

MARY HELEN IMMORDINO-YANG, ED.D.

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Publications at: <http://www-rcf.usc.edu/~immordin/>

January, 2012

Neuroscience Graduate Program Faculty, University of Southern California (December 2010-)

Assistant Professor of Education, Rossier School of Education, University of Southern California

Waite Phillips Hall, Room 601D, Los Angeles, CA 90089-4038

(August 2008-)

Assistant Professor of Psychology, Brain and Creativity Institute, University of Southern California

3641 Watt Way, Suite B17, Los Angeles, CA 90089-2520 (preferred mailing address) (November 2008-)

Area of Interest: I am interested in the psychological and neural bases of social emotion, social interaction and identity across cultures and their implications for intrinsic motivation, moral development, learning and schools. I use an interdisciplinary, developmental approach that combines affective and social neuroscience, human development psychology and educational psychology.

EDUCATION

University of Southern California, Brain and Creativity Institute/Rossier School of Education

Postdoctoral Fellow under the mentorship of A. Damasio and R. Rueda, Jan. 2006-Aug. 2008

Foci: Social/affective neuroscience, cortical and subcortical neuroanatomy, neuroimaging, psychophysiology, applications of neuroscience to educational theory and practice

Harvard University Graduate School of Education, Cambridge, Massachusetts

Doctor of Education in Human Development and Psychology, June 2005

Master of Education in Cognitive Development, June 1998

Foci: Language, Emotion, Cognitive Development and Learning; Mind, Brain and Education

Coursework: Neuropsychology; Cognitive, Emotional, Linguistic, Symbolic and Memory Development; Evolutionary Psychology; Qualitative and Quantitative Research Methodology

Cornell University, College of Arts and Sciences, Ithaca, New York

Bachelor of Arts in French Literature: May 1993; Dean's List

Coursework: Psychology, Biology, Anthropology, Math, Physics, French, Kiswahili, Russian

HONORS AND AWARDS

Received a "Commendation" from the County of Los Angeles for service to the education community, August, 2011.

Delivered an invited address at the annual meeting of the Association for Psychological Science held in Washington, D.C., May 2011.

Named a "Rising Star" by the Association for Psychological Science, March 2011.

Awarded the 2010 Cozzarelli Prize by the editorial board of the *Proceedings of the National Academy of Sciences* (best paper of the year published in *PNAS* in the behavioral/social science category; 6 papers honored out of 3700 published) for Immordino-Yang, M.H., McColl, A., Damasio, H., Damasio, A. (2009). Neural correlates of admiration and compassion. *PNAS*, 106(19), 8021-8026.

Inaugural recipient of the "Transforming Education through Neuroscience Award," co-sponsored by the International Mind, Brain and Education Society and the Learning & the Brain Society, Feb. 2008. See

also: Daniel, D. and Fischer, K. W. (2008) First award for transforming education through neuroscience: Mary Helen Immordino-Yang. *Mind, Brain and Education* 2(2), iii.

Associate North American Editor for *Mind, Brain and Education*, the journal of the International Mind, Brain and Education Society (IMBES), awarded “Best New Journal in the Humanities and Social Sciences” by the Association of American Publishers Academic Division, Feb. 2008.

Invited by the Dean to deliver the Student Welcoming Address at the new student Orientation Ceremony, Harvard University Graduate School of Education, Cambridge, MA on Sept. 8, 2003.

Harvard University Mind, Brain and Behavior Fellow, Sept. 2002.

Awarded “distinction” by all committee members on qualifying paper, entitled: *Working memory for music and language: Do we develop analogous systems based on similar symbolic experience?* at the Harvard University Graduate School of Education, Cambridge, MA in May, 2001.

Qualifying paper proposal awarded “model” status by the Committee on Degrees anonymous faculty committee, Harvard University Graduate School of Education, Cambridge, MA in May, 2000.

FUNDING

Awarded:

“ <i>CAREER: A longitudinal, cross-cultural investigation of psychosocial and neurobiological aspects of emotion development in adolescence,</i> ” PI, NSF 1151920	Pending
“ <i>Culture-specific neurobiological models of the influence of narrative framing using sacred values,</i> ” DARPA	Pending
Undergraduate Research Associates Program, USC, 2011-12	\$10K
“ <i>Neural correlates of social emotion</i> ”	
Rose Hills Foundation 2011 Science and Engineering Fellowship (for involving students in research)	\$7K
“ <i>Family Socialization, Neural Functioning and Positive Symptoms of Schizophrenia.</i> ”	
Culture, Neuroscience and Psychosis Program, Foundation for Psychocultural Research (PI, with Co-PI Steven Lopez)	\$41K
“ <i>Cross-cultural investigations of admiration and compassion: an interdisciplinary study</i> ”	
Advancing Scholarship in the Humanities and Social Sciences Initiative (USC Provost), 2010-11	\$25K
“ <i>Cross-cultural investigations of admiration and compassion</i> ”	
Undergraduate Research Associates Program, USC, 2010-11	\$3.3K
“ <i>Neural correlates of social emotion</i> ”	
Rose Hills Foundation 2010 Science and Engineering Fellowship (for involving students in research)	\$7K
“ <i>Learning and the brain: conversations between neuroscientists and teachers</i> ”	
Annenberg Media Foundation, grant for development of MBE online course for educators, 2010-11 (Content Director; with Kurt Fischer (advisor) and Matt Schnepps (producer) at Harvard University)	\$1M
“ <i>Neural correlates of social exclusion among youth exposed to family conflict</i> ”	
NIH/NICHD NRSA Post-doctoral Fellowship F32 HD63255, 2010-13 (Co-sponsor, with G. Margolin, sponsor; Darby Saxbe is PI)	\$156K
“ <i>A multimodal study of the neural correlates of experiencing admiration and compassion</i> ”	
Center for Compassion and Altruism Research and Education (CCARE), 2009-10 (Co-PI with Josef Parvizi at Stanford University)	\$35K
“ <i>A tale of two cases: functional compensation and learning after hemispherectomy</i> ”	
American Association of University Women Doctoral Fellowship Recipient, 2004-05	\$20K
“ <i>Emotion and affective prosody in a right hemispherectomized adolescent boy</i> ”	
Anonymous Summer Dissertation Research Travel Award, 2003	\$1K
Spencer Foundation Doctoral Research Training Grant, 1999-2002	(tuition/fees, plus \$30K stipend)

