

# Romanian adnominal locative PPs and Argument Structure

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**Abstract:** I discuss the distribution of *de* with adnominal PPs in Romanian. I argue that *de* is obligatory with locative modifiers attached to nominal projections, with a single exception: inside postcopular indefinites. In the other cases in which *de* is absent, the PP is either argumental or attached to a verbal projection (embedded under a nominalizer or DP-external). In particular, I argue that *de*-less PPs that localize an indefinite object of possession-related verbs are attached to a low projection in the multi-layered argument structure of these verbs, which supports event decomposition in syntax. I analyze *de* as a relativizer that binds the world variable of the locative predication. From the obligatory use of *de*, I conclude that locatives cannot combine with nouns by direct modification.

**Keywords:** adnominal locatives; locative prepositions; argument structure; possession verbs

## 1. Introduction: *de* with adnominal locative PPs

Adnominal locative prepositional phrases in Romanian must be preceded by the functional preposition *de* (roughly equivalent to ‘of’), except in certain environments to be defined below. This requirement holds both for spatial and temporal location (see (1a)-(1b)). Locative pro-adverbials behave like locative PPs with respect to the use of *de* (see (1c)-(1d))<sup>1</sup>.

- (1) (a) Cartea        \*(de) pe        masă        e        veche.  
         book-the        of        on        table        is        old  
         ‘The book on the table is old.’  
      (b) Faimoasa        erupție        din /        \*în        79 a        fost        precedată de        multe  
         famous-the        eruption        of-in        in        79 has        been        preceded by        many  
         altele.  
         others  
         The famous eruption in 79 was preceded by numerous others,’  
      (c) cărțile        de acolo  
         books-the        of there  
      (d) filmul        de ieri  
         movie-the        of yesterday

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<sup>1</sup> *de* + *în* ‘in’ is obligatorily contracted into *din* (see (1b)).

In this paper, after presenting the conditions in which *de* does not occur, I will propose an explanation of the distribution of *de*, arguing that when *de* is absent, the locative is either inside a verbal projection embedded under a nominalizer or outside the DP. The cases of DP-external placement are particularly interesting because they lead to a number of conclusions about clause structure in general, supporting a multi-layered syntactic projection of verbal argument structure and the existence of a special position for the restriction of clause-level quantifiers. I will then propose an analysis of adnominal *de*, arguing that its role is to bind the situation variable of the locative predication.

## 1.1 Adnominal *de* vs. ablative *de*

Before pursuing our investigation of the adnominal *de*, it should be noticed that there is a different *de*+PP/Adverbial-construction, which expresses Source (the initial state of a change-of-place event, and other arguments or adjuncts treated as starting points – e.g. source of information, temporal starting point of an event). Romanian does not have a simple preposition “from”; the ablative requires decomposition into Path+Location:

- (2) (a) Au venit de pe munte / de la școală/ din  
have.3PL come from on mountain from at school from-in  
Italia/ de acolo.  
Italy from there
- (b) Am aflat-o de la el.  
have.1SG learned-it from at him  
‘I learned it from him.’
- (c) Sunt aici de la ora 5.  
am here from at hour-the 5  
‘I’ve been here since 5 o’clock.’

It is likely that adnominal *de* originated in this ablative *de*. Note indeed that ablative PPs, in languages in which they are distinct from adnominal locatives (e.g. English), can occur as nominal modifiers, in order to convey the fact that the spatial relation holds at times previous to the time of the matrix:

- (3) the plants {from / in} your garden

Romanian differs from English in that the mere use of the locative preposition ‘in’ in (3) is not possible, so that the contrast in (3) cannot be expressed in Romanian (both ‘from’ and ‘in’ are rendered as *din* = *de* + ‘in’).

## 1.2 Situations in which adnominal *de* is not used. Towards a first generalization

The research on Romanian nominalizations (Cornilescu 2001, Cornilescu et al. 2013) has established two situations in which *de* does not occur with adnominal locatives:

- (i) With locative modifiers inside complex event nominalizations in the sense of Grimshaw (1990) – examples (4) show typical complex event nominalizations, the ‘long

infinitive’ and the nominal supine; they contrast with the examples in (5), with simple event nouns, in which *de* is required:

- (4) (a) Interpretarea operei Aida la Covent Garden a  
 performance-the opera-the.GEN Aida at Covent Garden  
 fost memorabilă.  
 been memorable  
 ‘The performance of the opera *Aida* at Covent Garden was memorable.’
- (b) Cântatul lui în baie mă enervează.  
 singing-the his in bathroom me annoys  
 ‘His singing in the bathroom annoys me.’
- (5) (a) Interpretarea \*(de) la Paris a actorului a dezamăgit.  
 performance-the of at Paris GEN actor-the.GEN has disappointed  
 ‘The actor’s performance in Paris was disappointing.’
- (b) Ai auzit declarația din / \*în parlament a  
 have.2SG heard declaration-the of-in in parliament GEN  
 prim-ministrului?  
 prime-minister-the.GEN  
 ‘Did you hear the prime minister’s statement in the parliament?’

