

FROM LOCATIVE TO *DE* DIRECTIONAL PREPOSITIONAL PHRASES IN ROMANIAN

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Abstract. The paper discusses those (syntactic and semantic) circumstances under which Romanian simple spatial prepositions render locative or directional reading of an event. It will be argued that spatial prepositions are always locative, and that the goal of motion interpretation is only available with some subclasses of motion verbs. A (semi)lexical approach to the category of P is adopted, pointing out relevant data concerning what are commonly viewed as ‘functional’ prepositions. Specifically, it will be shown that *DE* and *PE* contribute to the mapping of trajectories of motion events from semantics to syntax.

1. Introduction

Much work has been dedicated to the study of prepositions in the past decades, and linguists have advocated for different views. Grimshaw (1991), Baker (2003) and others favour the view that (almost) all Ps are functional elements (in the extended projection of the noun, just as determiners are). The opposite approach to the category of Ps is the one entertained by den Dikken (2003, 2006), Svenonius (2004), to mention just a few relevant studies in which the authors argue, on the basis of the existence of ‘locative’ (also named ‘static’) and ‘directional’ Ps, and with evidence from English, German and Dutch, that (spatial) Ps are lexical heads to which a number of functional projections may associate. This line of research goes along the analyses of verbal and nominal categories, which have long been decomposed into a lexical layer and several (functional) projections. Van Riemsdijk (1990, 1998) considers spatial Ps as *semi-functional*, while Campos (1991), following Plann (1985), classifies them as *+N neutralized categories*¹. In a recent study on Romanian prepositions, Mardale (2007) analyses all the properties that Ps have in common with lexical or with functional elements and concludes (following Zwarts 1997 and Corver and van Riemsdijk 2001) that prepositions are a **semilexical** category.

In the first part of the present study I wish to strengthen this view by briefly looking at spatial prepositions in Romanian. Some evidence in favour of the (semi)lexical approach is presented below.

(i) Spatial Ps have semantic content. It is a well-known fact that verbs of motion can be each other’s opposites in terms of the *direction* or, more widely, function of the *spatial* properties that they specify. This type of spatial opposition is not specific to the category of Verbs, but it is also a property of Adverbs and Prepositions (the so-called *converse* prepositions²).

- (1) a. rise ≠ fall, ascend ≠ descend, up ≠ down, above ≠ below;
b. enter ≠ leave, inside ≠ outside, into ≠ out of;

¹ Plann notices (in Terzi 2006) similarities that locatives share with both nouns and adjectives, and since the common property of these two lexical categories is the binary distinctive feature [+N] (Chomsky 1970), she concludes that they are specified for +N, *but only* for +N, hence, the term ‘+N neutralized categories’.

² An interesting point to be made is that the use of the converse prepositions is related to the size/dimensions of the two entities that are in a spatial relation. Consider the two sentences in (i):

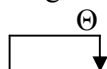
- (ii) a. The pen is *on* the table.
b. ?? The table is *under* the pen.

The sentence given in (b) is grammatically acceptable, but interpretably odd. One can specify the location of a pen in space in terms of its position with respect to a table, but the inverse infelicitous.

c. advance \neq retreat, forward \neq backward, front \neq back.

(ii) Spatial Ps assign a thematic role to their complement, namely that of Location.

(2) Simon is in the castle.



(iii) Spatial Ps can be (contrastively) focused, as in (3):

(3) Simon went IN the castle (not out of it).

These three pieces of evidence support the (semi)lexical analysis that has been proposed for the category of P, which proves to be a heterogeneous class. For reasons of space I will leave aside the evidence for the functional character of (a large subclass of) Ps (e.g. reduced number of elements, very abstract /no semantic content, inability to assign a theta-role). An intermediary assumption is that prepositions that refer to spatial relations can be considered to be a (semi)lexical category, but I will return to this view in sections 6-7.