Official advisory role:

“Turning Experiences into Understandings: Using Universal Design for Learning to Harness the Power of Positive Emotion”

NSF, Informal Science Education Research Program (PI is G. Rappolt-Schlichtmann at Center for Applied Special Technologies; award period 3 years) \$1.5M

“Development of an International Cultural Neuroscience Consortium (ICNC)”

NIH R13 (PI is Joan Chiao, Northwestern U.; Co-PI is Shinobu Kitayama, U. of Michigan)

RESEARCH

Current Research: My current research projects investigate: (1) psychological, neural and psychophysiological correlates of social emotions and implications for development; (2) cultural differences in social emotion and its physiological correlates in the U.S., China, and Brazil, and implications for education in multicultural contexts; (3) the psychological and neural systems involved in moral judgment; (4) functional compensation for emotional and cognitive skills after hemispherectomy, and implications for understanding individual differences in learning.

Postdoctoral Research: "Brain bases of social and moral emotions across cultures."

Rossier School of Education/Brain & Creativity Institute, USC, Los Angeles, CA (Jan. '06 – Aug. '08)

Conceptualize, develop, design and execute experiments related to social emotions across cultures, including data collection, analysis and interpretation using BOLD fMRI and simultaneous psychophysiological recording, as well as psychological analytic techniques like qualitative interview. Primary responsibility for the writing of scholarly manuscripts on topics related to social emotions, applications to education, and the data from the social emotions project, in conjunction with other collaborators. Supervise a neuroscience graduate student in the design and execution of complementary experiments in China, and supervise multiple RAs and students. Mentored by A. Damasio and R. Rueda.

Dissertation Research: "A tale of two cases: Emotion and affective prosody after right and left hemispherectomy."

Harvard Graduate School of Education, Cambridge, MA (Aug. '00 - June '05)

Conceived, designed and implemented a multiphase, multilingual study of prosodic language development and emotion in two adolescent boys with brain hemispheres surgically removed to control epilepsy and forty-six normal peers. Supervised multiple research assistants in Argentina and the U.S. in data collection and analysis. Collaborated with researchers at Children's Hospital and Mass. General Hospital, Boston. Advised by K. Fischer, C. Snow, and C. Ayoub.

Qualifying Research: "Working memory for music and language: Do we develop analogous systems based on similar symbolic experience?" (Aug. '00 – Dec. '02)

Conducted an extensive review of knowledge about the neuroscience, cognitive science and development of processes related to working memory for music and language. Developed a novel theoretical framework to reconceptualize the relationships between these domains. Advised by K. Fischer, H. Gardner, and D. Rose.

Related Activities and Service

Associate Editor for North America, *Mind, Brain and Education* (Wiley) ('09 - present)

Editorial Board Member, *Culture and Brain* (Springer) ('11-present)

Editorial Board Member, *Journal of Experimental Psychology* ('11-present)

Elected member of the governing board of IMBES ('11-'13)

Invited Member of the Neuroeducation Leadership Coalition, Society for Neuroscience ('10- present)

Invited conference planning committee member, Foundation for Psychocultural Research ('11)

Member of the Delphi Panel of international experts on neuroeducation, charged with producing ethical and research standards for the new field of MBE. (‘08 – ‘10)

Award committee chair, Award for transforming education through neuroscience, sponsored by IMBES and the Learning and the Brain Conference (‘09, ‘10, ‘11)

Reviewer, Divisions: Research on Learning in Formal and Informal Settings, Cognitive Neuroscience National Science Foundation, Arlington, VA (2008 - present)

Reviewer, *Proceedings of the National Academy of Sciences; Contemporary Education Psychology; Brain; Cerebral Cortex; Mind, Brain and Education; Behavior and Brain Sciences; Journal of Educational Computing Research; Human Brain Mapping; PLOS one*, as well as various other scholarly journals, books, grant programs and conferences.

Mind, Brain and Education Doctoral Research Group, HUGSE, Cambridge, MA (May. ‘04 - June ‘05)
Conceived and implemented a new research training group for MBE doctoral students and faculty, with two other advanced doctoral students, advised by Kurt Fischer. Led biweekly research seminar (Fall ‘04).

Advanced Seminar in Neuroimaging, Dornsife Neuroimaging Center, USC, Los Angeles, CA
Contribute to discussions furthering neuroimaging technologies and analysis. (May - Dec. ‘07)

Mind, Brain, and Behavior Working Group, Harvard University, Cambridge, MA (Oct. ‘98 – June ‘05)
Lectured, led and participated in cross-disciplinary discussions of pertinent research issues. HUGSE representative to the university-wide steering committee (‘03-‘04). Advised faculty on the program's design, allocation of resources, and ways to foster inter-disciplinary doctoral-level collaboration (‘03-‘04).

Brain Matters Discussion Group, HUGSE, Cambridge, MA (Jan. ‘99 - June ‘04)
Organized student-run, biweekly meetings to discuss issues relating neuroscience research to education.

Dynamic Development Research Group, HUGSE, Cambridge, MA (Chair, ‘00-01) (Jan. ‘98 - June ‘04)

Other Research Experience

Researcher, Project on Music Learning, HUGSE (Nov. ‘97 - Sept. ‘01)
Using previously audiotaped data, designed a study of the use of language as a self-scaffolding tool in piano practicing. Supervised an assistant's reliability coding and analysis.

Research Assistant, Autism Project
Massachusetts General Hospital, Boston, MA (with H. Tager-Flusberg and G. Harris) (Jan. - Sept. ‘00)
Helped to design and test fMRI protocols for research on language abilities and face perception in adult autistic subjects.

Research Assistant, Project on Cognitive Transfer of Reading Skills in Young Bilingual Learners
HUGSE, Cambridge, MA (with C. Snow and M. Carlo) (Oct. ‘98 – July ‘99)
Helped to design, implement, collect and analyze data from the Boston portion of a national study on Spanish to English transfer in bilingual third graders.