(ii) With locative arguments (complements), including arguments of simple event nominals<sup>2</sup> and non-eventive nominals:

- (6) (a) Vizita la Luvru a durat toată ziua.  
 visit-the at/to Louvre has lasted whole day-the
- (b) distanța între cele două puncte  
 distance-the between the two points

To these data known from the literature, I add some further data which can be subsumed under (ii): even with nouns which are not relational, *de* is absent with locatives that have a quasi-argumental interpretation, specifying one of the arguments of a relation implied by the lexical-conceptual structure of the noun. This may explain the contrast between (7a,c) and (7b,d):

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<sup>2</sup> *Vizită* in (6a) is not a complex event noun, as shown by the fact that the object of the visit (the museum) does not surface as a genitive and also by the fact that locative modifiers take *de* – see (i), which has a temporal location modifier introduced by *de*:

- (i) vizita la muzeu de sâmbăta trecută  
 visit-the at/to museum of Saturday-the last

The complex event noun corresponding to *vizita* ‘to visit’ is *vizitare*, which takes a genitive object and, correlatively, a *de*-less locative modifier:

- (ii) vizitarea muzeului sâmbăta trecută  
 visiting-the museum-the.GEN Saturday-the last

- (7) (a) podurile peste Dunăre  
bridges-the above Danube
- (b) norii \*(de) peste vale  
clouds-the of above valley
- (c) calea ferată între Bucureşti şi Ploieşti  
road-the rail between Bucharest and Ploieşti
- (d) casa {dintre / \*între} copaci  
house-the of-between / between trees  
'the house between the trees'

*La* 'to, at' lacks *de* when it does not express location, but rather purpose or orientation:

- (8) (a) cheia la uşa aceasta  
key-the to door-the this  
'the key to this door'
- (b) camerele la stradă  
rooms-the to street  
'the rooms to the street'

Assuming that complex event nominalizations involve verbal projections (v, maybe Asp) embedded under a nominalizer head (see Borer 1994, Fu, Roeper & Borer 2001, Alexiadou 2001, Cornilescu 2001, Alexiadou et al. 2007), the first situation of absence of *de* (see (4)) can be explained by the fact that the locative modifies a *verbal*, rather than a nominal projection. As for (ii), the data in (6) and (7) show that *de* is only present with *bona fide* modifiers, excluding arguments as well as quasi-argumental PPs. We come thus to the following generalization:

- (9) A locative *modifier* inside a *nominal* projection must be marked by *de*.

## 2. Further situations in which *de* does not appear

Recent studies (Giurgea & Mardale 2013, Mardale 2013) have pointed out some data which appear to be exceptions to (9) and concluded that there is a connection between the presence of *de* and specificity:

(i) *de* does not appear with non-specific objects of intensional verbs (see (10) vs. (11)) and of verbs related to possession (see (12)):

- (10) Ion doreşte/ vrea/ caută o casă la munte  
Ion desires wants looks-for a house at mountain  
'Ion wants/is looking for a house (that should be) in the mountains.'
- (11) Ion doreşte/ vrea o casă de la munte  
Ion desires wants a house of at mountain  
'Ion wants a certain house, which is in the mountains.'

(12) (a) Ion a cumpărat/ are o casă la București.  
Ion has bought/ has a house at Bucharest

(b) Ion are adresa la București  
Ion has address-the at Bucharest

(ii) *de* can be absent with generic DPs:

(13) (a) Casele la București sunt scumpe.  
houses-the at Bucharest are expensive  
'Houses in Bucharest are expensive.'

(b) Un apartament la București costă mai mult decât o casă la Slobozia.  
an apartment at Bucharest costs more much than a house at Slobozia  
'An apartment in Bucharest costs more than a house in Slobozia.'

(iii) *de* can be absent inside indefinites in predicative position:

(14) Limoges e un oraș în Franța  
Limoges is a city in France

In this article, I will argue that (i) and (ii) (examples (10), (12) and (13) above) do not constitute exceptions to the generalization in (9), because the locative PPs are in fact external to the DP. The only true exception remains (iii), an issue which I will address in the end of the paper, after I develop an account of the construction with *de* which explains the specificity effect found in (11).

### 3. Locatives in possessive predications

In this section, I will argue that the locatives without *de* in (10)-(12) above (point (i) in section 2) are in fact external to the DP. After presenting the evidence for their DP-external placement (section 3.1), I will make a hypothesis about the position that these locatives occupy in the clause. Before pursuing the discussion, it is important to notice that the verbs in the examples (10)-(12) can all be considered verbs related to possession: 'want something' is 'want to *have* something', 'look for *x*' in (10) is 'try to *get* *x*'. The object of the verbs in (10) ('want', 'look for') is interpreted as possessed by the subject in the situation that constitutes the goal of the action. .

