

Layla Unger

Department of Psychological & Brain Sciences, University of Louisville

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Professional Appointments

2026-Present **Assistant Professor**, University of Louisville
2024-Present **Visiting Professor**, The Ohio State University
2024-2026 **Assistant Professor**, University of York
2017-2023 **Postdoctoral Scholar**, The Ohio State University

Education

Carnegie Mellon University

PHD PSYCHOLOGY, ADVISOR: ANNA V. FISHER

Pittsburgh, PA, USA

2012 - 2017

University of Edinburgh

MSc PSYCHOLINGUISTICS, MASTER'S DEGREE WITH DISTINCTION

Edinburgh, UK

2009 - 2010

University of Aberdeen

BSc PSYCHOLOGY, FIRST CLASS HONORS DEGREE

Aberdeen, UK

2005 - 2009

Research & Travel Support

CURRENT SUPPORT

2024 – 2029	NIH R01 Drivers of Semantic Development Role: co-PI	\$ 3,625,000
2025 – 2029	Plan Nacional Research Grant WordLex: Uncovering Mechanisms of Learning Words from Context Role: co-I	\$ 107,140
2025 – 2027	BA/Leverhulme Research Grant Incidental Category Learning Role: PI	\$ 12,100
2023 – 2025	Experimental Psychology Society Research Grant Online and Offline mechanisms of Memory Integration over Development Role: co-I	\$ 7,060

PAST SUPPORT

2023 – 2025	Experimental Psychology Society Research Grant Online and Offline mechanisms of Memory Integration over Development Role: co-I	\$ 7,060
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FELLOWSHIPS

2016 – 2017	William S. Dietrich II Presidential Fellowship , Carnegie Mellon University
2011 – 2016	Program for Interdisciplinary Education Research Fellowship , Carnegie Mellon University

AWARDS

2017	Graduate Student Assembly Conference Funds , Carnegie Mellon University
2016	Research Assistance for Graduate Students Grant , Carnegie Mellon University
2015	Graduate Research Grant , Carnegie Mellon University
2014	Graduate Research Grant , Carnegie Mellon University
2013	Research Assistance for Graduate Students Grant , Carnegie Mellon University

Publications

* Indicates co-first authorship

† Indicates student mentee

JOURNAL ARTICLES

Unger, L., & James, E. (accepted at *Psychonomic Bulletin & Review*). Learning words from the company they keep.

Unger, L. & Sloutsky, V. M. (2025). Dynamics of learning new words from context. *Journal of Experimental Psychology: General*, 1784–1799.

Unger, L., Chang, T., Bergen, B., Savic, O., & Sloutsky, V. M. (2024). When is a word in good company for learning? *Developmental Science*, e13510.

Weichart, E. M., **Unger, L.**, King, N., Sloutsky, V. M., & Turner, B. M. (2024). “The eyes are the window to the representation”: Linking gaze to memory precision and decision weights in object discrimination tasks. *Psychological Review*, 1045–1067.

Unger, L., Yim, H., Savic, O., Dennis, S., & Sloutsky, V. M. (2023). No frills: Simple regularities in language can go a long way in the development of word knowledge. *Developmental Science*, e13373.

Unger, L. & Sloutsky, V. M. (2022). Category learning is shaped by the multifaceted development of selective attention. *Journal of Experimental Child Psychology*, 226, 105549.

Savic, O.*, **Unger, L.*** & Sloutsky, V. M. (2022). Experience and maturation: The contribution of co-occurrence regularities in language to the development of semantic organization. *Child Development*, 94, 142–158.

Unger, L. & Sloutsky, V. M. (2022). Ready to learn: Incidental exposure fosters category learning. *Psychological Science*, 33, 999–1019.

Savic, O.*, **Unger, L.*** & Sloutsky, V. M. (2022). Exposure to co-occurrence regularities in language drives semantic integration of new words. *Journal of Experimental Psychology: Learning, Memory & Cognition*, 48, 1064–1081.

Unger, L. & Fisher, A. V. (2021). The emergence of rich semantic knowledge from simple statistics: A synthetic review. *Developmental Review*, 60, 100949.

Unger, L., Vales, C., & Fisher, A. V. (2020). The role of co-occurrence statistics in developing semantic knowledge. *Cognitive Science*, 44, e12894.

