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Goal, source, and route preverbs in Latin: their interaction with spatial datives

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Abstract: Prefixed verbs in Latin may take an argument in the dative case, interpreted as the ground of the spatial relation codified by the preverb. This phenomenon is constrained by the semantics of that spatial relation: while preverbs encoding a location, a goal, or a source of motion generally accept the dative argument, preverbs encoding a route do not. I propose a syntactic analysis of this phenomenon, framed within the Spanning framework. I assume an analysis of the spatial dative as an applied argument interpreted as a possessor of the final location of motion. Developing a configurational theory of spatial relations, I show how only the syntax-semantics of the preverbs interpreted as encoding a location, be this final (a goal), initial (a source), or unrelated to motion (a static location), is compatible with the projection of an Appl(icative)P integrating the dative argument. By the same token, pure route preverbs, involving a path but not a location, are correctly predicted to disallow the projection of ApplP, and hence the spatial dative.

Keywords: datives; goals; Latin; preverbs; routes; sources; spanning

1 Introduction: p-datives as applied arguments

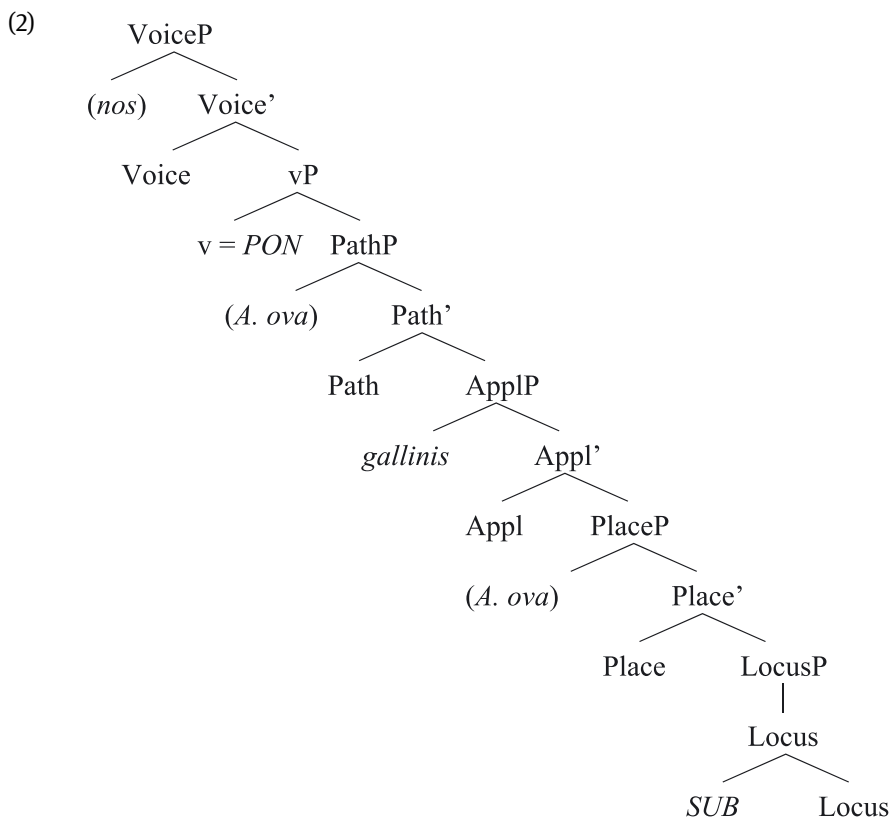
In Acedo-Matellán (2017) I call *p-datives* those datives in Latin interpreted as grounds (Lehmann 1983; Talmy 2000 *relata*) with respect to an adpositional prefix, traditionally called *preverb*:¹

¹ All Latin examples have been extracted from the *Bibliotheca Teubneriana Latina Online*. All translations into English are mine.

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- (1) *Anitum ova gallinis saepe sup-ponimus.*
 duck.GEN.PL egg.ACC.PL hen.DAT.PL often under-put.1PL
 ‘We often place ducks’ eggs beneath the hens.’
 (Cic. nat. deor. 2, 124)

In (1) we understand that the ducks’ eggs end up under (*sub-*) the hens. Also part of the interpretation of (1) is that the hens are somehow affected by the event (see, among others, Ernout and Thomas [1964: 69] and Devine and Stephens [2013: 134]). In that paper I propose a Distributed Morphology (Halle and Marantz 1993; Embick 2010) analysis of the structure of predicates involving a prefixed verb and a p-dative. The next is the analysis of (1):



In a nutshell, these predicates are vPs embedding the adpositional projections Place and, above it, Path, establishing a change of location (Acedo-Matellán 2016; Jackendoff 1983; Svenonius 2007; among others). Place takes as complement a nominal projection of relational semantics, Locus, identifying the region occupied

by the ground (Noonan 2010; Terzi 2010). The preverb originates as a modifier of Locus, restricting its denotation to the kind of region it encodes: a volume, a surface, an “under” area, as in (1), etc. The figure argument (*Anitum ova*) originates as the specifier of PlaceP, since it is understood as ending up in the location identified by Locus, and raises to the specifier of Path, where it is interpreted as a figure in motion. The dative argument is introduced by an Appl(icative) head (Cuervo 2003; Pylkkänen 2008) merged above PlaceP. The semantic import of this head involves, in Cuervo’s (2003: 121) words, that “[t]he dative DP is applied to the end state of the object DP [...]. The dative DP is the ‘possessor’ of an end state of the object”. In the above example, the hens are the possessors of the end state of the eggs, that is, of the state of being located in a “under” area (*sub-*). The affectedness interpretation linked to the dative emerges from the semantics of Appl. Moreover, Locus being a nominal of relational semantics, its possessor argument is satisfied by the dative: the applied argument “possesses” the denotation of Locus, i.e., it behaves as a possessive dative. Therefore, the interpretation of the p-dative as the ground is inferential: “the below region of the hens”. A series of post-syntactic operations bring together the different morphemes to produce the surface string, including the prefixed verb. The reader is referred to Acedo-Matellán (2017) for a detailed argumentation, evidence supporting the above analysis, and references to previous work on the subject.

While this analysis explains most of the properties of p-datives, it does not solve the fact, noted in the literature, that not all preverbs admit p-datives. Lehmann argues that while preverbs identifying the goal of motion, i.e., the final location of motion, as in (1), admit p-datives quite freely, route preverbs like *circum-* ‘around’ or *per-* ‘via, through’ and source preverbs like *de-* ‘away, downwards’, frequently reject them. The analysis sketched above does not solve this unevenness, because it takes all preverbs, regardless of their semantics, as originating in the same way: as modifiers of Locus under a Path – Place configuration, the goal/source/route distinction being of conceptual, rather than grammatical nature. The purpose of this paper is to shed light on this unsolved issue. In the remainder of this paper, I will still assume the nature of the p-dative as an applied argument, the inferential nature of its interpretation as the ground with respect to the preverb, the idea that the preverb is related to a portion of the configuration articulating a spatial relation, and also that Locus is an abstract nominal identifying the region occupied by the ground. In other respects, the analysis is non-trivially different. In particular, I adopt the perspective of Spanning, a syntactic theory of the lexicon/morphology-syntax interface (Bye and Svenonius 2012; Ramchand 2018; Svenonius 2016) and also a more articulated, configurational theory of the different kinds of spatial relations (Pantcheva 2011). I also follow Starke’s (2004) idea that DPs can introduce projecting features into the

derivation. The applied argument can be responsible by itself for the projection of ApplP. Appl may project as a head only if it can be lexicalized (see Section 5 for details).

This paper is organized as follows. In Section 2, I present and discuss the differences among preverbs regarding the licensing of p-datives. In Section 3, I provide an overview of the model of the syntax-lexicon interface adopted for the analysis. In Section 4, I present a configurational theory of spatial relations to understand the syntax and semantics of locations, goals, sources, and routes. In Section 5, I apply these theoretical premises to the analysis of predicates involving a location, goal, source, or route preverb. Section 6 presents the conclusions and remaining issues.

2 Differences among preverbs regarding the licensing of p-datives

At least since Lease (1912), p-datives have been pointed out not to be licensed by all preverbs, or not to the same extent.² On the basis of a survey of Classical Latin authors, Lease provides percentages of usage of the p-dative per period, per author, and per preverb, distinguishing between those cases where the dative coappears with an accusative coargument and those cases where it appears as the sole non-subject argument. Lease (1912: 287) lists the next preverbs as co-appearing with a dative argument:

- | | | |
|-----|------------------------------|---|
| (3) | <i>ad-</i> ‘at, next to’ | <i>ob-</i> ‘against, towards’ |
| | <i>ante-</i> ‘before’ | <i>prae-</i> ‘before, in front’ |
| | <i>circum-</i> ‘around’ | <i>pro-</i> ‘before, in front, forward’ |
| | <i>con-</i> ‘with, together’ | <i>sub-</i> ‘under’ |
| | <i>in-</i> ‘in, on’ | <i>super-</i> ‘above’ |
| | <i>inter-</i> ‘between’ | |

The preverbs listed can be argued to be able to identify a goal of motion when they are combined with a dynamic verb. The next examples illustrate:

- (4) *Hi duo amnes [...] in-cidunt Oriundi flumini.*
 these.NOM two.NOM river.NOM.PL in-fall.3PL Oriuns.DAT river.DAT
 ‘These two rivers fall into the river Oriuns.’
 (Liv. 44, 31, 4)

² See also Allen (1912), who, however, bases his results in a smaller corpus.

