

Tyler Zarus Knowlton

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College Park, MD 20742

Contact Information

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Research Interests

Broad: semantics, psycholinguistics, language acquisition, the language-thought relationship
Specific: quantification, lexical decomposition, syntactic bootstrapping, argument structure, numerical and event concepts, the language-vision interface

Education

Ph.D. (expected) Linguistics 2021
Thesis: The psychological treatment of (universal) quantification
Advisors: [Jeffrey Lidz](#) and [Paul Pietroski](#)
University of Maryland, College Park, MD

B.A. Cognitive Science (with honors) 2015
Minors in Linguistics, Philosophy, and Psychology
Johns Hopkins University, Baltimore, MD

Awards and Honors

[NSF Doctoral Dissertation Improvement Grant](#), “Doctoral Dissertation Research: The mental representation and acquisition of the universal quantifiers” (NSF #BCS-2017525) (with [Jeffrey Lidz](#)) 2020

College of Arts and Humanities [Graduate Student Service Award](#) 2020

[Howard Lasnik Award for Distinguished Teaching by a Graduate Student](#) 2020

[CUNY Jerrold J. Katz Young Scholar Award](#) 2019

[Jacob K. Goldhaber Travel Grant](#) 2018

Fellow, [NSF-NRT Training Program](#), “NRT-DESE: Flexibility in Language Processes and Technology: Human- and Global-Scale” (NRT #1449815) 2017

Maryland [Language Science Fellowship](#) 2017

[Phi Beta Kappa](#) 2015

Cognitive Science Departmental Honors 2015

Johns Hopkins General University Honors 2015

Johns Hopkins [Provost’s Undergraduate Research Award](#) 2014

Publications

- Knowlton, T.** and Lidz, J. (forthcoming) *Genericity signals the difference between “each” and “every” in child-directed speech*. Proceedings of the 45th annual Boston University Conference on Language Development.
- Knowlton, T.**, Pietroski, P., Williams, A., Halberda, J., and Lidz, J. (forthcoming) *Determiners are “conservative” because their meanings are not relations: evidence from verification*. Proceedings of SALT 30.
- Knowlton, T.**, Hunter, T., Odic, D., Wellwood, A., Halberda, J., Pietroski, P., and Lidz, J. (under review) *Meanings as cognitive instructions*. Proceedings of the National Academy of Sciences.
- Knowlton, T.**, Pietroski, P., Halberda, J., and Lidz, J. (under review) *The mental representation of universal quantifiers*. Linguistics and Philosophy.

Presentations

Conference Talks

- Knowlton, T.** and Lidz, J. (2021) *Bootstrapping universal quantifiers: the role of genericity*. Linguistic Society of America (LSA) Annual Meeting, San Francisco, CA.
- Knowlton, T.** and Lidz, J. (2020) *Genericity signals the difference between “each” and “every” in child-directed speech*. Boston University Conference on Language Development (BUCLD) 45, Boston University.
- Knowlton, T.**, Pietroski, P., Williams, A., Halberda, J., and Lidz, J. (2020) *Memory for cardinality supports a non-relational account of conservativity*. Experiments in Linguistic Meaning (ELM) 1, University of Pennsylvania.
- Cesana-Arlotti, N., **Knowlton, T.**, Lidz, J., and Halberda, J. (2020) *An investigation of the origins of logical quantification: infants’ (and adults’) representations of exhaustivity in collective or individual complex actions*. Symposium on Learning ‘hard words’, XXII International Congress of Infant Studies (ICIS) Biennial Congress, Glasgow, Scotland.
- Knowlton, T.**, Pietroski, P., Williams, A., Halberda, J., and Lidz, J. (2020) *Conservative meanings with only one set: evidence from verification*. 33rd CUNY Conference on Human Sentence Processing, University of Massachusetts at Amherst.
- Knowlton, T.**, Pietroski, P., Halberda, J., and Lidz, J. (2019) *The mental representation of universal quantifiers: evidence from verification*. 32nd CUNY Conference on Human Sentence Processing, CU Boulder.
- Knowlton, T.**, Halberda, J., Pietroski, P., and Lidz, J. (2018) *Acquiring the universal quantifiers: every part together or each part on its own?* Boston University Conference on Language Development (BUCLD) 43, Boston University.

