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MORPHOSYNTACTIC MISMATCHES REVISITED: THE CASE OF THE ROMANIAN SUPINE

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Abstract: This article proposes a general survey of a supposed mixed category in Romanian, namely the supine. It is shown that what seems to be a mixed verbal-nominal nature is a context-dependent behaviour, determined by syntactic categories that may select a supine form. The core argument is that the two behaviours are associated with different projections. These facts are naturally captured by the theoretical framework of Distributed Morphology. Three forms of Romanian grammar are derived from the same underspecified item, which is a categorially neutral stem feeding derivational and inflectional processes. Arguments are provided from the behaviour of forms which involve the same stem: nominalizations and past participles.

Keywords: morphosyntactic mismatches, mixed categories, participial stem, underspecification, Distributed Morphology

The boundary between inflectional and derivational processes is not always clear. Moreover, sometimes word-formation and inflection are using the same material and the same operations. In some cases, this results in various sorts of mismatches: inflectional (cf. the fact that a form like a participle can project a full VP like in *he kept [vp-pp puttingpp the book behind the couch]*) and categorial mismatches (cf. the double categorization of the English gerund in the structure called “*poss-ing*”).

This presentation is concerned with morphosyntactic mismatches, i.e., mismatches between features that count for the external syntax (distribution) and features that count for the internal syntax. Such cases

are the English “poss-*ing*” gerund or the Romanian supine, which will be our main concern.

This last form brings an interesting case into that picture. Among other syntactic uses, it has one which is a nominalized participle (by a process like “conversion”). This form is clearly used in derivational as well as in inflectional processes, and in this respect, it represents evidence in favor of approaches that try to unify inflectional and categorial mismatches.

So, we will try to take a look at the dual/mixed nature of the supine; determine its relationships with other parts of the system (inflectional and derivational aspects), and find the appropriate framework to fit the facts.

1. What is Romanian supine?

1.1. The core facts about Romanian supine

There are two major syntactic uses of the perfect participle crosslinguistically: (a) perfect verb formation (+ HAVE); (b) passive verb formation (+ BE).¹

Romanian has a **third use of the perfect participle**: the “supine”. The form of past participle in Romanian is used in three types of syntactic environments: nominal, adjectival and verbal. There is, on the one hand, a past participle, with verbal and adjectival uses:

- (1) (a) am cules căpșuni
have picked strawberries
'I have picked strawberries'
(b) căpșunile sînt culese
strawberries-the are picked-agr
'The strawberries are picked'

On the other hand, traditional grammars take some of the contexts of the Romanian participle (preceded by prepositions) to involve a distinct form of the verbal paradigm, called **supine**, considered to have a mixed [+N, +V] nature (cf. (2)-(4)). In (2), the participial form appears in a

¹ Nothing special will be said about the mapping from “participle” to “adjective” (a case of automatic “inflectional mismatch”). We could assume, following Baker (2003), that the participle is in fact “the verbal adjective”.

nominal structure, in combination with a definite determiner, and the complement is assigned genitive case. In (3), the supine follows an aspectual auxiliary, expressing the end of an activity; in this case, it does not take an article, and requires the presence of a marker, a functional “preposition”, *de*. In (4), the supine (expressing the Goal) is preceded by a subcategorized preposition in the complement position of a verb of motion.

- (A) **nominal supine**: D⁰ + participle:
(2) culesul căpșunilor
picking-the strawberries-gen
'strawberry picking'
(B) **verbal supine**: preposition + participle²
B1 participle without D⁰, obligatorily preceded by the “preposition” *de*:
(3) am terminat de cules căpșunile
have finished to pick strawberries-the
'I have finished picking the strawberries'
B2 participle without D⁰, preceded by a subcategorized preposition:
(4) mergem la cules de căpșuni
go-1pl to picking of strawberries
'We are going to pick strawberries'

Let us have a brief look at non-finite forms in Romanian. The emboldened endings are meant to show how these are derived. The infinitive is the root (ending in the thematic vowel, *a/e/ea/i/î*) eventually preceded by a particle *a*, expressing non-finite tense in Romanian (the infinitive is involved in the formation of the future). Tentatively, we may assume that infinitive is imperfective Asp, whereas participle is perfective Asp.

Table 1
Non-finite forms in Romanian

Infinitive	(a) <i>cînta</i> 'sing'	(a) <i>cîntî</i> 'read'	(a) <i>merge</i> 'walk'
Pres. part.	cîntînd 'singing'	cîntînd 'reading'	mergînd 'walking'
Past part.	<i>cîntat</i> 'sung'	<i>cîntît</i> 'read'	<i>mers</i> 'walked'

² The examples illustrate the supine as complement to aspectual verbs. The same form appears in copular structures, reduced relatives, Tough constructions, i.e., in predicative contexts involving (small) clauses in other languages.

There is no (morphological) reason to separate the “supine” from the “participle”, as shown by the fact that the irregularities are exactly the same for the two cases, cf. the “sigmatic” participles *mers*, *cules*.

- (5) *cînta* – *cîntat* – *de cîntat* / *cîntatut*
 sing – sung – to sing / the singing
citi – *citit* – *de citit* / *cititut*
 read – red – to read / the reading
culege – *cules* – *de cules* / *culesul* (**culegut*)
 pick – picked – to pick / the picking
merge – *mers* – *de mers* / *mersul* (**mergut*)
 walk – walked – to walk / the walking

1.2. The problem

We have some theoretical puzzles facing us in the Romanian supine. First, what kind of mismatches can we identify? Should we analyze the supine as a verbal noun, i.e., a mixed category? And, from a purely morphological point of view, what status should be assigned to the “participial morpheme”, in our case AT (or Thematic Vowel + T)?

2. Mixed or underspecified?

2.1. A mixed-category criterion: co-occurrence of different properties

In the generative literature, some verbal nouns have been analyzed as “mixed categories” (+N, +V), for instance the Arabic *masdar* (Fassi Fehri 1991), the Welsh verbal noun (Rouveret 1993) as well as the English gerund. Is the supine also a verbal noun?

A criterion for the mixed character is to find properties of two kinds of projections **in the same projection, at the same time**. For instance, the distribution would be nominal, as for the English gerund, which can appear in contexts excluded by non-nominal projections:

- (6) (a) we were concerned about Pat’s watching television
 (b) *we were concerned about that Pat was watching television

The same type of projection is characterized by internal properties specific for verbs, i.e., accusative case assignment (7a–b) and adverbial modification (7c):

- (7) (a) John’s building a spaceship
 (b) I disapproved of Pat’s watching television
 (c) Pat disapproved of my *quiet / quietly leaving before anyone noticed
 (d) *Pat disapproved that leaving

In (8a–d), we give some other examples of mixed categories, manifesting a “griffon” behavior: a verbal head with hybrid properties—nominalized infinitives in Italian (8a), Spanish (8b) and Old Romanian (8c); Arabic *masdar* (which in fact has more complex properties) is illustrated in (8d):

- (8) (a) *il rivedere un compagno d’armi*
 the see-again a companion of arms
 ‘the fact of seeing again a brother in arms’
 (b) *el haber-me-lo dicho*
 the have-me-it said
 ‘the fact that he told it to me’
 (c) *tâierea capul lui*
 cutting-the head-the him
 ‘the fact of cutting his head’
 (d) *quat-l-u Zayd-in Muhammad-an*
 murder-nom Zayd-gen Muhammad-acc
 ‘the murder of Muhammad by Zayd’

The behavior of the Romanian supine does not respect the mixed-behavior criterion; instead of showing hybrid properties **at the same time**, its verbal/nominal nature (or “ambiguity”, according to traditional grammars) is manifested as contextually dependent. And indeed, we see that the supine combined with a determiner falls to assign accusative or nominative case. Its projection is completely reorganized according to the nominal pattern:

- (9) (a) **culesul căpșuni*
 picking-the strawberry
 ‘strawberry picking’
 (b) **culesul Ion*
 picking-the Ion
 ‘Ion’s picking’

The problem in these examples is the fact that the arguments are not assigned case, which in Romanian corresponds either to morphological

case or to the insertion of a “preposition”. The problem disappears when the internal argument has the form of an NP in the genitive or that of a PP adjunct:

- (10) (a) culesul căpșunilor
picking-det strawberries-gen
'the picking of strawberries'
(b) culesul de căpșuni
picking-det of strawberries
'the picking of strawberries'

Moreover, case licensing of the object does not seem to be a property of the supine form in itself. The possibility to assign strong accusative case appears only if there is more verbal structure around. This is the case for (11a), in which the supine combines with an auxiliary verb.

- (11) (a) am de cules căpșuni
have to pick strawberries
'I have to pick strawberries'
(b) *cules căpșuni (e o activitate plăcută)
pick strawberries (is a pleasant activity)
'picking strawberries is a pleasant activity'

This observation leads to the idea that the supine itself cannot assign a case to its complements. In the case of the nominal projection, this is done by the presence of nominal determination. Within the verbal projection, the supine combines with auxiliaries, forming a verbal complex, which, as a whole, is responsible for case-licensing of the complements. The result is not a “mixed” projection because the different properties of the supine are not manifested at the same time, in the same projection, but in different projections.

Another possibility would be to say that the auxiliary assigns an “aspectual role” to this object, and contributes to fully identifying it, and that the supine only assigns a weak case to this object. This way of analysis was proposed for the Scottish Gaelic verbal noun by Ramchand (1997), who considers that this characteristic is due to the nominal status of this verbal noun.

We therefore retain as a conclusion the following idea: the supine changes its projection type as it changes its morphological properties; it does not match the mixed-category criterion.

There is an apparent exception to this generalization, represented by the supine inside a PP projection, in which the preposition is selected by the main verb or has an autonomous lexical meaning (such as Goal), in the case of adjuncts. In traditional grammars, this prepositional supine is considered to be verbal (accusative-case assigner). This is the essential argument of traditional grammars in saying that the supine keeps its verbal properties in this kind of contexts.

- (12) am plecat la cules căpșuni
have gone at picking strawberries
'I'm going to pick strawberries'

On the basis of this type of examples, traditional grammars take the view that the supine is a case-assigner when it is introduced by a preposition. We have to note that these cases are restricted to supine expressing Goal. Also, when the supine is preceded by lexical sub-categorized prepositions, the prepositional accusative becomes impossible for the object of that supine. The strong structural accusative case is not allowed:

- (13) *am renunțat la invitat pe Ion / pe acest om
have renounced to invite pe-acc Ion / pe-acc this man
'I renounced to invite Ion / this man'

This is even more striking if we compare the supine with another non-finite form of the Romanian verbal system, the infinitive, which is perfectly compatible with prepositional accusative case:

- (14) am renunțat la a invita pe Ion / pe acest om
have renounced to invite pe-acc Ion / pe-acc this man
'I renounced to invite Ion / this man'

Another important remark is that in prepositional contexts, the object is always strictly adjacent and non-determined, whereas in ordinary verbal constructions, the object allows determination, quantification etc., and can be separated from the verb by temporal modifiers:

- (15) (a) *am plecat la cules multe căpșuni / toate căpșunile
have gone to pick many strawberries / all strawberries-the
'I am going to pick many strawberries / all the strawberries'
(b) *am plecat la cules imediat căpșuni
have gone to pick immediately strawberries
'I am going to pick strawberries immediately'

Therefore, it seems that a direct object in such supine constructions manifests a special behavior, to be distinguished from the regular behavior of a direct object in an ordinary verbal construction. The only “objects” allowed by the supine in the absence of an auxiliary are bare, predicative NPs (not DPs), which do not accept strong accusative case. What they bear is a weak case, that may appear with defective forms (quasi-nominal, or uncategorized forms; see also in this sense Ramchand’s (1997) proposal for the Scottish Gaelic VN). Another explanation that could be adopted is that this behavior is due to the fact that the structure is frozen, and relies probably on a composition of the type N-N, generated by lexical rules (as compounds). If this is true, structures like (12), with PPs containing supines, involve nominal supine compound structures, in which the “light” object enters in a lexical compounding relation to the supine. An argument in this sense is given by the existence of structures of the type in (16), appearing in enumerations or other particular contexts (titles, labels), where the model of composition is possible with participles:

- (16) n-am uitat nimic: cumpărat bilete, făcut bagaje...
not have forget anything: buying tickets, packing bags
'I didn't forget anything: buying tickets, packing bags...'

Moreover, present-day Romanian tends to favor the construction with *de*-insertion instead of the direct one with the presumed accusative object. Therefore, the perspective offered by productive supine structures is that of an element whose verbal-nominal nature is not “double” or “mixed”, but clearly context-dependent, distinguishing this form from “true” verbal nouns.

2.2. Capturing mismatches

There is a recognized difference between lexicalist and non-lexicalist approaches with respect to the treatment of inflectional mismatches versus category mismatches. Lexicalist approaches treat them as completely different, whereas non-lexicalist approaches treat them alike, via a Head-Movement-type analysis.

2.2.1. Lexicalist approaches

Feature-percolation systems (Head feature principle) account for the transmission of morphological features, e.g., “participle”, from the head to the maximal phrase:

- (17)
$$\begin{array}{c} [+V \ -N \ \text{prp}] \\ \diagup \quad \diagdown \\ [+V \ -N] \quad [\text{prp}] \\ \text{put} \quad \text{-ing} \end{array}$$

In the case of mixed categories, this system would result in contradictory feature specifications:

- (18)
$$\begin{array}{c} [+V \ \dots N] \\ \diagup \quad \diagdown \\ [+V \ -N] \quad [\dots V \ +N] \\ \text{put} \quad \text{-ing} \end{array}$$

A lexicalist solution for mixed-type of mismatch (English gerund) would propose:

- a “split-head” analysis of the type of Lapointe’s (1993; 1999) Dual Lexical Categories:

- (19)
$$\begin{array}{c} X/Y \\ \swarrow \quad \searrow \\ \text{external synt} \quad \text{internal synt} \end{array}$$

- a “mixed-head” analysis of the type of Malouf’s (1998) Hierarchical Lexicon:

- (20)
$$\begin{array}{c} \text{Nominal outside} \quad \text{Verbal inside} \\ \swarrow \quad \searrow \\ \text{Ger} \end{array}$$

The main idea of this type of framework is that the items at hand are doubly categorized items and that there is feature percolation from the base categories to the resulting category. Roots bear POS specifications.

The inflectional and categorial mismatches are not alike (more precisely, there is no inflectional mismatch).

There have also been attempts to unify inflectional and category mismatches, based on the argument that features contributed by inflectional affixes are exclusively relevant for external syntax (Yoon 2005). This was also the sense of Haspelmath's (1995) proposal that inflection should also cover word-class changing relations, i.e., transpositional inflection: word-class changing inflections are special cases of inflection in his view. Another attempt was to say that features contributed by inflectional affixes are exclusively relevant for external syntax (Yoon 2005). The result is that inflectional and category mismatches are treated alike.

2.2.2. Non-lexicalist approaches

A syntactic view would more or less say that the head affix would move and incorporate, giving rise to categories accumulating features all the way up, like in current generative models since the late '80s (from Abney 1987 to Alexiadou 2001).

This is the option adopted by Distributed Morphology (Marantz 1997; Harley-Noyer 1998). In this theoretical framework, the items listed in the vocabulary have no category, categorization being contributed by the syntactic component. The insertion of an element in the appropriate syntactic context makes it a nominal, or verbal, or adjectival... element.

In the vision of syntactic approaches then, inflectional and derivational mismatches are assigned a unified treatment; categories are built up by operations of head-movement and incorporation of affixes; there is no POS specification on Roots.

Word formation involves Root derivation:



A Root = an l-morpheme; a Noun = a Root whose nearest c-commanding element is a D⁰; a Verb = a Root whose nearest licenser is Aspect or Tense

In the appropriate context, a Root becomes a Noun, a Verb... via the combination with an f-morpheme: n, v...

There is a clear connection between syntactic behavior and categorization. Lexical categories, heads of syntactic projections, determine the internal structure of the projection (selection, projection, complement li-

censing), and the type of position in which the corresponding phrases will be inserted, as well.

For the case of the supine, there are empirical facts that contribute to an "underspecification"-type analysis, as we tried to show in section 2.1.

2.3. What kind of mismatch in the supine?

Is the type of mismatch manifested in the Romanian supine purely inflectional? The answer is no: we do not find a morphological process that is "relevant to syntax"; the *-at* form does not determine the global behavior and the functional nodes, inasmuch as it can feed a nominal or a verbal structure. Then, the process of making a participle from a verb is not clearly category-neutral. There are researchers who proposed that the participial morpheme is a derivational affix (Schütze 2003, for instance).

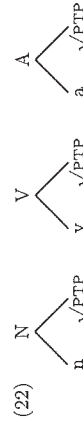
Is it purely derivational then? The answer is again no: we do not clearly obtain different "lexemes" by the process of supine formation.

However, if we see inflection and derivation as a continuum, we may think about the corresponding mismatches as being alike: neutral l-morphemes combined with f-morphemes which can compete for different values. In the case of gerund, for instance (Harley-Noyer 1998), the *-ing* suffix can be analyzed as a default nominalizer; it would then be a **n** or a **v** head according to what we find in higher structure (Asp or Det).

2.4. Distributed Morphology-style treatment of the supine/participle

If our view is correct, an analysis that seems to impose itself is the "underspecification" analysis, proposed in the Distributed Morphology framework. The participle has no categorial features, being categorized by the syntactic context.

We can then propose the following supine-formation system (DM-style):



According to the view of Distributed Morphology, there are no categorial features at the "Vocabulary" level. Participle would then be a single uncategorized item competing for several syntactic contexts.

At this point, we could ask the following question: should we talk only about uncategorized roots or about uncategorized stems? If PTP is a root, then what is the infinitive?

What is less clear indeed, is which label to put on the participial form itself. In DM, there are category-neutral “roots” (l-morphemes), and there are affixes with features competing for a specific value to express (f-morphemes). The analysis we would like to propose is that the participial, PTP, is itself category-less. Or, it is not really a root, being composed of a verbal root and the participial affix. We shall try now to find a solution to this puzzle.

3. Emergence of a Latin-type “third stem” in Romanian?

Many modern theoretical views are consistent with the existence of an uncategorized level of grammatical representation. Baker (2003), for instance, considers that category is given by syntax. The categorial identification is done by the syntax in the following way: a Noun—has a referential index; a Verb—has a specifier; an Adjective—by default is -N, -V. In his system, however, the participle is not really discussed; it is considered a “verbal adjective” without further investigation.

Schütze (2003) takes the participial suffix as being category-changing, creating participles from verbs. This makes them derivational affixes. As for the participle, it is considered as not being (really) a verb; it does not carry voice, but only (lexical?) aspect. So, the participle is a decategorized verb. This, however, takes in fact the participle to be a distinct category.

Aronoff (1994) discusses the problem of (English) participle, which, according to him, illustrates the “morphomic” level; being purely morphological, this element is appropriate for the very different syntactic constructions of past and passive.

Another argument for the “morphomic” level discussed by Aronoff (1994) is the existence of the Latin “third stem”, realized in participle, supine, and future active participle. In this case, a single stem, also a “morpheme”, is used in various syntactic environments. The supine was a verbal noun; derived from a participial stem (from a synchronic point of view), it was an item that allowed nominal inflection (case marking) and appeared as Goal adjunct with verbs or adjectives:

- (23) (a) eo lusum
go playing
(b) mirabile visu
wonderful to see

The argument in favor of a verbal noun analysis comes from the possibility of case marking on the direct object by the supine, and the co-occurrence of the nominal inflection on it. According to Aronoff (1994), the supine should be treated as the manifestation of the same **Stem** (in the strict morphological sense, at the “morphomic” level) as that of the participle, even if the values (aspect, voice) of the categories derived from this stem are different (the supine does not admit the passive interpretation in Latin). The same stem is used to derive a number of deverbal nouns in Latin, such as *pictura*, derived from *pingo*, *pict-*. Aronoff (*ibid.*) builds in this way an argument for the view that the morphological level should be kept distinct from syntax, semantic or phonology; morphemes do not encode (grammatical) meaning since, in the cases illustrated, they do not always have the same value.

Indeed, the same thematic element appears in very different formations, like the active future participle, meaning “those which will V” and in the supine, denoting the activity without further specifications, and in the past participle, denoting a state, a result.

(24) Active Future Participle

- mor-it-uri te salutant
die-th-fut.part you salute
'Those going to die salute you'

(25) Supine

- (a) eo pisc-at-um
go1sg fish-th-acc
'I go fishing'
(b) pingo, pict- → pict-ura
I paint painting

It could also be interesting to note that, putting aside any attempt to diachronically explain the existence of the Romanian supine (in other words, the extended use of the participial stem), Romanian supine and Latin supine present rather similar distributions, i.e., the expressing of the goal or of the point of view.

We are not able to propose, at this moment, an analysis for both Latin and Romanian, but we may simply retain Aronoff's suggestion for Romanian, that there is a single stem at work in the two cases. This stem can be used as a base as well for verb as for noun formation. In sum, none of these forms is basic; they are all derived from a single sound form — a stem.

Therefore, we would like to apply the same view to Romanian participle and supine, which, as we saw, are perfectly homophonous. The advantage would be that we would unify two categories of the non-finite verbal system of Romanian that seem to have all in common. But in this case, we would rather like to say that a single morphological element, categorially neutral, is used to build a noun (the supine), a verb (in combination with an auxiliary, see before), or an adjective. This is the analysis proposed above, and it goes somehow in the same direction as Aronoff's discussion.

One question to ask is whether Romanian morphology can be considered to be based on stems, and if the participle is a stem. Such a view could be supported by the fact that the *-AT* formation is also used in derivation. *-AT* can also attach to non-verbal roots:

- (26) Root +V → V-*at* (categorially neutral element)
mîncat 'eating', cîntat 'singing', citit 'reading', mers 'walking'
sprîncecat 'eye-browed', migdalat 'almond-ed'
- (27) Root +N → {Adj} (state of someone who has...)
sprîncecat 'eye-browed', migdalat 'almond-ed'

-AT could be considered also as participating in the derivation of agent nouns. The idea that it would be the realization of the same stem is however contradicted by the variation illustrated in (28d-e). However, the correspondence between the participle and the stem of agent nouns is stable for the "regular" classes of verbs (28a-c).

- (28) Root + *t* + *or* → Agent Nouns
- (a) cînta 'sing'—cîntăt-or 'singer'
 - (b) măguli 'flatter'—măguliit-or 'flatterer'
 - (c) hotărî 'decide'—hotărît-or 'decisive'
 - (d) merge 'walk'—mers-mergător 'walker'
 - (e) culege 'pick'—cules-culegător 'picker'

There are, we think, reasons to treat the participial form as one of the stems of the verb in Romanian. It would be a rather particular use of this notion, which should be used for "what remains when all affixes are set apart". In our case, contrary to Latin, there are no affixes going with the nominal vs. verbal or adjectival status.³ But we could assign the status of a stem to the part which is common to all these syntactic uses mentioned above, and it would correspond to "what remains when the categorial features are set apart".

