

How Stress marks the Perfective-Imperfective opposition in Ukrainian

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Introduction. This paper investigates how stress interacts with morphosyntactic structure in Ukrainian verbs. We analyse perfective~imperfective pairs, zooming in on a subset in which both forms are prefixed. Focusing on finite forms, we show that stress functions as a marker of aspectual contrast in Ukrainian. In some pairs, it is the only marker of the perfective~imperfective opposition. In other pairs, stress and suffix alternations jointly mark the aspectual opposition. We argue that stress placement follows from the interaction of two ingredients. The first ingredient is stress-active morphemes, which decide where stress goes. The second ingredient is phonological domains within which these stress-active morphemes compete.

Data. Ukrainian encodes the perfective~imperfective opposition using different strategies. One of these strategies involves stress alternations (1). (The data are given in an IPA-like transcription, with Cyrillic *u*, *e* and *u* transcribed as *e*, *ε* and *č*, respectively. Stress is marked by ' before a stressed vowel.)

(1) v'e-hra-jε-mo (pfv.1pl) ~ ve-hra-jε-m'o (ipfv.1pl) 'win'

In (1), the perfective (pfv) and imperfective (ipfv) forms are morphologically identical. Both share the prefix *ve-* and the same suffixes. Prefixed imperfectives are also referred to in the literature as secondary imperfectives (e.g. Matushansky 2025a). Crucially, the aspectual opposition is marked only by stress in (1). Stress is on the prefix *ve-* in the perfective, but on the final syllable in the imperfective. The question is how this difference in stress can be accounted for.

Stress-active morphemes. Stress is not fixed in Ukrainian. However, analysing an *ad hoc* dataset of 2,879 Ukrainian verbs, we observe that stress placement is restricted to a limited number of recurring patterns and tends to be associated with certain morphemes. We therefore hypothesise the existence of morphemes that are lexically specified as stress-active (marked in bold). These morphemes decide where stress goes.

(2) a. **x'oč**-ε-mo (ipfv.1pl) 'want'

b. pεč-ε-m'o (ipfv.1pl) 'bake'

In (2a), the root *xoč* is stress-active and consistently attracts stress. In (2b), there is no stress-active morpheme within the word. Stress therefore surfaces on the final syllable by default. In addition to stress-active roots, the prefix *ve-* and some suffixes are also stress-active. The root *hra* is stress-active and systematically attracts stress in unprefixated forms (3a). When this root combines with the prefix *ve-*, stress surfaces on *ve-* in the perfective form (3b). Other prefixes behave like *pro-* in (3c): they do not attract stress. As a consequence, stress surfaces on the stress-active root *hra* in (3c).

(3) a. **hr'a**-jε-mo (ipfv.1pl) 'play'

b. v'e-**hra**-jε-mo (pfv.1pl) 'win'

c. pro-**hr'a**-jε-mo (pfv.1pl) 'lose'

The pattern in (3b) also shows that, in cases with multiple stress-active morphemes within a word, the leftmost stress-active morpheme wins (the same was observed by Melvold 1989 for Russian). This accounts for stress placement in perfective forms like (1), which is identical to (3b), where the stress-active prefix *ve-* attracts stress, winning over the stress-active root *hra*. However, both the prefix *ve-* and the root *hra* fail to attract stress in the corresponding prefixed imperfectives in (1). Stress is on the final syllable by default. Stress-active morphemes alone are therefore not enough to account for the stress placement in all forms. This brings us to the second ingredient.

Phonological domains. We propose that perfective and prefixed imperfective forms differ in the domain in which stress-active morphemes compete.

(4) a. **v'e-hra-jε-mo** (pfv.1pl) ~ **ve-hra-jε-m'o** (ipfv.1pl) ‘win’

b. **v'e-me-jε-mo** (pfv.1pl) ~ **ve-me-v'a-jε-mo** (ipfv.1pl) ‘wash till the end/everything’

In the perfective forms in (4a-b), stress is on the prefix *ve-*, which is the leftmost stress-active morpheme within the word domain. However, the stress-active prefix *ve-* and the stress-active roots *hra* and *me* (which systematically attract stress in unprefixed forms) fail to attract stress in the corresponding prefixed imperfectives. Instead, stress is in the suffixal domain. In (4a), stress surfaces on the default final syllable, which suggests that there is no stress-active morpheme within the suffixal domain. In (4b), stress is on the only stress-active suffix *-va* within the suffixal domain. We therefore conclude that in prefixed imperfectives, the domain for stress competition is smaller than the whole word and is restricted to the suffixal domain. By contrast, in perfectives (and unprefixed imperfectives such as (3a)), the domain for stress competition is the whole word.

Pre-accented morphemes. There is one pattern that, at first sight, contradicts the domains generalization:

(5) **pid-spiv-'a-jε-mo** (pfv.1pl) ~ **pid-sp'iv-u-jε-mo** (ipfv.1pl) ‘sing along’

In the perfective form in (5), stress is on the stress-active suffix *-a*. Given that stress competition in perfectives is within the whole word domain and that the leftmost stress-active morpheme wins, we conclude that neither the prefix *pid* nor the root *spiv* is stress-active. However, in the corresponding prefixed imperfective in (5), stress surfaces on the root, which is stress-neutral. This pattern can be accounted for if we assume the existence of pre-accented morphemes. The suffix *-u* is stress-active with the pre-accented property: it places stress on the preceding syllable. A similar pre-accented morpheme has been proposed by Matushansky (2025b) for Russian in the corresponding prefixed imperfective context.

Conclusion. This study shows that stress alternations in perfective~imperfective pairs in Ukrainian are regular and systematically determined. They result from the interaction of stress-active morphemes and phonological domains. While stress-active morphemes compete for stress, phonological domains determine which stress-active morphemes can participate in this competition. The interaction of these two ingredients yields distinct stress patterns in perfective and imperfective forms. This account captures both types of cases: those in which stress is the sole marker of aspectual contrast and those in which stress and suffix alternations jointly mark the perfective~imperfective opposition.

References. Matushansky, O. 2025a. Russian E-verbs and thematic vowel change. *Journal of Slavic Linguistics*, 33 (FASL 32 Proceedings): 1–19. Matushansky, O. 2025b. Two BAP Violations in Russian Verbal Stress. *Journal of Slavic Linguistics*, 33 (FASL 30 Proceedings): 1–18. Melvold, J. L. 1989. *Structure and stress in the phonology of Russian*, Doctoral dissertation, Massachusetts Institute of Technology.