- (5) [Rostrum lupi] portis prae-figunt.
 muzzle.ACC wolf.GEN door.DAT.PL before-fasten.3PL
 ‘They fasten a wolf’s muzzle before the doors.’
 (PLIN. nat. 28, 157, 18)
- (6) Ad-equitavit portis.
 at-ride.PRF.3SG door.DAT.PL
 ‘He rode up to the doors.’
 (LIV. 22, 42, 5)

Crucially, Lease’s list does not contain any source preverbs like *de-* ‘away, downwards’, *ab(s)-* ‘away’, or *e(x)-* ‘out of’. It also does not contain preverbs identifying the route of motion, i.e., *per-* ‘through’, *praeter-* ‘past, beyond’, and *tra(ns)-* ‘across, over’, with the exception of *circum-* ‘around’, which, however, is pointed out never to admit the dative when used in intransitive predicates.

Lehmann (1983) ponders on the matter of the correlation between the semantics and case properties of the preverb, on the one hand, and the licensing of the p-dative, on the other. He points out that “those preverbs most intimately associated with the ablative, most bluntly reject the dative” (1983: 157). These preverbs are of course those encoding a source: *de-* ‘away, downwards’, *ab(s)-* ‘away’, or *e(x)-* ‘out’. As regards route preverbs, he confirms Lease’s (1912) results that *per-* ‘through’, *praeter-* ‘past, beyond’, and *tra(ns)-* ‘across, over’ never take their relatum in the dative.

Lease’s and Lehmann’s claims about source preverbs remain controversial. Serbat (1996: 546) points out that the dative is not rare with preverbs corresponding to ablative-taking prepositions. And, indeed, examples can be found where the dative is interpreted as the ground of a source preverb (see Ernout and Thomas 1964 and Serbat 1996 for more cases):

- (7) Nil equidem tibi abs-tuli.
 nothing.ACC indeed you.DAT away-bring.PRF.3SG
 ‘I have indeed not taken anything from you.’
 (PLAVT. Aul. 634)
- (8) Larici [...] umor de-fluit.
 larch.DAT liquid.NOM downward-flow.3SG
 ‘From the larch a liquid substance flows down.’
 (PLIN. nat. 16, 194, 3)

- (9) [Spinae] corpori ex-trahuntur felis excrementis.
 thorn.NOM.PL body.DAT out-drag.PASS.3PL cat.GEN excrement.ABL.PL
 ‘Thorns are extracted out of the body with cat excrements.’
 (PLIN. nat. 28, 245, 19)

On the other hand, as regards the route preverbs *per-* ‘through’, *praeter-* ‘past, beyond’, and *tra(ns)-* ‘across, over’, I will take Lease’s and Lehmann’s conclusion – namely, that they never appear with a dative argument – to be robust, since I have not seen it contested and I have not encountered counterexamples myself.

More interesting is the preverb *circum-*. As mentioned above, this is the only arguable route preverb in Lease’s (1912) list and he points out that it can only take a p-dative when it also takes an accusative argument. Examples such as (4) and (6) above should make clear that taking an accusative argument is not a precondition for a prefixed verb to admit a p-dative. Therefore, in order to understand Lease’s result, I examined the *circum-*prefixed verbs that take an argument encoding the ground of the preverb. The examination was performed on the relevant entries in *Thesaurus Linguae Latinae* (TLL) and the conclusions are based on the information about the subcategorization properties of the verbs indicated on this dictionary. Out of the 34 verbs of the survey, the ones listed in (10) license a p-dative, whereas those listed in (11) do not:

- (10) *circumdo* ‘place or wrap around’ *circumpono* ‘put around’
circumfundo ‘pour around’ *circumspargo*³ ‘sprinkle or scatter around’
circumiaceo ‘lie round about’ *circumstringo* ‘tie around’
circumicio ‘cast or place around’ *circumstruo* ‘build round’
circumligo ‘bind around’ *circumvincio* ‘bind around’
circumlino ‘smear around’ *circumvolvo* ‘roll/wrap oneself around’
- (11) *circumago* ‘drive or turn in a circle’ *circumsido* ‘set oneself around in a hostile manner’
circumambulo ‘walk around’ *circumsisto* ‘place oneself around, surround’
circumclamo ‘roar around’ *circumsono* ‘sound on every side, be filled with sound’
circumcolo ‘dwell round about’ *circumsto* ‘stand around’
circumcurso ‘run round about’ *circumvado* ‘assail on every side’
circumduco ‘lead or draw around’ *circumvehor* ‘ride, drive around’

³ Also found as *circumspargo*.

<i>circum</i> eo ‘march, go around’	<i>circum</i> venio ‘be around, encircle’
<i>circum</i> equito ‘ride around’	<i>circum</i> verto ‘turn around’
<i>circum</i> fluo ‘flow around’	<i>circum</i> volito ‘fly around’
<i>circum</i> gredior ‘go, walk around’	<i>circum</i> volo ‘fly around’
<i>circum</i> latro ‘bark around’	
<i>circum</i> sedeo ‘sit around, surround’	

The semantic generalization to be drawn seems to be that in those *circum*-verbs allowing a p-dative, the preverb informs about the disposition of the figure in its location, be this final or not, such that it occupies a circular or semicircular space. It does crucially not inform about its trajectory. In other words, with these verbs *circum*- ‘around’ seems to function as a goal preverb or as a location preverb, but not as a route preverb. In turn, all the verbal bases that combine with the dative-licensing *circum*- entail either stasis (as in *circum*iaceo) or directionality (as in *circum*curro or *circum*pono). Importantly, this semantic characterization of *circum* (and of the verbal base) seems to be independent of whether the verb takes another argument in the accusative (see *circum*do ‘wrap around’ in [12]) or not (see *circum*iaceo ‘lie around’ in [13]), *pace* Lease (1912):

- (12) *Quod sua fraterno circum-det*
 that her.ACC.PL brother’s.DAT around-give.SBJV.3SG
braccia collo.
 arm.ACC.PL neck.DAT
 ‘For her to put her arms around her brother’s neck.’
 (Ov. met. 9, 457)
- (13) *Et Lycaonia et Phrygia [...] circum-iacent Europae.*
 and Lycaonia.NOM and Phrygia.NOM around-lie.3PL Europe.DAT
 ‘Both Lycaon and Phrygia lie around Europe.’
 (Liv. 37, 54, 8)

On the contrary, verbs entailing just the movement of the figure around the ground, with no implication of a final location, do not license the p-dative. This is so, again, regardless of argument structure, that is, of whether they are biargumental, with the figure as subject (cf., e.g., *circum*eo ‘march around’, *circum*volo ‘fly around’, or *circum*equito ‘ride around’) or triargumental, with the figure as the direct object (cf. *circum*ago ‘drive around’ or *circum*duco ‘lead around’). In the next two representative examples, the ground (*me* ‘me’ in [14], *omnia sua praesidia* ‘all his garrisons’ in [15]) appears in the accusative rather than the dative:

- (14) *Me* [...] *Mors* *atris* *circum-volat* *alis*.
 me.ACC Death.NOM gloomy.ABL around-fly.3SG wings.ABL
 ‘Death flies all around me with its gloomy wings.’
 (HOR. sat. 2, 1, 57)
- (15) *Quos* *Pompeius* [...] *omnia* *sua*
 these.ACC Pompey.NOM all.ACC.PL his.ACC.PL
praesidia *circum-duxit*.
 garrisons.ACC.PL around-lead
 ‘Pompey lead them around all his garrisons.’
 (CAES. CIV. 3, 61, 1)

In the above examples the verbal base (*volo* ‘fly’, *duco* ‘lead’) could be taken to express directionality, and *Mors* ‘Death’ and *Quos* ‘these’ are interpreted as figures in motion. There are other cases in (11), however, where the verbal base does not express any kind of directionality, as *circumlatro* ‘bark around’. In this case it is the event itself (barking, in this case) that seems to be going around the ground, as a figure of sorts.⁴ In these cases there is also no entailment of a final location, and the ground is expressed, again, in the accusative:

- (16) *Acerrimi* *canes* [...] *circum-latrare*
 keen-scented.SUPERL dogs.NOM around-bark.INF
hominem [...] *incipiunt*.
 person.ACC begin.3PL
 ‘Those most keen-scented dogs begin barking around their victim.’
 (SEN. dial. 6, 22, 5)

These are verbs, in other words, where *circum-* functions not as a goal preverb, but as a route preverb, identifying topological properties of the path or trajectory of motion.^{5,6}

⁴ Cf. McIntyre’s (2004) notion of *event path*, for Germanic, as in *read through the book*, where the reading itself is understood as going through the book.

⁵ Note that there are some verbs in (11) that also entail a final location, like *circumsisto* ‘place oneself around, surround’, but are not attested with a dative ground. However, all *circum-*verbs licensing the p-dative, i.e., those in (10), entail a final location. This latter claim is the one I am making.

⁶ See Mare (2018) for a recent exploration of the morphosyntax and semantics of the preverb, preposition, and adverb *circum*. Mare, following Allen (1912) and Pinkster (2011), argues that the dative argument appearing in predicates involving the preverb *circum-* is a run-of-the-mill dative argument, i.e., not directly related to the presence of the preverb. It should be clear from the discussion in this section that my conclusions are different.