4. Importing stems into Marantz's (1997) system?

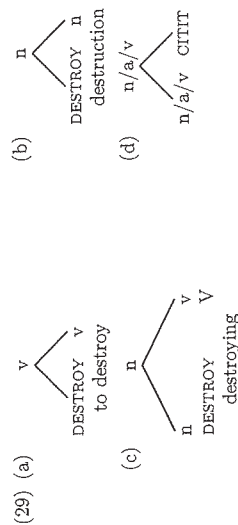
Let us sketch now a way of making sense of all the intuitions above. We will assume that the most qualified model accounting for the facts outlined in this paper is Distributed Morphology, as depicted in Marantz (1997). The only inconvenience would be that our participles seem to be at the same time **basic** and **constructed**.

In fact, the relationship between *deconstruct* and *destroy*, for instance, in this framework, is ensured by "readjustment rules". In our case, there seem to be not different instantiations/spell-outs of the same abstract ROOT, but indeed two roots—or two stems, if it is possible to talk about stems that are neutral from the point of view of syntactic category.

We assume that in Romanian there are perfective and imperfective neutral stems, i.e., participial and infinitive stems.

In the system proposed here, stems as neutral elements are combined with nominal, adjectival, verbal heads. In our case, that of the Romanian participle, these heads do not have phonological content. Put differently, we assume that the difference between Romanian participle/supine formation and English gerund formation is that *-ing* is a nominal head, whereas *-at* is not. We illustrate hereafter the different types of word-formation corresponding to gerund and to supine; all of them take place in the syntactic component, according to the Distributed Morphology framework.

³ There are, of course, marks of agreement in gender and number when the participle is in an adjectival position, but no marks of declension for the supine use.



5. Is -AT (simply) an empty morpheme?

What is -at, then? The answer, in Aronoff's terms, would be that -at is an empty thematic morpheme, and we have already seen the arguments (section 2). We may have some arguments for taking this morphological piece as the expression of (lexical) Aspect. Participial stems, as we will argue below, encode Aspect. If this is correct, the view of Aronoff (1994) about the complete absence of semantic-grammatical value for the participial stem could be challenged, at least for the Romanian participle. The thematic affix (AT or Thematic Vowel + T) seems to keep a certain value in Romanian, which we take to be an aspectual one.

We take the basic aspectual value of the participial stem to be a perfective one. This is indeed the default value of past participle constructions, as is well known.

This aspectual value of the participial stem will be changed by the contribution of various markers. The first one is the nominalizer element, i.e., the determiner. Event supine-based nominalizations, as shown by Cornilescu (1999; 2006), take an atelic reading most of the time. This is a consequence of the nominal status of the supine and of the weak status of the object. The supine nominal can take implicit arguments, and in particular implicit objects, hence its atelic value:

- (30) *cîntatul este un dar*
singing-the is a gift
'singing is a gift'

However, those are contexts with a generic reading, the supine denotes a generic event, and the aspectual value is shifted to the iterative-habitual reading.

The aspectual value attached to the participial stem that we supposed was present in agent -*tor* derived nouns is not clear, but in any case they seem to be atelic. In those examples, too, we could find an aspectual component which is habitual (someone has to perform an activity regularly in order to be, for instance, a dancer or a smoker).

In some periphrases, the participial stem is attached to the expression of completion, a value that has also to do with perfectivity. See for example (31), where the action of reading has to be completed, or the movement to reach its goal:

- (31) (a) *am de citit acest articol pînă mîine*
have to read this article till tomorrow
'I have to read this article till tomorrow'
- (b) *am de mers la piață*
have to go to market
'I have to go to the market place'

There are also event nominalizations in which a value of completion is encoded, in cases where the object is assigned strong genitive case.

- (32) (a) *cititul ziarului de dimineață*
reading-the newspaper-gen of morning
'the reading of the newspaper in the morning'
- (b) *cititul de dimineață*
reading-the of morning
'reading in the morning'

The partition that we suggested seems to be supported by the fact that the imperfective stem is used in some derived nouns but also in the future form. In Old Romanian, the so-called "long infinitive" which is nowadays a noun was used as an infinitive. In the same way, the participle is used in nominalizations and in complex (perfective) tenses.

- (33) (a) *mîncă-re-a*
eat-inf-suff-det
'the food'
- (b) *mîncat-ul*
eat-sup-det
'the eating'

- (34) (a) am cîntat
have sung
'I sang'
(b) voi cînta
will sing
'I'll sing'
(c) voi cîntare (Old Romanian)

We may assume, then, that the supine/participle stem encodes Aspect; its basic value could be considered to be perfectivity. Some contexts, however, may involve shifting to an atelic iterative-habitual reading.

As for the Voice value of this stem, there is a discussion in the Romanian literature, about its voice ambiguity, which may go in the sense of Aronoff (1994): supine has been considered as ambiguous between active and passive reading. But in fact, supine's properties lead us to think that it is rather a non-active form (maybe a middle). Active reading is not possible unless the supine has nominal properties, i.e., in the prepositional context discussed above. In the other cases, if it does not have a clear passive reading (which holds for the supine reduced relatives), the active reading is associated with an arbitrary reading of the subject.

A suggestion that could be made with respect to the aspectual value of the perfective stem is that it may shift its aspectual nature according to the way of realizing its object (i.e., in the basic position inside or outside VP). For instance, in the past participle constructions, the object will be realized in its basic position and assigned strong structural accusative case, the whole construction Aux + Participle being able to case-mark it. In other constructions with the traditional supine, the object would only be assigned weak case, having a predicate-modifier status. The two options are associated with a telic and atelic aspectual value, respectively.

6. Summary

We argued in this paper that the participle, **ROOT+AT by itself** is not [+N], [+V]. Participles need syntactic supporters—functional elements, i.e., auxiliaries or determiners, in order to receive a category. (Stative and resultative) participle, verbal “supine”, “supine” event nouns in Romanian are all syntactic realizations of the “3rd stem”. The *AT*-Stem (or PTP, or the 3rd stem) combines with different functional layers attributing categories: a, n or v. *AT* itself is not a, n or v.

Stems are categorially neutral and accessible to inflection and to derivation. This leads to the triple use of the Romanian participle known as the past participle/supine parallelism in Romanian. The view of the grammar which could fit the facts discussed in this paper is the one outlined in Distributed Morphology, where “mixed categories” are not needed. In such a framework, it is possible to have an analysis in which a single morphological piece corresponds to three linguistic units. The only device we would have to add is that stems can also be categorially neutral and represent starting points in word formation.

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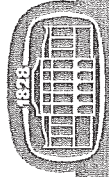
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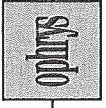
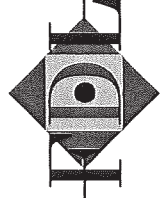
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Quel est le nom du verbe? À propos du supin et de l'infinitif en roumain

Elena Soare* et Alexandru Mardale**

0. INTRODUCTION

0.1. *Nominaux "imparfaits"*

Vendler (1967c) parle de nominaux "parfaits" et "imparfaits", une distinction reprise et raffinée dans Zucchi (1993). Les nominaux imparfaits sont illustrés par le "poss-ing", le gérondif anglais présentant des propriétés concomitantes de nom et de verbe, cf (1c) opposé à (1a-b) :

- (1a) the performance of the song (parfait)
- (1b) the performing of the song (parfait)
- (1c) John's performing the song (imparfait)

Ce qui distingue les nominaux "imparfaits" des nominaux "parfaits" est donc un mélange de propriétés nominales et verbales. Il y a un consensus général à travers les écoles linguistiques sur le fait que certains nominaux ont un lien plus étroit avec le verbe, mais la nature précise de ce lien n'est toutefois pas facile à déterminer.

Cet article se propose d'étudier un cas de nominal "imparfait" du roumain, le supin, en le comparant avec d'autres formes soi-disant à "double nature" nominale et verbale dans la même langue, et notamment avec l'infinitif.

0.2. *Problématique et organisation de l'article*

Dans la tradition grammaticale roumaine, on donne des définitions équivalentes pour le supin et l'infinitif. Les deux formes ont cependant des propriétés et des distributions complémentaires, aussi bien dans leur emploi nominal que dans leur emploi verbal.

L'infinitif roman, roumain compris, est un verbe (propriétés verbales: assignation du cas accusatif) équivalent à une proposition (non-finie), et en tant qu'équivalent d'une proposition, il peut remplir la fonction d'un argument nominal. Il n'accepte pas la combinaison avec un article, sauf dans le cas de *l'infinito sostantivato* en italien. Les infinitifs comme *le rire* et *le manger* sont des

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noms parfaits dans le sens de Vendler (op. cit.) et il est à supposer qu'ils ont une entrée lexicale distincte de celle du verbe. Par ailleurs, le roumain ne présente pas d'infinitif nominalisé directement par combinaison avec l'article.

Le supin roumain, quant à lui, présente deux séries d'emplois – emploi verbal et emploi nominal, comme nous allons le voir dans la première section de cet article. Nous essaierons ici de préciser le processus de dérivation du supin nominal et son rapport avec les autres formes du système verbo-nominal du roumain, et de répondre à la question si le supin nominal est dérivé par une règle lexicale, ayant comme résultat un nom "parfait".

Nous allons procéder par trois étapes. Nous examinerons d'abord la distribution et les propriétés du supin, en corrélation avec son homonyme, le participe passé. Nous arriverons à la conclusion que le supin provient de la nominalisation appliquée directement à un thème participial sous-spécifié, à la différence d'autres nominaux qui supposent une étape intermédiaire de dérivation, ce qui traduit dans des termes formels le "lien plus étroit" entre les nominaux imparfaits et le verbe dont ils dérivent.

Dans la deuxième section, nous comparerons les nominalisations à base d'infinitif et de supin. Nous tâcherons de cerner les conditions dans lesquelles ces nominaux peuvent développer des lectures événementielles vs. résultatives et nous mettrons en évidence une autre classe de propriétés qui distinguent les deux types de dérivés.

Nous esquisserons enfin, dans la dernière section, une analyse syntaxique et sémantique qui rende compte des généralisations établies dans la deuxième section. Dans ce but, nous proposerons aussi une réponse à la question des catégories fonctionnelles qui contribuent à rendre cette forme nominale, et le rapport entre ces catégories et traits et les lectures événementielle et résultative.

1. QU'EST-CE QUE LE SUPIN ROUMAIN?

1.1. Les faits

Le tableau suivant illustre brièvement les formes verbales non-finies du roumain.

Tableau 1: Formes non-finies en roumain

Infinitif	(a) cânta 'chanter'	(a) citi 'lire'	(a) merge 'marcher'
Participe Présent	cântând 'chantant'	citind 'lisant'	mergând 'marchant'
Participe Passé et Supin	cântat 'chanté'	citit 'lu'	mers 'marché'

Il y a deux emplois syntaxiques du participe passé à travers les langues: a) la formation du parfait (+AVOIR) et b) la formation du passif (+ETRE). Le roumain comporte un troisième emploi de cette forme que l'on pourrait appeler un thème participial: le "supin".

Le participe passé traditionnel

- (2a) am cules căpșuni sunt
ai cueilli fraises fraises-les
"j'ai cueilli des fraises" "les fraises sont cueillies"

Le supin traditionnel

A. supin nominal : participe + D°

- (3) cules-ul căpșuni-lor
cueilli-le fraises-les-Gén
"la cueillette des fraises"

B. supin verbal : préposition + participe¹

B₁ participe sans D°, précédé obligatoirement de la "préposition" *de*:

- (4) am terminat de cules căpșuni-le
ai fini de cueilli fraises-les
"j'ai fini de cueillir les fraises"

B₂ participe sans D°, précédé d'une préposition sous-catégorisée:

- (5) mergem la cules² de căpșuni
allons à cueilli de fraises
"nous allons à la cueillette de fraises"

1.2. Mixte ou sous-spécifié?

Les noms verbaux à travers les langues ont donné lieu à des analyses postulant l'existence de catégories mixtes. Un critère pour l'existence de cette double catégorisation est en premier lieu la co-occurrence de propriétés différentes dans la même projection. Cela se réalise par exemple pour le gérondif nominal en anglais. Cette forme a une distribution nominale; elle ne peut pas apparaître dans des positions réservées à des propositions:

- (6a) We were concerned about Pat's watching television
(6a) *We were concerned about that Pat was watching television
(6b) We all knew that Pat was watching television.
(6b') *We all knew Pat's watching television.

¹ Les exemples illustrent le supin dans les constructions aspectuelles. La même forme apparaît dans les constructions copulatives et en position de complément des adjectifs comme *difficile*, à savoir les constructions prédicatives qui comportent des propositions réduites dans d'autres langues.

² Le supin est dépourvu d'article dans cet exemple en vertu d'une contrainte généralement valable en roumain selon laquelle les prépositions bloquent l'apparition du Déterminant. Cependant, il garde une nature nominale, comme le montre l'apparition de la marque *de*, insérée pour des besoins de cas.

En même temps, la projection³ du gérondif anglais est caractérisée par des propriétés internes spécifiques aux verbes, à savoir l'assignation de l'accusatif et la modification adverbiale; par ailleurs, les déterminants autres que le défini sont bannis:

- (7a) John's building a spaceship
 (7b) I disapproved of Pat's watching television
 (7c) Pat disapproved of my *quiet/ quietly leaving before anyone noticed
 (7d) *Pat disapproved that leaving

L'infinitif en ancien roumain était une de ces catégories mixtes⁴:

- (8a) *tăierea* capul lui (ancien roumain)
 couper-la tête-le lui-Gén
 "sa décollation"
 (8b) *tăierea capului* / *capul (lui) (roumain moderne)
 couper-la tête-le-Gén / tête-le-Acc (lui-Gén)

Le supin combiné avec un déterminant n'assigne pas d'accusatif ou de nominatif. Sa projection est complètement réorganisée selon le type nominal:

- (9a) *cules-ul căpșuni (9b) *cules-ul Ion
 cueilli-le fraises cueilli-le Jean
 "la cueillette de fraises" "la cueillette de Jean"

Dans ce cas, l'argument interne apparaît comme un groupe nominal au génitif (10a) ou bien comme un adjectif prépositionnel (10b):

- (10a) cules-ul căpșunilor (10b) culesul de căpșuni
 cueilli-le fraises-les-Gén cueilli-le de fraises
 "la cueillette des fraises" "la cueillette de fraises"

Le supin ne s'accorde pas de la présence d'un objet accusatif sauf dans le cas où il fait partie d'une phrase aspectuelle comme dans (11a) où il est complétement d'un semi-auxiliaire (ici, *am de* 'avoir à'):

- (11a) am de cules căpșuni (11b) *de cules căpșuni îmi place
 ai de cueilli fraises de cueilli fraises me plaît
 "je dois cueillir des fraises" "il me plaît de cueillir des fraises"

La nature de la projection maximale englobant le supin change donc selon que le supin lui-même change de propriétés morphologiques; par conséquent, le supin ne vérifie pas le critère des catégories mixtes cité en début de cette section.

³ Une projection est la catégorie maximale (ou catégorie syntagmatique) projetée par une catégorie lexicale tête.

⁴ D'autres exemples dans ce sens: l'infinitif nominalisé de l'espagnol et de l'italien.

1.3. Unifier ou non: quelle théorie?

Les distorsions manifestées par les catégories comme le gérondif anglais ont donné lieu à de nombreuses analyses, qui peuvent être rangées sous deux grands types: (i) analyses lexicalistes à "tête double" (cf. Lapointe (1993) - Dual Lexical Categories) et (ii) analyses syntaxiques à "tête mixte" (cf. Malouf (1998) - Hierarchical Lexicon).

Les idées qui sont à la base des analyses lexicalistes sont les suivantes :

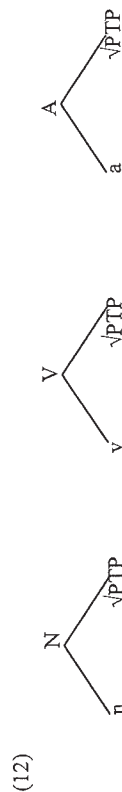
- les éléments à double nature sont des items à double catégorisation
- il y a transmission des traits de chaque composant morphologique vers la catégorie résultante
- les racines présentent des traits catégoriels, c'est-à-dire la spécification de la partie du discours.

Le problème majeur de ce type d'analyse est la difficulté de prévoir quels traits, transmis à la catégorie dérivée, prévaudront pour la syntaxe interne et quels traits pour la syntaxe externe.

Dans les approches "syntaxiques", on propose un traitement unifié des deux types des distorsions catégorielles et des distorsions "flexionnelles". Du point de vue de la formation, ce mécanisme est similaire à la conversion d'une catégorie lexicale qui emprunte des catégories fonctionnelles d'une autre classe lexicale. Passant sur les détails, ce genre d'analyse repose sur les opérations suivantes:

- mouvement de tête et incorporation des affixes donnant lieu à des catégories (de Abney (1987) à Marantz (1997)).
- absence de spécification catégorielle sur les racines
- la formation des mots suppose une dérivation à partir de racines.

Dans le cadre de la Morphologie Distribuée, une Racine est considérée comme un morphème "L" (comme lexical). Un Nom sera ici une racine gouvernée par un D° (un déterminant), un Verbe sera une racine gouvernée par l'Aspect ou le Temps. Dans le contexte approprié, une racine deviendra un nom, un verbe ... via la combinaison avec un morphème F (comme fonctionnel): n, v... Mais comme on l'aura compris, les racines ne portent pas de spécification catégorielle. Ci-après, une implémentation des emplois du participe dans ce cadre:



Une question se pose cependant: ce n'est pas la racine mais la forme de participe qui se trouve à la base, donc la notion de thème; peut-on parler alors de thèmes sous-catégorisés?

1.4. Esquisse d'une analyse morphologique

Un nouvel élément serait apporté dans cette problématique par la morphologie dérivationnelle. On peut considérer, dans le système dérivationnel du roumain, que le même morphème participe dans la formation des noms d'agent entre autres; les formes contiennent toutes le segment "voyelle thématique + T":

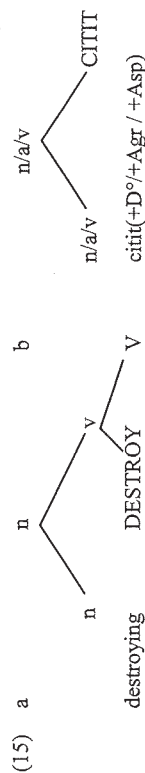
- (13) *ascultat* 'obéi' → *ascultător* 'obéissant'
- cântat* 'chanté' → *cântător* 'chantant'

Une hypothèse plausible est inspirée par Aronoff (1994): la morphologie thématique existe au moins partiellement en roumain, de la même façon qu'en latin. Ainsi, le participe actif futur et le supin en latin, aussi bien que certains noms dérivés, reposent sur la même base tout en n'étant aucun la forme de base; la base est un objet morphologique, un thème:

- (14) *laudat*, *laudat-um*, *laudat-urus*

La même hypothèse serait tentante pour rendre compte du supin roumain⁶, selon ce que suggèrent les dérivés en (13). Cependant, nous ne voudrions pas renoncer à l'idée d'un traitement du supin par sous-spécification, dans les termes de la Morphologie Distribuée de Marantz (1997). Est-il possible d'importer les thèmes dans ce système ? A notre opinion, une réponse positive est possible, dans les termes suivants.

Les thèmes verbaux du roumain sont traditionnellement le perfectif (participial) et l'imperfectif (infinitif). Dans la formation du participe/supin, -AT n'est pas une tête, n'est pas un affixe nominalisateur à la différence de -ing, mais seulement une partie d'un thème dépourvu de catégorie. Les représentations données en (15) montrent les différences que nous postulons entre l'analyse du supin roumain et celle du gérondif anglais:



1.5. Conclusion

Nous retenons l'idée que les distorsions catégorielles caractérisant le supin roumain sont mieux décrites par la Morphologie Distribuée. Le participe,

⁵ La présence d'un thème identique est courante, mais il existe des "trous"; pour *culege* – *cules* 'cueillir', le nom d'agent n'est pas dérivé sur le thème participial culés mais sur le thème d'infinitif avec un allongement thématique –at.

⁶ Cela permettrait de voir d'une autre façon le soi-disant héritage de cette forme du système grammatical latin.

RADICAL+AT en *lui-même* n'est pas [+N], [+V]. Le participe, le supin verbal et le supin nominal en roumain sont des réalisations d'un thème verbal, le thème en -AT (ou PRT) se combine simplement avec différents "étages" fonctionnels et reçoivent ainsi des catégories: a, n ou v.

Les thèmes sont neutres du point de vue catégoriel et sont accessibles aussi bien aux processus flexionnels et dérivationnels. Cette propriété est responsable en roumain de l'existence de ce triple usage du thème participial en roumain que nous avons examiné dans cette section.

2. DEUX TYPES DE NOMINALISATION

2.1. Les formes

Les deux thèmes dont nous avons parlé dans la section précédente donnent lieu à des nominalisations: la nominalisation de l'infinitif, par le suffixe *-re* et la combinaison avec un déterminant qui sélectionne le genre féminin (16a), et la nominalisation du supin formée selon nous sur le thème-même, c'est-à-dire sans affixe nominalisateur, en combinaison avec le déterminant défini sélectionnant le genre neutre (16b). Cf:

- (16a) *cânta-re-a* 'le chant'

- (16b) *cântat-ul* 'le fait de chanter'

Voyons maintenant quelles sont les propriétés des deux types de nominaux.

2.2. Noms événementiels vs résultatifs

Depuis Grimshaw (1990), on parle d'une distinction entre les dérivés nominaux à partir de bases verbales, notamment de la distinction entre les noms résultatifs et les noms événementiels. Cette distinction permet de mieux comprendre les propriétés partagées par certains verbes et les noms qui en dérivent. Il est communément admis que les noms événementiels ont une structure argumentale, ce qui est en principe une propriété typiquement verbale. Autrement dit, les nominalisations qui se font accompagner par des arguments réalisés syntaxiquement auront une lecture événementielle (17a). À l'inverse, les nominalisations qui n'ont pas de structure argumentale recevront une interprétation résultative (17b):

- (17a) the examination of the book by the students took a long time

- (17b) the examinations were on the table

Les deux lectures que nous venons de mentionner sont identifiées par de nombreux autres tests. Dans la section suivante, nous verrons quels résultats ces tests donnent pour les nominaux qui nous intéressent.