2. Locative and directional prepositions

From a semantic point of view, *locative*, non-directional spatial prepositions (also referred to in the literature as *static* locatives) denote the position of one or more entities, which remain in the respective location or configuration (if more than one object or entities are involved) throughout the event time. The function of these prepositions is to locate a (movable) object/entity (the *figure*) of small dimensions of unknown position with respect to a generally larger and more stable object (the *landmark*) whose position in space is known. The Figure ('Simon' in (2) above) is usually mapped into the subject position, while the landmark object is the direct object of the clause. *Directional* prepositions entail a change in location of the object/entity along a trajectory, or *path*. Languages differ in their strategies to express directed motion, as it was pointed out in the literature of the past decade (Koopman 1997, Kracht 2002, Noonan 2006, etc.)³.

One important distinction between the two major subclasses of spatial Ps is that locative prepositions, but not the directional ones, can appear as complements of stative verbs such as *be*, *remain*, *stay*⁴:

- (4) a. The cat was in/on/under/behind the box.
b. *The cat was into/onto/from/out of/through the box.

One approach in the literature is that the prepositions in (4a) are not purely locative, in the sense that they can (always) be interpreted as directionals (in those languages in which there is one and the same overt realization of static and Goal of motion directional prepositions, i.e.

³ E.g. verbal prefixes in Russian, cf. Markovskaya (2006), Accusative case in German (vs. Dative with locatives), cf. van Riemsdijk (2008), etc.

⁴ There are, however, constructions in which we do find a PP complement of *be* introduced by a directional preposition (as Norbert Corver pointed out to me):

(i) John was very much *into* gambling.

However, the preposition in (i) does not refer to a spatial relation between the subject and the object of the clause, nor to a change in location of the subject during an event of motion. Rather, the PP predicate denotes a property of John, and 'be into something' is possibly listed in the lexicon as such.

English or Romanian) when combined with verbs of directed motion. Thus, Ps such as *in* and *on* are viewed as *ambiguous* (Koopman 1997, van Riemsdijk and Huybregts 2001, and others). Moreover, the same authors claim that some languages permit directional prepositions (of the (2b) type) to combine more or less freely with any verb of motion (in Germanic languages, Chinese, Finno-Ugric), and that there are other languages in which a directional interpretation of prepositions is more restricted (Romance, Japanese, Korean, Semitic). On the other hand, Folli (2002), Zwarts (2005, 2006), Noonan (2006), Gehrke (2005 and subsequent work) claim that the English prepositions *in* and *on* are *purely locative* (contra van Riemsdijk and Huybregts 2001) and others), which is why an *in* PP or an *on* PP cannot render directionality (nor telicity, for that matter) with some classes verbs of motion.

In the attempt to point out some peculiarities of how an event of motion is mapped and interpreted I will confront English (from the Germanic branch) and Romanian (a member of the Romance family). First of all I will present some data pointing at the similarities and the differences with respect to the subclasses of motion verbs that are able to render a Goal interpretation in the two languages, and propose a tentative analysis (section 5) discarding the *ambiguous* view of simple spatial PPs and favouring the *purely locative* one. Secondly (section 6), I will show how Source of motion is derived in Romanian, an observation which will prove to be crucial for the (semi)lexical analysis of spatial prepositions. The last section will consider another Romanian preposition which is relevant for the discussion, namely *pe*.

3. Subclasses of motion verbs

A first observation is that English has an inherent goal PP, namely *to* (in contrast with the ambiguous Romanian *la*, Italian *a*, French *à*). Thus, *into* and *onto*⁵ also introduce a Goal of motion. Romanian has to use other means to render directionality with manner of motion verbs ((6.b), (6.e)).

- (5) a. Mary jumped into the lake. – dir/*loc
 b. Mary danced into the room – dir/*loc
- (6) a. Maria a sărit în lac. – ambiguous (dir/loc)
 Maria aux jumped in lake
 b. Maria a intrat în lac sărind. – dir
 Maria aux entered in lake jumping
 c. Maria a dansat în cameră. – loc/*dir
 Maria aux danced in room
 ‘Maria danced inside the room’
 d. Maria a intrat în cameră dansând. - dir
 Maria aux entered in room dancing

One contrast between English and Romanian is observed with some verbs of motion such as *swim*, *run*, *walk*, *dance*, *crawl* (henceforth *run*-verbs). In (8) the *în* and *pe* PPs can either denote the endpoint of a motion event or its location:

⁵ Higginbotham (2000) labels *into* and *onto* ‘accomplishment prepositions’. Cinque (2007fn. 16) refers to a very recent study by Noonan suggesting that these complex prepositions are formed by incorporation of a Pstat into a Pdir, incorporation that is subject to a reversal of the (bound) morphemes, given the universal hierarchy of the PP projections: [PPdir from [PPstat AT [DPplace [... [... [... PLACE]]]]]]].

