

# Julian Jara-Ettinger

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## Education and Appointments

2017–present    Assistant Professor of Psychology, Yale University  
Assistant Professor of Computer Science (by courtesy), Yale University  
Affiliated faculty in Cognitive Science, Yale University  
Affiliated faculty in Education Studies, Yale University  
2016–2017    Postdoctoral fellow, Simons Center for the Social Brain, MIT  
2011–2016    PhD in Brain and Cognitive Sciences, MIT  
2006–2011    BS in Physics and Mathematics, Universidad Michoacana

## Awards and Honors

2017            Robert J. Glushko Prize for Outstanding Doctoral Dissertation  
2017            SRCO Outstanding Doctoral Dissertation Award  
2015            Glushko Student Travel Award, Cognitive Science Society  
2013            Angus MacDonald Award for Excellence in Undergraduate Teaching  
2012            Cosyne Travel Award  
2011 & 2012    Singleton Graduate Fellowship  
2007 & 2009    Honorable Mention at ACM international collegiate programming contest,  
Mexico and Central America

## Publications

### Articles in prep

- [1] Velez-Ginorio, J., Siegel, M., Tenenbaum, J.B., & Jara-Ettinger, J. (*in prep*). Interpreting actions by attributing compositional desires.

- [2] Jara-Ettinger, J., & Gweon, H. (*in prep*). Minimal covariation data support one-shot inferences of novel agents.
- [3] Royka, A., Heuser, G., & Jara-Ettinger, J. (*in prep*). Non-iconic gestures around the world are either rare or repetitive.
- [4] Flowers, M., Maier, M., Aboody, R., & Jara-Ettinger, J. (*in prep*). People determine fairness based on exactness.
- [5] Flowers, M., Stoner, L., & Jara-Ettinger, J. (*in prep*). Five-year-olds generalize properties of counting to non-numeric counting algorithms.
- [6] Aboody, R., Velez-Ginorio, J., Santos, L., & Jara-Ettinger, J. (*in prep*). Teachers select what to share rationally, but misrepresent learners' hypothesis space.
- [7] Aboody, R., Huey, H., & Jara-Ettinger, J. (*in prep*). Preschoolers believe that accurate predictions reveal knowledge, but accurate observations do not.
- [8] Bear, A., Bensinger, S., Jara-Ettinger, J., & Knobe, J. (*in prep*). What comes to mind? A mix of what's likely and what's good.
- [9] Rubio-Fernandez, P., & Jara-Ettinger, J. (*in prep*). Joint inferences of speakers' knowledge and referents based on how they speak.
- [10] Royka, A., Aboody, R., & Jara-Ettinger, J. (*in prep*). People interpret actions that do not act on the world as gestures: evidence from the Tsimane'.
- [11] Jara-Ettinger, J. (*in prep*). Theory of Mind as Inverse Reinforcement Learning.

### Journal publications

- [1] Rubio-Fernandez, P., Mollica, F., & Jara-Ettinger, J. (*under review*). Why searching for a blue triangle is different in English than in Spanish.
- [2] Conway, B., Ratnasigam, S., Jara-Ettinger, J., Futrell, R., & Gibson, E. (*under review*). Communication efficiency of color naming across languages suggests a new framework for the evolution of color terms.
- [3] Jara-Ettinger, J., Schulz, L.E., & Tenenbaum, J.B. (*under review*). The computational basis of productivity, flexibility, and explanatory depth in commonsense psychology.
- [4] Jara-Ettinger, J., Floyd, S., Huey, H., & Tenenbaum, J.B. (*under review*). Social pragmatics: four- and five-year-olds rely on commonsense psychology to resolve referential ambiguities.
- [5] Jara-Ettinger, J., Levy, R., Sakel, J., & Gibson, E. (*under review*). The cultural origins of the shape bias: Evidence from the Tsimane'.
- [6] Bridgers, S., Jara-Ettinger, J., & Gweon, H. (*under review*). Children consider others' expected costs and rewards when deciding what to teach.
- [7] Jara-Ettinger, J.\*, Sun, F.\*, Schulz, L.E., & Tenenbaum, J.B. (2018). Sensitivity to the sampling process emerges from the principle of efficiency. *Cognitive Science*.