Research Assistant, Home/School Longitudinal Study of Language Development
HUGSE, Cambridge, MA (with C. Snow and P. Tabors) (Aug. - Dec. ‘97)

Research Assistant, Head Start Language Diversity Study
HUGSE, Cambridge, MA (with C. Snow and P. Tabors) (July - Aug. ‘97)

Laboratory Technician, Infant Development Project
Cornell University Infant Psychology Lab., Ithaca, NY (with E. Spelke) (June - Dec. ‘93)

CURRICULUM DESIGN AND TEACHING EXPERIENCE

University Level

Content Director, Course developer, “Neuroscience and the classroom: making connections”
Free, online masters-level course for teachers, funded by Annenberg Media (June ‘10 – Nov. ‘11)

Doctoral/Undergraduate Advisor/Supervisor, Brain & Creativity Institute, USC (Jan. ‘07- present)

(In addition to USC students, I have supervised undergraduate and graduate students visiting from various institutions, among them University of São Paulo, Brazil; University of Bielefeld, Germany; Northeastern University; Harvard University; India Institute of Medical Sciences.)

Faculty sponsor for undergraduate research training, BISC-490, USC ('10, '11)

Instructor, EDUC 713, "Human development across the lifespan" (doctoral level), USC ('10, '11)

Instructor, EDUC 525, "Challenges in urban education: Learning" (doctoral level), USC ('09, '10)

Instructor, EDUC 520, "Development across the life span" (masters level), USC ('09)

Honors Thesis Advisor, Institute for Multimedia Literacy, USC (Jan. '07- June '08)

Teaching Fellow, H-156, "Doctoral Research Practicum on Dynamic Development of Cognition and Emotion" HUGSE, Cambridge, MA (with K. Fischer) (Fall-Spring '03-'04)

Mind, Brain and Education Course Developer/Senior Course Coordinator, HT 100
Human Development and Psychology/Psychology Department, HU (Summer '00 – Summer '03)

Teaching Fellow, H-090, "Proseminar in Human Development and Psychology."
HUGSE (with C. Snow & R. Selman) (Summer-Fall '01)

Lead Teaching Fellow, H-134, "Cognition, Emotion, and the Developing Brain."
Human Development and Psychology/Psychology Department, HU (with K. Fischer) (Fall '99, '00, '01)

Teaching Fellow, T-560, "Neuropsychology and Instructional Design: Meeting the Challenge of Individual Differences." HUGSE (with D. Rose) (Spring '99, '00, '01)

Curriculum Developer/Peer Advisor, Mind, Brain and Education Masters Program
HUGSE (with K. Fischer) (Aug. '98 -June '99)
Collaboratively developed and implemented a new interdepartmental masters program in MBE.

For K-12 teachers and students

Instructor, "The art and science of teaching" (Yearly beginning summer '04)
(internationally taught and attended weeklong workshop for educators, administrators and policy makers)

Faculty, International Mind, Brain, Health and Education Institute, Harvard GSE ('10-'11)
(held in Melbourne, New Delhi, and Cambridge, MA)

Related Activities, Service and Employment

Committee to redesign the Neuroscience Graduate Program, USC (2010 - 2011)

Admissions and employment review committee, Brain and Creativity Institute (2008 - 2011)

Lecturer, Harvard University Programs in Professional Education (Summer '02, '03, '08, '09, '10)

National Advisory Board Member, U. New Mexico Family Development Program (Sept. '08-present)

Steering Committee Member, The Ross School, East Hampton, NY. (March '07 – present)

Educator in Residence, Crane Country Day School, Santa Barbara, CA (August 2008-June 2009)

National and International Educational Consultant/Speaker (January '03-present)

Committee on Curriculum and Instruction, HUGSE, Cambridge, MA ('03-'04)

Admissions Committee, HUGSE, Cambridge, MA (Spring, '01)

Seventh Grade Integrated Science Teacher, Curriculum Developer, Science and Tech. Department
Randolph Junior/ Senior High School, Randolph, MA (Sept. '95 - June '97)

Summer School Teacher, French and Algebra, Manter Hall School, Osterville, MA (June - Aug '95)

Massachusetts Provisional Teacher Certification: French, General Science (received Dec. '95)

PUBLICATIONS

Peer Reviewed Articles (*student co-author)

Immordino-Yang, M.H. (2011). Musings on the neurobiological and evolutionary origins of creativity via a developmental analysis of one child's poetry. *LEARNING Landscapes*, 5(1), 133-139.

Immordino-Yang, M.H. (2011). Implications of affective and social neuroscience for educational theory. *Educational Philosophy and Theory*, 43(1), 98-103.

Reprinted in: K. Patten and S. Campbell (2011), *Educational neuroscience: Initiatives and emerging issues*. Wiley-Blackwell: Hoboken, 97-102.

Immordino-Yang, M.H. & Singh, V. + (2011). Hippocampal contributions to the processing of social emotions. *Human Brain Mapping*. doi: 10.1002/hbm.21485

Immordino-Yang, M.H. (2011). Me, my "self" and you: Neuropsychological relations between social emotion, self awareness, and morality. *Emotion Review*, 3(3), 313-315.

Immordino-Yang, M.H., Chiao, J.Y., Fiske, A.P. (2010). Neural re-use in the social and emotional brain. *Brain and Behavioral Sciences*, 33(4), 275-276.

Immordino-Yang, M. H. (2010). Toward a microdevelopmental, interdisciplinary approach to social emotion. *Emotion Review*, 2(3), 217-220.

Immordino-Yang, M.H. & Sylvan, L.+ (2010). Admiration for virtue: Neuroscientific perspectives on a motivating emotion. *Contemporary Educational Psychology*, 35(2), 110-115.

Immordino-Yang, M.H., McColl, A. +, Damasio, H., Damasio, A. (2009). Neural correlates of admiration and compassion. *Proceedings of the National Academy of Sciences*, 106(19), 8021-8026.

Commentary: Haidt, J. & Morris, J. (2009). Finding the self in self-transcendent emotions. *Proceedings of the National Academy of Sciences*, 106(19), 7687-7688.

