

MAX KLEIMAN-WEINER

EDUCATION	Ph.D.	Massachusetts Institute of Technology Brain and Cognitive Sciences Computational Cognitive Science Group Advisor: Josh Tenenbaum Committee: Drazen Prelec, Rebecca Saxe, Fiery Cushman GPA: 5.0/5.0	2012–2018
	2x MSc	University of Oxford, Merton College Applied Statistics & Experimental Psychology Advisors: Tim Behrens & Matthew Rushworth	2010, 2012
	BS	Stanford University Biological Sciences and honors in Neuroscience The Deans' Award (1 of 8, highest academic award) Firestone Medal (1 of 34, highest research award) GPA: 3.9/4.0, Phi Beta Kappa and departmental distinction	2009
EMPLOYMENT	2012-2019 2018-2019 2011-2014 2011-2012 2010	Diffee, Co-Founder & Chief Scientist [Acquired by Salesforce] Data Science Initiative, CRCS, & MBB Postdoctoral Fellow Knowledge Base Acceleration (KBA), Organizer Chinese Academy of Sciences & REAP, Fulbright Fellow McKinsey & Company, Summer Associate	
AWARDS	2020 2020 2019 2017 2017 2016 2016 2015 2015,16,18 2015 2013	Best Paper Modeling Prize for Higher Cognition – Cognitive Science Society Best Paper Award – Cooperative AI Workshop, NeurIPS Glushko Dissertation Prize – Cognitive Science Society (\$10,000 Prize) Best Paper (1st of 200+) – Reinforcement Learning and Decision Making William James Prize (best paper) – Society for Philosophy and Psychology MIT Pokerbots 1st of 22 (\$10,000 prize) Angus MacDonald Award for Excellence in Undergraduate Teaching MIT Pokerbots 1st of 38 (\$10,000 prize) Cognitive Science Society Glushko Student Travel Award (merit based) Psychonomics Poster Finalist Newman Entrepreneurial Initiative (\$25,000 award)	
FELLOWSHIPS	2011-2017 2011-2012 2009-2014 2009-2011 2008 2008	Hertz Foundation Graduate Fellowship Fulbright Research Fellowship (China) NSF Graduate Research Fellowship Marshall Scholar Barry M. Goldwater Scholar Irene and Eric Simon Brain Research Foundation Student Fellow	

