Curriculum vitae

Ifat Levy
Department of Comparative Medicine
Yale School of Medicine
310 Cedar St, BML 330A
New Haven, CT 06510

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email: ifat.levy@yale.edu

Education

Hebrew U of Jerusalem	Ph.D.	2004	Computational Neuroscience
Tel-Aviv University	L.L.B.	1997	Law
Tel-Aviv University	B.Sc.	1994	Physics (Program for outstanding students)

Positions

2017/7-	Associate Professor of Psychology, Yale University
2015/7-	Associate Professor of Comparative Medicine and Neuroscience, Yale School of Medicine
2012/7-	Research Scientist, Clinical Neurosciences Division, National Center for PTSD
2010/7-	Full member, Interdepartmental Neuroscience Program, Yale School of Medicine
2010-2015	Assistant Professor of Neurobiology, Yale School of Medicine
2009-2015	Assistant Professor of Comparative Medicine, Yale School of Medicine
2009/4-7	Associate research scientist, Section of Comparative Medicine, Yale School of Medicine
2004-2009	Postdoctoral research fellow under the supervision of Paul Glimcher in the Center for Neural Science, New York University.
1998-2004	Graduate student in the Interdisciplinary Center for Neural Computation, Hebrew University of Jerusalem, under the supervision of Rafael Malach, Weizmann Institute of Science

Honors and fellowships

2019 -	Reviewing Editor, eNeuro
2015 -	Associate Editor, Editorial Board, Journal of Neuroscience
2013 -	Member of the Identity and Personality Network, Part of Human Capital and Economic Opportunity Global Working Group
2012 - 2013	Member, Special emphasis panel ZRG1 PSE-D, Social Neuroscience and Neuroeconomics of Aging, NIH/NIA
2001-2004	Horvitz foundation doctoral scholarship
1996-2001	Scholarship from the interdisciplinary doctoral program in “Computation and information processing in the brain”, Hebrew University
1994	Tel-Aviv University, graduated Cum Laude
1992, 1994	Tel-Aviv University, Dean’s list in physics
1991-1994	Scholarship from the program for outstanding students, Tel Aviv University

Research support

Current

R01MH118215 (PI: Levy) 07/16/2019 - 04/30/2024
NIH/NIMH
Individual differences in decision making under uncertainty
Total costs for project period: $ 3,337,954

BCS-1829439 (PI: Levy) 10/01/2018 - 09/30/2021
NSF
Decision making under uncertainty across the lifespan: cognitive, motivational and neural bases
Total costs for project period: $ 696,038

BCS-1829439 (PI: Levy) 07/10/2019 - 08/31/2021
NSF
Supplemental support to BCS-1829439
Total costs for project period: $105,008

R56AG058769 (PI: Levy) 09/30/2018 - 08/31/2020
NIH/NIA
Decision making and learning under uncertainty in aging
Total costs for project period: $ 757,408

R01MH105535 (MPI: Schiller, Harpaz-Rotem) 12/01/2014 - 11/30/2020
NIH/NIMH
Fear learning and reconsolidation after trauma exposure: a computational approach
Role: co-Investigator
Total costs for project period: $ 2,510,000

Completed

R21AG049293 (PI: Levy) 09/30/2015 - 04/30/2018
NIH/NIA
Medical decision-making under uncertainty in older adults - behavior and fMRI

R21MH102634 (MPI: Levy, Harpaz-Rotem) 03/17/2014 - 02/28/2017
NIH/NIMH
Neural mechanisms of decision-making under uncertainty in PTSD

R01AG033406 (MPI: Levy, Glimcher) 04/01/2010 - 04/30/2015
NIH/NIA
Cognitive Bases of Risk-taking Over the Lifespan: Psychophysics & Brain Imaging

YCCI pilot grant (PI: Levy) 07/01/2013 - 06/30/2014
Neural Correlates of Reward Learning in Obesity

Pilot/Exploratory Study (Levy, PI) 06/01/2011 - 05/31/2012
The Yale Pepper Center
The effect of ambiguity on treatment preferences in the elderly

Publications

Peer-reviewed articles

Jia R, Furlong E, Gao S, Santos LR, and **Levy I** (2020). Learning about the Ellsberg Paradox reduces, but does not abolish, ambiguity aversion. *Plos One* 15: e0228782