Invited Talks

- Knowlton, T.** (2019) *The psychological treatment of (universal) quantification*. Integrated Language Sciences and Technology Seminar, University of Pennsylvania.

Knowlton, T. (2018) *Are natural language quantifiers first- or second-order?* McDonnell Network Focused Workshop on “The Development of Set and Quantifier Representations”, Johns Hopkins.

Conference Posters

Cesana-Arlotti, N., **Knowlton, T.**, Lidz, J., and Halberda, J. (2020) *An investigation of the origins of logical quantification: infants’ (and adults’) representations of exhaustivity in collective or individual complex actions.* Society for Philosophy and Psychology (SPP) 46th Annual Meeting, Princeton.

Knowlton, T., Pietroski, P., Williams, A., Halberda, J., and Lidz, J. (2020) *Determiners are ‘conservative’ because their meanings are not relations: evidence from verification.* Semantics and Linguistic Theory (SALT) 30, Cornell.

Cesana-Arlotti, N., **Knowlton, T.**, Lidz, J., and Halberda, J. (2020) *An investigation of the origin of logical quantification: infants’ and adults’ representations of collective and distributive actions in complex visual scenes.* 42nd Annual Meeting of the Cognitive Science Society, Virtual.

Cesana-Arlotti, N., **Knowlton, T.**, Lidz, J., and Halberda, J. (2020) *Who’s chasing whom? Adults’ and infants’ engagement of quantificational concepts (“each” and “all”) when representing visual chasing events.* Vision Sciences Society (VSS) 20th Annual Meeting, Virtual.

Cesana-Arlotti, N., **Knowlton, T.**, Lidz, J., Pietroski, P., and Halberda, J. (2019) *Concepts of universal quantification (“each” and “all”) may support infant and adult understanding of collective and distributive actions.* Cognitive Development Society (CDS) 2019 Biennial Meeting, Louisville, KY.

Knowlton, T., Halberda, J., Pietroski, P., and Lidz, J. (2019) *A novel memory task reveals early understanding of quantifier meanings.* Society for Research in Child Development (SRCD) 2019 Biennial Meeting, Baltimore, MD.

Knowlton, T., Pietroski, P., Halberda, J., and Lidz, J. (2019) *Representational format and universal quantifiers.* Linguistic Society of America (LSA) Annual Meeting, New York, NY.

Perkins, L., **Knowlton, T.**, Williams, A., and Lidz, J. (2018) *Matching number vs. linking roles: using 3-participant scene percepts to understand infants’ bootstrapping.* Boston University Conference on Language Development (BUCLD) 43, Boston, MA.

Knowlton, T., Perkins, L., Williams, A., and Lidz, J. (2018) *Getting a grip on infants’ event representations: participant number in TAKE and PICK-UP.* XXI International Congress of Infant Studies (ICIS) Biennial Congress, Philadelphia, PA.

Knowlton, T., Wong, A., Halberda, J., Pietroski, P., and Lidz, J. (2018) *Different determiners, different algorithms: two majority quantifiers in Cantonese bias distinct verification strategies.* 31st CUNY Conference on Human Sentence Processing, UC Davis.

Knowlton, T., Halberda, J., Pietroski, P., and Lidz, J. (2017) *Sentences, centers, and sets: set selection and the meanings of more and most.* Cognitive Development Society (CDS) Biennial Meeting, Portland, OR.

Knowlton, T., Halberda, J., Pietroski, P., and Lidz, J. (2017) *Distinguishing first- from second-order specifications of each, every, and all.* Mid-Atlantic Colloquium of Studies in Meaning (MACSIM) 7, Georgetown.

Knowlton, T., Halberda, J., Pietroski, P., and Lidz, J. (2017) *Set selection and storage reflect differences in quantifier meanings.* McDonnell Network Plenary Workshop on “The Ontogenetic Origins of Combinatorial Thought”, UCSD.

Perkins, L., **Knowlton, T.**, Hirzel, M., Dudley, R., Williams, A., and Lidz, J. (2017) *Linguistic and conceptual structure in verb learning*. McDonnell Network Plenary Workshop on “The Ontogenetic Origins of Combinatorial Thought”, UCSD.