2.3. Le nom du verbe est "imparfait"

Les deux nominalisations productives ayant régulièrement une interprétation événementielle en roumain, à savoir celles de l'infinitif et du supin, présentent des propriétés différentes.

A) Infinitif : Les nominaux formés sur l'infinitif sont ambigus entre une lecture résultative et une lecture événementielle, comme le sont beaucoup de noms en -ion dans les langues romanes et en anglais. La présence d'un complément du nom interprété comme agent (génitif subjectif) est associée systématiquement à une lecture événementielle, ce qui est attendu dans le cadre de Grimshaw (1990) :

- (18) manifestarea ostentativă a apartenenței religioase de către imigranți este interzisă
"la manifestation ostentatoire de l'appartenance religieuse par les immigrants est interdite"

Dans la littérature, y compris sur le roumain, il y a eu de nombreuses tentatives de relier la lecture événementielle à la présence de la catégorie Aspect dans le groupe nominal, une catégorie héritée des verbes correspondants (par exemple, chez Siloni (1997)). La présence de l'aspect est le plus souvent corrélée à la présence d'un modifieur adjectival ou prépositionnel :

- (19) manifestarea succesivă / continuă / frecventă / împotriva regimului comunist caracterizează perioada contemporană
"la manifestation successive / continue / fréquente contre le régime communiste caractérise la période contemporaine"

D'autres tests qui mettent en évidence la lecture événementielle des nominalisations infinitives du roumain sont les suivants :

- la compatibilité avec le singulier et avec le déterminant défini :

(20) lupta funcționarilor pentru salarii mai mari
"le combat des fonctionnaires pour des salaires plus importants"

- la réalisation de l'argument interne hérité du verbe :

(21) manifestarea împotriva regimului comunist este descrisă în manualele de istorie
"la manifestation contre le régime communiste est décrite dans les manuels d'histoire"

- enfin, l'impossibilité de se combiner avec des modifieurs locatifs (GPrép ou GAdv) introduits par *de* :

(22) *manifestarea împotriva regimului comunist din (de+ în) occident / de acolo
"la manifestation contre le régime communiste de l'occident / de là-bas"

Comme nous l'avons suggéré plus haut, la lecture résultative des mêmes nominalisations est identifiée à l'aide des tests suivants :

Quel est le nom du verbe?

— la compatibilité avec le pluriel et avec des déterminants autres que définis :

- (23a) luptele funcționarilor pentru salarii mai mari
"les combats des fonctionnaires pour des salaires plus élevés"
- (23b) am asistat la o manifestare împotriva regimului comunist
"j'ai assisté à une manifestation contre le régime communiste"
- corrélativement, la compatibilité avec des quantifieurs (dénombrables) :

(24) fiecare / nicio luptă a bugetarilor (nu) s-a terminat cu un eșec
"chacun / aucun combat des budgétaires (ne) s'est conclu par un échec"

 - la non lexicalisation de l'argument interne hérité du verbe :

(25) manifestarea a scos în stradă sute de oameni
"la manifestation a fait sortir dans la rue des centaines de gens"

 - l'incompatibilité avec un GPrép Agent introduit par *de către* :

(26) *manifestarea de către simpatizanții regimului a pornit din Piața Universității
"la manifestation par les sympathisants du régime est partie de la Place de l'Université"

 - l'incompatibilité avec des modifieurs aspectuels :

(27) *manifestarea continuă / succesivă împotriva regimului a pornit din Piața Universității
"la manifestation continue / successive contre le régime est partie de la Place de l'Université"

 - la compatibilité avec des modifieurs locatifs introduits par *de* :

(28) manifestarea împotriva regimului comunist din (de+ în) occident / de acolo
"la manifestation contre le régime communiste de l'occident / de là-bas"

B) Supin : À la différence des nominalisations infinitives, le supin nominal n'est pas ambigu mais présente seulement des lectures événementielles, même si l'argument lexicalisé est l'argument externe. Plus précisément, les lectures résultatives sont très contraintes pour le supin; la lecture événementielle n'est pas sensible à la réalisation de l'argument interne comme pour l'infinitif roumain et les autres noms déverbaux analysés par Grimshaw. Ceci a été discuté en détail par Cornilescu (1999).

- (29a) culesul fructelor de către copii
"la cueillette des fruits par les enfants"
- (29b) ieșitul (frecvent) din casă pe timp de iarnă
"le fait de sortir (fréquemment) de la maison en hiver"
- (29c) fumul la vîrstă fragedă
"le fait de fumer à un âge tendre"
- (29d) cîntatul lor la Paris
"le fait qu'ils chantent à Paris"

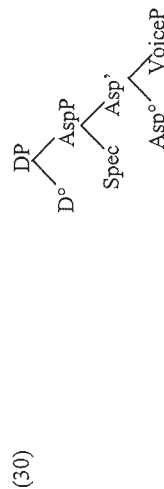
Ces propriétés inattendues ont été expliquées par Cornilescu (1999) par des distinctions d'ordre aspectuel entre les deux types de nominalisation. Negoia Soare (2002) met ces différences sur le compte de distinctions syntaxiques tenant à la position des arguments et à la structure interne de la projection verbale. Plus précisément, la différence concernant la nature de l'Aspect entre l'infinitif et le supin nominal peut être formulée, du moins pour l'infinitif, en termes syntaxiques : alors que ce dernier se caractérise par la présence d'un Aspect syntaxique induit par la présence / réalisation de l'argument interne qui mesure l'événement, le supin se caractérise par la présence d'un Aspect hérité de la base verbale dont il dérive, qui est atélique.

Dans le présent article, nous avons affirmé que le système verbal du roumain comporte deux thèmes différents, disons *perfectif* et *imperfectif*. L'idée de faire reposer le supin et l'infinitif sur ces deux thèmes semble faire sens aussi au vu des distinctions présentées ici entre les nominalisations supine et infinitive. Dans la dernière section de cet article, nous esquisserons une analyse formelle reposant sur l'analyse morphologique proposée en première section et intégrant les généralisations de la deuxième section, avec une composante syntaxique concernant la structure fonctionnelle des nominalisations de l'infinitif et du supin.

3. LES NOMINAUX "IMPARFAITS" EN TERMES FORMELS

Le supin nominal a donc des propriétés qu'il partage avec le *gerund*: la non-combinaison avec un autre déterminant que le défini, la détermination adverbiale, la lecture événementielle non-ambiguë. Même si, comme nous l'avons vu précédemment, le supin n'est pas mixte, ces propriétés "verbales" pointent selon nous dans la même direction, à savoir que ces noms sont dérivés directement du verbe, plus précisément du thème verbal, alors que les autres nominaux ne le sont pas.

Les différences de comportement enregistrées dans les sections précédentes peuvent être formalisées selon un modèle syntaxique comportant plusieurs niveaux fonctionnels (voir, entre autres, Siloni (1997)). Ces différences concernent la présence ou l'absence d'une structure fonctionnelle riche. Plus précisément, lorsque l'aspect verbal est hérité, la dénotation de base est celle d'événement. Une structure comme celle donnée en (30), adaptée de Alexiadou (2001), peut être proposée :

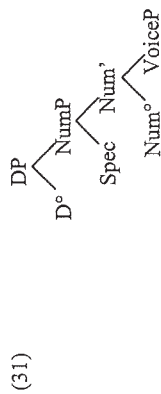


Dans cette représentation, on remarque l'absence des traits de nombre. Nous proposons effectivement que pour le supin, le nombre ne se vérifie pas ;

l'interprétation associée au déterminant défini est la même que celle qui est présente dans les noms à interprétation générique. Pour le supin, il permet d'obtenir l'interprétation d'événement générique.

En revanche, dans le cas de l'infinitif, nous proposons une structure pleinement nominale. Le nombre est toujours projeté, mais dans le cas de l'infinitif résultatif il est vérifié par montée dans le Num, alors que pour l'infinitif événementiel ce déplacement n'a pas lieu et le nombre est neutralisé. La projection fonctionnelle d'Aspect est selon nous complètement absente.

Voici une représentation possible de l'infinitif nominalisé dans ces termes :



4. CONCLUSIONS

Nous avons montré qu'il y a, au niveau morphologique, syntaxique et sémantique, pour ce que l'on appelle dans la littérature des "noms imparfaits", un lien plus étroit avec le verbe. Le nom imparfait est dérivé directement sur le thème (au moins pour le cas du supin) ; il hérite certaines catégories fonctionnelles du verbe, notamment l'aspect ; il hérite la dénotation du verbe, celle d'événement. Dans le cas des autres déverbaux, des processus intermédiaires prennent place (l'affixation) et l'absence de la catégorie de l'aspect est selon nous à la base des différences discutées.

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Nouveaux points de vue sur les déverbaux en roumain

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0. Résumé

Ce travail porte sur les deux nominalisations productives du roumain, celle à base d'infinitif et celle à base de supin. Ces deux nominalisations présentent des différences du point de vue distributionnel, syntaxique et interprétatif, et elles posent des problèmes par rapport aux théories standard de la nominalisation. On identifiera les différences qui apparaissent entre ces deux nominalisations, les différentes contraintes auxquelles leur apparition est soumise, et on proposera un cadre de traitement qui rendra compte de ces différences dans une perspective syntaxique.

1. Introduction

Cette contribution vise à apporter un nouvel éclairage sur deux déverbaux du roumain, respectivement dérivés de la base d'infinitif et celle du supin, dans une perspective de syntaxe comparée. Je ferai apparaître des éléments nouveaux concernant leurs propriétés, qui permettront d'envisager une nouvelle piste d'analyse.

Le roumain se caractérise par une grande diversité de dérivés déverbaux (voir Ripeanu 1974, Sala e.a. (1989)). Parmi ceux-ci, la nominalisation de l'infinitif et celle du supin sont les plus productives et en même temps les plus rapprochées du verbe. Pourtant elles entretiennent des différences de distribution (leurs possibilités d'apparition sont soumises à des contraintes et des conditions qui ont fait l'objet de différentes études), ainsi que de structure et d'interprétation.

Pour ce qui est des formes, les dérivés qui font l'objet de cette contribution se présentent comme suit. L'infinitif nominalisé, dont le statut nominal est non-ambigu, est un dérivé affixal construit sur le thème d'infinitif avec l'ajout de l'affixe *-re*, qui sélectionne le genre féminin :

- (1) cânta – cântare / cântări
chanter – chant / des chants
tăcea – tăcere / tăceri
taire – silence / des silences
iubi – iubire / iubiri
aimer – amour / des amours

Le supin nominalisé est formé sur le thème participial (on peut considérer, du point de vue purement morphologique, qu'il n'existe pas deux thèmes – participe et supin – mais un seul ; les implications de cette hypothèse ne seront cependant pas abordées ici). Le statut de l'élément affixal participial n'est pas clair : dans certains types de travaux morphologiques comme la morphologie constructionnelle on parlerait de transcatégorisation (conversion) à partir d'un thème. Le genre sélectionné est le neutre.

- (2) cânta – cântat
chanter – chanté (chant)
merge – mers
marcher – marché (marche)
iubi – iubit
aimer – aimé (amour)

Les deux nominalisations se combinent avec la forme appropriée (suffixale en roumain, fléchée pour le genre) du déterminant.

Dans la littérature (Gramatica, Cornilescu 1999), on souligne le fait que l'apparition de ces dérivés est soumise à des facteurs de niveaux de langue. Pourtant, je montrerai que les différences peuvent être circonscrites dans des termes plus formels.

Quelques différences importantes apparaissent entre ces dérivés. La première est suggérée dans les exemples ci-dessus ; il s'agit du fait que la forme de pluriel est disponible uniquement pour l'infinitif nominalisé et non pas pour le supin¹. Cette différence a été associée à la possibilité de l'infinitif nominalisé, absente pour le supin nominalisé, d'avoir une lecture résultative (v. Cornilescu (1999/2006)).

La deuxième différence, que l'on peut considérer distributionnelle mais qui relève d'une différence plus profonde d'ordre syntaxique, est représentée par la base, dont le choix est soumis à des contraintes. Les deux nominalisations sont également compatibles sans problème avec des bases transitives, mais pour les bases intransitives, l'infinitif nominalisé sélectionne plutôt des bases inaccusatives, tandis que le supin semble préférer les bases inergatives – même si la possibilité de combinaison avec les bases inaccusatives semble exister également :

- (3) căderea / ?căzutul
tomber-Inf/ tomber-Sup
,la chute'
*rîderea / rîsul
rire-Inf / rire-Sup
,le rire'

La problématique de l'aspect vient compliquer la caractérisation de ces nominalisations. Les inaccusatifs deviennent possibles avec le supin avec des bases inchoatives :

- (4) apusul soarelui; înfloritul copacilor
couché soleil-Gén; fleuri arbres-Gén

Un autre facteur qui rend aussi possible l'apparition du supin nominal avec des bases inaccusatives est l'interprétation itérative/habituelle à laquelle nous allons consacrer la section 2.3.

Le type syntaxique de la base sélectionnée est en relation avec le traitement que les deux dérivés réservent à leurs arguments. Il apparaît que la lexicalisation de l'argument interne, aussi bien pour le cas transitif que pour le cas inaccusatif, est obligatoire dans le cas de la nominalisation infinitive. Elle ne l'est pas pour le supin nominalisé, qui peut lexicaliser l'agent.

Par ailleurs, souvent la possibilité des supins nominaux avec des bases inaccusatives est associée à l'apparition d'une lecture itérative/habituelle. L'interprétation itérative/habituelle semble être une composante importante qui caractérise la nominalisation du supin par rapport à celle de l'infinitif.

Je tenterai dans ce qui suit de relier les aspects qui différencient ces deux nominalisations dans une théorie cohérente, reposant sur les conditions de dérivation de type différent qu'elles impliquent. Pour l'essentiel de mes propositions d'ordre théorique, je me placerai dans le cadre de la Morphologie Distribuée, dont je préciserai les choix au fur et à mesure de l'exposition.

¹ Cette affirmation est néanmoins un peu trop forte. Des supins nominaux pluriels peuvent être marginalement rencontrés, par exemple : avem două tunsuri și un coafat 'nous avons deux coupes et une permanente' – mais ce sont probablement les seules occurrences. Je ne discuterai pas ici ces exemples, du fait que l'on peut facilement constater qu'ils ne prennent pas la lecture d'événement.

2. Contrastes : différences structurales et interprétatives entre les deux nominalisations

2.1 Infinitif : événementiel vs. résultatif. La pluralité

On rencontre dans le cadre des nominalisations à travers les langues une double lecture possible, la lecture événementielle et la lecture résultative. Ce point a été le mieux décrit par Grimshaw (1991) qui fournit également les tests servant à les discerner ; je rappelle ici la possibilité de la pluralisation qui serait disponible uniquement pour les nominalisations en lecture résultative, avec la possibilité de sélectionner des déterminants autres que le défini, et l'impossibilité d'apparaître avec des modificateurs adverbiaux comme *fréquent* ou le prédicat *durer x temps*, qui orientent la lecture vers le sens événementiel.

La première distinction qui sépare ces deux nominalisations concerne justement la possibilité de la lecture résultative et événementielle : elle caractérise les nominalisations de l'infinitif à la différence de celles du supin.

Il existe une généralisation bien connue pour les nominalisations dans les langues romanes, notée d'abord par Milner (1982), ensuite par Zubizarreta (1987), Picallo (1991), par Kupfermann (1991) et par Cornilescu (1999) sur le roumain. Cette généralisation établit que, pour un GN constitué autour d'un N déverbal, le Génitif subjectif force l'interprétation résultative. C'est une corrélation est attendue dans le cadre de Grimshaw (1990): dans le cas des noms événementiels, le complément à statut d'argument qui est obligatoirement présent dans un tel GN sera l'objet; un Nom événementiel se combinera donc avec un Génitif objectif à statut d'argument. Le Génitif subjectif aura un statut de modificateur et ne pourra apparaître qu'avec un N résultatif.

- (5) a la démonstration de Jean tient en deux pages /* a duré deux heures
b la démonstration du théorème tient en deux pages / a duré deux heures

Par rapport à cette généralisation, les deux nominalisations productives du roumain faisant l'objet de cette contribution, à la différence des dérivés en -*tie* par exemple, n'ont pas le même comportement. Cornilescu (1999) montre effectivement que seul l'infinitif nominalisé acquiert la lecture résultative dans le contexte fourni par Kupfermann (1991), celui de la présence de l'argument externe. Le supin nominal, même avec le « génitif subjectif », reste événementiel. La théorie de Grimshaw (1990) prédit correctement que, lorsque la lecture événementielle est forcée par le contexte, l'objet doit être lexicalisé dans les deux types de nominalisations.

- (6) a cumpărarea casei a fost inutilă
acheter-Dét maison-Gén a été inutile
'l'achat de la maison a été inutile'
b *cumpărarea a fost inutilă
acheter-Dét a été inutile
'l'achat a été inutile'
- (7) a cumpăratul casei a fost inutil
acheté-Dét maison-Gén a été inutile
'l'achat de la maison a été inutile'
b *cumpăratul a fost inutil
acheté-Dét a été inutile
'l'achat a été inutile'

Les autres tests donnent également le résultat attendu dans le cadre de la théorie de Grimshaw, par exemple la présence des GPrép agentifs rend nécessaire la projection de l'objet (pour l'ensemble des tests, voir Cornilescu (1999)):

- (8) a cumpărarea casei de către Ion a fost inutilă

- l'acheter-Dét maison-Gén par Jean a été inutile
'l'achat de la maison par Jean a été inutile'
- b *cumpărarea de către Ion a fost inutilă
l'acheter-Dét par Jean a été inutile
'l'achat par Jean a été inutile'
- (9) a dărîmatul acestei biserici de către stat a fost o eroare
démoli-Dét cette-Gén église-gén par l'Etat a été une erreur
'la démolition de cette église par l'Etat a été une erreur'
- b *dărîmatul de către stat a fost o eroare
démoli-Dét par l'Etat a été une erreur
'la démolition par l'Etat a été une erreur'

La lexicalisation de l'Agent en position de Génitif subjectif est impossible dans le cas de la lecture événementielle:

- (10) a *cumpărarea lui Ion a fost inutilă
acheter-Dét Gén Jean a été inutile
'l'achat par Jean a été inutile'
- b *dărîmatul statului a fost inutil
démoli-Dét Etat-Gén a été inutile
'la démolition par l'Etat a été inutile'

L'insertion des modificateurs adverbiaux comme *constant* et *fréquent* est possible:

- (11) a studierea constantă a documentelor este o necesitate
étudier-Dét constant-Fém Gén documents est une nécessité
'l'étude constante des documents est une nécessité'
- b fumatul constant al trabucurilor l-a ruinat
fumé-Dét constant Gén cigares l'a ruiné
'le fait de fumer constamment des cigares l'a ruiné'

La conclusion est que la structure argumentale des deux nominalisations événementielles est complète; l'agent (implicite) n'est pas représenté dans la structure syntaxique, mais il est sémantiquement actif, réalisé par un PRO sujet.

Ce qui intéresse ici, outre l'explication de ce contraste, c'est le fait que, selon Grimshaw (1990), reprise par Cornilescu (1999), la possibilité de la pluralisation est associée strictement à la lecture résultative. Cette affirmation s'avère inexacte, comme l'observent Roodenburg (2006) et Iordăchioaia (2006). Les nominalisations événementielles plurielles existent bien à travers les langues romanes, comme le montrent les exemples suivants, repris à Roodenburg (2006) :

- (12) a de fréquente destrucțiuni des quartiers populaires pour y ériger des tours
staliniennes
b ripetute correzioni hanno modificato il testo originale

Les langues romanes semblent être opposées aux langues germaniques par ce paramètre. Le roumain dispose des deux cas de figure, par l'intermédiaire justement des nominalisations qui nous intéressent ici. L'existence du pluriel « événementiel » est attestée avec l'infinitif nominalisé :

- (13) repetatele arestări ale lui Miron Cozma în fața camerelor de luat vederi
répétées-Dét arrestations de Miron Cozma devant les caméras
En revanche, elle ne l'est pas avec le supin nominalisé, qui de façon générale n'admet pas le pluriel. Une autre question apparaît alors, de surcroît par rapport au fait de savoir pourquoi le supin garde l'interprétation événementielle avec la lexicalisation de l'argument externe : qu'est-ce qui fait que le pluriel peut apparaître dans le cas de l'infinitif événementiel et non pas dans le cas du supin ?

2.2 Supin – événement vs. activité. L’aspect

L’affirmation conformément à laquelle le supin nominal est uniquement événementiel doit néanmoins recevoir une précision. Dans la littérature, on utilise souvent le terme événement et événementiel de façon lâche. Pour être précis, il faudrait distinguer, pour ce qui nous préoccupe, événement dans le sens plus strict de procès, à savoir un événement borné avec les trois phases : initiation, culmination, résultat. Or, le supin a en fait aussi une double lecture, non pas événement / résultat mais événement borné / activité. Cette observation recoupe celle de Cornilescu (1999) qui traite en termes aspectuels la différence supin / infinitif, en observant que le supin nominal peut être aussi bien télélique que atélique, tandis que l’infinitif ne peut être que télélique – ce qui est responsable de la lexicalisation obligatoire de l’argument interne dans le cadre de la lecture résultative.

En vue de distinguer la lecture événement de la lecture activité pour le supin nominal, je me servirai d’un test fourni par Marin (2006), à savoir la possibilité d’apparaître avec l’expression *avoir lieu*, en roumain *a avea loc*. Lorsque le supin dénote un événement borné, à savoir lorsqu’il a un objet délimité, il accepte la combinaison avec cette expression ; sinon, on parlera de la lecture atélique – activité :

- (14) a unde are loc culesul viilor?
où a lieu la cueillette des vignes
b ??unde are loc prinsul peştelui ?
où a lieu l’attrapage du poisson
c unde a avut loc prinsul acestui peşte mare ?
où a eu lieu l’attrapage de ce grand poisson

Il est évident que le supin des inergatifs ainsi que la structure avec argument externe ne donnera lieu qu’à la lecture atélique d’activité :

- (15) a *rîsul va avea loc după-amiază
le rire aura lieu dans l’après-midi
b *cîntatul lui Ion va avea loc în zilele de luni
le chanté de Jean aura lieu les lundis

Cette observation est importante pour l’analyse que je vais proposer. Elle met en évidence la capacité du supin de donner lieu à un « shiftage » aspectuel qui n’est pas disponible pour les autres nominalisations que nous pouvons appeler, à la suite d’une riche littérature, des nominalisations lexicales. Pour que le « shiftage » aspectuel soit possible, il faut que l’aspect soit non pas lexical, mais grammatical, c’est-à-dire, dans le cadre théorique que j’adopte, que ce soit une projection fonctionnelle au niveau de la nominalisation du supin. J’insiste sur le fait suivant : en général, on explique les propriétés événementielles des nominalisations par la projection de l’Aspect (v. entre autres Alexiadou (1999)) ; or, ce que je propose est différent : je dirai qu’il y a deux types de nominalisations événementielles, l’une lexicale, représentée ici par l’infinitif nominalisé, et l’autre « syntaxique » représentée par le supin nominalisé. Seulement la dernière comporte une projection fonctionnelle aspectuelle.

