

Steven T. Piantadosi

Professor
Department of Psychology
Helen Wills Neuroscience Institute
University of California, Berkeley
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Interests

Cognitive development, artificial intelligence, numerical cognition, language acquisition & processing, neuroscience, computational modeling, information theory, Bayesian data analysis, psychology fieldwork

Academic positions

2024-Present	Professor, Psychology, UC Berkeley
2023-Present	Instructor, Mathematics, Mount Tamalpais College
2022-2024	Associate Professor, Psychology, UC Berkeley
2018-2022	Assistant Professor, Psychology, UC Berkeley
2014-2018	Assistant Professor, Brain and Cognitive Sciences, University of Rochester
Apr-May 2014	Visiting Scientist, Brain and Cognitive Sciences, MIT
Jan-Feb 2014	Visiting Scholar, Center for the Study of Language and Information, Stanford
2011-2014	Postdoctoral Researcher, Brain and Cognitive Sciences, Rochester
2006-2011	Graduate Student, Brain and Cognitive Sciences, MIT

Affiliations

UC Berkeley, Institute of Cognitive and Brain Sciences (co-director)
UC Berkeley, Helen Wills Neuroscience Institute
UC Berkeley, Simons Institute for the Theory of Computing
UC Berkeley, Center for Effective Global Action
UC Berkeley, Center for Latin American Studies

Education

2011	Ph.D.	Brain and Cognitive Sciences	MIT
2006	BS	Mathematics	UNC Chapel Hill
2006	BA	Linguistics	UNC Chapel Hill

Awards

2021 Early Investigator Award, Society of Experimental Psychologists
2019 Division of Social Sciences Distinguished Teaching Award
2017 Wilmot Assistant Professor, University of Rochester
2016 Association for Psychological Science Rising Star
2012 Robert J. Glushko Dissertation Prize, Cognitive Science Society
2012 Top 30 under 30 in Science and Innovation, Forbes Magazine
2010 Walle Nauta award for continuing dedication to teaching, MIT
2009 Angus McDonald award for excellence in undergraduate teaching, MIT

Funding

2024-2029	NSF DRL: Uncovering the foundation of mathematical and probabilistic thought across cultures - \$2,459,875 (PIs: Piantadosi & Xu)
2022-2027	NSF DRL: The Algorithmic Foundations of Mathematical Knowledge - \$2,471,055
2022	NSF DRL: Supplemental Funding for Postdoctoral Researchers to Mitigate

COVID-19 Impacts on Research Career Progression – Award 1901262 - \$117,728

2023 The Neurocognitive Mechanisms underlying the Co-Occurrence of Dyslexia and Dyscalculia – UC Berkeley Schwab Dyslexia and Cognitive Diversity Center – (PIs: Pinheiro-Chagas, Piantadosi) -- \$140,000

2020-2025 NSF DRL: The Role of Attentional Control in Early Mathematical Learning (PIs: Piantadosi & Kidd) - \$2,494,494

2020 Hellman Fellows Fund, UC Berkeley.

2018-2022 NSF DRL: Determining the foundational properties of numerical learning in an indigenous Amazonian group (PI: Piantadosi) - \$1,820,710

2016-2021 NIH R01: Origins of Logic and Counting Algorithms (PIs: Cantlon & Piantadosi) - \$1,426,360

2015-2021 The nature and origins of the human capacity for abstract combinatorial thought. (PI: Susan Carey). McDonnell Foundation Collaborative Activity Award (member of network)

2013 Academic hardware donation program, NVIDIA

2012 Ruth L. Kirschstein National Research Service Awards (NRSA), NIH

2010 NSF SBE Doctoral Dissertation Research Improvement Grants in Linguistics - \$12,000

2008-2011 Graduate Research Fellowship Award, NSF

Teaching

2025 Computational Cognitive Science (undergraduate)

2024 Compositionality (graduate, joint with Fei Xu)

2023 Insect cognition (undergraduate honors seminar)

2023 Data Analysis (graduate)

2022 Bayesian models of cognition (graduate)

2022 Computational Cognitive Science (undergraduate)

2021 Data Analysis (graduate)

2020 Computational Cognitive Science (undergraduate)

2019 Computational Cognitive Science (undergraduate)

2018 Cognition (undergraduate)

2017 Behavioral Methods (graduate)

2017 Cognition (undergraduate)

2016 Information theory in cognitive science and neuroscience (graduate)

2016 Cognition (undergraduate)

2015 Behavioral Methods (graduate)

2015 Cognition (undergraduate)

Book

Formal Foundations of Cognitive Science, forthcoming, MIT Press

Publications¹

Rule, J., Piantadosi, S.T. (under review). The End of Radical Concept Nativism.

Pitt, B., Leib, E., O'Shaughnessy, D., Gallardo, C., Ferrigno, S., Piantadosi, S.T. (under review). Algorithm induction in indigenous Amazonian children.

Leib, E., Bunge, S., Piantadosi, S.T. (under review). Indigenous Amazonians spontaneously use space to offload cognitive demands.

¹ All papers are available on my website. All code and data is available on the website or by request with no restrictions.

Rule, J., Piantadosi, S.T., Tenenbaum, J.B. (2024). Efficient learning of symbolic concepts via metaprogram search. *Nature Communications*.

Piantadosi, S.T., Muller, D.C., Rule, J.S., Kaushik, K., Gorenstein, M., Leib, E.R., Sanford, E. (2024). Why concepts are probably vectors. *Trends in Cognitive Sciences*.

Piantadosi, S.T. (2024). Modern language models refute Chomsky's approach to language. in *From fieldwork to linguistic theory: A tribute to Dan Everett*. E. Gibson, M. Poliak, (Eds). Language Science Press.

Borazjanizadeh, N., Piantadosi, S.T. (2024). Reliable Reasoning Beyond Natural Language. arXiv.

Piantadosi, S.T., Gallistel, C.R. (2024). Formalising the role of behaviour in neuroscience. *European Journal of Neuroscience*.

Fedorenko, E., Piantadosi, S.T., Gibson, E. (2024). Language is primarily a tool for communication rather than thought. *Nature*.

Cheyette, S., Piantadosi, S.T. (2024). Response to difficulty drives variation in IQ test performance. *Open Mind*, 8, 265-277.

Cheyette, S.J., Wu, S., Piantadosi, S.T. (2024). Limited information-processing capacity in vision explains number psychophysics. *Psychological Review*.

Cantlon, J.F., Piantadosi, S.T. (2024). Uniquely human intelligence arose from expanded information capacity. *Nature Reviews Psychology*.