RESEARCH GRANTS (CO-PI)	2020- 2018-20 2018-20 2018-21 2014-17	Templeton World Charity Foundation, The Cognitive Foundations of Social Minds (w/ Josh Tenenbaum, Francine Dolins, Richard Lewis, Josep Call) DARPA, Ground Truth, Social MIND: Social Machine Intelligence for Novel Discovery (w/ Josh Tenenbaum & James Allen Evans, UChicago), \$355,000 Future of Life Institute, Reverse-engineering fair cooperation (w/ Josh Tenenbaum), \$150,000 Templeton World Charity Foundation, Diverse Intelligences Initiative, Reverse-engineering the moral mind (w/ Josh Tenenbaum), \$228,250 DARPA, Memex, Maximizing Coreference Resolution with Efficient Human Input, \$2,600,000
SHORT COURSES	2014 2013 2011	Machine Learning Summer School (MLSS) Santa Fe Institute (SFI) - Complex Systems Summer School Inter-University Program (IUP) for Chinese Language Studies
PUBLICATIONS		<p>Google Scholar Link: scholar.google.com/citations?hl=en&user=SACXQKYAAAAJ</p> <p>*Wang, R.E., *Wu, S.A., Evans, J.A., Tenenbaum J.B., Parkes, D.C., Kleiman-Weiner, M. (2020) Too many cooks: Coordinating multi-agent collaboration through inverse planning (Extended Abstract) <i>AAMAS</i></p> <p>Levine, S., Kleiman-Weiner M., Schulz L., Tenenbaum J.B., Cushman, F. (2020) The logic of universalization guides moral judgment. <i>Proceedings of the National Academy of Sciences</i>.</p> <p>McManus, R.M., Kleiman-Weiner, M., Young L. (2020) What we owe to family: The impact of special obligations on moral judgment. <i>Psychological Science</i>.</p> <p>Awad E., Levine S., Kleiman-Weiner, M., Dsouza S., Tenenbaum J.B., Shariff A., Bonnefon J., & Rahwan I. (2020) Blaming humans in autonomous vehicle accidents: Shared responsibility across levels of automation. <i>Nature Human Behavior</i>.</p> <p>*Serrino, J., *Kleiman-Weiner, M., Parkes, C. D., & Tenenbaum, J. B. (2019) Finding friend and foe in multi-agent games. (<i>NeurIPS</i>) (* indicates equal contribution)</p> <p>*Shum, M., *Kleiman-Weiner, M., Littman, M. L., & Tenenbaum, J. B. (2019) Theory of Minds: Understanding Behavior in Groups Through Inverse Planning. (<i>AAAI</i>) (* indicates equal contribution) [oral]</p> <p>Strouse, D., Kleiman-Weiner, M., Tenenbaum, J.B., Botvinick, M., Schwab, D. (2018) Learning to share and hide intentions using information regularization. (<i>NeurIPS</i>).</p> <p>Cao, J., Kleiman-Weiner, M., & Banaji, M.R. (2018). People make the Bayesian judgment they criticize in others. <i>Psychological Science</i>.</p> <p>Kleiman-Weiner, M., Tenenbaum, J. B., & Zhou, P. (2018). Non-parametric Bayesian inference of strategies in infinitely repeated games. <i>Econometrics Journal</i>.</p> <p>Gerstenberg, T., Ullman, T. D., Nagel, J., Kleiman-Weiner, M., Lagnado, D. A. & Tenenbaum, J. B. (2018). Lucky or clever? From changed expectations to attributions of responsibility. <i>Cognition</i>.</p> <p>Kim R., Kleiman-Weiner M., Abeliuk A., Awad E., Dsouza S., Tenenbaum J.B.. & Rahwan I. (2018). A Computational Model of Commonsense Moral Decision Making. <i>AAAI/ACM: AI, Ethics, and Society</i>.</p> <p>Halpern, J.Y., Kleiman-Weiner, M. (2018). Towards Formal Definitions of Blame-worthiness, Intention, and Moral Responsibility. <i>AAAI</i>. [oral]</p>

