Harvard Medical School Curriculum Vitae

Date Prepared:	**8/16/16**
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Place of Birth:	Belleville, NJ, USA

Education

2004	BA	Major in Molecular and Cell Biology	University of California, Berkeley
2006	PhD	Experimental Psychopathology (Christine Hooker, Ph.D.)	Harvard University

Postdoctoral Training

09/12-07/16	Research Fellow	Psychiatric and Neurodevelopmental Genetic Unit (Jordan Smoller, M.D., Sc.D.)	Massachusetts General Hospital
06/12-07/16	Research Associate	Harvard Vision Sciences Laboratory (Ken Nakayama, Ph.D.)	Harvard University

Faculty Academic Appointments

08/16-present	Instructor	Psychiatry	Harvard Medical School

Appointments at Hospitals/Affiliated Institutions

08/16-present	Assistant Neuroscientist	Psychiatry (Division of Depression and Anxiety Disorders)	McLean Hospital

Other Professional Positions

2004-2005	Research Assistant	University of Cambridge, Cambridge, UK
2005-2007	Research Assistant	University College London, London, UK
2012-2016	Research Associate	Stanley Center for Psychiatric Research, Broad Institute, Cambridge, MA
2012-2016	Research Associate	Harvard Vision Laboratory, Department of Psychology, Harvard University, Cambridge, MA
2014-	Consultant	23andMe, Mountain View, CA
2015	Consultant	Nevada Discovery Museum, Reno, NV
2015	Consultant	PatientsLikeMe, Cambridge, MA
2015-	Scientific Advisor	AARP, Washington, DC
2016-	HOPE Advisory Board Member	Partners Healthcare, Boston, MA

Major Administrative Leadership Positions

2016-	Assistant Director	Institute for Technology in Psychiatry, McLean Hospital
2016-	Brain & Behavior Working Group Leader	Harvard Football Players' Health Study
2015-	President and Director	The Many Brains Project, Inc. (a 501c3)

Committee Service

2010-2011	Committee for Undergraduate Instruction (Psychology)	Harvard University

Professional Societies

2007-	Society for Research in Psychopathology	Member
2007-2015	Cognitive Neuroscience Society	Member
2008-2015	Vision Sciences Society	Member
2013-2015	International Society of Psychiatric Genetics	Member

Grant Review Activities

2016	NCI SBIR Study Section, Cognitive Assessment of Cancer 2016	NIH *Ad hoc* Member

Editorial Activities

Ad hoc Reviewer:

American Journal of Psychiatry
Biological Psychiatry
Brain and Behavior
Brain and Cognition
Clinical Psychological Science
Drug and Alcohol Dependence
Early Human Development
Frontiers in Psychology
Journal of Cognitive Psychology
Journal of Nervous and Mental Diseases
Journal of Vision
Neuropsychiatric Genetics
Neuropsychologia
Personality and Individual Differences
PLoS ONE
Proceedings of the Royal Society B: Biological Sciences
Psychiatry Research
Psychiatry Research: Neuroimaging
Psychological Medicine
Royal Society Open Science
Schizophrenia Research
Scientific Reports
Social Cognitive & Affective Neuroscience

Honors and Prizes

2007	Stimson Research Award	Harvard University	Research
2008	Restricted Funds Travel Award	Harvard University	Research
2009	George W. Goethals Award for Excellence in Teaching	Harvard University	Teaching
2010	Bok Center Certificate of Distinction in Teaching (x2 – Spring / Fall)	Harvard University	Teaching
2010	George W. Goethals Award for Excellence in Teaching (x2 – Spring / Fall)	Harvard University	Teaching
2010	Restricted Funds Travel Award	Harvard University	Research
2011	Bok Center Certificate of Distinction in Teaching	Harvard University	Teaching
2011	George W. Goethals Award for Excellence in Teaching	Harvard University	Teaching
2012	Restricted Funds Travel Award	Harvard University	Research
2012	Clinical Research Award for Psychiatry	Massachusetts General Hospital	Research
2015	Champions of Change in Precision Medicine Invitee	The White House, Office of Science and Technology Policy	Research
2015	Precision Medicine Data Interoperability Roundtable Invitee	The White House, Office of Science and Technology Policy	Research
2015	Face of the Future Award	Society for Research in Psychopathology	Research

Report of Funded and Unfunded Projects

Funding Information

Past

2007-2010 National Science Foundation Graduate Research Fellowship
This grant supported graduate training to study individual differences in social perception in healthy people and in people with specific developmental deficits like prosopagnosia.

