

Verbal Prefixes are not Ps

1. Goal: In this paper we analyze, from a cartographic point of view, the internal syntactico-semantic structure of prefixes that combine with motion verbs. We show that in a fine-grained structure of spatial constructions prefixes are not related to Place, they are not resultatives, but they are related to Path and process. They lexicalize modifiers of the projections that correspond to the process and to the path in a cartographic structure. This way we argue that prefixes are not copies of locative Ps but independently generated elements. This is why they can co-occur and they can even be lexicalized by different elements. Therefore, we claim that prefixes are different from Ps (against Matushansky 2002). We also show that they are not the only elements that can lexicalize these modifiers.

2. Background: We follow authors like Koopman (2010), Svenonius (2010), Den Dikken (2010) in the idea that it is necessary to decompose the Path-Place structure for spatial constructions (since Jackendoff 1983) in order to capture their fine properties. The result is a structure where every semantic component of a spatial construction is located in a very well defined position in the structure. This allows working in a very microscopic way, where projections are sub-morphemic, i.e. smaller than lexical items (see Starke 2010). We assume phrasal spell-out (Starke 2005, i.a.) as the best way to understand the relationship between this sub-morphemic projections and lexical items, which are just the phonological realization of chunks of the structure.

3. The structure of spatial constructions: Following these approaches, we first present the relevant elements of a fine syntactico-semantic structure of spatial constructions.

a. *proc* and *procTrans*: We focus on two possible constructions. The first one represents a complex transition in which the Figure moves to a point after covering a path or a set of points. The process is encoded in a *proc* projection (Ramchand 2008). The second one represents a punctual transition and there is no path covered. It is encoded in *procTrans*. So the main difference is that when *proc* is present, a path must be covered and there is no result state. This is represented in the structure by *Map*. While *proc* by itself corresponds to a notion like [DO], *proc* + *Map* corresponds to [COVER]. On the other hand, *procTrans* corresponds to [GO] and combines with a result state. *proc* + *Map* can combine with either an extended entity like in (1)a or an action like in (1)b. In the former John covers the length of the desert and in the latter John covers an act of running. This can be represented as in (2).

b. *SetPointP* and *Terminal*: As we see in (2), *Map* is modified by a *SetPointP*. This projection takes a location and makes it belong to a set of points. To obtain a location that belongs to a set of points it is first necessary to have a projection that takes a point in the space and makes it possible to relate it to other in a single event. Following the distinction between *central* and *terminal coincidence* in Hale (1986), Hale & Keyser (2002) we give the label ‘Terminal’ to this other projection. In (2), *SetPointP* modifies the extension of the ‘mapping’. In this case John covered a set of points that go to his house. In the same way as it happens with *Map*, *SetPointP* can modify other projections. It can modify *proc* or *procTrans*. In these cases the interpretation is that the process extends until one point. It can also modify the act being covered. For example, it could be the case that in (1)b, John not only covers an [act of running] but he covers an [act of running to his house]. There are, thus, different interpretations depending on the position of the modifier.

4. Proposal: In this paper we claim that verbal prefixes in Slavic languages, German or Dutch behave in a similar way as *SetPointPs*, i.e. modifying either *Map*, *proc* or *procTrans*. In Spanish this position can be lexicalized by verbs like *entrar* (‘go in’) or *salir* (‘go out’), but also by verbs like *acercarse* (‘approach’) and even by prefixes like *sobre-* in *sobrevolar* (‘fly over’).

a. Verbal prefixes: Following Svenonius (2004) on the idea that Russian prefixes are phrasal, we claim that prefixes in Slavic languages, German or Latin lexicalize modifiers. Against Ramchand (2008), in our analysis we show that prefixes don’t occupy the *res* position. So, for an example like (3) in Russian, we argue that the first element, the prefix *v-*, gives the meaning that the process extends from an outer place to an inner one and the second *v* is a P lexicalizing the Place, i.e. giving the meaning that the Figure actually ends up inside a place, a shop in this case. The prefix and the lower P need to agree semantically, but they don’t have to correspond to the same element, like in (3). In (4) we observe examples with different elements (*vy-* and *na* and *ac-* and *in*). Variability in the interpretation of prefixes is possible depending on the projection they modify. If they modify *proc*, the whole set of points should be covered for the process to be completed. When the prefix modifies *Map*, the construction isn’t necessarily telic (in line with Filip 2003), if the process doesn’t cover the whole *Map*, like in source constructions. The other possibility is that prefixes lexicalize the modifier of

