

Four flavors of Czech prepositions

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Introduction. The issue of (non-)identity between Slavic prepositions and verbal prefixes has become a perennial topic of discussion (e.g. Matushansky 2002, Gribanova 2009, Biskup 2019). The current paper argues that even when prepositions and prefixes look the same, they are not identical from the perspective of morphosyntax. Looking at Czech, we distinguish four different ‘flavors’ of P-like elements. The flavors overlap in some of the features, yet each of them is a distinct grammatical object. When they look the same, we treat this as syncretism.

Basic data. Some Czech prepositions, e.g., *pod* ‘under,’ have at least four different uses, illustrated in (1)-(4). (1) shows a prototypical preposition, (2) features an incorporated preposition, (3) contains a verbal particle/prefix and (4) has a verbal particle in a nominalized verb.

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|-----|--------------------|--------|-----|-------------------|-----|-------------------|-----|------------------|
| (1) | pod | zemí | (2) | pod- zemí | (3) | pod- letět | (4) | pod- let |
| | under | ground | | under-ground | | under-fly | | under-fly |
| | ‘under the ground’ | | | ‘the underground’ | | ‘to fly under’ | | ‘a flight under’ |

The homophony between (1) and (3) gave rise to the debate concerning the (non-)identity of prepositions and prefixes. The Czech data we discuss argue that the focus on (1) and (3) should be broadened to also include cases like (2) and (4), because each of these uses is different from the others. The four uses can be differentiated by the two properties in (5) and (6).

- (5) *A dichotomy based on the nature of the complement (verbal vs. nominal)*
- prepositional markers** in (1) and (2) attach to nominal (object-denoting) roots
 - verbal particles** in (3)-(4) attach to verbal (event-denoting) roots
- (6) *A dichotomy based on the boundary between the adposition and its complement*
- free morphemes** with a low degree of prosodic integration, as in (1) and (3)
 - bound morphemes** with higher degree of integration, as in (2) and (4)

Our goal is to show how the two parameters are reflected by the shape of the morphemes, and how we can understand the four-way ambiguity of morphemes such as *pod* ‘under’.

Preposition vs. particle. The distinction between a regular preposition and a verbal particle (given in (5)) is required to account for the behavior of adpositions like ‘over/across.’ When ‘over’ is used with object-denoting complements, it has the shape *přes*, see (1’) and (2’). With an event-denoting complement (a verb), it has the shape *pře*, see (3’) and (4’).

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|------|---------------------|---------|------|------------------------|------|-------------------|------|-----------------|
| (1’) | <i>přes</i> | hranice | (2’) | <i>přes-</i> hraničí | (3’) | <i>pře-</i> letět | (4’) | <i>pře-</i> let |
| | across | border | | across-border | | over-fly | | over-fly |
| | ‘across the border’ | | | ‘a transborder region’ | | ‘to fly over’ | | ‘an overflight’ |

The same distinction (1/2) vs. (3/4) is relevant for the class of the so-called secondary prepositions. These are items like *mimo* ‘outside,’ which can only be used in contexts such as (1)/(2), but not (3)/(4). There are also verbal particles (prefixes) like *vz* ‘up,’ which can only be used in contexts like (3)/(4), but not (1)/(2). In other words, the grammar clearly distinguishes the two contexts, and we cannot even describe the facts without that distinction.

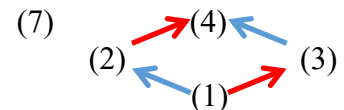
Bound vs. free. Some adpositional markers have one form for contexts like (1)/(3) and a different form for the contexts (2)/(4). For quite a few markers (though not all), the two contexts

differ by vowel length, see (1'') and (3'') with a short vowel, contrasting with (2'') and (4'') with a long vowel (Scheer 2001, Ziková 2012, Caha & Ziková 2016, 2022).