- Cao, J., **Kleiman-Weiner, M.**, & Banaji, M.R. (2017). Statistically inaccurate and morally unfair judgments via base rate intrusion. *Nature Human Behavior*, 1(10), 738.
- Kleiman-Weiner, M.**, Saxe, R., & Tenenbaum, J. B. (2017). Learning a commonsense moral theory. *Cognition*.
- Kleiman-Weiner, M.**, Shaw, A., & Tenenbaum, J. B. (2017). Constructing Social Preferences From Anticipated Judgments: When Impartial Inequity is Fair and Why? *Proceedings of the 39th Annual Conference of the Cognitive Science Society*. [oral]
- Kleiman-Weiner, M.**, Ho, M., Austerweil, J. L., Littman, M. L., & Tenenbaum, J. B. (2016). Coordinate to cooperate or compete: abstract goals and joint intentions in social interaction. *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. [oral]
- Ho, M., MacGlashan, J., Greenwald, A., Littman, M. L., Hilliard, E. M., Trimbach, C., Stephen, B., Tenenbaum, J. B., **Kleiman-Weiner, M.**, & Austerweil, J. L. (2016). Feature-based joint planning and norm learning in collaborative games. *Proceedings of the 38th Annual Conference of the Cognitive Science Society*.
- Kleiman-Weiner, M.**, Gerstenberg, T., Levine, S., & Tenenbaum, J. B. (2015). Inference of intention and permissibility in moral decision making. *Proceedings of the 37th Annual Conference of the Cognitive Science Society*. [oral]
- Allen, K., Jara-Ettinger, J., Gerstenberg, T., **Kleiman-Weiner, M.**, & Tenenbaum, J. B. (2015). Go fishing! responsibility judgments when cooperation breaks down. *Proceedings of the 37th Annual Conference of the Cognitive Science Society*.
- Gerstenberg, T., Ullman, T. D., **Kleiman-Weiner, M.**, Lagnado, D. A., & Tenenbaum, J. B. (2014). Wins above replacement: Responsibility attributions as counterfactual replacements *Proceedings of the 36th Annual Conference of the Cognitive Science Society*.
- Frank, J.R., **Kleiman-Weiner, M.**, Roberts, D.A., Voorhees, E., & Soboroff, I. (2014). Evaluating stream filtering for entity profile updates in TREC 2012, 2013, and 2014 (*KBA Track Overview, Notebook Paper*)
- Frank, J. R., Bauer, S. J., **Kleiman-Weiner, M.**, Roberts, D. A., Tripuraneni, N., Zhang, C., Ré, C., Voorhees, E., & Soboroff, I. (2013). *Evaluating Stream Filtering for Entity Profile Updates for TREC 2013 (KBA Track Overview)*.
- Kleiman-Weiner, M.**, Luo, R., Zhang, L., Shi, Y., Medina, A., & Rozelle, S. (2013). Eggs versus chewable vitamins: which intervention can increase nutrition and test scores in rural china? *China Economic Review*, 24, 165–176.
- Zhang, L., Kleiman-Weiner, M., Luo, R., Shi, Y., Martorell, R., Medina, A., & Rozelle, S. (2013). Multiple micronutrient supplementation reduces anemia and anxiety in rural China’s elementary school children. *The Journal of Nutrition*, 143(5), 640– 647.
- Frank, J. R., **Kleiman-Weiner, M.**, Roberts, D. A., Niu, F., Zhang, C., Ré, C., & Soboroff, I. (2012). Building an entity-centric stream filtering test collection for TREC 2012. *Proceedings of the Text Retrieval Conference (TREC)*.
- Cepeda, C., Cummings, D. M., Hickey, M. A., **Kleiman-Weiner, M.**, Chen, J. Y., Watson, J. B., & Levine, M. S. (2010). Rescuing the corticostriatal synaptic disconnection in the R6/2 mouse model of Huntington’s disease: exercise, adenosine receptors and ampakines. *PLoS Currents*, 2.

- Luo, R., **Kleiman-Weiner, M.**, Rozelle, S., Zhang, L., Liu, C., Sharbono, B., Shi, Y., & Lee, M. (2010). Anemia in rural China's elementary schools: prevalence and correlates in Shaanxi province's poor counties. *Ecology of Food and Nutrition*, 49(5), 357–372.
- Kleiman-Weiner, M.**, Beenhakker, M. P., Segal, W. A., & Huguenard, J. R. (2009). Synergistic roles of GABAA receptors and SK channels in regulating thalamocortical oscillations. *Journal of Neurophysiology*, 102(1), 203–213.
- Schofield, C. M., **Kleiman-Weiner, M.**, Rudolph, U., & Huguenard, J. R. (2009). A gain in GABA_A receptor synaptic strength in thalamus reduces oscillatory activity and absence seizures. *Proceedings of the National Academy of Sciences*, 106 (18), 7630–7635.
- Cepeda, C., André, V. M., Yamazaki, I., Wu, N., **Kleiman-Weiner, M.**, & Levine, M. S. (2008). Differential electrophysiological properties of dopamine D1 and D2 receptor-containing striatal medium-sized spiny neurons. *European Journal of Neuroscience*, 27(3), 671–682.
- Kleiman-Weiner, M.**, & Berger, J. (2006). The sound of one arm swinging: a model for multidimensional auditory display of physical motion. *Proceedings of the 12th International Conference on Auditory Display*.

