Jacob Hoover VIGLY*

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2024–PRES.	Postdoctoral Fellow (NSF SPRF), **Massachusetts Institute of Technology** Department of Brain and Cognitive Sciences Computational Psycholinguistics Laboratory	PI: Roger Levy

Education

2018–24	PhD, **McGill University**, Department of Linguistics, and **Mila** – Québec AI Institute advisor: Timothy J. O'Donnell dissertation: "The Cost of Information: Looking beyond Predictability in Language Processing" [Fast-tracked from MA program in 2019]
2006–12	ALB, *cum laude*, **Harvard University Extension School** Field of Study: Mathematics	Minor: Linguistics

Teaching

WINTER '23	Instructor, McGill COMP/LING 445 *Computational Linguistics*
FALL '21	Guest lecture for McGill COMP/LING 445 *Computational Linguistics*
2019–22	Teaching Assistant, 6 McGill courses in linguistics/computer science COMP/LING 596 *Probabilistic Programming* (WINTER '21, WINTER '22) COMP/LING 445 *Computational Linguistics* (FALL '20, '21) LING 201 *Introduction to Linguistics* (FALL '19, WINTER '20)

Community

2020–22	Graduate student representative, McGill Linguistics Department
2020	Graduate Program changes Committee, student member
2019–22	Vice President, Academic, **GLAM**, Graduate Linguistics Association of McGill
2019–20	Founding member, **EARTH-LING**, McGill Linguistics department environmental working group
2018–24	Student member, webmaster, **MCQLL** (Montréal Computational & Quantitative Linguistics Lab)

Reviewer for: CogSci, 2021; 2025; CoNLL 2020, 2023, 2025; TACL, 2022;

Research

2025　B. Lipkin, B. LeBrun, **J. H. Vigly**, J. Loula, D. R. MacIver, L. Du, J. Eisner, R. Cotterell, V. Mansinghka, T. J. O'Donnell, A. K. Lew, and T. Vieira. Apr. 7, 2025. *Fast Controlled Generation from Language Models with Adaptive Weighted Rejection Sampling*. DOI: 10.48550/arXiv.2504.05410. arXiv: 2504.05410 [cs]. Pre-published.

J. H. Vigly, V. Boyce, M. Socolof, J. Michaelov, T. von der Malsburg, and R. Levy. Mar. 2025. "Implicit Gender Bias in Linguistic Descriptions for Expected Events: The Case of the 2024 United States Presidential Election". Poster. The 38th Annual Conference on Human Sentence Processing (University of Maryland, College Park).

T. H. Clark, **J. H. Vigly**, E. Gibson, and R. Levy. Mar. 2025. "Modeling Human Inferences and Reading Behavior with an Incremental, Resource-Rational Model of Noisy-Channel Language Processing". Poster. The 38th Annual Conference on Human Sentence Processing (University of Maryland, College Park).

*Note: my surname is Vigly. Prior to Sept. 2024, I published under the surname Hoover, which is now a middle name.

2024 **J. L. Hoover**. Aug. 2024. "The Cost of Information: Looking beyond Predictability in Language Processing". PhD thesis. Montréal, Canada: McGill University. xi, 110.

H. Rahimi, D. Mimno, **J. Hoover**, H. Naacke, C. Constantin, and B. Amann. Mar. 2024. "Contextualized Topic Coherence Metrics". In: *Findings of the Association for Computational Linguistics: EACL 2024*. Findings 2024. Ed. by Y. Graham and M. Purver. St. Julian's, Malta: Association for Computational Linguistics, pp. 1760–1773.

2023 **J. L. Hoover**, M. Sonderegger, S. T. Piantadosi, and T. J. O'Donnell. July 21, 2023. "The Plausibility of Sampling as an Algorithmic Theory of Sentence Processing". In: *Open Mind: Discoveries in Cognitive Science* 7, pp. 350–391. ISSN: 2470-2986. DOI: 10.1162/opmi_a_00086.

2022 M. Socolof, **J. L. Hoover**, R. Futrell, A. Sordoni, and T. J. O'Donnell. Oct. 12, 2022. "Measuring Morphological Fusion Using Partial Information Decomposition". In: *Proceedings of the 29th International Conference on Computational Linguistics*. COLING 2022. Gyeongju, Republic of Korea: International Committee on Computational Linguistics, pp. 44–54.

J. L. Hoover, M. Sonderegger, and T. J. O'Donnell. Sept. 6, 2022. "With Better Language Models, Processing Time Is Superlinear in Surprisal". Poster. Architectures and Mechanisms for Language Processing (AMLaP 28) (York, England).

2021 **J. L. Hoover**, W. Du, A. Sordoni, and T. J. O'Donnell. Nov. 2021. "Linguistic Dependencies and Statistical Dependence". In: *Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing*. EMNLP 2021. Online and Punta Cana, Dominican Republic: Association for Computational Linguistics, pp. 2941–2963. DOI: 10.18653/v1/2021.emnlp-main.234.

J. L. Hoover. June 2021. "Accounting for Variation in Number Agreement in Icelandic Dative-Nominative Constructions". In: *Proceedings of the 38th West Coast Conference on Formal Linguistics*. WCCFL38, March 6–8, 2020, University of British Columbia, Vancouver. Ed. by R. Soo, U. Y. Chow, and S. Nederveen. Somerville, Mass., USA: Cascadilla Proceedings Project, pp. 231–241.

Fellowships and Awards

2024–26	**National Science Foundation SBE Postdoctoral Research Fellowship** (SPRF): "Algorithmic models of incremental human language comprehension" (SMA 2404644). Co-funded by NSF's Perception, Action and Cognition (PAC) program. Faculty sponsor: Roger Levy, MIT. US$160k.
2023	**McGill International Graduate Mobility Award**, for research visit at MIT. CA$6k.
2019	**CRBLM Graduate Scholar Stipend**, Centre for Research on Brain, Language and Music (CRBLM). "What neural network models can tell us about linguistic structure." CA$3k.

Languages

English	Native
Estonian	Intermediate (2½ years living and working in Estonia: ~ CEF level B2)
French	Intermediate (~ B2)
Japanese	Novice (two years' undergraduate study, rather atrophied)
Russian, Spanish	Basic knowledge

Ballet career

2008–18	I worked full-time as professional dancer from 2008 until 2018. Trained as a ballet dancer at Walnut Hill School and Miami City Ballet School, I danced soloist roles at **José Mateo Ballet Theatre** in Cambridge, MA (2008–12), and **Vanemuine Theatre** in Tartu, Estonia (2013–15), and was a company dancer for **Festival Ballet Providence**, now Ballet RI (2015–18).
2018–PRES.	I retired from full-time dancing in 2018, when I began my graduate study at McGill. I have continued with occasional appearances as an independent artist including with Festival Ballet Providence, Rhode Island Women's Choreography Project, Revolve Dance Project in Providence, RI, and Robinson Ballet in Bangor, ME.