE Citizen Science Initiative for Brain and Behavior Research, New York University, New York, NY (2019-Present)

Postdoctoral Fellow

PI: Suzanne Dikker, Ph.D.

# Social Cognitive and Affective Neuroscience Lab, Columbia University, New York, NY (2011-2017)

Graduate Student

PI: Kevin Ochsner, Ph.D.

#### Gabrieli Laboratory for Cognitive and Affective Neuroscience, MIT, Cambridge, MA (2008 - 2011)

Research Assistant

PI: John Gabrieli, Ph.D.

#### Bunge Cognitive Control & Development Lab, UC Berkeley, Berkeley, CA (Summer 2008)

Research Assistant

PI: Silvia Bunge, Ph.D.

#### **Education**

#### Ph.D. (2017) Columbia University, Psychology

Advisor: Kevin Ochsner

Dissertation: Influencing emotions: how brain development and social factors shape affective responses

# M.Ed. (2009) Harvard Graduate School of Education, Mind, Brain, and Education M.A. (2006) University of California Santa Cruz, Secondary School Social Science Education B.A. (2003) New York University, History

#### **Awards and Fellowships**

Postdoctoral NRSA Fellowship (F32 HD097873-01), Charting the role of variability in learning across development. Sponsor: Cate Hartley; cosponsor: Todd Gureckis. 2019-2021

Leon Levy Neuroscience Fellowship. Sponsor: Cate Hartley; mentorship committee: Todd Gureckis, Xavier Castellanos. 2018-2020

Institutional National Research Service Award (T32: MH019524), NYU Center for Neural Science NIMH Training Program in Learning, Memory, Development and Plasticity). 2017-2018

Predoctoral NRSA Fellowship (F31 MH107119-01A1), Social Influence on Emotion in Adolescence. Sponsor:

Kevin Ochsner; cosponsors: Daphna Shohamy, Nim Tottenham. 2015-2017

Edward E. Smith Memorial Award in Cognitive Neuroscience, 2014

Faculty Fellowship, Columbia University, 2011-2012, 2013-2014

Leo Rubinstein Endowed Fellowship, 2012-2013

Columbia Psychology Department Travel Award 2011, 2013
Harvard Graduate School of Education Class Commencement Marshal
Harvard Graduate School of Education Student Government Association Senator
UC Santa Cruz - only master's student to attain teaching assistant position in Evolution of Education course
New York University - Deans List and Scholarship five out of six terms

#### **Publications**

Martin, R. E., Silvers, J. A., Hardi, F., Stephano, T., Helion, C., Insel, C., Franz, P.J., Ninova, E., Lander, J.P., Mischel, W., Casey, B.J., Ochsner, K. N. (2019). Longitudinal changes in brain structures related to appetitive reactivity and regulation across development. *Developmental Cognitive Neuroscience*, *38*, 100675.

Martin, R. E., Villanueva, Y., Stephano, T., Franz, P. J., & Ochsner, K. N. (2018). Social influence shifts valuation of appetitive cues in early adolescence and adulthood. *Journal of Experimental Psychology: General*, 147(10), 1521–1530.

Silvers, J. A., Insel, C., Powers, A., Franz, P., Helion, C., Martin, R. E., Weber, J., Mischel, W., Casey, B.J., Ochsner, K. N. (2016). The transition from childhood to adolescence is marked by a general decrease in amygdala reactivity and an affect-specific ventral-to-dorsal shift in medial prefrontal recruitment. *Developmental Cognitive Neuroscience*, *10*, *128-137*.

Martin, R. E., & Ochsner, K. N. (2016). The neuroscience of emotion regulation development: implications for education. *Current Opinion in Behavioral Sciences*, 142-148.

Silvers, J. A., Insel, C., Powers, A., Franz, P., Helion, C., Martin, R. E., Weber, J., Casey, B.J., Mischel, W., & Ochsner, K. N. (2016). vIPFC–vmPFC–amygdala interactions underlie age-related differences in cognitive regulation of emotion. *Cerebral Cortex*, *1-13*.

West, M. R., Kraft, M. A., Finn, A. S., Martin, R. E., Duckworth, A. L., Gabrieli, C. F. O., & Gabrieli, J. D. E. (2015). Promise and paradox: measuring students' non-cognitive skills and the impact of schooling. *Educational Evaluation and Policy Analysis*, *38* (1), 148-170.

Saygin, Z. M., Osher, D. E., Koldewyn, K., Martin, R. E., Finn, A., Saxe, R., Gabrieli, J. D. E., & Sheridan, M. (2015). Structural connectivity of the developing human amygdala. *PLoS ONE*, *10*(*4*).