2013 Stuart T. Hauser Research Fellowship in Biological and Social Psychiatry
The grant supported postdoctoral training in methods for biological psychiatry, particularly the application of population and statistical genetics to the understanding of complex cognitive traits and psychiatric disorders.

2013-2016 Ruth L. Kirschstein Postdoctoral National Research Service Award
The grant supports postdoctoral training in methods for psychiatric genetics, specifically to understand the mechanisms through which variations in common alleles that increase risk for schizophrenia are linked with differences in cognitive and social information processing.

Report of Local Teaching and Training

Teaching of Students in Courses

2003	Cognitive Psychology (CogSci 100) Undergraduate students	University of California, Berkeley 5 hours per week for 16 weeks
2008	Abnormal Psychology (Psych 18) Undergraduate students	Harvard University, Cambridge, MA 5 hours per week for 16 weeks
2009-2011	Intensive Cross-level Analyses in Social and Cognitive Neuroscience (Psych 975) Undergraduate students	Harvard University, Cambridge, MA 5 hours per week for 64 weeks
2014	Harvard University Social Neuroscience Graduate Seminar Psychology doctoral students	Harvard University, Cambridge, MA Guest Lecturer: Genetics of Social Cognition

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):

2015	Adult Cognition over the Lifespan Clinical and Research Fellows	Harvard Medical School, Boston, MA One-hour lecture

Laboratory and Other Research Supervisory and Training Responsibilities

2008-2012	Supervision of research assistants and graduate students assisting in social neuroscience research	Harvard University, Cambridge, MA twice-a-week mentorship for 48 months
2012-2015	Supervision of research assistants assisting in psychiatric genetic / epidemiological research	Massachusetts General Hospital, Boston, MA twice-a-week mentorship for 30 months

Local Invited Presentations

No presentations below were sponsored by outside entities.

2005 Realignment in fMRI Preprocessing, Invited Lecture, Methods for Dummies Lecture Series
Functional Imaging Laboratory, University College London, London, UK

2011 Using Citizen Science to Understand Individual Differences in Face Processing, Invited talk, Kreiman Lab
Center for Life Sciences, Harvard Medical School, Boston, MA

2012 Citizen Science and Individual Differences, Invited Lecture, Psychology Seminar Series
Wellesley College, Wellesley, MA

2012 From Many, One: Using Big Data to Understand the Neuropsychology of Individuals, Invited talk, Psychiatric Genetics and Translational Research Seminar
Center for Human Genetic Research, Massachusetts General Hospital, Boston, MA

2013 Emerging Technologies in High-throughput Cognitive Phenotyping, Invited talk, Genomes2People Program
Brigham and Women's Hospital, Harvard Medical School, Boston, MA

2013 Bringing Neuropsychology Online: Crowdsourcing approaches to understanding the development and organization of cognitive functions, Invited talk, Harvard Oxytocin Research Initiative
Department of Psychiatry, Massachusetts General Hospital, Boston, MA

2013 Bringing Neuropsychology Online: Crowdsourcing approaches to understanding the development and organization of cognitive functions, Invited talk, Grand Rounds, Center for Addiction Medicine
Department of Psychiatry, Massachusetts General Hospital, Boston, MA

2013 Taking Research Out Into the Wild, Invited Panel Discussion, Center for Research on Computation and Society
School of Engineering and Applied Sciences, Harvard University, Cambridge, MA

2014 TestMyBrain.org: Understanding Individuals, Invited talk, Neurolunch seminar series
Center for Brain Sciences, Harvard University, Cambridge, MA