Interestingly, the behaviour of the dative-licensing *circum*-verbs is not so different from that of other prefixed verbs expressing a goal, as in (4) through (6). Looked at more closely, those preverbs also identify topological properties of the final location, and are not informative about the trajectory itself. This converges with the fact that they can also be found with a p-dative in predicates involving no movement, for instance, predicates headed by the prefixed counterpart of *sum* ‘be’:

- (17) *Pulpae fissilibus in-sunt.*
 fibres.NOM fissile.DAT.PL in-are
 ‘Fibres are found inside trees that split easily.’
 (PLIN. nat. 16, 184, 3)
- (18) *Portis alii bipatentibus ad-sunt.*
 gate.DAT.PL some.NOM.PL opening_in_two_ways.DAT.PL at-are
 ‘Some stand at the wide-opened gates.’
 (VERG. Aen. 2, 328)
- (19) *Subucula pexae trita sub-est tunicae.*
 undergarment.NOM neat.DAT ragged.NOM under-is tunic.DAT
 ‘A ragged undergarment lies under the neat tunic.’
 (HOR. epist. 1, 1, 94)

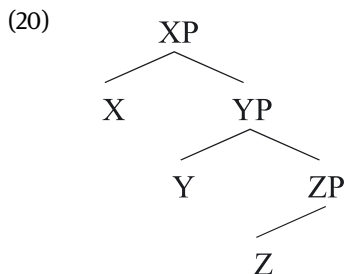
In other words, goal-denoting preverbs seem to be goal-denoting simply because they are combined with verbs expressing directional motion – *cado* ‘fall’, *pono* ‘put’, *equito* ‘ride’, in (4) through (6). In and of themselves, the preverbs are location preverbs, i.e., they purely identify topological properties of a location, be it final (i.e., a goal) or not.

To sum up, preverbs encoding goals, sources, or locations admit p-datives. That includes the uses of *circum*- with certain verbs encoding directionality or stasis and where *circum*- denotes topological properties of a location. Preverbs encoding routes, i.e., *per*- ‘through, via’, *praeter*- ‘past’, and *trans*- ‘over, beyond’, and the instances of *circum*- ‘around’ used as routes, do not license p-datives. All this empirical evidence motivates my proposal for the semantic and syntactic hierarchy of spatial relations in Section 4 and my analysis in Section 5.

3 A Spanning approach to the syntax-lexicon interface

I will frame my analysis within the so-called Spanning approach to the syntax-lexicon interface, drawing on Bye and Svenonius (2012), Svenonius (2016), and

Ramchand (2018). Spanning, like Nanosyntax (Baunaz and Lander 2018), is a theory of morphosyntax where the interface between syntax, the only generative engine, and the lexicon receives great attention and is responsible for patterns of grammaticality and also linguistic variation. Morphology is non-existent as an independent module. Syntax produces representations based on one-feature nodes following a universal hierarchy:



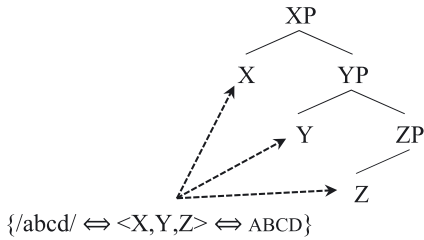
The representation is shipped off to be interpreted by the interfaces. This is done cyclically, in segments determined by phasal heads (cf., for Distributed Morphology, Embick [2010: 44–46]). The lexicon is the module that separates syntax from the interfaces of externalization and meaning. It is here that the syntactic representation is lexically interpreted via lexical items. These are correspondences among phonological, syntactic, and conceptual bits of information. The syntactic information corresponds to a *span* of features, i.e., “a contiguous sequence of heads in a complementation relation” (Ramchand [2018: 27]; see also Bye and Svenonius [2012: 435]). For an imaginary lexical item *abcd*, the lexical entry could look like this:

$$(21) \quad \{ /abcd/ \iff \langle X, Y, Z \rangle \iff ABCD \}$$

$\langle X, Y, Z \rangle$ indicates the span consisting of the features X, Y, and Z, where Z is the complement of Y, and Y is the complement of X. I assume that functional lexical items, like English *the* or *-s* (plural) do not have a conceptual component (i.e., no *ABCD* component), their semantics being directly read off the syntactic features of the representation.

Lexical items are used to spell out syntactic nodes and, often, to provide conceptual information. Lexicalization is regulated by the principle of Specificity (Ramchand 2018: 29): a lexical item can be used to lexicalize a span of nodes if its featural specification contains all those nodes. For instance, the lexical item in (21) could spell out the span consisting of $X > Y > Z$ in the tree below:

(22)

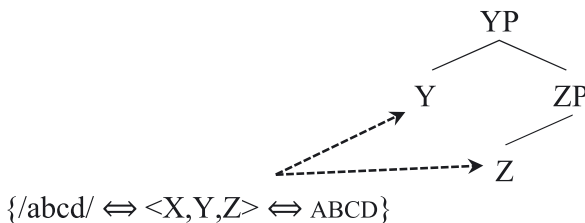


By the same token, if this lexical item were specified for $\langle X, Y \rangle$, $\langle Y, Z \rangle$, or $\langle X, Z \rangle$, its use in the lexicalization of the $X > Y > Z$ span would violate Specificity, yielding a crash at the syntax-lexicon interface. I follow Bye and Svenonius (2012) in assuming that in a first stage of lexicalization, L(exical)-match, a search operation identifies entries that are suitable to deliver their exponent, abiding by Specificity, to a particular span. L-match is represented here by dashed arrows going from the lexical item to each of the nodes comprised in the span. Note that it follows from the definition of span that specifiers and adjuncts must undergo Spell-Out in a cycle different from that of the spine of the derivation. Following Embick (2010: 51), I assume that they do so, provided that they are endowed with case, when the phasal head of the projection where they are hosted is merged.

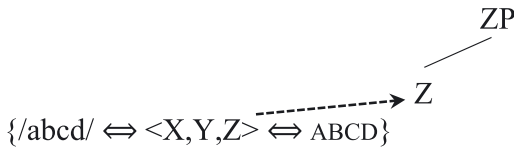
Importantly, Specificity allows the lexical item of (21) to be used in the lexicalization of subspans:

(23)

a.



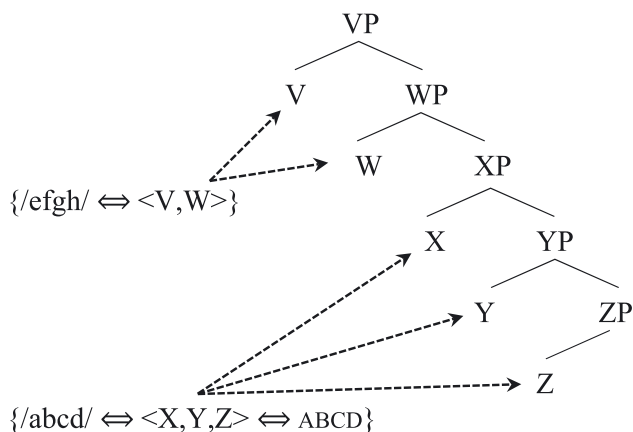
b.



This shows that not all the features of the lexical item need be used. At the same time, however, I will also assume Fábregas's (2007) Exhaustive Lexicalization principle, stating that all the features of the tree must be lexicalized.

As regards the conversion of the hierarchic structure into a linear representation and the linearization of exponents, I follow Bye and Svenonius (2012) and Svenonius (2016), who, in turn, build on Brody's (2000) Mirror Theory. The core idea is that relations of complementation are exchanged, at Spell-Out, for relations of inverse linearization, such that if $A > B$, where $>$ indicates that B is the complement of A , then, all else being equal, $b < a$, where b and a are the exponents of B and A , respectively, and $<$ indicates linear precedence. This assumption derives the effects of head movement (either Raising or Lowering) in theories like Distributed Morphology (Embick 2010: 37–38). To illustrate, imagine that the tree in (22) is enlarged to the one in (24):

(24)

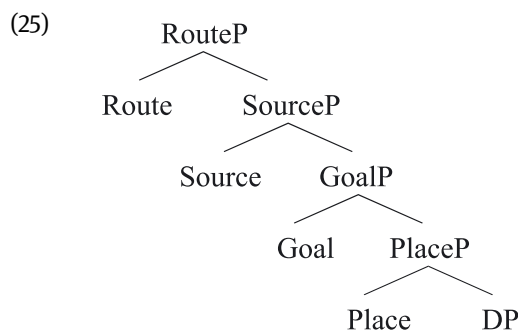


The linearization algorithm described above predicts that, by default, the exponent */abcd/* will be linearized immediately to the left of the exponent */efgh/*, since the nodes corresponding to the latter (*V*, *W*) are higher in the complementation hierarchy than those corresponding to the former (*X*, *Y*, *Z*). By default, also, both exponents are part of the same complex word: */abcd-efgh/*.⁷

⁷ I am glossing over many details that are not relevant for the discussion of the Latin data dealt with in Section 5. In a nutshell, in the Brody–Svenonius system, all the exponents belonging to the same cycle or phase would end up by default forming one and the same lexical word (in turn ultimately yielding a phonological word), the exponents being linearized in the order inverse to the complementation sequence of their corresponding nodes in the syntactic representation. Special diacritics idiosyncratically attached to particular nodes may prevent this scenario and generate both free standing words (within the same phase: non-bound auxiliaries, for instance) and also clitics. See Svenonius (2016) for a detailed discussion.