Hurst, M.A., Piantadosi, S.T. (2024). Continuous and Discrete Proportions Elicit Different Cognitive Strategies. *Cognition*.

Yang, H.A., Piantadosi, S.T., Kidd, C. (2023). Children's Estimation of Peripheral Information Drives Improvements in Approximate Number Sense. *Proceedings of the Annual Meeting of the Cognitive Science Society*.

Sanford, E.M., Piantadosi, S.T. (2023). Sampling in Approximate Number Perception. *Proceedings of the Annual Meeting of the Cognitive Science Society*.

Ryskin, R., Salinas, M.A., Piantadosi, S.T., Gibson, E. (2023). Real-time pragmatic inference across cultures: evidence from a non-industrialized society. *Journal of Experimental Psychology: General*, 152(5), 1245-1263.

Pitt, B., Casasanto, D., Piantadosi, S.T. (2023). No clear evidence for a left-to-right mental number line in insects. *Proceedings of the National Academy of Sciences (commentary)*.

Piantadosi, S.T., Rule, J.S., Tenenbaum, J.B. (2023). Learning as Bayesian inference over programs. in *Bayesian Models of Cognition: Reverse Engineering the Mind*. T. L. Griffiths, N. Chater, J. Tenenbaum, (Eds).

Piantadosi, S.T. (2023). How to enumerate trees from a context-free grammar. arXiv.

Piantadosi, S.T. (2023). The Algorithmic Origins of Counting. *Child Development*, 94(6), 1472-1490.

Perfors, A., Piantadosi, S.T., Kidd, C. (2023). Trans-inclusive gender categories are cognitively natural. *Nature Human Behavior*, 7, 1609-1611.

O'Shaughnessy, D.M., Cruz, T., Mollica, F., Boni, I., Jara-Ettinger, J., Gibson, E., Piantadosi, S.T. (2023). Diverse mathematical knowledge among indigenous Amazonians. *Proceedings of the National Academy of Sciences*, 120(35).

Martí, L., Wu, S., Piantadosi, S.T., Kidd, C. (2023). Latent diversity in conceptual representation. *Open Mind*, 7, 79-92.

Hoover, J.L., Sonderegger, M., Piantadosi, S.T., O'Donnell, T.J. (2023). The Plausibility of Sampling as an Algorithmic Theory of Sentence Processing. *Open Mind*, 7, 350-391.

Dedhe, A.M., Piantadosi, S.T., Cantlon, J.F. (2023). Cognitive Mechanisms Underlying Recursive Pattern Processing in Human Adults. *Cognitive Science*, 47(4).

Dedhe, A.M., Clatterbuck, H., Piantadosi, S.T., Cantlon, J.F. (2023). Origins of Hierarchical Logical Reasoning. *Cognitive Science*, 47(2).

Chater, N., Perfors, A., Piantadosi, S.T. (2023). Language processing and language learning. in *Bayesian Models of Cognition: Reverse Engineering the Mind*. T. L. Griffiths, N. Chater, J. Tenenbaum, (Eds).

Yang, Y., Piantadosi, S.T. (2022). One model for the learning of language. *Proceedings of the National Academy of Sciences*, 119(5).

Srivastava, A., Rastogi, A., Rao, A., Shoeb, A.A.M., Abid, A., Fisch, A., Brown, A.R., Santoro, A., Gupta, A., Garriga-Alonso, A., others, (2022). Beyond the Imitation Game: Quantifying and extrapolating the capabilities of language models. *arXiv preprint arXiv:2206.04615*.

Rule, J.S., Piantadosi, S.T., Tenenbaum, J.B. (2022). Learning as programming: Efficient search in models of human concept learning. *Proceedings of the Cognitive Science Society*.

Pitt, B., Carstensen, A., Boni, I., Piantadosi, S.T., Gibson, E. (2022). Different reference frames on different axes: Space and language in indigenous Amazonians. *Science Advances*, 8(47).

Pitt, B., Gibson, E., Piantadosi, S.T. (2022). Exact number concepts are limited to the verbal count range. *Psychological Science*, 33(3).

Piantadosi, S.T., Yang, Y. (2022). Reply to Murphy et al: Program induction can learn language. *Proceedings of the National Academy of Sciences (response to commentary)*.

Piantadosi, S.T., Hill, F. (2022). Meaning without reference in large language models. *arXiv preprint arXiv:2208.02957*.

Piantadosi, S.T., Yang, Y. (2022). Reply to Kodner et al: Fundamental misunderstanding of both model and methods. *Proceedings of the National Academy of Sciences (response to commentary)*.

Hurst, M., Piantadosi, S.T. (2022). Investigating Adults' Strategy Use During Proportional Comparison. *Proceedings of the Annual Meeting of the Cognitive Science Society*.

Holdaway, C., Piantadosi, S. (2022). Stochastic time-series analyses highlight the day-to-day dynamics of lexical frequencies. *Cognitive Science*, 46(12).

Boni, I., Jara-Ettinger, J., Sackstein, S., Piantadosi, S.T. (2022). Verbal counting and the timing of number acquisition in an indigenous Amazonian group. *PLOS ONE*.

Boni, I., Piantadosi, S.T. (2022). Culture and Commutativity. *Proceedings of the Annual Meeting of the Cognitive Science Society*.

Schmidt, B., Piantadosi, S.T., Mahowald, K. (2021). Uncontrolled corpus composition drives an apparent surge in cognitive distortions (Commentary on Bollen et al.). *Proceedings of the National Academy of Sciences (commentary)*.

Pitt, B., Carstensen, A., Gibson, E., Piantadosi, S.T. (2021). Variation in spatial concepts: Different frames of reference on different axes. *Proceedings of the Cognitive Science Society*.

Pitt, B., Ferrigno, S., Cantlon, J., Casasanto, D., Gibson, E., Piantadosi, S.T. (2021). Spatial concepts of number, size, and time in an indigenous culture. *Science Advances*, 7(33).

Piantadosi, S.T. (2021). The computational origin of representation. *Minds and Machines*, 31(3), 1-58.

Piantadosi, S.T. (2021). Probability, Belief, and the Richness of Cognition. in *The Cognitive Science of Belief*. J. Musolino, J. Sommer, P. Hemmer, (Eds). Cambridge University Press.

O'Shaughnessy, D.M., Gibson, E., Piantadosi, S.T. (2021). The Cultural Origins of Symbolic Number. *Psychological Review*, 129(6).

