



Michael Frank

Benjamin Scott Crocker Professor of Human Biology and Professor, by courtesy, of Linguistics

Psychology

 Curriculum Vitae available Online

Bio

BIO

How do we learn to communicate using language? I study children's language learning and how it interacts with their developing understanding of the social world. I use behavioral experiments, computational tools, and novel measurement methods like large-scale web-based studies, eye-tracking, and head-mounted cameras.

ACADEMIC APPOINTMENTS

- Professor, Psychology
- Professor (By courtesy), Linguistics
- Member, Bio-X
- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI)
- Director, Center for the Study of Language and Information (CSLI)
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Director, Symbolic Systems Program, (2020- present)
- Director, Center for the Study of Language and Information, (2020- present)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Governing board member, ManyBabies Consortium (2017 - present)
- Advisory Board, MacArthur-Bates Communicative Development Inventory (2014 - present)
- Governing board member, Cognitive Science Society (2015 - present)

PROGRAM AFFILIATIONS

- Symbolic Systems Program

LINKS

- Michael Frank - Department of Psychology: <http://web.stanford.edu/~mcfrank/>
- Language and Cognition Lab site: <http://langcog.stanford.edu>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

How do we learn to communicate using language? I study children's language learning and how it interacts with their developing understanding of the social world. I use behavioral experiments, computational tools, and novel measurement methods like large-scale web-based studies, eye-tracking, and head-mounted cameras.

Teaching

COURSES

2025-26

- Development and Epidemiology: HUMBIO 4B (Spr)
- Experimental Methods: PSYCH 251 (Aut)
- Minds and Machines: CS 24, LINGUIST 35, PHIL 99, PSYCH 35, SYMSYS 1, SYMSYS 200 (Win)

2023-24

- Behavior, Health, and Development: HUMBIO 4B (Spr)
- Experimental Methods: PSYCH 251, SYMSYS 195E (Aut)
- Topics in Natural and Artificial Intelligence: PSYCH 247, SYMSYS 206 (Win)

2022-23

- Behavior, Health, and Development: HUMBIO 4B (Spr)
- Experimental Methods: PSYCH 251, SYMSYS 195E (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Xi Jia Zhou

Postdoctoral Faculty Sponsor

Mira Nencheva, Fionnuala O'Reilly, Rebecca Zhu

Doctoral Dissertation Advisor (AC)

Samah Abdelrahim, Alvin Tan

Master's Program Advisor

Martin Blue, Huanxing Chen, Hannah Guan, Zeina Hashem, Chuqi Hu, Sriskandha Kandimalla, Fernanda Kramer, Puyin Li, Avery Louis, Huijun Mao, Kalu Obasi, Arjun Pawar, JD Pruett, Junyi Tao, Merve Tekgurler, Yiheng Yao, Xingyi Zhang, Zhenze Zhang, Xi Jia Zhou, Chelsea Zou

Doctoral Dissertation Co-Advisor (AC)

Julio Martinez

Undergraduate Major Advisor

Loran Baxter Mercado, Anna Hun, Zoe Quake, Estella Zhou

Doctoral (Program)

