Tyler Zarus Knowlton

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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., Halberda, J., Pietroski, P., and Lidz, J. (2021) *Evaluating "each"- (but not "every"-) sentences encourages encoding individual properties.* 34th CUNY Conference on Human Sentence Processing, University of Pennsylvania.

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

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

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

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

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

Mayfest 2020: Hindsight Organizing Committee	2019-
Linguistics Colloquium Committee	2019-
Developmental Science Workshop Co-Organizer (with Z. Ovans & M. Hirzel), *Endless Possibilities: The Development of Possibility and Necessity in Cognition, Language, and Society*	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

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

Technical:	R, PsychoPy (python), LaTeX, 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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Alexander Williams
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