#### 3.1 Arguments for the DP-external placement of the *de*-less locative

Extraction facts show that *de*-less locatives in (10) and (12) are DP-external. Thus, they can undergo wh-movement (see (15a), (16a)), scrambling in the postverbal field (see (17a)), topicalization (see (18a)), whereas adnominal *de*-PPs (which are of course DP-internal, as shown by the presence of *de*) as well as other adnominal adjunct PPs can undergo none of these movement operations (see (15b-d), (16b-c), (17b-c), (18b-c)):

(15) (a) Unde îți dorești o casă?  
where you.DAT wish.2SG a house  
'Where do you want (to have) a house?'

- (b) \*[De unde]<sub>i</sub> îți dorești [o casă t<sub>i</sub>] ?  
 of where you.DAT wish.2SG a house  
 Intended meaning: “Where is the specific house you wish?”
- (c) \*[Cu ce]<sub>i</sub> îți dorești [o casă t<sub>i</sub>] ?  
 with what you.DAT wish.2SG a house
- (d) Am invitat [prieteni din facultate] \*[De unde]<sub>i</sub> ai invitat  
 /  
 have.1 invited friends of-in faculty of where have.2SG invited  
 [prieteni t<sub>i</sub>] ?  
 friends  
 ‘I invited friends from the faculty. / (Intended meaning) Wherefrom were the friends you invited?’
- (16) (a) Unde are o casă?  
 where has a house
- (b) \*[De unde]<sub>i</sub> a desenat [o casă t<sub>i</sub>] ?  
 of where has drawn a house
- (c) \*[De cine]<sub>i</sub> a recitat [o poezie t<sub>i</sub>] ?  
 by whom has recited a poem
- (17) (a) Am cumpărat la București o casă  
 have.1 bought at Bucharest a house  
 Possible interpretation: ‘I bought a house situated in Bucharest’
- (b) \*Am cumpărat [de la București]<sub>i</sub> [o casă t<sub>i</sub>]  
 have.1 bought of at Bucharest a house
- (c) \*Am cumpărat [cu turn]<sub>i</sub> [o casă t<sub>i</sub>]  
 have.1 bought with tower a house
- (18) (a) La București, Ion are / a cumpărat o casă  
 at Bucharest Ion has / has bought a house  
 Possible interpretation: ‘Ion has/bought a house situated in Bucharest’
- (b) \*[De la București]<sub>i</sub>, Ion are / a cumpărat [o casă t<sub>i</sub>]  
 of at Bucharest Ion has / has bought a house
- (b) \*[Cu turn]<sub>i</sub>, Ion are / a cumpărat [o casă t<sub>i</sub>]  
 with tower Ion has / has bought a house

I conclude that displacement facts clearly show that *de*-less locatives with possessed objects are not DP-internal. We have thus a straightforward explanation for the absence of *de* in these cases: the PP is not adnominal.

Note however that displacement of the whole [Object + Locative] constituent is also possible:

- (19) [O casă la MUNTE] mi-aș dori / a cumpărat.  
 a house at mountain me.DAT-would.1SG wish / has bought

‘It is a house in the mountains that I wish / that (s)he bought.’

An explanation of this fact will be provided by the syntactic analysis that will be developed in the following sub-section: I will argue that the locative forms a small clause with the possessum. It is this small clause that is raised in (19).

### 3.2 Syntactic analysis

If the locative in (10) and (12) is DP-external, which position does it occupy? Notice that examples such as (20), both in Romanian and in English, are ambiguous: *in Paris* (Ro. *la Paris*) can locate either the buying event, or the possessum (the house):

- (20) Ion a cumpărat o casă la Paris.  
Ion has bought a house at Paris  
‘Ion bought a house in Paris.’

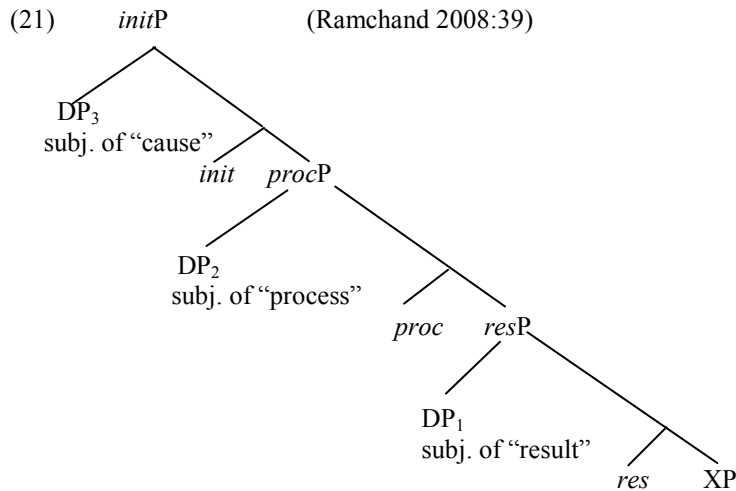
Precisely because in the second reading, the locative only modifies the possessum, it has been considered adnominal by the studies reviewed in section 2. But the evidence in 3.1 has shown that it cannot be adnominal.