Dhingra I, Zhang S, Zhornitsky S, Le T, Wang W, Chao HH, **Levy I**, and Li CSR (2020). The effects of age on reward magnitude processing in the monetary incentive delay task. *Neuroimage* **207**: 116368

Le TM, Chao I, **Levy I**, and Li CSR (2020). Age-Related Changes in the Neural Processes of Reward-Directed Action and Inhibition of Action. *Frontiers in Psychology* **11**: 1121

Wang W, Zhornitsky S, Chao HH, **Levy I**, Joormann J, and Li CSR (2019). The effects of age on cerebral responses to self-initiated actions during social interactions: An exploratory study. *Behavioral Brain Research* **378**: 112301

Piva M, Velnoskey K, Jia R, Nair A, **Levy I**, and Chang SWC (2019). The dorsomedial prefrontal cortex computes task-invariant relative subjective value for self and other. *eLife* **8**: e44939

Homan P, **Levy I**, Feltham E, Gordon C, Hu J, Li J, Pietrzak RH, Southwick S, Krystal JH, Harpaz-Rotem I*, and Schiller D* (2019). Neural computations of threat in the aftermath of combat trauma. *Nature Neuroscience* **22**: 470-476

Pushkarskaya H, Sobowale K, Henick D, Tolin DF, Anticevic A, Pearlson GD, **Levy I**, Harpaz-Rotem I, and Pittenger C (2019). Contrasting contributions of anhedonia to obsessive-compulsive, hoarding, and post-traumatic stress disorders. *Journal of Psychiatric Research* **109**: 202-213

Webb R, **Levy I**, Lazzaro SC, Rutledge RB, and Glimcher PW (2019). Neural random utility: Relating cardinal neural observables to stochastic choice behavior. *Journal of Neuroscience, Psychology and Economics* **12**: 45-72

Pushkarskaya H, Tolin D, Henick L, **Levy I**, and Pittenger C (2018). Unbending mind: Individuals with hoarding disorder do not modify decision strategy in response to feedback under risk. *Psychiatry Research* **259**: 506-513

Logue M et al. (2018). Smaller Hippocampal Volume in Posttraumatic Stress Disorder: A Multi-Site ENIGMA-PGC Study. *Biological Psychiatry* **83**: 244-253

Zhang Z, Fanning J, Ehrlich DB, Chen W, Lee D, and **Levy I** (2017). Distributed neural representation of value, saliency, and category during anticipation of rewards and punishments. *Nature Communications* **8**: 1907 DOI: 10.1038/s41467-017-02080-4

Pushkarskaya H, Tolin D, Ruderman L, Henick D, Kelly JM, Pittenger C, and **Levy I** (2017). Value-based decision making under uncertainty in hoarding and obsessive- compulsive disorders. *Psychiatry Research* **258**: 305-315

Levy I (2017). Neuroanatomical substrates for risk behavior. *The Neuroscientist* **23**(3): 275-286

Grubb MA, Tymula A, Gilaie-Dotan S, Glimcher PW, and **Levy I** (2016). Neuroanatomy accounts for age–related changes in risk preferences. *Nature Communications* **7**, doi: 10.1038/ncomms13822

Ruderman L, Ehrlich DB, Roy A, Pietrzak R, Harpaz-Rotem I, and **Levy I** (2016) Post-traumatic stress symptoms and aversion to ambiguous losses in combat veterans. *Depression and Anxiety* **33**: 606-613.

Zhang Z, Mendelsohn A, Manson KF, Schiller D, and **Levy I** (2015) Dissociating value representation and inhibition of inappropriate affective response during reversal learning in the ventromedial prefrontal cortex. *eNeuro* .0072-15.2015

Kable JW and **Levy I** (2015) Neural markers of individual differences in decision-making. *Current Opinion in Behavioral Science* **5**: 100-107

Pushkarskaya H, Tolin D, Ruderman L, Kirshenbaum A, Kelly JM, Pittenger C, and **Levy I** (2015) Decision-making under uncertainty in obsessive-compulsive disorder. *Journal of Psychiatric Research* **69**: 166-173