Immordino-Yang, M.H. (2008). The smoke around mirror neurons: Goals as sociocultural and emotional organizers of perception and action in learning. *Mind, Brain, and Education*, 2(2) 67-73.

Immordino-Yang, M.H. (2008). The stories of Nico and Brooke revisited: Toward a cross-disciplinary dialog about teaching and learning. *Mind, Brain, and Education*, 2(2) 49-51.

Immordino-Yang, M.H. (2007). A tale of two cases: Lessons for education from the study of two boys living with half their brains. *Mind, Brain and Education*, 1(2), 67-83.

Commentaries: Ablin, J. L. (2008). Learning as problem design versus problem solving: Making the connection between cognitive neuroscience research and educational practice. *Mind, Brain, and Education*, 2(2), 52-54.

Christoff, K. (2008). Applying neuroscientific findings to education: The good, the tough and the hopeful. *Mind, Brain, and Education*, 2(2), 55-58.

Snow, C. (2008). Varied developmental trajectories: Lessons for educators. *Mind, Brain, and Education*, 2(2), 59-61.

vanGeert, P., & Steenbeek, H. (2008). Brains and the dynamics of "wants" and "cans" in learning. *Mind, Brain, and Education*, 2(2), 62-66.

Immordino-Yang, M.H., & Damasio, A.R. (2007). We feel, therefore we learn: The relevance of affective and social neuroscience to education. *Mind, Brain and Education*, 1(1), 3-10.

Reprinted in *Learning Landscapes* (2011), 5(1), 115-131.

Reprinted in *Jossey-Bass reader on the brain and learning* (2008, pp.183-198). San Francisco, CA: Jossey-Bass.

Reprinted in Parkay, F.W., Hass, G. J., & Anctil, E. J. (Eds.), *Curriculum leadership: Readings for developing quality educational programs, 9th Edition*, Allyn and Bacon.

Fischer, K. W., Daniel, D. B., Immordino-Yang, M. H., Stern, E., Battro, A., & Koizumi, H. (2007). Why mind, brain, and education? Why now? *Mind, Brain and Education*, 1(1), 1-2.

Peer-reviewed articles and chapters under Review/In Preparation (+student or postdoctoral co-author)

Immordino-Yang, M.H., Singh, V. +, Christodoulou, J. + (revised, under re-review, submitted July, 2011) "Rest is not idleness": Implications of the brain's default mode for human development and education.

Saxbe, D. +, Yang, X. +, Borofsky, L. +, Immordino-Yang, M. H. (under review, submitted Dec., 2011) The embodiment of emotion: Language use during the feeling of social emotions predicts cortical somatosensory activity.

Chiao, J. and Immordino-Yang, M.H. (under review, submitted Dec., 2011) Modularity and the cultural mind: Contributions of cultural neuroscience to cognitive theory.

Immordino-Yang, M.H., Jordan, M. +, Schiffhauer, B. +, Bossman, J. +, Singh, V. + (in preparation) Spontaneous recall of personal memories during the processing of social emotions about unknown people. Abstract submitted. Manuscript due July 2012 to *Frontiers in Psychology*.

Immordino-Yang, M.H. and Yang, X. + (in preparation) Neurobiological correlates of emotional experience in Los Angeles and Beijing. To be submitted Feb., 2012.

Immordino-Yang, M.H., Singh, V. + (in preparation) Cortical-subcortical connectivity during the feeling of social emotions. To be submitted Feb., 2012.

Pavarini, G. +, Schnall, S., Immordino-Yang, M.H. (in preparation) Construal levels during admiration and elevation. To be submitted Feb., 2012.

Immordino-Yang, M.H., Pavarini, G. +, Schnall, S., Yang, X. + (in preparation) Spontaneous emotional behavior and cognitive construal predict default-mode area activations during emotions and rest. To be submitted March, 2012.

Brockington, G. +, Immordino-Yang, M.H. Domain-specific galvanic skin responding in STEM experts. To be submitted April, '12.

Singh, V. +, Immordino-Yang, M.H. (data collection phase) Neural correlates of judging everyday moral transgressions.

Immordino-Yang, M.H. Neurobiological contributions to understanding emotions in educational contexts. Invited chapter to appear in R. Pekrun (ed), *Handbook of emotions in education*. Due March 2012.

Book chapters, monographs, technical reports, edited books (*peer reviewed)

*Immordino-Yang, M. H. & Singh, V. (2011). Designing learning technologies: Perspectives from social and affective neuroscience. In R. Calvo and S. DiMello (Eds.), *Affective Prospecting: New perspectives on Affect and Learning Technologies*. (pp. 233-242) Sydney: Springer.

*Immordino-Yang, M.H. & Fischer, K.W. (2010). Neuroscience bases of learning. In V. G. Aukrust (Ed.), *International encyclopedia of education, 3rd Edition*. (pp. 310-316) Oxford: Elsevier.

*Immordino-Yang, M. H., & Faeth, M. (2010). The role of emotion and skilled intuition in learning. In D. A. Sousa (Ed.), *Mind, Brain and Education: Neuroscience Implications for the Classroom* (pp.66-81). Bloomington, IN: Solution Tree Press.

*Immordino-Yang, M.H., & Fischer, K. W. (2010). Brain development. In I. Weiner & E. Craighead (Eds.), *Corsini encyclopedia of psychology, 4th Edition* (pp. 254-256). New York: John Wiley & Sons.

*Immordino-Yang, M. H. (2009). Social neuroscience and its application to education. In S. Feifer & G. Rattan (Eds.), *The Neuropsychology of Emotional Disorders* (pp. 15-22). Middletown, MD: School Neuropsychology Press.

Winstein, C., Immordino-Yang, M.H., Aziz-Zadeh, L. (2009) Promoting Generalization in Stroke Rehabilitation: The Social Cognitive Perspective. Report prepared for the *National Institutes of Health* workshop on Promoting Generalization in Cognitive Stroke Rehabilitation, June 3-4, 2009, Washington DC.

Fischer, K.W., & Immordino-Yang, M. H. (2008). The fundamental importance of the brain and learning for education. In *Jossey-Bass reader on the brain and learning*. (pp. xvii – xxi) San Francisco, CA: Jossey-Bass.

