



**Evelina Fedorenko**  
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Ev Fedorenko is a cognitive neuroscientist who studies the language system. She received her Bachelor's degree from Harvard in 2002, and her Ph.D. from MIT in 2007. She was then awarded a K99R00 career development award from NICHD. In 2014, she joined the faculty at HMS/MGH, and in 2019 she returned to MIT, where she is currently Frederick A. (1971) and Carole J. Middleton Career Development Associate Professor of Neuroscience in the Brain and Cognitive Sciences Department and the McGovern Institute for Brain Research. Fedorenko uses fMRI, EEG/ERPs, MEG, intracranial recordings and stimulation, and computational modeling, and works with adults, children, and individuals with developmental and acquired brain disorders.

## **The Language System in the Human Mind and Brain**

The goal of my research program is to decipher the representations and computations that support linguistic ability. I will discuss three discoveries my lab has made over the last decade. First, I will show that the language network is selective for language processing over a wide range of non-linguistic processes. Next—challenging a common view whereby syntax is dissociable from meaning—I will show that every brain region that responds to syntactic processing is at least as sensitive to word meanings. Finally, I will show that linguistic composition is the core driver of the response in the language-selective areas: as long as nearby words can combine into phrases/clauses, the language areas respond as strongly as they do to their preferred stimulus—naturalistic sentences. Taken together, these results argue against an abstract and domain-general syntactic processing mechanism, and support strong integration between the lexicon and syntax. They further suggest that the language network is more concerned with meaning than structure, in line with the communicative function of language.

**Friday, November 6, 2020**

**1:30 - 2:50 PM EST**

**Join the meeting on Zoom**

**Meeting ID 968 6753 2227 Passcode 883155**