INVITED PRESENTATIONS (SELECTED)

2020 Center for Human-Compatible AI Conference (CHAI), Berkeley
 2020 Machine Learning Special Interest Group, Lincoln Laboratory
 2019 Diverse Intelligences Summit, St. Andrews
 2019 EconCS Seminar, Harvard
 2019 Center for Research on Computation and Society, Harvard
 2019 MI21 Human Like Technologies, London
 2019 Center for Human-Compatible AI Conference (CHAI), Berkeley
 2018 Leading Integrity, Warwick Business School, London
 2018 O'Reilly Artificial Intelligence Conference, NYC
 2018 Distinguished Speaker, Accelerated Discovery Forum, IBM Research (Almaden)
 2018 Boston College, Carroll School of Management, JDM Day
 2018 Lee Lab (Prof. Daeyeol Lee), Yale
 2017 Cooperative Social Intelligence Workshop (Organizer), CogSci
 2017 Facebook AI (FAIR), New York
 2017 Human Cooperation Lab (Prof. David Rand), Yale
 2017 Morality, Language and Thought Workshop, Institut Jean Nicod
 2017 Boston University, Questrom School of Business, JDM Day
 2017 Scalable Cooperation Group (Prof. Iyad Rahwan), MIT Media Lab
 2017 Social Cognitive Neuroscience Lab (Prof. Rebecca Saxe), MIT BCS
 2017 MIT Cognitive Lunch
 2016 Workshop on Physical & Social Scene Understanding, CogSci
 2016 Workshop on Learning, Inference and Control of Multi-Agent Systems, NIPS
 2016 Organizational Economics Lunch, MIT Sloan
 2016 Cooperation and Self-Control Workshop, London
 2016 London Judgement and Decision Making Seminar, UCL
 2016 DeepMind, London
 2016 Morality Lab (Prof. Liane Young), Boston College
 2016 Computational Cognitive Neuroscience Lab (Prof. Sam Gershman), Harvard
 2015 Brown University, Department of Cognitive, Linguistic & Psychological Sciences, Cognition Seminar Series
 2015 Shaw Lab (Prof. Alex Shaw), University of Chicago
 2015 Boston Area Moral Cognition Group
 2015 Affective Brain Lab (Prof. Tali Sharot), UCL/MIT
 2015 Scalable Cooperation Group (Prof. Iyad Rahwan), MIT Media Lab
 2015 MIT Cognitive Lunch
 2015 Moral Psychology Research Lab (Prof. Fiery Cushman & Josh Greene), Harvard
 2015 Computation & Cognition Lab (Prof. Noah Goodman), Stanford
 2015 Northeastern Undergraduate Researchers of Neuroscience
 2009 Achauer Honors Symposium (Stanford)

PATENTS **Kleiman-Weiner, Max, et al.** “Knowledge operating system,” 2018. US Patent Application US20180349517A1.

Roberts, D.A., **Kleiman-Weiner, M.**, Frank, J.R., *et al.*, “Entity-centric knowledge discovery,” Mar. 1, 2016. US Patent 9,275,132.

TEACHING

2016 TA: Statistical Learning Theory and Applications (MIT 9.520/6.860)
 2013, 14, 15 TA: Computational Cognitive Science (MIT 9.66/9.660/6.804)
 2009 TA: Economic Development of Greater China (Stanford EASTASN 285C)
 2008 Lecturer: Current Debates in Neuroscience (Stanford)

SUPERVISED STUDENTS **PhD:** Essie (Suhyoum) Yu (2018-)
Masters of Engineering: Sunayana Rane (2018-2020), Luana Lopes Lara (2018-2019), Jack Serrino (2018-2019), Michael Shum (2017-2018), Lily Zhang (2017-2018)

Undergraduate: Sarah Wu (2019-2020), Rose Wang (2019-2020), John Muchovej(2019-2020), William Long (2018-2019), Suproteem Sarkar (2018-2019), Alyssa Dayan (2018), Penghui Zhou (2015-2016), Daniel Lerner (2015-2016), Suzanne A Mueller (2015-2016), Erwin Hilton (Summer 2015), Max Maybury (Spring 2015), Paul Masterson (Spring 2015), Alejandro Vientos (Summer 2014, 2016-2018), Max Stein-Golenbock (Spring 2014), Drew Drechsler (Fall 2013)

MISC

Citizenship: USA
Languages: English, Mandarin Chinese