Worlds shaped by words: a cross-linguistic investigation into the neural mechanisms of lexico-syntactic feature production

Wang, J.

Citation

Wang, J. (2025, December 17). *Worlds shaped by words: a cross-linguistic investigation into the neural mechanisms of lexico-syntactic feature production. LOT dissertation series*. Retrieved from https://hdl.handle.net/1887/4285307

Worlds shaped by words

A cross-linguistic investigation into the neural mechanisms of lexico-syntactic feature production

Languages employ different nominal classification systems to categorise nouns. In German, each noun is assigned a grammatical gender, while in Mandarin Chinese, nouns are paired with classifiers that align with semantic features. Grammatical gender and classifiers are lexico-syntactic features that are assumed to be automatically activated during speech production. Although grammatical gender has been widely studied, research on classifiers remains scarce, and it is unclear how such features are processed across different languages, lexical categories, and in second language acquisition. This dissertation investigates the processing of grammatical gender in German and classifiers in Mandarin during noun phrase production, addressing the following questions: Are classifiers activated in Mandarin during noun phrase production? Do semantic features like visual shape influence classifier processing? Do Mandarin learners of German process grammatical gender, even though it is absent in their native language? Do semi-lexical nouns in German activate grammatical gender similarly to regular nouns? To answer these questions, this research combines behavioural and electroencephalographic measures using picture-word interference and blocked cyclic naming paradigms. The results showed that classifiers were activated during noun phrase production. Visual shape information was also involved in classifier processing. Despite difficulties in production, Chinese learners of German automatically processed grammatical gender in their second language. The grammatical gender of semi-lexical nouns was processed through multiple routes. Taken together, this dissertation provides new insights into the cognitive mechanisms that underlie lexico-syntactic feature processing during language production.

Jin Wang   **Worlds shaped by words**

Jin Wang

Worlds shaped by words

A cross-linguistic investigation into the neural mechanisms of lexico-syntactic feature production