Finn, A. S., Kraft, M. A., West, M. R., Leonard, J. A., Bish, C. E., Martin, R. E., Sheridan, M.A., & Gabrieli, J. D. E. (2014). Cognitive skills, student achievement tests, and schools. *Psychological Science*, *25*(*3*), *736*–744.

Sheridan, M. A., Kharitonova, M., Martin, R. E., Chatterjee, A., & Gabrieli, J. D. E. (2014). Neural substrates of the development of cognitive control in children ages 5–10 years. *Journal of Cognitive Neuroscience*, *1–11*.

Kharitonova, M., Martin, R. E., Gabrieli, J. D. E., & Sheridan, M. A. (2013). Cortical gray-matter thinning is associated with age-related improvements on executive function tasks. *Developmental Cognitive Neuroscience*, *6*, 61–71.

Martin, R. E., & Groff, J. S. (2011). Collaborations in mind, brain, and education: an analysis of researcher–practitioner partnerships in three elementary school intervention studies. *Mind, Brain, and Education*, *5*(*3*), *115–120*.

# **Manuscripts**

Martin, R.E., Hartley, C.A. (in prep). Characterizing patterns of variability related to strategy shifts across development.

Martin, R. E., Weber, J., Koscik, T. R., Cunningham, W. A., & Ochsner, K. N. (submitted). Social influence modulates neural and behavioral reactions to emotional scenes.

Helion, C., Silvers, J. A., Powers, A., Dreyfuss, M., Jacoby, N., Insel, C., Martin, R., Weber, J., Mischel, W., Casey, B. J., & Ochsner, K. N. (invited revision: JEP:G). Comparing strategies for regulating negative emotions across development.

#### **Invited Talks and Conference Presentations**

Martin, R.E., Sertel, M., Suver, M., Valtcheva, S. (August, 2019). *Natural Reality: neural and behavioral responses to naturalistic stimuli*. Minisymposium organized for the NYU Langone Neuroscience Institute Seminar Series, New York, NY.

Martin, R.E. & Pollack, C. (March, 2019). *Applications of cognitive science research: contributions to education across levels of analysis.* Symposium chaired at the Society for Research on Child Development Biennial Meeting, Baltimore, MD.

Martin, R.E. (October, 2016). *Neural structures supporting regulation of craving across development*. Talk presented at the New York Social and Affective Neuroscience Meeting, New York, NY.

Martin, R.E. (June, 2016). Social influence on emotion in adolescence and adulthood. Talk presented at the Sackler Institute for Developmental Neurobiology at Cornell Weill Medical College, New York, NY.

Martin, R.E., Weber, J., & Ochsner, K.N. (September, 2015). *Social influence shapes neural and behavioral reactions to emotional scenes*. Talk presented at the New York Social and Affective Neuroscience Meeting, New York, NY.

Martin, R.E., & Ochsner, K.N. (September, 2014). *Peer feedback enhances food craving more for adolescents than adults*. Talk presented at the Flux Congress Annual Meeting, Los Angeles, CA.

Martin, R.E. (March, 2014). *I want what you want: social influence on food craving in adolescence*. Paper presented at the Society for Research on Adolescence Biennial Meeting, Austin, Tx.

#### **Posters**

Martin, R.E. & Hartley, C.A. (2020, September). *Understanding the roles of novelty and uncertainty in exploration across development*. Poster session presented at the Flux Congress Annual Virtual Meeting.

Martin, R.E. & Hartley, C.A. (2018, August). *Characterizing patterns of variability related to strategy shifts in learning across development.* Poster session presented at the Flux Congress Annual Meeting, Berlin, DE.

Martin, R.E. (2017, October). *The neuroscience of emotion regulation development: implications for education*. Poster session presented at the New York University Mind, Brain, and Education Collaboratory, New York, NY.

Martin, R.E., Weber, J., & Ochsner, K.N. (2016, November). *Social influence shapes neural and behavioral responses to emotional scenes*. Poster session presented at the Society for Neuroscience 42<sup>st</sup> Annual Meeting, San Diego, CA.

Martin, R.E., Silvers, J.A., Insel, C. Powers, A., Casey, B.J., Mischel, W., & Ochsner, K.N. (2016, September). *Lateral prefrontal cortex supports the relationship between age and regulation of craving*. Poster session presented at the Flux Congress Annual Meeting, St. Louis, MO.

Martin, R.E., & Ochsner, K.N. (2016, April). *Social influence shapes neural and behavioral reactions to emotional scenes*. Poster Session presented at the Cognitive Neuroscience Society 23<sup>st</sup> Annual Meeting, New York, NY.