The solution I propose relies on event decomposition in syntax. Verbs expressing changes can be semantically decomposed into sub-events (see Jackendoff 1976, Rappaport-Hovav & Levin 1998, a.o.). A number of authors have proposed that the internal structure of complex events is reflected in the syntactic structure (see Hale & Keyser 1993, Ritter & Rosen 1998, Travis 2000, Ramchand 2008, a.o.). What is relevant for our purposes is the distinction between a phrase expressing the process and a phrase expressing the result. The idea is that the ambiguity in (20) is due to the existence of two possible attachment positions for the locative, to the phrase denoting the buying process and to the phrase denoting the result.

For concreteness, I will adopt Ramchand’s (2008) framework, one of the most elaborated theories of argument structure that uses event decomposition in syntax. According to this theory, verbs can project all or a part of the structure in (21) (where *initP* = Initiator Phrase, *procP* = Process Phrase, *resP* = Result Phrase)<sup>3</sup>:

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<sup>3</sup> *ProcP* is the dynamic part of the event. *ResP* is a state. The projection of *ResP* is characteristic of achievements. *InitP* corresponds to the projection that introduces the external argument (Kratzer’s 1996 *VoiceP*, Chomsky’s 1995 *v\*P*).



With the verb *buy*, the result state is a state of possession (the Agent is the possessor of the Theme). I propose that the interpretation of the locative in (20) in which it locates only the Theme is characteristic of structures expressing possession. Note indeed that this is the only interpretation of the locative in the basic possessive clause:

- (22) Ion are o casă în Spania.  
Ion has a house in Spain

The locative in (22) does not localize both of the participants to the possession relation, but only the possessum.

The two readings of the locative in (20) are thus associated to the two different structures given below (in (23a) we have location of the buying event, where the locative modifies ProcP<sup>4</sup>; in (23b), where the locative is inside ResP, it locates the Theme):

- (23) (a) [<sub>InitP</sub> John<sub>i</sub> bought [<sub>ProcP</sub> [<sub>ResP/PP</sub> X<sub>i</sub> HAVE a house] in Bucharest]]  
(b) [<sub>InitP</sub> John<sub>i</sub> bought [<sub>ProcP</sub> [<sub>ResP/PP</sub> X<sub>i</sub> HAVE a house in Bucharest]]]

The co-indexation between the agent of *buy* and the possessor (the subject of the result state) is a lexical property of the verb (Ramchand's system allows an argument to fulfill multiple roles, occupying multiple positions in the argument structure; this possibility is encoded in the verb's lexical entry)<sup>5</sup>:

- (24) [<sub>InitP</sub> Agent<sub>i</sub> [*buy* [<sub>ProcP</sub> (*buy*) [<sub>ResP</sub> X<sub>i</sub> HAVE Theme]]]]

<sup>4</sup> We can also assume that the locative modifies InitP in this reading.

<sup>5</sup> In Ramchand's system, the lexical verb subsequently merges in all the positions of the argument structure, by virtue of its *res*, *proc* and/or *init* categorial features. This implies that instead of HAVE in (24), we must assume incorporation of the possessive relator into the verb *buy*. I keep the notation HAVE in this paper in order to highlight the place in which the possessive small clause is inserted in the verb's argument structure.



As for the [Possessor [Relator Possessee]] structure for possessive small clauses, with the possessor higher than the possessee, Ramchand assumes it for the double object construction, following Pesetsky (1995) and Harley (2002)<sup>6</sup>.

This analysis allows us to explain the generalization that locatives of the type in (10) and (12) are characteristic of verbs related to possession. The proposal is that all these verbs project a possessive small clause in their argument structure.

There are two issues that should be clarified: the way in which the locative combines with the possessive small clause and the way in which the possessive small clause appears in the syntactic structure projected by other verbs related to possession (*offer*, *want*, *find*, etc.).

On the first issue, I propose that the possessive relator, which I notate as HAVE, allows an optional predicative layer which localizes the possessum<sup>7,8</sup>:

(25) [Possessor [HAVE [<sub>PredP</sub> Theme [Pred Location]]]]

There are two reasons for this proposal: first, the fact that the locative only locates the Theme is characteristic to possessive constructions and would not follow if the locative were attached as an adjunct to the whole possessive small clause. Second, there is another construction in which *have* takes a further predicative layer: this is one of the s(tage)-level uses of *have*, where it takes, besides the possessum and the possessor, a predicate applied to the possessum:

(26) (a) Am        cartea    la tine.  
              have.1SG book-the at you  
              ‘My book is with you / at your place.’

<sup>6</sup> Ramchand assumes that role identification is possible only between specifiers; therefore, only the construction with a specifier possessor can be used in the implementation of my analysis.

<sup>7</sup> I will not elaborate here on the nature of the possessive relator. *Have* has been analyzed as a copula that incorporates a locative preposition (whose complement is promoted as the subject) – *be-at*, see Benveniste (1966), Freeze (1992), Den Dikken (1995). Other authors agreed that *have* is a copula incorporating a preposition, but identified the preposition as *with* (see Kayne (1993), Harley (2002), Levinson (2011)). In any case, in (25) we have a different element that localizes the possessee. This shows that possession and locatization should be kept distinct.