Immordino-Yang, M.H. (2007). Introduction & Chapter 3: Compensation after losing half of the brain. In A. Nava (Ed.), *Critical issues in brain science and pedagogy* (pp. 3-4, 45-54). San Francisco: McGraw Hill.

*Immordino-Yang, M.H., & Deacon, T. (2007). An evolutionary perspective on reading and reading disorders? In K.W. Fischer, J. H. Bernstein & M.H. Immordino-Yang (Eds.), *Mind, brain and education in reading disorders*. (pp. 16-29). Cambridge: Cambridge University Press.

*Immordino-Yang, M.H., & Fischer, K.W. (2007). Dynamic development of hemispheric biases in three cases: Cognitive/hemispheric cycles, music, and hemispherectomy. In D. Coch, K. W. Fischer & G. Dawson (Eds.), *Human behavior, learning and the developing brain: Vol.1. Typical development* (pp. 74-111). New York, NY: Guilford Press.

*Fischer, K.W., Bernstein, J.H., & Immordino-Yang, M.H. (Eds.). (2007). *Mind, brain and education in reading disorders*. Cambridge: Cambridge University Press.

*Fischer, K.W., Immordino-Yang, M.H., & Waber, D. (2007). Toward a grounded synthesis of mind, brain, and education for reading disorders: An introduction to the field and this book. In K. W. Fischer, J. H. Bernstein, & M. H. Immordino-Yang (Eds.), *Mind, brain and education in reading disorders*. (pp. 3-15). Cambridge: Cambridge University Press.

*Katzir, T., Immordino-Yang, M.H., & Fischer, K.W. (2007). Mind, brain, and education in the era of globalization. In M. M. Suarez-Orozco (Ed.), *Learning and living in the global era: International perspectives on globalization and education*. (pp. 85-103). Berkeley, CA: University of California Press/Ross Institute.

*Fischer, K.W., & Immordino-Yang, M.H. (2002). Cognitive development and education: From dynamic general structure to specific learning and teaching. In E. Lagemann (Ed.), *Traditions of scholarship in education*. Chicago: Spencer Foundation.

Non peer-reviewed articles, popular press articles, book reviews, etc.

Immordino-Yang, M. H. (2011) Game-changing research: An interview on neuroscience and education. *Futures in Urban Ed*, USC Rossier School of Education, Winter/Spring Issue, 15.

Immordino-Yang, M. H. (2009). Transforming education through neuroscience award recipient: Kurt Fischer. *Mind, Brain and Education*, 3(4), 218-219.

Immordino-Yang, M. H. (2008, July 12). Strange Lessons. *New Scientist*, 44-45.

Immordino-Yang, M. H. (2008, July 10). Emotions, Social Relationships, and the Brain: Implications for the Classroom. *ASCD Express*, 3(20).

Immordino-Yang, M. H. (2008). Review of the book, *How the body shapes the way we think: A new view of intelligence*, by Rolf Pfeifer and Josh Bongard (Cambridge, MA: MIT Press, 2007). *European Legacy*, 13(6).

Immordino-Yang, M.H. (2001). When 2 + 2 makes kids trip: Making sense of brain research in the classroom. *Basic Education*, 45(8), 16-19.

ACADEMIC CONFERENCE PRESENTATIONS/CHAIRER SYMPOSIA/PAPERS

Immordino-Yang, M.H., Saxbe, D., Yang, X. (2012, January) Individual differences in verbal descriptions of compassion and admiration predict somatosensory and self-related neural activations. In, S. Morelli (Chair) and M. Lieberman (Co-Chair), The power of connecting with others: Investigating empathy, admiration, compassion, and social connection in the brain. Presented at the annual meeting of the Society for Personality and Social Psychology, San Diego, CA.

Immordino-Yang, M.H. (2012, January) Embodied brains, social minds: Neural and behavioral correlates of social emotion in Los Angeles and Beijing. Presentation to the preconference session on Cultural Psychology, organized by Y. Chentsova-Dutton, J. Leu, J. Chiao, A. Cohen at the annual meeting of the Society for Personality and Social Psychology, San Diego, CA.

Katzir, T. (Chair) and Immordino-Yang, M.H. (Co-Chair) (2011, June) The Right Reading Brain: What have we learned about the role of the right hemisphere in language and reading development? Symposium organized at the biannual meeting of the International Mind, Brain and Education Society, San Diego, CA.

Immordino-Yang, M.H. (2011, June) An introduction to the brain and neurosciences for educators. 3-hour Preconference workshop to the biannual meeting of the International Mind, Brain and Education Society, San Diego, CA.

Immordino-Yang, M.H. (2011, May) Interdisciplinary investigations of admiration and compassion. Invited address at the annual meeting of the Association for Psychological Science, Washington D.C.

Immordino-Yang, M.H. (2010, December) Admiration and compassion in the U.S. and China: Cross-cultural comparisons of psychological experience and its neural and psychophysiological correlates. Invited talk at the symposium on Studies of Social Cognitive Neuroscience: Understanding self and others in sociocultural contexts, Peking University in Beijing, China.

Immordino-Yang, M.H. (Chair) and Carew, T. (Co-Chair) (2010, November) Exploring interdisciplinary pathways: Enriching neuroscience research by connecting to educational practice and theory. Symposium organized at the annual meeting of the Society for Neuroscience, San Diego, CA.

Immordino-Yang, M.H. (2010, November) Me, my “self” and *you*: Combining affective neuroscience and human development approaches to study social emotion. In M.H. Immordino-Yang and T. Carew (Chairs), Exploring interdisciplinary pathways: Enriching neuroscience research by connecting to educational practice and theory. Symposium presented at the annual meeting of the Society for Neuroscience, San Diego, CA.

Immordino-Yang, M. H. (2010, September) Embodied brains, social minds: Bridging neuropsychological and anthropological perspectives on human social emotion. Invited paper delivered at the conference on The Human Brain and the Social Bond: Exploring the Notion of Constrained Relativism. Hosted/ sponsored by the Konrad Lorenz Institute for Evolution and Cognition Research in Vienna, and the International Institute for Applied Systems Analysis in Schloss Laxenburg, Austria.

