

Lindsay Meredith Oberman

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Education

Ph.D.	Experimental Psychology University of California, San Diego Thesis Advisor: V.S. Ramachandran	June 2007
M.A.	Experimental Psychology University of California, San Diego Thesis Advisor: V.S. Ramachandran	June 2004
B.S.	1.) Neuroscience and Behavioral Biology 2.) Psychology Emory University	May 2002

Professional Experience

Adjunct Faculty January 2008-Present
Emmanuel College

Post-doctoral Research Fellow July 2007-Present
**Harvard University, Beth Israel Deaconess Medical Center,
Berenson-Allen Center for Noninvasive Brain Stimulation**

Dr. Alvaro Pascual-Leone

Primary investigator on several studies investigating neural plasticity of the motor cortex in neurotypical individuals and individuals with autism spectrum disorders.

Graduate Student September 2002-June 2007
University of California, San Diego Department of Psychology, La Jolla, California

Dr. V.S. Ramachandran

Primary investigator on several studies investigating human cognitive and behavioral neuroscience in the Brain and Perception Laboratory. Collaborators include Jaime Pineda (Cognitive Neuroscience Laboratory) and Piotr Winkielman (Department of Psychology).

Clinical Research Assistant September 2000-May 2002
Emory University Undergraduate Department of Psychology, Atlanta, Georgia

Dr. Elaine Walker

Worked closely with lead researcher in methodology development, data collection, and data analysis of multiple cortisol level and memory studies.

Clinical Research Assistant May 2001-August 2001
Emory University Undergraduate Department of Psychology, Atlanta, Georgia

Dr. Stephan Hamann

Collected data in emotional arousal and functional Magnetic Resonance Imagery study.

Summer Intern

May 2000-August 2000

**National Institutes of Health, National Institute of Mental Health,
Clinical Brain Disorders Branch, Unit of Neuropsychology;** Bethesda, Maryland*Dr. Daniel Weinberger*

Participated in recruitment, screening, and scheduling process of participants for clinical schizophrenia studies. Contributed to soon-to-be published journal article.

Laboratory Assistant

October 1999-May 2000

Emory University Graduate Department of Psychiatry, Atlanta, Georgia*Dr. Gerald Vogel*

Read and analyzed EEG and EMG recordings of sleep deprived rats for a study on depression.

Summer Intern

May 1999-August 1999

**National Institutes of Health, National Institute of Alcohol Abuse and Alcoholism,
Laboratory of Neurogenetics,** Rockville, Maryland*Dr. David Goldman*

Sequenced DNA of patients suffering from alcoholism.

Laboratory Assistant

January 1999-October 1999

Yerkes Regional Primate Research Center, Neuroscience Laboratory,

Atlanta, Georgia

Dr. Michael Kuhar

Involved in multiple laboratory tasks for a study investigating effects of cocaine and other drugs on mouse brain tissue.

Laboratory Assistant

October, 1998-January 1999

Yerkes Regional Primate Research Center, Reproductive Biology Laboratory, Atlanta, Georgia*Dr. Kenneth Gould*

Monitored female chimpanzee menstrual cycles in a study investigating behavioral patterns as they relate to reproduction.

Awards & Honors

- Dean's Fellowship-Given by the Dean of Social Sciences 2002-2006
- Department of Psychology Research Award 2003
- Geckler Fellowship 2003-2004
- Jean Fort Dissertation Prize 2007
- NRSA Post-Doctoral Fellowship 2007-2010

Research in Progress

TMS: Investigations of neural plasticity of the motor cortex through the use of TMS-induced Motor Evoked Potentials in neurotypical and ASD populations.

MRI: Anatomical analysis of white matter volume and connectivity in neurotypical and ASD populations.

Autism: Investigations into the neural basis of empathy, imitation, and pragmatic language deficits in high functioning individuals with autism spectrum disorders.

Simulation: Investigations into the role of mirroring in social cognition through the use of electroencephalography (EEG) and electromyography (EMG).

