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Ian M. Krajbich

Professional Experience

2013 – present: Assistant Professor

Department of Psychology, *The Ohio State University* Department of Economics, *The Ohio State University*

Center for Cognitive and Brain Sciences, The Ohio State University

2011 – 2013: Postdoctoral Fellow with Ernst Fehr

Department of Economics, University of Zurich, Switzerland

Laboratory for Social and Neural Systems Research, University of Zurich

2010 – 2011: Postdoctoral Fellow with Antonio Rangel and Colin Camerer

Division of the Humanities and Social Sciences, Caltech

Academic Background

2011: Ph.D., *Caltech,* Behavioral and Social Neuroscience

Thesis: Neurometrically informed mechanism design and the role of visual fixations in simple choice

Advisor: Professor Antonio Rangel

2008: M.S., Caltech, Social Sciences

2005: B.S., Caltech, Physics and Business Economics & Management, with honors

Honors and Awards

2016: Ohio State College of Arts and Sciences, College of Education and Human Ecology, cross-

college seed grant (co-PI) - \$20,245

2016: Exeter Prize finalist for best paper published in 2015 in the fields of experimental

economics, decision theory, and behavioural economics

2016: Plenary speaker for the annual meeting of the European Group for Process Tracing

2016: NSF CAREER Award (\$722,305)

2014: Elected to the Board of the Society for Neuroeconomics

2013: Best poster award, Society for Neuroeconomics annual meeting

2012: Forschungskredit grant from the University of Zurich to fund a Ph.D student under my

supervision (~\$60,000)

2012: FINRISK travel grant for the Society for Neuroeconomics annual meeting (\$1000)

2008: NSF IGERT Fellowship recipient

2007: Caltech Discovery Grant for 50 fMRI scanning hours2006: NSF Graduate Research Fellowship (honorable mention)

Publications

Arkady Konovalov, <u>Ian Krajbich</u>. "Money in the bank: Distortive effects of accumulated earnings on risky choice." *Neuron* 93(3): 473-475, 2017

Laura Enax, <u>Ian Krajbich</u>, Bernd Weber. "Salient nutrition labels increase the integration of health attributes in food decision-making." *Judgment and Decision Making* 11(5): 460-471, 2016

Arkady Konovalov, <u>Ian Krajbich</u>. "Gaze data reveal distinct choice processes underlying model-based and model-free reinforcement learning." *Nature Communications* 7:12438, 2016

<u>Ian Krajbich</u>, Colin Camerer, Antonio Rangel. "Exploring the scope of neurometrically informed mechanism design." *Games and Economic Behavior* DOI:10.1016/j.geb.2016.05.001, 2016

Arkady Konovalov, <u>Ian Krajbich</u>. "Over a decade of neuroeconomics: What have we learned?" *Organizational Research Methods* DOI: 10.1177/1094428116644502, 2016

Nathaniel J.S. Ashby, Joseph G. Johnson, <u>Ian Krajbich</u>, Michel Wedel. "Applications and Innovations of Eye-movement Research in Judgment and Decision Making." *Journal of Behavioral Decision Making* 29: 96-102, DOI: 10.1002/bdm.1956, 2016

Bastiaan Oud*, <u>Ian Krajbich</u>*, Kevin Miller, Jin Hyun Cheong, Matthew Botvinick*, Ernst Fehr*. "Irrational time allocation in decision making." *Proceedings of the Royal Society B* 283(1822), 2016 *joint first and last authorship

<u>Ian Krajbich</u>, Stephanie M. Smith. "Modeling eye movements and response times in consumer choice." *Journal of Agricultural & Food Industrial Organization* 13(1):55-72, 2015

<u>Ian Krajbich</u>, Mark Dean. "How can neuroscience inform economics?" *Current Opinion in Behavioral Sciences* 5:51-57, 2015.

<u>Ian Krajbich</u>, Todd Hare, Bjoern Bartling, Yosuke Morishima, Ernst Fehr. "A common mechanism underlying food choice and social decisions." *PLoS: Computational Biology* 11(10): e1004371, 2015

<u>Ian Krajbich</u>, Bjoern Bartling, Todd Hare, Ernst Fehr. "Rethinking fast and slow based on a critique of reaction time reverse inference" *Nature Communications* 6:7455, 2015

Justin Chumbley, <u>Ian Krajbich</u>, Jan Engelmann, Evan Russell, Stan Van Uum, Gideon Koren, Ernst Fehr. "Endogenous cortisol predicts decreased loss aversion in young men." *Psychological Science* 25: 2102-2105, 2014