Mollica, F., Piantadosi, S.T. (2021). Logical Word Learning: The case of kinship. *Psychonomic Bulletin & Review*.

Futrell, R., Gibson, E., Tily, H., Blank, I., Vishnevetsky, A., Piantadosi, S.T., Fedorenko, E. (2021). The Natural Stories Corpus. *Language Resources and Evaluation*, 55, 63-77.

Cheyette, S.J., Wu, S., Piantadosi, S.T. (2021). The psychophysics of number arise from resource-limited spatial memory. *Proceedings of the Cognitive Science Society*.

Bryer, M.A., Koopman, S.E., Cantlon, J.F., Piantadosi, S.T., Maclean, E.L., Baker, J.M., Beran, M.J., Jones, S.M., Jordan, K.E., Mahamane, S., Nieder, A., Perdue, B.M., Range, F., Stevens, J.R., Tomonaga, M., Ujfalussy, D.J., Vonk, J. (2021). The evolution of quantitative sensitivity. *Philosophical Transactions of the Royal Society B*, 377(1844).

Yoo, S.B.M., Tu, J.C., Piantadosi, S.T., Hayden, B. (2020). The neural basis of predictive pursuit. *Nature Neuroscience*, 23, 252-259.

Rule, J., Tenenbaum, J., Piantadosi, S. (2020). The Child as Hacker. *Trends in Cognitive Science*, 24(11).

Pitt, B., Casasanto, D., Ferrigno, S., Gibson, E., Piantadosi, S.T. (2020). Multi-directional mappings in the minds of the Tsimane': Size, time, and number on three spatial axes. *Proceedings of the Cognitive Science Society*.

Mollica, F., Siegelman, M., Diachek, E., Piantadosi, S.T., Mineroff, Z., Futrell, R., Kean, H., Qian, P., Fedorenko, E. (2020). Composition is the core driver of the language-selective network. *Neurobiology of Language*, 1(1), 104-134.

Lake, B., Piantadosi, S.T. (2020). People Infer Recursive Visual Concepts from Just a Few Examples. *Computational Brain and Behavior*, 3, 54-65.

Gorenstein, M.A., Cedegao, Z., Piantadosi, S.T. (2020). A model of temporal connective acquisition. *Proceedings of the Cognitive Science Society*.

Ferrigno, S., Cheyette, S.J., Dedhe, A., Piantadosi, S.T., Cantlon, J.F. (2020). Simple models of sequential processing cannot explain center-embedded generalizations. *Science Advances eLetters*.

Ferrigno, S., Cheyette, S.J., Piantadosi, S.T., Cantlon, J.F. (2020). Recursive sequence generation in monkeys, children, US adults, and native Amazonians. *Science Advances*, 6(26).

Cheyette, S.J., Piantadosi, S.T. (2020). A unified account of numerosity perception. *Nature Human Behavior*, 4, 1265-1272.

Mollica, F., Piantadosi, S.T. (2019). Humans store about 1.5 megabytes of information during language acquisition. *Royal Society Open Science*.

Koopman, S.E., Arre, A., Piantadosi, S.T., Cantlon, J.F. (2019). One-to-one correspondence without Language. *Royal Society Open Science*.

Gibson, E., Futrell, R., Piantadosi, S.T., Dautriche, I., Mahowald, K., Bergen, L., Levy, R. (2019). How Efficiency Shapes Human Language. *Trends in Cognitive Science*, 23(5), 389-407.

Musolino, J., d'Agostino, K.L., Piantadosi, S.T. (2019). Why we should abandon the Semantic Subset Principle. *Language Learning and Development*, 15(1), 32-46.

Cheyette, S.J., Piantadosi, S.T. (2019). A primarily serial, foveal accumulator underlies approximate numerical estimation. *Proceedings of the National Academy of Sciences*, 116(36), 17729-17734.

Alonso-Diaz, S., Cantlon, J., Piantadosi, S.T. (2019). Intrinsic whole number bias in an indigenous population. *Proceedings of the Cognitive Science Society*.

Undurraga, E.A., Behrman, J., Emmet, S., Kidd, C., Leonard, W., Piantadosi, S.T., Reyes-Garcia, V., Sharma, A., Zhang, R., Godoy, R. (2018). Child stunting is associated with weaker human capital among native Amazonians. *American Journal of Human Biology*, 30(1).

Rule, J., Schulz, E., Piantadosi, S.T., Tenenbaum, J.B. (2018). Learning list concepts through program induction. *Proceedings of the Cognitive Science Society*.

Piantadosi, S.T. (2018). One parameter is always enough. *AIP Advances*, 8.

Piantadosi, S.T., Palmeri, H., Aslin, R. (2018). Limits on Composition of Conceptual Operations in 9-Month-Olds. *Infancy*, 23(3), 310-324.

Oey, L.A., Mollica, F., Piantadosi, S.T. (2018). Adults use gradient similarity information in compositional rules. *Proceedings of the Cognitive Science Society*.

Martí, L., Mollica, F., Piantadosi, S.T., Kidd, C. (2018). Certainty is Primarily Determined by Past Performance during Concept Learning. *Open Mind*, 2(2), 47-60.

Mahowald, K., Dautriche, I., Gibson, E., Piantadosi, S.T. (2018). Word forms are structured for efficient use. *Cognitive Science*, 42(8), 3116-3134.

Brabec, M., Behrman, J., Emmett, S., Gibson, E., Kidd, C., Leonard, W., Penny, M., Piantadosi, S.T., Sharma, A., Tanner, S., Undurraga, E.A., Godoy, R. (2018). Birth season and height among girls and boys below 12 years of age: Lasting effects and catch-up growth among native Amazonians in Bolivia. *Annals of Human Biology*, 45(4), 299-313.

Blanchard, T., Piantadosi, S.T., Hayden, B. (2018). Robust mixture modeling reveals category-free selectivity in reward region neuronal ensembles. *Journal of Neurophysiology*, 119(4), 1305-1318.

Alonso-Diaz, S., Piantadosi, S.T., Hayden, B., Cantlon, J.F. (2018). Intrinsic whole number bias in humans. *Journal of Experimental Psychology: Human Perception and Performance*, 44(9), 1472-1481.