Immordino-Yang, M.H., Parvizi, J. and Battro, A. (2009, May) Integrating medical and educational neuroscientific perspectives to explore functional compensation after hemispherectomy. Panel presented at the second biannual conference of the International Mind, Brain and Education Society (IMBES), Philadelphia, PA.

Immordino-Yang, M.H., Daniel, D. and Rose, T. (2009, May) Teaching teachers neuroscience. Symposium/discussion presented at the second biannual conference of the International Mind, Brain and Education Society (IMBES), Philadelphia, PA.

Immordino-Yang, M.H., Tramo, M., Hall, D. (2009, May) Emotion, learning, and the brain: Insights from experimental neuroscience and educational approaches to children with neurological disease. Symposium/discussion presented at the second biannual conference of the International Mind, Brain and Education Society (IMBES), Philadelphia, PA.

Immordino-Yang, M.H. & Sylvan, L. (2009, April) Revisiting the role of non-conscious processes in motivation: Neuroscientific perspectives. In M. Bong (Chair), Another step forward to motivational science: Whether, what, when and how neurobiological research can contribute to understanding student motivation. Paper presented at the American Educational Research Association Conference, San Diego, CA.

Immordino-Yang, M. H. (2007, August). The relevance of social and affective neuroscience to education. Paper presented at the USC conference on Emotion, Decision-Making and the Brain, Los Angeles, CA.

Immordino-Yang, M. H. (2004, July). Compensatory relationships between emotion and affective prosody after right and left hemispherectomy. Paper presented at the conference on Language, Culture and Mind: Integrating perspectives and methodologies in the study of language, Portsmouth, UK.

Immordino-Yang, M. H. (2004, April). A tale of two cases: Emotion and affective prosody after right and left hemispherectomy. In M. Atherton (Chair), Language and Reading: New Research Directions in Neuroscience. Paper presented at the American Educational Association Annual Research Conference, San Diego, CA. Paper published online by the American Educational Research Association, Brain and Neurosciences Special Interest Group. www.tc.umn.edu/~athe0007/BNEsig/papers/Immordino-Yang.pdf

Immordino-Yang, M. H. (2003, October). Comprehension of affective prosody after right and left hemispherectomy. Poster presented at the 28th annual Boston University Conference on Language Development, Boston, MA. Immordino-Yang, M.H. (2003). Paper published in *Supplement to the proceedings of the 28th annual Boston University Conference on Language Development*, Boston, MA: Cascadilla Press online.

Immordino-Yang, M. H. (2003, February). Prosodic language functioning in a right-hemispherectomized boy: A preliminary report. In T. Katzir (chair), Beyond the Talk: Connecting language of cognition and motivation. Paper presented at the Harvard Graduate School of Education Annual Student Research Conference, Cambridge, MA.

Immordino-Yang, M. H. (2001, February). Working memory for music and language: Analogous systems based on experience? In R. Selman (chair), Experience, Reason and Action. Paper presented at the Harvard Graduate School of Education Annual Student Research Conference, Cambridge, MA.

Immordino-Yang, M. H. (2000, May). Metaphor use in a seventh grade science lesson: Implications for students' understandings. Paper presented at the fifth conference on Conceptual Structure, Discourse, and Language, University of California, Santa Barbara, CA

Immordino-Yang, M. H. (2000, February). Meaning-making and metaphor among four seventh grade science students. In Mind Brain and Education: Toward an interdisciplinary framework for educational practice. Paper presented at the Harvard Graduate School of Education Annual Student Research Conference, Cambridge, MA.

Fischer, K., Granott, N., Parziale, J., Immordino, M. H. (1999, April). Beyond one-dimensional learning: Constructing new knowledge by building bridges among multiple parallel skill levels. In R. Breckinridge Church & P. Garber (Chairs), Making use of implicit knowledge to teach. Symposium conducted at the Biennial Meeting of the Society for Research in Child Development, Albuquerque, NM.

SELECTED INVITED TALKS

Emotions as adaptive processes. Workshop to the Army Training and Doctrine Command, Institute for Creative Technologies, Marina del Rey, CA, Feb. 15, 2012.

Embodied brains, social minds: Perspectives on the emotional origins of creativity and scientific knowledge. Address to the Bay Area Discovery Museum Donor Circle Speaker Series, San Francisco, CA, Feb. 16, 2012.

Embodied brains, social minds: Neurobiological and developmental perspectives on emotion, culture and learning. 6-hour workshop at the Rivers School, Weston, MA, Jan. 3, 2012

Embodied brains, social minds: Neuropsychological perspectives on social emotions and self in a global, technological age. University of Sydney, Australia, November 9, 2011.

The neurobiology of our human potential for virtue (keynote lecture to 1000 participants); *The art and science of teaching and learning* (post-conference workshop to 80 participants). Conference on Mind and its Potential, Sydney, Australia, Nov. 8-9th, 2011.

Embodied brains, social minds: How inspiration motivates purposeful learning. TEDx talk, October 22, 2011. <http://tedxmanhattanbeach.com/2011/10/tlc-mhiy/>

Embodied brains, social minds: Perspectives on emotion, learning and self. Keynote presentation at the International Primary Curriculum Leadership Conference, London, England, October 13, 2011.

What can science contribute to the future of learning? (public debate between MHIY, Howard Gardner and David Rose); *Embodied brains, social minds: neurobiological perspectives on learning in a digital, global age* (plenary lecture). Future of learning conference, Harvard Graduate School of Education, Cambridge, MA. August 2, 2011.

Embodied brains, social minds: Neurobiological perspectives on development and the origins of creativity. Opening keynote presentation at the Harvard University conference on Mind, Brain and Education, June 20th, 2011.

What the neurobiology of emotion and culture mean for nurturing the connected mind. Keynote presentation at the USC Teaching with Technology Conference: The connected mind. May 3, 2011.

The psychology and neurobiology of social emotion. Lecture at the Smith College Mind, Body and Education Colloquia, North Hampton, MA, November 18, 2010.

Understanding emotion and social processing in educational contexts. Lecture at the Harvard Graduate School of Education, Nov. 19th, 2010.