<u>lan Krajbich</u>, Bastiaan Oud, Ernst Fehr. "Benefits of neuroeconomics modeling: New policy interventions and predictors of preference." *American Economic Review: Papers & Proceedings* 104(5): 501-506, 2014

Rafael Polania, <u>Ian Krajbich</u>, Marcus Grueschow, Christian Ruff. "Neural oscillations and synchronization differentially support evidence accumulation in perceptual and value-based decision-making." *Neuron* 82(3): 709-720, 2014

Colin Camerer, Alec Smith, Camelia M Kuhnen, Donald T Wargo, Gregory Samanez-Larkin, Read Montague, Dino J Levy, David Smith, Dar Meshi, Peter H Kenning, John Clithero, Bernd Weber, Todd Hare, Scott Huettel, Camilla Josephson, Mathieu d'Acremont, Daria Knoch, <u>Ian Krajbich</u>, Benedetto De Martino, Peter NC Mohr, Jan Barton, Marja-Liisa Halko, Christina F Chick, Lorena Gianotti, Hauke R Heekeren. "Correspondence: Are cognitive functions localizable? Colin Camerer et al. versus Marieke van Rooij and John G. Holden." *Journal of Economic Perspectives* 27(2): 247-250, 2013

Ernst Fehr & <u>Ian Krajbich</u>. "Social preferences and the brain." In P. Glimcher and E. Fehr (Eds.) *Neuroeconomics: Decision-Making and the Brain*, 2013

<u>Ian Krajbich</u>, Dingchao Lu, Colin Camerer, Antonio Rangel. "The attentional drift-diffusion model extends to simple purchasing decisions." *Frontiers in Psychology* 3(193): 1-18, 2012

Shuo Wang, <u>Ian Krajbich</u>, Ralph Adolphs, Naotsugu Tsuchiya. "The role of risk aversion in non-conscious decision making." *Frontiers in Psychology* 3(50): 1-17, 2012

<u>lan Krajbich</u> & Antonio Rangel. "Multialternative drift-diffusion model predicts the relationship between visual fixations and choice in value-based choice." *Proceedings of the National Academy of Sciences of the USA* 108(33): 13852-13857, 2011

<u>lan Krajbich</u>, Carrie Armel, Antonio Rangel. "Visual fixations and the computation and comparison of value in simple choice." *Nature Neuroscience* 13(10): 1292-1298, 2010

<u>Ian Krajbich</u>, Colin Camerer, John Ledyard, Antonio Rangel. "Using neural measures of economic value to solve the public goods free-rider problem." *Science* 326(5952): 596-599, 2009

<u>Ian Krajbich</u>, Ralph Adolphs, Daniel Tranel, Natalie Denburg, Colin Camerer. "Economic games quantify diminished sense of guilt in patients with damage to the prefrontal cortex." *Journal of Neuroscience* 29(7): 2188-2192, 2009

Ming Hsu, <u>Ian Krajbich</u>, Chen Zhao, Colin Camerer. "Neural response to reward anticipation under risk is nonlinear in probabilities." *Journal of Neuroscience* 29(7): 2231-2237, 2009

Min Jeong Kang, Ming Hsu, <u>Ian Krajbich</u>, George Loewenstein, Samuel McClure, Joseph Tao-yi Wang, Colin Camerer. "The wick in the candle of learning. Epistemic curiosity activates reward circuitry and enhances memory." *Psychological Science* 20(8): 963-973, 2009

Yunhua Hu, Shelly R. Winn, <u>Ian Krajbich</u>, Jeffrey O. Hollinger. "Porous polymer scaffolds surface-modified with arginine-glycine-aspartic acid enhance bone cell attachment and differentiation *in vitro*." *Journal of Biomedical Materials Research*. 64A: 583-590, 2003

Working Papers

Arkady Konovalov & <u>Ian Krajbich</u>, "Revealed Indifference: Using Response Times to Infer Preferences" posted at: http://www.econ.ohio-state.edu/pdf/krajbich/wp16-01.pdf

Cary Frydman & <u>Ian Krajbich</u> "Using response times to infer others' beliefs in information cascade games" posted at: <u>http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2817026</u>

Invited Talks

The Ohio State University, Department of Agricultural, Environmental and Development Economics (February, 2017)

Stanford University, Spanlab/Neurochoice/MAD seminar (November, 2016)

Stanford University, Department of Economics, Behavior & Experimental seminar (November, 2016)

The Ohio State University, Undergraduate Economic Society (November, 2016)