Martin, R.E., & Ochsner, K.N. (2015, May). *Social influence shapes neural and behavioral reactions to emotional scenes*. Poster Session presented at the Association for Psychological Science 27th Annual Convention, New York, NY.

Martin, R.E., & Ochsner, K.N. (2015, April). *I feel the same way: neural mechanisms underlying social influences on emotion.* Poster Session presented at the 8<sup>th</sup> Annual Social and Affective Neuroscience Meeting, Boston, MA.

Martin, R.E., Villanueva, Y., Goraya, S., Franz, P.J., & Ochsner, K.N. (2014, April). *The effect of social influence on emotional reactivity*. Poster Session presented at the Cognitive Neuroscience Society 21<sup>st</sup> Annual Meeting, Boston, MA.

Martin, R.E., Goraya, S., Villanueva, Y., & Ochsner, K.N. (2013, September). *Social regulation of craving for food in adolescence and adulthood*. Poster session presented at the inaugural Flux Congress Annual Meeting, Pittsburgh, PA.

Martin, R.E., Franz, P.J., & Ochsner, K.N. (2013, April). *Social influence regulates emotional reactivity*. Poster session presented at the Social and Affective Neuroscience Annual Meeting, San Francisco, CA.

Martin, R.E., Silvers, J.A., Insel, C. Powers, A., Mehta, N., Casey, B.J., Mischel, W., & Ochsner, K.N. (2012, October). *Development of ventral lateral and medial prefrontal cortex predicts emotional reactivity and regulation of appetitive food cues*. Poster session presented at the Society for Neuroscience 42<sup>st</sup> Annual Meeting, New Orleans, LA.

Martin, R.E., Chattergee, A.M., Gabrieli, J.D.E., & Sheridan, M.A. (2011, November). *The development of executive function in young children: an fMRI study*. Poster session presented at the Society for Neuroscience 41<sup>st</sup> Annual Meeting, Washington D.C.

Martin, R.E., Ofen, N., Chai, J. & Gabrieli, J.D.E. (2010, April). *Relationships between development, cortical thickness and source memory*. Poster Session presented at the Cognitive Neuroscience Society 18<sup>th</sup> Annual Meeting, San Francisco, CA.

# **Specialized Training Courses and Workshops**

Computational Psychiatry Summer Course. (2019). University College London. New York, NY. NYU School of Journalism Science Communication Course. (2019). New York University, New York, NY. Designing Your Research Vision Professional Development Training. (2019). New York University School of Medicine, New York, NY.

Science of Learning Summer Symposium: Convergence of Educational, Developmental, Cognitive, Neuroscience and Artificial Intelligence Perspectives. (2018). Max Planck Institute, Berlin, DE.

Neurohackademy Summer Institute. (2018). University of Washington eScience Institute, Seattle, WA. Software Carpentry Workshop on Python, Unix, Git, SQL Academic Programming (2018). New York University Libraries, New York, NY.

Bayes, MCMC & Stan Short Course on Bayesian Statistical Programming. (2017). New York, NY. Sackler Summer Institute for Developmental Cognitive Neuroscience. (2013). Weill Cornell Medical School, New York, NY.

University of Maryland Summer Institute on Developmental Neuroscience. (2012). University of Maryland, College Park, MD.

NYU Center for Brain Imaging DTI Workshop. (2012). New York University, New York, NY. MGH Freesurfer Course. (2010). Massachusetts General Hospital, Boston, MA.

#### **Professional Affiliations**

Society for Neuroscience, Social and Affective Neuroscience Society, Cognitive Neuroscience Society, Flux Society for Developmental Cognitive Neuroscience, Society for Research in Child Development, Society for Research in Adolescence, Association for Psychological Science, International Mind, Brain and Education Society

#### **Ad Hoc Reviewer**

Neuropsychologia, Motivation and Emotion, Child Development

# **Teaching Experience**

#### Columbia University, New York, NY (2011-2016)

Teaching Fellow, Department of Psychology

Courses:

Developmental Psychology, Tottenham (2015)

Experimental Psychology: Social Cognition and Emotion, Ochsner (2013, 2014)

Memory and Stress, Metcalfe (2012)

Mind, Brain, and Behavior, Nautiyal (2011)

#### Columbia University, New York, NY (2014-2017)

Lead Instructor, Summer Programs for High School Students

Course: Science of Psychology

#### Harvard University, Cambridge, MA (2009)

Senior Thesis Advisor, Mind, Brain, and Behavior Program

#### Berkeley High School, Berkeley, CA (2006-2008)

Teacher, Department of Humanities and Social Sciences

Courses:

United States History (11<sup>th</sup> grade)

Women's Studies (12th grade)

Sociology and Anthropology (12th grade)

Human Geography (9<sup>th</sup> grade)

World History (9<sup>th</sup> grade)

Ancient Civilizations (9th grade)

#### University of California Santa Cruz, Santa Cruz, CA (2006)

Teaching Fellow, Department of Education

Course: Evolution of Education.