Hildebrandt T, Grotzinger A, Redden M, Greif R, Goodman W, **Levy I**, and Schiller D (2015) Testing the disgust conditioning theory of food-avoidance in adolescents with recent onset anorexia nervosa. *Behavior Research and Therapy* **71**: 131-138

Pietrzak RH, Averill LA, Abdallah C, Neumeister A, Krystal JH, **Levy I**, and Harpaz-Rotem I (2015) Amygdala-hippocampal volume and the phenotypic heterogeneity of posttraumatic stress disorder: A cross-sectional study. *JAMA Psychiatry* **72**: 396-398

Pushkarskaya H, Smithson M, Joseph JE, Corbly C, and **Levy I** (2015) Neural correlates of decision-making under ambiguity and conflict. *Frontiers in Behavioral Neuroscience* **9**, doi: 10.3389/fnbeh.2015.00325

Manson KF and **Levy I** (2015) Selling value: The influence of language on willingness-to-accept. *PLoS ONE* **10**, e0120292

Gilaie-Dotan S*, Tymula A*, Cooper N, Kable JW, Glimcher PW, and **Levy I** (2014) Neuroanatomy predicts individual risk attitudes. *Journal of Neuroscience* **34**: 12394-12401

- *Featured article*

Zhang Z, Manson KF, Schiller D, and **Levy I** (2014) Impaired associative learning with food rewards in obese women. *Current Biology* **24**:1731-1736

- *Commentary:*
  Davidson TL, Martin AA (2014) Obesity: Cognitive Impairment and the failure to 'eat right'. *Current Biology* **24**: R685-R687
- *Research highlight*:
  Loving food too much. *Nature Reviews Neuroscience* **15,** Research highlights in brief (2014)

Tymula A, Rosenberg Belmaker LA, Ruderman L, Glimcher PW, and **Levy I** (2013) Like cognitive function, decision making across the life span shows profound age-related changes. *Proceedings of the National Academy of Sciences of the USA* **110***: 17143-17148*

Tymula A*, Rosenberg Belmaker LA*, Roy AK, Ruderman L, Manson K, Glimcher PW, and **Levy I** (2012) Adolescents' risk-taking behavior is driven by tolerance to ambiguity. *Proceedings of the National Academy of Sciences of the USA* **109**: 17135-17140

Levy I, Rosenberg Belmaker L, Manson K, Tymula A, and Glimcher PW (2012). Measuring the subjective value of risky and ambiguous options using experimental economics and functional MRI methods. *Journal of Visualized Experiments* **67**, DOI: 10.3791/3724

Levy I*, Lazzaro SC*, Rutledge RB, and Glimcher PW (2011) Choice from non-choice: Predicting consumer preferences from blood oxygenation level-dependent signals obtained during passive viewing. *Journal of Neuroscience* **31**(1):118-125

Levy I, Snell J, Nelson AJ, Rustichini A, and Glimcher PW (2010) Neural representation of subjective value under risk and ambiguity. *Journal of Neurophysiology* **103**(2):1036-47

Schiller D, **Levy I**, Niv Y, LeDoux JE, and Phelps EA (2008) From fear to safety and back: reversal of fear in the human brain. *Journal of Neuroscience* **28**(45):11517-25

Levy I, Schluppeck D, Heeger DJ, and Glimcher PW (2007) Specificity of human cortical areas for reaches and saccades. *Journal of Neuroscience* **27**(17):4687-4696

Nir Y, Hasson U, **Levy I**, Yeshurun Y, Malach R (2006) Widespread functional connectivity and fMRI fluctuations in human visual cortex in the absence of visual stimulation. *Neuroimage* **30**(4):1313-1324

Hasson U, Nir Y, **Levy I**, Fuhrmann G, and Malach R (2004) Intersubject synchronization of cortical activity during natural vision. *Science* **303**: 1634-1640

Levy I, Hasson U, and Malach R (2004) One picture is worth at least a million neurons. *Current Biology* **14**: 996-1001

Levy I, Hasson U, Harel M, and Malach R (2004) Functional analysis of the periphery effect in human building related areas. *Human Brain Mapping* **22**: 15-26

Hasson U, Harel M, **Levy I**, and Malach R (2003) Large-scale mirror-symmetry organization of human occipito-temporal objects areas. *Neuron* **37**: 1027-1041

