Bria Long, Ph.D.

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Education & Professional Experience

Beginning 7/2024	*University of California, San Diego*	Assistant Professor Department of Psychology *Director:* Visual Learning Lab
2017 – 2024	*Stanford University*	Postdoctoral Fellow NSF SBE Fellow & NIH K99/R00 Awardee Advisor: Prof. Michael C. Frank *Parental leaves: 8-12/2019, 7–11/2021*
2017	*Harvard University*	Ph.D., Cognitive Psychology *Cognition, Brain, & Behavior* Advisors: Profs. George A. Alvarez, Talia Konkle, & Susan Carey
2011	*École Normale Supérieure*	M.S., Cognitive Science Advisor: Prof. Sid Kouider
2009 – 2010	*École Normale Supérieure*	Fulbright Scholar (France) Advisor: Prof. Emmanuel Dupoux
2009	*Stanford University*	B.A., Human Biology, Departmental Honors *Concentration: Language & Thought* Advisor: Prof. Lera Boroditsky

Fellowships, Grants, & Awards

2022 - 2027	National Institutes of Health K99/R00 Fellowship Recipient ($961,218) *"Grounding models of category learning in the visual experiences of young children"*
2020	Stanford CSLI COVID-19 Bridge Grant ($41,000)
2019	Stanford Human-Centered Artificial Intelligence AWS Cloud Credits ($13,000)
2018	Travel Award, Conference on Computational Cognitive Neuroscience (CCN)
2018	Estes Rising Star Travel Award, *Workshop on "Deep, fast, and shallow learning in humans and machines"*
2017 – 2019	National Science Foundation SBE Postdoctoral Research Fellowship ($138,000) *"Interactions between word learning and visual category development in infancy"*
2016	George W. Goethals Teaching Award, Harvard University
2015	George W. Goethals Teaching Award, Harvard University
2014	Large Grant for Graduate Student Research ($3500), Harvard University
2013	Best Student Poster Award, Rovereto Concepts, Actions, and Objects Seminar
2012	Mind, Brain, and Behavior Travel Award, Harvard University

2011   Stimson Research Grant, Harvard University
2011   Honorable Mention, National Science Foundation Graduate Research Fellowship
2009   Fulbright Scholarship ($14,000), Franco-American Fulbright Commission
2009   Firestone Award for Undergraduate Excellence in Research, Stanford University

Papers

Long, B., Goodin, S., Kachergis, G., Marchman, V., Radwan, S., Sparks, R., Xiang, V., Zhuang, C., Hsu, O., Newman, B., Yamins, D.L.K., Frank M.C. (in press). The BabyView Camera: Designing a new head-mounted camera to capture children's early social and visual environment. *Behavioral Research Methods.* [pdf] [repository]

Long, B., Wang, Y., Christie, S., Frank, M. C., & Fan, J.E. (in press). Developmental changes in drawing production under different memory demands in a U.S. and Chinese sample. *Developmental Psychology.* [pdf] [repository]

Long, B., Simson, J., Buxó-Lugo, A., Watson, D. G., & Mehr, S. A. (2023). How games can make behavioural science better. *Nature*, 613, 433-436. [pdf]

Long, B., Kachergis, G., Agrawal, K., & Frank, M. C. (2022). A longitudinal analysis of the social information in infants' naturalistic visual experience using automated detections. *Developmental Psychology. 58*(12), 2211–2229. [pdf] [repository]

Zettersten, M., Yurovsky, D., Xu, T. L., Uner, S., Tsui, A.S.T., Schneider, R. M., Saleh, A. N., Meylan, S. C., Marchman, V., Mankewitz, J., MacDonald, K., **Long, B**., Lewis, M., Kachergis, G., Handa, K., deMayo, B., Carstensen, A., Braginsky, M., Boyce, V., Bhatt, N., Bergey, C. A., & Frank, M.C. (2022). Peekbank: An open, large-scale repository for developmental eye-tracking data of children's word recognition. *Behavior Research Methods*. 1-16. [pdf] [repository]

Long, B., Sanchez, A., Kraus, A. M., Agrawal, K., & Frank, M. C. (2022). Automated detections reveal the social information in the changing infant view. *Child Development, 93*(1), 101-116. [pdf] [repository]

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). Analytic reproducibility in articles receiving open data badges at Psychological Science: An observational study. *Royal Society Open Science, 8*(1), 201494. [pdf] [repository]

