

## Debates on Mental Lexicon and its Cerebral Basis: Evidence from Russian

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150 years ago P. Broca and K. Wernicke started the story of cerebral specialization for language and some other cognitive functions. We currently know a lot about versatile nature of language localization as seen from behavioral and brain functional imaging studies in cross-linguistic perspective. Neurolinguistic debates on modular vs. parallel processing now get experimental evidence of neuronal patterns based on both probabilities and universals shown in different language families. The generation of regular and irregular past tense verbs has long been a testing ground for different models of inflection in the mental lexicon. According to the dual-system view, regular forms are generated by a rule and irregular forms are retrieved from memory. The single-system view postulates a single integrated system for all forms. Behavioral studies examined a variety of languages, but neuroimaging studies still rely almost exclusively on English and German data. We used Russian, a language with a much more complex verb class system. We randomly mixed different tasks (inflecting nonce and real verbs and nouns of different types) and compiled large sets of stimuli matched for frequency and phonological complexity. Unlike most previously obtained results, our findings are more readily compatible with the single-system approach. Observed activation patterns are best explained by the difference in processing load between experimental tasks. The data on mental lexicon organization in speakers of Russian were also received by our group in normal and aphasic adult subjects, normal and SLI children and second language learners.

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