4 The morphosyntax of spatial relations

Pantcheva (2011: 51), working within the nanosyntactic framework, proposes that directional PPs host different projections in a specific, universal order:⁸



This is an incremental approach to the representation of syntactic-semantic features. For instance, the interpretation “route” does not just reside in the head *Route*, but corresponds to the whole configuration projected from that head down to the *Place* head – see Caha (2009) for the projection of case features.

Pantcheva (2011: 65) provides semantic arguments for the hierarchy in (25). *Place* denotes a region, a set of contiguous points in space. *Goal* induces the interpretation of this region as a final location, introducing a transition, namely from a negative phase in which the locative relation between figure and ground does not obtain to one in which it does obtain (Fong 1997). *Source*, as a negative operator of sorts, reverses the sense of the transition: from positive to negative, so that *Place* is interpreted as an initial location. Finally, the *Route* head has the semantics of *Goal* in that it introduces a transition to a positive phase again. Thus, a *RouteP* licenses two transitions: from negative to positive and from positive to negative. In other words, in a *RouteP* the figure is entailed to have a locative relation with the ground only in the middle stretches of the path, but not at the beginning or at the end.

There are, according to Pantcheva, also morphological arguments in favour of the hierarchy in (25). It is well known that goals and locations, on the one hand, and sources and routes, on the other, may show syncretism, i.e., may be expressed by one and the same exponent. Latin shows many cases of the location-goal

⁸ See also Romeu (2014) and Gibert Sotelo (2017), for different proposals also within Nanosyntax. See Real Puigdollers (2013) for a critique of Pantcheva’s (2011) system.

syncretism. Thus, a PP introduced by *in* can be interpreted as a location or as a goal, albeit with a change in case:

- (26) *in palatio* / *in palatium*
 in palace.ABL in palace.ACC
 ‘in the palace’ ‘into the palace’

On the other hand, the Modern Greek preposition *apo* may mean ‘from’ or ‘via’ and exemplifies the source-route syncretism. These patterns of syncretism are naturally derived in Nanosyntax via lexical items specified for more than one feature, e.g., Place and Goal. Crucially, however, the features must be contiguous in the hierarchy. Syncretisms involving only non-contiguous features, e.g., Route and Goal, are predicted not to obtain, since any lexical item specified for two features must also be specified for all intermediate features, as per the so-called Superset Principle (analogous to Specificity, as described in Section 3).

With the exception of routes, which I take to be non-complex, and therefore, to involve no incrementality, I will preserve the Source > Goal > Location hierarchy proposed by Pantcheva. However, I think that the same results can be derived with even less features. Following Jackendoff (1983), my first assumption is that spatial relations boil down to a basic ontology of two categories: Place, which expresses a location, and Path, which expresses a sequence of locations (Wunderlich 1991). The rest of differences between locations, goals, routes, and sources is configurational. I will also preserve Locus from Acedo-Matellán (2017) as identifying the region occupied by the ground (see Noonan’s 2010 and Terzi’s 2010 *Place* head). The difference between Locus and Place is that between a nominal denoting a region of space and a preposition transforming it into a location, i.e., relating it to a figure. Locus merges at the bottommost position in the configuration, but it can take a nominal specifier interpreted as a possessor of the spatial region, i.e., as a ground:

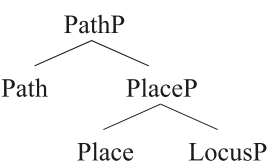
- (27)
- $$\begin{array}{c}
 \text{LocusP} \\
 \diagup \quad \diagdown \\
 \text{the table} \quad \text{Locus}
 \end{array}$$

I assume that ground DPs may obtain case from the adpositional heads merged above LocusP.

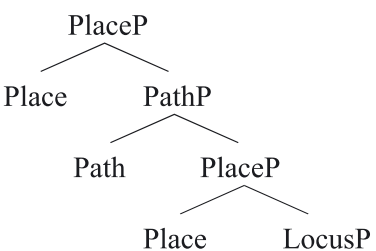
A Place head taking a LocusP is interpreted as a location:

- (28)  Ex.: The needle is *on the record*

When a Path head is merged on top of a Place head, the whole is interpreted as a goal. Specifically, Path denotes a sequence of locations where the extreme one is identified with that denoted by PlaceP. Thus, the transitional character of goals, argued for by Pantcheva on the basis of Fong (1997), emerges as a concomitant effect of the merger of Path above Place:

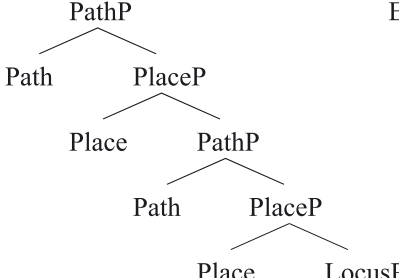
- (29)  Ex.: Jane put the needle *onto the record*.

A further Place head merged on top of PathP is necessarily interpreted as the location at the other remaining extreme of the sequence of locations denoted by Path, to wit, the initial location, i.e., a source:

- (30)  Ex.: The needle is *off the record*

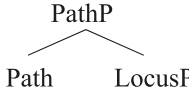
For English, for instance, the “opposite” of *on* is denoted by *off*, i.e., the set of contiguous points that is not part of the surface of the ground. Similarly, *out* denotes the complement set of *in*, i.e., the location that is not that contained within the ground. The presence of Path is related to the notion of separation inherent to sources. As for the upper Place head, there is independent evidence for the basic locational nature of source preverbs: they can combine with non-dynamic verbs. Thus, in Latin, the preverbs *ab(s)-* ‘away from’, *de-* ‘away from, downwards from’, and *e(x)* ‘out’ combine with static verbs such as *sum* ‘be’ and *sto* ‘stand’: *ab-sum*

“away-be” ‘be absent’, *de-sum* “away-be” ‘be absent, fail’, *ex-sto* “out-stand”, ‘stand out, stand above’. By all means, a source structure can be combined with a verb expressing directionality, i.e., lexicalizing Path, like *put*:

- (31)  Ex.: *Jane put the needle off the record.*

In this case the motion is understood as having the region of space in contact with the record as the initial location.

Up to this point, the configurations I have proposed to account for locations, goals, and sources are not substantially different from those proposed by Pantcheva: the resulting hierarchy is the same and the same level of complexity characterizes each of those three notions: one head for locations, two for goals, three for sources. The proposal for routes is, however, different. In this case I put forward that Path merges directly with a LocusP, without any Place head intervening. The region of space denoted by LocusP is not identified with a location, but with an ordered sequence of locations itself, i.e., a route, and there is no transition entailed.⁹

- (32)  Ex.: *The ball dropped through the tube.*

Unlike locations and sources, pure route preverbs in Latin, lexicalizing only the Path head, do not combine with non-dynamic verbs, like *sum* ‘be’, *sto* ‘stand’, *iaceo* ‘lie’, or *sedeo* ‘sit’, at least in their locative interpretations.¹⁰ Interestingly, *circum-* ‘around’, allows some of these combinations, as was shown in Section 2 (example [13]). This suggests that *circum-* has a more complex nature, licensing route but also goal and location interpretations.

⁹ There are yet other combinatorial possibilities, like that of a Place head merged on top of Path (in turn merged on top of Locus). This could in principle convert Path into a place, explaining static uses of route prepositions like *across a meadow*, *over the hill*, etc. (Svenonius 2010).

¹⁰ In *per-sedeo* “through-sit” ‘sit for long’, *per-sto* “through-stand” ‘continue standing, stand for long’ *per-* ‘through’ does not have a spatial reading, but an adverbial, temporal reading, and can be argued to instantiate an *external* or *superlexical prefix*; cf. Di Sciullo (1997, 2005) for Romance, Svenonius (2004) for Slavic, and Acedo-Matellán (2016) for Latin.

Assuming that preverbs and prepositions have the same structure (Acedo-Matellán 2016; Miller 1993; Oniga 2005), this theory allows a configurational theory of prepositional case assignment in Latin – and probably also in German, where instead of ablative we see dative for locations and sources. In the prepositional domain, case is assigned by the uppermost head: ablative case is assigned by Place; i.e., locations and sources appear in the ablative:¹¹

- (33) a. *in/sub* *capsa*
 in/under box.ABL
 ‘in/under the box’
 b. *e/a/de* *capsa*
 out/away/downward from box.ABL
 ‘out of/away from/downward from the box.’

In all other cases, i.e., goals and routes, where Path is the highest head, accusative is assigned:¹²

- (34) a. *in/sub* *capsam*
 in/under box.ACC
 ‘into/to under the box’
 b. *circum/per* *capsam*
 around/through box.ACC
 ‘around/through the box.’

In the next section the theory is tested as to its ability to capture the patterns of licensing of a p-dative by different preverbs, shown in Section 2.¹³

¹¹ The preposition *ad* ‘at, next to’ always takes accusative, irrespectively of whether it is understood as a location or as a goal: *ad capsam* ‘next to the box’ / ‘to/towards the box’. I do not have an explanation for this counterexample, so I will assume that case assignment in this case is purely lexical, i.e., it depends on the lexical item for *ad* itself.