- Unger, L.,** Savic, O., & Sloutsky, V. M. (2020). Statistical regularities shape semantic organization throughout development. *Cognition*, 198, 104190.
- Unger, L.,** & Fisher, A. V. (2019). Rapid, experience-related changes in the organization of children's semantic knowledge. *Journal of Experimental Child Psychology*, 179, 1-22.
- Unger, L.,** Fisher, A. V., Nugent, R., Ventura, S., & MacLellan, C. (2016). Developmental changes in semantic knowledge organization. *Journal of Experimental Child Psychology*, 156, 202-222.
- Fisher, A. V., Godwin, K. E., Matlen, B. J., & **Unger, L.** (2014). Development of category-based induction and semantic knowledge. *Child Development*, 85, 48-62.
- Stanford, A. D., Luber, B., **Unger, L.,** Cycowicz, Y. M., Malaspina, D., & Lisanby, S. H. (2013). Single pulse TMS differentially modulates reward behavior. *Neuropsychologia*, 51, 3041-3047.
- DeBruine, L. M., Jones, B. C., **Unger, L.,** Little, A. C., & Feinberg, D. R. (2007). Dissociating averageness and attractiveness: Attractive faces are not always average. *Journal of Experimental Psychology: Human Perception and Performance*, 33, 1420-1430.

UNDER REVIEW & IN PREP

- Unger, L.,** Savic, O., & Sloutsky, V. M. (in revision at *Cognition*). Day-by-day, bit-by-bit: Building richly interconnected word knowledge everyday language experiences.
- Unger, L.,** Jackson, B. & Sloutsky, V. M. (in revision at *Cognition*). Incidental exposure fosters category learning in children.
- Granger, A.[†], Gomez, R., Sloutsky, V. M., & **Unger, L.** (in prep). Learning words by predicting the future and updating the past.

PEER-REVIEWED CONFERENCE PROCEEDINGS PAPERS

- Unger, L.,** Savic, O., & Sloutsky, V. M. (2025). Building interconnected networks of word knowledge over time. *Proceedings of the 47th Annual Meeting of the Cognitive Science Society*, San Francisco, CA, USA.
- Unger, L.,** & James, E. (2025). Do young children learn words from the company they keep? *Proceedings of the 47th Annual Meeting of the Cognitive Science Society*, San Francisco, CA, USA.
- Unger, L.** & Sloutsky, V. M. (2024). Dynamic processes of word learning from context. *Proceedings of the 46th Annual Meeting of the Cognitive Science Society*, Rotterdam, Netherlands.
- Unger, L.,** Weichart, E. R., & Sloutsky, V. M. (2023). Without even trying: How incidental exposure shapes category learning. *Proceedings of the 45th Annual Meeting of the Cognitive Science Society*, Virtual.
- Unger, L.** & Sloutsky, V. M. (2021). Category learning is shaped by the multifaceted development of selective attention. *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society*, Virtual.

- Unger, L.,** Savic, O., & Sloutsky, V. M. (2020). Simple mechanisms, rich structure: Statistical co-occurrence regularities in language shape the development of semantic knowledge. *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*, Virtual.
- Savic, O., **Unger, L.,** & Sloutsky, V. M. (2020). Becoming organized: How simple learning mechanisms may shape the development of rich semantic knowledge. *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*, Virtual.
- Unger, L.** & Sloutsky, V. M. (2019). Environmental regularities shape semantic organization throughout development. *Proceedings of the 41st Annual Meeting of the Cognitive Science Society*, Montreal, Quebec, CA.
- Savic, O., **Unger, L.** & Sloutsky, V. M. (2019). Rapid semantic integration of novel words following exposure to distributional regularities. *Proceedings of the 41st Annual Meeting of the Cognitive Science Society*, Montreal, Quebec, CA.
- Yim, H., Savic, O., **Unger, L.,** Sloutsky, V. M. (2019). Can paradigmatic relations be learned implicitly? *Proceedings of the 41st Annual Meeting of the Cognitive Science Society*, Montreal, Quebec, CA
- Unger, L.** & Sloutsky, V. M. (2018). Ready to learn: Predictive exposure to category-relevant regularities facilitates novel category learning. *Proceedings of the 40th Annual Meeting of the Cognitive Science Society*, Madison, WI, USA.
- Unger, L.** & Fisher, A. V. (2018). All creatures great and small: Category-relevant statistical regularities in children's books. *Proceedings of the 40th Annual Meeting of the Cognitive Science Society*, Madison, WI, USA.
- Unger, L.,** Fisher, A. V. (2017). Learning in the wild: Real-world experiences shape children's knowledge organization. *Proceedings of the 39th Annual Meeting of the Cognitive Science Society*, London, UK.
- Vales, C., Fisher, A. V., & **Unger, L.** (2017). Looking for the cat and seeing the dog: Using visual search to study semantic knowledge in children. *Proceedings of the 39th Annual Meeting of the Cognitive Science Society*, London, UK.
- Unger, L.,** Fisher, A. V. (2016). Semantic contamination of visual similarity judgments. *Proceedings of the 38th Annual Meeting of the Cognitive Science Society*, PA, USA.
- Unger, L.,** Kim, J., Badger, J., Fisher, A. V., & Huppert, T. J. (2016). The role of the prefrontal cortex in induction: An fNIRS study. *Proceedings of the 38th Annual Meeting of the Cognitive Science Society*, Philadelphia, PA, USA.
- Unger, L.,** Fisher, A. V., & MacLellan, C. (2014). Developmental changes in the semantic organization of living kinds. *Proceedings of the 36th Annual Meeting of the Cognitive Science Society*, Quebec City, Quebec, CA.