Samah Abdelrahim, Steven Feng, Alvin Tan

Publications

PUBLICATIONS

- **Cognitive Modeling Using Artificial Intelligence.** *Annual review of psychology*
Frank, M. C., Goodman, N. D.
2025
- **Learning Variability Network Exchange (LEVANTE): A Global Framework for Measuring Children's Learning Variability Through Collaborative Data Sharing.** *Child development*
Frank, M. C., Baumgartner, H. A., Braginsky, M., Kachergis, G., Lightbody, A. A., Sparks, R. Z., Zhu, R., Carlson, S. M., Graham, S., Lipina, S. J., Newcombe, N. S., Odgers, C. L., Pianta, et al
2025
- **Interaction structure constrains the emergence of conventions in group communication.** *Proceedings of the National Academy of Sciences of the United States of America*
Boyce, V., Hawkins, R. D., Goodman, N. D., Frank, M. C.
2024; 121 (28): e2403888121
- **Baby steps in evaluating the capacities of large language models** *NATURE REVIEWS PSYCHOLOGY*
Frank, M. C.
2023; 2 (8): 451-452
- **How young children integrate information sources to infer the meaning of words.** *Nature human behaviour*
Bohn, M., Tessler, M. H., Merrick, M., Frank, M. C.
2021
- **Polite Speech Emerges From Competing Social Goals.** *Open mind : discoveries in cognitive science*
Yoon, E. J., Tessler, M. H., Goodman, N. D., Frank, M. C.
2020; 4: 71–87
- **Consistency and Variability in Children's Word Learning Across Languages.** *Open mind : discoveries in cognitive science*
Braginsky, M., Yurovsky, D., Marchman, V. A., Frank, M. C.
2019; 3: 52–67
- **Data availability, reusability, and analytic reproducibility: evaluating the impact of a mandatory open data policy at the journal Cognition** *ROYAL SOCIETY OPEN SCIENCE*
Hardwicke, T. E., Mathur, M. B., MacDonald, K., Nilsonne, G., Banks, G. C., Kidwell, M. C., Mohr, A., Clayton, E., Yoon, E. J., Tessler, M., Lenne, R. L., Altman, S., Long, et al
2018; 5 (8)
- **A Collaborative Approach to Infant Research: Promoting Reproducibility, Best Practices, and Theory-Building**
Frank, M. C., Bergelson, E., Bergmann, C., Cristia, A., Floccia, C., Gervain, J., Hamlin, J., Hannon, E. E., Kline, M., Levelt, C., Lew-Williams, C., Nazzi, T., Panneton, et al
WILEY.2017: 421–35
- **Wordbank: an open repository for developmental vocabulary data** *JOURNAL OF CHILD LANGUAGE*
Frank, M. C., Braginsky, M., Yurovsky, D., Marchman, V. A.
2017; 44 (3): 677-694
- **A Collaborative Approach to Infant Research: Promoting Reproducibility, Best Practices, and Theory-Building.** *Infancy : the official journal of the International Society on Infant Studies*
Frank, M. C., Bergelson, E., Bergmann, C., Cristia, A., Floccia, C., Gervain, J., Hamlin, J. K., Hannon, E. E., Kline, M., Levelt, C., Lew-Williams, C., Nazzi, T., Panneton, et al
2017; 22 (4): 421-435
- **Pragmatic Language Interpretation as Probabilistic Inference.** *Trends in cognitive sciences*
Goodman, N. D., Frank, M. C.
2016; 20 (11): 818-829