2015 Crowd-collaboration to Understand the Mind and Brain, Invited talk, Kohane Lab meeting
Center for Biomedical Informatics, Harvard Medical School, Boston, MA

2016 Mobilizing Patients and Technology to Understand More About the Mind and Brain, Invited talk, Center for Human Genetic Research Seminar
Center for Human Genetic Research, Massachusetts General Hospital, Boston, MA

2016 Building a Lab for Participants and Researchers, Invited Talk, Clinical Research Seminar
Psychology Department, Harvard University, Cambridge, MA

2016 Mobilizing Patients and Technology to Understand More About the Mind and Brain, Invited talk, Cognitive Neurology Seminar
Neurology, Beth Israel Deaconess Medical Center, Boston, MA

2016 Building a Digital Neuropsychology Lab for Participants and Researchers, Invited talk, Psychiatry Research Quarterly Meeting
Psychiatry, Massachusetts General Hospital, Boston, MA

2016 Mobilizing Patients and Technology to Understand More About the Mind and Brain, Invited talk, Center for Depression, Anxiety, and Stress Research Seminar Series
McLean Hospital, Belmont, MA

2016 Building a Digital Neuropsychology Lab for Participants and Researchers, Invited talk, OCD and Related Disorders Program
Psychiatry, Massachusetts General Hospital, Boston, MA

2016 TestMyBrain.org, Invited Talk, Patient Engagement Meeting
Laboratory of Computer Science, Massachusetts General Hospital, Boston, MA

2016 Building a Digital Neuropsychology Lab for Participants and Researchers, Invited talk, Center for Translational Cognitive Neuroscience meeting
VA Boston Healthcare System, Boston, MA

Report of Regional, National and International Invited Teaching and Presentations

Those presentations below sponsored by outside entities are so noted and sponsor(s) is (are) identified.

Regional

2015 Participant-driven approaches for understanding cognition and brain health, Invited talk
PatientsLikeMe, Cambridge, MA (Sponsored by PatientsLikeMe)

2016 The Many Brains Project: Cognitive Testing for Science and Society, Invited talk
Center for Integration of Medicine and Innovative Technology, Boston, MA
(Sponsored by CIMIT, a 501c3)

2016 TestMyBrain.org and the Many Brains Project, Invited talk, GET Labs, Genomes, Environments, and Traits Conference
Personal Genome Project, Boston, MA (Sponsored by PersonalGenomes, a 501c3)

2016 Participant-driven approaches for understanding cognition and brain health, Invited talk, Type 1 Diabetes Exchange, Boston, MA (Sponsored by Unitio, a 501c3)

2016 Mobilizing People and Technology to Understand More About the Mind and Brain, Invited talk, Lunch-and-Learn Seminar
Panorama Education, Boston, MA (Sponsored by Panorama Education)

National

2012 Family Resemblance in Face Recognition, Invited Talk, Social Psychology Brown Bag Series
Psychology Department, Northwestern University, Evanston, IL

2013 Crowdsourcing Methods for High-Throughput Cognitive Phenotyping, Invited Talk, Lunch Talk Series
23andMe, Mountain View, CA (Sponsored by 23andMe, Inc.)

2015 Crowdsourcing to Study Cognition: New Insights into Human Cognitive Variation and How to Collect Large Samples for Understanding the Brain and Metabolic Disease, Invited talk, Intersection of Metabolic Disease and Neurocognitive Dysfunction Workshop
NIDDK, National Institutes of Health, Bethesda, MD (Sponsored by the NIH)

2015 Building a Digital Neuropsychology Lab for Participants and Researchers, Invited talk
NIDDK, National Institutes of Health, Bethesda, MD (Sponsored by the NIH)

2016 Web-based Methods for Measuring Cognition Across the Lifespan, Invited Talk, National Institute of Aging Pre-Conference Workshop
Association for Psychological Science Meeting, Chicago, IL (Sponsored by the NIH).