procTrans, which seems to be the general pattern. In those cases the construction is telic, because *procTrans* obligatorily triggers telic predicates. This can be seen in a construction like the one in (5), where the fact that the P is locative seems to indicate that there is *procTrans* and a result state (following Ramchand 2008, Pantcheva 2007). The structure of an example like (3) is represented in (6). In this sense it is remarkable that the only goal and source Ps that don't have a correspondent verbal prefix in Russian and Czech are those meaning *towards*, which are the prepositions that can't appear in locative constructions (Asbury et al. 2006, Gehrke 2008). In general, as prefixes refer to the whole process or the whole mapping, telicity is more natural when they are present, in line with Arsenijevic (2006:16) in the idea that prefixes "necessarily co-occur with a resultative interpretation of the event", even in route contexts (see Gehrke 2008:186-187), unless there is some element that explicitly marks that the process doesn't arrive to the end.

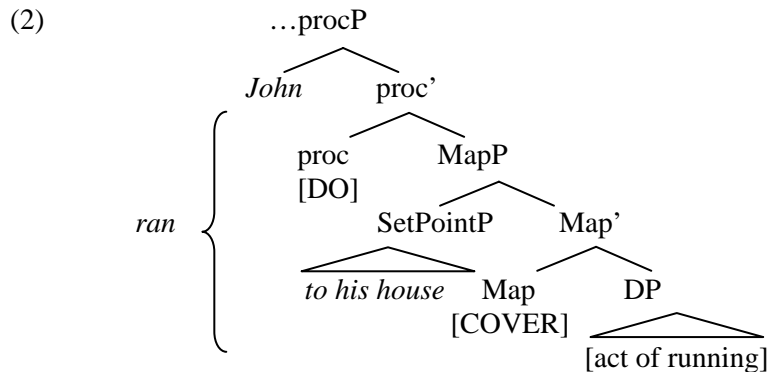
b. Spanish *entrar en/a*: In Spanish it is possible to find certain Vs that can lexicalize these modifiers: *entrar* ('go into'), *salir* ('go out'), *subir* ('go up')... In these cases the verb lexicalizes a part of the structure for which, as we have seen, other languages have a special lexical item: the prefix. The element which is being modified can vary. We can analyze this by looking at the opposition *entrar a/en* ((7)). Although the interpretation is similar, there is a difference. In the first case, with *en*, there is a *procTrans*: the Figure undergoes a transition from an outer place to an inner one. There is a result state encoded in which the Figure is located inside the Ground. In (7)a Juan ends up being in his house. In (7)b, on the other hand, what is being said is that Juan moved from outside to inside his house but there is no result state. There is no *procTrans*. The fact that it can be interpreted as a punctual transition is due to the fact that going from outside to inside is normally achieved in a punctual moment, but this is not always like that: *Juan entró hasta la cocina* ('Juan entered up to the kitchen'). Despite the fact that in the Latin origin of *entrar* there is a component related to the meaning of *inside* we consider that in Spanish there is no special lexical item in the composition of *entrar* (for example *en-* or *entr-*) that lexicalizes the modifier. The whole lexical item 'entrar' lexicalizes *proc* or *procTrans* as well as the modifier, which must be interpreted as 'from outside to inside'. In the case of other verbs like *subir*, which lexicalize *proc*, what is being modified is *proc* or *Map*. This is related to the fact that Talmy (1985) classifies Spanish as a verb-framed language

c. Spanish *a-* in *acercarse* ('go closer, approach'), ***alejarse*** ('go further'), ***adentrarse*** ('go towards inside'): There are other verbs in Spanish where some elements seem to "incorporate" into the verb. These are verbs like *acercarse* or *alejarse*. In a case like *Juan se acercó a la pared* ('Juan approached the wall'), the meaning is that Juan, moving from far to near, goes to the wall. Following our analysis, this is to say that something similar to *a cerca* ('to near') modifies the process and *a la pared* ('to the wall') modifies *Map*. It could also be the case that *a cerca* modifies a *procTrans*. In these cases there is a transition and a result state. So *Juan se acercó a su casa durante una hora* ('John approached his house for a few hours') is ambiguous between the two interpretations. If *acercarse* lexicalizes *proc* then Juan goes towards his house for a while. If it lexicalizes *procTrans*, Juan goes to his house and stays there for some hours, so *a su casa* corresponds to a result state. In this latter case, *a cerca* modifies *procTrans* and gives the meaning that the transition has been made to a nearby place. So we don't think that (*a*) *cerca* has incorporated to the verb, but that the meaning that it encodes is base-generated as a modifier.

