Curriculum Vitae of Dr. Stephan C. Meylan, Ph.D.

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Education

Ph.D. Psychology, University of California, Berkeley, 2018.
Advisor: Dr. Thomas L. Griffiths
Committee: Dr. Thomas L. Griffiths, Dr. Mahesh Srinivasan, Dr. Terry Regier, Dr. Michael C. Frank
Dissertation title: "Representing linguistic knowledge with probabilistic models"

B.A. *magna cum laude* Linguistics, Brown University, 2010.

Study Abroad: Brown University / Casa De Las Americas in Havana, Cuba, Fall 2008.

Academic Positions

2019 - Present: Postdoctoral Fellow, Massachusetts Institute of Technology. PIs: Dr. Roger Levy and Dr. Elika Bergelson (Duke University).

2018 - 2019: Postdoctoral Associate, Duke University. PIs: Dr. Elika Bergelson and Dr. Roger Levy (MIT).

Publications

Journal Articles

(under revision) The Challenges of Large-Scale, Web-based Language Datasets: Word Length and Predictability Revisited.

(under revision) Evaluating Models of Robust Word Recognition with Serial Reproduction.

*Sanchez, A., ***Meylan, S.C**., Braginsky, M., MacDonald, K.E., Yurovsky, D., and Frank, M.C. (2019). childes-db: a flexible and reproducible interface to the Child Language Data Exchange System. *Behavior Research Methods* 51 1928?1941.

Meylan, S.C., Frank, M. C., Roy, B.C., and Levy, R. (2017). The emergence of an abstract grammatical category in children's early speech. *Psychological Science* 28 (2), pp. 181 - 192.

Kurumada, C., **Meylan, S. C.**, and Frank, M. C. (2013). Zipfian frequency distributions facilitate word segmentation in context. *Cognition* 127, 439–453.

* indicates co-first authorship.

Refereed Conference Proceedings and Poster Presentations

Meylan, S., Levy, R.P., and Bergelson, E. (2020). Children's Expressive and Receptive Knowledge of the English Regular Plural. 42nd Annual Meeting of the Cognitive Science Society, 29 July - 1 August 2020.

Meylan, S., Bergelson, E., and Levy, R.P. (2020). Characterizing Child-Directed Listening with Corpus and Model-based Analyses. 22nd Biennial International Conference of Infant Studies, 6-9 July 2020.

Meylan, S., Braginsky, M., DeMayo, B., Sanchez, A., Schonberg, C., Srinivasan, M., Vlach, H., Lupyan, G., Griffiths, T., and Frank, M. (2019). Wordful: Tracking Early Productive Vocabulary Growth with Smartphones. 44th Annual Conference on Language Development (BUCLD), Boston.

Nematzadeh, A., **Meylan, S.C.**, and Griffiths, T.L. (2017). Evaluating Vector-Space Models of Word Representation. Proceedings of the 37th Annual Meeting of the Cognitive Science Society, London.

Meylan, S.C., and Griffiths, T.L. (2017). Statistical language models reveal cross-linguistic differences in processing difficulty. Poster presentation at the 2017 CUNY Sentence Processing Conference, Boston, 30–31 March 2017.

Braginsky, M., **Meylan, S.C.**, and Frank, M.C. (2016). Gender differences in lexical input and acquisition. 41st Annual Boston University Conference on Language Development (BUCLD), Boston.

Suchow, J.W., Morgan, T.J.H., Hamrick, J., Pacer, M., **Meylan, S.C.**, and Griffiths, T.L. (2016). Wallace: automating cultural evolution experiments through crowdsourcing. Tutorial presentation at the 38th Annual Conference of the Cognitive Science Society, Philadelphia.

Meylan, S.C., Frank, M.C., Roy, B.C., and Levy, S.M. (2016). Bayesian modeling reveals the early emergence of syntactic abstraction in children's speech. 20th Biennial Congress of the International Congress on Infant Studies, New Orleans.

Suchow, J.W., Morgan, T.J.H., Hamrick, J., Pacer, M., **Meylan, S.C.**, and Griffiths, T.L. (2015). Wallace: A platform for simulating cultural evolution in structured populations online. ACM Conference on Economics and Computation, Portland, Oregon.

Meylan, S. C., and Griffiths, T.L. (2015). A Bayesian framework for learning words from multiword utterances. *Proceedings of the 37th Annual Meeting of the Cognitive Science Society*, Pasadena.

Meylan, S. C., and Griffiths, T.L. (2015). Word forms—not just their lengths—are optimized for efficient communication. Poster presentation at the 2015 CUNY Sentence Processing Conference, University of Southern California, 19–22 March 2015.

Meylan, S. C., and Griffiths, T.L. (2014). Exploring Inductive Biases In Naturalistic Language Use. Member abstract presented at the 36th Annual Meeting of the Cognitive Science Society.

Meylan, S. C., and Gahl, S. (2014). The divergent lexicon: Lexical overlap decreases with age in a large corpus of conversational speech. *Proceedings of the 36th Annual Meeting of the Cognitive Science Society*, Quebec City.

Meylan, S. C., Frank, M. C., and Levy, R. (2013). Modeling the development of determiner productivity in children's early speech. *Proceedings of the 35th Annual Meeting of the Cognitive Science Society*, Berlin.

Meylan, S. C., Kurumada, C., Börschinger, B., Johnson, M., and Frank, M. C. (2012). Modeling online word segmentation performance in structured artificial languages. *Proceedings of the 34th Annual Meeting of the Cognitive Science Society*, Sapporo.