ENCYCLOPEDIA CHAPTERS

- Fisher, A.V. & **Unger, L.** (2020). Categorization in the preschool period. In S. Hupp & J. Jewell (Eds.), *The Encyclopedia of Child and Adolescent Development*. Wiley: Wiley-Blackwell.

Invited Talks and Conference Activity

INVITED AND CONFERENCE TALKS

- Unger, L.** (2025). Learning words from context. *Invited talk at the University of Cambridge Cognition and Brain Sciences Unit, Cambridge, UK.*
- Unger, L.,** Savic, O., & Sloutsky, V. M. (2025). Building interconnected networks of word knowledge over time. *Talk presented at the Annual Meeting of the Cognitive Science Society, San Francisco, CA, USA.*
- Unger, L. & Sloutsky, V. M.** (2024). Dynamic processes of word learning from context. *Talk presented at the Annual Meeting of the Cognitive Science Society, Rotterdam, Netherlands.*
- Unger, L. & Fisher, A. V.** (2024). Grounding generalization in semantic membership. *Workshop talk presented at the Biennial Meeting of the Cognitive Development Society, Pasadena, CA, USA.*
- Unger, L.,** Ralston, R., Wan, Q., Gao, M., & Savic, O. (2022). Delineating prediction mechanisms for learning words from context. *Talk presented at the International Conference on Error-Driven Learning in Language, Tübingen, Germany.*
- Unger, L.,** Yim, H., Savic, O., & Sloutsky, V. M. (2022). No frills: Simple regularities can go a long way in the development of word knowledge. *Talk presented at the Annual Meeting of the Cognitive Development Society, Madison, WI, USA.*
- Unger, L.,** Savic, O., & Sloutsky, V. M. (2021). Apples are foobly, and so are mipps: Contributions of experience to semantic memory over development. *Talk presented at the Annual Meeting of the International Society for Developmental Psychobiology, Chicago, IL, USA and Virtual.*
- Unger, L.,** Savic, O., & Sloutsky, V. M. (2020). Simple mechanisms, rich structure: Statistical co-occurrence regularities in language shape the development of semantic knowledge. *Talk presented at the Annual Meeting of the Cognitive Science Society, Virtual.*
- Unger, L. & Sloutsky, V. M.** (2019). Environmental regularities shape semantic organization throughout development. *Talk presented at the Annual Meeting of the Cognitive Science Society, Montreal, Quebec, CA.*
- Unger, L.,** Savic, O., & Sloutsky, V. M. (2019). The role of co-occurrence statistics in lexical-semantic development. *Talk presented at the Biennial Meeting of the Society for Research on Child Development, Baltimore, MD, USA.*
- Unger, L.,** Kim, J., Badger, J., Fisher, A. V., & Huppert, T. J. (2017). The role of the prefrontal cortex in induction: An fNIRS study. *Talk presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA, USA.*
- Unger, L.,** Fisher, A. V., & MacLellan, C. (2014). Developmental changes in the semantic organization of living kinds. *Talk presented at the Annual meeting of the Cognitive Science Society, Quebec City, Quebec, CA.*
- Unger, L.,** Fisher, A. V., & MacLellan, C. (2014). Tracking the development of semantic organization. *Talk presented at Annual Meeting of the Jean Piaget Society, San Francisco, CA, USA.*