- (7) a. John ran in the forest. – loc⁶/*dir
 b. John crawled on the roof. – loc/*dir
- (8) a. Ion a alergat în pădure. – dir⁷/loc
 Ion aux run in forest
 b. Ion s-a tîrît pe acoperiș. – dir/loc
 Ion refl- aux crawled on roof

This observation holds only for *run*-verbs, as Gehrke (2006) pointed out, but not for (a small class of) verbs of motion such as *kick* (non-iterative), *jump*, *fall* (henceforth *jump*-verbs), which allow both non-directional and goal of motion readings in English:

- (9) John jumped on the porch.
 ⇒directional: John jumped and ended up on the porch.
 <-> locative: John jumped while being on the porch.
- (10) John kicked the ball in the yard.
 ⇒directional: John kicked the ball and the ball ended up in the yard.
 <-> locative: John kicked the ball while being in the yard.

Unsurprisingly, Romanian also allows both readings with *jump*-verbs:

- (11) Ion a sărit pe verandă. – dir/loc
 Ion aux jumped on porch
- (12) Ion a aruncat mingea în curte. – dir/loc
 Ion aux threw ball-the in yard

The readings of (11) and (12) are identical to the readings I pointed out for the English sentences in (9) and (10), respectively.

Looking closely to some verbs in Romanian corresponding to the ones mentioned under *run*-verbs for English, we notice that some of the *run*-verbs have a particular behaviour in Romanian⁸ with respect to what has been noticed in (8) above. Consider (13) versus (14):

- (13) John skied in the forest. – loc/*dir
- (14) a. Ion a schiat în pădure. – loc/*dir
 Ion aux skied in forest
 b. Ion s-a plimbat pe plajă. – loc/*dir
 Ion refl-aux strolled on beach

⁶ Contrast (7a) (repeated here as (i)) with (ii) below:

- (i) John ran in the forest. – locative
 (ii) John ran into the forest. – directional

⁷ Some speakers of Romanian do not seem to accept the directional reading of (8a), but only the locative one. This is maybe due to the fact that ‘the forest’ is a *landmark object* of considerable dimensions and thus the locative interpretation is preferred. A much more clear example for the point that I wish to make would perhaps be *Ion a alergat în casă* (‘John ran in house’) where the intuitions favour the directional reading (but do not exclude the locative one).

⁸ The distinction has also been noticed for Italian (Folli 2002):

- (i) Gianni è corso nel bosco. (directional (telic), aux. *essere* ‘to be’) – ‘run’
 (ii) Gianni ha corso nel bosco. (locative (atelic), aux. *avere* ‘to have’)
 (iii) Gianni ha/*è passeggiato nel bosco. (only locative, *avere*) – ‘stroll’

We can verify syntactically our intuition by applying the durative adverbial *for X Time* or the time-frame adverbial *in X Time* tests; the adverbial modifier *in X Time* is a measurer of the duration of an event before it reaches its final point, while *for X Time*, on the other hand, measures out the duration of a homogeneous process which is not related to any culminating or final point.

- (15) a. Ion a alergat în pădure în 10 minute (directional) / timp de 10 minute (locative)
 Ion aux run in forest in 10 minutes/time of 10 minutes
 b. Ion a schiat în pădure *în 10 minute (directional) /ok timp de 10 minute (locative)
 Ion aux skied in forest in 10 minutes/time of 10 minutes

Other such verbs which only allow for locative interpretation in Romanian are *a înota* ‘to swim’, *a rătăci* ‘to wander’, *a dansa* ‘to dance’ (*ski*-verbs).