Long, B., Moher, M., Carey, S. E., & Konkle, T. (2019). Animacy and object size are reflected in perceptual similarity computations by the preschool years. *Visual Cognition*, *27*(5-8), 435-451.[pdf] [repository]

Long, B., Moher, M., Carey, S., & Konkle, T. (2019). Real-world size is automatically encoded in preschoolers' object representations. *Journal of Experimental Psychology: Human Perception and Performance, 45(7),* 863. [pdf] [repository]

Long, B., Yu., C.P., & Konkle, T. (2018). Mid-level visual features explain the high-level categorical

organization of the ventral stream. *Proceedings of the National Academy of Sciences. 115*(38), E9015-E9024. [pdf] [repository]

Hardwicke, T. E., Mathur, M. B., MacDonald, K., Nilsonne, G., Banks, G. C., Kidwell, M. C., Mohr, A. H., Clayton, E., Yoon, E. J., Tessler, M. H., Lenne, R. L., Altman, S., **Long, B.,** Frank, M. C. (2018). Data availability, reusability, and analytic reproducibility: Evaluating the impact of a mandatory open data policy at the journal *Cognition*. *Royal Society Open Science*, *5*(8), 180448. [pdf] [repository]

Long, B. & Konkle, T. (2017). A familiar Size-Stroop effect in the absence of basic-level recognition. *Cognition. 168,* 234-242. [pdf] [repository]

Long, B., Störmer, V.S. & Alvarez, G.A. (2017). Mid-level perceptual features contain early cues to animacy. *Journal of Vision. 17*(6), 1–20. [pdf] [repository]

Long, B., Konkle, T., Cohen, M.A., & Alvarez, G.A. (2016). Mid-level perceptual features distinguish objects of different real-world sizes. *Journal of Experimental Psychology: General. 145*(1), 95-109. [pdf] [repository]

Kouider, S., **Long, B.,** Le Stanc, L., Barbosa, L.S., Fievet, A.C., & Gelskov, S. (2015). Neural dynamics of prediction and surprise in infants. *Nature Communications.* [pdf]

Minagawa-Kawai Y., Cristia A., **Long B.,** Vendelin I., Hakuno Y., Dutat M., Filippin L, Cabrol D. & Dupoux E. (2013) Insights on NIRS sensitivity from a cross-linguistic study on the emergence of phonological grammar. *Frontiers in Psychology.* [pdf]

Fausey C.M, **Long B.L.**, Inamori, A. and Boroditsky L. (2010). Constructing agency: the role of language. *Frontiers in Cultural Psychology.* [pdf]

Preprints & Peer-Reviewed Conference Proceedings

Kramer, L. E., Chen, Y. C., **Long, B**., Konkle, T. & Cohen, M. R. (2023). Contributions of early and mid-level visual cortex to high-level object categorization. *bioRxiv*, 2023-05. [pdf]

Long, B., Fan, J. E., Huey, H., Chai, Z., & Frank, M. C. (in revision). Parallel developmental changes in children's drawing and recognition of line drawings of visual concepts. *PsyArXiv*. [pdf] [repository]

Long, B., Lai, C.M., Chan, P., Wong, P., Frank, M.C., & Kachergis, G. (accepted pending data collection). Consistency and variability between cultures during toddlers' naturalistic play. *Infancy.* [pdf]

Huey*, H., **Long*, B**., Yang, J., George, K., and Fan, J. (2022). Developmental changes in the semantic part structure of drawn objects. *Proceedings of the 44th Annual Meeting of the Cognitive Science Society.* [pdf] [repository] *equal contributions*

Long, B., Kachergis, G., Bhatt, N., & Frank. M.C. (2021). Characterizing the object categories two

children see and interact with in a dense dataset of naturalistic visual experience. *Proceedings of the 43nd Annual Conference of the Cognitive Science Society.* [pdf] [repository]

Kachergis, G., Radwan, S., **Long, B**., Fan, J., Lingelbach, M., Bear, D., Yamins, D., and Frank, M. (2021). Predicting children's and adults' preferences in physical interactions via physics simulation. *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.* [pdf] [repository]

Zettersten, M., Bergey, C. A., Bhatt, N., Boyce, V., Braginsky, M., Carstensen, A., deMayo, B., Kachergis, G., Lewis, M., **Long, B.,** MacDonald, K., Mankewitz, J., Meylan, S. C., Saleh, A. N., Schneider, R. M., Tsui, A., Uner, S., Xu, T. L., Yurovsky, D., & Frank, M.C. (2021). Peekbank: Exploring children's word recognition through an open, large-scale repository for developmental eye-tracking data. *Proceedings of the 43rd Annual Conference of the Cognitive Science Society.* [pdf] [repository]