<sup>8</sup> Regarding the semantics of the structure in (25), note that the lower predicative layer must transfer up the denotation of the possessed entity (the Theme is an argument of both HAVE and the spatial relation). This can be achieved by assigning a special denotation to the lower Pred, which makes PredP a function that is applied to the higher relation, HAVE, as proposed by Pykkänen (2008) for her low Appl (P represents the denotation of the locative PP, a property obtained from the P-relation by saturating its inner argument; f stands for the relation denoted by the higher head, HAVE, and x for the Theme; I notate the event type as *ev* here, because I am not sure that type *s* is appropriate for events, which might be considered as a sub-type of entities, as shown by eventive nominalizations):

(i) [[Pred]] =  $\lambda P \lambda x \lambda f_{\langle e, \langle e, \langle ev, t \rangle \rangle \rangle} \lambda z \lambda e [ f(e, z, x) \wedge P(e, x) ]$

- (b) Le am pregătite de la ora 5  
 them(FPL) have.1SG prepared.FPL from at hour-the 5  
 ‘I’ve had them prepared since 5 o’clock.’

Notice that the special theme-locating reading of locatives discussed here only appears with indefinite objects (except with the verb *have* in the construction in (26)a and (12)b) – contrary to (20), the locative in (27) can only locate the buying event, not the house:

- (27) Ion a cumpărat casa la Paris.  
 Ion has bought house-the at Paris  
 ‘Ion bought the house in Paris.’

I conclude that the predicative layer in (25) involves an *existential HAVE*-construction. The existence of such a construction is supported by the fact that i(ndividual)-level *have* puts the same constraints on its object as the existential *there is*. This is illustrated in (28): definite objects are fine only with elements that induce an s-level reading – e.g. adverbials that introduces a temporal boundary of the possession state, past tense (see (28a,b), a further s-level predicate (see (26) above) – or in contexts that allow an s-level possession interpretation (see the readings of (28c)):

- (28) (a) Am casa asta ??(din 1989).  
 have.1SG house-the this since 1989  
 ‘ ?? I have this house / I’ve had this house since 1989.’
- (b) Am avut și eu mașina asta.  
 have.1 had also I car-the this  
 ‘I’ve also had this car.’
- (c) Am mașina asta.  
 have.1SG car-the this  
 ‘I have this car.’  
 ≠ I possess this car  
 = This is the car I’m using now

If *have* is a ‘possessive copula’ (a copula incorporating a possessive relator/preposition, see the discussion in footnote 7), the existential possessive construction can be seen as the counterpart of the *be*-existential construction. Notice that *there-is* existentials also allow a locative layer:

- (29) (a) There is a house (on the hill)  
 (b) I have a house (on the hill)

The second task is to show how the possessive layer is projected with the various verbs related to possession which we have shown to allow PPs that locate the possessum. The general idea is that the structure in (25) is embedded, with these verbs, as the lowest level of their argument-structure, as we have already seen with *buy*:

- (30) [<sub>InitP</sub> Agent<sub>i</sub> [*buy* [<sub>ProcP</sub> (*buy*) [<sub>ResP</sub> x<sub>i</sub> HAVE Theme]]]]

With *buy*, I assume that the identity between the Agent and the possessor is a lexical requirement of the verb; when a different intended possessor appears, expressed by a dative, as in (31a), there is a further ApplP that introduces a benefactor which can be understood as the possessor of a subsequent situation (not the one which is the immediate result of *buy*); the benefactor / future intended possessor can also be expressed by a *for*-PP adjunct (see (31b)):

- (31) (a) I-am cumpărat fiului meu o casă la mare.  
 him.CL.DAT-have.1 bought son-the.DAT my a house at sea  
 ‘I bought my son a house at the seaside.’  
 (b) Am cumpărat o casă la mare pentru fiul meu.  
 have.1 bought a house at sea for son-the my  
 ‘I bought a house at the seaside for my son.’

There are however verbs with which the possessor is not identified with the agent; such verbs also allow a locative inside the ResP:

- (32) I-am oferit lui Ion o casă la mare.  
 3SG.CL.DAT-have.1 offered DAT Ion a house at sea  
 ‘I offered Ion a house at the seaside.’

A further difference between *buy* and *offer* is that with *offer* the result state is not actual possession, but modalized possession – the Goal acquires the possibility to become possessor of the Theme. With this proviso, we can represent *offer* as

- (33) [<sub>InitP</sub> Agent [*offer* [<sub>ProcP</sub> Goal<sub>i</sub> (*offer*) [<sub>ResP</sub> x<sub>i</sub> [HAVE Theme]]]]]

With *want*-type verbs (see (10)), the possession predication cannot occur as a ResP because such verbs are stative (stative verbs lack the Proc and Res layers). But a predication structure in the complement of *want* is likely in view of the fact that *want* normally takes clausal complements. *Want* semantically selects propositions; event nouns can be shifted to a proposition interpretation (set of possible worlds in which the event takes place) – thus, (34b) is equivalent to (34a):

- (34) (a) I want them to marry.  
 (b) I want their marriage.

