

Why Lexical Prefixes are not Late Merged Adjuncts in the Phase Model

1. Introduction

- Goal: investigate whether Slavic lexical prefixes can be late merged adjuncts
- Theoretical framework: minimalist decompositional approach to morphology (only one generative component)
- It has been argued that Germanic (separable) prefixes are morphological adjuncts, i.e. non-selected X elements (Newell 2005).
- Similarly to phrasal adjuncts, morphological adjuncts can be late merged, i.e. merged to a non-root node (e.g. Speyer 2006, Newell 2005).
- There is a similarity between Germanic particles or separable prefixes and Slavic lexical prefixes (e.g. Arsenijević 2004, Babko-Malaya 1999, Spencer & Zaretskaya 1998, Svenonius 2004a,b).

→ The question: Are lexical prefixes late merged adjuncts?

2. Properties of lexical and superlexical prefixes

See e.g. Babko-Malaya 1999; Filip 2004; Istratkova 2004; Romanova 2004; Svenonius 2004b; Di Sciullo & Slabakova to appear.

Lexical (internal) prefixes	Superlexical (external) prefixes
1. idiosyncratic meaning (locative, resultative, directional)	1. regular meaning like adverbs (delimitative, cumulative, repetitive, distributive)
2. cannot stack	2. can stack
3. secondary imperfective possible	3. secondary imperfective not possible
4. attached inside superlexical prefixes	4. attached outside lexical prefixes
5. participate in idioms	5. do not participate in idioms
6. affect argument structure of the verb	6. do not affect argument structure
7. attach to telic stems if a verb has both	7. attach to atelic stems if a verb has both

3. Lexical prefixes and late adjunction

3.1. Lexical prefixes and their projection

3.1.1. Lexical prefixes are heads, bound morphemes.

• In contrast to Germanic particles and separable prefixes, Slavic lexical prefixes behave like heads; they cannot be topicalized (1), (2), stranded by verb movement (3), (4) or stranded by gapping (5) and (6).

- (1) a. Ivan v-běhl do domu. (CZ)
Ivan in-ran in house
'Ivan ran into the house.'
b. *V Ivan běhl do domu.
in Ivan ran in house
'Ivan ran into the house.'
- (2) a. Ivan v-bežal v dom. (R)
Ivan in-ran in house
'Ivan ran into the house.'
b. *V Ivan bežal v dom.
in Ivan ran in house
'Ivan ran into the house.'
- (3) a. Včera vběhl Ivan do domu. (CZ)
yesterday in-ran Ivan in house
'Yesterday, Ivan ran into the house.'
b. *Včera běhl Ivan v do domu.
yesterday ran Ivan in in house
'Yesterday, Ivan ran into the house.'
- (4) a. Včera vbežal Ivan v dom. (R)
yesterday in-ran Ivan in house
'Yesterday, Ivan ran into the house.'
b. *Včera bežal Ivan v v dom.
yesterday ran Ivan in in house
'Yesterday, Ivan ran into the house.'
- (5) Ivan ve-šel, a Taras vy-*(šel). (CZ)
Ivan in-went and Taras out-went
'Ivan went in, and Taras went out.'
- (6) Ivan vo-shěl, a Taras vy-*(shel). (R)
Ivan in-went and Taras out-went
'Ivan went in, and Taras went out.'
(Svenonius 2004a, 9 (22b))

3.1.2. Lexical prefixes as resultative predicates

- There is a clear relation between lexical prefixes and arguments. Lexical prefixes can add arguments (unselected by the verb), see (7), (8) and also 3.3.
- Lexical prefix *vy-* wants an argument that can be 'out'.
- Ground promotion in (7b) in contrast to (7b').