- Alonso-Diaz, S., Cantlon, J.F., Piantadosi, S.T. (2018). A threshold free model of number comparison. *PLOS ONE*.
- Piantadosi, S.T., Cantlon, J. (2017). True Numerical Cognition in the Wild. *Psychological Science*, 28(4), 462-469.
- Overlan, M.C., Jacobs, R.A., Piantadosi, S.T. (2017). Learning abstract visual concepts via probabilistic program induction in a Language of Thought. *Cognition*, 168, 320-334.
- Mollica, F., Wade, S., Piantadosi, S.T. (2017). A Rational Constructivist Account of the Characteristic-to-Defining Shift. *Proceedings of the Cognitive Science Society*.
- Mollica, F., Piantadosi, S.T. (2017). An incremental information-theoretic buffer supports sentence processing. *Proceedings of the Cognitive Science Society*.
- Mollica, F., Piantadosi, S.T. (2017). How data drives early word learning: A cross-linguistic waiting time analysis. *Open Mind*, 1(2), 67-77.
- Gibson, E., Piantadosi, S.T., Jara-Ettinger, J., Levy, R. (2017). The use of a computer display exaggerates the connection between exact and approximate number ability in remote populations. *Open Mind*, 1(3), 159-168.
- Gibson, E., Piantadosi, S.T., Levy, R. (2017). Post Hoc Analysis Decisions Drive the Reported Reading Time Effects in Hackl, Koster-Hale & Varvoutis (2012). *Journal of Semantics*, 34(3), 539-546.
- Gibson, E., Futrell, R., Jara-Ettinger, J., Mahowald, K., Bergen, L., Ratnasingam, S., Gibson, M., Piantadosi, S.T., Conway, B.R. (2017). Color naming across languages reflects color use. *Proceedings of the National Academy of Sciences*, 114(40), 10785-10790.
- Ferrigno, S., Jara-Ettinger, J., Piantadosi, S.T., Cantlon, J. (2017). Universal and uniquely human factors in spontaneous number perception. *Nature Communications*, 8.
- Dautriche, I., Mahowald, K., Gibson, E., Christophe, A., Piantadosi, S.T. (2017). Words cluster phonetically beyond phonotactic regularities. *Cognition*, 163, 128-145.
- Dautriche, I., Mahowald, K., Gibson, E., Piantadosi, S.T. (2017). Wordform similarity increases with semantic similarity: an analysis of 100 languages. *Cognitive Science*, 41(8), 2149-2169.
- Cheyette, S.J., Piantadosi, S.T. (2017). Knowledge transfer in a probabilistic Language of Thought. *Proceedings of the Cognitive Science Society*.
- Ballard, I., Miller, E., Piantadosi, S., Goodman, N., McClure, S. (2017). Beyond Reward Prediction Errors: Human Striatum Updates Rule Values During Learning. *Cerebral Cortex*, 28(11), 3965-3975.
- Piantadosi, S.T. (2016). A rational analysis of the approximate number system. *Psychonomic Bulletin and Review*, 1-10.
- Piantadosi, S.T., Tenenbaum, J., Goodman, N. (2016). The logical primitives of thought: Empirical foundations for compositional cognitive models. *Psychological Review*, 123(4), 392-424.
- Piantadosi, S.T., Jacobs, R. (2016). Four problems solved by the probabilistic Language of Thought. *Current Directions in Psychological Science*, 25(1), 54-59.
- Piantadosi, S.T., Kidd, C. (2016). Extraordinary intelligence and the care of infants. *Proceedings of the National Academy of Sciences*, 113(25), 6874-6879.

Piantadosi, S.T., Kidd, C. (2016). Endogenous or exogenous? The data don't say (Commentary on Han, Musolino, & Lidz 2016). *Proceedings of the National Academy of Sciences*, 113(20).

Piantadosi, S.T. (2016). Efficient estimation of Weber's W. *Behavior Research Methods*, 48, 42-52.

Piantadosi, S.T., Aslin, R. (2016). Compositional reasoning in early childhood. *PLOS ONE*.

Piantadosi, S.T., Fedorenko, E. (2016). Infinitely productive language can arise from chance under communicative pressure. *Journal of Language Evolution*, 2, 141-147.

Overlan, M.C., Jacobs, R.A., Piantadosi, S.T. (2016). A Hierarchical Probabilistic Language-of-Thought Model of Human Visual Concept Learning. *Proceedings of the Cognitive Science Society*.

Martí, L., Mollica, F., Piantadosi, S.T., Kidd, C. (2016). What determines human certainty?. *Proceedings of the Cognitive Science Society*.

Jara-Ettinger, J., Gibson, E., Kidd, C., Piantadosi, S.T. (2016). Native Amazonian Children Forego Egalitarianism When They Learn to Count. *Developmental Science*, 19(6), 1104-1110.

Jara-Ettinger, J., Piantadosi, S.T., Spelke, E., Levy, R., Gibson, E. (2016). Mastery of the logic of natural numbers is not the result of mastery of counting: Evidence from late counters. *Developmental Science*, 20(6), e12459.

Futrell, R., Stearns, L., Everett, D.L., Piantadosi, S.T., Gibson, E. (2016). A Corpus Investigation of Syntactic Embedding in Pirahã. *PLOS ONE*.

Bigelow, E.J., Piantadosi, S.T. (2016). A large dataset of generalization patterns in the number game. *Journal of Open Psychology Data*, 4(1).

Bigelow, E.J., Piantadosi, S.T. (2016). Inferring priors in compositional cognitive models. *Proceedings of the Cognitive Science Society*.

Piantadosi, S.T., Hayden, B. (2015). Response: ``Commentary: Utility-free heuristic models of two-option choice can mimic predictions of utility-stage models under many conditions''. *Frontiers in Neuroscience*, 9(299).

Piantadosi, S.T. (2015). Problems in the philosophy of mathematics: A view from cognitive science. in *Mathematics, Substance and Surmise: Views on the Meaning and Ontology of Mathematics*. E. Davis, P. J. Davis, (Eds). Springer.

Piantadosi, S.T., Hayden, B. (2015). Utility-free models of binomial choice can replicate predictions of utility models in many conditions. *Frontiers in Neuroscience*.

Pelz, M., Piantadosi, S.T., Kidd, C. (2015). The dynamics of idealized attention in complex learning environments. *The 5th Joint IEEE International Conference on Development and Learning and on Epigenetic Robotics*.

Mollica, F., Piantadosi, S.T. (2015). Towards semantically rich and recursive word learning models. *Proceedings of the Cognitive Science Society*.

Mollica, F., Piantadosi, S.T., Tanenhaus, M.K. (2015). The perceptual foundation of linguistic context. *Proceedings of the Cognitive Science Society*.

Hemmer, P., Persaud, K., Kidd, C., Piantadosi, S.T. (2015). Inferring the Tsimane's use of color categories from recognition memory. *Proceedings of the Cognitive Science Society*.