Kurumada, C., **Meylan, S. C.**, and Frank, M. C. (2011). Zipfian word frequencies support statistical word segmentation. *Proceedings of the 33rd Annual Meeting of the Cognitive Science Society (BUCLD), Boston.*

Non-Refereed Technical Reports

Robbins, L.L., Hansen, M.E., Kleypas, J.A., and **Meylan, S.C.** (2010). CO2calc: A user-friendly seawater carbon calculator for Windows, Max OS X, and iOS (iPhone). U.S. Geological Survey Open-File Report 2010–1280. *348 citations as of March 2020*

Funding

National Institutes of Health F32 Postdoctoral Fellowship, "Linguistic Experience and Generalization: Early Links between Sounds, Words, and Grammar" 2019-2022.

National Science Foundation Graduate Research Fellowship (GRFP), 2012-2017.

Invited Talks

UC Berkeley Computation and Language Lab (PI: Dr. Steven Piantadosi) "The Telephone Game: Evaluating and improving language models with a large-scale serial transmission experiment." March 22nd, 2019.

UC Berkeley NLP Seminar. "Word forms—not just their lengths—are optimized for efficient communication." February 13th, 2017.

MIT Computational Psycholinguistics Lab (Brain and Cognitive Science). "A rose by any other name would be less communicatively efficient: Investigating the interface of language structure and processing." November 1st, 2017.

Workshops

"Scientific Reports" June 4, 2020. Computational Psycholinguistics Lab, MIT (with Mika Braginsky)

"How to Compute: An Introduction to Linux-based Scientific Computing" June 1, 2020. Computational Psycholinguistics Lab, MIT.

"childes-db: A flexible and reproducible interface to CHILDES." March 8, 2019. Duke - University of North Carolina, Chapel Hill Talk Series.

"An introduction to plotting in R." October 6, 2017. Quantitative Analysis and Coding Knowledge series, UC Berkeley Department of Psychology.

Teaching Experience

Guest Lecturer, Data on the Mind, April 2017 (Principal Instructor: Dr. Yang Xu)

Graduate Student Instructor, Computational Models of Cognition, Spring 2015 (Principal Instructor: Dr. Tom Griffiths)

Graduate Student Instructor, Computational Models of Cognition, Spring 2014 (Acting Graduate Instructor: Joshua Abbott)

Undergraduate Teaching Assistant, Introduction to Linguistic Theory, Fall 2009 (Principal Instructor: Dr. Pauline Jacobson)

Research Experience

Graduate Student Researcher, DARPA Next Generation Social Science (NGS2) program, Fall 2017 - Spring 2018 (Principal Investigator: Dr. Thomas Griffiths)

Graduate Student Researcher, Data on the Mind: Center for Data-Intensive Psychological Science, Fall 2014-Spring 2015 (Principal Investigator: Dr. Thomas Griffiths)

Research Assistant, Stanford Language and Cognition Lab, Fall 2010 - Summer 2012 (Principal Investigator: Dr. Michael C. Frank)

Research Assistant, USGS Coastal and Marine Geology Program, summers 2006 - 2010 (Principal Investigator: Dr. Lisa Robbins)

Industry Experience

Platform Analyst / Statistician, Crowdflower, San Francisco CA, Fall 2011 – Spring 2012.

Data Science Intern, Crowdflower, San Francisco CA, Summer 2011.

Maintained Software Projects

Project lead and backend engineer for *Wordful*, A smartphone app for tracking early vocabulary growth (`wordfulapp.com`)

Project lead and backend engineer for *childes-db*: a reproducible interface to the Child Language Data Exchange System (`childes-db.stanford.edu`)

Developer for *CO2calc*: A User-Friendly Seawater Carbon Calculator for Windows, Mac OS X, and iOS (`pubs.usgs.gov/of/2010/1280`). Technical report has received approximately 400 citations by July 2020.

My Github profile is `github.com/smeylan`. Additional code samples available on request (less than 10% of my code is publicly available at present).

Mentorship

Research Assistants

Andrew Wang (UC Berkeley): Spring 2020; as of 2020, engineer at Salesforce

Jessica Mankewitz (UC Berkeley): Fall 2019 - Spring 2020; as of 2020, lab manager for Dr. Michael Frank

Dee Dong (post-bac RA at UC Berkeley): Spring - Fall 2019; as of 2020, senior backend engineer at Snowflake

Sathvik Nair (UC Berkeley): Fall 2017 - Summer 2018; as of 2020, engineer at Amazon AWS

Neha Dabke (UC Berkeley): Summer - Fall 2017

Aditya Bhumbla (UC Berkeley): Spring 2017

Teeranan (Ben) Pokaprakarn (UC Berkeley): Spring - Fall 2015; Ph.D. student in bioinformatics at UNC Billings School of Public Health

Wesley Hsieh (UC Berkeley): Spring 2015

Naomi Jing (UC Berkeley): Spring 2015 - Fall 2016

Xiyue (Sissi) Wang (UC Berkeley): Spring 2014 - Fall 2016 (please note that this is *not* the Princeton History department student detained by Iran; I can't help with related inquiries)

Undergraduate Theses Advised

Sathvik Nair (UC Berkeley): Spring 2020 (Principal Thesis Advisor: Dr. Mahesh Srinivasan)

Aucher Serr (UC Berkeley): Spring 2014 (Principal Thesis Advisor: Dr. Mahesh Srinivasan)

Reviewing

Annual Conference of the Cognitive Science Society (CogSci), 2014 - 2020; International Conference on Learning Representations (ICLR) 2020; ad hoc reviewer for *Cognition*, *Cognitive Science*, *Developmental Psychology*, *Language Learning and Development*, *Behavior Research Methods*, and *Evolution and Human Behavior*.

Last updated: July 29, 2020