¹² Interestingly, no Latin preposition assigns dative. Thus, as I point out in Acedo-Matellán (2017), we must discard any analysis of p-datives whereby a preposition has been appended to the verb leaving the dative-marked ground DP stranded – as proposed for accusative- or ablative-marked ground DPs with prefixed verbs by Miller (1993) or Oniga (2005). For a recent detailed description of the relationship between prepositions and cases see Oniga (2014: 258–261).

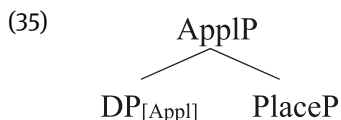
¹³ The theory of spatial relations presented here is similar in spirit to Ramchand’s (2008) seminal proposal for the different subeventive projections: Initiation, Process, and Result. Indeed, Ramchand proposes an ontology of only two kinds of eventualities: states and events, and it is how they are combined that brings out the different interpretations. For instance, a state by itself is interpreted as such (cf., e.g., *fear*), but when embedded under a process, it is interpreted as a result (cf., e.g., *break*), and when embedding a process, it is interpreted as an initiating subevent (cf., e.g., *dance* or *break*).

5 Prefixed verbs with p-datives: an explanation of the patterns

In this section, I apply the assumptions contained in the previous two sections to the analysis of the patterns of coappearance of the different preverbs with a p-dative. The basic guiding idea, also salient in Acedo-Matellán (2017), is that the applied argument (i.e., the p-dative) must be merged on top of a static projection, a PlaceP. The Appl feature relates the denotatum of the dative, a possessor of sorts, to a possessed location – which can be a location, a goal, or a source, in the theory entertained here. I take all preverbs to lexicalize Locus, i.e., they at least denote sets of regions in space. Some preverbs lexicalize Path, i.e., an ordered set (a scale) of locations. But only preverbs lexicalizing a Place feature are expected to license Appl, and, hence, the p-dative. In Section 5.1, I present my assumptions about the syntax, the semantics, and the lexicalization of the Appl feature, and derive the most important empirical predictions from these assumptions and their interaction with the principles of lexicalization presented in Section 3. These predictions are explored in Sections 5.2 and 5.3, where I describe the interaction of preverbs with Appl (non-route preverbs and route preverbs, respectively).

5.1 The Appl feature: syntax, semantics, and lexicalization

A substantial difference between the theory entertained here and the one underlying my (2017) paper has to do with the projection of the Appl feature. Following a seminal proposal in Starke (2004) for the division of labour between heads and specifiers in general, I take the dative argument itself to be able to introduce the Appl feature into the derivation, so that ApplP is projected upon its merger. The p-dative, therefore, may function as a head of sorts, but it also denotes the applied argument:



Appl may, however, project as an independent head, but only if it can be lexicalized. I assume that this is possible with verbs of transferral, such as *do* (see the derivation of *circumdo* in [53] in Section 5.3). All in all, I am avoiding the stipulation

of any null exponent for Appl.¹⁴ In any case, the Appl feature is taken to be responsible for the assignment of inherent case, dative, to the applied argument.

The Appl feature, either projecting a head or being merged as the highest feature of the applied DP, has the denotation $\lambda x.\lambda e_s.\text{Possessor}(e_s, x)$: the property of being a possessor of a state, e_s (cf. Acedo-Matellán [2017], basing on Cuervo [2003], Pykkänen [2008], and McIntyre [2006]). Appl merges on top of PlaceP, which I take to be coerced to denote a property of states, λe_s , i.e., the state of the figure being located in relation to the ground. The denotations of PlaceP and Appl combine via Event Identification (cf. Pykkänen's [2008: 12] proposal for high applicatives), yielding $\lambda x.\lambda e_s.\text{Possessor}(e_s, x)$. The applied argument saturates λx via Functional Application, yielding a property of states again: λe_s . This semantic algorithm accounts for the fact that a Path head can combine either directly with PlaceP (in predicates without a p-dative) or with ApplP, since the denotation is the same in both cases: λe_s (with the addition of Possessor in the latter case).

A series of empirical predictions emerges from the syntactic-semantic requirements of Appl (to be combined with PlaceP), the hierarchy of spatial relations presented in Section 4, and the mechanisms and principles of lexicalization presented in Section 3. A first important prediction, already explored in my previous work, is that constructions involving a p-dative will necessarily feature an internal argument, either an accusative object in transitive predicates, or a nominative subject in unaccusative predicates. This is so because Appl can only merge on top of PlaceP, which necessarily hosts a figure argument at Spec-Place. A second related prediction, already mentioned above, is that only preverbs lexicalizing Place can license Appl, and hence, the p-dative. In particular, we expect that those preverbs licensing the p-dative will be combinable, in their spatial interpretation, with a non-dynamic verb, like *sum* 'be', *iaceo* 'lie', *sto* 'stand', etc. and those that are never found with a p-dative will not be combinable with such verbs (again, in their spatial interpretation), because they simply do not denote a location. This seems to be true, as already pointed out in Sections 2 and 4. Two final related predictions regard the case where the preverb can lexicalize both Path and Place via the specification $\langle \text{Path}, \text{Place}, \text{Locus} \rangle$. Since it can lexicalize Place, it is expected to license Appl, and hence the p-dative. However, in that case, it cannot lexicalize also Path, by Specificity, as it does not contain all the features comprised in the span $\text{Path} > \text{Appl} > \text{Place}$. Therefore, for such a preverb to coappear with the p-dative, Path must either be non-existent (as in non-dynamic verbs like *iaceo* 'lie') or it must be independently lexicalized, i.e., by a verb encoding directionality.

¹⁴ I am very grateful to an anonymous reviewer for bringing to my consideration the idea that the Appl feature could be directly introduced by the specifier.

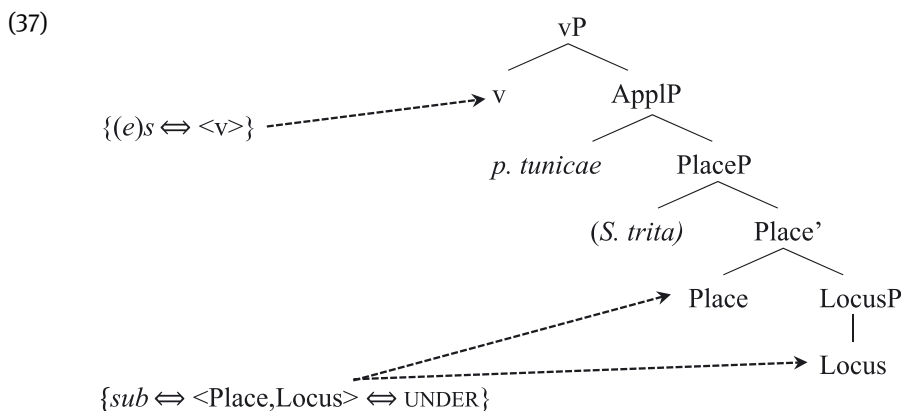
These two predictions are felicitous and concern the preverb *circum-*, as will be explored in Section 5.3.

5.2 Preverbs indicating location, goal, or source

Prefixed verbs with a static interpretation, license p-datives:

- (36) *Subucula* *pexae* *trita* *sub-est* *tunicae*.
 undergarment.NOM neat.DAT ragged.NOM under-is tunic.DAT
 ‘A ragged undergarment lies under the neat tunic.’
 (HOR. epist. 1, 1, 94)

The applied argument is merged above PlaceP and induces the projection of ApplP by virtue of its dative feature. The preverb lexicalizes both Locus and Place, i.e., it corresponds to both the region in space and its construal as a location. I have chosen to express the phonological representation of the lexical item as its written form, in italics, rather than as a string of phonemes; in the case of verbs, it is reduced to the mere root, the form without prefixes and inflectional material: i.e., e.g., (e)s = root of *sum* ‘be’. The verbal lexical entry lexicalizes the eventuality head, v:



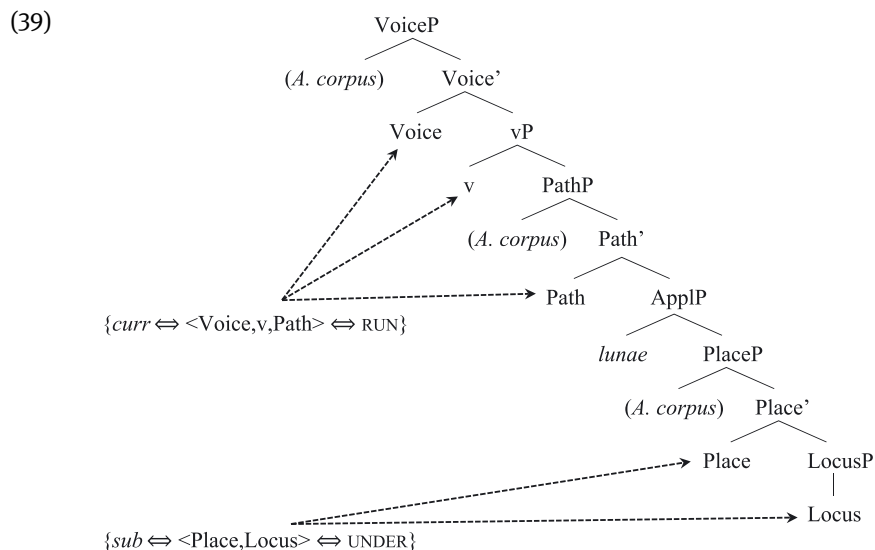
In this configuration, the neat tunic (*pexae tunicae*) is interpreted as a possessor of a state of affairs consisting in the ragged undergarment (*Subucula trita*) being in an “under” region (*sub-*). The “under” region denoted by *sub-* is interpreted as being possessed by the tunic, i.e., as being the region under the tunic. The figure argument starts out as the specifier of PlaceP, but it raises later to the specifier of TP (the sequence in parentheses at Spec-Place represents the copy), not represented here. I assume that DPs with an inherent case, like *pexae tunicae*, do not count as interveners for such a movement.