Par ailleurs, en adoptant les propositions de Marantz (1999), on peut admettre également que la nominalisation du supin et non pas celle de l’infinitif comporte un niveau *v* : ceci est un point qui sera élaboré dans la dernière section de cet article, qui concerne la stratégie de dérivation propre à chacune des deux nominalisations.

2.3 Contraintes syntaxiques et sémantiques sur les bases. L’inaccusatif, l’inchoatif et l’habituel

Comme affirmé précédemment dans l’Introduction, il existe des différences et des contraintes entre les types de bases compatibles avec les deux affixes. Si les bases transitives sont compatibles avec les deux nominalisations, les bases intransitives mettent en évidence une spécialisation de celles-ci. Les bases inergatives admettent nominalisation par le supin et non pas avec l’infinitif ; l’inaccusatif est possible avec les deux mais contraint avec le supin. Voici à titre d’exemples les listes empruntées au travail de Cornilescu (1999).

- (16) **verbes inaccusatifs**
a pleca / plecarea / plecatul
'partir / partir-dét / parti-dét'
a ateriza / aterizarea / aterizatul
'atterrir / atterrir-dét / atterri-dét'
a veni / venirea / venitul
'venir / venir-dét / venu-dét'
a învia / învierea / înviatul
'ressusciter / ressusciter-dét / ressuscité-dét'
a sosi / sosirea / sositul
'arriver / arriver-dét / arrivé-dét'
a întineri / întinerirea / întineritul
'rajeunir / rajeunir-dét / rajeuni-dét'

- (17) **verbes inergatifs**
a rîde / *rîderea / rîsul
'rire / rire-dét / ri-dét'
a respira / *respirarea / respiratul
'respirer / respirer-dét / respiré-dét'
a munci / *muncirea / muncitul
'travailler / travailler-dét / travaillé-dét'

J’aimerais ici essayer de mieux circonscrire la possibilité de l’apparition des bases inaccusatives avec les deux nominalisations et de préciser en termes de quoi on peut parler d’une préférence pour l’infinitif dans ce cas. Plus haut, j’ai affirmé que l’apparition des bases inaccusatives avec le supin nominal n’est pas libre, contrairement à ce que suggère la littérature. On peut parler d’une préférence claire de cette nominalisation pour les bases inergatives. Par ailleurs, l’apparition des bases inaccusatives est soumise à la condition d’avoir un certain type d’interprétation.

Il ne s’agit pas, ou pas seulement, contrairement à ce que laisse entendre la littérature, d’une préférence purement stylistique ou liée à la date d’entrée dans le vocabulaire (par exemple dire que les dérivés plus anciens passent par le supin) ; la vision que je défends ici est que la différence est en premier lieu grammaticale, structurale. Si nous regardons la liste en (16) avec les inaccusatifs, et nous comparons les dérivés du point de vue sémantique, la différence qui se fait jour concerne l’apparition d’une lecture habituelle ou itérative ; *aterizarea* ‘l’atterrissage’ a une lecture d’événement unique (ou générique selon le contexte), *aterizatul* a une lecture d’événement habituel ou répété (la différence entre habituel et itératif n’est pas pertinente pour cette démonstration). Le même effet et laissé par d’autres couples : *sosirea / sositul* (în întârziere) ‘l’arrivée (en retard)’ ; *plecarea / plecatul* ‘le départ’ etc.

Une hypothèse à explorer est que cette lecture habituelle / itérative est associée avec un changement aspectuel et une inergativisation. Avec la prise en compte de la composante agentive dans le cas d'un verbe comme *arriver* (en retard), on a une conversion de la structure inaccusative en structure inergative. Cela n'est pas exclu dans la mesure où on peut avoir par exemple en anglais des composés comme *a church-goer*, avec un suffixe agentif, ce qui inattendu pour une structure inaccusative (parce que par ailleurs le dérivé **goer* n'existe pas, comme d'ailleurs **arriver* etc); dans ce cas également on doit prendre en compte la possibilité d'une « inergativisation ». Donc, dans le cas du supin, on partirait de la structure inergative toujours, et le problème du contraste serait résolu, ainsi que le lien entre l'obligation de la projection de l'objet dans l'infinitif et pas dans le supin, et les propriétés aspectuelles, à savoir télicité / atélicité.

Dans Soare (2002) une autre explication est proposée, liée au comportement du supin par rapport à son argument interne : celui-ci serait réalisé dans la position externe. Cornilescu (2006) propose une analyse selon laquelle dans certains contextes cet argument externe est incorporé par le supin nominal et ne peut pas l'être dans le cas de l'infinitif nominalisé. Les deux analyses arrivent à la même conclusion, qui est que le supin nominal repose sur la structure inergative : c'est le seul point pertinent pour ce qui va suivre.

Dans l'analyse que je vais proposer, il est possible de lier l'interprétation habituelle avec la structure du supin nominal. L'interprétation habituelle est corrélée avec le sens d'activité, qui est inaccessible aux purs inaccusatifs ; la raison est que pour l'activité on réanalyse l'unique argument comme un argument externe, en lui attribuant un caractère agentif.

Mais pourquoi le sens habituel apparaît-il avec l'argument externe ? La réponse devrait être que pour obtenir une habitude, il est essentiel d'avoir une répétition constante à travers un intervalle suffisamment long : il faut fumer suffisamment longtemps pour parler d'habitude. L'habituel est obtenu d'un prédicat épisodique qui perd son statut d'épisodique, et qui de dynamique devient statif : si l'on conduit un camion, cela est une activité épisodique ; lorsqu'elle est distribué sur un intervalle suffisamment long, cela devient une habitude et perd son caractère dynamique.

Dans le cas des transitifs, on constate que souvent les objets sont pluriels ou massifs, ils ne sont pas « délimités », et ils n'ont pas le rôle de délimiter l'événement comme dans le cas d'une structure transitive canonique où l'objet correspond au résultat de l'action. Le résultat n'est pas pertinent. Si l'activité habituelle est de fumer, il y a forcément un objet, mais cet objet n'est pas saillant dans la lecture habituelle. En revanche, l'agent de l'activité se trouve avoir une place importante. Cela qualifie en fait les activités comme une classe aspectuelle privilégiant le développement de la lecture habituelle. Par ailleurs, les transitifs peuvent fonctionner, comme je viens de l'expliquer, aussi bien comme des événements bornés que comme des activités.

Une autre observation importante concerne l'existence des inchoatifs (inaccusatifs) avec le supin nominal. Ici on pourrait appliquer le même type de raisonnement que pour l'habitualité. L'inchoatif est une focalisation sur le début de l'action, sur sa phase initiale, avec l'engagement d'un participant dans le procès. On devrait aussi remarquer que l'inchoatif et l'habituel/itératif sont associés : *inflatul copacilor* 'la floraison des arbres' est aussi inchoatif et habituel.

En tant que conclusion intermédiaire, à la suite des observations concernant l'absence de pluriel pour le supin nominal, la sélection des bases verbales, et finalement l'apparition de l'interprétation habituelle/itérative, on peut retenir les idées suivantes :

- le supin nominal repose sur la structure inergative
- le supin suppose une nominalisation non-affixale
- le supin comporte plus de projections de type verbal, en tout cas *v* et *Asp*.

Ces éléments représentent la base, la source des différences discutées ici, qui opposent la nominalisation à base de supin à la nominalisation à base d'infinitif en roumain.

3. L'apport de la morphologie : le genre et le nombre

Dans l'Introduction de cet article, j'ai relevé les différences morphologiques qui séparent les deux nominalisations. Mis à part le problème de la pluralité et celui de l'aspect, les formes étudiées ici sont aussi opposées par le genre sélectionné (féminin pour l'infinitif, neutre pour le supin). La question qui peut se poser est si les différences de comportement que nous avons signalées entre le supin et l'infinitif sont reliées à ces différences morphologiques et si ces différences morphologies sont à leur tour reliées.

Pour ce qui est du neutre en roumain, ses propriétés sont particulières : il ne s'agit pas à proprement parler d'un genre, étant donné que les marques sont non-spécifiques (la flexion s'identifie soit au masculin pour le singulier, soit au féminin pour le pluriel) ; par ailleurs, c'est également le genre par défaut lorsqu'il y a conflit d'accord. On peut dès lors affirmer que seul l'infinitif nominalisé est vraiment pourvu de traits de Genre, et pas le supin, qui reçoit le genre par défaut – et encore, seulement au singulier.

A ce sujet, Picallo (2006) fait une proposition intéressante. Elle donne des arguments en faveur de l'idée que les traits de Genre « nourrissent » les traits de nombre ; autrement dit, la présence des traits de genre est une condition pour la vérification des traits de nombre. Si le supin, comme je l'ai dit, n'a pas de Genre (c'est-à-dire ne présente pas la projection fonctionnelle Genre), on s'attend à ce que les traits de nombre ne soient pas vérifiés non plus. Les traits nominaux seraient dans ce cas inactifs pour le supin qui garde les traits de pluralité verbale, manifestés donc au niveau de l'aspect par l'interprétation habituelle / itérative.

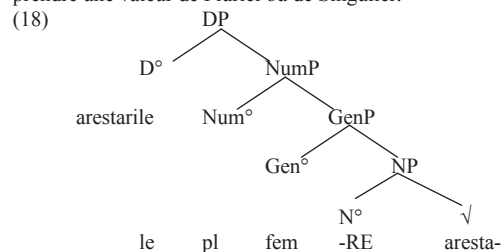
La perspective vers laquelle nous nous acheminons est par conséquent la suivante : l'infinitif nominalisé est un vrai dérivé nominal, construit au niveau du lexique, vérifiant des traits nominaux « forts » Genre et Nombre contre des projections fonctionnelles dédiées. Ceci rejoint une vieille intuition de la tradition grammaticale qui considère l'infinitif « long » comme un vrai nom, dont le lien avec le paradigme verbal est uniquement lexical. Le supin devrait être le résultat d'une autre stratégie de nominalisation, ayant pour résultat de garder plus de propriétés verbales dont sont responsables des projections fonctionnelles typiques des verbes (*v*, *Asp*), et l'absence des projections nominales, Genre et Nombre. Toutes les propriétés répertoriées ci-dessus devraient suivre de cette proposition. Dans la dernière partie de cet article, je développerai le détail de l'analyse que je viens d'esquisser, dans un cadre qui admet les principes de la Morphologie Distribuée de Marantz (1997/1999).

4. Analyse proposée

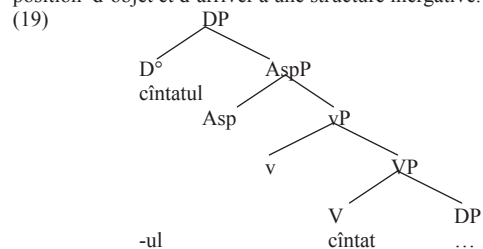
La voie d'analyse qui vient d'être annoncée sera précisée dans cette dernière section. La nominalisation de l'infinitif est traitée comme une nominalisation de type lexical, ce qui impliquerait, pour certains cadres qui l'admettent, qu'elle est formée par une affixation dans le lexique, où la tête est représentée par l'affixe nominalisateur –RE et attire, ou incorpore, la racine d'infinitif (en –a, –ea, –e, –i ou –î selon la classe de conjugaison).

Par conséquent, dans la représentation proposée en (18), la tête –RE se situe sous le nœud N° où elle va attirer la racine d'infinitif. Cette racine n'est pas catégorisée ; sur ce point je suis le point de vue admis dans le cadre de la Morphologie Distribuée. Ce cadre théorique a l'avantage de rendre compte des situations comme la formation des mots en hébreu – mais aussi souvent pour l'anglais – où une même racine peut fournir un verbe ou un nom. Il permet aussi de rendre compte de façon élégante des catégories mixtes V/N.

Comme la tête nominale ainsi formée sélectionne une valeur de genre, féminin en l'occurrence, on projette également cette catégorie, ainsi que celle de Nombre, qui peut prendre une valeur de Pluriel ou de Singulier.



Dans le cas du supin, en premier lieu, la stratégie de nominalisation n'est pas la même. Il n'y a pas d'affixe nominalisateur ; c'est une nominalisation par défaut, entraînée par la combinaison avec le Déterminant. Le Genre est fourni par défaut, et on ne lui associera pas de projection fonctionnelle car il n'y a pas de trait de genre. Par conséquent, le nombre n'est pas « alimenté » non plus. En revanche, dans ce cas la projection englobe plusieurs niveaux de structure verbale. Cela permet de rendre compte du shiftage aspectuel dont j'ai discuté dans la section précédente, ainsi que de la possibilité d'incorporer l'argument interne généré en position d'objet et d'arriver à une structure inergative.



Le résultat final s'obtient par incorporations successives, pour (18) de la racine avec l'affixe, ensuite avec les traits de genre, de nombre et finalement avec le Déterminant.

Les distinctions structurales introduites couvrent entièrement les différences discutées : les propriétés du nombre et de l'aspect, les bases sélectionnées. Les différences d'interprétations en suivent : en effet la lecture habituelle est reliée aussi à la structure inergative.

Il faudrait également signaler un problème posé par cette analyse. On pourrait en effet se poser la question de ce qui rend compte de la présence de la lecture d'événement ainsi que de la structure argumentale dans le cas de la nominalisation représentée en (18). On dira que cette nominalisation a bien une structure argumentale, mais de façon peut-être paradoxale cette propriété ne découle pas de la présence en syntaxe d'un niveau V, mais de l'héritage du sens du verbe de base. Dans le cas du supin nominal, l'existence de v est synonyme de l'héritage direct de la structure argumentale verbale. Cette idée demande néanmoins à être développée avec plus d'attention ; elle revient à dire que dans le cas de ces noms en -RE, les arguments sont associés à la nominalisation de la même manière que dans le cas d'autres noms comme les noms de parenté ou les noms relationnels, ou les dérivés en -tion pour lesquels j'admets la même analyse.

Une question ouverte concerne la comparaison du supin nominal avec le gérondif nominal anglais. Grimshaw (1991) constate aussi, dans le cas de cette forme, la compatibilité avec la structure inergative ainsi que l'absence de la lecture résultative. Les deux formes sont proches justement par le fait qu'elles représentent des structures plus « verbales ». Une possibilité serait de traiter la nominalisation du gérondif dans les mêmes termes, selon lesquels -ing ne serait pas un affixe nominalisateur mais un thème verbal nominalisé par combinaison avec le Déterminant. Cette analyse traite les formes en question comme appartenant au paradigme verbal mais représentant une base de départ pour la nominalisation.

5 Conclusion

J'ai proposé dans cet article un nouveau point de vue sur les déverbaux à base d'infinitif et de supin en roumain. Les propriétés déjà analysées dans la littérature – à savoir l'asymétrie concernant les interprétations événementielle et résultative – ont été complétées par des questions qui n'avaient pas été explicitement abordées : l'existence des nominalisations événementielles plurielles, un autre point d'asymétrie entre les deux types de nominalisations ; l'existence de la lecture habituelle pour le supin ; la tendance à la combinaison avec les bases inergatives pour cette même nominalisation, et finalement la possibilité des bases inaccusatives avec lecture inchoative. L'idée de base est que le supin repose sur une structure inergative ; d'où la projection d'un niveau v ; il permet des changements de la valeur aspectuelle, d'où la projection d'un niveau Aspect. A l'opposé, l'infinitif nominalisé en -RE représente une structure complètement nominale, avec projection de Genre et de Nombre (le premier étant une condition pour le deuxième). Les arguments sont projetés par rapport à cette projection nominale ; ce sont les arguments d'un N° non pas des arguments de V°.

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Two Kinds of Event Plurals: Evidence from Romanian Nominalizations

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1 Introduction

Beginning with the generalization in Grimshaw (1990), it has been known that Complex Event Nominals (CENs) disallow plural marking, a property which Grimshaw relates to the presence of the argument structure inherited from the verb. Thus, in (1) below Grimshaw opposes the CEN preserving the theme argument *of the problems* to the Result Nominal (RN) which has no arguments and can be pluralized:

- (1) a. The assignments were long. (RN)
b. The assignment(*s) **of the problems** took a long time. (CEN)

More recently, this generalization has been challenged by Roodenburg (2006) who provides empirical evidence from French and Italian where plural CENs are not excluded. His claim is that the possibility to pluralize has to do with language-specific properties concerning the syntax-semantics of Number which predict Romance CENs to allow plural and Germanic CENs to disallow it, as illustrated by the contrast between the French and English data in (2).¹ Grimshaw's generalization would thus be restricted to Germanic languages:

- (2) a. les désamorçages **de bombes lourdes** par les recrues
'the dismantlements of heavy bombs by the young soldiers'
b. * the destructions **of the city** by the soldiers

While we do not deny the importance of language-specific properties, we would like to draw attention to the fact that this cannot be the only explanation for the contrast in (2), since both the Romance (2a) and the Germanic pattern (2b) can be instantiated within one and the same language, in our case, Romanian, a Romance language.

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¹The data in (2) are taken from Roodenburg (2006). Note that the two examples do not form a minimal pair, since the theme is a bare plural in (2a) and a singular definite in (2b). Although this may have implications for the grammaticality contrast, we do not attempt to address this matter here.

As indicated by the data in (3) where the genitive phrase *ale cartierelor vechi* 'of the old quarters' qualifies as a theme, infinitive CENs in Romanian easily accept plural marking, while supine CENs totally exclude it:

- (3) demolările / * demolaturile frecvente **ale cartierelor vechi**
demolish-Inf-Pl / demolish-Sup-Pl frequent-Pl of quarters-Gen old
de către comuniști
by communists
'the frequent demolitions of the old quarters by the communists'

On the basis of the aspectual differences between the two CEN patterns in Romanian, in part already observed by Cornilescu (2001), we reach the conclusion that they each realize one of two plurality patterns directly related to two patterns of internal functional structure available for CENs: nominal or verbal. The nominal pattern in a CEN indicates that the syntactic structure includes a Number projection which explains the availability of plural morphology. The verbal pattern corresponds to the projection of imperfective/unbounded Asp(ect) which blocks Num(ber) and thus plural morphology. In Romanian, infinitive CENs instantiate the nominal pattern and supine CENs, the verbal one.

In support of our generalization, we bring further evidence for the nominal properties of the infinitive and the verbal characteristics of the supine. We will show that unlike supine CENs, infinitive CENs display morphologically marked gender features and non-defective case declension, they develop RN readings, and are incompatible with aspectual adverbs. Besides the fact that it lacks these nominal properties, the supine will be argued to introduce aspect shift by turning bounded/perfective events into unbounded/imperfective ones. Thus, AspP hosts a [-bounded] feature which expresses (verbal) semantic plurality.

In Section 2, we present the morphological properties of infinitive and supine nominalizations in Romanian: derivational procedures, plural marking, determiner selection, gender marking, and case inflection. In Section 3, we discuss the aspectual differences between infinitive and supine CENs and we establish some correlations with the morphological differences from Section 2. In Section 4, we describe the special aspectual contribution of the supine, that of triggering aspect shift. On the basis of our empirical generalizations, we describe the functional structure of the nominal and the verbal CEN patterns in Section 5. In Section 6, we formulate our conclusion and consider a few cross-linguistic predictions that our analysis makes with respect to pluralization in CENs and Grimshaw's generalization.

2 Morphological properties: infinitive vs. supine

In this section, we concentrate on the morphological properties of infinitive and supine nominalizations, with particular focus on the differences between the two.

2.1 Two nominalization patterns

Infinitive and supine nominals are the most productive deverbal nominalizations in Romanian and they derive from the stem of the long infinitive and that of the past

participle, respectively:

- (4) a. Infinitive:
 i. a cînta - cînta -**r** -**e** / cîntă -**r** -**i**
 to sing - sing -Inf -E.Sg / sing -Inf -Pl
 ii. a reproduce - reproduce -**r** -**e** / reproduce -**r** -**i**
 to reproduce - reproduce -Inf -E.Sg / reproduce -Inf -Pl
- b. Supine:
 i. a cînta - cînta -**t** / # cîntă -**t** -**uri**
 to sing - sing -Sup / sing -Sup -Pl
 ii. a reproduce - reprodu -**s** / # reprodu -**s** -**uri**
 to reproduce - reproduce -Sup / reproduce -Sup -Pl

The infinitive suffix *-re* is an unambiguous derivative affix, since it exclusively appears within (infinitival) nominalizations. The restricted use of the verbal infinitive employs a short infinitive (5a) or a prepositional infinitive (5b):

- (5) a. Ion nu poate **citi** fără ochelari.
 John not can read without glasses
 'John cannot read without glasses.'
- b. Pentru **a citi**, Ion are nevoie de ochelari.
 for to read, John has need of glasses
 'In order to (be able to) read, John needs glasses.'

The suffix *-t/s* that appears in the supine nominal is two-way ambiguous: it generally participates in the formation of the Romanian past participle (6a), and it also appears in the traditionally called 'verbal' uses of the supine (6b,6c):

- (6) a. **Am citit** deja cartea.
 have read-Part already book-the
 'I have already read the book.'
- b. S-a apucat **de citit** o carte.
 Cl-has started of read-Sup a book
 'He started reading a book.'
- c. A plecat **la pescuit**.
 has left at fish-Sup
 'He went fishing.'

In view of the differences between the two suffixes, Soare (2007) argues that *-re* is a nominalizing affix, while *-t/s* is only the marking of a verbal stem and carries no particular nominalizing features. Thus, while the infinitival noun is a derivational nominalization marked for gender (see (4a) and Section 2.3 below), the supine nominal is mainly distinguished on the basis of its distributional properties. The distinction between the two corresponds to the classical differentiation between 'lexical' and 'syntactic' nominalizations originating in Chomsky (1970) and taken over in Picallo (1991).

2.2 Plural marking and determiner selection

A first parameter that differentiates between the two nominalizations is the countable/uncountable distinction, manifested in the possibility/impossibility to realize morphological number marking. As already indicated in (4), only the infinitive nominals display morphologically marked plural (4a), as opposed to the supine nominals (4b) which get the ending *-uri* by default. This latter point will be addressed in Section 2.3.