Peer-Reviewed Papers

Oberman, L.M., Winkielman, P., Ramachandran, V.S. (in press). Slow Echo: Facial EMG evidence for the delay of spontaneous, but not voluntary emotional mimicry in children with autism spectrum disorders. *Developmental Science*.

Oberman, L.M. & Ramachandran, V.S. (in press) Reflections on the Mirror Neuron System: Their Evolutionary Functions Beyond Motor Representation. Invited submission to J. Pineda (Ed.) *Role of Mirroring in Social Cognition*. Totowa, New Jersey: Humana Press.

Winkielman, P., Niedenthal, P.M., **Oberman, L.M.** (in press). Embodied Perspective on Emotion-Cognition Interactions. Invited submission to J. Pineda (Ed.) *Role of Mirroring in Social Cognition*. Totowa, New Jersey: Humana Press.

Oberman, L.M. & Pascual-Leone, A. (2008). Cortical plasticity: A proposed mechanism by which genomic factors lead to the behavioral and neurological phenotype of autism spectrum and psychotic spectrum disorders. *Behavioral and Brain Sciences*, 31, 241-320.

Oberman, L.M., Ramachandran, V.S. (2008). How do Shared Circuits develop? *Behavioral and Brain Sciences*, 31, 1-58.

Oberman, L.M., Ramachandran, V.S. & Pineda, J.A. (2008). Modulation of mu suppression in children with autism spectrum disorders in response to familiar or unfamiliar stimuli: The mirror neuron hypothesis. *Neuropsychologia*, 46, 1558-1565.

Winkielman, P., Niedenthal, P.M., **Oberman, L.M.** (2008). The Embodied Emotional Mind. Invited submission to Semin, G. R., & Smith, E. R. (Eds.) *Embodied Grounding: Social, Cognitive, Affective, and Neuroscientific Approaches*. New York: Cambridge University Press.

Oberman, L.M. & Ramachandran, V.S. (2007) Evidence for deficits in mirror neuron functioning, multisensory integration, and sound-form symbolism in autism spectrum disorders. Invited submission to special issue of *Social Neuroscience* on Mirror Neurons and Communication.

Oberman, L.M., Winkielman, P., Ramachandran, V.S. (2007) Face to Face: Blocking facial muscles selectively impairs recognition of emotional faces. Invited submission to special issue of *Social Neuroscience* on Interpersonal Sensitivity.

Oberman, L.M., McCleery, J.P, Ramachandran, V.S., Pineda, J.A. (2007). EEG evidence for mirror neuron activity during the observation of human and robot actions: Toward an analysis of the human qualities of interactive robots. *Neurocomputing*, 70, 2194-2203.

Oberman, L.M., Pineda, J.A. & Ramachandran, V.S. (2007) The Human Mirror Neuron System: A Link Between Action Observation and Social Skills. *Social Cognitive and Affective Neuroscience*, 2, 62-66.

Oberman, L.M. & Ramachandran, V.S. (2007) The simulating social mind: The role of simulation in the social and communicative deficits of autism spectrum disorders, *Psychological Bulletin*, 133, 310-327.

Pineda, J.A & **Oberman, L.M.** (2006) What Goads Nicotine Addicts to Smoke? *Brain Research*, 1121, 128-135.

Oberman, L.M., Hubbard, E.M., McCleery, J.P., Altschuler, E.L., Ramachandran, V.S., Pineda, J.A. (2005). EEG evidence for mirror neuron dysfunction in autism. *Cognitive Brain Research*, 24, 190-198.

Manuscripts submitted, under revision, and in preparation

- Oberman, L.M.** & Pascual-Leone, A.P. (in prep). Can autism spectrum disorders be accounted for by enhanced developmental and experience-based plasticity mechanisms?
- Winkielman, P. & **Oberman, L.M.** (submitted). Investigations on Embodied Cognition in Autism. Invited submission to special issue of *Emotion Review* on Emotion and Embodiment.
- Oberman, L.M.**, Ramachandran, V.S., Niedenthal, P.M., Winkielman, P. (submitted). Embodied Simulation-A conduit for converting perception into understanding and high-level social skills. Invited submission to Balci, E. & Lassiter, D. (Eds.) *The Social Psychology of Visual Perception*. New York: Psychology Press.