When the PP is a complement of inherently directed motion verbs, however, [*în/pe* DP] obligatorily designates the endpoint of a telic motion event. Crucially, the head of the PP is the same (locative) preposition that I have discussed so far, but the only available reading is the directional one:

-a coborî/ieși/intra/pleca/sosi/urca/veni
 ‘to descend/exit/enter/leave/arrive/ascend/come’

- (16) a. Ion a coborît în curte. – goal of motion
 ‘Ion went down in the yard.’
 b. Ion a ieșit pe balcon. – goal of motion
 ‘Ion went out on the balcony.’

Interestingly, with verbs of inherently directed motion the preposition is omitted in English, since the property that distinguishes *enter*-verbs is that they encode the *path* component⁹ of the motion event¹⁰. Thus, the goal of motion argument occurs in direct object position (17b). This is not the case in Romanian, in (18) the presence of the preposition introducing the goal argument is obligatory.

- (17) a. John walked *(to) the store.
 b. The president entered the main hall through the back door.
 (18) Președintele a intrat *(în) sala principală prin ușa din spate.
 president-the aux entered *(in) hall-the main through door-the from back

4. Data summary

English: *run, ski*-verbs + *in/on* → locative
jump-verbs + *in/on* → locative/goal of motion¹¹

⁹ According to two very influential studies by Talmy (1985, 2000) all Germanic languages belong to the class of “satellite-framed languages”, in the sense that the verbal root encodes only *manner* and *motion*, while paths are rendered by other elements, namely particles or affixes (the so-called ‘satellites’). Romance languages are “verb-framed languages” and conflate *motion* and *path* in the verbal root (many verbs of inherent motion are present in these languages) and need to employ other means to express manner of motion

¹⁰ The presence *path* component in the semantics of the verb ‘to enter’ may be due to its Romance origin.

¹¹ The directional reading can be forced with both classes of verbs if *into/onto* are used.

Romanian: *run*-verbs + *în/pe* → locative/goal of motion
jump-verbs + *în/pe* → locative/goal of motion
ski-verbs + *în/pe* → locative
enter-verbs + *în/pe* → goal of motion

The data is relevant for supporting the view (pointed out in 2) that spatial *in* and *on* and their Romanian counterparts *în* and *pe* cannot be ambiguous since the directional reading is not always available in both languages (although with different verb subclasses), whereas the stative reading is available with all subclasses of motion verbs, with the exception of *enter*.

5. Analysis

Syntactically, locative Preposition Phrases (PPs) are associated with Place structure (projected by a *Place* feature), while directional PPs with Path structure which embeds Place structure (Koopman (1997), den Dikken (2003) and others).

-[PathP [PlaceP [DPPlace]]]

There are languages in which both the PathP and the PlaceP (or Pstat, in Cinque's 2007 terms) are overtly realized (the surface order of the morphemes that lexicalize Path and Place is variable):

- (19) *gay-at-ba* (cf. *gay-ba* 'lit.) house-at')
 house-to-at
 'to the house' (Iatmul (Papuan) – Staalsen 1965: 21, in Cinque 2007: 10)

This is however not the case with Romanian Goal PPs (and neither with English, except for *into* and *onto*). I suggest on the basis of the data examined in section 3 and summarized in section 4 (and following Gehrke (2005) and subsequent studies on English, German and Dutch) that whenever directionality is one of the readings available in Romanian (with *run* and *jump*), *Path* is rendered compositionally by the verb and a **locative PP**. More precisely, the head of PathP (or P_{Dir.}, cf. Cinque 2007) could be a null element, an abstract *TO* preposition that is licensed by the motion verb¹². The same holds for English *jump*-verbs + *in/on*.

Ramchand and Folli (2004) argue that all simple spatial prepositions in Italian are locative¹³ and can give rise to locative (that is, non-directional) interpretations, in the sense that they can all occur as complements of stative predications, whereas the reverse case is unattested. This translates into the generalization that there are no simple Ps in Italian that have obligatory non-stative interpretations. I believe that this generalization holds for Romanian¹⁴, too. This account is strengthened by the fact that there are prepositions that have

¹² This view has been suggested to me by Prof. Cinque, p.c.

¹³ I will not go into details for lack of space. The reader is referred to Ramchand and Folli's (2004) study for arguments and discussion.