Importantly, the plural form is available for the infinitive not only in its RN reading (7a), but also in its CEN reading (7b), thus contradicting Grimshaw's generalization. In turn, the supine is always plural-defective and also unambiguously a CEN, obeying Grimshaw's generalization. We will return to the tests identifying the CEN vs. RN readings of the infinitive in Section 3.1, in connection with its aspectual properties.

- (7) a. **Interpretările** acestui actor sînt memorabile.
 interpret-Inf-Pl this-Gen actor are memorable
 'The performances of this actor are memorable.'
- b. **Interpretările acestui rol** de către diverși actori i-au schimbat stilul.
 interpret-Inf-Pl this role-Gen by various actors Cl-have changed style-the
 'The performance of this role by various actors has changed its style.'

The contrasting behavior of the two CENs with respect to the countable/uncountable property is further confirmed by the selection of determiners. Thus, discrete quantifiers are compatible with the infinitive (8a), but not with the supine which accepts only mass quantifiers (8b):

- (8) a. **Prea multe** spălări / **o** spălare a(le) rufelor distrug(e) țesătura.
 too many wash-Inf-Pl / one wash-Inf of laundry-Gen destroy(s) fabric-the
- b. **Prea mult** / ***un** spălat al rufelor distruge țesătura.
 too much / one wash-Sup of laundry-Gen destroys fabric-the
 'Too much washing of the laundry destroys the fabric.'

Note that the contrast clearly relies on the discrete vs. mass type of the determiner and not on number, since the quantifier *one* is out with the supine and grammatical with the infinitive.

Selection of discrete determiners is thus another property that infinitive CENs share with count nouns. Mass quantifiers are selected by both supine CENs and mass nouns. The count noun *pată* 'stain' accepts the discrete quantifier *multe* 'many' and rejects the mass quantifier *mult* 'much' (9a). The mass noun *vin* 'wine' is compatible with the mass *mult*, but incompatible - in its mass interpretation - with the discrete *multe* (9b):

- (9) a. **Prea multe** pete / ***prea multă** pată a(u) distrus rochia.
 too many stains / too much stain have/has destroyed dress-the
 'Too many stains/*too much stain destroyed the dress.'

- b. **Prea mult** vin / # **prea multe** vinuri dăunează sănătății.
too much wine / too many wines endangers health
'Too much wine/#too many wines endangers one's health.'

However, there are differences between Romanian mass nouns and supine CENs. For instance, the 'vague' quantifier *niște* 'some' is allowed with concrete mass nouns and rejected by the supine. Most likely this is due to a lexical restriction holding for abstract mass nouns in general, since *frumusețe* 'beauty', an abstract mass noun, is incompatible with *niște*, too:

- (10) a. Caut **niște sare**.
search some salt
'I am looking for some salt.'
- b. ***Niște** cântat n-o să-ți faci niciun rău.
some sing-Sup not-will Subj-Cl do no harm
'A bit of singing will not do you any harm.'
- c. ***Niște** frumusețe nu strică nimănui.
some beauty not harm nobody
'A bit of beauty will not do any harm to anybody.'

Just like *some* in English, *niște* combines with singular mass nouns but also with plural count nouns and it denotes a vague quantity. As expected, the infinitive CEN admits *niște* only in the plural form:

- (11) a. Am **niște mere**.
have some apples
'I have some apples.'
- b. Au avut loc **niște premieri** ale participanților.
have taken place some prize-award-Inf-Pl of participants-Gen
'There have been some prize-awards to the participants.'

In conclusion, infinitive CENs pattern with count nouns and supine CENs with mass nouns. The possibility of a noun to be counted has been related in the literature to the presence of a NumP projection in its internal structure (see for instance Borer 2005 for a recent approach). NumP appears in the syntax of count nouns, but not in that of mass nouns. Plural marking and the selection of determiners obviously point towards the generalization that number features are present in the infinitive CEN and that they are absent in the supine CEN. We will make this precise in our proposal in Section 5.

2.3 Gender and case

A further distinction that can be established between the infinitive and the supine CEN concerns the nominal declension, more precisely gender features and the case inflection. As we will show below, the infinitive CEN behaves like a typical noun with a complete nominal paradigm, while the supine CEN has a defective nature.

The infinitive nominalizer *-re* has gender features, being marked as [+fem](inine). Compare the infinitive form in (4a), repeated below as (12a) with the one of a prototypical feminine noun in Romanian (12b):

- (12) a. cântar **-e** / cântăr **-i**
sing-Inf -FSg / sing-Inf -Pl
- b. floar **-e** / flor **-i**
flower -FSg / flower -Pl

The supine is traditionally considered to have neuter gender (see Graur et al. 1966) with an unmarked ending in the singular and *-uri* in the plural. The supine itself is not used in the plural form as a CEN, the plural ending *-uri* is constructed by analogy with other nouns which are derived from the supine/past participle stem. For example, the nouns *venit* and *mers* in (13b) and (13c) originate from the past participle and the supine forms, respectively, but they are perceived as lexicalized items, since these derivations are not productive. Similar nouns like the ones in (14a) and (14b) are untested or have a very restricted use:

- (13) a. cântat $-\emptyset$ / # cântat **-uri**
sing-Sup -N.Sg / sing-Sup -Pl
'singing(#s)'
- b. venit $-\emptyset$ / venit **-uri**
come-Past.Part -N.Sg / come-Past.Part -Pl
'income(s)'
- c. mers $-\emptyset$ / mers **-uri**
walk-Sup -N.Sg / walk-Sup -Pl
'way(s) of walking'
- (14) a. sosit $-\emptyset$ / * sosit **-uri**
arrive-Past.Part -N.Sg / arrive-Past.Part -Pl
'thing(s) that arrived'
- b. citit $-\emptyset$ / ?? citit **-uri**
read-Sup -N.Sg / read-Sup -Pl
'way(s) of reading'

Some supine forms can also be used as simple event nominals and thus have a plural realization. This is the case with the example in (15). However, note that the corresponding CEN cannot pluralize, as shown in (15b):

- (15) a. tuns $-\emptyset$ / tuns **-uri**
cut-Sup -N.Sg / cut-Sup -Pl
'(hair) cutting(s)'
- b. **tunsul** părului / * **tunsurile** părului
cut-Sup-the hair-Gen / cut-Sup-Pl hair-Gen
'the cutting(*s) of the hair'

Given the fact that Romance languages in general have only two gender classes (masculine and feminine), it has been argued that Romanian neuter is not a proper

gender class either. Two arguments have been brought in support of this idea: the lack of semantic identity and the lack of a specific ending. With respect to the former issue, although one would expect neuter to be the gender for inanimate nouns, it does not completely cover this semantic area (see for instance the feminine inanimate *carte - cărți* 'book - books' and the masculine inanimate *trandafir - trandafiri* 'rose - roses'). As for the latter argument, the neuter has no formal identity since it exhibits syncretism with the masculine singular and the feminine plural form. In (16) below, we exemplify the gender paradigm of three nouns in Romanian. The null ending in the singular characterizes both neuter and masculine nouns, while the plural endings *-e* and *-uri* appears both with neuter and feminine nouns:

	GENDER	SINGULAR	PLURAL
(16)	MASCULINE	băiat -∅ 'boy'	băieț -i
	FEMININE	fat -ă 'girl'	fet -e
		blan -ă 'fur'	blân -uri
	NEUTER	măr -∅ 'apple'	mer -e
		chibrit -∅ 'match'	chibrit -uri

2.3.1 Gender marking in the supine?

While we do not attempt to address the issue of whether there is a neuter gender in Romanian or not,² we would like to argue that the so-called 'neuter gender' of the supine is merely a default specification. In order to do that, we will show that the only indicator of gender in the supine form – i.e. the plural ending *-uri* – does not always carry gender features.

We follow Picallo (2006) in regarding gender features as indicators of the class/delension to which a noun belongs. Under this view, gender features are hosted by a Class(ifier) projection to which the noun moves in order to check its class information. Moreover, Picallo argues that gender features and ClassP are obligatory for the projection of Number. Thus, the lack of gender triggers the lack of a NumP and implicitly the unavailability of the plural marking. Within this theory, saying that neuter does not exist as a gender class in Romanian would have the consequence that neuter nouns should not be able to form plural.³ This is too strong a generalization, since neuter count nouns like *scaun - scaune* 'chair(s)', *stilou - stilouri* 'pen(s)' clearly do pluralize.

Leaving aside the fact that the plural form does not show up with the supine CEN but only with the simple event supine (see (15)), the only ending that the supine takes is the plural *-uri*. Besides functioning as a plural ending for feminine and neuter nouns (see also (16) above), we assume that it can also be used as a default ending for words which behave like nouns, although they have not been integrated into a nominal class. This would be the case of the supine.

In support of our hypothesis, it should be observed that *-uri* is the default plural ending for newly formed nouns and for the most recent borrowings:

- (17) un **X** - două **X-uri**; un **8** - două **8-uri**
 one X - two X's; one 8 - two 8's

²But see Bateman and Polinsky (2006) for a recent approach against the existence of an individual gender class 'neuter' in Romanian.

³We would like to thank a CSSP anonymous reviewer for drawing our attention on this issue.

With respect to borrowings, Brâncuș (1978) argues that the plural *-uri* is a sign that the noun has not been completely adapted to the language. Once they are fully integrated, foreign nouns get the plural marking *-e*. See for instance the recent borrowing *weekend* as opposed to the older *verb* in (18):

- (18) a. un **weekend** - două **weekend-uri** / ***-e**
 one weekend - two weekends
- b. un **verb** - două **verburi** / ***verbe** (19th century)
 one verb - two verbs
- c. un **verb** - două **verbe** / ***verburi** (present-day)

We conclude from this discussion that *-uri* is associated with supine CENs as a default ending like in the case of 'unestablished' nouns. Since the singular form of the supine has no morphological indicator of gender, we may conclude that the supine CEN does not carry gender features. In Picallo's theory, the lack of gender correlates with the lack of a ClassP and implicitly, with the absence of a NumP. This explains the unavailability of plural marking in supine CENs. If NumP is not projected, there is no way to accommodate the plural ending in the supine CEN.

2.3.2 Gender marking: infinitive vs. supine

In Section 2.2, we showed that the infinitive CEN behaves like a count noun and we suggested that it projects a NumP in the syntax. If we compare the supine with the infinitive CEN with respect to gender and Picallo's claim that gender features 'feed' Number, we find a further confirmation for our initial hypothesis. In particular, the infinitive CEN has both a singular (*-e*) and a plural ending (*-i*) clearly indicating feminine gender, as shown in (12). In Picallo's terms, this means that the infinitive projects a ClassP specified with feminine gender and a NumP can also be projected.⁴

The gender specification in the two Romanian CENs can thus be correlated with the availability of plural marking: the infinitive carries feminine gender, while supine carries a default 'neuter'; the former accepts plural, the latter does not. To confirm our generalization with respect to gender, it should be noted that the infinitive successfully establishes anaphoric relations with the feminine demonstrative *aceasta*,⁵ while the supine rejects the masculine/neuter syncretic form *acesta* and can only be referred to by the genderless form *asta*, the common anaphor for CPs in Romanian:

- (19) a. **Că Ion a venit, asta/*aceasta/*acesta** știu.
 'That John came, I know it/this-F/this-M.'
- b. Am vorbit despre **interpretarea rolului Hamlet** în general. Se pare ca **aceasta** / ??**asta** îi consacră indubitabil pe actorii tineri.
 'We spoke about the interpretation-Inf of Hamlet in general. It seems that this-F / ??it undoubtedly validates the young actors.'

⁴Note that both mass and count nouns carry gender features, but only the latter exhibit plural marking. In Picallo (2006), we also need a feature [\pm count] under ClassP to distinguish between the two noun classes, such that only count nouns are specified as [+count] and project NumP (see also Alexiadou et al. (to appear), Iordăchioaia and Soare (2007)).

⁵Note that the anaphor *asta* is not excluded in (19b). But in this case we are dealing with coercion since the noun *interpretarea* is understood as a fact.

- c. Am vorbit despre **interpretatul rolului Hamlet** în general. Se pare că ***acesta / asta** îi atrage pe toți actorii tineri.
'We spoke about the interpretation-Sup of Hamlet in general. It seems that *this-M.N / it attracts all the young actors.'

In conclusion, the neuter form of the supine is not the effect of neuter gender features. Typical neuter nouns like *stilou* 'pen' are referred to by the anaphor *acesta* and not *asta*:

- (20) Ieri, Ion își pierduse **stiloul**. Se pare că **acesta / *asta** rămăsese pe masă în sala unde predase.
'Yesterday, John lost his pen. Apparently, this-M.N / *it had remained on the desk in the room where he had taught.'

2.3.3 Nominal features and the Classifier projection

Following Picallo (2006), the presence of gender in infinitive CENs and the lack of it in supine CENs is expressed in the syntax by the presence/absence of a ClassP. The Classifier - as previously noted - hosts the nominal features of a noun, its class information. The projection of a NumP that hosts the plural marker is also a nominal property. The default gender in the supine suggests that this CEN lacks the ClassP in the syntax, so it carries no noun class information.

Besides gender, case is also an indicator of the noun declension. Romanian common nouns display two case paradigms with nominative-accusative and genitive-dative syncretism. The nominative-accusative form is the most unmarked one. Interestingly, the infinitive CEN exhibits both case inflections, while the supine cannot appear in the genitive-dative form (21):

- (21) a. **Tăierea / tăiatul** pădurilor a provocat
cut-Inf-Nom / cut-Sup-Nom woods-Gen has brought about
alunecări de teren.
earth-flows
'Cutting down the woods brings about earth flows.'
- b. Alunecările de teren au loc din cauza **tăierii / *tăiatului**
earth flows-the occur because of cut-Inf-Gen / cut-Sup-Gen
pădurilor.
woods-Gen

2.4 Interim conclusion

To summarize our observations with respect to the morphological properties of the two CEN patterns in Romanian, we have shown that the infinitive CEN behaves like a typical count noun: it accepts plural marking and can combine with discrete determiners, it carries well-determined gender features, and it has a full case paradigm. The supine CEN exhibits a clear contrast with the infinitive in nominal properties: it does not accept plural marking or discrete determiners, it carries default gender, and it is

case-defective. By taking up Picallo's analysis of nominal features in relation with syntactic projections, the infinitive projects [+fem] ClassP and NumP. For the supine, there is no evidence for either of the two projections.

In what follows, we would like to suggest that the infinitive is a full nominal, while the supine exhibits a more verbal nature which blocks nominal properties. For this, we will investigate the aspectual properties of the two CENs.

3 Aspectual properties

The contrast between infinitive and supine CENs in Romanian is further confirmed by their aspectual properties, which correlate with the plural marking contrasts. In this section, we will show that infinitive CENs express telic/bounded events, unlike supine CENs which are atelic/unbounded.

3.1 Telicity

Cornilescu (2001) offers a detailed investigation of the aspectual properties of the two CENs and concludes that the infinitive is telic, while the supine is atelic. Cornilescu's argumentation is based on three issues: the projection of the theme argument, the possibility to develop R-readings, and the selection of the verbal bases.

First of all, Cornilescu follows Borer (1994) in assuming that if a transitive CEN obligatorily projects its theme argument, then it is telic, while a CEN which can project its external argument without having projected its theme is atelic. This generalization is based on the intuition that the theme identifies the culmination of an event. If the theme is obligatory, it means that the event must culminate so the CEN is telic; if the theme is not projected, the event does not need to culminate, so the CEN is atelic. In this respect, Cornilescu shows that the infinitive CEN qualifies as telic and the supine, as atelic. As the data in (22) indicate, the infinitive CEN cannot project the agent without having projected the theme, but the supine can:

- (22) a. ***citirea** lui Ion
read-Inf-the John-Gen
'John's reading'
- b. **cititul** lui Ion
read-Sup-the John-Gen
'John's reading'

The infinitive in (22a) can only be understood as a RN. This brings us to the second aspectual difference between infinitive and supine, the possibility to develop R-readings. Only telic events have a resulting state, and thus should be able to derive result readings. The infinitive and the supine CEN comply with this prediction: the former gives rise to RNs, the latter does not. In Romanian, R-readings are indicated by the presence of the preposition *de* 'of' which appears with locative modifiers. In (23), it can be noticed that the infinitive is compatible with *de*, while the supine is not:

- (23) a. ***cîntatul** lui Ion **de** la baie
sing-Sup-the John-Gen of in bathroom

- b. interpretarea **de** la Paris (a operei Oedip)
perform-Inf-the of in Paris (of opera-Gen Oedipus)
'The Paris performance of the opera Oedipus'

A final piece of evidence that Cornilescu makes use of in order to indicate the telicity of the infinitive and the atelicity of the supine involves the selectional restrictions of the two CENs with respect to the verbal base. While they are both compatible with transitive verbs (see the discussion above), only the supine can be formed from unergative verbs, known to always express activities. The infinitive rejects them on the basis of their atelicity:⁶

	UNERGATIVE VERB		INFINITIVE	SUPINE
	a călători	'to travel'	*călătorire	călătorit
(24)	a locui	'to live'	*locuire	locuit
	a munci	'to work'	*muncire	muncit
	a râde	'to laugh'	*rîdere	rîs

The generalization in Cornilescu (2001) that the infinitive CEN is telic and the supine CEN is atelic correlates with the plural marking facts in Section 2. This confirms previous observations in the literature, according to which telic CENs do pluralize and only atelic ones do not, so only the former obey Grimshaw's generalization (see for instance Mourelatos 1978, Borer 2005). As a telic CEN, the infinitive is expected to exhibit plural marking.

3.2 Boundedness

In order to facilitate a thorough investigation of the aspectual differences between infinitive and supine CENs, we propose to reformulate the telicity contrast above in terms of *boundedness*, a term borrowed from Jackendoff (1991). According to Jackendoff, the expression of plurality is 'a feature of conceptualization that is orthogonal to the distinction between objects and events'. Thus, in his terms, nominal plural, mass nouns, atelic and imperfective aspect count as [-b](ounded), while nominal singular, count nouns, telic and perfective aspect are [+b].

As expected, given Cornilescu's observations, the supine CEN cannot express a single (bounded) event located in space or/and time. This is however possible with the infinitive:

- (25) **Citirea** / # **cititul** cărții a avut loc **ieri** /
read-Inf-the / read-Sup-the book-Gen has taken place yesterday /
în sala de lectură.
in reading room-the
'The reading of the book took place yesterday/in the reading room.'

According to Jackendoff, plural is a function that maps a [+b] entity into a [-b] multiplicity of entities of the same type. The infinitive CEN is thus expected to undergo

⁶It seems that nominalizations of unergative verbs exclude plural also in other languages with rich morphology, like Georgian (Léa Nash, p.c).

pluralization, since it is [+b]. The [-b] supine is incompatible with the plural function. A further test is provided by the (in)compatibility with the function 'until' which is assumed to bind an unbounded event with a time producing a bounded event. As expected, 'until' can combine only with the plural of the infinitive CEN and not with the [+b] singular form (26a).⁷ But it felicitously modifies the supine CEN:

- (26) a. **arestările** / # **arestarea** lui Miron Cozma **pînă** la schimbarea
arrest-Inf-Pl / arrest-Inf-the Miron Cozma-Gen until at changing
guvernării
government-Gen
'Miron Cozma's arrestings until the government changes'
b. **cititul** benzilor desenate **pînă** la vârsta de 16 ani
read-Sup-the comics-Gen until at age of 16 years
'reading comics until the age of 16'

So far we can conclude that the infinitive CEN as a [+b] event is expected to pluralize, while the supine CEN as a [-b] event naturally rejects the plural marking since it already involves a form of plural. In what follows, we will show that the unbounded character of the supine best matches a verbal syntactic structure with an Aspect projection. In view of our conclusions in Section 2, the bounded character of the infinitive is compatible with its nominal syntax with Classifier and Number projections.

4 Aspect shift

In this section, we address another level of aspectuality as instantiated by the two Romanian CENs, that of aspect shift. The possibility to trigger aspect shift will be taken as evidence for the presence of an Asp(ect)P in the syntax. With 'aspect shift' we refer to the possibility of the nominalization to change the aspectual value that comes with the base verb. This means that the nominalization itself contributes an aspectual operator,⁸ independently of the lexical aspect of the root. In Verkuyl (1993)'s terms, who distinguishes between 'inner' and 'outer' aspect, aspect shift takes place at the level of the outer aspect. So it is the outer aspect information that we will correlate with a syntactic projection AspP.⁹ As we will see, only the supine CEN introduces aspect shift, so it has aspectual contribution, a fact which indicates its verbal nature and thus, explains its defective nominal properties. We first consider infinitive CENs and then, for comparison, supine CENs.

4.1 The infinitive

As already indicated in Section 3.1, the infinitival form in general is incompatible with unergative roots (24) known to express unbounded events. At the same time, the infini-

⁷The only reading available for (26a) with the singular *arestarea* is 'the arresting of Miron Cozma before the government changes', so *pînă* is interpreted as 'before' and not as 'until'.

⁸See de Swart (1998), van Geenhoven (2004), Laca (2006) for various examples of such aspectual operators acting as 'eventuality modifiers'.

⁹See also Alexiadou et al. (to appear) for more details on the distinction between inner and outer aspect and its relevance for nominalizations.

tival CEN obligatorily requires the projection of the theme which qualifies it as carrying telicity (Cornilescu 2001).

In order to understand if it is the lack of a theme that makes the infinitive CEN incompatible with unergatives or the unbounded character of the latter, we should test transitive verbs with a bare plural theme which are atelic/unbounded (Dowty 1979). However, this test cannot be applied to infinitive CENs, since their theme is realized in the genitive case which always involves a definite determiner and thus the construction becomes again telic/bounded. In (27) below, *pînă* can only be interpreted as 'before' and not as an endpoint bounding an unbounded event, and the CEN in (27c) is related only to (27b):

- (27) a. A citit **cărți pînă** la miezul nopții.
has read books until at midnight
'He read books until midnight.'
- b. A citit **cărțile pînă** la miezul nopții.
has read books-the until at midnight
'He had read the books by midnight.'
- c. **citirea cărților pînă** la miezul nopții
read-Inf-the books-Gen until at midnight
i. # = 27a: 'the reading of books until midnight'
ii. = 27b: 'the reading of the books by midnight'

In conclusion, infinitive CENs with the theme in genitive case always derive from bounded constructions. Considering this in relation with the conclusion in Section 3.1 according to which infinitive CENs express bounded events, it means that the infinitival CEN does not change the boundedness specification of the base verb. That is, it cannot trigger aspect shift,¹⁰ it merely inherits the aspectual specification of the verb.