Long, B., Kachergis, G., Agrawal, K., & Frank, M. C. (2020). Detecting social information in a dense database of infants' natural visual experience. *Proceedings of the 42nd Annual Conference of the Cognitive Science Society.* [pdf] [repository]

Deza, A., Chen, Y. C., **Long, B**., & Konkle, T. (2019). Accelerated Texforms: Alternative Methods for Generating Unrecognizable Object Images with Preserved Mid-Level Features. *Proceedings of the 2019 Conference on Computational Cognitive Neuroscience.* [pdf] [repository]

Long, B., Fan, J. E., Chai, Z., & Frank, M. C. (2019). Developmental changes in the ability to draw distinctive features of object categories. *Proceedings of the 41st Annual Conference of the Cognitive Science Society.* [pdf]

Long, B., Fan, J. E., Frank, M. C. (2018). Drawings as a window into developmental changes in object representations. *Proceedings of the 40th Annual Conference of the Cognitive Science Society.*

Sanchez*, A., **Long*, B.,** Kraus, A. M., Frank, M. C. (2018). Postural developments modulate children's visual access to social information. *Proceedings of the 40th Annual Conference of the Cognitive Science Society. *equal contributions* [pdf] [repository]

Long, B. & Konkle, T. (2018) The role of textural statistics vs. outer contours in deep CNN and neural responses to objects. *Proceedings of the 2018 Conference on Computational Cognitive Neuroscience.* [pdf] [repository]

Conference Presentations

Huey*, H., **Long*, B**., Yang, J., George, K., and Fan, J. (2022). Developmental changes in the semantic part structure of drawn objects. Poster given at the 2022 *Proceedings of the 44th Annual Meeting of the Cognitive Science Society.*

Long, B., Kachergis, G., Bhatt, N., & Frank. M.C. (2021). Characterizing the object categories two hildren see and interact with in a dense dataset of naturalistic visual experience. Talk given at the 2021 *Proceedings of the 43nd Annual Meeting of the Cognitive Science Society.*

Kachergis, G., Radwan, S., **Long, B**., Fan, J., Lingelbach, M., Bear, D., Yamins, D., and Frank, M. (2021).

Predicting children's and adults' preferences in physical interactions via physics simulation. Talk given at the *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.*

Long, B., Kachergis, G., Agrawal, K., & Frank, M. C. (2020). Detecting social information in a dense database of infants' natural visual experience. Talk given at the 2020 *Proceedings of the 42ⁿᵈ Annual Meeting of the Cognitive Science Society.*

Deza, A., Chen, Y. C., **Long, B**., & Konkle, T. (2019). Accelerated Texforms: Alternative Methods for Generating Unrecognizable Object Images with Preserved Mid-Level Features. Poster given at the *Proceedings of the 2019 Conference on Computational Cognitive Neuroscience*.

Magri, C., **Long, B.,** Chiou, R., & Konkle, T. (2019). Behavioral and neural associations between object size and curvature. Poster given at the annual meeting of the *Vision Sciences Society*, May 18-23, St. Petersburg, FL.

Long, B., Fan, J. E., Chai, Z., & Frank, M. C. (2019). Developmental changes in the ability to draw distinctive features of object categories. Poster given at the annual meeting of the *Vision Sciences Society*, May 18-23, St. Petersburg, FL.

Long, B., Fan, J. E., Chai, Z., & Frank, M. C. (2019). The role of memory in children's drawings of object categories. Talk given at the *Society for Research in Child Development*, March 18-22, Baltimore, MD.

Long, B. & Konkle, T. (2018) The role of textural statistics vs. outer contours in deep CNN and neural responses to objects. Poster given at the *2018 Conference on Computational Cognitive Neuroscience*, Sept 6-9, Philadelphia, PA.

Long, B., Fan, J.E., & Frank, M.C. (2018). Drawings as a window into developmental changes in object representations. Talk given at the annual meeting of the *Cognitive Sciences Society*, July 25-28, Madison, WI.

Long, B., Fan, J.E., & Frank, M.C. (2018). Drawings as a window into developmental changes in object representations. Poster given at the annual meeting of the *Vision Sciences Society*, May 18-23, St. Petersburg, FL.

Long, B. & Konkle T. (2017). Mid-level features are sufficient to drive the animacy and object size organization of the ventral stream. Talk given at the annual meeting of the *Vision Sciences Society*, May 19-24, St. Petersburg, FL.