- Gibson, E., Jacobson, P., Graff, P., Mahowald, K., Fedorenko, E., Piantadosi, S.T. (2015). A pragmatic account of complexity in definite Antecedent-Contained-Deletion relative clauses. *Journal of Semantics*, 32(4).
- Cantlon, J., Piantadosi, S.T., Ferrigno, S., Hughes, K., Barnard, A. (2015). The origins of counting algorithms. *Psychological Science*, 26(6), 675-683.
- Alonso-Diaz, S., Cantlon, J., Piantadosi, S.T. (2015). Cognition in reach: continuous statistical inference in optimal motor planning. *Proceedings of the Cognitive Science Society*.
- Piantadosi, S.T. (2014). Zipf's word frequency law in natural language: A critical review and future directions. *Psychonomic Bulletin & Review*, 21(5), 1112-1130.
- Piantadosi, S.T., Kidd, C., Aslin, R. (2014). Rich analysis and rational models: Inferring individual behavior from infant looking data. *Developmental Science*, 17(3), 321-337.
- Piantadosi, S.T., Gibson, E. (2014). Quantitative Standards for Absolute Linguistic Universals. *Cognitive Science*, 38(4), 736-756.
- Piantadosi, S.T., Jara-Ettinger, J., Gibson, E. (2014). Children's learning of number words in an indigenous farming-foraging group. *Developmental Science*, 17(4), 553-563.
- Kidd, C., Piantadosi, S.T., Aslin, R.N. (2014). The Goldilocks Effect in Infant Auditory Attention. *Child Development*, 85(5), 1795-1804.
- Rieth, C., Piantadosi, S.T., Smith, K., Vul, E. (2013). Put your money where your mouth is: Incentivizing the Truth by Making Nonreplicability Costly. *European Journal of Personality*.
- Piantadosi, S.T., Tily, H., Gibson, E. (2013). Information content versus word length in natural language: A reply to Ferrer-i-Cancho and Moscoso del Prado Martin . *ArXiv e-prints*.
- Gibson, E., Bergen, L., Piantadosi, S.T. (2013). The rational integration of noise and prior semantic expectation: Evidence for a noisy-channel model of sentence interpretation. *Proceedings of the National Academy of Sciences*, 11(20), 8051-8056.
- Gibson, E., Piantadosi, S.T., Fedorenko, E. (2013). Quantitative methods in syntax / semantics research: A response to Sprouse & Almeida. *Language and Cognitive Processes*, 28(3), 229-240.
- Piantadosi, S.T., Stearns, L., Everett, D., Gibson, E. (2012). A corpus analysis of Pirahã grammar: An investigation of recursion. Talk presented at the LSA (by E. Gibson)..
- Piantadosi, S.T., Tenenbaum, J., Goodman, N. (2012). Bootstrapping in a language of thought: a formal model of numerical concept learning. *Cognition*, 123(2), 199-217.
- Mahowald, K., Fedorenko, E., Piantadosi, S.T., Gibson, E. (2012). Info/information theory: speakers actively choose shorter words in predictable contexts. *Cognition*, 126(2), 313-318.
- Kidd, C., Piantadosi, S.T., Aslin, R. (2012). The Goldilocks Effect: Human Infants Allocate Attention to Visual Sequences That Are Neither Too Simple Nor Too Complex. *PLoS ONE*.
- Gibson, E., Piantadosi, S.T., Brink, K., Bergen, L., Lim, E., Saxe, R. (2012). A noisy-channel account of crosslinguistic word order variation. *Psychological Science*, 24(7), 1079-1088.
- Fedorenko, E., Piantadosi, S., Gibson, E. (2012). Processing Relative Clauses in Supportive Contexts. *Cognitive Science*, 36(3), 1-27.

- Fedorenko, E., Piantadosi, S.T., Gibson, E. (2012). The interaction of syntactic and lexical information sources in language processing: The case of the noun--verb ambiguity. *Journal of Cognitive Science*.
- Piantadosi, S.T., Tily, H., Gibson, E. (2011). Word lengths are optimized for efficient communication. *Proceedings of the National Academy of Sciences*, 108(9), 3526.
- Piantadosi, S.T., Tily, H., Gibson, E. (2011). Reply to Reilly and Kean: Clarifications on word length and information content. *Proceedings of the National Academy of Sciences (response to commentary)*, 108(20), E109.
- Piantadosi, S.T. (2011). "Learning and the language of thought". Ph.D. dissertation, MIT.
- Piantadosi, S.T., Tily, H., Gibson, E. (2011). The communicative function of ambiguity in language. *Cognition*, 122(3), 280--291.
- Gibson, E., Piantadosi, S.T., Fedorenko, K. (2011). Using Mechanical Turk to Obtain and Analyze English Acceptability Judgments. *Language and Linguistics Compass*, 5(8), 509-524.
- Piantadosi, S.T., Crutchfield, J. (2010). How the Dimension of Space Affects the Products of Pre-Biotic Evolution: The Spatial Population Dynamics of Structural Complexity and The Emergence of Membranes. Santa Fe Institute Working Paper arXiv:1010.5019.
- Piantadosi, S.T., Tenenbaum, J., Goodman, N. (2010). Beyond Boolean logic: exploring representation languages for learning complex concepts. *Proceedings of the Cognitive Science Society*.
- Kidd, C., Piantadosi, S.T., Aslin, R. (2010). The Goldilocks Effect: Infants' preference for visual stimuli that are neither too predictable nor too surprising. *Proceedings of the Cognitive Science Society*.
- Tily, H., Piantadosi, S.T. (2009). Refer efficiently: Use less informative expressions for more predictable meanings. *Proceedings of the workshop on the production of referring expressions: Bridging the gap between computational and empirical approaches to reference*.
- Piantadosi, S.T., Tily, H., Gibson, E. (2009). The communicative lexicon hypothesis. *Proceedings of the Cognitive Science Society*, 2582-2587.
- Piantadosi, S.T. (2008). Symbolic dynamics on free groups. *Discrete and Continuous Dynamical Systems*, 20(3), 725-738.
- Piantadosi, S.T., Goodman, N., Ellis, B., Tenenbaum, J.B. (2008). A Bayesian model of the acquisition of compositional semantics. *Proceedings of the Cognitive Science Society*.