International

2014 TetsMyBrain.org for Survey Data Collection, Invited Talk
WHO World Mental Health Survey Initiatives Annual Meeting, Boston, MA

2016 The Path from Cognitive Neuroscience to Cognitive Neuropsychology: Partnering with Participants for Rapid Test Development and Validation, Invited talk, Symposium on the Future of Neuropsychology
International Neuropsychological Society, London, UK

Report of Technological and Other Scientific Innovations

TestMyBrain.org	TestMyBrain.org is a website I developed for behavioral assessment, where people participate in studies in exchange for personalized feedback about their own cognitive functions, personality, and abilities. Through TestMyBrain.org, my colleagues and I have produced over 50 sensitive and reliable neuropsychological measurements and tested over 1.6 million people since 2008. TestMyBrain.org has since been converted to a nonprofit organization, The Many Brains Project, to provide the site and associated technology with ongoing support.

Report of Education of Patients and Service to the Community

Educational Materials for Patients and the Lay Community
No educational materials below were sponsored by outside entities.

Patient Educational Material

2010-present	Face-to-Face newsletter	Contributor	Bi-yearly newsletter from Harvard Vision Lab to Prosopagnosic Patients
2008-present	TestMyBrain.org	President/Director	Public facing website for running research studies as well as helping promote awareness of modern methods for understanding the mind and brain.
2013-present	Making Science Less WEIRD	Director and Contributor	Website promoting greater diversity in behavioral science participation using web-based methods

Lay Community Educational Material

2009	How Fit is Your Brain?	Contributed Materials	New York Times
2009	In the News: Test Your Brain	Contributed Materials	PBS The Human Spark
2010	The Seven Best Websites to Kill Time On	Contributed Materials	Oprah Magazine

2010	Face Memory Peaks Late	Interviewee	Science News
2010	The Face Looks Familiar	Interviewee	Harvard Gazette
2012	Bringing the Psych Lab Online	Interviewee	Harvard Gazette
2014	Popular Science: Research Moves from Professionals' Labs to Amateur's Homes	Interviewee	Harvard Magazine
2015	Some Brain Functions Improve As You Age	Interviewee	Boston Globe (Cover Story)
2015	Older Really Can Mean Wiser	Interviewee	New York Times (Most Emailed)
2015	Smarter By the Minute, Sort Of	Interviewee	Harvard Gazette (Most Popular; Editor's Pick)
2015	The Rise and Fall of Cognitive Skills	Interviewee	MIT News
2015	At What Age Does Your Brain Peak?	Interviewee	Pacific Standard
2015	The Smartest Age	Interviewee	The Atlantic
2015	New Study Shows That Your Brain's Powers Change As You Age	Interviewee	Forbes
2015	Test Your Cognitive Abilities with Online Games	Interviewee	CBC Radio
2015	Not all Your Cognitive Abilities Decline As You Age	Interviewee	Radio Boston, WBUR
2015	How Your Experiences Influence Who You're Attracted To	Interviewee	Huffington Post
2015	Yes, You Really Do have a 'Type', Science Says	Interviewee	Time Magazine
2015	Hot or Not? Why Don't We Agree	Interviewee	The Guardian

2015	Just My Type? The Reason We Find Certain People Attractive	Interviewee	The Today Show, NBC
2015	The Science Behind the Perception of Beauty	Interviewee	WBZ-TV, CBS Boston
2016	Love Factually	Interviewee	Bustle Magazine
2016	Using the Web to Map the Mind	Interviewee	MGH Research: In-Depth