With object-denoting nouns, the proposition is obtained by adding a hidden possessive predicate:

- (35) I want the house = I want to have (possess) the house

As it is highly unlikely that this hidden relation comes from the noun, we must conclude that it is the lexical entry of the verb which introduces it. The possibility of having a locative referring to the desired state, as in (10), supports the idea that the possessive small clause is projected in syntax. Labeling the possessive relator that heads the small clause P, we can represent ‘possessive’ *want* as follows:

- (36) [<sub>InitP</sub> Experiencer<sub>i</sub> [*want* [<sub>PP</sub> x<sub>i</sub> [HAVE Theme]]]]]

The possessive relator can also be overtly expressed by a preposition – the preposition *cu* ‘with’ – if the verb is the light verb *face* ‘do/make’:

- (37) Am făcut-o pe Maria cu o casă la mare.  
 have.1 made-CL.3SF.ACC OBJ Maria with a house at sea  
 ‘I made Maria have a house at the seaside.’

The cases in which the possessive relator is covert and selected by the verb (all the examples we have seen until (37)) can be represented as *incorporation* of P into the V (see Hale & Keyser 1993).

#### 4. Small clauses in the restriction of GEN

The second purported exception to the obligatory use of *de* with locative modifiers inside nominal projections concerns generic DPs – see (13) in section 2; (13a) is repeated below:

- (38) Casele la București sunt scumpe.  
 houses-the at Bucharest are expensive

Here too the locative can be analyzed as DP-external. I propose that the locative is a small-clause whose subject is coindexed with the subject of the sentence and which is attached in a position which is interpreted as the restriction of the GEN operator:

- (39) [ casele<sub>i</sub> [ [x<sub>i</sub> la București] [GEN [sunt t<sub>i</sub> scumpe]]]] =  
 [ casele λx [ [x la București] [ GEN [sunt x scumpe]]]]  
 ‘for any x ∈ [[the houses]], if x is in Bucharest, then, in general, x is expensive’

This analysis is supported by the fact that the subject can be a proper name, which does not allow DP-internal postnominal modification (in (40), we have generic quantification over situations containing Maria, restricted to those placed at the seaside):

- (40) Maria la mare este o cu totul altă persoană.  
 Maria at sea is a wholly different person

As to the precise position in which the small clause occurs, overt adverbs of quantification show that it needs not be adjacent to the adverb:

- (41) Casele pe deal sunt în general însorite.  
 houses-the on hill are generally sunny  
 ‘Houses on a hill are generally sunny.’

I propose therefore that the small clause occurs in a domain of the clause dedicated to the restriction of clausal quantifiers, which is preverbal and can be treated as topic. Its direct association with the adverb of quantification obtains at LF.

## 5. Specificity effects and the status of *de*

The data in section 2, especially the contrast between (10) and (11), suggested that adnominal *de* is somehow connected to specificity. How can we explain this contrast given our DP-external analysis of *de*-less locatives with objects of possession-related verbs?

If locative predications as in (10) are characteristic of *existential* possessive constructions, as argued in section 3, the non-specificity effect is expected. What still remains unexplained is the specificity effect triggered by the use of *de* in (12), repeated below:

- (42) Ion dorește/ vrea o casă de la munte  
Ion desires wants a house of at mountain  
'Ion wants a certain house, which is in the mountains.'

The specificity effect in (42) cannot be simply due to the adnominal position of the PP. We get the non-specific reading with adnominal constituents expressing location if they are realized as relative clauses with the subjunctive mood:

- (43) Ion vrea o casă care să fie la munte  
Ion wants a house which SBJV be.SBJV.3 at mountain

I propose that the specificity effect comes from the fact that DP-internal locative predications have an independent evaluation index – they are evaluated at the real world, which implies that the entity located by the PP must exist in the real world (whereas we get the non-specific reading when the locative predication is evaluated at the worlds of the subject's desires). This interpretive property can be considered as the semantic contribution of *de*<sup>9</sup>. In other words, *de*-phrases are equivalent to indicative relatives. Indeed, (42) has the same interpretation as (44):

- (44) Ion vrea o casă care este la munte  
Ion wants a house which is(IND) at mountain

This interpretative effect distinguishes *de*-locatives from other adnominal intersective modifiers – PPs as well as adjectives:

- (45) Ion vrea o casă cu turn ≠ Ion vrea o casă care **este** cu turn  
Ion wants a house with tower Ion wants a house which is(IND) with tower  
'Ion wants a house with a tower' 'Ion wants a house which has a tower'
- (46) Ion vrea o casă mare ≠ Ion vrea o casă care **este** mare  
Ion wants a house big Ion wants a house which is(IND) big  
'Ion wants a big house' 'Ion wants a house which is big'

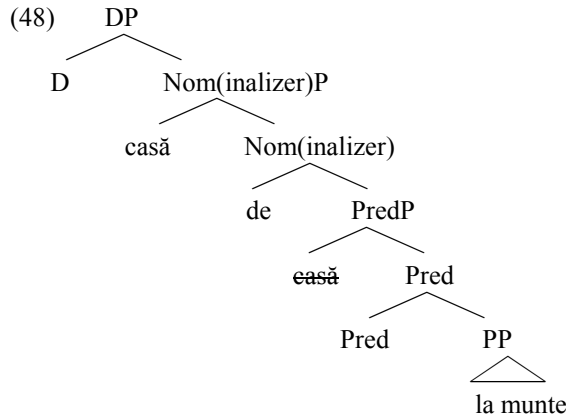
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<sup>9</sup> Treating the world of evaluation as an argument of the predicate, we can say that *de* saturates this argument slot by a free variable interpreted deictically – as the real world by default.