(1'')	<i>při</i>	zemi	(2'')	<i>při</i> -zemí	(3'')	<i>při</i> -letět	(4'')	<i>při</i> -let
	at	ground		at-ground		at-fly		at-fly
	'at the ground'			'ground floor'		'to fly at'		'arrival'

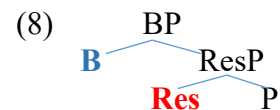
In (6), we characterized this difference using the traditional labels bound vs. free morpheme. We do so because in (1), the preposition can be separated from the noun by an adjective, while this is impossible in (2). In the talk, we show that phonological processes such as *e*-epenthesis apply differently in the two types of environments, supporting the general idea that also the difference between (3) and (4) can be described in these terms.

Syncretism. The facts discussed up to now reveal that there are form-identity relations among the forms (1) to (4) that can be depicted as in (7). The numbers in (7) track the example number.



The blue arrow corresponds to the free/bound distinction: example (2) is a bound version of (1), (4) is a bound version of (3). The red arrows indicate the distinction in the properties of the complement (event/object). The example (3) contains a verbal-particle counterpart of the prepositions in (1), (4) contains a verb-particle counterpart of the bound prepositions in (2). Each of the objects linked by the arrows in the graph (7) can be syncretic with one another, i.e., we find syncretism between (1)-(2), (2)-(4), (1)-(3), and (3)-(4). Note that the graph (7) also entails a restriction on syncretism similar to the *ABA constraints observed in Caha (2009) or Bobaljik (2012): (1) and (4) cannot be syncretic unless either (2) or (3) is syncretic with the two; similarly for (2) and (3). This is borne out in Czech.

Implementation. To capture the syncretism relations in (7), we propose the structure (8). This is a version of a nesting structure known to deliver *ABA. The lowest feature (P) corresponds to the prepositional use (1), see (9a). All other functions also have this feature, but they have more features. The verbal particle uses (3) and (4) have an additional feature Res (for result), see (9b,c). We adopt this feature from Ramchand (2008) who proposes that Slavic particles move from P to Res, thereby expressing these two



- (9)
- a. (1) = [P]
 - b. (3) = [Res [P]]
 - c. (4) = [B [Res [P]]]
 - d. (2) = [B [P]]

features. Finally the feature B (for bound) characterises the bound forms, namely the bound verbal particle (4) and the bound preposition (2), see (9c-d). We postulate the feature B because of the length alternation like (1'')-(2''), where the bound version of many prepositions corresponds to a lengthened version of the free version. We analyze the length as an independent marker, so we propose that the bound prepositions have an extra feature that the length spells out, i.e., B. Admittedly, we would like to have a more substantive proposal.

Deriving *ABA. Looking at (9a-c), we see a nesting structure familiar from the work by Bobaljik (2012), which delivers a *ABA constraint in the sequence of functions (1)-(3)-(4) (which is a relevant sequence in (7)). We further show that if we adopt the Nanosyntax theory of multi-dimensional paradigms (Taraldsen 2019, Caha 2022), we can also derive a *ABA constraint in the sequence (1)-(2)-(4), which is the second branch in (7).

Conclusions. Our talk establishes that there are four distinct flavors of P morphemes in Czech. Based on their form, we group the uses into natural classes depending on the nature of the complement (5) and the strength of the boundary between the P element and the complement (6). Combined with Nanosyntax model of spellout, this approach neatly accounts both for the observed cases of syncretism and also for the restrictions on syncretism.

Selected references. **Biskup 2019.** Prepositions, case and verbal prefixes: The case of Slavic. **Bobaljik 2012.** Universals of Comparative Morphology. **Caha 2009.** The Nanosyntax of Case. **Caha 2022.** The marking of mass, count and plural in multidimensional paradigms. **Caha & Ziková 2016.** Vowel length as evidence for a distinction between free and bound prefixes in Czech. **Gribanova 2009.** Phonological evidence for a distinction between Russian prepositions and prefixes. **Matushansky 2002.** On formal identity of Russian prefixes and prepositions. **Scheer 2001.** The rhythmic law in Czech. **Taraldsen 2019.** Nanosyntax and syncretism in multidimensional paradigms. **Ziková 2012.** Lexical prefixes and templatic domains: Prefix lengthening in Czech.