Neurobiological perspectives on creativity as a social emotional process. Keynote lecture at the Utah Valley University Arts in Education Conference, Orem, UT, October 1, 2010.

Social emotion and learning: Neurobiological and psychosocial perspectives on embodiment. Invited talk at the Institute of Educational Psychology, University of Munich, Germany, September 7, 2010.

The future of Mind, Brain and Education in a global society. Public debate with Howard Gardner and David Rose at the Harvard Future of Learning Summer Institute, sponsored by Harvard University Project Zero, Cambridge, MA, August 5, 2010.

Our bodies, our minds, our "selves": The relevance of social and affective neuroscience to education. Invited lecture to the Harvard University Institute for Mind, Brain and Education, Cambridge, MA, June 21, 2010.

Me, myself and "you": Cross cultural investigations of admiration and compassion. Invited talk to the Center for Group Dynamics Seminar Series, followed by a presentation and discussion to the Center for Culture, Mind and the Brain, University of Michigan, Ann Arbor MI, March 22, 2010.

Neuroscience and Education: Some examples of the potential. Joint lecture with Peter Mundy to the AAU Education Deans' Meeting, Washington, D.C., November 13, 2009.

Social affective neuroscience, cultural differences, and implications for education in a global world. 5-hour lecture/workshop at the Ross Global Academy International Conference on Emotion and Learning, East Hampton, MA, August 25, 2009.

Our bodies, our minds, our “selves”: Neurobiological perspectives on emotion, social interaction and learning. Keynote lecture to 1450 special education teachers at the Anchorage School District Special Education Cross District Training, Anchorage, AK, August 14, 2009.

Emotion and social interaction in learning and schools. Lecture at the Harvard Future of Learning Summer Institute, sponsored by Harvard University Project Zero, Cambridge, MA, August 5, 2009.

Admiration and Compassion: Interactions of the body and mind in moral emotions. Invited lecture to the Harvard University Institute for Mind, Brain and Education, Cambridge, MA, July 2, 2009.

Neural correlates of admiration and compassion: Clinical implications for diagnosing acquired social deficits? Lecture sponsored by the Dickerson Lab at Harvard MGH and the Interdisciplinary Affective Science Lab of Lisa Feldman Barrett at Boston College, Boston, MA, July 1, 2009.

Social and affective neuroscience and education: Connections and promises. Series of three lectures: to the University of Texas, Arlington education and psychology faculty, to the Board of the Arlington School District, and to parents and teachers of students in Arlington Public Schools, April 21-22, 2009.

The cognitive neuroscience of social emotion: Implications for education? Lecture to the Harvard University Graduate School of Education Future of Learning Initiative, as part of a series entitled, “How is neuroscience changing our understanding of learning and teaching?” Other speakers were John Gabrieli and David Rose. Cambridge, MA (by videoconference) November 5th, 2008.

The science of emotion, social interaction, and learning: The state of the art. Invited series of three lectures at the University of Washington, Seattle, sponsored by the UW Psychology Department and by the Evergreen School Speaker Series, November 14th-15th, 2008.

Our bodies, our minds—our cultures, our selves: Body, mind and emotion in learning. Keynote address to the Learning and the Brain Conference, Boston, MA, November 22nd, 2008.

Educating adult students with disabilities: The role of social interaction and shared emotion in learning. Opening keynote lecture to the California Association for Postsecondary Education and Disability (CAPED) 33rd Annual Convention, San Francisco, CA, Oct. 7th, 2008.

All smoke and mirror neurons: Body, mind and emotion in the making of “us”. Invited series of three lectures to the Santa Barbara community of educators, pediatric clinicians and parents, sponsored by the Crane Country Day School, Santa Barbara, CA, August, October, and December, 2008.

The cognitive neuroscience of social emotions across cultures: Implications for education in a global world. Invited lecture at the first Asia-Pacific Conference on Mind, Brain and Education in Nanjing, China, October 26, 2008.

Admiration and Compassion: Interactions of the body and mind in moral emotions. Invited lecture to the Harvard University Institute for Mind, Brain and Education, Cambridge, MA, July 9th, 2008.

Brains in social and affective contexts: Implications from cognitive neuroscience research for schools. Invited address at the Salk Institute for town-hall style meeting entitled *Brains R Us: The Science of Educating*, sponsored by the UC San Diego National Science Foundation Temporal Dynamics of Learning Center, on March 3, 2008.

The neurobiological link between emotion, cognition and social processing: Implications for education. Keynote address to the Learning and the Brain Conference, San Francisco, CA Feb. 9, 2008.

Emotion, social interaction and learning: Lessons for education from two boys living with half their brains. Keynote address to the Learning and the Brain Conference, San Francisco, CA Feb. 15, 2007.

An introduction to the brain and neurosciences for educators. Three-hour workshop delivered at the Summer Institute on Connecting the Mind, Brain and Education, Harvard University Programs in Professional Education, Cambridge, MA on June 22, 2003 and June 30, 2008. Workshop delivered to the

conference of the International Mind, Brain and Education Society, Nov. 1, 2007; May 28, 2009. Workshop delivered to the Learning and the Brain Conference triannually, 2004 onwards.

Mind, Brain and Education: Lessons from theory, research and practice. Invited series of four lectures to the educational and scientific community of the University of Maine at Farmington on Sept. 22-24, 2004.

The importance of bringing "M" and "B" to "E": A critical conversation about research on hemispherectomy. Invited video lecture with A. Battro for K. Fischer's and H. Gardner's course, *Cognitive Development, Education and the Brain*, HUGSE, on Oct. 8, 2004.

Emotion in speech and faces in two boys living with half a brain. Lecture to the Mind, Brain and Behavior Graduate Initiative, Harvard University, Cambridge, MA on Feb. 19, 2004.

A conceptual introduction to the brain and neuroscience. Guest video-lecture and follow-up interactive session delivered to K. Fischer's and H. Gardner's course, *Cognitive Development, Education and the Brain*, HU Graduate School of Education, on Sept. 20, 2001, Feb 3, 2003, Feb. 9, 2004, March 2, 2005.