Report of Scholarship

Peer reviewed publications in print or other media

Research Investigations

1. Hooker C, **Germine L**, Knight RT, D'Esposito M. Amygdala response to facial expressions reflects emotional learning. *Journal of Neuroscience*. 2006; 26(35): 8915-8922.
2. Duchaine B, **Germine L**, Nakayama K. Family Resemblance: Ten Family Members with Prosopagnosia and Within-Class Object Agnosia. *Cognitive Neuropsychology*. 2007; 24: 419-430.
3. Hooker C, Verosky S, **Germine L**, Knight RT, D'Esposito M. Mentalizing about emotion and its relationship to empathy. *Social Cognitive Affective Neuroscience*. 2009; 3: 204-217.
4. Duchaine B, Jenkins R, **Germine L**, Calder A. Normal gaze discrimination and adaptation in seven prosopagnosics. *Neuropsychologia*. 2009; 47(10), 2029-2036.
5. Hooker C, Verosky S, **Germine L**, Knight RT, D'Esposito M. Neural activity during social signal perception correlates with self-reported empathy. *Brain Research*. 2010; 1308: 100-113.
6. Wilmer J, **Germine L**, Chabris C, Chatterjee G, Williams M, Loken E, Nakayama K, Duchaine B. Human face recognition ability is specific and highly heritable. *Proceedings of the National Academy of Sciences*. 2010; 107(11): 5238-5241.
7. Wilmer J, **Germine L**, Loken E, Guo X, Chatterjee G, Nakayama K, Williams M, Chabris C, Duchaine B. Response to Thomas: Is human face recognition ability entirely genetic? *Proceedings of the National Academy of Sciences*. 2010; 107(24): E101.
8. **Germine L**, Cashdollar N, Duzel E, Duchaine B. A new selective developmental deficit: Impaired object recognition with normal face recognition. *Cortex*. 2011; 47: 598-607.
9. **Germine L**, Garrido L, Bruce L, Hooker C. Social anhedonia is associated with neural abnormalities during face emotion processing. *Neuroimage*. 2011; 58(3): 935-945.
10. **Germine L**, Duchaine B, Nakayama K. Where cognitive development and aging meet: Face learning ability peaks after age 30. *Cognition*. 2011; 118(2): 201-210.
11. **Germine L,** Hooker C. Face emotion recognition is related to individual differences in psychosis-proneness. *Psychological Medicine*. 2011; 41(5): 937-948.

12. Halberda J, Ly R, Wilmer J, Naiman D, **Germine L.** Number sense across the lifespan as revealed by a massive internet-based sample. *Proceedings of the National Academy of Sciences.* 2012; 109(28): 11116-11120.
13. Wilmer J, **Germine L,** Chabris C, Chatterjee G, Gerbasi M, Nakayama K. Capturing specific abilities as a window into human individuality: the example of face recognition. *Cognitive Neuropsychology.* 2012; 29(5-6): 360-392.
14. **Germine L**, Nakayama K, Duchaine B, Chabris C, Chatterjee G, Wilmer J. Is the web as good as the lab? Comparable performance from web and lab in cognitive/perceptual experiments. *Psychonomic Bulletin & Review.* 2012; 19(5): 847-857.
15. Susilo T, **Germine L**, Duchaine, B. Face recognition ability matures late: Evidence from individual differences in young adults. *Journal of Experimental Psychology: Human Perception & Performance.* 2013; 39(5): 1212-1217.
16. Wilmer J, Nakayama K, **Germine L.** Face recognition: a model specific ability. *Frontiers in Human Neuroscience*. 2014; 8: 769.
17. Tosto MG, Petrill SA, Halberda J, Trzaskowski M, Tikhomirova TN, Bogdanova OY, Ly R, Wilmer JB, Naiman DQ, **Germine L,** Plomin R, Kovas Y. Why do we differ in Number Sense? Evidence from a genetically sensitive investigation. *Intelligence*. 2014; 43: 35-46.
18. **Germine L**, Benson T, Cohen F, Hooker C. Psychosis-proneness and the rubber hand illusion of body ownership. *Psychiatry Research*. 2014; 207(1-2): 45-52.
19. **Germine L**, Dunn EC, McLaughlin K, Smoller JW. Childhood adversity is associated with adult theory of mind and social affiliation, but not face processing. *PLoS ONE*. 2015; 10(6): e0129612.
20. Fortenbaugh FC, DeGutis J, **Germine L**, Wilmer J, Grosso M, Russo K, Esterman M. Sustained attention across the lifespan in a sample of 10,000: Dissociating ability and strategy. *Psychological Science.* 2015; 26(9): 1497-510.
21. Hartshorne J, **Germine L.** When does cognitive functioning peak? The asynchronous rise and fall of different cognitive abilities across the lifespan. *Psychological Science.* 2015; 26(4): 433-443.
22. **Germine L**, Russell R, Bronstad PM, Blokland GAM, Smoller JW, Kwok H, Anthony SE, Nakayama K, Rhodes G, Wilmer JB. Individual aesthetic preferences for faces are shaped mostly by environments, not genes. *Current Biology.* 2015; 25(20): 2684 - 2689.
23. **Germine L**, Robinson EB, Smoller JW, Calkins ME, Moore TM, Hakonarson H, Daly M, Lee PH, Holmes AJ, Buckner RL, Gur RC, Gur RE. Association between polygenic risk for schizophrenia, neurocognition, and social cognition across development. *Translational Psychiatry.* In press.