The linearization algorithm described at the end of Section 3 establishes that all the specifiers undergo Spell-Out independently of the spine of the derivation, if they have been provided with case. This affects the applied dative above PlaceP and the internal argument moved to Spec-T. As for the exponents of Locus, Place, v, and the rest of the inflectional heads above, not represented here (the Tense-Aspect-Mood nodes, and agreement), they are linearized, by default, following a precedence order that is the inverse one to the order of complementation in the syntactic configuration, and forming one and the same word: <Locus, Place> <v, Asp, T, M> <Agr>: *sub-es-t*.

Prefixed verbs with a goal interpretation involve the projection of a Path head and also of a Place head:

- (38) *Aliud nequeat suc-currere lunae corpus.*
 other.NOM be_unable.SBJV.3SG under-run.INF moon.DAT body.NOM
 ‘No other body can glide under the moon.’
 (LVCR. 5, 762–3)

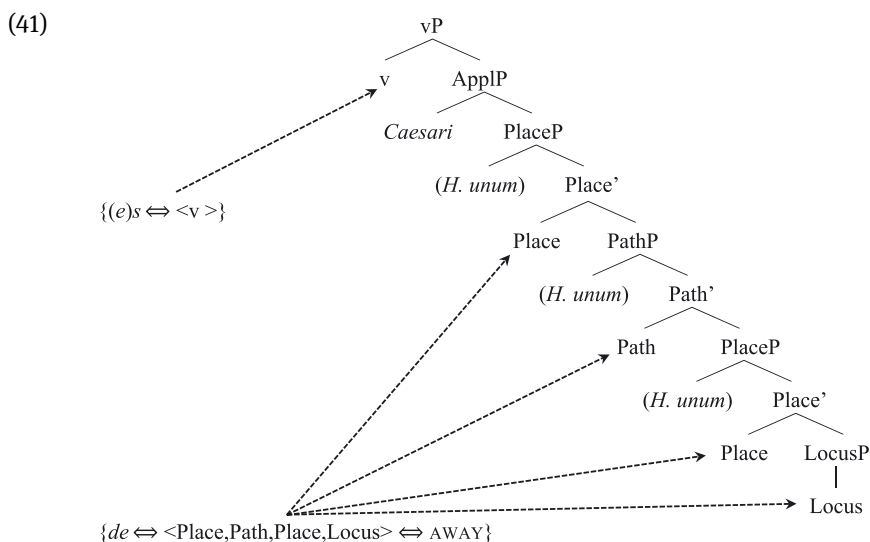
I assume that Place and Path are lexicalized independently in the case of goals: Place is lexicalized, as above, by the preverb, while Path is lexicalized by the verb. The head Appl is free to be merged above Place and below Path, since these two heads are lexicalized independently, in accordance with Exhaustive Lexicalization:



I take the subject *Aliud corpus* ‘some other body’ to be interpreted as a figure of *sub*-, a figure in motion with respect to Path, and, following ideas in Borer (2005) and Ramchand (2008), as the originator of the event, which is why it raises from Spec-Path to Spec-Voice (and it keeps moving from there to Spec-T to obtain nominative case).

As for source preverbs, they too involve a Place projection, above which the Appl-bearing argument is readily mergeable. We find cases where no Path has been merged, i.e., static verbs with a source preverb and a p-dative:

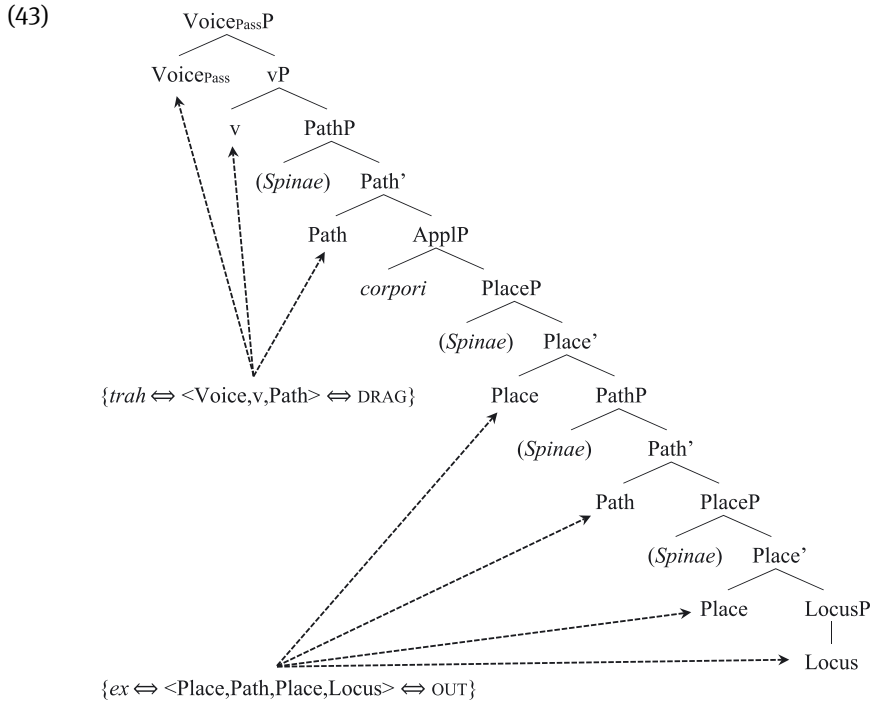
- (40) *Hoc unum [...] Caesari [...] de-fuit.*
 this.NOM one.NOM Caesar.DAT away-be.3SG
 ‘This one thing Caesar lacked.’
 (CAES. civ. 3, 2, 2)



In this case the spatial relation has to be interpreted metaphorically. I take Caesar to be understood as possessing the state of affairs consisting of “this one thing” (*Hoc unum*) being absent from a space (Locus) that has to be identified as the set of things available to him.

But source preverbs may coappear with p-datives also in dynamic predicates, i.e., involving the projection of an upper PathP, Path being lexicalized by the verb:

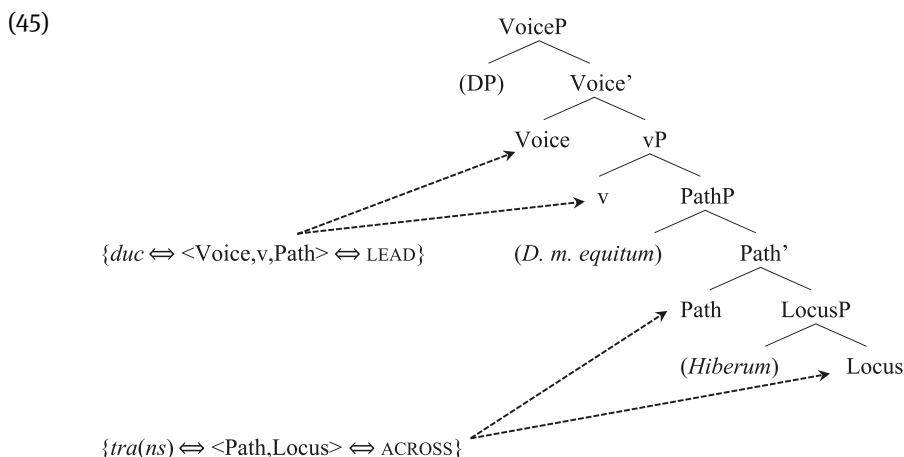
- (42) [Spinae] corpori ex-trahuntur felis excrementis.
 thorn.NOM.PL body.DAT out-drag.PASS.3PL cat.GEN excrement.ABL.PL
 ‘Thorns are extracted out of the body with cat excrements.’
 (PLIN. nat. 28, 245, 19)



5.3 Preverbs indicating route. The case of *circum-*

When a Path head takes a LocusP as complement, the region denoted by Locus is not interpreted as a location, but as an ordered sequence of locations or points in space, and a route interpretation emerges. Crucially, no Place, i.e., no location, final or not, is involved, which precludes the projection of Appl, and hence, of the p-dative. Instead, frequently the preverb coappears with a ground DP marked with accusative case, i.e., the case bestowed by Path. This is illustrated with the next example involving the route preverb *tra(ns)-* ‘across, over’:

- (44) *Duodecim milia equitum Hiberum tra-duxit.*
 twelve thousand.ACC.PL rider.GEN.PL Ebre.ACC across-lead.PRF.3SG
 ‘He lead twelve thousand riders across the Ebre river.’
 (Liv. 21, 23, 1)