- [8] Gibson, E., Jara-Ettinger, J., Levy, R., & Piantadosi, S.T. (2018). Task effects in cross-cultural research: Computer experiments can yield misleading results in non-industrialized populations. *Open Mind*.
- [9] Gibson, E., Futrell, R., Jara-Ettinger, J., Mahowald, K., Bergen, L., Sivalogeswaran, R., Gibson, M., Piantadosi, S.T., & Conway, B. (2017). Color language reflects usefulness of color. *Proceedings of the National Academy of Sciences*.
- [10] Jara-Ettinger, J.\*, Foyd, S.\*, Tenenbaum, J.B., & Schulz, L.E. (2017). Children believe that agents maximize expected utilities. *Journal of Experimental Psychology: General*.
- [11] Rubio-Fernandez, P., Jara-Ettinger, J., & Gibson, E. (2017). Can processing demands explain toddlers' performance in false-belief tasks? *Response to Setoh et al. Proceedings of the National Academy of Sciences*.
- [12] Baker, C.L., Jara-Ettinger, L., Saxe, R., & Tenenbaum, J.B. (2017). Rational quantitative attribution of beliefs, desires, and percepts in human mentalizing. *Nature Human Behaviour*.
- [13] Ferrigno, S., Jara-Ettinger, J., Piantadosi, S.T., & Cantlon, J. (2017). A universal number bias in monkeys, children, and innumerate adults. *Nature Communications*.
- [14] Jara-Ettinger, J., Gweon, H., Schulz, L.E., & Tenenbaum, J.B. (2016). The naïve utility calculus: computational principles underlying social cognition. *Trends in Cognitive Sciences*.
- [15] Jara-Ettinger, J., Piantadosi, S.T., Spelke, E., Levy, R., & Gibson, E. (2016). Mastery of the natural numbers is not the result of mastery of counting: Evidence from late counters. *Developmental Science*.
- [16] Jara-Ettinger, J., Gweon, H., Tenenbaum, J.B., & Schulz, L.E. (2015). Children's understanding of the costs and rewards underlying rational action. *Cognition*.
- [17] Jara-Ettinger, J., Gibson, E., Kidd, C., & Piantadosi, S.T. (2015). Native Amazonian children forego egalitarianism in merit-based tasks when they learn to count. *Developmental Science*.
- [18] Jara-Ettinger, J., Tenenbaum, J.B., & Schulz, L.E. (2015). Not so innocent: Toddlers' inferences about costs and culpability. *Psychological Science*.
- [19] Piantadosi, S.T., Jara-Ettinger, J., & Gibson, E. (2014). Children's development of number in an indigenous farming-foraging group. *Developmental Science*.

## **Book chapters**

- [1] Rodrigues, E., Achcar, J., & Jara-Ettinger, J. (2011). Using a Gibbs Sampling Algorithm and a Non-homogeneous Poisson Model to Estimate the Occurrence of Ozone Exceedances in Mexico City. *Air Quality - Model and Applications*.