¹⁴ It does not hold, however, for English. Compare the following examples:

- (1) a. Dracula walked *to* the castle.
 b.*Dracula was *to* the castle.

Cinque (2007fn. 9) suggests that 'The presence in goal direction contexts of a single preposition (*Ion merge la magazin*, *Ion va al negozio* 'Ion is going to (the) store'), identical to the stative preposition (*Ion este la magazin*,

obligatory locative readings even when combined with verbs of motion (see again the discussion on *swim* verbs in Romanian). Therefore, **all simple spatial prepositions in Romanian are locative; there are no simple spatial prepositions that have obligatory directional interpretation.**

The implication is that there are no ambiguous simple prepositions in the lexicon. Again, when spatial prepositions (in Romanian) introduce a goal of motion complement and thus express the final point of the motion event, *path* is rendered compositionally by the VP complex. The goal PP denotes the endpoint of the movement along the path. Goal PPs change verb aspectuality, adding telicity to the event.

One possible approach is the one put forth in Folli and Ramchand's (2004), namely that goal PPs (derived from locative prepositions) introduce a result state and are crucially dependent on what they label 'Result phrase' in receiving directional interpretation, which means that they obligatorily occupy the complement position of a Result head. I will follow Ramchand (2006), (who in turn was inspired by Dowty (1979), Pustejovsky (1991), Higginbotham (2000)), in claiming that the complex verb types can be decomposed into a *process* and *result state*¹⁵ component.

A directional preposition such as *into* is assumed to be formed by the incorporation of *in* (which has a [+Rp] feature) into the preposition *to* (which has a [+P] and a [+Rp] feature). Ramchand further argues that whenever prepositions seem to have an ambiguous behaviour (both locative and directional), it is because the [Rp] feature is optional. According to Ramchand, verbs of motion in English never license a result phrase as part of their lexical specification, which is instead encoded in the complex prepositional forms. Moreover, 'telos' is also encoded in the PP. The logic is that with events such as 'John *ran* in the forest' the Rp feature is not present, so the preposition is only locative and gives rise to locative interpretation.

My proposal is that (at least) in Romanian no optional feature is involved. Simple spatial prepositions always license a Place¹⁶ structure. Whenever the verb encodes a resultative phase in the sense of Pustejovsky (1991) as given in (20), that is whenever a *ResP* is projected in the verbal structure the (null) Path head in the internal structure of a PP is licensed and feature-checking takes place.

(19) (causing subevent) [process subevent (result state)]

6. Source of motion

Romanian lexicalises source of motion PPs according to the generalization in (21)¹⁷:

(21) [PathP DE [PlaceP [DP]]]

(22) a. Ion merge la școală.
Ion goes *TO* at school
'Ion goes to school'

a'. Ion vine de la școală.
Ion comes *DE* at school
'Ion comes from school'

Ion è al negozio 'Ion is at (the) store', can be taken to mean that the goal direction preposition is non pronounced', given the (universal) hierarchy of the projections inside a PP (see fn. 6).

¹⁵ A third projection (the highest) in the structure proposed by Ramchand for all event types is that of the *initiator*, namely the Cause Phrase, but this is not relevant for the present discussion.

¹⁶ I will use the labels proposed in Koopman (1997).

¹⁷ Cf. Zegrean (2007) for a (non-exhaustive) list of Source PPs in Romanian. English does not display any such pattern, consider *at-to-from*, *in-into-out of*, *near-near (to)-away from*, etc.

verb of motion is combined with a spatial prepositions the default directionality always tends towards the positive phase that indicates goal. What *de* does is to specifically prevent from this to happen, pointing the vectors *down*, *left* or *back*.

7. Another case of semi-lexical P in Romanian

Some more evidence in favour of a semi-lexical view of Ps comes from the distribution and interpretation of projective¹⁸ locative prepositions ('under', 'over', 'across', etc.) that are also compatible with directional readings. With motion verbs indicating manner English allows for two interpretations, none of which is, however, a goal of motion reading:

(25) The boat floated under the bridge. – locative/dir (route)

The PP in (25) does not designate the final point of the motion path (some point located under the bridge)¹⁹, but rather the trajectory of the movement from one side of the bridge to the other. Interestingly, Romanian has a different means to express route directionality, disambiguating between the two readings, namely by employing the multi-functional preposition *pe*.