- **Inferring word meanings by assuming that speakers are informative.** *Cognitive psychology*
Frank, M. C., Goodman, N. D.
2014; 75: 80-96
- **Predicting Pragmatic Reasoning in Language Games** *SCIENCE*
Frank, M. C., Goodman, N. D.
2012; 336 (6084): 998-998
- **Modeling human performance in statistical word segmentation** *COGNITION*
Frank, M. C., Goldwater, S., Griffiths, T. L., Tenenbaum, J. B.
2010; 117 (2): 107-125
- **ManyNumbers 3: A Multi-Lab Study of Demographic Correlates of Early Number Knowledge.** *Developmental science*
Yu, Y., Barner, D., Mejia, M., Jung, S., Maheshwari, U., Gunderson, E. A., Fyfe, E., Duru, L. A., Abreu-Mendoza, R. A., Boni, I., Cordes, S., Dhaliwal, T., Feigenson, et al
2026; 29 (3): e70184
- **Young children strategically adapt to unreliable social partners.** *Child development*
Shannon, K. A., Conine-Nakano, A., Frankenhuys, W. E., Frank, M. C., Gweon, H.
2026
- **Children's understanding of how noise disrupts verbal communication.** *Child development*
Chuey, A., Williams, R. M., Qing, C., Frank, M. C., Gweon, H.
2026
- **Selection of Goal-Consistent Auditory Environments by 3-5-Year-Old Children** *JOURNAL OF COGNITION AND DEVELOPMENT*
Williams, R. M., Frank, M. C.
2026
- **A universal of human social cognition: Children from 17 communities process gaze in similar ways.** *Child development*
Bohn, M., Prein, J. C., Ayikoru, A., Bednarski, F. M., Dzabatou, A., Frank, M. C., Henderson, A. M., Isabella, J., Kalbitz, J., Kanngiesser, P., Keşşafağlı, D., Köymen, B., Manrique-Hernandez, et al
2026
- **The Development of Morality and Conventionality Across Cultures: Implementing a Two-Stage Model for Cross-Cultural Research.** *Developmental science*
Yazdi, H., Schneider, R. M., Mejia, M. A., Frank, M. C., Srinivasan, M., Yoon, E. J., Dunham, Y., Barner, D.
2026; 29 (1): e70103
- **Cross-Contextual Variability in Children's Early Understanding of Visual Media.** *Topics in cognitive science*
Zhu, R., Kilonzo, T. N., Zhu, L. Z., Fan, J. E., Frank, M. C.
2025
- **Young children infer the informativeness of others' praise.** *Developmental psychology*
Asaba, M., Stegall, J., Hembacher, E., Frank, M. C., Gweon, H.
2025
- **An introduction to the Item Response Warehouse (IRW): A resource for enhancing data usage in psychometrics.** *Behavior research methods*
Domingue, B. W., Braginsky, M., Caffrey-Maffei, L., Gilbert, J. B., Kanopka, K., Kapoor, R., Lee, H., Liu, Y., Nadela, S., Pan, G., Zhang, L., Zhang, S., Frank, et al
2025; 57 (10): 276
- **A Meta-Analysis of the Impact and Heterogeneity of Explicit Demand Characteristics** *COLLABRA-PSYCHOLOGY*
Coles, N. A., Wyatt, M., Frank, M. C.
2025; 11 (1)
- **Development and validation of the NIH Baby Toolbox® language measures.** *Infant behavior & development*
Novack, M. A., Dworak, E. M., Han, Y. C., Kaat, A. J., Ustsinovich, V., Saffran, J., Frank, M. C., Waxman, S., Gershon, R. C.
2025; 80: 102121