Invited talks

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|-----------|--|
| Mar 2025 | The Cognitive Foundations of Number, Rice |
| Mar 2025 | Neuroscience, Behavior, and what's in-between, MIT |
| Feb 2025 | Neuroscience, Behavior, and what's in-between, Princeton Psychology |
| Feb 2025 | Rules vs. Neurons and what may be next, Simons Institute, UC Berkeley |
| Nov 2024 | Syntax and semantics in the age of large language models, Rutgers |
| Oct 2024 | The Cognitive Foundations of Number, UPenn Psychology |
| Aug 2024 | A few thoughts on intelligence, Santa Fe Institute |
| Nov 2023 | Syntax and semantics in the age of large language models, Edinburgh Lectures in Language Evolution |
| Nov 2023 | Towards a formal foundation for cognitive science, Stanford |
| July 2023 | The Language of Thought as a Modern Psychological Theory, Nantes Université |
| July 2023 | Information Capacity Sparked Human Intelligence, Neurospin |
| June 2023 | Modern Language Models Refute Chomsky's Approach to Language, MIT |

May 2023 An introduction to the Bayesian LOT, Computational Cognitive Modeling of Learning and Development, Keynote, Harvard

Apr 2023 Syntax and semantics in the age of large language models, Center for Cognitive Science, TU Darmstadt

Apr 2023 Syntax and semantics in the age of large language models, UT Austin

Jul 2023 One model for the learning of language, ILFC Seminar

Nov 2022 A. Church, an Infinite Library, and the Language of Thought, NYU Psychology

Oct 2022 How number relates to everything else, neuro@noon, Sungkyunkwan University

May 2022 A unified model of number perception, Society of Experimental Psychologists

Apr 2022 One model for the learning of language, MIT Brain and Cognitive Sciences

Mar 2022 One model for the learning of language, Keynote, UNC Linguistics Colloquium

Fed 2022 One model for the learning of language, Neurospin

Feb 2022 Three surprising things about number, UC Merced

Dec 2021 Church Encoding as the link between Cognition and Neuroscience, The Learning Salon

Nov 2021 One Model for the Learning of Language, Newport Lab

Oct 2021 Number learning the Bolivian Amazon, Georgetown

Oct 2021 A Cognitive Scientist walks into an IQ test, Catalight Foundation

Sep 2021 The Child as Hacker, University of Indiana, Psychology

Jul 2021 How the Language of Thought Works, MPI Tübingen

May 2021 The computational origin of human representation, MILA, Montreal

Apr 2021 The human child as an algorithmic inference engine, University of Iowa

Mar 2021 One model for the learning of Language, Utrecht Institute of Linguistics (UiL OTS)

Dec 2020 Three surprising things about number, NSF ECR

Dec 2020 Three surprising things about number, University of Washington

Nov 2020 One model for the learning of Language, CUNY

Nov 2020 One model for the learning of Language, Stanford Brownbag

July 2020 One model for the learning of language, Abralin ao vivo

Feb 2020 The human child as an algorithmic inference engine, UCSB

Mar 2019 Algorithmic inference as the basis of human learning, York University

Sep 2019 Statistics over algorithms as a model of human learning, UC Berkeley Statistics

Jan 2019 The Hypothesis of a Language of Thought in Infancy, Séminaire «Développement du cerveau et émergence des fonctions cognitives», Collège de France

Aug 2018 What Lies Beneath the Language of Thought, Keynote, ESSLLI Workshop, Bulgaria

Jul 2018 What Lies Beneath the Language of Thought, Cognitive Science Society (workshop)

Jun 2018 Number, the Language of Thought, and the Bolivian Amazon, Latin American School for Education, Cognitive and Neural Sciences

Apr 2018 What Lies Beneath the Language of Thought, Institute for Advanced Study

Sep 2017 One Model for the Learning of Language, MIT Workshop on Simplicity in Grammar Learning

Jul 2017 Extraordinary Intelligence and the care of Infants, Summer school on neurocognitive methods in infant and toddler research, Utrecht University

Jan 2017 Extraordinary Intelligence and the care of Infants, University of Rochester Warner School of Education

Jan 2017 Extraordinary Intelligence and the care of Infants, Laboratory for Laser Energetics

Sep 2016 What lies below the language of thought, NYU ConCats group

May 2016 Number learning in the Bolivian Amazon, Math Cognition and Learning Conference

Nov 2015 Statistics over Computations: Inference, Structure, and Human Thought, University of Rochester Biostatistics

April 2015 Language learning as computational inference Rutgers, Newark

Dec 2014 Language learning as computational inference NYU Linguistics

Jun 2014 Language learning as computational inference Max Planck Institute for Psycholinguistics

Apr 2014 Learning to count as algorithmic inference RuCCS Colloquium Series Rutgers University

Jan 2014 Cognitive determinants of word frequency, Stanford University CSLI Workshop on Gradiance

Dec 2013 Communicative design in human language, Saarland University Distinguished Lecture Series