## Refereed conference proceedings

- [1] Royka, A., Aboody, R., & Jara-Ettinger, J. (2018). Movement as a message: inferring communicative intent from action. *Proceedings of the 40<sup>th</sup> Annual Conference of the Cognitive Science Society*.
- [2] Flowers, M., Aboody, R., & Jara-Ettinger, J. (2018). Beyond principles: Children determine fairness based on attention and exactness. *Proceedings of the 40<sup>th</sup> Annual Conference of the Cognitive Science Society*.
- [3] Rubio-Fernandez, P., & Jara-Ettinger, J. (2018). Joint inferences of speakers' knowledge and referents based on how they speak. *Proceedings of the 40<sup>th</sup> Annual Conference of the Cognitive Science Society*.
- [4] Bear, A., Bensinger, S., Jara-Ettinger, J., & Knobe, J. (2018). What comes to mind? A mix of what's likely and what's good. *Proceedings of the 40<sup>th</sup> Annual Conference of the Cognitive Science Society*.
- [5] Aboody, R., Velez-Ginorio, J., Santos, L., & Jara-Ettinger, J. (2018). When teaching breaks down: Teachers rationally select what information to share, but misrepresent learners' hypothesis spaces. *Proceedings of the 40<sup>th</sup> Annual Conference of the Cognitive Science Society*.
- [6] Aboody, R., Huey, H., & Jara-Ettinger, J. (2018). Success does not imply knowledge: Preschoolers believe that accurate predictions reveal prior knowledge, but accurate observations do not. *Proceedings of the 40<sup>th</sup> Annual Conference of the Cognitive Science Society*.
- [7] Jara-Ettinger, J., & Gweon, H. (2017). Minimal covariation data support future one-shot inferences about unobservable properties of novel agents. *Proceedings of the 39<sup>th</sup> Annual Conference of the Cognitive Science Society*.
- [8] Velez-Ginorio, J., Siegel, M., Tenenbaum, J.B., & Jara-Ettinger, J. (2017). Interpreting actions by attributing compositional desires. *Proceedings of the 39<sup>th</sup> Annual Conference of the Cognitive Science Society*.
- [9] Jara-Ettinger\*, J., Sun\*, F., Schulz, L.E., & Tenenbaum, J.B. (2016). The naïve utility calculus unifies statistical and spatial routes to preference. *Proceedings of the 38<sup>th</sup> Annual Conference of the Cognitive Science Society*.
- [10] Bridgers, S., Jara-Ettinger, J., & Gweon, H. (2016). Children consider others' expected costs and rewards when deciding what to teach. *Proceedings of the 38<sup>th</sup> Annual Conference of the Cognitive Science Society*.
- [11] Jara-Ettinger, J., Lydic, E., Tenenbaum, J.B. & Schulz, L.E. (2015). Beliefs about desires: Children's understanding of how knowledge and preference influence choice. *Proceedings of the 37<sup>th</sup> Annual Conference of the Cognitive Science Society*.
- [12] Jara-Ettinger, J., Schulz, L.E., & Tenenbaum, J.B. (2015). The naïve utility calculus: Joint inferences about the costs and rewards of actions. *Proceedings of the 37<sup>th</sup> Annual Conference of the Cognitive Science Society*.
- [13] 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 37<sup>th</sup> Annual Conference of the Cognitive Science Society.*

- [14] Jara-Ettinger\*, J., Kim\*, N., Muentener, P., & Schulz, L.E. (2014). Running to do evil: Costs incurred by perpetrators affect moral judgment. *Proceedings of the 36<sup>th</sup> Annual Conference of the Cognitive Science Society.*
- [15] Jara-Ettinger, J., Gweon, H., Tenenbaum, J.B., & Schulz, L.E. (2014). I'd do anything for a cookie (but I won't do that): Children's understanding of the costs and rewards underlying rational action. *Proceedings of the 36<sup>th</sup> Annual Conference of the Cognitive Science Society.*
- [16] Jara-Ettinger, J., Tenenbaum, J.B., & Schulz, L.E. (2013). Not so innocent: Reasoning about costs, competence, and culpability in very early childhood. *Proceedings of the 35<sup>th</sup> Annual Conference of the Cognitive Science Society.*
- [17] Jara-Ettinger, J., Baker, C.L., & Tenenbaum, J.B., (2012). Learning what is where from social observations. *Proceedings of the 34<sup>th</sup> Annual Conference of the Cognitive Science Society.*

### **Selected Posters**

- [1] Velez-Ginorio J. (presenter), Siegel, M., Tenenbaum, J.B., & Jara-Ettinger J. (2016). The language of mental states: compositionality and rationality in Theory of Mind. ABRCMS. Presentation award winner, Behavioral Science division.
- [2] Velez-Ginorio J. (presenter), Siegel, M., Tenenbaum, J.B., & Jara-Ettinger J. (2016). The language of mental states: compositionality and rationality in Theory of Mind. SACNAS. Presentation award winner, Computer Science division.

### **Ad-hoc reviewing**

Child Development, Cognition, Cognitive Development, Cognitive Psychology, Cognitive Science, Developmental Psychology, Emotion, Inventio, Journal of Experimental Child Psychology, Journal of Experimental Psychology: General, Nature Human Behaviour, NSF, PLOS Computational Biology, Philosophies, PNAS, and Psychological Review.