- **Estimating Age-Related Change in Infants' Linguistic and Cognitive Development Using (Meta-)Meta-Analysis.** *Developmental science*
Cao, A., Lewis, M., Tsuji, S., Bergmann, C., Cristia, A., Frank, M. C.
2025; 28 (4): e70028
- **JACDI: WS-SF: A Short-Form Version of the Saudi Arabic Communicative Development Inventory.** *International journal of language & communication disorders*
Alroqi, H., Frank, M. C., Alaslani, K., Albeeshi, A., Almohammadi, A., Aljahlan, Y., Alsulaiman, R., Murad, A., Alnemary, F.
2025; 60 (5): e70108
- **Pragmatics as Social Inference About Intentional Action.** *Open mind : discoveries in cognitive science*
Bohn, M., Frank, M. C.
2025; 9: 290-304
- **Infants' Social Evaluation of Helpers and Hinderers: A Large-Scale, Multi-Lab, Coordinated Replication Study.** *Developmental science*
Lucca, K., Yuen, F., Wang, Y., Alessandroni, N., Allison, O., Alvarez, M., Axelsson, E. L., Baumer, J., Baumgartner, H. A., Bertels, J., Bhavsar, M., Byers-Heinlein, K., Capelier-Mourguy, et al
2025; 28 (1): e13581
- **Measuring Variation in Gaze Following Across Communities, Ages, and Individuals: A Showcase of TANGO-CC (Task for Assessing Individual differences in Gaze understanding-Open-Cross-Cultural)** *ADVANCES IN METHODS AND PRACTICES IN PSYCHOLOGICAL SCIENCE*
Prein, J., Bednarski, F. M., Dzabatou, A., Frank, M. C., Henderson, A. M. E., Kalbitz, J., Kanngiesser, P., Kessafoglu, D., Koymen, B., Manrique-Hernandez, M. V., Magazi, S., Mujica-Manrique, L., Ohlendorf, et al
2025; 8 (1)
- **Tools of the Trade: A Guide to Sociodemographic Reporting for Researchers, Reviewers, and Editors** *JOURNAL OF COGNITION AND DEVELOPMENT*
Singh, L., Barokova, M., Bazhydai, M., Baumgartner, H. A., Franchin, L., Kosie, J. E., Lew-Williams, C., Okyere Omame, P., Reinelt, T., Schuwerk, T., Sheskin, M., Soderstrom, M., Wu, et al
2024
- **Estimating the Replicability of Psychology Experiments After an Initial Failure to Replicate** *COLLABRA-PSYCHOLOGY*
Boyce, V., Prystawski, B., Abutto, A. B., Chen, E. M., Chen, Z., Chiu, H., Ergin, I., Gupta, A., Hu, C., Kemmann, B., Klevak, N., Lua, V. Y. Q., Mazzaferro, et al
2024; 10 (1)
- **Remote Infant Studies of Early Learning (RISE): Scalable online replications of key findings in infant cognitive development.** *Developmental psychology*
Tenenbaum, E. J., Stone, C., Vu, M. H., Hare, M., Gilyard, K. R., Arunachalam, S., Bergelson, E., Bishop, S. L., Frank, M. C., Hamlin, J. K., Kline Struhl, M., Landa, R. J., Lew-Williams, et al
2024
- **Referential transparency of verbs in child-directed input by Japanese and American caregivers.** *Journal of child language*
Fitch, A., Lieberman, A. M., Frank, M. C., Brough, J., Valteau, M., Arunachalam, S.
2024: 1-16
- **Testing the relationship between preferences for infant-directed speech and vocabulary development: A multi-lab study.** *Journal of child language*
Soderstrom, M., Rocha-Hidalgo, J., Muñoz, L. E., Bochynska, A., Werker, J. F., Skarabela, B., Seidl, A., Ryjova, Y., Rennels, J. L., Potter, C. E., Paulus, M., Ota, M., Olesen, et al
2024: 1-26
- **Limited evidence of test-retest reliability in infant-directed speech preference in a large preregistered infant experiment.** *Developmental science*
Schreiner, M. S., Zettersten, M., Bergmann, C., Frank, M. C., Fritzsche, T., Gonzalez-Gomez, N., Hamlin, K., Kartushina, N., Kellier, D. J., Mani, N., Mayor, J., Saffran, J., Shukla, et al
2024: e13551
- **United States-China differences in cognition and perception across 12 tasks: Replicability, robustness, and within-culture variation.** *Journal of experimental psychology. General*
Cao, A., Carstensen, A., Gao, S., Frank, M. C.