How can this difference be explained? I propose that it comes from the fact that *de*-locatives are reduced relatives, whereas the modifiers in (45)-(46) are *direct modifiers*. The idea is that an independent evaluation world can be introduced by a relative clause construction, but not by direct modification, because it requires a clausal structure. Direct modification relies on Heim & Kratzer's (1998) predicate modification rule<sup>10</sup>. Extending this rule to world variables, I propose that the world argument of the modifier is identified with the world argument of the NP sister (on a par with the individual argument):

- (47) If A is  $\langle e, \langle s, t \rangle \rangle$  and B is  $\langle e, \langle s, t \rangle \rangle$ , then  $[[A\ B]] = \lambda x\ \lambda w\ ([ [A] ](x)(w) \wedge [ [B] ](x)(w))$

I conclude that *de* is a relativizer specialized for locative small clauses. For concreteness, I will adopt a raising analysis of reduced relatives, which has the advantage that *de*, the head which binds the world variable, c-commands the base position of the head noun. I adopt a two-layered analysis of raising relatives, as in Bianchi (1999), and consider the higher head as a nominalizer, as proposed by Bhatt (2002). As for the lower head, in order to distinguish reduced relatives from full relatives, I propose the label Pred:



From the necessary use of *de* with adnominal locative modifiers (the generalization in (9), defended here), I conclude that locative PPs differ from other property denoting expressions (such as adjectives and *with*-PPs) by not being able to combine with the NP by Heim & Kratzer's (1998) Predicate Modification, as direct modifiers. This indicates that they have a richer argument structure – they can take an event as a radically external argument (by “radically external” I mean not generated in an argument position), but not an individual (as opposed to intersective direct modifiers, which do have a radically external argument, if we assume Predicate Modification).

<sup>10</sup> This rule applies when the constituents combined have the same denotation, of the property type  $\langle e, t \rangle$ ; the result is a property that holds of entities which have both properties denoted by the two sub-constituents:

(i)  $[[A\ B]] = \lambda x\ ([ [A] ](x) \wedge [ [B] ](x) )$

## 6. On the absence of *de* in predicative indefinites

From the three possible exceptions to the generalization in (9) presented in section 2, there is one which is not amenable to a DP-external analysis: *de*-less locatives inside postcopular indefinites:

- (49) Limoges e un oraș în Franța.  
Limoges is a city in France.

Example (50) shows that the construction is limited to indefinites:

- (50) Limoges e orașul \*în / din Franța cu cei mai mulți șomeri  
Limoges is city-the in / of-in France with the more many unemployed  
'Limoges is the city in France with the highest unemployment rate.'

Extraction facts show that the locative is DP-internal (unlike those in section 3):

- (51) (a) \*Unde e Limoges un oraș?  
where is Limoges a city
- (b) \*Limoges e în Franța un oraș.  
Limoges is in France a city

The restriction of this construction to indefinites and predicate positions suggest that the functional structure of the DP is involved. Maybe the indefinite article here is not a D (as proposed for predicative indefinites by various researches, see Roy 2013 and references therein) and the binding of the world variable is only possible inside DPs. Therefore, a null variant of the relativizer in (48) is selected, which leaves the world variable unbound. Under this hypothesis, the use of *de* inside indefinite predicates, which is possible, see (52), would correlate with a DP-status of the postcopular indefinite:

- (52) Limoges e un oraș din Franța.  
Limoges is a city of-in France.

I leave a precise analysis of this phenomenon for further research.

## 7. Conclusions

The Romanian data concerning the use of *de* with adnominal locatives provides evidence for: (i) event decomposition in syntax for possession verbs and desiderative verbs related to possession (supporting a multilayered argument structure, such as in Ramchand 2008); (ii) the existence of a special small clause position for the restriction of adverbial quantifiers, including the null quantifier GEN; (iii) the existence of a verbal projection or at least of a verb-type denotation inside complex event nominals.

Conclusions that hold for Romanian in particular are: (i) Locatives require a predicative (small clause) projection in order to take an individual external argument. They can be direct modifiers only of event-denoting projections. (ii) Adnominal *de* with locatives introduces a reduced relative and binds its world/situation variable. Whether (i) holds for other languages is an issue which deserves to be further researched.