Avidan G, **Levy I**, Hendler T, Zohary E and Malach R (2003) Spatial vs. object specific attention in high-order visual areas. *Neuroimage* **19**: 308-318

Hasson U, **Levy I**, Behrmann M, Hendler T, and Malach R (2002) Eccentricity bias as an organizing principle for human high-order object areas. *Neuron* **34**: 479-490

Malach R, **Levy I**, and Hasson U (2002) The topography of high-order human object areas. *Trends in Cognitive Sciences* **6**(4): 176-184

Levy I, Hasson U, Avidan G, Hendler T, and Malach R (2001) Center-periphery organization of human object areas. *Nature Neuroscience* **4**(5): 533-539

- *Commentary*:

Kanwisher N (2001) Faces and places: of central (and peripheral) interest. *Nature Neuroscience* **4**: 455-456

Commentaries

Levy I (2018). Information utility in the human brain. *PNAS* **115**: 7846-7848

Krystal JH, Abdallah CG, Pietrzak RH, Averill LA, Harpaz-Rotem I, **Levy I**, Kelmendi B, Southwick SM (2018). Locus Coeruleus hyperactivity in posttraumatic stress disorder: Answers and questions. **83**: 197-199

Levy I (2017). The behavioral economics of anxiety. *Biological Psychiatry* **81**(12): 974-976

Book chapters

Levy I and Ehrlich D (2018). Neuroeconomics. In Lewis A (Ed.) *The Cambridge Handbook of Psychology and Economic Behavior* (pp 627-649). Cambridge University Press

Levy I (2015). Neuroeconomics. In Scott R and Kosslyn S (Eds.) *Emerging Trends in the Social and Behavioral Sciences: An Interdisciplinary, Searchable, and Linkable Resource* (pp 1-14). John Wiley and Sons, Hoboken, NJ

Levy I (2013) Ambiguous Decisions in the Human Brain. In Crowley PH and Zentall TR (Eds.) *Comparative Decision Making (*pp 135-155). Oxford University Press, New York NY

Pushkarskaya H and **Levy I** (2013) Poor Decisions about Security. In Crowley PH and Zentall TR (Eds.) *Comparative Decision Making (*pp 347-348). Oxford University Press, New York NY

Levy I and Glimcher PW (2013). Neuroeconomics. In H. Pashler (Ed.), *Encyclopedia of the mind* (Vol. 14, pp. 565-569). SAGE Publications, Thousand Oaks CA

Malach R, Avidan G, Lener Y, Hasson U, and **Levy I** (2004) The Cartogarphy of Human Visual Object Areas. In Kanwisher N and Duncan J (Eds.) *Attention and Performance* XX (pp 195-204). Oxford University Press

Invited Talks and Symposia

2020 Visual Sciences Seminar, Bar-Ilan University, Ramat Gan, Israel, June 2020
2020 Department of Neurobiology Seminar, Weizmann Institute of Science, Rehovot, Israel, May 2020
2020 Symposium: Neuroeconomics, Winter Conference on Neural Plasticity, St. Kitts, February 2020
2020 The ELSC Seminar, Hebrew University of Jerusalem, Jerusalem, Israel, January 2020
2018 Symposium: Neural Computations as Markers of Stress, Anxiety and Trauma, ACNP annual meeting, Hollywood Fl, December 2018
2018 Columbia Neuroscience Seminar Series, Columbia University, New York NY, October 2018
2018 Neuroeconomics Seminar, University of Zurich, Zurich Switzerland, October 2018
2018 Yale ThinkTank Workshop. School of Management, Yale University, May 2018
2018 What can neuroscience contribute to economics? Respondent to Prof. Ernst Fehr, Seminars in Society and Neuroscience, Columbia University, New York NY, May 2018
2018 The Computational Neuroscience of Prediction. Brain Conference, Rungstedgaard Denmark, April 2018