- (7) a. *spát kocovinu (CZ)
sleep hangover
'sleep a hangover'

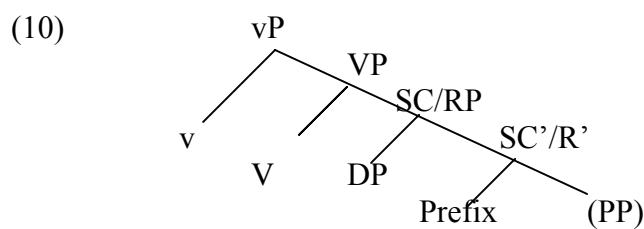
- b. vy-spat kocovinu out-sleep hangover 'sleep off a hangover' b'. vy-spat se z kocoviny out-sleep self from hangover 'sleep off a hangover'

- (8) a.* guljat' sobaku walk dog 'walk the dog' (R)
 b. vy-guljat' sobaku out-walk dog 'walk the dog'

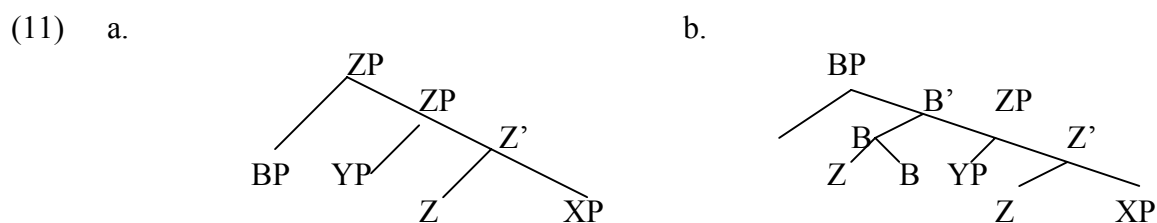
• It has been proposed that Russian lexical prefixes are resultative predicates that are in a predicational relation to a verbal argument (e.g. Spencer & Zaretskaya 1998 following Levin & Rapoport 1988, discussion in Mateu 2001).

- (9) a. Ona is-pisala svoju ručku. she IZ-write her pen_{ACC} 'Her pen has run out of ink.'
 b. [[CAUSE [ACT (she)], IZ (pen)], BY[WRITE (she)]]
 (Spencer & Zaretskaya 1998, 17 (51), (54))

- Predication is local.
- It is the prefix (as a predicate selecting the DP) that projects, not the DP.
- (Lexical) incorporation standardly goes up and to the left. Hence lexical prefixes should be merged in a position below the verb.
- Thus, lexical prefixes head a small clause or resultative phrase with the appropriate argument in the specifier position (e.g. Mateu 2001, Rojina 2004, Ramchand 2004, Romanova 2004, Svenonius 2004b).



→ Then the proposal that lexical prefixes are late merged morphological adjuncts would go against the standard claim that (late) adjoined elements do not project.



3.2. Lexical prefixes and spellout

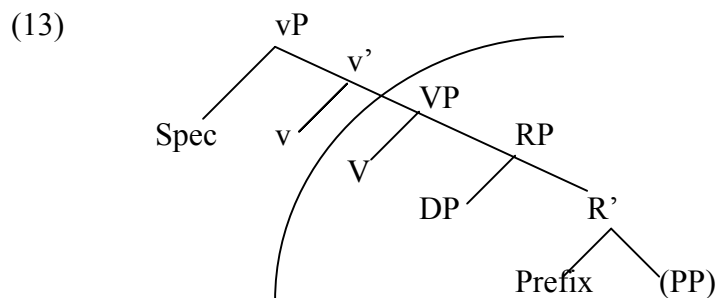
3.2.1. Syntactically

- According to Newell (2005), late adjunction of morphological elements occurs on a following phase in accordance with Nissenbaum's (2000) Linear Edge Condition applied at the word level, i.e. morphemes can be late merged only to an edge at the X level.
- In the standard phase model with the vP and CP phase, when the derivation works on the CP phase, the complement of v is not accessible (Phase Impenetrability Condition, see Chomsky 2000, 108).

(12) Phase Impenetrability Condition

In phase α with head H, the domain of H is not accessible to operations outside α ; only H and its edge are accessible to such operations.

→ The small clause projection (resultative projection) is already spelled out; it is inaccessible for further operations. Hence the lexical prefix cannot be late merged into the small clause projection.



3.2.2. Phonologically

- Since further operation (at interfaces too) cannot overwrite the output of the preceding phases, phonological changes on the root induced by the prefixation process suggest that lexical prefixes and the root are in the same phase domain, see (14), (15) and (16); for details on Czech data see Scheer (2004).