Thesis

Germine L. Emotion Recognition and Psychosis-Proneness: Neural and Behavioral Perspectives. Cambridge (MA): Harvard University; May 2012.

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings

(last three years, not yet published as manuscripts)

1. **Germine L**, Robinson EB, Smoller JW, Calkins ME, Moore TM, Hakonarson H, Gur RC, Gur RE. Polygenic risk for schizophrenia is related to slower processing of social and verbal information

across development. Society for Research in Psychopathology, New Orleans, LA, 2015. *Selected for Face of the Future Award

2. Wilmer JB, Nakayama K, **Germine L.** Multiple object tracking predicts math potential. Vision Sciences Society, St. Pete's Beach, FL, 2016.

Narrative Report (limit to 500 words)

The major contribution of my research has been the translation of discoveries from basic cognitive neuroscience research to validated tools for high-throughput cognitive phenotyping, mobile health assessment, and broad participant engagement using the web. Through my website, TestMyBrain.org, I have collected data from over 1.6 million people and validated techniques for web-based assessment of cognition and behavior. This endeavor has resulted in notable publications in broad areas of behavioral science including cognitive genetics, epidemiology, and lifespan cognitive change. This work has also led to partnerships with industry and external nonprofit organizations, as well as engagement with leadership at both NIH and the White House Office of Science and Technology Policy. The majority of my effort is dedicated to research, although I also spend a significant amount of time mentoring students, teaching, and on outreach activities towards greater public engagement in science and health.

In my area of expertise, my major achievements in the last four years have been the establishment and validation of methods for combining traditional neuropsychological measurement principles and discoveries in cognitive neuroscience with the growing domain of digital, cloud-based, and/or mobile health technologies. My technology development efforts are centered around a fundamental reconceptualization of the research laboratory, based on the principles that (1) treating participants as partners can increase both social and scientific impact, and (2) that understanding human variability and diversity can be accomplished "in the wild", outside of a traditional laboratory or clinical setting. Critically, this reconceptualization has allowed me to perform studies with much larger and more diverse samples than is typically feasible. In the past 2-3 years, I have published work on the architecture of age-related cognitive differences across the lifespan (10,000 – 50,000 participants), described etiological dissociations in basic aspects of social cognition and perception (20,000 participants), and uncovered patterns in the associations between early life trauma and adult cognitive and mental health (5,000 participants). My future work will further develop these methods / technologies for health and science, towards better characterizations of human cognitive variation through longitudinal phenotyping, patient engagement, and the development of scalable tools for mental and cognitive health that can be broadly disseminated.

My main contributions to teaching and education over the last four years have been (1) the mentorship of promising undergraduate students (two mentees, currently in medical school), (2) local talks to fellows, graduate students, and local laboratories, and (3) creating resources that can be used by teachers and educators through TestMyBrain.org

In summary, I have created a niche at the intersection of translational science, technology development, and participant engagement. I look forward to furthering my research program, teaching and participating in the rich intellectual community, and creating additional connections with clinicians, researchers, and business partners.