2024

- **Learning the Meanings of Function Words From Grounded Language Using a Visual Question Answering Model.** *Cognitive science*
Portelance, E., Frank, M. C., Jurafsky, D.
2024; 48 (5): e13448
- **Parallel developmental changes in children's production and recognition of line drawings of visual concepts.** *Nature communications*
Long, B., Fan, J. E., Huey, H., Chai, Z., Frank, M. C.
2024; 15 (1): 1191
- **The role of translation equivalents in bilingual word learning.** *Developmental science*
Tan, A. W., Marchman, V. A., Frank, M. C.
2024: e13476
- **Comparing apples to manzanas and oranges to naranjas: A new measure of English-Spanish vocabulary for dual language learners.** *Infancy : the official journal of the International Society on Infant Studies*
Tamis-LeMonda, C. S., Kachergis, G., Masek, L. R., Gonzalez, S. L., Soska, K. C., Herzberg, O., Xu, M., Adolph, K. E., Gilmore, R. O., Bornstein, M. H., Casasola, M., Fausey, C. M., Frank, et al
2024
- **Evidence for Infant-directed Speech Preference Is Consistent Across Large-scale, Multi-site Replication and Meta-analysis.** *Open mind : discoveries in cognitive science*
Zettersten, M., Cox, C., Bergmann, C., Tsui, A. S., Soderstrom, M., Mayor, J., Lundwall, R. A., Lewis, M., Kosie, J. E., Kartushina, N., Fusaroli, R., Frank, M. C., Byers-Heinlein, et al
2024; 8: 439-461
- **Conducting Developmental Research Online vs. In-Person: A Meta-Analysis.** *Open mind : discoveries in cognitive science*
Chuey, A., Boyce, V., Cao, A., Frank, M. C.
2024; 8: 795-808
- **Openly accessible LLMs can help us to understand human cognition.** *Nature human behaviour*
Frank, M. C.
2023
- **Broadening Convenience Samples to Advance Theoretical Progress and Avoid Bias in Developmental Science** *JOURNAL OF COGNITION AND DEVELOPMENT*
Doebel, S., Frank, M. C.
2023
- **Eleven years of student replication projects provide evidence on the correlates of replicability in psychology.** *Royal Society open science*
Boyce, V., Mathur, M., Frank, M. C.
2023; 10 (11): 231240
- **A unified approach to demographic data collection for research with young children across diverse cultures.** *Developmental psychology*
Singh, L., Barokova, M. D., Baumgartner, H. A., Lopera-Perez, D. C., Omane, P. O., Sheskin, M., Yuen, F. L., Wu, Y., Alcock, K. J., Altmann, E. C., Bazhydai, M., Carstensen, A., Chan, et al
2023
- **Developmental changes in drawing production under different memory demands in a U.S. and Chinese sample.** *Developmental psychology*
Long, B., Wang, Y., Christie, S., Frank, M. C., Fan, J. E.
2023; 59 (10): 1784-1793
- **The BabyView camera: Designing a new head-mounted camera to capture children's early social and visual environments.** *Behavior research methods*
Long, B., Goodin, S., Kachergis, G., Marchman, V. A., Radwan, S. F., Sparks, R. Z., Xiang, V., Zhuang, C., Hsu, O., Newman, B., Yamins, D. L., Frank, M. C.
2023
- **Predicting Age of Acquisition for Children's Early Vocabulary in Five Languages Using Language Model Surprisal.** *Cognitive science*
Portelance, E., Duan, Y., Frank, M. C., Lupyan, G.
2023; 47 (9): e13334

- **Bridging the data gap between children and large language models.** *Trends in cognitive sciences*
Frank, M. C.
2023
- **Registered Reports in Child Development: Introduction to the Special Section.** *Child development*
Syed, M., Frank, M. C., Roisman, G. I.
2023
- **How to build up big team science: a practical guide for large-scale collaborations.** *Royal Society open science*
Baumgartner, H. A., Alessandrini, N., Byers-Heinlein, K., Frank, M. C., Hamlin, J. K., Soderstrom, M., Voelkel, J. G., Willer, R., Yuen, F., Coles, N. A.
2023; 10 (6): 230235
- **ACOUSTICALLY-DRIVEN PHONEME REMOVAL THAT PRESERVES VOCAL AFFECT CUES.** *Proceedings of the ... IEEE International Conference on Acoustics, Speech, and Signal Processing. ICASSP (Conference)*
Noufi, C., Berger, J., Frank, M., Parker, K., Bowling, D. L.
2023; 2023
- **An individual differences perspective on pragmatic abilities in the preschool years.** *Developmental science*
Bohn, M., Tessler, M. H., Kordt, C., Hausmann, T., Frank, M. C.
2023: e13401
- **'Big team' science challenges us to reconsider authorship.** *Nature human behaviour*
Coles, N. A., DeBruine, L. M., Azevedo, F., Baumgartner, H. A., Frank, M. C.
2023
- **Conceptual Hierarchy in Child-Directed Speech: Implicit Cues are More Reliable** *JOURNAL OF COGNITION AND DEVELOPMENT*
Wilson, K., Frank, M. C., Fournassi, A.
2023
- **Pragmatic Felicity Facilitates the Production and Comprehension of Negation** *COLLABRA-PSYCHOLOGY*
Nordmeyer, A. E., Frank, M. C.
2023; 9 (1)
- **Modeling Individual Differences in Children's Information Integration During Pragmatic Word Learning.** *Open mind : discoveries in cognitive science*
Bohn, M., Schmidt, L. S., Schulze, C., Frank, M. C., Tessler, M. H.
2022; 6: 311-326
- **Estimating Demographic Bias on Tests of Children's Early Vocabulary.** *Topics in cognitive science*
Kachergis, G., Francis, N., Frank, M. C.
2022
- **Plurality is a Good Start, but It's Time for Unification: A Commentary on "Computational Modeling of Bilingual Language Learning: Current Models and Future Directions"** *LANGUAGE LEARNING*
Kachergis, G., Tan, A., Frank, M. C.
2022
- **Context-Dependent Learning of Linguistic Disjunction.** *Journal of child language*
Jasbi, M., Jaggi, A., Clark, E. V., Frank, M. C.
2022: 1-36
- **Habituation Reflects Optimal Exploration Over Noisy Perceptual Samples.** *Topics in cognitive science*
Cao, A., Raz, G., Saxe, R., Frank, M. C.
2022
- **A longitudinal analysis of the social information in infants' naturalistic visual experience using automated detections.** *Developmental psychology*
Long, B. L., Kachergis, G., Agrawal, K., Frank, M. C.
2022

