Sara Swords

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EDUCATION

University of Michigan **2016 – 2020**
Bachelor of Arts in Linguistics *Ann Arbor, MI*
GPA: 3.73/4.00

RESEARCH/CLINICAL EXPERIENCE

Technical Research Associate **2022 –**
McGovern Institute for Brain Research *Cambridge, MA*
Massachusetts Institute of Technology
• Performing precision fMRI and statistical analyses to determine the functional topography of high-level cognitive networks in lesioned brains
• Lesion-masking severely anatomically atypical brains for data processing and analysis
• Designing experimental stimuli from linguistic corpora

Project Coordinator – Interesting Brains **2022 –**
McGovern Institute for Brain Research *Cambridge, MA*
Massachusetts Institute of Technology
• Recruiting special population participants, nationally and internationally, to create a dataset of anatomically atypical brain data
• Collecting a neuroimaging and behavioral dataset of 45+ adults and children with brain lesions

Hearing and Speech Technician **2022 – 2022**
Bill Wilkerson Center *Nashville, TN*
Vanderbilt University Medical Center
• Aided speech language pathologists, occupational and physical therapists in communication and feeding intervention for high-support needs, nonverbal autistic children aged 5 months to 5 years
• Conducted bilingual (English, Spanish) group therapy for children with Developmental Language Disorders (DLD) from non-English speaking homes

PUBLICATIONS

Swords, S., Kean, H., Wolna, A., & Fedorenko, E. (in prep). The case of a single hemisphere supporting all major functional networks: Language, Multiple Demand, and Theory of Mind systems.

Kean, H., Wolna, A., **Swords, S.**, Jhingan, N., Poliak, M., Nieto-Castañón, A., Shewmon, A., Richardson, M., & Fedorenko, E. (in prep). Functional specificity is preserved in highly anatomically atypical brains.

Malik-Moraleda, S., Taliaferro, M., Shannon, S., Jhingan, N., **Swords, S.**, Peterson, D. J., Frommer, P., Okrand, M., Sams, J., Cardwell, R., Freeman, C., & Fedorenko, E. (2023). Constructed languages are processed by the same brain mechanisms as natural languages. *bioRxiv*.

POSTERS

Kean, H., Wolna, A., **Swords, S.**, Jhingan, N., Shewmon, A., Richardson, M., & Fedorenko, E. (2024). Functional specificity is a core principle of human brain organization, as revealed by highly anatomically atypical brains. Poster session presented at the *Society for the Neurobiology of Language*, Brisbane, AU.

PRESS

Science News, "Elyse G.'s brain is fabulous. It's also missing a big chunk" **2023**
• Covered findings from ongoing Interesting Brains project research exploring the neuroplasticity of lesioned brains
https://www.sciencenews.org/article/brain-missing-chunk-neuroplasticity

MIT News, "Studies of unusual brains reveal critical insights into brain organization, function" **2023**
• Covered findings from ongoing Interesting Brains project research with emphasis on language processing in lesioned brains
https://news.mit.edu/2023/studies-of-unusual-brains-reveal-insights-brain-organization-function-0221

The New York Times, "The Curious Hole in My Head" **2022**
• Covered findings from ongoing Interesting Brains project research from the perspective of a project participant
https://www.nytimes.com/2022/09/04/science/brain-language-research.html

TEACHING

Teaching Assistant **2023**
Massachusetts Institute of Technology *Cambridge, MA*
9.39 "Language in the Mind and Brain"

RESEARCH MENTORSHIP

Josleen St. Luce (MIT Undergraduate Researcher) **2023 – 2024**

ACADEMIC AWARDS

James B. Angell Scholar	**2018**
University Honors (4x)	**2016, 2017, 2018, 2019**
William J. Branstrom Freshman Prize	**2017**
EECS Showcase J.P. Morgan Session Winner	**2018**
MIT Spot Award (2x)	**2024**
Award for Excellence in Chinese Language	**2019**
Annual Award for Excellence in Czech Language Studies	**2017**
Czech Language Studies Scholarship	**2017**