Teaching and Mentorship

Teaching Experience

University of Maryland

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|---|-------------|
| Instructor, Language and Thought (LING449T) | Spring 2020 |
| Designed and taught 11-student seminar | |
| TA, Grammar and Meaning (LING410; Instructor: Valentine Hacquard) | Fall 2019 |
| Duties: grading, office hours, reviewing p-sets in class, once teaching ~25 student lecture | |
| TA, Child Language Acquisition (LING444; Instructor: Jeffrey Lidz) | Spring 2019 |
| Duties: grading, office hours, helping write exams, once teaching ~20 student lecture | |
| TA, Language and Mind (LING240; Instructor: Tonia Bleam) | Fall 2018 |
| Duties: grading, office hours, review sessions, twice teaching ~50 student lecture | |
| TA, Introductory Linguistics (LING200; Instructor: Tonia Bleam) | Spring 2018 |
| Duties: weekly discussion section of ~30 students, grading, office hours | |

Mentorship

University of Maryland

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| High school summer intern mentor, Project on Children’s Language Learning | 2019 |
| Responsible for mentoring high school research assistant S. Chervenak and supervising his final paper & science fair poster presentation | |
| Undergraduate mentor, Project on Children’s Language Learning | 2018- |
| Responsible for mentoring undergraduate research assistants M. Lauchman, M. Aiyad, D. Lahori, T. Hudson, M. Griffith, S. Deshpande, & A. Boyer and supervising their end-of-term poster presentations | |

Johns Hopkins University

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| Undergraduate mentor, Vision and Cognition Lab | 2015-16 |
| Responsible for mentoring undergraduate research assistants A. Wong, S. Akmal, A. Vadaparty, I. Perone, & L. Grau and supervising their term papers | |

Research Experience

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| Research Assistant, Project on Children’s Language Learning , College Park, MD | 2016- |
| PURA Fellow, Language Processing and Development Lab , Baltimore, MD | 2014-16 |
| Lab Manager, Vision and Cognition Lab , Baltimore, MD | 2014-16 |
| Research Assistant, Vision and Cognition Lab , Baltimore, MD | 2012-13 |
| Research Intern, Coriell Institute for Medical Research, Camden, NJ | 2012 |

Academic Activities

Service

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| Mayfest 2020: Hindsight Organizing Committee | 2019- |
| Linguistics Colloquium Committee | 2019- |
| Developmental Science Workshop Co-Organizer (with Z. Ovens & M. Hirzel), <i>Endless Possibilities: The Development of Possibility and Necessity in Cognition, Language, and Society</i> | 2018-19 |
| Chair, Language Science Outreach Committee | 2018-19 |
| Winter Storm 10 Planning Committee | 2017-18 |
| Co-chair (with S. Thivierge), Linguistics Graduate Student Association | 2017-18 |
| Career fair coordinator, Language Science Outreach Committee | 2016-18 |
| Winter Storm 9 Planning Committee | 2016-17 |
| SALT27 Organizing Committee | 2016-17 |

Ad Hoc Reviewing

Manuscripts

Language Learning and Development
Journal of Memory and Language

Conference Abstracts

Annual Meeting of the Cognitive Science Society (CogSci)

Professional Memberships

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| Cognitive Science Society | 2020- |
| Society for Research in Child Development | 2019- |
| International Congress of Infant Studies | 2017- |
| Cognitive Development Society | 2017- |
| Linguistic Society of America | 2015- |

Skills & Methods

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| Technical: | R, PsychoPy (python), L ^A T _E X, Linger, PsyToolkit, Habit, HTML/CSS, JavaScript, Psychtoolbox (MATLAB), Adobe Premiere, Git, PsyScope X, PsyCode |
| Experimental: | Visual Psychophysics, Habituation-switch, Corpus analysis, Self-paced reading (including with eye-tracking) |

References

Jeffrey Lidz
Professor of Linguistics & Distinguished Scholar-Teacher
University of Maryland
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Paul Pietroski
Distinguished Professor of Philosophy & Cognitive Science
Rutgers University
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Justin Halberda
Professor of Psychological and Brain Sciences
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Associate Professor of Linguistics & Philosophy
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[updated 1/10/2021]