Conference talks

- Gorenstein, M., Zhang, C., Piantadosi, S.T. (2020). A Model of Temporal Connective Acquisition. Proceedings of the Cognitive Science Society.
- Oey, L., Mollica, F., & Piantadosi, S.T. (2018). Adults use gradient similarity information in compositional rules
- Futrell, R., Gibson, E., Tily, H., Blank, I., Vishnevetsky, A., Piantadosi, S., and Fedorenko, E. The Natural Stories Corpus. (2017). The 11th International Conference on Language Resources and Evaluation (LREC).
- Mollica, F., & Piantadosi, S.T. (2017). An information-theoretic buffer supports language processing. CUNY
- Hemmer, P., Persaud, K., Kidd, C., & Piantadosi, S. T. (2015b). Inferring the Tsimane's use of color categories from recognition memory. Cognitive Science Society.
- Mollica, F., & Piantadosi, S.T. (2015). Characterizing data-driven word learning: A cross-linguistic analysis. More On Development.
- Alonso-Diaz, S., Cantlon, J., & Piantadosi, S. T. (2015). Cognition in reach: continuous statistical inference in optimal motor planning. Cognitive Science Society.
- Mollica, F., Piantadosi, S. T., & Tanenhaus, M. K. (2015b). The perceptual foundation of linguistic context. Cognitive Science Society.
- Piantadosi, S. T., Jara-Ettinger, J., & Gibson, E. (2015). Number word acquisition in an indigenous amazonian group. Society for Research in Cognitive Development.
- Dautriche, I., Mahowald, K., Gibson, E., Christophe, E., & Piantadosi, S. (2014). Lexical clustering in efficient language design. AMLAP.
- Mahowald, K., Dautriche, I., Gibson, E., Christophe, E., & Piantadosi, S. (2014). Efficient phonological clustering in the mental lexicon. Ninth International Conference on the Mental Lexicon. Niagara-on-the-Lake, Ontario.
- Piantadosi, S., Goodman, N., & Tenenbaum, J. (2013). Modeling the acquisition of quantifier semantics: a case study in function word learnability. Workshop on the Acquisition of Quantification, UMass Amherst.
- Piantadosi, S., Stearns, L., Everett, D., & Gibson, E. (2012a). A corpus analysis of Pirahã grammar: an investigation of recursion. Linguistic Society of America (presented by E. Gibson).
- Mahowald, K., Fedorenko, E., Piantadosi, S., & Gibson, E. (2012a). Info/information theory: speakers actively choose shorter words in predictable contexts. CUNY Sentence Processing Conference.
- Piantadosi, S., Tenenbaum, J., & Goodman, N. (2012a). Discovering function word meanings through Bayesian concept learning. UAI.
- Piantadosi, S., Kidd, C., & Aslin, D. (2012). Rich modeling and data analysis for infant experimentation. International Society on Infant Studies.
- Kidd, C., Piantadosi, S., & Aslin, R. (2012a). Infants allocate attention to avoid overly simple and overly surprising word sequences. International Society on Infant Studies.
- Gibson, E., Piantadosi, S., Ichinco, D., & E., F. (2011). Evaluating structural overlap across constructions: inter-subject analysis of co-variation. Linguistic Society of America.
- Piantadosi, S., Tenenbaum, J., & Goodman, N. (2010a). Beyond boolean logic: a learning theory for complex compositional concepts. MathPsych.
- Piantadosi, S., Tenenbaum, J., & Goodman, N. (2010b). Beyond boolean logic: a learning theory for complex compositional concepts. Cognitive Science Society.
- Tily, H. & Piantadosi, S. (2009a). Refer efficiently: use less informative expressions for more predictable meanings. Cognitive Science Society workshop on the Production of Referring Expressions.
- Piantadosi, S., Tily, H., & Gibson, E. (2009a). The communicative lexicon hypothesis. CUNY Conference on Human Sentence Processing.
- Piantadosi, S., Tily, H., & Gibson, E. (2009b). The communicative lexicon hypothesis. Cognitive Science Society.
- Piantadosi, S., Goodman, N., & Tenenbaum, J. (2009). A formal model of number bootstrapping. Recursion.

- Piantadosi, S., Goodman, N., & Tenenbaum, J. (2008). Uniform information density in discourse: a cross-corpus analysis of syntactic and lexical predictability. CUNY Conference on Human Sentence Processing.
- Piantadosi, S. (2006a). Symbolic dynamics and free groups. UNC-Chapel Hill Department of Mathematics Seminar Talk.
- Piantadosi, S. (2005a). Symbolic dynamics and the free group. UNC-G Regional Undergraduate Mathematics Conference.
- Piantadosi, S. (2005b). When space matters: an algebraic perspective on spatial population dynamics. Santa Fe Institute.

Conference posters

- With Better Language Models, Processing Time Is Superlinear in Surprisal. Jacob Louis Hoover, Morgan Sonderegger, Steven T. Piantadosi, and Timothy J. O'Donnell. Architectures and Mechanisms for Language Processing (AMLaP 28). York, England. 6 Sep, 2022.
- Pitt, B., Carstensen, A., Boni, I., Piantadosi, S.T., Gibson, E. (2022). Different spatial reference frames on different axes: Memory and language among the Tsimane' of Bolivia. Cognitive Neuroscience Society.
- Conti, J., Bryer, M., Piantadosi, S.T., Cantlon, J. (2022). Comparing learning capacity across species and age to identify origins of human uniqueness. Cognitive Development Society.
- Dedhe, A., Piantadosi, S.T., Cantlon, J. (2022). Building blocks of recursive pattern processing in human children and adults. Cognitive Development Society.
- Hurst M., & Piantadosi, S.T. (2022). Strategies for proportional reasoning differ across display formats and development. Cognitive Development Society.
- Mollica, F., & Piantadosi, S. T. (2018). Simplicity, data and inter-related systems: A computational account of kinship term acquisition. Children's Acquisition of Kinship Knowledge: Theory and Method Workshop. Bristol, UK. January, 2018.
- Ferrigno, S. Piantadosi, S.T., Cantlon, J. Recursion in Monkeys, Children, Tsimane', and US Adults. Cognitive Development Society 2017.
- Ratnasingam, S., Gibson, E., Futrell, R., Jara-Ettinger, J., Mahowald K., Bergen, L., Piantadosi, S.T., Conway, B. (2017). Statistical variations in the power spectrum of daylight over a day predict communicative efficiency of color-language. VSS
- Koopman, S., Arre, A., Piantadosi, S.T., Cantlon, J. (2017) Understanding the 1-1 Correspondence Principle without Counting. SRCD.
- Jara-Ettinger, J., Piantadosi, S.T., Spelke, E., Levy, R., Gibson, E. (2017). The relation between mastery of the logic of natural numbers and the mastery of counting. SRCD
- Ballard, I., Miller, E., Piantadosi, S.T., Goodman, N., McClure, S. (2017) Beyond reward prediction errors: human striatum updates rule values during learning. Cosyne.
- Blanchard, T. C., Piantadosi, S. T., & Hayden, B. Y. (2016c). A Bayesian method of testing discrete neuron categories based on response properties. Japan Neuroscience Society.
- Blanchard, T. C., Piantadosi, S. T., & Hayden, B. Y. (2016a). A Bayesian method of categorizing ofc neurons based on functional properties. Orbitofrontal Cortex and Cognition in the City of Lights (OFC2015).
- Blanchard, T. C., Piantadosi, S. T., & Hayden, B. Y. (2016b). A Bayesian method of categorizing OFC neurons based on functional properties. Society for Neuroscience.
- Conway, B. R., Jara-Ettinger, J., Mahowald, K., Piantadosi, S., Bergen, L., Futrell, R., & Gibson, E. (2016). Color language reflects usefulness of color. Vision Sciences Society.
- Ferrigno, S., Jara-Ettinger, J., Piantadosi, S. T., & Cantlon, J. (2015). A universal number bias in monkeys, children, and innumerate adults. Cognitive Development Society.
- Mahowald, K., Piantadosi, S., Alper, M., & Gibson, E. (2015). Lexical items are privileged slots for meaning. CUNY Sentence Processing Conference.
- Mollica, F., Piantadosi, S., & Tanenhaus, M. (2015c). Establishing context in sentence processing: perceptual cues define linguistic context. CUNY Sentence Processing Conference.
- Futrell, R., Mahowald, K., Piantadosi, S., & Gibson, E. (2014). Efficient communication forward and backward. CUNY.