Long, B. & Konkle T. (2016). Mid-level features are sufficient to drive the animacy and object size organization of the ventral stream. Talk given at the annual meeting of the *Society for Neuroscience*, San Diego, CA.

Long, B., Carey, S. & Konkle, T. (2016). Pre-verbal infants automatically activate real-world size representations. Poster presented at the annual meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

Long, B., Konkle, T., Moher, M., Alvarez, G.A., & Carey, S. (2015). Young children automatically access

the real-world size of objects. Poster presented at the *Cognitive Development Society Meeting*, Columbus, OH.

Long, B., Konkle, T & Alvarez, G.A. (2015). Mid-level features automatically activate real-world size representations. Talk given at the annual meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

Alaoui-Socé, A., **Long, B.,** & Alvarez, G.A. (2015). Animate shape features influence high-level animate categorization. Poster given at the annual meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

Long, B., Moher, M., Konkle, T., Alvarez, G.A. & Carey, S. (2015). Broad category membership guides visual attention in young children. Poster presented at the annual meeting of the *Budapest Conference on Cognitive Development,* Budapest, Hungary.

Long, B., Störmer, V.S., & Alvarez, G.A. (2014). Rapid extraction of category-specific shape statistics: Evidence from event-related potentials. Talk presented at the Annual Meeting of the *Vision Sciences Society*, St. Pete Beach, FL.

Long, B, Störmer, V.S., & Alvarez, G. A. (2014). Rapid extraction of category-specific shape statistics: Evidence from event-related potentials. Poster presented at the annual meeting of the *Cognitive Neuroscience Society*, Boston, MA.

Long, B, Konkle, T., Cohen, M., & Alvarez, G. A. (2013). Real-world size influences visual search efficiency. Poster presented at the annual meeting of the *Concepts, Actions, and Objects Seminar*, Rovereto, Italy.

Long, B, & Alvarez, G.A. (2012). Implicit Processing of Labels Facilitates the Formation of Compressed Working Memory Representations. Poster presented at the annual meeting of the *Vision Sciences Society*, Naples, FL.

Egorova, N., Cristià, A., Vendelin, I., Filippin, L., **Long, B.,** Gervain, J., Minagawa-Kawai, Y., & Dupoux, E. (2010). Neural correlates of dialect perception in early infancy. Presented at the *Acoustical Society of America* meeting held in Cancun, Mexico.

Fausey, C.M., **Long, B.L.,** & Boroditsky, L. (2009) The role of language in eye-witness memory: Remembering who did it in English and Japanese. Presented at the 30th Annual Meeting of the *Cognitive Science Society*, Amsterdam, Netherlands.

Invited Talks

February 2023   Learning to see
                  Department of Psychology Colloquium, University of California, San Diego

January 2023   Learning to see
                  Department of Psychology Colloquium, University of Southern California

July 2022   *Invited panelist:* Parallel development of visual production and recognition

Image2Symbols: 2022 Cognitive Science Society Workshop

June 2022   *Keynote speaker:* Parallel development of visual production and recognition
         Computer Vision & Pattern Recognition (CVPR)
         Sketch-Oriented Deep Learning Workshop

April 2022   Learning to see
         Department of Psychology Colloquium, Université de Montréal

March 2022   Learning to see
         Department of Psychology Colloquium, Yale University

Feb 2022   Quantifying young children's visual environments
         Social Cognition & Learning Lab, University of California, San Diego

April 2021   Best practices for reproducible workflows
         Cognition and Computation Lab, New York University

Feb 2021   Learning to see
         Department of Psychology Colloquium, University of California, Berkeley

Dec 2020   Parallel development of visual production and recognition
         Neural Information Processing Systems (NeurIPS) Workshop:
         Shared Visual Representations in Humans and Machines (SVRHM)

October 2020   Learning to see
         Colloquium, CNRS Institut des Sciences Cognitives Marc Jeannerod (Lyon)

Nov 2020   Developmental changes in infants' early visual experience
         Concepts and Categories Seminar, New York University

October 2020   Learning to see
         Colloquium, Department of Psychology, Central European University

May 2020   Quantifying the social information in the infant view
         Vision & Perception Lab, Stanford University

April 2020   Quantifying the social information in the infant view
         Developmental Psychology Brownbag Seminar, Stanford University

January 2019   The development of visual concepts
         Colloquium, Department of Psychology, John Hopkins University

October 2018   Drawings as a window into developmental changes in object representations
         Developmental Psychology Brownbag Seminar, University of California, Berkeley