STUDENT MENTORED CONFERENCE PRESENTATIONS

- Granger, A.[†], **Unger, L.**, & Gomez, R. (2026). Connecting the dots: word-learning and semantic connectedness in 5-yr-olds. *Poster presented at the Annual Meeting of the Cognitive Development Society*, Montreal, Quebec, CA.
- Reardon, N.[†], **Unger, L.**, & Sloutsky, V. M. (2023). Incidental exposure optimizes attention to features that are relevant to category membership. *Talk presented at the Annual Meeting of the Cognitive Neuroscience Society*, San Francisco, CA, USA.
- Unger, L.**, Anilkumar, A.[†], & Sloutsky, V. M. (2022). Learning words from context. *Poster presented at the Annual Meeting of the Psychonomic Society*. Boston, MA, USA and Virtual.
- Vallampati, A.[†], **Unger, L.**, & Savic, O. (2020). The semantic network: The mechanisms that build organized word knowledge in development. *Poster presented at the Annual Meeting of the Cognitive Science Society*. Virtual.
- Savic, O., Barkhimer, A.[†], Yim, H., **Unger, L.**, De Deyne, S., Dennis, S., & Sloutsky, V. M. (2020). Predicting lexico-semantic development from co-occurrence regularities in linguistic input. *Poster presented at the Annual Meeting of the Psychonomic Society*. Virtual.
- Swenski, T.[†], **Unger, L.**, Savic, O., & Sloutsky, V. M. (2019). Co-occurrence regularities in language shape the development of semantic knowledge. *Poster presented at the Biennial Meeting of the Cognitive Development Society*, Louisville, KY, USA.
- Unger, L.**, D'Emilia, W.[†], & Fisher, A. V. (2015). Semantic development: The contribution of number of relations to representational similarity. *Poster presented at the Biennial Meeting of the Society for Research in Child Development*, Philadelphia, PA, USA.

Teaching

CURRICULUM DEVELOPMENT AND INSTRUCTOR

Cognitive Processes [2026 - Present]

Introduction to cognitive psychology

MSc Data Visualization [2025 - 2026]

New Master's level course on data visualization in R

Language Processing [2024 - 2026]

Introduction to adult language processing for ~ 300 undergraduate students

Research Methods in Cognitive Psychology [2016]

Research methods with original student projects, including two that won student competitions

GUEST LECTURER

Psychology of Childhood

Developmental Psychology

Mentoring

UNDERGRADUATE AND PRE-DOCTORAL RESEARCH MENTOR

Driti Veerapuram
Anju Anilkumar
Ellie Hargreaves
Emma Fury
Allison Granger (now PhD student at University of Arizona)
Crystal Abdallah
Gabrielle Butz
Taylor Swenski

MASTERS THESIS ADVISOR

Matteo Fabrizi
Katie Baker

UNDERGRADUATE HONORS THESIS ADVISOR

Helen Nicholson
Katie Oakley
Hannah Bennett
Katie White
Pippa Lear
Mya Malinson-Hayes
Noah Reardon (now PhD student at Indiana University - Bloomington)
Alice Raby
Apoorva Vallampati (now PhD student at Tufts)
Rachel Walsh
Wyatt D'Emilia

UNDERGRADUATE RESEARCH GRANT ADVISOR

Francois Ban
Jae-Won Kim
Kevin Long
Jennifer Shin

Service & Outreach

ETHICS REVIEW COMMITTEE

Conducting internal ethics review for staff and student research projects.

SCHOOL NETWORK

Contributing to the development of a network of university and school partnerships to both facilitate research and provide pedagogical support for local schools.

R WORKSHOP FOR UNDERGRADUATE STUDENTS

Developed and taught an annual 8-week workshop in statistical computing in R for undergraduate students

PSYCHOLOGY WORKSHOP FOR UNDERREPRESENTED TEENS

Co-developed a series of workshops introducing teens from underrepresented backgrounds to psychology research

AD-HOC REVIEWING

Ad-hoc reviewer for Psychonomic Bulletin & Review, Cognition, Psychological Science, Cognitive Science, Developmental Science, Journal of Memory and Language, Journal of Experimental Psychology: Learning, Memory & Cognition, Journal of Child Language, Memory, Journal of Experimental Child Psychology, Cognitive Psychology, Cognitive Development, Language & Cognition.