The status of Slavic lexical prefixes in mental grammar:
Evidence from priming in Bosnian/Croatian/Montenegrin/Serbian

I. Background: Even though some lexical prefixes (LPs) in Slavic languages look like prepositions—as illustrated in (1b) for Bosnian/Croatian/Montenegrin/Serbian (BCMS) *za* 'for'—LP+stem combinations frequently have non-transparent meanings. Despite this, analytical work in the past twenty years has treated LPs as morphemes, and focused on questions related to their function and syntactic position (e.g., Svenonius 2004, Arsenijević 2006, Ramchand 2008, Łazorczyk 2010, a.m.o.). However, no compelling arguments have thus far been given for this assumed decomposition: (i) Slavic prefixes are never separable from the stems they combine with (unlike similar prefixes in German/Dutch), and (ii) although the unprefixed (1a) and prefixed verbs (1b-d) belong to the same morphological class, this could be due to morphophonological similarity or diachronic relatedness, rather than definitively indicating that they share the same stem.

(1) a. radi-ti b. za-radi-ti c. iz-radi-ti d. pre-radi-ti
work-INF LP-work-INF LP-work-INF LP-work-INF
'work' 'earn' 'make' 'process'

This study aims to understand whether BCMS speakers individuate lexical prefixes as morphemes in their mental grammar or not, using a stem-priming procedure familiar from work on German/Dutch prefixed verbs (Smolka et al. 2009 *et seq.*, Creemers et al. 2020).

II. Methods: One hundred twenty students at the University of Novi Sad, Serbia complete an unmasked auditory continuous lexical decision task. Sample size was determined via a priori power analysis to ensure 80% power. Unmasked priming and auditory presentation were chosen to mitigate pre-lexical morpho-orthographic decomposition effects that can yield priming for morphologically unrelated forms like *pigment* → PIG (see Creemers et al. 2020 for a discussion). This design addresses a potential confound present in Feldman, Barac-Cikoja & Kostić 2002 and Kazanina 2011, which used (masked) visual priming, and which remain to our knowledge the only studies to date to investigate morphological priming by prefixed words in Slavic languages (BCMS and Russian, respectively).

Critical targets are high frequency simplex verbs in the masculine active participle form. Prime-target relations include: morphologically and semantically related (2a), morphologically related but semantically opaque (2b), pseudo-morphologically related (2c), phonologically related (2d), and unrelated controls (2e). LPs are traditionally situated in (2a) and (2b), where they may be either transparently or opaquely related to the target. Items like (2c) appear morphologically related to the target (e.g., with the LP *na* 'on'), but exhibit distinct morphological behavior. As seen in (3) for the pair in (2c), the two verbs have distinct stems and suffixes in the present tense. Items like (2d) show phonological overlap with the target, but the non-overlapping segment is not a plausible morpheme in BCMS (**vla*).

(2) a. pre-*dao* → dao b. pro-*dao* → dao c. na-*dao* → dao
'gave over' 'gave' 'sold' 'gave' 'hoped' 'gave'

d. vla*dao* → dao e. preneo → dao
'ruled' 'gave' 'carried over' 'gave'

(3) a. daj-em b. nad-am
give-1SG.PRES hope-1SG.PRES
'I give' 'I hope'

Participants are assigned to one of four experimental lists, each containing 30 critical item pairs: 5 per priming condition (2a-d) and 10 controls (2e). Each target appears only once per list but is paired with different prime types across lists, enabling within-item comparisons while avoiding repetition effects. To minimize strategic processing, we include 200 filler pairs, which consist of 50% real words and 50% non-words (by making single-segment modifications to existing verbs while respecting BCMS phonotactics). Due to language-specific constraints, the experiment employs a balanced incomplete block design, which accommodates the fact that not all targets can be paired across all conditions, while each condition is equally represented and can be compared to controls. We further validate our results by analyzing a subset of items that appear across multiple conditions.

III. Predictions & Implications: If the non-transparent LP+stem combination (2b) is decomposable, it should prime the relevant stem (*dao*) more than stimuli with only *apparent* morphological overlap (2c) or only phonological overlap (2d). If (2b) is not decomposable, it should prime the relevant stem to the same extent as (2c) and plausibly also (2d). The non-transparent LP+stem (2b) is also expected to prime the target less than the transparent LP+stem (2a), see Feldman, Barac-Cikoja & Kostić 2002. The results will indicate whether BCMS speakers represent lexical prefixes as morphemes in their mental grammar, an insight which analytical methods have not yet been able to provide. Crucially, unlike in prior work, the inclusion of a pseudo-morphological condition (2c) directly tests whether conditions (2b) and (2d) are processed differently simply because only (2b) contains two plausible morphemes, or whether morphological processing independent of form (and meaning) is truly required for lexically prefixed verbs.

Note: This study represents work in progress, which was affected by the shutdown of universities in Serbia for much of last year. As the universities are open again, data collection is in progress, and we are confident that we will be able to present our results at FASL in May 2026.

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