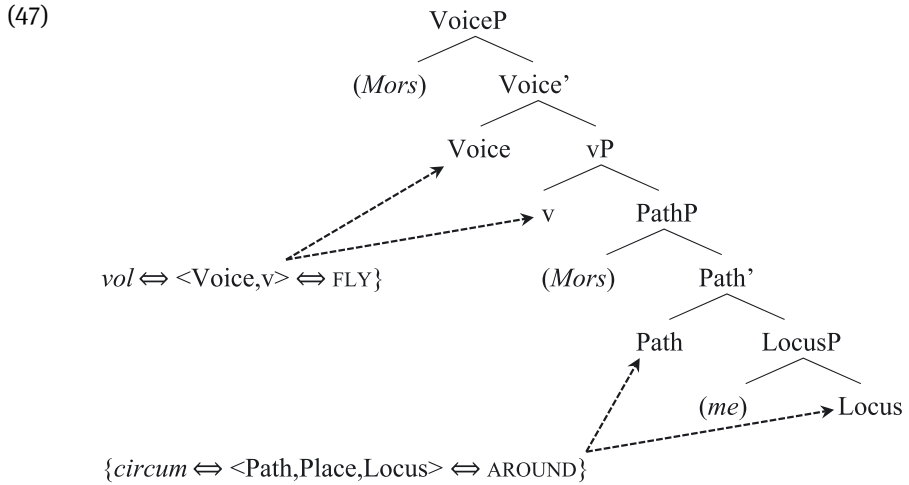


LocusP, hosting the ground DP *Hiberum* ‘the Ebre river’ at its specifier is interpreted as a set of points characterizing the trajectory of the figure DP *Duodecim milia equites* ‘twelve thousand riders’. The preverb does not license the projection of Place, since it is not contained in its lexical entry. Since PlaceP does not project, ApplP cannot project either, accounting for the fact that the ground cannot be expressed in the dative. The ground DP obtains accusative case directly from Path.

In Section 2 we saw how the preverb *circum-* ‘around’ has an ambivalent behaviour as regards its licensing of p-datives. When it is understood as providing information just about the trajectory of the figure, with no entailment of a resultant location, *circum-* does not appear with dative ground DPs, but, ordinarily, with accusative ground DPs:

- (46) *Me/*Mihi [...] Mors atris circum-volat alis.*
 me.ACC/me.DAT death.NOM gloomy.ABL around-fly.3SG wings.ABL
 ‘Death flies all around me with its gloomy wings.’
 (Hor. sat. 2, 1, 57)

This prompts an analysis similar to the one provided in (45):



The accusative *me*, merged at Spec-Locus, is interpreted, by virtue of the lexicalization of Locus and Path by *circum-*, as a circular sequence of ordered points. There is no entailment of a final location, i.e., no PlaceP projected. The lexical entry of *circum-* is specified for the features $\langle \text{Path}, \text{Place}, \text{Locus} \rangle$. If *circum* lexicalizes a shorter span, namely $\text{Path} > \text{Locus}$, it still abides by Specificity, and the derivation converges.

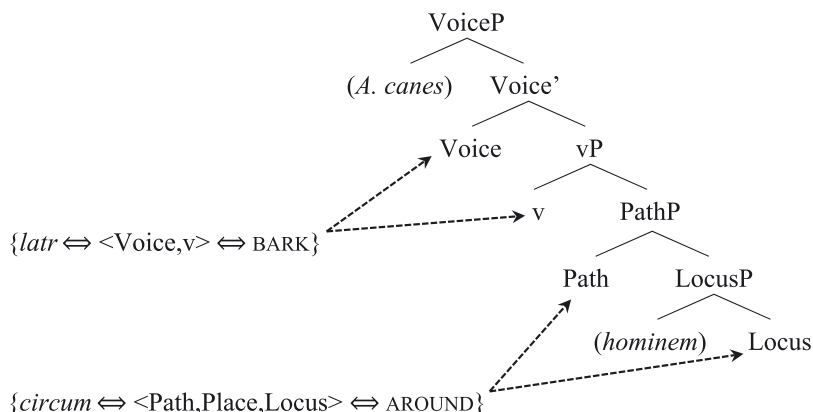
An interesting case also reported in Section 2 is that of *circumlatro* ‘bark around’, illustrated again below:

- (48) *Acerrimi canes [...] circum-latrare hominem [...] incipiunt.*
 keen-scented.SUPERL dogs.NOM around-bark.INF person.ACC begin.3PL
 ‘Those most keen-scented dogs begin barking around their victim.’
 (SEN. dial. 6, 22, 5)

In this case there does not seem to be any figure of motion, if not the event of barking itself. This suggests that the subject is a pure external argument, an originator, merging directly at Spec-Voice:¹⁵

¹⁵ An anonymous reviewer asks whether the difference between verbs like *circumvolo* and verbs like *circumlatro*, as represented in the analyses, is real and testable. The analyses provided in (47) and (49) are based on the difference in the semantic interpretation of the subject of these verbs, simultaneously a figure and an originator in the case of *circumvolo*, and a mere originator in the case of *circumlatro*. I am afraid I cannot offer any formal test to distinguish both verbs in Latin. The *there*-test, however, reveals a contrast between the respective correspondences of these two expressions in English. While *fly around* admits it (in highly literary English), thereby showing its unaccusative nature, *bark around* bluntly rejects it:

(49)



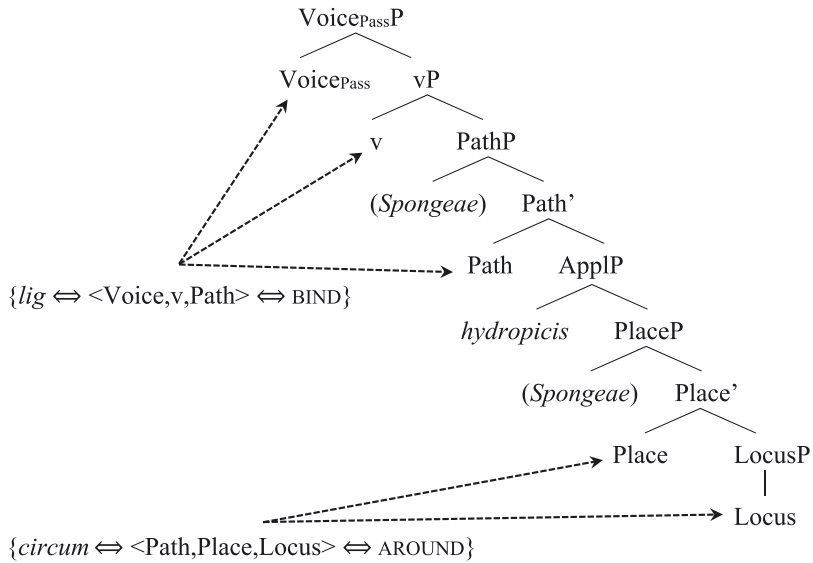
The lexical specification for Place is, I claim, what allows *circum-* to identify a Place head in directed motion constructions entailing a final location, unlike other route preverbs like *per-* ‘through’ or *trans-* ‘across’. This is the first condition for *circum-* to license a p-dative. The second is that it should not be lexicalizing a Path head simultaneously. The reason is simple: assuming that the p-dative implies the projection of ApplP, *circum-* could not lexicalize the span Path > Appl > Place, since it is not so specified and it would violate Specificity. It therefore follows that in *circum-*predicates involving a p-dative, Path, when present, must be lexicalized by the verb, i.e., the verb must be a directional one, as we concluded in our empirical observations of Section 2. We can illustrate a first case with *circum-ligo* ‘bind around’:

- (50) [Spongeae] *circum-ligantur* et *hydropicis*.
 sponge.NOM.PL around-bind.PRS.PASS.3SG also dropsical.DAT
 ‘Sponges are also bound around the dropsical parts.’
 (PLIN. nat. 31, 128, 5)

-
- (i) “Then, immediately I had fired, there flew around me such flights of bats, ravens, vultures, and owls [...]”
 (Williams, Robert F.: *Eureka: A prophecy of the future*, vol. iii. London: Longman et al., 1837, p. 83; apud Google Books)
- (ii) *There barked around me many dogs.

I thank Louise Mycock for confirmation of the above judgments.

(51)



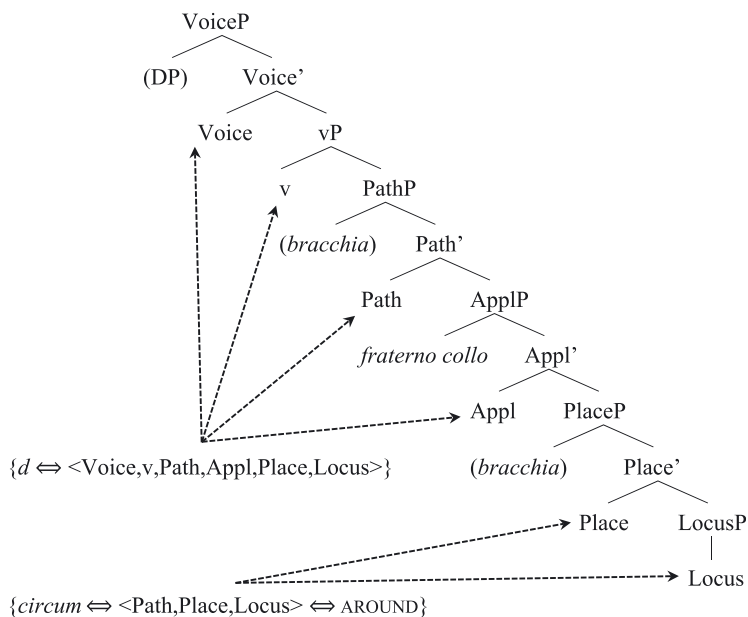
The verbal root lexicalizes the span Voice > v > Path. ApplP is projected from a feature directly introduced by the applied argument *hydropicis*, and hence there is no Appl head in need of lexicalization. Finally, *circum-* lexicalizes the lower span Place > Locus, still complying with Specificity.