## Works Cited

- Alexiadou, Artemis. 2001. *Functional Structure in Nominals: Nominalization and Ergativity*. Amsterdam: John Benjamins.
- Alexiadou, Artemis, Liliane Haegeman, and Melita Stavrou. 2007. *Noun Phrase in the Generative Perspective*. Berlin, New York: Mouton de Gruyter.
- Benveniste, Emile. 1966. *Problèmes de linguistique générale*. Paris: Gallimard.
- Bhatt, Rajesh. 2002. The Raising Analysis of Relative Clauses: Evidence from Adjectival Modification. *Natural Language Semantics* 10: 43-90.
- Bianchi, Valentina. 1999. *Consequences of Antisymmetry: Headed Relative Clauses*. Berlin: Mouton de Gruyter.
- Borer, Hagit. 1994. On the Projection of Arguments. In *University of Massachusetts Occasional Papers in Linguistics 17*, edited by Elena Benedicto and Jeff Runner, 19-48. Amherst: GLSA.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Mass.: MIT Press.
- Cornilescu, Alexandra. 2001. Romanian nominalizations: Case and aspectual structure. *Journal of Linguistics* 37(3): 467-501.
- Cornilescu, Alexandra, in coll. with Carmen Dobrovie-Sorin, Ion Giurgea, Elena Soare, and Camelia Stan. 2013. Deverbal Nouns. In *A Reference Grammar of Romanian. Volume I: The Noun Phrase*, edited by Carmen Dobrovie-Sorin and Ion Giurgea, 663-718. Amsterdam, Philadelphia: John Benjamins.
- Den Dikken, Marcel. 1995. *Particles*. New York: Oxford University Press.
- Freeze, Ray. 1992. Existentials and other locatives. *Language* 68: 553-595.
- Fu, Jingqi, Thomas Roeper, and Hagit Borer. 2001. The VP within Process Nominals: Evidence from Adverbs and the VP-anaphor Do So. *Natural Language and Linguistic Theory* 19: 549-582.
- Giurgea, Ion, and Alexandru Mardale. 2013. Chapter 8 Adnominal Prepositional Phrases, §2.2.1 Local and Temporal Adjuncts. In *A Reference Grammar of Romanian. Volume I: The Noun Phrase*, edited by Carmen Dobrovie-Sorin and Ion Giurgea, 549-554. Amsterdam, Philadelphia: John Benjamins.
- Grimshaw, Jane. 1990. *Argument Structure*. Cambridge, MA: MIT Press.
- Hale, Kenneth L., and Samuel Jay Keyser. 1993. On argument structure and the lexical expression of syntactic relations. In *The view from building 20: Essays in linguistics in honor of Sylvain Bromberger*, edited by Kenneth Hale and Samuel Kayser, 53-109. Cambridge, MA: MIT Press.
- Harley, Heidi. 2002. Possession and the double object construction. *Yearbook of Linguistic Variation* 2:29-68.
- Heim, Irene, and Angelika Kratzer. 1998. *Semantics in Generative Grammar*. Cambridge: Blackwell.
- Jackendoff, Ray. 1976. Toward an explanatory semantic representation. *Linguistic Inquiry* 7: 89-150.
- Kayne, Richard. 1993. Toward a modular theory of auxiliary selection. *Studia Linguistica* 47: 3-31.
- Kratzer, Angelika. 1996. Severing the external argument from the verb. In *Phrase Structure and the Lexicon*, ed. by Johann Rooryck and Laurie Zaring, 109-37. Dordrecht: Kluwer.
- Levinson, Lisa. 2011. Possessive with in Germanic: have and the Role of P. *Syntax* 14 (4): 355-393.



- Mardale, Alexandru. 2013. Romanian Complex Adnominal Prepositional Phrases. *Bucharest Working Papers in Linguistics* 15 (1): 57-69.
- Pesetsky, David. 1995. *Zero Syntax: Experiencers and Cascades*. Cambridge, MA: MIT Press.
- Pylkkänen, Liina. 2008. *Introducing Arguments*. Cambridge, Mass: MIT Press.
- Ramchand, Gillian. 2008. *Verb Meaning and the Lexicon. A First Phase Syntax*. Cambridge: Cambridge University Press.
- Rappaport-Hovav, Malka, and Beth Levin. 1998. Building Verb Meanings. In *The Projection of Arguments: Lexical and Syntactic Constraints*, ed. by Miriam Butt and William Geuder, 97-134. Stanford, CA: CSLI Publications.
- Ritter, Elizabeth, and Sara Thomas Rosen. 1998. Delimiting events in syntax. In *The Projection of Arguments: Lexical and Compositional Factors*, ed. by Miriam Butt and Wilhelm Geuder, 135-164. Stanford, CA: CSLI Publications.
- Roy, Isabelle. 2013. *Nonverbal Predication Copular Sentences at the Syntax-Semantics Interface*. Oxford: Oxford University Press.
- Travis, Lisa. 2000. Event structure in syntax. In *Events as Grammatical Objects: The Converging Perspectives of Lexical Semantics and Syntax*, ed. by Carol Tenny and James Pustejovsky, 145-85. Stanford, CA: CSLI Publications.