University College London, Computational Psychiatry seminar (June, 2016)

Warwick University, CAGE-IAS Behavioural Science Summer School (June, 2016)

Foundations of Uncertainty and Risk – Annual Meeting, Young Talent roundtable (June, 2016)

European Group for Process Tracing – Annual Meeting, Plenary Speaker (June, 2016)

University of Cologne/Konstanz, Psychoeconomics Workshop (June, 2016)

Barcelona GSE, Workshop on Stochastic Choice (June, 2016)

University of Konstanz, Symposium on Exploring Ignorance - The Acquisition, Selection and

Processing of Information (May, 2016)

Columbia University, Workshop on the Representation of Value and Economic Choice (May, 2016)

University of Michigan, Decision Consortium Seminar (March, 2016)

University of Toronto, Rotman School of Management (February, 2016)

Duke University, Psychology & Neuroscience (February, 2016)

University of Bern, Colloquium in Social Psychology and Social Neuroscience (January, 2016)

University of Zurich, Social and Neural Systems Laboratory/Department of Economics (January, 2016)

Interdisciplinary Symposium on Decision Neuroscience - Annual Meeting (2015)

Maastricht University, Department of Economics (2015)

MIT Sloan, Marketing seminar (2015)

Cognitive Science Society Workshop on Sequential Sampling Models (2014)

University of Alaska Workshop on Choice Processes and Choice Experiments (2014)

New York University, Neuroeconomics Colloquium (2014)

University College London, Affective Brain Lab (2014)

National Yang Ming University, Institute of Neuroscience (2013)

National Taiwan University, Department of Economics (2013)

Third International Symposium on Biology of Decision Making, Paris, France (2013)

University of Basel, Department of Psychology (2013)

Claremont Graduate University, Department of Economics (2013)

Virginia Tech, Department of Economics (2013)

George Washington University, Department of Psychology (2013)

University of Michigan, School of Information (2013)

Columbia University, Department of Psychology (2013)

The Ohio State University, Department of Psychology (2012)

University of Madison Wisconsin, Department of Psychology (2012)

Yale University, Department of Psychology (2012)

Cambridge University, Department of Physiology, Development, and Neuroscience (2012)

University of Bonn, Center for Economics and Neuroscience (2012)

Paris School of Economics Workshop on Collective Decisions (2012)

Caltech, Behavioral and Social Neuroscience Seminar (2012)

Neuroscience Center Zurich Symposium (2011)

University of Zurich, Department of Economics (2010)

New York University Neuroeconomics seminar (2010)

Conference Presentations

Economic Science Association – North American Meeting – talk (November, 2016)

Decision – Theory, Experiments and Applications (D-TEA) – talk (2016)

COSYNE – Annual Meeting – poster (2016)

Society for Neuroeconomics – Annual Meeting – poster (2015)

Stanford Institute for Theoretical Economics: Experimental Economics Session - talk (2015)

2nd Multidisciplinary Conference on Reinforcement Learning and Decision Making – poster (2015)

Science of Philanthropy Initiative – Annual Meeting – talk (2014)

Society for Neuroeconomics – Annual Meeting – talk (2014)

Economic Science Association – International Meeting – talk (2014)

Bounded Rationality in Choice – Annual Meeting – talk (2014)

American Economic Association – Annual Meeting – talk (2014)

Society for Neuroeconomics – Annual Meeting – poster (2013)

Economic Science Association – International Meeting – talk (2013)

Society for Neuroeconomics - Annual Meeting - talk (2012)

International Conference on Brain Dynamics and Decision Making – poster (2012)

Neural Coding, Decision Making & Integration in Time Workshop – two posters (2012)

Society for Neuroeconomics - Annual Meeting - poster (2011)

Cognitive Neuroscience Society – Annual Meeting – poster (2011)

Society for Neuroscience – Annual Meeting – poster (2010)

Econometrics Society World Congress – talk (2010)

Cognitive Neuroscience Society – Annual Meeting – poster (2010)

Economic Science Association - North American Meeting - talk (2009)

Society for Neuroeconomics – Annual Meeting – poster (2009)

Workshop on Public Economics: Theoretical and Experimental Approaches – talk (2009)

Cognitive Neuroscience Society – Annual Meeting – poster (2009)

Tamagawa-Caltech Workshop on Neural Mechanisms of the Social Mind – poster (2009)

Society for Neuroscience – Annual Meeting – poster (2008)

Econometrics Society – Annual Meeting – talk (2008)

Economic Science Association – International Meeting – talk (2008)

Society for Neuroeconomics – Annual Meeting – poster (2008)