- **Peekbank: An open, large-scale repository for developmental eye-tracking data of children's word recognition.** *Behavior research methods*
Zettersten, M., Yurovsky, D., Xu, T. L., Uner, S., Tsui, A. S., Schneider, R. M., Saleh, A. N., Meylan, S. C., Marchman, V. A., Mankewitz, J., MacDonald, K., Long, B., Lewis, et al
2022
- **Relational Reasoning and Generalization Using Nonsymbolic Neural Networks** *PSYCHOLOGICAL REVIEW*
Geiger, A., Carstensen, A., Frank, M. C., Potts, C.
2022
- **Exploring Patterns of Stability and Change in Caregivers' Word Usage Across Early Childhood.** *Cognitive science*
Jiang, H., Frank, M. C., Kulkarni, V., Fourtassi, A.
2022; 46 (7): e13177
- **Simplicity and validity in infant research** *COGNITIVE DEVELOPMENT*
Kominsky, J. F., Lucca, K., Thomas, A. J., Frank, M. C., Hamlin, J.
2022; 63
- **Online Computerized Adaptive Tests of Children's Vocabulary Development in English and Mexican Spanish.** *Journal of speech, language, and hearing research : JSLHR*
Kachergis, G., Marchman, V. A., Dale, P. S., Mankewitz, J., Frank, M. C.
2022: 1-21
- **From partners to populations: A hierarchical Bayesian account of coordination and convention.** *Psychological review*
Hawkins, R. D., Franke, M., Frank, M. C., Goldberg, A. E., Smith, K., Griffiths, T. L., Goodman, N. D.
2022
- **Predicting Pragmatic Cue Integration in Adults' and Children's Inferences About Novel Word Meanings** *JOURNAL OF EXPERIMENTAL PSYCHOLOGY-GENERAL*
Bohn, M., Tessler, M., Merrick, M., Frank, M. C.
2022
- **Improving the generalizability of infant psychological research: The ManyBabies model.** *The Behavioral and brain sciences*
Visser, I., Bergmann, C., Byers-Heinlein, K., Dal Ben, R., Duch, W., Forbes, S., Franchin, L., Frank, M. C., Geraci, A., Hamlin, J. K., Kaldy, Z., Kulke, L., Laverty, et al
2022; 45: e35
- **The puzzling relationship between multi-laboratory replications and meta-analyses of the published literature.** *Royal Society open science*
Lewis, M., Mathur, M. B., VanderWeele, T. J., Frank, M. C.
2022; 9 (2): 211499
- **Toward a "Standard Model" of Early Language Learning** *CURRENT DIRECTIONS IN PSYCHOLOGICAL SCIENCE*
Kachergis, G., Marchman, V. A., Frank, M. C.
2021
- **Automated detections reveal the social information in the changing infant view.** *Child development*
Long, B. L., Sanchez, A., Kraus, A. M., Agrawal, K., Frank, M. C.
2021
- **Moderated Online Data-Collection for Developmental Research: Methods and Replications** *FRONTIERS IN PSYCHOLOGY*
Chuey, A., Asaba, M., Bridgers, S., Carrillo, B., Dietz, G., Garcia, T., Leonard, J. A., Liu, S., Merrick, M., Radwan, S., Stegall, J., Velez, N., Woo, et al
2021; 12: 734398
- **Emotion as Information in Early Social Learning** *CURRENT DIRECTIONS IN PSYCHOLOGICAL SCIENCE*
Wu, Y., Schulz, L. E., Frank, M. C., Gweon, H.
2021
- **Adults' and Children's Comprehension of Linguistic Disjunction** *COLLABRA-PSYCHOLOGY*
Jasbi, M., Frank, M. C.
2021; 7 (1)