### **Invited talks and presentations**

2018  
 Number cognition workshop, UC Berkeley  
 Psychology department, NYU  
 McPartland group meeting, Yale Child Study Center  
 Mechanisms of Dishinibition group meeting, Yale University  
 CBMM education workshop, Wellesley College  
 Simons Center for the Social Brain, MIT  
 Effective Altruists Fellowship, Yale University  
 Social Psychology speaker series, Harvard University  
 Junior Colloquium in Cognitive Science, Yale University

2017  
 Linguistics department, Yale University  
 Department of anthropology, Yale University  
 Department of philosophical investigations, UNAM  
 Department of Cognitive Science, Central European University  
 Glushko dissertation awards symposium, Cognitive Science Society meeting  
 Searching for cognitive universals CUNY workshop  
 Kasnow group meeting, Harvard University  
 Psychology and economics group, Harvard University  
 Junior colloquium in Cognitive Science, Yale University

2016  
 CBMM symposium, ABRMS  
 Department of Psychology, Columbia University  
 Department of Psychology, University of Michigan

2015  
 Department of psychological & brain sciences, Johns Hopkins University  
 Psychology department, Yale University  
 Department of psychology, University of Chicago  
  
 Language and cognition seminar, Harvard University

2014  
 Kelemen group meeting, Boston University  
 Department of Brain & Cognitive Sciences, University of Rochester

2013  
 Conexiones: charlas intercampus, Tufts University  
 Invited lecture on computational modeling, infant and childhood cognition course, MIT

2012  
 Invited lecture on computational modeling, infant and childhood cognition course, MIT

## Teaching

Fall 2018	Multivariate Statistics (PSYC 518), Yale University
Spring 2018	Minds, Brains, and Machines (PSYC 437), Yale University
Fall 2017	Multivariate Statistics (PSYC 518), Yale University
Fall 2013	Teaching assistant: Infant and early childhood Cognition, MIT
Fall 2012	Teaching assistant: Infant and early childhood Cognition, MIT

## Supervision

### Graduate students

2017-present	Michael Lopez-Brau, Yale University
2016-present	Rosie Aboody, Yale University

### Dissertation committees

### Senior thesis students

Victor Hunt (cognitive science, 2018), Maria Maier (psychology, 2018), Jimmy Shih (psychology and computer science, 2019).

### Undergraduate students

Sam Fereidooni (Yale; 2018), Rudd Fawcett (Yale; 2018), Katherine Hoffman (Yale; 2018), Stephanie Bang (Yale; 2018), Gwyneth Heuser (University of Rochester; summer 2018), Amanda O'Donnell (University of Rochester; summer 2018), Lindsay Stoner (Kenyon College; summer 2018), Sarah Wong (Wellesley College; summer 2018), Caiqin Zhou (Wellesley College; Fall 2018), Ethan Weinberger (Yale mathematics; Summer 2018), Breanna McBean (CSU Fullerton; 2018 CBMM summer research program), Liam Elkind (Yale; spring 2018), Ece Bozkurt (Yale; spring 2018), Ivana Bozic (Yale; 2018), Annie Chen (Yale CS; 2018), Gemma Nicholson (Quinnipiac University; 2017-2018), Camila Rivera-Soto (Yale cognitive science; 2017-2018), Amanda Royka (Yale cognitive science; 2017-2018), Joey Velez-Ginorio (UCF; 2016 CBMM summer research program), Abigail Clark (Smith college; 2016), Allison Kaslow (BCS, MIT; 2015), Lena Yang (BCS, MIT; 2015), Christina Ma (Wellesley college; 2015), Madeline Klein (Smith college; 2015), Mary DePascale (Wesleyan; 2015), Felix Sun (CSAIL; 2014-2015 Super UROP program), Eileen Rivera (Wellesley college; 2014), Anna Fountain (BCS, MIT; 2014), Sophie Cao (BCS, MIT; 2014), Diego Guerrero (CSAIL, MIT; 2014), Mika Maeda (Wellesley college; 2013-2014), Aviana Polsky (BCS, MIT; 2013), Jessica Wass (BCS, MIT; 2013), Kristina Presing (BCS, MIT; 2013), Vivian Tran (BCS, MIT; 2013), Salvador Esparza (BCS, MIT; 2012-2013), Jenny Yang (Wellesley College; 2012), Eric Garr (Adelphi University; 2012).

## Service

- 2018-present Yale Education Studies Advisory Committee.
- 2017-present Current works in cognitive development. Series organizer.
- 2017-present Graduate Program Advisory Committee representative.
- 2018 Angier prize committee.
- 2018 Yale Fulbright committee.
- 2018 Wrexham Prize Committee for the Social Sciences.