4.2 Verb semantic classes and the supine

The situation is different with the supine. As noted in Section 3.1, supine CENs are unbounded. But this does not preclude them from applying to bounded roots like achievements (28):

- (28) a. **Sositul lui Ion** cu întârziere la toate întâlnirile importante
arrive-Inf-the John-Gen with delay at all meetings important
nu e un secret.
not is a secret
'John's arriving late at all important meetings is not a secret.'
- b. **Sositul lui Ion** cu întârziere la toate întâlnirile importante
arrive-Inf-the John-Gen with delay at all meetings important
pînă cînd a fost amenințat cu concedierea nu e un secret.
until when has been threatened with firing not is a secret

¹⁰Note that this conclusion holds of infinitival constructions in general, since even in unbounded constructions with a "de 'of' + bare plural" theme they maintain the unbounded character of the original construction: *citirea de cărți pînă miezul nopții* corresponds to (27a) above.

'John's (continuously) arriving late at all important meetings until he was threatened with getting fired is not a secret.'

Since the supine CEN in (28) is still unbounded (according to the possibility to combine with *pînă*: (28b)) despite the bounded character of the achievement root *a sosi* 'to arrive', it means that the supine actually introduces aspect shift on the root: it turns [+b] events into [-b] events. This is confirmed by the interaction between the supine and various semantic verb classes.

States and activities are known as classes of atelic verbs, so they express unbounded events. The supine nominals derived from these verbs do not simply inherit the original unboundedness, but they seem to be possible only if the original event is bounded. Thus, supine CENs derived from states and activities are very questionable if not completely excluded, unless we can understand them as pluralities of bounded events:

- (29) a. ***statul** lui Ion / ***dormitul** lui Ion
stay-Sup-the John-Gen / sleep-Sup-the John-Gen
- b. **statul** lui Ion la Maria / **dormitul** lui Ion **pînă**
stay-Sup-the John-Gen at Mary / sleep-Sup-the John-Gen until
după-amiaza tîrziu
afternoon late
'John's habit of staying at Mary's/sleeping until late in the afternoon'
- (30) a. ***muncitul** lui Ion / ***învățatul** lui Ion
work-Sup-the John-Gen / learn-Sup-the John-Gen
- b. **muncitul** lui Ion / **învățatul** lui Ion **pînă** la
work-Sup-the John-Gen / learn-Sup-the John-Gen until at
miezul nopții
midnight
'John's (habit of) working/studying until midnight'

Once they are circumscribed in space and/or time, the atelic events can be understood as bounded and thus the supine form becomes available. Both the states in (29b) and the activities in (30b) become bounded due to *pînă* 'until'. But note that *pînă* does not bound the unbounded event expressed by the supine, since the overall interpretation of the two constructions is habitual and thus still unbounded. In order to test this, we can see that another 'until'-phrase semantically compatible with the unbounded event expressed by the supine is easily available:

- (31) a. **dormitul** lui Ion **pînă** după-amiaza tîrziu **pînă** la vîrsta
sleep-Sup-the John-Gen until afternoon late until at age-the
adolescenței
teen
'John's (habit of) sleeping until late afternoon (which lasted) until he was a teenager'
- b. **învățatul** lui Ion **pînă** la miezul nopții **pînă** la absolvirea
learn-Sup-the John-Gen until at midnight until at graduating
facultății
university

'John's (habit of) studying until midnight (which lasted) until he graduated university'

In conclusion, the supine introduces unboundedness as a form of pluralization over individual/bounded events. It cannot combine with unbounded events (in (29a) and (30a)) for the same reason for which plural is not available for mass nouns. If this happens, then the unbounded event has to be interpreted as bounded (in (29b) and (30b)), just like mass nouns have to be interpreted as countable. In (32b), the plural makes *water* be understood as 'river' or 'kind of water' (e.g. sweet and salty; clean and dirty):

- (32) a. I saw **water**(#s) on the floor.
b. There are two **waters** flowing into the Danube.

As a further confirmation of this generalization, the supine is grammatical with accomplishments (33a) and punctual events (33b) which are bounded, but ungrammatical with i-level predicates (33c) which cannot be located in space and time (Kratzer 1995), so they cannot become bounded and then multiplied:

- (33) a. **Mîncatul** micului dejun pe terasă este obiceiul lui de o viață.
eat-Sup-the breakfast-Gen on terrace is habit his of a life
'Having breakfast on the terrace has been his lifetime habit.'
b. **Clipitul** Mariei în acest moment important este enervant.
blink-Sup Mary-Gen in this moment important is annoying
'Mary's blinking at this important moment is annoying.'
c. ***cunoscutul** limbilor străine / ***descinsul** omului
know-Sup-the languages-Gen foreign / descend-Sup-the man-Gen
din maimuță
from monkey
'knowledge of foreign languages/the man's descent from the monkey'

As shown by (33b), the unboundedness of a punctual event in the supine form correlates with iterativity at a given moment. In all the other examples, we noticed that unboundedness usually correlated with habituality. These two patterns can also be identified in the two interpretations possible with semelfactive verbs. A semelfactive verb has both a punctual event (34a) and an accomplishment reading (34b). The supine CEN corresponding to the former has an interative reading, while the one corresponding to the latter receives a habitual reading. Compare the interpretation of (35a) with (34a) and that of (35b) with (34b):

- (34) a. În acest moment important, Ion sare într-un picior.
in this moment important John jumps on one foot
'At this important moment, John is jumping on one foot.'
b. Ion a sărit peste gard.
John has jumped over fence
'John jumped over the fence.'

- (35) a. **Săritul** lui Ion într-un picior în acest moment important
jump-Sup-the John-Gen on one foot in this moment important
este enervant.
is annoying
'John's jumping on one foot at this important moment is annoying.'
b. **Săritul** lui Ion peste garduri nu este tocmai o calitate.
jump-Sup-the John-Gen over fences not is exactly a quality
'John's (habit of) jumping over fences is not really a quality.'

4.3 The pluractional operator in the supine

The behavior described above indicates that the supine contains an operator that triggers aspect shift, so it turns bounded events into unbounded. We support the idea that this is a pluractional operator in the sense of Lasersohn (1995), van Geenhoven (2004) and Laca (2006), and as argued in Iordăchioaia and Soare (2007).

Pluractional operators (POs) are known from Cusic (1981) and Lasersohn (1995) to introduce verbal plurality/atelicity. POs with a morphological character have often been identified in polysynthetic languages, as for instance the PO *qattaar* in West Greenlandic (van Geenhoven 2004, p. 147) which expresses verbal plurality in general:

- (36) a. ??Qaartartoq sivirusuunik qaarpoo.
'A/the bomb exploded for a long time.'
b. ?Qaartartoq sivirusuunik qaa**qattaar**poq. (a magic bomb)
'A/The bomb exploded again and again for a long time.'
c. Qaartartut sivirusuunik qaa**qattaar**put.
'Bombs exploded again and again for a long time.'

Given that a 'for'-PP requires an atelic event, and *explode* is a punctual telic event, the incompatibility in (36a) is expected. The combination improves once the PO *qattaar* is introduced, since it turns the telic event into an atelic one (36b). The oddity of the sentence is due to the fact that the same bomb cannot explode again and again, unless it is a magic bomb. The oddity disappears if the theme of *explode* is plural, which allows the interpretation that different bombs were involved in the multiple explosion events that spread over a long time.

Among the usual semantic effects associated with POs we can enumerate distributivity (reduplicative POs in Klamath), frequentativity/iterativity (*tar* in West Greenlandic, *andar* in Spanish), repetition (West Greenlandic *urar*), and habituality (*tar* in West Greenlandic). In the literature (see Lasersohn (1995), van Geenhoven (2004), Laca (2006)), these terms often overlap, but this is also due to the ambiguity of POs which usually carry several of these semantic properties at the same time. As pointed out especially in Section 4, iterativity and habituality are often associated with supine CENs in Romanian,¹¹ which is already an indicator that they carry pluractionality.

Several other characteristics associated with POs in general (see Laca (2006) for an overview) were discussed in Iordăchioaia and Soare (2007) with respect to the Romanian supine. Here, we address two main properties that give POs unquestionable the-

¹¹The habitual interpretation of the supine is discussed in details in Soare (2006).

oretical status: 1) *the lack of multiplicity effects with indefinites* and 2) *the distribution effects with plurals*. The first property refers to the fact that unlike a frequency adverb like *occasionally* in (37), a PO like *qattaar* in (36) does not provide an interpretation in which the indefinite *a bomb* would refer to several different bombs. If this were possible, the sentence in (36b) would not sound odd:

- (37) A bomb **occasionally** exploded.
 a. The same bomb exploded. (magic bomb)
 b. A different bomb exploded every time.

With respect to the second property, by comparing the West Greenlandic (36c) to (36b), it is obvious that the grammaticality of the former is directly connected to the fact that different bombs explode.

The two properties are accounted for by van Geenhoven (2004) and Laca (2006). The analysis relies on the idea that unlike a frequency adverb a PO can only take scope at the V level and not over the whole VP, so this is why it cannot multiply the indefinite within the VP: it does not have scope over it. The distribution effects with plurals are accounted for on the basis of the assumption that a PO can only combine with a VP whose object has 'cumulative reference' (see van Geenhoven 2004, p. 154), a property which characterizes plurals in general.¹²

Coming back to the Romanian supine CEN, we can see that it clearly displays the two properties described above. Thus, (38a) is ungrammatical because a journalist cannot be killed several times. This means that the PO in the supine cannot multiply the singular indefinite theme *un jurnalist*, so it takes narrow scope with respect to it. The construction becomes grammatical once the theme is a plural (38b). That is, similarly to *qattaar*, the PO in the Romanian supine CEN creates distribution effects with a plural argument:

- (38) a. ***Ucisul unui jurnalist** de către mafia politică este un subiect
 kill-Sup-the a journalist-Gen by mafia political is a topic
 foarte actual în presă.
 very actual in media
 b. **Ucisul jurnaliștilor** de către mafia politică este un subiect
 kill-Sup-the journalists-Gen by mafia political is a topic
 foarte comun.
 very common
 'Th killing of journalists by the political mafia is a very common topic.'

The same properties have been identified by Laca with respect to the PO "*andar + gerund*" in Spanish. Compare (39a) below with the West Greenlandic (36b) and the Romanian (38a) above, and (39b) with (36c) and (38b):

- (39) a. ?? El zorro **anduvo matando una gallina**.
 the fox walk-Pres.Pf killing a hen
 'The fox has been killing a hen.'

¹²While it is not within the aim of our paper to give a semantic account of POs, we refer the reader to van Geenhoven (2004), and Laca (2006), pp. 198-201, for one which we consider to apply for the Romanian supine CEN, too.

- b. El zorro **anduvo matando gallinas**.
 the fox walk-Pres.Pf killing hens
 'The fox has been killing hens.'

In order to keep an eye on the comparison between infinitive and supine CENs, note that the infinitive structure corresponding to (39a) above is grammatical:

- (40) **Uciderea unui jurnalist** de către mafia politică este un subiect foarte
 kill-Inf-the a journalist-Gen by mafia political is a topic very
 actual în presă.
 actual in media
 'The killing of a journalist by the political mafia is a very up to date topic in the media.'

This contrast is due to the difference between the two CENs with respect to boundedness and pluractionality. Since unlike supine, infinitive does not involve pluractionality, the interpretation of (40) is that of a singular bounded event. Thus, the singular indefinite theme of the infinitive does not raise the problem that is raised by the conflict between the pluralized killing event expressed by the supine and the singular theme which cannot undergo the same event more than once. As a consequence, the structure with the infinitive is fine.

As a further piece of evidence for the presence of the PO, we observe that it exhibits scope interaction with aspectual modifiers. In (41) below a 'for'-adverbial can either specify the time interval for the single event and thus get narrow scope with respect to the PO (41a), or modify the plurality of events and thus outscope the PO (41b):

- (41) plantatul de copaci **timp de 3 ore / timp de 3 ani**
 plant-Sup-the of trees for 3 hours / for 3 years
 a. PO - *plant* > 3 hours: 'a plurality of tree-planting events, each of them taking 3 hours'
 b. 3 years > PO - *plant*: '3 years covered with (a plurality of) tree-planting events'

This kind of scope interaction does not occur with the infinitive, where only a 'for'-adverbial that specifies the time interval for the basic event is plausible (42). This is expected, if we consider our observation in Section 4.1, according to which the infinitive simply inherits the lexical aspectual¹³ properties of the root. No further aspectual information above this is available that would give rise to scope interaction with aspectual modifiers specifying different time intervals:

- (42) plantarea de copaci **timp de 3 ore / # timp de 3 ani**
 plant-Inf-the of trees for 3 hours / for 3 years
 a. *plant* > 3 hours: 'the event of planting trees which took 3 hours'
 b. # *plant* > 3 years: 'the event of planting trees which took 3 years'
 c. * 3 years > *plant*

¹³Lexical aspect is understood here as corresponding to the notion of Aktionsart, or 'inner' aspect of Verkuyl (1993). See also Iordăchioaia and Soare (2007) for a comparison between the Romanian infinitive and the Spanish infinitive as both inheriting the lexical aspect of the root.

We conclude from this section that the infinitive CEN selects bounded eventualities as verbal bases and since it eventually still expresses bounded events, it does not introduce any aspectual information of its own. On the contrary, we have observed that the supine CEN expresses unbounded events, but that this does not correspond to a selection of correspondingly unbounded roots. The supine takes a bounded root, it multiplies it and thus turns it into an unbounded plurality. It carries a pluractional operator which introduces aspect shift by mapping bounded events into unbounded ones. We take this information to be hosted by an Aspect projection in the syntax of the supine. This projection - we will show below - is independently motivated by the presence of Aspect modifiers

5 The functional structure of Romanian CENs

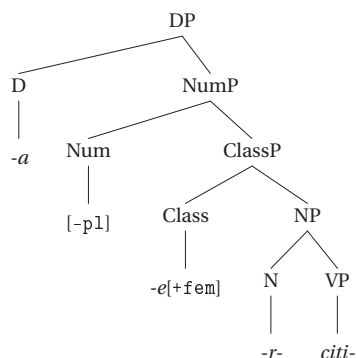
The contrasting properties of the two CEN patterns in Romanian lead to the generalization that we are dealing with two types of event plurality: one by means of (nominal) Number – in the infinitive CEN and the other by means of Aspect (triggered by the PO) – in the supine CEN. We showed that these properties can be accounted for by corresponding functional projections in the syntax, in agreement with general principles assumed in the linguistic literature.

We thus propose that infinitive CENs project a mainly nominal structure with NumP, whereas supine ASNs project a mainly verbal structure with AspP. This corresponds to two patterns of nominalization, both of them starting from a VP and taking the overall shape of a DP: the functional projections in between account for the differences.

5.1 The nominal pattern

The nominal pattern for the realization of plural, instantiated by the infinitive CEN receives the functional structure in (43):

(43)

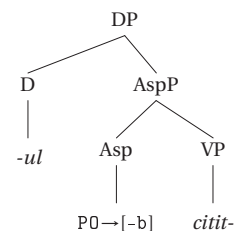


The nominalizer *-r-* selects the VP *citi*, turning it into a noun. Following Picallo's proposal, we argue that the N head moves to Class in order to check its class features gender and case carried by the ending *-e*. Under the Number projection on top of ClassP, plural can be realized, as we argued before. The whole structure is a DP.

5.2 The verbal pattern

The verbal pattern expressing plurality is given in (44) and characterizes the Romanian supine CEN:

(44)



Since the suffix *-ts* is not morphologically specific to the supine (see the discussion in Section 2.1), we assume that it comes together with the VP in the structure. Alternatively, one could argue that it appears under AspP, so it carries the PO and contributes the [-b] feature, in a similar fashion to the claim that is made of the verbal gerund suffix *-ing* as contributing imperfective aspect (see Alexiadou 2001, 2005). Note however that in English the suffix *-ing* in the verbal gerund contributes the same imperfective value that it contributes when it plays the role of the present participle. In contrast to this, if we assumed the same kind of analysis for the Romanian suffix *-ts*, we would make the prediction that it contributes perfective/bounded aspect in the past perfect form, and imperfective/unbounded aspect in the supine CEN. Since so far we have no evidence that this should be the case, we assume that the aspectual value of unboundedness in the supine CEN is contributed by the PO which appears in the course of the nominalization process.¹⁴

As argued in Section 2, the supine CEN does not display evidence for the nominal projections ClassP and NumP, so the next projection above the VP is AspP, hosting the PO which triggers unboundedness. The nominal behavior of the supine CEN – mainly relying on its distributional properties – is accounted for via the DP projection which embeds the rest of the structure (see also Soare 2007).

A final confirmation for the presence of an AspP in the functional structure of the supine is provided by the test of aspectual adverbs like *constantly*, which are argued by Cinque (1999) to modify an Asp head:

(45) cititul (constant) al ziarelor (constant)
read-Sup-the constantly newspapers-Gen constantly

¹⁴We are not sure for now if the PO can be posited of the supine form in general. In order to establish this, further investigation is needed on the behavior of the so-called 'verbal supine'. For the moment, we keep our generalization with respect to the CEN.

'constantly reading newspapers'

As correctly predicted by our analysis, the infinitive CEN cannot be modified by such adverbs, it only accepts the corresponding adjective *constant*:

- (46) a. omiterea (***constant**) a unor informații (??**constant**)
omit-Inf-the constantly some information-Gen constantly
- b. omiterea **constantă** a unor informații
omit-Inf-the constant-F.Sg some information-Gen
'the constant omission of information'

It should also be pointed out that although the adverb *constant* is homonymous with the masculine-neuter adjective *constant*, in (45) we are dealing with the adverb, and not with the adjective. As a test, adjectives in Romanian can appear prenominal. Notice the contrast between the supine and the infinitive CENs modified by the adjective *constant* in (47). It clearly shows that in (45) it cannot be the adjective modifying the supine.

- (47) a. ***constantul** **citit** al ziarelor
constant-M.N.the read-Sup newspapers-Gen
- b. **constanta** **omitere** a unor informații
constant-F.the omit-Inf some information-Gen

As a further confirmation, note also that in the case of suppletive adverb-adjective pairs,¹⁵ the supine only accepts the adverb, so the supine in general is incompatible with adjectives:

- (48) Învățatul **bine** / ***bun** nu îl caracterizează.
learn-Sup-the well / good not him characterizes
'Learning well is not really like him.'

6 Conclusions and cross-linguistic implications

Throughout this paper, we have focused on the morphological and aspectual differences between the infinitive and the supine CENs in Romanian which have led us to an explanation of their contrasting behavior with respect to plural marking.

We have shown in the spirit of the observation in Roodenburg (2006) that Grimshaw's generalization does not hold entirely, since the infinitive CEN in Romanian does accept plural, contrary to predictions. However, we argued that this deviation is not directly related to a language parameter Romance vs. Germanic as Roodenburg claimed, since Romanian instantiates both varieties of CENs: with and without plural. The Romanian supine conforms to Grimshaw's generalization, while the infinitive does not.

The sharp differences between the two Romanian CENs allowed us to explain the (un)availability of plural marking via the structural architecture of the CEN. We related

¹⁵We thank Patricia Cabredo Hofherr for suggesting this test to us.

the possibility to realize morphological number to the presence of a Number projection in the functional structure and we explained the unavailability of plural as a blocking effect of a semantic plural encoded in aspectual features as unboundedness. At the syntactic level, the unbounded feature is hosted by an Aspect projection which as a verbal projection blocks the realization of NumP, a nominal projection. We eventually reduced the contrast to an opposition between a nominal and a verbal pattern of realizing plural as Number and Aspect, respectively.

The generalizations we presented for Romanian seem to be also confirmed in other languages, as already predicted by Mourelatos (1978) and Borer (2005) who observe that telic/bounded CENs can pluralize, and only the atelic/unbounded ones cannot. The contrast is supported in English by the distinction between the nominal and the verbal gerund (see Alexiadou (2005) and Alexiadou et al. (to appear)). At the same time, the atelic/unbounded aspect of the base verb blocks plural also in Spanish infinitival nominals (Iordăchioaia and Soare 2007). The study of the Romanian CENs is particularly enlightening since the differences between the two plural patterns are very systematic and thus provide a reliable background to test further cross-linguistic generalizations with respect to the functional structure and the behavior of deverbal nominalizations.

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The volumes *Romance Languages and Linguistic Theory: Selected papers from 'Going Romance'* contain the selected papers of the Going Romance conferences, a major European annual discussion forum for theoretically relevant research on Romance languages. This volume assembles a significant number of selected papers that were presented at the 21st edition of Going Romance, which was organized by the Chair of Romance Linguistics of the University of Amsterdam in December 2007. The range of languages (both standard and non-standard varieties) analyzed in this volume is quite significant: Catalan, French, Italian, European and Brazilian Portuguese, Romanian and Spanish. The volume is quite representative of the spread of the variety of research carried out nowadays on Romance languages within theoretical linguistics and shows the vitality of this research.

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Selected papers from 'Going Romance' Amsterdam 2007

Edited by Enoch O. Aboh,
Elisabeth van der Linden,
Josep Quer and Petra Sleeman

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Structural patterns blocking plural in Romance nominalizations*

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Some Complex Event Nominals (CENs) like the Romanian infinitive contradict the generalization in Grimshaw (1990) according to which CENs do not pluralize. But many CENs like the Romanian supine and the Spanish nominal infinitive obey this generalization. In this paper we explain the availability and the blocking of pluralization in relation to the internal structure of the CEN. We argue that pluralization in CENs is blocked by the syntactic encoding of the unbounded outer or inner aspect. The Romanian supine projects a verbal structure with a [-bounded] (outer) Aspect projection. In the Spanish nominal infinitive, the unbounded/atelic inner aspect is accommodated by a [-count] Classifier projection in a nominal structure. Both patterns prevent the projection of Number, and thus, pluralization. But this does not exclude the availability of plural for CENs with a bounded/telic inner aspect which project a [+count] ClassifierP and implicitly, NumberP, as in the case of Romanian infinitival CENs.

1. Introduction

Grimshaw (1990) argued that Complex Event Nominals (CENs) disallow plural marking (1b), as opposed to the corresponding R(esult) Nominals (1a). Among deverbal nouns, CENs can be distinguished by the fact that they express an event (indicated in (1b) by the expression *took a long time*) which is 'complex', since they inherit (at least parts of) the argument structure of the base verb (the theme of *the problems* in (1b)):

- (1) a. The assignments were long.
b. The assignment(*s) of the problems took a long time.