Cognitive Neuroscience Society – Annual Meeting – poster (2008)

Economic Science Association – North American Meeting – talk (2007)

Tamagawa Workshop on Neural Mechanisms of the Social Mind – talk (2007)

Economic Science Association – North American Meeting – talk (2006)

Ad-hoc Reviewing

Guest editor for the Journal of Behavioral Decision Making special issue on eye-tracking (2016)

General interest journals:

Science

Proceedings of the National Academy of Sciences of the USA

Nature Communications

Nature Human Behaviour

Current Biology

PLoS Computational Biology

Proceedings of the Royal Society B
Current Opinion in Behavioral Sciences
Journal of Neuroscience, Psychology and Economics
PLoS One
Scientific Reports

Neuroscience Journals:

Nature Neuroscience

Neuron

Journal of Neuroscience

European Journal of Neuroscience

Neuroimage

Social, Cognitive and Affective Neuroscience

Neuroreport

Psychology Journals:

Psychological Review

Psychological Science

Journal of Experimental Psychology: General

Journal of Experimental Psychology: Learning, Memory, and Cognition

Cognition

Journal of Behavioral Decision Making

Decision

Frontiers in Cognitive Science

Economics Journals:

American Economic Review

Econometrica

Quarterly Journal of Economics

Journal of Economic Behavior and Organization

Experimental Economics

American Journal of Agricultural Economics

Decisions in Economics and Finance

Journal of Agricultural & Food Industrial Organization

Journal of the Economic Science Association

Other Journals:

Journal of Marketing Research

Grant Agencies:

National Science Foundation

Leverhulme Trust

Israeli Science Foundation

Conferences:

Computational Systems Neuroscience (COSYNE) (2015)

Reinforcement Learning and Decision Making (RLDM) (2015)

Society for Neuroeconomics (2016)

Teaching Experience

PSYCH 7695.04 The Dynamics and Neuroscience of Psychological and Economic Decision Making, (cotaught with Roger Ratcliff), *The Ohio State University*, (Fall 2014)

PSYCH 4508 Judgment and Decision Making, The Ohio State University, (Fall 2014, Fall 2015)

PSYCH 7708 Judgment and Decision Making, *The Ohio State University*, (Spring 2014, Spring 2015, Spring 2017)

ECON 5194 Neuroeconomics, The Ohio State University, (Fall 2015)

PSYCH 8880 Current Research in Decision Psychology, The Ohio State University (Fall 2016)

ECON/PSYCH 5870 Neuroeconomics and Decision Neuroscience, *The Ohio State University* (Spring 2017)

Economics for neuroscientists and neuroscience for economists, graduate course (co-taught with Todd Hare), *University of Zurich*, (Fall 2011, 2012)

Service

Board Member, Society for Neuroeconomics, (2014-2017)

Member, Graduate Admissions Committee, Dept. of Psychology, The Ohio State University, (2014-)

Member, Awards Committee, Dept. of Psychology, The Ohio State University, (2013-)

Member, Undergraduate Studies Committee, Dept. of Economics, The Ohio State University (2015-)

Denman Forum Judge (2015, 2016)

COMPAS conference moderator (January, 2016)

Speaker and co-organizer of Caltech Alumni Association Ohio-Kentucky meeting (Jan 2015)

Chair, Neuroeconomics Journal Club, Dept. of Economics, *University of Zurich*, (2011-2013) Administrator, "Brainscience" subject recruitment system, *Caltech*, (2007-2011)

Student Awards

NSF Graduate Research Fellowship – Stephanie Smith, 2016
Decision Sciences Collaborative research grant – James Wei Chen, 2016
Gibson Research Award – Rachael Gwinn, 2015
Denman Research Forum 1st place – Alison Butler, 2015
Undergraduate Research Office Summer Award – Alison Butler, 2015

Research Group Members

Undergraduate:

Cameron Luther (2017 -)

Kareem Soliman (2016 -)

Alison Butler (2014 – 2016)

Naomi Anderson (2014 – 2016)

Xiao Luo (2014 – 2015)

Tomas Moreno-Vasquez (2013 – 2014)

Graduate:

Stephanie Smith (2014 – present) Rachael Gwinn (2014 – present)

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James Wei Chen (2014 – present)
Arkady Konovalov (2013 – present)
Manuel Andres Mitsumasu Heredia (2012 – 2013) (University of Zurich)
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Postdoctoral Scholar:

Aidan Makwana (2015 – 2016)

Research Assistant:

Nataliya Rubinchik (2016 – present)