#### International School of the Peninsula, Palo Alto, CA (2005)

Substitute Teacher

#### Santa Clara Synchronized Swim Club, Santa Clara, CA (2003-2005)

Head Coach, Junior Age Group Team

#### **Guest Lectures**

The Adolescent Brain, New School for Social Research (2019)

Developmental Psychology and the Teen Brain, Columbia Summer High School Program (2018, 2019)

Introduction to Neuroanatomy and the Teen Brain, City and Country School, (2018)

The Science of Happiness, Columbia Summer High School Program, (2016, 2017)

Research Methods, Research Methods in Psychology, Columbia University, New York, NY, (2014, 2015, 2016)

Drugs and the Brain, Columbia Grammar and Prep School, New York, NY, (2013)

*Neuroanatomy*, Cognitive Neuroscience Course, Teachers College at Columbia University, New York, NY, (2012, 2013)

Brain Imaging Methods, New York Brain Bee, Columbia University, New York, NY, (2012)

Emotion and the Brain, Mind, Brain, and Behavior Course, Columbia University, New York, NY (2011)

Neuroanatomy, St. Peter School, Cambridge, MA, (2010, 2011)

# Mentoring

Columbia and Barnard Honors Projects: Projects: Julia Chen, Lior Zwanziger

Master's Program Research Assistants: Jen Yang, Theodore Stephano, Felicia Hardi, Suneet Goraya Post-Baccalaureate Research Assistants: Peter Franz, Yvette Villanueva, Lindsay Sturm, Athena Bochanis, Sarah Dahlen, Emilia Ninova, Eileen Hartnett

Undergraduate Research Assistants: Peter Hook, Kaila Manca, Sara Sakowitz, Shraddha Nair, May Levin High School Student Projects and Research Internships: Stefanie Esposito, Celine Lee, Lauren Cole

#### **Public Outreach**

#### Scientist Action and Advocacy Network, <a href="http://scaan.net/">http://scaan.net/</a> (2017-present)

Pro bono scientist

Policy briefs: Raise the Age NY, a campaign to increase the age youth may be tried in criminal courts; Miranda Rights and Youth, a campaign to protect youth from waiving Miranda rights

# Columbia University Neuroscience Outreach Group, New York, NY (2011-2016)

Volunteer Lecturer (Introduction to Neuroanatomy, Drugs and the Brain, Brain Imaging Methods) Middle and High School Curriculum Designer World Science Festival Volunteer

#### The School at Columbia University Science Expo, New York, NY, (2012, 2014, 2016, 2018)

Designed cognitive neuroscience exhibits and presentations Volunteer

#### **Other Publications**

Martin, R.E., (2019, April). Serial obsessions. *Cooper Square Review*. Retrieved from <a href="http://coopersquarereview.org/post/serial-obsessions/">http://coopersquarereview.org/post/serial-obsessions/</a>

Martin, R.E., (2019, April). When yelling is the best medicine. *Cooper Square Review*. Retrieved from http://coopersquarereview.org/post/when-yelling-is-the-best-medicine/

Martin, R.E., (2015, June). From molding minds to dissecting brains: Three lessons I have taken from the history classroom to the neuroscience lab. *Bright – a Medium publication about innovation in education*. Retrieved from <a href="https://medium.com/bright/from-molding-minds-to-dissecting-brains-b67413677510#.k0o25jqwq">https://medium.com/bright/from-molding-minds-to-dissecting-brains-b67413677510#.k0o25jqwq</a>

Martin, R.E., (2009). Grey areas. In N.I. Sommers (Ed.), *Teachers as writers: essays on teaching and learning*. Cambridge, MA: Harvard Graduate School of Education.

# **Other Work Experience**

#### Google, Mountain View, CA (2004)

Advertising Operations Representative

#### **DRAGONE Productions, San Francisco, CA (2004)**

Talent Scout, Casting Assistant for Le Rêve

#### Saturday Night Live, New York, NY (2002-2003)

Research and Production Intern

#### Pierre Rougier Consulting, New York, NY (2001-2002)

Public Relations and Production Intern

Olympic Synchronized Swimming Training Squad (2000) United States National Team (1996-2001)

Athlete