- | | | | |
|------|--------------------------------------|--|------|
| (14) | a. spát
sleep
'sleep' | b. vy-spat
out-sleep
'sleep off' | (CZ) |
| (15) | a. igrat'
play
'play' | b. pod-ygrat'
under-play
'support sb at playing' | (R) |
| (16) | a. sóxnut' [soxnut']
dry
'dry' | b. vý-soxnut' [vysəxnut']
out-dry
'dry up' | (R) |

→ This can again be in conflict with the claim that late adjunction of the lexical prefix occurs on a following phase. One has to ensure that both the root and the prefix are spelled out in the same phase.

3.3. Lexical prefixes and arguments

- Lexical prefixes can change the argument structure and case requirements of the verb that they attach to.
- The prefix licenses the argument and the accusative case (17), (18). But only one structural accusative (17b’).

- (17) a. * spát kocovinu_{ACC} (CZ)
 sleep hangover
 ‘sleep a hangover’
 b. vy-spat kocovinu_{ACC} b’. vy-spat se_{ACC} z kocoviny_{GEN}/ *kocovinu_{ACC}
 out-sleep hangover out-sleep self from hangover / hangover
 ‘sleep off a hangover’ ‘sleep off a hangover’

- (18) a. * guljat’ sobaku_{ACC} (R)
 walk dog
 ‘walk the dog’
 b. vy-guljat’ sobaku_{ACC}
 out-walk dog
 ‘walk the dog’

- The prefix changes the type and the case of the selected argument, see (19) and (20). Prefix *pro-* wants an interval or path (locative: *prosedět křeslo*, *projít město* time: *prosedět/prožít život*, abstract: *promyslet ideu...*).
- The promotion of the interval DP to direct object is not necessary (telic unprefixated verbs with instrumental: *projít tunelem* but *projít čtvrt’ tunelem* with the interval in accusative. If both instrumental, principle of possible inclusion *projít čtvrtí tunelem*)

- (19) a. sedět v křesle_{LOC} (CZ)
 sit in armchair
 ‘sit in the armchair’
 b. pro-sedět křeslo_{ACC}
 through-sit armchair_{ACC}
 ‘sit a gap/hole in the armchair’

- (20) a. sidet’ v křesle_{LOC} (R)
 sit in armchair
 ‘sit in the armchair’
 b. pro-sidet’ křeslo_{ACC}
 through-sit armchair_{ACC}
 ‘sit a gap/hole in the armchair’

- There is a dependency:
 1. The presence of a certain argument (and its form) is dependent on the presence of the prefix.
 2. The presence of the accusative case is dependent on the presence of the prefix.

- To deal with this dependency, there are two basic ways in the case of late adjunction of the lexical prefix:

1. Acyclic merger of arguments after merger of the prefix.
 - This is in conflict with the standard (minimalist) cyclic merger of arguments (problem with Condition C effects).
 - Problem if the argument shall also be an argument of the verb.
 - Problem with objects spelled out in the vP phase. They did not wait for the prefix.
2. To merge arguments cyclically and wait for a prefix.
 - Either problem with look ahead.
 - Or problem with overgeneration and subsequent filtering.
 - Again problem with objects spelled out in the vP phase. How is their case and θ -role (if they exist) licensed?

3.4. Stacking

- Lexical prefixes are always closer to the stem than superlexical prefixes:

(21) SP*-LP-root-suffixes.

→ Newell's (2005) application of Nissenbaum's (2000) Linear Edge Condition has problems with multiple prefixes because:

1. If a superlexical prefix is spelled out in a phase preceding the phase where the lexical prefix is late merged (superlexicals can merge in the vP phase, Romanova 2004), it gives a bad ordering.
2. If one assumes that superlexical prefixes are merged in the CP phase, there has to be a (stipulated) dependency between the merger of superlexical prefix(es) and the merger of the lexical prefix. The lexical prefix must be merged below (all) the superlexical prefixes.

4. Conclusion

Lexical prefixes are not late merged morphological adjuncts in the phase model.

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