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Empirical evidence from Romance languages contradicts this generalization (see Roodenburg 2006, for French and Italian, Iordăchioaia & Soare 2008, for Romanian).¹ In particular, the Romanian infinitive CEN in (2), as opposed to the supine CEN, does not block pluralization:²

- (2) *demolă-r-i-le* /**demolă-t-uri-le* *frecvente* *ale*
 demolish.INF.PL-the³ /demolish.SP.PL-the frequent.PL of
cartierelor *vechi* *de către* *comuniști* *pentru* *a* *ridica* *tururi*
 quarters.G old by communists for to raise towers
 “the frequent demolitions of old quarters by the communists in order to raise towers (instead)”

In order to account for this contrast, we closely consider the fact that the semantics of plural may take several syntactic forms. In a nominal structure, plural is realized in the morphology or as a mass noun. In a verbal structure, plural appears as an unbounded aspect: either an imperfective outer aspect or an atelic inner aspect. CENs have a mixed categorial status which is due to their verbal internal make-up combined with a nominal external behavior. From this perspective, we expect plural in various CEN patterns to be realized in different ways, depending on their mainly nominal/verbal structure and their aspectual properties.

Grimshaw's generalization led to the idea that CENs are mass nouns. Since this is obviously not always the case, we propose a close investigation of the internal syntactic structure of the CENs in order to describe their behavior with respect to plural marking. In general, plural is blocked by an unbounded aspect, but it is allowed with a telic/perfective (i.e. bounded) aspect (cf. Mourelatos 1978). Moreover, we assume that morphological plural is hosted by Num(ber)P which is in complementary distribution with (outer) Asp(ect)P. Thus, we follow Iordăchioaia & Soare (2008) and explain the contrast in (2) by the fact that the infinitive CEN realizes morphological plural in a nominal structure with a NumP and the supine

1. Pluralization of event nominals with argument structure seems to be also possible in other languages like Dutch, English, German, and Portuguese (Sleeman & Brito 2008 and references therein, Alexiadou et al. 2009).
2. Note that in (2), the presence of the theme *ale cartierelor* *vechi*, of the *by*-phrase *de către comuniști*, and the availability of control in the purpose clause clearly indicate the CEN status of the infinitive and the supine nominals. To save space, in what follows we will often express only the theme argument, but adding a *by*-phrase and a purpose clause is always possible, so their absence should not question the CEN status of the nominals. For a detailed discussion of this issue, see also Cornilescu (2001).
3. Abbreviations: INF 'infinitive', SP 'supine', SG 'singular', PL 'plural', G 'genitive', A 'accusative', N 'nominative', F 'feminine', M 'masculine', N' 'neuter'.

rejects morphological plural because it has a verbal structure with an AspP. The NumP in the infinitive hosts the plural marker and the AspP in the supine hosts a pluralational operator introducing an (unbounded) plurality of events. This syntactic solution is independently motivated by the nominal properties of the infinitive and their absence with the supine.

In consequence, unbounded outer AspP constitutes one syntactic pattern that explains Grimshaw's generalization. It appears with the Romanian supine and it was argued to also characterize the English verbal gerund (Alexiadou et al. 2009). In this paper, we provide evidence for a second syntactic pattern which blocks plural in CENs. It comes from Spanish Nominal Infinitives (SNIs, see Miguel 1996) like in (3b) below:

- (3) a. *el construir casas de los albañiles*
 the.SG build.INF houses.A of the workers
 “the constant building of houses by the workers”
 b. **los (constantes) construir-r-es casas de los albañiles*
 the.PL constant.PL build.INF.PL houses.A of the workers
 “the constant buildings of houses by the workers”

Apparently, SNIs are unbounded like the Romanian supine, as they exclusively select atelic VPs.⁴ But an AspP is not motivated in the structure of SNIs, since unlike the supine, they have no aspectual contribution of their own, reject adverbs, and carry (nominal) gender features. We will argue that SNIs realize unboundedness in a nominal structure under Class(ifier)P (a category proposed in Picallo 2006), and not in a verbal one under AspP.

In Section 2, we start by presenting the properties of the two Romanian CEN patterns in (2) in order to trace the origin of their contrasting behavior with respect to plural marking. In Section 3, we address the aspectual properties of the supine CEN and we argue that they indicate the presence of a syntactic projection AspP. We complete the picture with the Spanish nominal infinitive which shares properties with both the Romanian infinitive and the supine (Section 4). We present our conclusions in Section 5.

2. Plural marking in Romanian CENs

In this section, we provide evidence for the nominal properties of the infinitive CEN in (2), generally absent in the supine.

4. Note that the bare plural *casas* makes the whole VP atelic, although the verb *construir* is telic.

The infinitive and the supine are the most productive deverbal nouns in Romanian and they derive from the infinitive and the past participle stem, respectively. Unlike *-t/s*, which derives both the past participle and the supine form, as it is originally a verbal suffix, the suffix *-rz* attaches to the short infinitive *demola* and derives infinitival nouns, as it is exclusively a nominalizer. We employ the hash symbol to stand for 'unavailable in the relevant use/meaning':

- (4) a. The Infinitive:
a demola: *demola-r-e* /*demolă-r-i*
 to demolish: *demolish.INF.F.SG* /*demolish.INF.PL*
- b. The Supine:
a demola: *demola-t* /*#demola-t-uri*
 to demolish: *demolish.SP* / *demolish.SP.PL*
- a conduce*: *condu-s/#condu-s-uri*
 to drive: *drive.SP* / *drive.SP.PL*

As can be observed in (4), an important difference between the two nominal forms in general concerns plural marking, possible with the infinitive (4a), but not with the supine (4b).⁵ For CENs, in particular, the selection of discrete (vs. mass) quantifiers further suggests that the infinitive (unlike the supine) is a count noun projecting NumP:

- (5) a. *Prea multe spălări* /*o spălare a(le) rușelor*
 too many wash.INF.PL / one wash.INF of laundry.G
distruge(e) țesătura.
 destroy(s) fabric.the
- b. *Prea mult / *un spălat al rușelor ...*
 too much / one wash.SP of laundry.G
 "Too much washing of the laundry destroys the fabric."

According to Picallo (2006), gender features and noun class information, hosted by a ClassP projection, are obligatory for the projection of NumP. This idea helps us to bring further support for the assumption that the infinitive CEN projects NumP, while the supine does not, to the extent that the former exhibits

5. The default plural ending *-uri* is associated with the supine by analogy with common nouns originating from the supine/past participle (e.g. *tuns* – *tunsuri* 'haircut(s)', *venit* – *venituri* 'income(s)'). These nouns either express simple events, or acquire a special lexical meaning (Iordăchioaia & Soare 2008), but the homonymous CEN does not accept plural:

- (i) *tunsul* /**tunsurile* *părului*
 cut.SP.the / cut.SP.PL.the hair.G
 "cutting the hair"

nominal properties which are absent in the latter: infinitive CENs display feminine gender and a full case declension, while supine CENs have default neuter gender and a defective case paradigm.

With respect to gender, the data in (6) indicate that infinitive CENs successfully establish anaphoric relations with the feminine demonstrative *aceasta* (6b), while the supine rejects the masculine-neuter form *acesta* and can only be referred to by the genderless form *asta* (6c), the common anaphor for CPs in Romanian (6a):⁶

- (6) a. *Că Ion a venit, asta / *aceasta / *acesta știu*.
 "That John came, I know it/this.F/this.M."
- b. *Am vorbit despre interpretarea rolului Hamlet în general. Se pare ca aceasta / ?asta îi consacără îndubitabil pe actorii tineri*.
 "We spoke about the interpretation.INF of Hamlet in general. Apparently, this.F / ?it undoubtedly validates the young actors."
- c. *Am vorbit despre interpretatul rolului Hamlet în general. Se pare ca *acesta / asta îi atrage pe toți actorii tineri*.
 "We spoke about the interpretation.SP of Hamlet in general. Apparently, *this.M.S / it attracts all the young actors."

Defectiveness characterizes the supine CEN also with respect to case declension. The data in (7) show that unlike the infinitive, the supine is uncommon in the genitive-dative form.⁷ It usually exhibits the non-oblique form for nominative-accusative (8):

- (7) *Alunecările de teren au apărut din cauza*
 flows.the of earth have occurred because of
tăierii /**tăiatului pădurilor*.
 cut.INF.G / cut.SP.G woods.G
 "The earth flows occurred because of cutting the woods."

6. Although the anaphor *asta* is not excluded in (6b), this is an instance of coercion, since in this case the infinitive *interpretarea* is understood as a fact, and not as an event.

7. An apparent counterexample is the genitive supine in (i). However, note that *tăiatul porcului* here is not a CEN, but almost an idiom, since a *by*-phrase makes it infelicitous. The nominative supine in (ii) allows a *by*-phrase:

- (i) *ritualul tăiatului porcului* (**de către bunicul familiei*)
 ritual.the cut.SP.the.G pig.G (by grandfather family.G)
 "the ritual of killing the pig ("by the grandfather of the family")"
- (ii) *Tăiatul porcului de către bunicul familiei e obiceiul local*.
 cut.SP.the.N pig.G by grandfather family.G is custom local
 "The grandfather of the family killing the pig is the local custom."

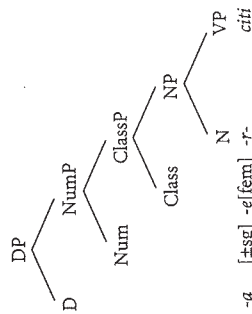
- (8) *Tăierea /tăiatul pădurilor este interzis(ă).*
 cut.INF.N.the /cut.SP.N.the woods.G is forbidden
 "Cutting the woods is forbidden."

As a consequence of the observations above, we follow Iordăchioaia & Soare (2008) and take the structure of the infinitive CEN to be fully nominal, thus including both ClassP and NumP (see the tree in (9)). The suffix *-r* under N nominalizes the VP and, according to Picallo (2006), N moves to Class to check its gender features carried by *-e*.

2.1 Telicity and plural marking

The realization of number in infinitive CENs may be related to their aspectual properties. Cornilescu (2001) argues that they express telic events, since they reject unergative verbs which are invariably atelic. These verbs can only appear in the supine (see the examples in (10)).⁸

- (9) *citirea* "the reading"



- (10) *a locui* **locui-re* *locui-t*
 to live live.INF live.SP
a munci **munci-re* *munci-t*
 to work work.INF work.SP

As a further confirmation of its telicity, the infinitive obligatorily projects the theme of the base verb – it cannot project only the external argument. On the assumption that the theme indicates the culmination of the event, the contrast in (11a–c) shows that the event in the infinitive CEN must always culminate (see Cornilescu 2001):

- (11) a. **citirea* *lui Ion*
 read.INF.the John.G

- b. *citirea* *cărții* (*de către Ion*)
 read.INF.the book.G by John
 "the reading of the book by John"
- c. *cititul* *lui Ion* *cu glas tare* *pentru a ne enerva*
 read.SP.the John.G with voice loud for to us annoy
 "John's reading loudly in order to annoy us"

The supine can project its agent without obligatorily projecting the theme (11c) and since it has no restrictions on the base verb, Cornilescu concludes that it denotes an atelic event. We will return to the supine in Section 3.

For now, the availability of morphological plural in infinitive CENs correlated with their telic aspect confirms previous observations in Mourelatos (1978) and Borer (2005), according to which telic CENs can pluralize and only atelic ones cannot.

3. The aspect projection in the Romanian supine

In this section we present the unboundedness induced by a pluractional operator via aspect shift as the main characteristic of the supine CEN. By comparison with the infinitive CEN, this motivates the presence of an AspP in the supine CEN.

We reformulate the aspectual differences between infinitive and supine CENs in terms of [\pm b](oundedness) as a wider notion allowing for generalizations across the nominal/verbal domains (Jackendoff 1991). The nominal plural, mass nouns, and the atelic aspect count as [-b], while the nominal singular, count nouns, and the telic aspect are [+b]. Given its telicity, the infinitive CEN expresses a [+b] event that cannot be bounded once again by a function like *until* which turns a [-b] event into [+b].⁹ This is possible with the supine CEN, which expresses a [-b] event:

- (12) *arestatul* /#*arestarea* *lui Miron Cozma* (*iar și iar*)
 arrest.SP.the / arrest.INF.the Miron Cozma.G again and again
pină la schimbarea puterii
 until at change.the regime.G
 "arresting M. C. again and again until the regime changed"

3.1 The pluractional operator (PO)

The [-b] character of the supine is the effect of an implicit PO present in its structure which changes the aspectual value of the original event into [-b]. POs have

8. More examples are given in Cornilescu (2001: 489). The infinitives *locuire*, *muncire* are available only if derived from colloquial transitive forms of the verbs 'live', 'work'.

9. The only possible reading for the infinitive in (12) is 'the arresting of M. C. before the government changed' where *until* means 'before' and does not act as a bounding function.

usually been studied in polysynthetic languages (Lasersohn 1995; van Geenhoven 2004); however, implicit instances of POs have been identified also in English (van Geenhoven 2004), and Laca (2006) describes two phrasal constructions with the same value in Spanish.

Two important properties of POs are the *lack of multiplicity effects with indefinites* and the *distribution effects with plurals*, illustrated by the West Greenlandic PO *qattaar* in (13a) and (13b), respectively:

- (13) a. ?*Qaartartaq sivisuumik qaaqattaarpoq.*
 "A bomb exploded again and again for a long time."
 b. *Qaartartut sivisuumik qaaqattaarput.*
 "Bombs exploded again and again for a long time."

Van Geenhoven shows that the telic verb equivalent to *explode* must combine with the PO *qattaar* in order to become [-b] and accept the atelic modifier *for a long time*. But the singular noun cannot be multiplied by the presence of the PO for us to understand that a different bomb explodes every time, so (13a) can only be accepted in the scenario of a magic bomb which explodes more than once. The grammaticality of (13b) with a plural argument indicates that the PO induces distributivity over the plural, so that we understand the sentence as referring to several explosions of individual bombs and not to one explosion of a group of bombs.

The first property distinguishes POs from frequency adverbs like *occasionally* which are known to pluralize the event, too, but besides this, they also create multiplicity effects with singular indefinites. This explains the availability of the reading in (14b):

- (14) A bomb occasionally exploded.
 a. The same bomb exploded. (magic bomb)
 b. A different bomb exploded every time.

The two properties of POs discussed above can also be observed in the behavior of the Romanian supine CEN, as shown in (15). A one-time event like *kill* in the supine is ungrammatical with a singular theme, but grammatical with a plural one. This is because the PO in the supine suggests more killing events which cannot have the same theme; a plurality is needed which can be distributed over several events:

- (15) a. **ucisul unui jurnalist de către mafia politică*
 kill.sp.the a.g journalist by mafia political
 b. *ucisul jurnaliștilor de către mafia politică*
 kill.sp.the journalists.the.g by mafia political
 "the killing of journalists by the political mafia"

The same properties have been observed with the pluractional construction 'andar+gerund' in Spanish (Laca 2006), in addition to other characteristics like

the incompatibility with 'once only' frequency adjuncts and habituality. These can also be observed in the behavior of the supine in (16) and (17):

- (16) *cititul romanului (*dintr-o răsuflare)*
 read.sp.the novel.g in-one-breath
 "the reading of the novel in one sitting"
- (17) a. *Fumatul tabacurilor /acest obicei l-a îmbolnăvit.*
 smoke.sp.the cigars.g /this habit him-has sickened
 "Smoking/this habit made him sick."
 b. *Fumatul lui Ion ori de câte ori iese în pauză*
 smoke.sp.the John.g whenever takes a break
 "John's smoking whenever he takes a break"

The possibility to replace a supine CEN with the phrase *this habit*, as well as the compatibility with *whenever*-clausal modifiers show that the supine expresses habituality (Soare 2006), a typical effect of pluractionality.

We conclude that it is the PO that gives the [-b] aspect of the supine CEN. But unlike in the case of the [+b] infinitive CEN, where the nominalizer *-r(e)* rejects atelic verbs, the supine can combine with both telic and atelic verbs, and the result is always [-b], so it triggers aspect shift. This can be observed in its interaction with semantic verb classes below.¹⁰

3.2 The interaction between the supine and the verbal base

Achievements and accomplishments, which are telic, i.e. [+b], successfully appear with the supine, which expresses a [-b] plurality of events, and thus, a habitual interpretation occurs (18):

- (18) a. *Sositul lui Ion cu întârziere mă enervează.*
 arrive.sp.the John.g with delay me annoys
 "John's (habit of) arriving late annoys me."
 b. *mîncatul micului dejun pe terasă*
 eat.sp.the breakfast.g on terrace
 "(the habit of) having breakfast on the terrace"

10. A reviewer notes that the supine may also refer to a single event like in (i). In this case, we should mention that the supine suggests an event involving several smaller events, so it induces distributivity. As Lasersohn (1995) notes, the same PO may at times yield habituality or distributivity or other pluractionality effects. In Romanian, the use of supine in (i) usually has a colloquial flavor:

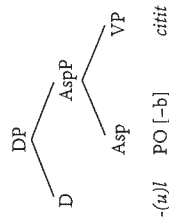
- (i) *Ștersul prafului în sufragerie mi-a luat o jumătate de oră.*
 wipe.sp.the dust.g in living-room me-has taken a half of hour
 "Dusting in the living-room took me half an hour."

Activities (19a) and states (19b), known as atelic/[-b], may combine with the supine only if the event is understood as bounded. Thus, the presence of a bounding function like *until* is sometimes obligatory.¹¹

- (19) a. *învăţatul lui Ion* **(pînă la miezul nopţii)*
 study.sp.the John.g (until midnight)
 "John's (habit of) studying until midnight"
 b. *dormitul lui Ion* **(pînă după-amiază tîrziu)*
 sleep.sp.the John.g (until afternoon late)
 "John's (habit of) sleeping until late afternoon"

In conclusion, the [-b] character of the supine CENs comes from the presence of the PO which pluralizes the bounded event, independently of the inner aspect of the base verb. We propose with Iordăchioaia & Soare (2008) that the supine CEN expresses verbal plurality, hosted by an AspP in the syntax, so it has the structure in (20). An N head is not motivated in (20), given the lack of a bona fide nominalizer (-*t/s* marks verbal stems, see Section 2) and the absence of nominal properties. We take the determiner *-(u)/* to be alone responsible for the external nominal behavior of the supine CEN which thus qualifies as a 'syntactic' nominalization in the terms of Chomsky (1970):

(20) *cititul* "the reading"



- (21) *reproducusul (constant al) tablourilor (constant)*
 reproduce.sp.the constantly of paintings.g constantly
 "constantly imitating paintings"

AspP is independently motivated by the compatibility with the adverb *constantly* argued in Cinque (1999) to indicate an Aspect projection. Note that despite

11. In contexts like (i), an originally [-b] state verb can be understood as [+b] even without being bounded by 'until'. Note, however, that the supine is still interpreted as a plurality of events, since *dormitul* does not refer to an unbounded state of sleeping, but to a habit. We thank an anonymous reviewer for bringing this example to our attention:

- (i) *Dormitul părintelui cu bebeluşul în pat prezintă riscuri.*
 sleep.sp.the parent.g with baby.the in bed presents risks
 "The parent sleeping with the baby in the same bed is risky."

the adjective – adverb homonymy in Romanian, *constant* in (21) is not an adjective, since if it were so, it should be able to appear in prenominal position, as it does with the infinitive CEN in (22b):

- (22) a. **constantul reproducus al tablourilor*
 constant.the reproduce.sp.the of paintings.g
 b. *constantia reproducere a tablourilor*
 constant.the reproduce.inf of paintings.g
 "the constant imitation of paintings"

4. Inner aspect in CENs: Spanish Nominal Infinitives (SNIs)

The projection of [-b] Aspect as in the Romanian supine represents one source of plural blocking in CENs. In this section we discuss an additional case of unboundedness as blocking plural which concerns Spanish Nominal Infinitives as in (3b). We will argue that in SNIs we are dealing with a nominal structure and as a consequence it is not an AspP, but a ClassP which hosts the [-b] aspectual information in the syntax.

- (3) a. *el construir casas de los albañiles*
 the.sg build.inf houses.A of the workers
 "the constant building of houses by the workers"
 b. **los (constantes) construir-es casas de los albañiles*
 the.pl constant.pl build.inf.PL houses.A of the workers
 "the constant buildings of houses by the workers"

Miguel (1996) distinguishes between verbal and nominal infinitive CENs in Spanish which primarily differ in the way they realize their external argument with nominative case, or with *de* 'of', respectively:¹²

- (23) a. *el murmurar la gente*
 the murmur.inf the people.N
 "the murmuring of the people"
 b. *el murmurar de las fuentes*
 the murmur.inf of the fountains
 "the murmuring of the fountains"

Here, we are concerned with the nominal pattern in (23b).

12. The internal argument receives accusative case (e.g. the theme *casas* in (3)) both in the verbal and in the nominal infinitive.

Miguel (1996), Demonte & Varela (1997), Fábregas & Varela (2006) have shown that SNIs have atelic/unbounded aspect, since they systematically reject telic VPs. SNIs are ungrammatical with achievements and accomplishments, for instance:

- (24) a. **El llegar tardío de Juan nos preocupó a todos.*
 the arrive.INF late of Juan us worried to all
 b. **El comprar una casa de Juan nos alegró.*
 the buy.INF a house of Juan us made happy

In view of the correlation between atelicity, unboundedness, and mass nouns and our discussion with respect to the Romanian supine, the unavailability of plural morphology in (3b) is expected in SNIs. The next concern is to find out what exactly blocks the projection of Number in the syntax of SNIs and to see if we can argue for an AspP like in the case of the supine. We address this issue below.

4.1 Nominal properties in SNIs

Miguel (1996) enumerates a number of properties which motivate the need to distinguish between the two infinitives in (23). These properties clearly indicate that SNIs (23b) present a rather nominal structure. Here, we address only a few, which are relevant in establishing a relation between SNIs and the two CEN patterns in Romanian.

First, SNIs carry gender features which – although not visible in the suffix *-r* – become obvious in anaphoric contexts, where an SNI can be referred to only by the masculine pronoun *el* and not by the default neuter pronoun *ello* usually employed with non-nominal CP structures. In this respect, SNIs are similar to the Romanian infinitive CEN (cf. (6b) above):

- (25) *Acostumbrado al dulce mirar de su amada, ya*
 used to.the sweet gaze.INF of his beloved, now
*no podía vivir sin él/*ello.*
 not could live without him/it

‘‘Used to the sweet gaze of his loved one, he could no longer live without it.’’