- (26) a. Barca a plutit *sub* pod. – locative
 boat-the aux floated under bridge
 b. Barca a plutit *pe sub* pod. – dir (route)²⁰
 boat-the aux floated *pe* under bridge

With a different choice of the verb, however, the *sub* PP may also indicate goal of motion (27a), apart from the locative reading. Again, adding *pe* conveys route directionality (17b):

- (27) a. Mingea s-a rostogolit *sub* masă. – locative/dir (goal)
 ball-the refl-aux rolled under table
 b. Mingea s-a rostogolit *pe sub* masă. – directional (route)²¹
 ball-the refl-aux rolled *pe* under table

The data in (26) and (27) indicates that the 'functional'²² preposition *pe* is apt to add (route) directionality, much as *de* imposed source of motion.

In the spirit of (24a) and (24b), in (28) a proposal for the representation for a route directional is schematised. The positive or negative value of the two phases is

¹⁸ Gehrke (2006) argues that the "definition of projective modifiers [...] additionally involves a certain axis which can be modelled along the lines of three orthogonal unit vectors in the vector space V for *up*, *right* and *front*. [...] It is this additional axis element in the definition of projective modifiers that enables these placePs to have a directional trajectory reading (but crucially not a goal reading), since this axis provides information about the direction from the reference object in space. Such extra (directional) information is absent in non-projective modifiers".

¹⁹ Folli and Ramchand (2004) argue for a goal of motion reading of (25), but their interpretation seemed inadequate to my English informants.

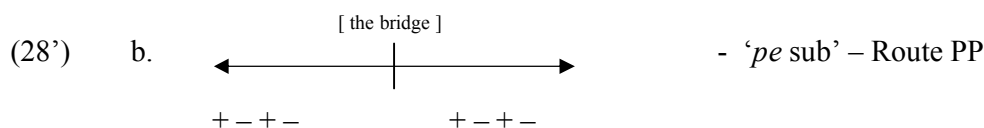
²⁰ A route directional indicates the sets of positions of an entity *during* an event of motion (without expressing its endpoint).

²¹ Ramchand and Folli (2004) also observed that in Italian *La palla rotolò sotto il tavolo* (The ball rolled under the table) is ambiguous between a goal of motion and a locative reading, contrasting this example with *La barca galleggiò sotto il ponte* (locative) and *La barca passò sotto il ponte galleggiando* (goal of motion).

²² Cf. Mardale (2007) for the functional uses of *pe*.

interchangeable. The additional morpheme *pe* (literally ‘on’) marks the landmark as a one-dimensional object reduced to a point in space, its boundaries are fused. Again, the vectors point (by default) upwards, toward right or front, but in this case there is a symmetry between *up* or *down*, *right* or *left*, and *front* or *back*, which does away with the directional opposition.

- (28) a. Pescarul a trecut *pe sub* pod. – directional (route)
 ‘The fisherman passed under the bridge’.



I interpret *pe* as an instantiation of P_{Path} encoding route directionality, whereas *de* encodes source of motion. *Pe* appears to combine only with projective spatial prepositions (see fn. 18)²³.

8. Conclusions

The central aim of the paper was to show how Romanian spatial prepositions contribute semantically to the mapping of events of motion. Within a fine-grained view of motion verbs it was possible to conclude that these Ps are purely locative and can only introduce the spatial endpoint of an event with some classes of verbs. However the semantics of the motion verbs is irrelevant for events the initial point of which is introduced by a source of motion PP. Romanian Source PPs are morphologically complex, invariantly lexicalising P_{Path} as DE. The final point was that ‘functional’ DE and PE actually have some lexical content when introducing a Place DP.

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²³ *Ion a trecut pe la tine* (Ion aux passed *pe* at you, ‘Ion passed by at your place’) is an instance of *pe* modifying a non-projective preposition. I take it to encode different semantics here, namely it spells a phase of the path. I will leave these cases aside.

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