2018 Seminar of the Department of Physiology, Development and Neuroscience, University of Cambridge, Cambridge UK, March 2018
2018 Translational Neuroscience Seminar Series, Friedman Brain Institute, Icahn School of Medicine at Mount Sinai, New York NY, January 2018
2017 Understanding Uncertainty: Effects on Decision Making, Cognitive Control, and Emotion. Symposium at the APS annual conference, Boston MA, May 2017
2017 Neuroscience Seminar in Psychiatry, Biological Science Training Program Lectures, Yale University, May 2017
2017 Current Works in Clinical Psychology and Neuroscience, Yale University, March 2017
2016 Opportunities for Advancing Behavioral and Social Research on Aging, NIA APS-pre conference, Chicago IL, May 2006
2016 Neuroeconomics Colloquium, NYU, New York NY, May 2016
2016 Workshop on Computational models of cognitive, social, and affective processing, Cosyne Workshops, Snowbird, Utah, Feb 2016
2015 Magnetic Resonance Research Center Seminar, Yale University, December 2015
2015 III Yale-Cajal Joint Symposium on Neurobiology, Madrid, Spain, October 2015
2015 The 2nd Multi-disciplinary Conference on Reinforcement Learning and Decision Making, Edmonton, Alberta, Canada, June 2015
2015 Workshop on Perception and Choice, Columbia University, May 2015
2015 Kavli BRAIN Coffee Hour on Decision Making, Yale University, April 2015
2015 Scientific Research Network on Decision Neuroscience and Aging, Miami FL, March 2015
2014 Current Works in Behavior, Genetics, and Neuroscience, Yale University, October 2014
2014 Health Policy and Management Seminar, Yale University, May 2014
2014 Scientific Research Network on Decision Neuroscience and Aging, St Pete Beach FL, May 2014
2014 Psychology Colloquium, Connecticut College, April 2014
2014 Departmental Seminar, Department of Neurobiology, Weizmann Institute of Science, Rehovot, Israel, April 2014
2014 Weekly Seminar, The Edmund and Lily Safra Center for Brain Sciences, Hebrew University of Jerusalem, Jerusalem, Israel, January 2014
2013 Departmental Seminar, Department of Psychology, Tel Aviv University, Tel Aviv, Israel, December 2013
2013 Personality and Identity Formation in Childhood and Adolescence, Chicago, May 2013
2013 NIH Workshop to Advance Basic Behavioral Research in Obesity, April 2013
2013 Sackler Science Speaker Series, Cornell Medical, April 2013
2013 Neuroscience Seminar in Psychiatry, Biological Science Training Program Lectures, Yale University, March 2013
2012 From ICNC to ELSC, Hebrew University of Jerusalem, Nov 2012
2012 Princeton University Neuroscience of Social Decision Making series, May 2012
2012 eHealth and Behavioral Economics for HIV Prevention and Treatment Conference, April 2012
2012 The John B. Pierce Laboratory Seminar Series, March 2012
2011 Mind, Brain, Culture and Consciousness Working Group, Yale University, November 2011
2011 Economic Theory Lunch, Department of Economics, Yale University, October 2011
2011 Neuro-Day, Interdepartmental Neuroscience Program, Yale University, June 2011
2011 First International Conference on Comparative Decision Making, Lexington KY, May 2011
2011 Current Work in Cognitive Psychology Lecture Series, Yale University, May 2011
2011 Symposium of the Integrative Cell Signaling and Neurobiology of Metabolism, April 2011
2010 Magnetic Resonance Research Center Seminar, Yale University, December 2010
2010 Olin Neuropyschiatric Research Center, Institute of Living, Hartford, September 2010

2010 Batsheva seminar on Reward and Decision Making in the Brain, Institute for Advanced Studies, the Hebrew University of Jerusalem, February 2010
2009 Department of Neurobiology, Yale School of Medicine, October 2009
2009 Department of Neurobiology, Weizmann Institute of Science, April 2009
2008 Theoretical Neuroscience Seminar Series, Columbia University, April 2008
2008 Section of Comparative Medicine, Yale School of Medicine, March 2008
2008 Department of Psychology, City College of New York, March 2008
2002 Department of Psychology, Hebrew University of Jerusalem, May 2002

Conference Organizing

Yale Workshop on Perception and Choice, March 2014, Co-organizer

Program committees:
Society for Neuroeconomics – 2018
Reinforcement Learning and Decision Making (RLDM) – 2013, 2015, 2017, 2019 (neuroscience area chair
Computational and System Neuroscience (Cosyne) – 2017

Teaching

Neuroeconomics for economists (ECON 422)
Neuroeconomics (NBIO/NSCI 597 / PSYC 641)