

Variable lexical stress slows visual word recognition in Russian

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Printed words can activate phonological codes even when no overt pronunciation is required [1, 2]. Russian provides a useful material for studying this phenomenon because some words have two normatively accepted pronunciation variants that differ in stress patterns, without any change in meaning, grammatical category, and neither variant is socially marked; for example, *márketing* and *markéting* are both correct pronunciation variants for ‘marketing’. We asked whether such stress variation affects visual word recognition. If written lexical representations activate phonological ones, variable-stress words should be harder to recognize than matched fixed-stress ones.

We tested this in a preregistered visual lexical decision task experiment with native speakers of Russian. Participants saw unaccented Cyrillic strings of letters and made word/nonword decisions. Materials included 48 lexemes with two accepted stress variants, 48 fixed-stress controls matched item-by-item for word-form frequency (ipm), length (letters), part of speech, and segmental structure, and 96 matched pseudowords. The analysed sample included the 5,096 correct answers to real-word trials from 62 participants.

Reaction times were analysed with a linear mixed-effects model on log RTs, with stress type, log frequency, length, and part of speech as fixed effects, and random intercepts for participant and lexeme. Variable-stress words were recognized more slowly than fixed-stress controls: 980 ms vs. 907 ms; $\beta = 0.090$, $SE = 0.023$, $t = 4.00$, $p < .001$, approximately a 9.5% RT cost. Accuracy showed the same pattern: 0.81 vs. 0.93.

These results extend evidence that phonological and stress-related information affects visual word recognition [3, 4, 5]. The cost for variable-stress words suggests that silent reading activates phonological lexical representations. When a printed word is linked to two accepted stress patterns, both variants may be activated, creating competition during lexical access and delaying recognition.

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References

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