- **A multi-lab study of bilingual infants: Exploring the preference for infant-directed speech.** *Advances in methods and practices in psychological science*
Byers-Heinlein, K., Tsui, A. S., Bergmann, C., Black, A. K., Brown, A., Carbajal, M. J., Durrant, S., Fennell, C. T., Fiévet, A. C., Frank, M. C., Gampe, A., Gervain, J., Gonzalez-Gomez, et al
2021; 4 (1)
- **The Development of Quantity Implicatures in Mandarin-Speaking Children** *LANGUAGE LEARNING AND DEVELOPMENT*
Zhao, S., Ren, J., Frank, M. C., Zhou, P.
2021
- **Do graded representations support abstract thought?** *CURRENT OPINION IN BEHAVIORAL SCIENCES*
Carstensen, A., Frank, M. C.
2021; 37: 90–97
- **Unsupervised neural network models of the ventral visual stream.** *Proceedings of the National Academy of Sciences of the United States of America*
Zhuang, C., Yan, S., Nayebi, A., Schrimpf, M., Frank, M. C., DiCarlo, J. J., Yamins, D. L.
2021; 118 (3)
- **Analytic reproducibility in articles receiving open data badges at the journal Psychological Science: an observational study** *ROYAL SOCIETY OPEN SCIENCE*
Hardwicke, T. E., Bohn, M., MacDonald, K., Hembacher, E., Nuijten, M. B., Peloquin, B. N., DeMayo, B. E., Long, B., Yoon, E. J., Frank, M. C.
2021; 8 (1)
- **Analytic reproducibility in articles receiving open data badges at the journal Psychological Science: an observational study.** *Royal Society open science*
Hardwicke, T. E., Bohn, M., MacDonald, K., Hembacher, E., Nuijten, M. B., Peloquin, B. N., deMayo, B. E., Long, B., Yoon, E. J., Frank, M. C.
2021; 8 (1): 201494
- **A Multilab Study of Bilingual Infants: Exploring the Preference for Infant-Directed Speech** *ADVANCES IN METHODS AND PRACTICES IN PSYCHOLOGICAL SCIENCE*
Byers-Heinlein, K., Tsui, A., Bergmann, C., Black, A. K., Brown, A., Carbajal, M., Durrant, S., Fennell, C. T., Fievet, A., Frank, M. C., Gampe, A., Gervain, J., Gonzalez-Gomez, et al
2021; 4 (1)
- **SAYCam: A Large, Longitudinal Audiovisual Dataset Recorded From the Infant's Perspective.** *Open mind : discoveries in cognitive science*
Sullivan, J., Mei, M., Perfors, A., Wojcik, E., Frank, M. C.
2021; 5: 20-29
- **Building theories of consistency and variability in children's language development: A large-scale data approach.** *Advances in child development and behavior*
Tsui, A. S., Marchman, V. A., Frank, M. C.
2021; 61: 199-221
- **Measurement of Cognition for the National Children's Study.** *Frontiers in pediatrics*
Zelazo, P. D., Lourenco, S. F., Frank, M. C., Elison, J. T., Heaton, R. K., Wellman, H. M., Slotkin, J., Kharitonova, M., Reznick, J. S.
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