Diffusion of Scientific Knowledge (Print and Internet)

Interviewed by Robert Lee Hotz. How your brain allows you to walk in another's shoes. *Wall Street Journal* (August 17, 2007).

Ramachandran, V.S. & **Oberman, L.M.** (November, 2006; June 2007) Broken Mirrors: A Theory of Autism, *Scientific American*.

Ramachandran, V.S. & **Oberman, L.M.** (May 13, 2006) Autism: The search for Steven, *New Scientist* 48-50.

Regular contributor on Psychology Today Internet forum.

Diffusion of Scientific Knowledge (Television and Radio)

Appearance on Charter Cable Station, Long Beach, CA (November, 2008).

Interviewed by Jon Hamilton *Neuroscientists Focus on Autism*. National Public Radio Morning Edition (November, 2007).

Appearance on *The Real Rain Man*. Discovery Health Channel (first aired in November, 2006).

Appearance on *Mirror Neurons*. Nova Science Now. Public Broadcasting Service (first aired in January, 2005).

Invited Talks

Psychology Department, University of Amsterdam, (November, 2008). Understanding the Mirror Neuron System in Autism.

National Academy of Science France-U.S. Frontiers of Science symposium, Roscoff, France (November, 2008) The Mirror Neuron System.

International Meeting for Autism Research, London, England. (May, 2008). EEG investigations of the mirror neuron system in typically developing individuals and individuals with autism spectrum disorder.

Neurology Grand Rounds, University of Vermont Medical School (February, 2008). Current theories and developments in autism spectrum disorders.

Series of 'Science Cafés' sponsored by Public Broadcasting Service in San Diego, CA; Minneapolis, MN; and Charlotte, NC. (2005-2006).

Conference Presentations

- Oberman, L.M.,** Maria-Tormos, J., Pascual-Leone, A. (November, 2008). Preliminary evidence for dysfunctional cortical plasticity mechanisms in autism spectrum disorders. Society for Neuroscience Abstract.
- Oberman, L.M.,** Winkielman, P., Ramachandran, V.S. (April, 2008). Delayed mimicry response in children with autism spectrum disorders: An EMG study. Cognitive Neuroscience Society Abstract.
- Oberman, L.M.,** Maria-Tormos, J., Pascual-Leone, A. (February, 2008). Preliminary evidence for dysfunctional cortical plasticity mechanisms in autism spectrum disorders. American Clinical Neurophysiology Society Abstract.
- Oberman, L.M.** (July, 2007). The Mu wave: An EEG Index of the Mirror Neuron System. National Science Foundation Workshop: Neurocognitive Development and Autism: The Mirror Neuron Hypothesis Abstract.
- Oberman, L.M.,** Ramachandran, V.S., Pineda, J.A. (November, 2007). Mirror neuron activity modulated by actor familiarity in children with autism spectrum disorders: An EEG study. Society for Neuroscience Abstract.
- Oberman, L.M.,** Winkielman, P., Ramachandran, V.S. (October, 2006). The role of the mirror neuron system in emotion recognition and judgments of others imitation. Society for Neuroscience Abstract.
- Oberman, L.M.,** Pineda, J.A., & Ramachandran, V.S. (April, 2006). The human mirror neuron system: A link between action observation and social skills. Cognitive Neuroscience Society Abstract.
- Ramachandran, V.S. & **Oberman, L.M.** (April, 2006). Evidence for deficits in mirror neuron function, multisensory integration, and sound-form symbolism in autism spectrum disorders. Cognitive Neuroscience Society Abstract.
- Oberman, L.M.,** Pineda, J.A., Ramachandran, V.S. (November, 2005). EEG evidence for the role of the mirror neuron system in metaphor comprehension. Society for Neuroscience Abstract.
- Gosch, C., Skinner, B., **Oberman, L.M.,** Pineda, J.A. (November, 2005). Mu rhythm suppression while viewing complex social and mechanical scenarios. Society for Neuroscience Abstract.
- Bressler, A.J., **Oberman, L.M.,** Pineda, J.A., and Ramachandran, V.S. (November, 2005). Recognizing the intentionality of actions: an EEG study of mirror neuron activity. Society for Neuroscience Abstract.
- Oberman, L.M.,** Pineda, J.A. (April, 2005). Investigations of EEG mu rhythm in moderate to heavy smokers. Cognitive Neuroscience Society Abstract.
- Shenk, L.M.,** Jacoby, B..P., McCleery, J.P, Ramachandran, V.S., Pineda, J.A. (October, 2004). EEG evidence of mirror neuron activity to unintentional non-goal directed actions. International Conference on Development and Learning
- Shenk, L.M.,** Hubbard, E.M., McCleery, J.P., Ramachandran, V.S., Pineda, J.A. (April, 2004). EEG evidence for mirror neuron dysfunction in autism. Cognitive Neuroscience Society Abstract.
- Shenk, L.M. &** Ramachandran, V.S. (November, 2003). Intact empathetic SCR in autistic individuals. Society for Neuroscience Abstract.