The verb *circumdo* allows us to explore a different case of a *circum*-predicate licensing a p-dative:

- (52) *Quod sua fraterno circum-det brachia collo.*
 that her.ACC.PL brother's.DAT around-give.SBJV.3SG arm.ACC.PL neck.DAT
 'For her to put her arms around her brother's neck.'
 (Ov. met. 9, 457)

I take the base verb *do*, the functional verb of transferral in Latin, to be able to lexicalize the whole span Voice > v > Path > Appl > Place > Locus. I assume that there is no conceptual component to *do*, its semantics boiling down to that inherent to the nodes it lexicalizes, i.e., a caused change of location entailing change of possession. Since *do* lexicalizes Appl, this feature may project as a head. In the case of *circumdo*, *do* 'give' lexicalizes a shorter span: Voice > v > Path > Appl, and the span Place > Locus is lexicalized by *circum-* 'around', also as allowed by Specificity. Since Path and Place lexicalize independently, Appl is allowed to project.

(53)

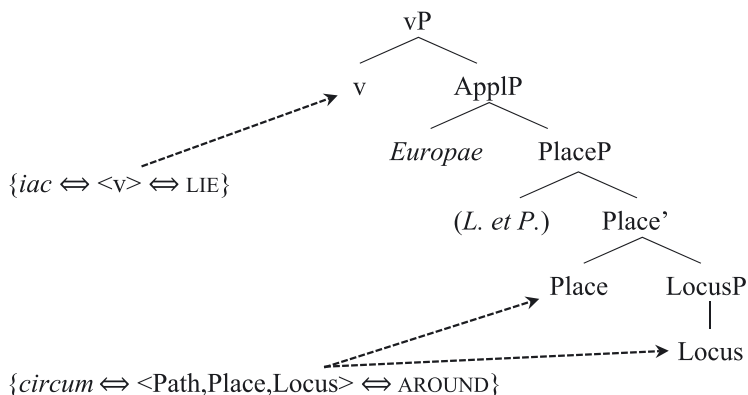


Finally, we also expect *circum*-predicates involving stasis, i.e., lack of movement, to license the p-dative.

- (54) *Et Lycaonia et Phrygia [...] circum-iacent Europae.*
 and Lycaonia.NOM and Phrygia.NOM around-lie.3PL Europe.DAT
 ‘Both Lycaon and Phrygia lie around Europe.’
 (Liv. 37, 54, 8)

In these cases, again, there is no need for a lexicalization of Path and Place via the same exponent, since Path is not present in the configuration. This allows ApplP to project above PlaceP, the trivial span *v* being lexicalized independently by the base verb, and *circum* lexicalizing the span *Place* > *Locus*:

(55)



6 Conclusions and remaining issues

P-datives appear with prefixed verbs and are interpreted as the ground of the preverb. However, only preverbs denoting topological properties of a location, be this a location in a non-dynamic eventuality (location), or a final or initial location of movement (goal and source, respectively), license p-datives. This leaves out all route preverbs except *circum-* ‘around’, which has been shown to be licensed both in predicates with no location entailed, in which it cannot coappear with a p-dative, and in predicates identifying a location (final or not), in which it may coappear with a p-dative.

The p-dative is introduced as the specifier of an ApplP, the Appl feature relating entities with locations, codified by PlaceP. PlaceP embeds a null nominal of relational semantics, Locus, denoting a spatial region. The p-dative, is interpreted as a possessor of Locus, and, by inference, as the ground of the spatial relation. Appl is compatible with preverbs lexicalizing a Place head, since the semantics of Appl requires a static predication relationship. This explains why the p-dative may appear with predicates involving a location, a goal, or a source preverb. Appl is not compatible with predicates where Place is not projected, among others, those involving a route preverb like *per-* ‘through’, *praeter-* ‘past’, *tra(ns)-* ‘across, over’, and the instances of *circum-* ‘around’ denoting a trajectory rather than a location.

A configurational approach to the difference between locations, goals, sources, and routes has been assumed, based on that proposed by Pantcheva (2011). However, it has been shown that a more parsimonious system, comprising an ontology of only two adpositional heads, Place and Path, suffices to yield, via configuration, all that variation in spatial relations, and suggests a way to treat certain patterns of case assignment in Latin – and also in German – that are not evidently derived within the system developed by Pantcheva. Thus, for instance, the fact that source relations involve a Place head, similarly to pure locations, explains why in these two languages source and location prepositions ordinarily assign the same case (ablative in Latin and dative in German). Relatedly, a natural explanation emerges for the accusative marking of both goals and routes (also in both Latin and German): both spatial relations involve a Path as their highest head.

The analysis supports a Spanning approach to the morphology/lexicon-syntax interface. Thus, lexical items are endowed with syntactic features licensing their use in the lexicalization of the structures generated by syntax, and this explains the different properties of location, goal, source, and route preverbs. However, the system is flexible enough to explain the ambivalent behaviour of *circum-*, which can lexicalize Path and Place or just one of those heads (in addition to Locus).

Some challenging issues remain for future research. An interesting one is that of preverb stacking. The system developed here allows for more than one preverb for a single verb, and Latin does show cases of stacking, as in *circum-in-icio* “around-in-throw” ‘throw up all around’, *per-in-undo* “through-in-flow” ‘overflow or inundate completely’, or *ad-in-do* “at-in-give” ‘put in besides’. For some of these verbs the most external preverb, due to its adverbial meaning, can be argued to be merged above the vP, i.e., to be superlexical (cf. footnote 10). However, in cases like *ad-in-do* this is not obvious and their syntactic configuration and their ability to sustain p-datives deserve exploration.

Another challenge that is not directly related to the syntax of the p-dative regards a certain prediction emerging from the theory of case assignment by the adpositional projections (Path and Place), as entertained in Section 4. According to that theory, route preverbs like *circum-* bestow accusative onto their ground DPs, and that accusative DP may well coappear with another one denoting the figure – see, for instance example (15) in Section 2. Nothing in the theory impedes that goal preverbs, also assigning accusative to their grounds, equally appear in constructions with two accusative DPs, one denoting the figure, and the other one denoting the ground. However, to the best of my knowledge, this is not attested. Rather, the ground, if expressed, must be introduced by a preposition if the figure surfaces as an accusative DP. For instance, in the next example excerpted from Lehmann (1983: 152), with figure *hunc* ‘this one’, the ground *collum* ‘neck’ is introduced by the preposition *in*. We do not find any similar examples without *in*:

- (56) *Hunc in collum [...] im-pone.*
 this.ACC in neck.ACC in-put.IMP.2SG
 ‘Put this one onto my neck.’
 (PLAUT. Persa 691–692)

Lehmann (1983: 153–154) had already noted how rare the construction with a figure accusative DP and a ground accusative DP is, and, although he points out that it is restricted to a few preverbs, he fails to identify them by their semantics. At this stage I can only venture a possible way to solve this conundrum. The key may well be the fact that preverbs allowing a goal interpretation correspond to prepositions that actually do not assign case of themselves. Rather, as shown in (33)a and (34)a, in Section 4, they appear with an accusative DP when they are interpreted as goals and with an ablative DP when they are interpreted as locations (with the cumbersome exception of *ad* ‘at, next to’, which always assigns accusative – see footnote 11). By contrast, route preverbs correspond to prepositions that always assign accusative. Assuming that preverbs start their life in the tree as prepositions, route ones manage to assign (inherent) accusative directly to their ground DPs, whereas those expressing goals do not, and the ground DP must therefore be

introduced by a preposition, as in (56), or else is forced to obtain accusative from an active Voice head (cf. Chomsky's [2000] *v*), as in the next example, with ground *domum* 'house':

- (57) *Tu illius domum in-ire [...] voluisti.*
 you.NOM that.GEN house.ACC in-go.INF want.PRF.2SG
 'You yourself wanted to enter his house.'
 (Cic. Deiot. 8)

Since there is only one accusative-assigning head, Voice, there can only be one instance of this case, barring the double accusative construction with goal preverbs. Evidence for the different nature of the accusative born by ground DPs associated with goal preverbs and that born by ground DPs associated with route preverbs (as in example [15] in Section 2) comes from passivization patterns. While the latter cannot become subjects in passive sentences, as I explored in Acedo-Matellán (2003), the former can, often with a special meaning of the verb, as the next example with *in-eo* 'go in, embark upon' shows:

- (58) *Mors in-itur.*
 death.NOM in-go.PASS.3SG
 'Death is embarked upon.'
 (Sen. dial. 1, 2, 12)

If this idea is on the right track, its implementation would require a rethinking of the theory of case assignment outlined in Section 4, and how it relates to lexicalization, since the preverbs that may govern a ground DP in the accusative, i.e., route preverbs, are precisely those that, by hypothesis, feature a Path head in the feature specification of their lexical entry. I leave this issue for future research.

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