May 2018   Drawings as a window into developmental changes in object representations
         Developmental Psychology Brownbag Seminar, Stanford University

Jan 2018   Seeing without recognizing: mid-level features support cognitive and
                  neural representations of object categories
                       Department of Psychology Friday Seminar Series, Stanford University

Dec 2017   Seeing without recognizing: mid-level features support cognitive and
                  neural representations of object categories
                       Cognitive BrownBag, University of California, San Diego

Dec 2016   Mid-level features elicit cognitive and neural representations of object size.
                       Laboratory for Developmental Studies Seminar, Harvard University

October 2015   Early-emerging representations of real-world object size.
                       Developing Minds Laboratory, Boston University

June 2015   Real-world object size is automatically accessed in adults, children, and
                  pre-verbal infants.
                       Language and Cognition Laboratory, Stanford University

Sept 2014   Broad categories are distinguished by mid-level perceptual features.
                       DiCarlo Lab, Massachusetts Institute of Technology

April 2014   Broad categories are distinguished by mid-level perceptual features.
                       Cognition, Brain, & Behavior Seminar, Harvard University

Sept 2013   Real-world size guides attention during visual search.
                       Visual Attention Laboratory, Harvard Medical School

Mentorship Experience

1/2020–   Human Biology Honor's Thesis Advisor (Isabella Duan)
6/2021   *Title: "Do labels change the specificity of category representations in infancy?"*

6/2020–   Honor's Thesis Advisor & CSLI Summer Intern Supervisor (Naiti Bhatt)
6/2021   *Title: "Quantifying the object categories in the infant view"*

Summer 2019   Mentor, Symbolic Systems Summer Internship (Ketan Agrawal)

2018–2020   Master's Thesis Co-Advisor (Zixian Chai)
                       Title: "Automated assessment of children's tracing abilities"

Summer 2018   CSLI Summer Intern Supervisor (Yi Feng)

2015–present   Mentor, Stanford Fulbright Mentoring Program
                       Provide advice and detailed feedback on research statements for undergraduates applying
                       for Fulbright scholarships.

2013–2015   Undergraduate Thesis for Abla Alaoui-Socé, co-advised by George A. Alvarez

Supervised and mentored the research that went into a successful honors thesis; this thesis won the Hoopes Prize at Harvard University.

2015   Mentor, Laboratory for Developmental Studies Summer Internship (Helena Wippick)
              Supervised a full-time summer intern on a project in infant cognitive development.

2014   Mentor, Laboratory for Developmental Studies Internship (Ankita Sukthankar)
              Supervised a full-time summer intern on a project in childhood cognitive development.

2014   Mentor, Vision Sciences Laboratory Internship (Tatiana Hill)
              Supervised a full-time summer intern on a project in adult visual cognition.

Teaching Experience

Seminar Instructor – Designed and conducted a seminar course for sophomores entering the Psychology concentration at Harvard University. This seminar focused on teaching students how to think and write like psychological scientists. I constructed all course materials and led all sessions during each semester that I taught this course. I received teaching awards for the course I taught in both Fall 2015 and Spring 2016 which focused on cognitive neuroscience.

Spring 2016   Contemporary Issues in Cognitive Neuroscience
Fall 2015   Contemporary Issues in Cognitive Neuroscience
Spring 2015   Contemporary Issues in Cognitive Psychology

Teaching Fellow – Assisted with course design and implementation in successive iterations of the introductory psychology class at Harvard University.

Fall 2014   Introduction to Psychological Science with Prof. Jason Mitchell (2 sections)
Spring 2014   Introduction to Psychological Science with Prof. Jason Mitchell (3 sections)
Fall 2013   Introduction to Psychological Science with Prof. Dan Gilbert (3 sections)

Professional Service

Memberships in Professional Organizations:
Vision Sciences Society, Society for Research in Child Development, Cognitive Development Society, Society for Neuroscience, Cognitive Neuroscience Society

Peer Review:
Nature Neuroscience, Proceedings of the National Academy of Sciences, Developmental Science, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Human Perception and Performance, Neuroimage, Journal of Vision, Proceedings B, Infant Behavior and Development, Developmental Psychology, PloS One, Conference on Computational Cognitive Neuroscience, Cognitive Science Society

Academic References

Dr. Michael C. Frank   mcfrank@stanford.edu

Dr. Talia Konkle   tkonkle@fas.harvard.edu
Dr. George A. Alvarez   alvarez@wjh.harvard.edu
Dr. Susan Carey   scarey@fas.harvard.edu