Gibson, E., Jacobson, P., Graff, P., Mahowald, K., Fedorenko, E., & Piantadosi, S. (2014). Pragmatic influences on the processing of ad relative clauses. CUNY.

Mahowald, K., S.T., P., & Gibson, E. (2012). Lexical clustering in efficient language design. CUNY.

Piantadosi, S., Goodman, N., Ellis, B., & Tenenbaum, J. (2008a). A Bayesian model of the acquisition of compositional semantics. Cognitive Science Society.

Fedorenko, E., Cherkasskiy, L., Piantadosi, S., & Saxe, R. (2008). Prosody influences the listener's online representation of the speaker's thoughts. CUNY.

Fedorenko, E., Cherkasskiy, L., Piantadosi, S., Scholz, J., & Saxe, R. (2008). Prosody influences the listener's online representation of the speaker's thoughts. The Annual Meeting of the Cognitive Neuroscience Society.

Aizawa, H., Plitt, J., Piantadosi, S.T., & Bochner, B. (2002). Human eosinophils, basophils, and hmc-1 cells express both short and long splice variants of siglec-8. 58th meeting of the American Academy of Asthma, Allergy and Immunology.

Journal Reviewing

Artificial Intelligence, Behavior Research Methods, Biology Letters, Child Development, Cognition, Cognitive Science, Cognitive Psychology, Cognitive Science Society Conference, CUNY Sentence Processing Conference, Current Opinion in Behavioral Sciences, Developmental Psychology, Developmental Science, Entropy, European Research Council, Infancy, Journal of Experimental Psychology, Journal of Memory and Language, Journal of Semantics, Journal of Quantitative Linguistics, Language, Language Acquisition: A Journal of Developmental Linguistics, Laboratory Phonology, Language and Cognition, Language and Speech, Language Learning and Development, Memory and Cognition, Natural Language Semantics, Nature, Nature Communications, Philosophical Psychology, Proceedings of the Royal Society, PLOS ONE, PLOS Computational Biology, Proceedings of the National Academy of Sciences, Reading and Writing, Royal Society Open Access, Science, Science Advances, Scientometrics, Topics in Cognitive Science, Trends in Cognitive Science

Grant Reviewing

National Science Foundation
Division of Research on Learning in Formal and Informal Settings (DRL)
SBIR/STTR Program

European Research Council (ERC)

French National Research Agency (ANR)

Natural Sciences and Engineering Research Council of Canada

Dutch Research Council (NWO)

Vienna Science and Technology Fund

Grant Panels

National Science Foundation, Division of Research on Learning in Formal and Informal Settings (DRL)
NSF Phase I
NSF Computational Cognition
NSF Integrative Strategies in Understanding Neural and Cognitive Systems (NCS)

Undergraduate mentees and lab staff

Shengyi Wu (UC Berkeley, MIT)

Tania Cruz (UC Berkeley, U. Delaware)

Charlene Gallardo (UC Berkeley)

Ced Zhang (UC Berkeley)

Yuchen Zhou (UC Berkeley)

Yim Register (PhD program in Computer Science; University of Washington)

Yuan Yang (Georgia Tech)

Lauren Oey (University of Rochester: Undergraduate President's Research Award; NSF GRFP; PhD in Psychology at UCSD)
Cameron Holdaway (University of Rochester: Take 5)
Eric Bigelow (Master Degree in Computer Science, University of Rochester; Uber; Harvard Psychology)
Sophie Sackstein (University of Rochester)

Graduate students supervised/co-supervised

Frank Mollica (Ph.D., University of Rochester, 2019)
Sam Cheyette (Ph.D., UC Berkeley, 2022)
Mark Gorenstein (UC Berkeley)
Isabelle Boni (UC Berkeley)
Louis Marti (UC Berkeley)
Dyana Muller (UC Berkeley)
Karthikeya Kaushik (UC Berkeley)

Master/postbac students supervised/co-supervised

Bin Li

Postdoctoral researchers supervised/co-supervised

Margaret Bryer (UC Berkeley, CMU)
Joshua Rule (UC Berkeley)
Benjamin Pitt (UC Berkeley, NSF SPRF)
David O'Shaughnessy (UC Berkeley)
Michelle Hurst (U Chicago)
Emily Sanford (UC Berkeley)

Additional Service

Science Homecoming, co-organizer with Jessica Cantlon
Rumelhart prize committee (2022-present)
Futures committee (2022-present)
Fiat Lux committee and advisor (2020 - present)
Institute of Cognitive and Brain Sciences, co-director (2022-present)
Neuroscience Admissions Committee (2022)
Space Committee (2020-2022)
Cognition Search Committee (2019-2020, 2020-2021)
Future of the Department Committee / Vision Statement (2021)
Climate and Equity Committee (2018-2019)
Cognition Area Head (2019-2020, 2021-present)

Journals

Open Mind (Associate Editor)
Open Mind (Editorial Board)

Open source / free software

LOTlib3 - inference in "language of thought models", program induction as a cognitive theory
Fleet - Fast C++ implementation of LOTlib
kelpy - Library for constructing kid experiments on touchscreens and eyetrackers
ngrampy - Library for handling large ngram data sets
Churlso - Programming language for discovering church encodings from relational data
pychuriso - A python implementation of churiso

GPUropolis - LOTlib-style inference for symbolic regression, run on CUDA GPUs

Editorials

Piantadosi, S.T. "Science Matters to Maryland." Montgomery County Sentinel, 2025, part of Science Homecoming.

Piantadosi, S.T. "Universities show their true colours in court." Nature, 2019.

Selected Media

How words get the message across – Philip Ball – Nature News –

<https://www.nature.com/articles/news.2011.40>

'A remarkable feat of cognition': 1.5 megabytes of information required to learn native language, UC Berkeley study finds – Amber Tang – Daily Californian

<https://www.dailycal.org/2019/04/07/humans-store-1-5-mb-of-information-to-learn-native-language-uc-berkeley-study-finds/>

The advantage of ambiguity – Emily Finn – MIT News

<https://news.mit.edu/2012/ambiguity-in-language-0119>

Of bairns and brains – The Economist

<https://www.economist.com/science-and-technology/2016/05/28/of-bairns-and-brains>