Language, Emotion and Brain Development. Lecture to the Summer Institute on Connecting the Mind, Brain and Education, Harvard University Programs in Professional Education, Cambridge, MA on June 25, 2002 and June 24, 2003.

Working memory for music and language: Do we develop analogous systems based on similar symbolic experience? Colloquium lecture co-sponsored by ARTS (Arts Research, Theses, and Scholarship) and DDRG (Dynamic Development Research Group), Harvard University Graduate School of Education, Cambridge, MA on Dec. 9, 2002.

The neurobiology of working memory for music and language: Where is the overlap, and why? Guest lecture delivered to Marc McManus' course, *Developmental Neurobiology*, Harvard University Psychology Department, Cambridge, MA on April 19, 2001.

Mind, Brain and Education: Integrating across disciplinary boundaries. Joint talk to the Visiting Committee, Harvard University Graduate School of Education, Cambridge, MA on April 10, 2003.

Forging the link between learning and brain science. Invited joint lecture to the Charles Eliot Society, Harvard University, Cambridge, MA on March 15, 2000.

Sense and Nonsense: Neuroscience's impact on Education. Invited joint lecture to the Provost's Committee of Harvard University, Cambridge, MA on Nov. 20, 1999.

SELECTED LABORATORY RESEARCH POSTERS

Yang, X.-F., Saxbe, D. E., Borofsky, L. A., Murphy, M. C., Immordino-Yang, M. H. (2011, November). *Do you think it or feel it? Language and neural activity reflect individual differences in emotion processing. [Abstract].* Presented at 41st annual meeting of Society of Neuroscience, Washington, D. C. NOTE: The first four authors are students and a postdoc working with MHIY.

Singh, V. and Immordino-Yang, M.H. (2011, June) *Neural and psychophysiological correlates of judging everyday moral violations.* Poster presented at the biannual meeting of the International Mind, Brain and Education Society, San Diego, CA. NOTE: V. Singh is a MHIY's doctoral advisee at the BCI at USC.

Singh, V. and Immordino-Yang, M.H. (2011, May) *Neural correlates of judging morality and affect in everyday situations.* Poster presented at the 23rd convention of the Association for Psychological Science, Washington D.C. NOTE: V. Singh is a MHIY's doctoral advisee at the BCI at USC.

Yang, X.- F., Wong, S. W. H., & Immordino-Yang, M.H. (2010, November). *Resting Cardiac Vagal Activity Predicts Heart Rate Change during Compassion for Physical Pain. [Abstract].* Presented at 40th annual meeting of Society of Neuroscience, San Diego, CA. NOTE: X. Yang is a MHIY's doctoral advisee at the BCI at USC.

Singh, V. and Immordino-Yang, M.H. (2010, June) *Activation and interconnectivity of the hippocampus during the feeling of admiration and compassion*. Presented by V. Singh at the FENS-IBRO Summer School (Federation of European Neuroscience Societies-Int'l Brain Research Organization), entitled Cognition and Action: System Neuroscience Approaches to Understanding Complex Behavior. Dubrovnik, Croatia. NOTE: V. Singh is a MHIY's doctoral advisee at the BCI at USC. The poster was awarded "Best presentation of the Conference".

SELECTED MEDIA COVERAGE

Research featured in the *Observer*, the magazine of the Association for Psychological Science: "Rising Stars." <http://www.psychologicalscience.org/index.php/publications/observer/2011/may-june-11/rising-stars-3.html#yang>

Research featured in the *Observer*, magazine of the Association for Psychological Science: "APS Member Immordino-Yang Receives Cozzarelli Prize." *Observer* Apr. 2010: 7.

Interviewed for the National Academy of Science's "Science Sessions" podcasts, concerning the research leading to the Cozzarelli Prize, by Jonathan Lifland (April 25, 2010).

<http://www.pnas.org/site/misc/immordinoYangPodcast.mp3>

<http://www.pnas.org/site/misc/podcasts.shtml>

Interviewed on *National Public Radio*, "All Things Considered", with Antonio Damasio, for a story about collaborative work on the neural systems involved in admiration and compassion, by Jonathan Hamilton (April 13, 2009).

<http://www.npr.org/templates/story/story.php?storyId=103043173&ft=1&f=1001>

Interviewed on *National Radio Ireland*, "Bridging the Gaps", for a live 30-minute conversation about my work in social and affective neuroscience and its relevance to education and society, by Waseem Akhtar (April 26, 2009).

Daniel, D. and Fischer, K. (2008) First Award for Transforming Education Through Neuroscience: Mary Helen Immordino-Yang. *MBE* 2(2), iii.

Interviewed by *The Washington Diplomat* for a story in the Education Special Section entitled, "Arts Smart: Educators Look at Cognitive Benefits of Arts Programs" by Carolyn Cosmos (November 6th, 2008). http://www.washdiplomat.com/November%202008/c1_11_08.html

Interviewed by The National, the English language newspaper of Abu Dhabi, UAE, for a story entitled, "Mirror, mirror, in the brain," by Robert Carroll (November 5th, 2008).

<http://www.thenational.ae/apps/pbcs.dll/article?AID=/20081105/Frontiers/422377182/1036>

Research featured in HUGSE Alumni Magazine (Summer, 2008).

Research featured in the *USC College of Letters Arts and Sciences* magazine, article entitled "The Brain and diversity: Fear of difference" (April, 2007).

Research featured in *Independent School Magazine*, article entitled "Beginning to learn: A new view on brain research and teaching," by A. Blodget (Spring, 2007).

Research featured in the HUGSE Alumni Magazine (Winter, 2004).

Research featured in the *Supplement to the Harvard University Gazette*, entitled "Forging the link between learning and brain science" (Spring, 2000).

PROFESSIONAL AFFILIATIONS

International Mind, Brain and Education Society (IMBES), founding member, 2006-present. Board of directors, 2011-13.

American Educational Research Association, member 2004-present.

Society for Neuroscience, member 2009-present.

Neuroscience and Education Leadership Coalition of the SfN, invited member, 2010-present

American Psychological Society/Association for Psychological Science, member 2009-present.

Society for Social Neuroscience, founding member, 2010-present.

Society for Personality and Social Psychology, member, 2011-present.