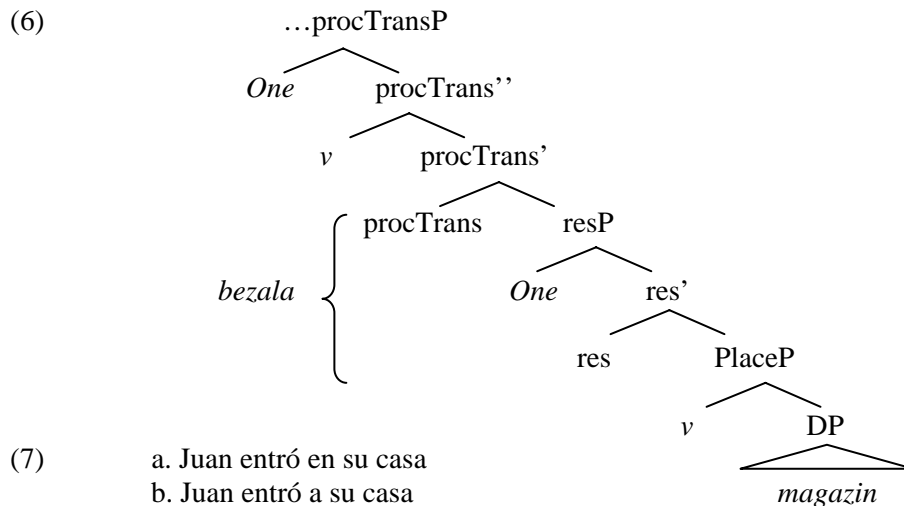
d. Other verbs like *sobrevolar* ('fly over'): There are other verbs in which incorporation seems to be present again. Incorporation could be plausible in light of the contrasts in (8). As (8)a versus (8)b is not possible, (8)c can be seen as a derivation by incorporation of (8)b. With our analysis we argue that in these cases *sobre-*, which could be considered as a prefix, lexicalizes a modifier that gives the meaning that the process is developed over something. The fact that (8)c is possible can be explained by world-knowledge, saying that it is possible to cover a city flying over it but not just flying across it. This way we can explain why in (8)b it can be interpreted that the plane didn't fly all over the city, whereas the natural interpretation of (8)c is that the plane covered the whole city flying over it. This kind of unselected object constructions is similar to the ones in Latin in cases like *Serpentes putamina *(ex-)tussiuunt* ('Snakes cough the egg shells out') (see Acedo Matellán & Mateu 2010).

Conclusion: With this analysis we show that prefixes, particles and verbs can lexicalize modifiers in opposition to Ps. The apparent differences in their behaviour are due to the different elements they can modify: *procTrans*, *proc*, *Map*, *SetpointP*... Therefore, they are not copies of Ps but elements generated independently.

- (1) a. John crossed the desert
b. John ran to his house



- (3) One v-bezala v magazin.
she V-ran into the shop-ACC
'She ran into the shop.' Russian: Spencer & Zaretskaya (1998:28)
- (4) a. Maša vybežala na ulicu.
M. out-ran^P.dir.sg.fem. on(to) street.ACC
'Maša ran out into the street' Russian: Arylova et al. (2005)
b. Ne in aedis ac-cederes.
lest in house.ACC at-march.SBJV.IPFV.2SG
'Lest you should come into the house.' Latin: Acedo-Matellán (2010:214)
- (5) On pri-exal v Moskvu *(za) den'.
he TO-drove.PF in Moscow.ACC *(in) day
'He arrived in Moscow (in / *for) a day.' Russian: Gehrke (2008:185)



- (7) a. Juan entró en su casa
b. Juan entró a su casa
'John went into his house'
- (8) a. *El avión voló la ciudad
b. El avión voló sobre la ciudad
c. El avión sobrevoló la ciudad.
'The plane flew (over) the city'

Selected references: Filip, H. 2003. Prefixes and the delimitation of events. *Journal of Slavic Linguistics* 11(1). 55-10. Gehrke, B. 2008. *Ps in Motion: On the Semantics and Syntax of P Elements and Motion Events* (LOT Dissertation Series 184). Utrecht: LOT Publications. Ramchand, G. 2008. *Verb Meaning and the Lexicon: A First Phase Syntax*. Cambridge: Cambridge University Press. Svenonius, P. 2004. Russian prefixes are phrasal. Ms. University of Tromsø; to appear in *Proceedings of FDSL 5* ; available at ling.auf.net.