Teaching Experience

Instructor-Harvard Medical School

- Spring 2008: Induction of Plasticity with TMS
- Fall 2008: Safety and Ethics of TMS; Induction of Plasticity with TMS

Instructor-Emmanuel College

- Fall 2008: Research Methods
- Spring 2008: Research Methods

Instructor-University of California, San Diego

- Summer 2006: Social Cognition

Teaching Assistantships-University of California, San Diego

- Spring 2007: Developmental Psychology, Professor Monica Sweet
- Winter 2007: Neuropharmacology, Professor Stephan Anagnostaras
- Fall 2006: Introduction to Sensation and Perception, Professor Joseph McCleery
- Fall 2006: Introduction to Cognitive Science, Professor John Lewis
- Summer 2006: Neuropharmacology, Professor Stephan Anagnostaras
- Spring 2006: Social Cognition, Professor Piotr Winkielman
- Winter 2006: Psychological Disorders of Childhood, Professor Amanda Roberts
- Summer 2005: Cognitive Psychology, Professor Bob Slevc
- Winter 2005: Graduate level Statistics, Professor Norman Anderson
- Fall 2004: Graduate level Statistics, Professor Steve Link
- Spring 2004: Brain Damage and Mental Function , Professor V. S. Ramachandran
- Winter 2004: Psychology of Emotions, Professor Christine Harris
- Summer 2003: Brain Damage and Mental Function , Professor V. S. Ramachandran
- Summer 2003: Introduction to Neuropsychology , Professor V. S. Ramachandran
- Spring 2003: Introduction to Sensation and Perception, Professor Ione Fine

University Service

January 2007-March 2007: Admissions Representative, Department of Psychology, University of California, San Diego.

August 2005 – June 2006: Admissions Representative, Department of Psychology, University of California, San Diego.

Editorial Service

Ad Hoc reviewer for *Neuroscience Letters*

Ad Hoc reviewer for *Developmental Medicine and Child Neurology*

Ad Hoc reviewer for *Philosophical Psychology*

Ad Hoc reviewer for *Social Neuroscience*

Ad Hoc reviewer for *PLOS One*

Ad Hoc reviewer for *Psychophysiology*

Ad Hoc reviewer for *Psychological Review*

Grant Reviews

Ad hoc grant reviewer for the *U.S.-Israel Binational Science Foundation*

Ad hoc grant reviewer for the *Sick Kids Foundation*

Memberships

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| • Cognitive Neuroscience Society | Member | 2003-Present |
| • Society for Neuroscience | Member | 2003-Present |

References

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