Second, SNIs never combine with adverbs, only with adjectives. Modifiers with aspectual value also appear as adjectives, like in the case of the Romanian infinitive in (22b):

- (26) a. *El andar errabundo /*errabundamente de Juan*
 the go.about.INF aimless /*aimlessly of Juan
 ‘‘John’s aimless going about’’
 b. *El constante tener /*constantamente de Juan*
 the constant fear.INF (constantly) of Juan
 ‘‘John’s constant fear (of something)’’

As a consequence of these properties and others, Miguel analyzes the suffix *-r* in SNIs as a nominalizer to distinguish it from the inflectional affix *-r* which appears with verbal infinitives like in (23a).

4.2 Inner vs. outer aspect

A comparison between the two Romanian CENs and the SNI indicates that the latter resembles the Romanian infinitive in what concerns the nominal character: they both carry gender features, reject adverbs, and their affix has been analyzed as a nominalizer. But unlike Romanian infinitives, SNIs do not accept plural marking since they are atelic, and in this respect, they pattern with the supine, although an Aspect projection is not motivated, given their nominal character. The similarities and the differences between the three CENs are summarized in Table 1 below:

Table 1. The properties of Romanian and Spanish CENs

CEN	Plural marking	Unbounded aspect	Verbal structure
Infinitive	yes	no	no
Supine	no	yes	yes
SNI	no	yes	no

In order to account for the mixed properties of SNIs, we propose that their aspectual information is encoded within the Classifier projection together with its nominal features. We first make a distinction between inner and outer aspect (after Verkuyl 1993). The former – also called Aktionsart – is closely related to the lexical properties of an event and its value is composed within the VP. Outer aspect – also called grammatical aspect – concerns the aspectual properties introduced at a higher level than the VP and is oblivious to the value of the inner aspect. The progressive *-ing* in English is an instance of outer aspect: it turns both telic and atelic events into imperfective:

- (27) a. John is arriving/dying.
 b. John is running/sleeping.

Telicity is most often used in relation to inner aspect, while perfectivity refers to outer aspect. We have taken boundedness to cover both notions, including the mass/count distinction in the nominal domain.

In the study of CENs, we assume that the presence of outer aspect is directly correlated with aspect shift: independently of the inner aspect, if outer aspect is contributed, its value is consistent and can be delimited from that of the inner aspect (see Alexiadou et al. 2009 for a similar analysis of the English verbal gerund). The PO in the Romanian supine has been shown to have this property: it always refers

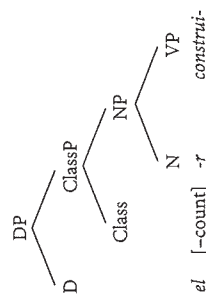
to a plurality of events. The aspectual properties of infinitive CENs and SNIs are of a different nature. The two nominalizers $-r(e)$ and $-r$ do not introduce any aspectual information, they are only sensitive to the inner aspect of the VP: it should be telic, or atelic, respectively. We conclude that Romanian infinitives and SNIs carry only inner aspect information.

4.3 The analysis

On the basis of the parallelism between the nominal Classifier projection and the verbal inner aspect (see Fassi Fehri 2005; Alexiadou et al. 2008), we propose that CENs with clear nominal structure like the Romanian infinitive and the SNI encode their aspectual properties under ClassP by means of a semantic feature $[\pm\text{count}]$. This feature is independently present under the ClassP of common nouns and it distinguishes between countable and uncountable nouns. The value $[\text{+count}]$ motivates a further projection of Number in countable nouns in the spirit of Picallo (2006). The $[\text{–count}]$ value occurs with mass nouns and it prevents the projection of NumP. Since Picallo's main concern is to argue that the Classifier hosting gender features is the input to a Number projection, our analysis correctly predicts that both mass and count nouns have gender, but only the latter project NumP.

Within this frame, we can analyze SNIs as projecting a $[\text{–count}]$ ClassP and no NumP. The difference between them and mass nouns stands only in their eventive nature triggered by the VP that they nominalize. The atelicity of the event is of the same nature as the uncountability of mass nouns. In (28) below we give the functional structure of SNIs. To complete the picture, the Romanian infinitive CEN projects a $[\text{+count}]$ ClassP and NumP. The former encodes the telicity of the base verb and the latter hosts the plural marker, as indicated in (9) above.

(28) *ei construi* "the building"



Note that in comparison to Miguel (1996), our analysis of SNIs can better explain the distinction between verbal infinitives and SNIs. In order to account for the aspectual properties of the SNI, Miguel places an AspP above the NP hosting the nominalizer $-r$. The same projection is then assumed in the structure of the verbal infinitive, this time on top of the VP level. But she does not explain why a verbal projection should be allowed in a nominal structure with NP (contra Borsley & Kornfilt 2000)

and why the Asp value should be unspecified in one case and obligatorily $[\text{–perfective}]$ in the other. We believe that a distinction between inner and outer aspect, on the one hand, and a delimitation of the nominal projections from the verbal ones, on the other hand, is the right solution for this problem.

5. Conclusions

In this paper we argued for two structural patterns of CENs which explain the plural blocking effect identified in Grimshaw (1990). We showed that from a semantic point of view unbounded aspect – a property reminiscent of the verbal origin of CENs – prevents the realization of morphological plural. In the syntax, we argued that unboundedness may be encoded either in a verbal or in a nominal structure, under AspP or ClassP, respectively.

These distinctions allowed us to characterize three different instances of CENs in Romance: the Romanian infinitive CEN, the Romanian supine CEN, and Spanish nominal infinitives. The first one is mainly nominal, expresses bounded/telic (inner) aspect and thus, projects $[\text{+count}]$ ClassP and NumP. Plural morphology is available. The second one is mainly verbal, carries unbounded aspect, so it projects an (outer) AspP which blocks Number and implicitly, pluralization. The last CEN structure combines nominal properties with unbounded/atelic (inner) aspect, so it projects a $[\text{–count}]$ ClassP which prevents the projection of NumP and thus, plural morphology is unavailable.

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Number/aspect interactions in the syntax of nominalizations: A Distributed Morphology approach¹

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In this paper we focus on the ability of ARGUMENT SUPPORTING NOMINALIZATIONS (ASNs) to realize morphological plural. We think that this aspect of their behavior is instrumental in our understanding of their properties and their syntax within one language and across languages. Our factual investigation deals with Romanian, English, German and Spanish, as well as Polish and Bulgarian ASNs. We show that the interplay between the aspectual properties – either inner or outer aspect – and the nominal/verbal characteristics, as justifying the internal structure of ASNs, allows us to characterize the ability of ASNs to accept plural marking across languages. We further argue for a flexible syntactic theory that enables us to capture the mixed properties of ASNs. We provide evidence for two parameters of variation. The first parameter is whether ASNs involve a nominalizer or not. If a nominalizer is not included, ASNs lack nominal internal properties. If a nominalizer is included, the second parameter comes into play and allows for language variation with respect to the height of attachment of the nominalizer. Specifically, a nominalizer can attach to (and thus nominalize) distinct layers of syntactic structure (VP vs. AspectP).

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I. INTRODUCTION

ARGUMENT SUPPORTING NOMINALIZATIONS (ASNs) are deverbal nominals which express events and preserve (parts of) the argument structure of the original verb, thereby exhibiting an ambivalent categorial behavior. Their mixed categorial properties are enlightening for understanding the parallels and the interactions between nominal and verbal categories.

ASNs have been analyzed in a variety of ways in the literature. We can identify two main lines of investigation: (i) lexical, e.g. Grimshaw 1990, Giorgi & Longobardi 1991 and, more recently, Lieber 2004; and (ii) syntactic, e.g. Picallo 1991; Borer 1993, 2003, 2005; Marantz 1997; Harley & Noyer 1999; Alexiadou 2001 and Fu, Roeper & Borer 2001. In this paper, we investigate the properties of ASNs by adopting a syntactic approach.²

Despite the differences among the various syntactic approaches, they all share the assumption that the internal structure of words is created by the same mechanisms of construction as the internal structure of sentences. This is different from the early transformational approach to word formation, in that it is no longer assumed that words are formed by sentence-reduction (as was the case in Lees 1960). Instead, words and sentences are both created in the syntax.

Our contribution to this topic, couched within the DISTRIBUTED MORPHOLOGY framework (Marantz 1997, Harley & Noyer 1999, Alexiadou 2001), is to provide a detailed cross-linguistic investigation of the (in)ability of ASNs to realize (nominal) morphological plural. We relate the (un)availability of morphological plural to the internal structure of ASNs, which is the result of the interaction between their aspectual properties and their primarily verbal/nominal behavior. While far from accounting for all the properties of ASNs and all the functional projections that their internal syntax may host, we consider this aspect of their behavior to be instrumental in understanding their properties and their syntax.

Why should that be so? In the semantic literature, the mass/count distinction in the nominal domain is often compared to the aspectual specification in the verbal domain (Mourelatos 1978; ter Meulen 1984; Bach 1986; Krifka 1986, 1992; Jackendoff 1991; to mention just a few). The general consensus is that count nouns are similar to telic and perfective events in being BOUNDED, and mass nouns to atelic and imperfective events in being UNBOUNDED. Syntactic approaches posit a NUMBERP projection as responsible for the number morphology in the nominal domain and an ASPECTP projection for the aspectual information in the verbal domain (see e.g. Cinque 1999, Borer 2005, Alexiadou, Haegeman & Stavrou 2007).

[2] This does not mean that the properties discussed here could not be explained in a lexicalist framework. A detailed comparison between syntactic and lexicalist approaches, however, would take us too far afield. For a comparison of the two systems, the reader is referred to Alexiadou, Haegeman & Stavrou 2007.

Importantly, only count nouns project (singular/plural) Number and only verbal constructions introducing ASPECT SHIFT (de Swart 1998), independently of the inner aspect/Aktionsart of the verb, realize (perfective/imperfective) AspectP. Thus it is the outer/grammatical aspect information that is projected as AspectP above the VP level, where the inner aspect is composed. We use ‘Number’ and ‘Aspect’ to refer to the functional projections that host the semantic ‘number’ and ‘aspect’ contribution of an ASN in the syntax. While all ASNs carry some (possibly, default) number/aspect semantic information, we will argue that not all of them project Number/Aspect.

In the general setting of the noun vs. verb contrast, NumberP and AspectP exclude each other (see Rouveret 1994, Alexiadou 2001, Rijkhoff 2002, Fassi-Fehri 2005 and others). However, ASNs preserve several verbal properties (argument structure, event interpretation) in combination with a nominal external distribution. The question is how (the semantics of) number and aspect interact in ASNs, and whether their internal syntax hosts NumberP or AspectP, or maybe even both.

In Grimshaw’s 1990 seminal study, plural marking is an important parameter distinguishing ASNs from Referential Nominals (RNs), to the extent that only the latter allow plural.³ The verbal character of the former explains, in Grimshaw’s view, their incompatibility with plural morphology, a fully nominal characteristic:

- (1) (a) The assignments were long. (RN)
 (b) *The assignments **of the problems** took a long time. (ASN)

For Grimshaw, all ASNs are mass nouns in this respect. In a syntactic approach, this would correlate with stating that ASNs have a mainly verbal internal structure (most likely including AspectP), and thus insufficient nominal structure to host NumberP.

Recent research on ASNs provides cross-linguistic counterevidence to Grimshaw’s claim, which from a syntactic point of view indicates that the verbal properties of the ASN may sometimes be embedded in a nominal structure rich enough to permit the realization of plural under NumberP (see Roodenburg 2006 for French and Italian; Iordăchioaia & Soare 2008, 2009 for Romanian; Sleeman & Brito to appear and references therein for Dutch, German and Portuguese; and Alexiadou, Iordăchioaia & Soare to appear b for Romance and Germanic).

In this paper we investigate pluralization with various patterns of ASNs in three language families: Romance, Germanic and Slavic. We will discuss

[3] Here, following Borer (2003), we use the terms ‘argument supporting nominals’ and ‘referential nominals’ instead of Grimshaw’s (1990) ‘complex event nominals’ and ‘result nominals’.

Romanian infinitive and supine ASNs, the Spanish nominal infinitive, the English nominal and verbal gerund, German *-ung*, Polish *-nie/-cie* and Bulgarian *-ne* ASNs. We will show that the ability to pluralize correlates with other nominal properties like adjectival modification, gender features and case inflection. We take these properties to be hosted by a Class(ifier)P where n (the site of the nominalizer, according to Marantz 2001) moves to check its nominal features (Picallo 2006). Importantly, we follow Picallo in assuming that the presence of ClassP is also obligatory for a further NumberP projection.

The inability to allow morphological plural sometimes correlates with the lack of these nominal properties and the corresponding projections, as in the Romanian supine and the English verbal gerund. We show that these two ASNs project AspectP. But there are ASNs which exhibit nominal properties, i.e. nP and ClassP are present in their syntax, but they do not pluralize, i.e. NumberP is absent. This is the case in most English nominal gerunds and German *-ung* ASNs, and Spanish nominal infinitives. We will show that the reason why they do not pluralize is their atelic inner aspect inherited from the verb. Such ASNs are telic or atelic depending on the inner aspect of the original verb, so there is no evidence for aspect shift and AspectP. The telic pattern realizes plural, the atelic one does not, thus confirming previous predictions in the literature, according to which bounded entities/events can be pluralized, while unbounded ones cannot (see, for instance, Mourelatos 1978, Jackendoff 1991, Borer 2005, vol. 2). To account for this contrast, we posit a [\pm count] feature on ClassP which ‘agrees’ with the inner aspect of the VP. ASNs with telic inner aspect have ClassP [+count] and project NumberP, while ASNs with atelic inner aspect have ClassP [–count], which blocks the realization of NumberP.

The common assumption that verbal (outer) Aspect is in complementary distribution with nominal Number – also evidenced here by some ASN patterns – is challenged by Polish *-nie/-cie* and Bulgarian *-ne* ASNs, which despite carrying verbal aspectual morphology can surface with plural. This suggests that they realize both AspectP and NumberP. We will show that these ASNs can be integrated in our account if we assume that the AspP is embedded in a nominal structure introduced by the nominalizer, i.e. the nominalizer attaches to AspP (see Schoorlemmer 1995, Rozwadowska 1997 for a similar claim). This contrasts with the other nominal ASNs realizing plural (e.g. Romanian telic infinitives), where the nominalizer attaches to VP.

We thus provide further evidence for the view that nominalizers can nominalize various layers of structure (VP vs. AspP) (see Abney 1987; Borer 1993; Alexiadou 2001, 2009, to appear). The nominalizer, which we take to be the head of nP (Marantz 2001), introduces a nominal internal structure and leads to the projection of ClassP and NumP. We will show that these ASNs contrast with the ASNs that lack nominalizers and include a verbal structure simply embedded under D (e.g. supines and verbal gerunds).

In this paper we will not be concerned with a detailed event decomposition of the VPs (Borer 2005, Alexiadou, Anagnostopoulou & Schäfer 2006, Ramchand 2008). Our focus is rather on their aspectual properties and, in relation to them, the layers above VP, namely AspectP, nP, ClassP and NumP, and how they interact with one another.

The paper is organized as follows. In Section 1 we present the two Romanian ASNs which confirm the generalization that Number is in complementary distribution with (outer) Aspect. The contrast between the nominal and the verbal gerund in English supports our conclusion from Romanian. In Section 3, we discuss the nature of the Aspect projection in ASNs, by focussing on the different levels where the aspectual properties of the nominal gerund and the verbal gerund become relevant in the syntax. In Section 4 we investigate the relationship between the classifier projection and aspect. To this end, we also examine Spanish nominal infinitives and German *-ung* ASNs. We will then, in Section 5, address the challenges Slavic ASNs pose to our analysis and formulate further refinements that rely on the idea that nominalizers may nominalize different layers of structure (VP vs. AspP). Our conclusion is in Section 6.

2. NUMBER VS. ASPECT: ROMANIAN INFINITIVE AND SUPINE ASNS

2.1 Nominalization patterns

Romanian is the first language we address concerning the interaction between verbal and nominal categories in ASNs, as it enables us to propose a measure of comparison for the other languages. Romanian has two productive deverbal nominals: the infinitive and the supine. Both can appear as ASNs; for a comprehensive demonstration and specific tests we refer the reader to Cornilescu 2001. We concentrate here on the contrast in (2), which shows that the infinitive realizes morphological plural, while the supine does not.⁴

- (2) **demolă-r-i-le/*demola-t-uri-le** frecvente ale cartierelor
 demolish-INF-PL-the/demolish-SUP-PL-the frequent.PL of quarters.GEN
 vechi de către comuniști
 old by to communists
 'the frequent demolitions of old quarters by the communists'

We will argue that the plural morphology is favored by the nominal properties of the infinitive which indicate the presence of an nP level, ClassP

[4] In this paper we use the following abbreviations in glosses: ADJ 'adjective', ADV 'adverb', F 'feminine', GEN 'genitive case', IMPF 'imperfective', IND 'indicative', INF 'infinitive', INS 'instrumental case', ITR 'intransitive', M 'masculine', N 'neuter', NOM 'nominative', PF 'perfective', PL 'plural', RF 'reflexive', SG 'singular', SUP 'supine'.

and NumP. By contrast, the supine lacks an nP level, but projects AspP. NumP is thus blocked.

The infinitive and the supine ASN are derived on the verbal stem of the infinitive and on the participial stem, respectively. The forms are given in (3).

- (3) THE INFINITIVE THE SUPINE
 a cînta: cînta-r-e/cîntă-r-i a cînta: cînta-t/#cînta-t-uri⁵
 to sing: sing-INF-F.SG/sing-INF-PL to sing: sing-SUP/sing-SUP-PL

 a conduce: conduce-r-e/conduce-r-i a conduce: condu-s/#condu-s-uri
 to drive: drive-INF-F.SG/drive-INF-PL to drive: drive-SUP/drive-SUP-PL

The morphology of these two nominals introduces a first difference. The infinitive involves a specific affix, *-re*, which exclusively derives this nominalization. It does not occur in any verbal form. Soare (2007) argues that *-re* is a true NOMINALIZER. The supine in turn does not present a nominalizer; it is the 'bare' nominalization of a verbal participial stem. Nothing in the morphology indicates the nominal status of the supine, except for the determiner and the genitive case assigned to complements.⁶ The supine is thus a syntactic nominalization in the sense of Chomsky (1970) and Picallo (1991): the layer bringing the nominal status is the DP that embeds a verbal structure.

2.2 Nominal properties

The contribution of a nominalizer is to assign the category 'n(oun)' either to a simple root or roots that have already been categorized as e.g. verbal (Marantz 2001). Picallo (2006) argues that gender and declension information, typical to nouns, is hosted by another category – called Classifier (Class) – which is obligatory once n is projected and to which the n head moves to check its class information. The projection of further nominal categories is conditioned by the projection of ClassP. Picallo shows that the gender features encoded in the Class are a precondition for Number. It turns out that the infinitive and the supine ASN display different behavior with respect to gender features and the nominal properties connected to n and Class.

The morphology clearly indicates that infinitive ASNs have [+fem] gender, as they have the same singular-plural endings *-e* vs. *-i* just as feminine common nouns:

- (4) (a) cînta-r-e/cîntă-r-i (b) floar-e/flor-i
 sing-INF-F.SG/sing-INF-PL flower-F.SG/flower-PL

[5] The plural ending *-uri* is associated with the supine by analogy with lexicalized nouns originating from the supine/past participle, e.g. *tuns – tunsuri* ('haircut' – 'haircuts'). See Iordăchioaia & Soare 2008.

[6] In this paper we will not be concerned with case assignment in ASNs, but see Cornilescu (1995) for some insights on genitive case assignment.

Supine ASNs are traditionally considered to have neuter gender: they have a null ending for singular (like masculine nouns) and *-uri* in the plural (like some feminine nouns). But as Iordăchioaia & Soare 2008 show, the ending *-uri* in supine ASNs is not the effect of neuter gender features, but a default gender marking. Recent borrowings like that in (5a) also receive this ending in Romanian, but once they are completely integrated into the nominal system, this can change. Compare (5b) to (5c):

- (5) (a) weekend – weekend-**uri**
weekend – weekends
(b) verb/verb**uri** (19th-century Romanian)
(c) verb/verbe (present-day Romanian)
verb.N.SG/PL

If this is correct, the two Romanian ASNs differ with respect to gender features that are present in the infinitive but absent in the supine ASN. An important argument for this position comes from anaphoric relations: the infinitive ASN successfully establishes anaphoric relations with the feminine demonstrative *aceasta*, as illustrated by (6b), while the supine rejects the masculine/neuter syncretic form *acesta* in (6c) and can only be referred to by the genderless form *asta*, the common anaphor for CPs in Romanian, as illustrated in (6a).

- (6) (a) Că Ion a venit, **asta** știu.
'That Ion came, I know it.'
(b) Am vorbit despre **interpretarea rolului Hamlet** în general.
'We spoke about the interpretation.INF of the role of Hamlet in general.'
Se pare ca **aceasta**/?**asta** îi consacră indubitabil pe actorii tineri.
'Apparently, this.F/?it undoubtedly validates the young actors.'
(c) Am vorbit despre **interpretatul rolului Hamlet** în general.
'We spoke about the interpretation.SUP of Hamlet in general.'
Se pare ca ***acesta/asta** îi atrage pe toți actorii tineri.
'Apparently *this.M.N/it attracts all the young actors.'

In addition to gender, the supine also has a defective case declension, since unlike the infinitive ASN in (7a), it is usually unnatural with the dative-genitive case inflection in comparison to the nominative-accusative one:

- (7) (a) Alunecările de teren apar din cauza
flows.the of terrain occur from cause
tăierii/*tăiatului pădurilor.
cut.INF.GEN/cut.SUP.GEN woods.GEN
'Mudflows occur because woods are being cut down.'

- (b) **Tăierea/tăiatul** pădurilor provoacă
cut.INF.NOM/cut.SUP.NOM woods.GEN brings.about
alunecări de teren.
flows of terrain
'Cutting down the woods brings about mudflows.'

The nominal properties present in the infinitive ASN and absent in the supine ASN point to a (structural) defectiveness of the supine, which appears to be 'less nominal' than the infinitive. As a matter of fact, modification further confirms this hypothesis. Most adjectives are only allowed with the infinitive.⁷ In the example in (8b), *atent* can only appear postnominally, which is an indication of its adverbial status.⁸

- (8) (a) studierea **atentă/atenta** studiere a detaliilor
study.INF.the careful.ADJ/careful.ADJ.the study.INF of details.GEN
(b) studiatul **atent/*atentul** studiat al detaliilor
study.SUP.the careful.ADJ.ADV/careful.ADJ.the study.SUP of details.GEN

We conclude for now that the nominal properties justifying the projection of nP and ClassP are motivated for the infinitive ASN, but not for the supine ASN.⁹

2.3 Plural marking and determiner selection

The nominal properties encoded under ClassP directly explain the most striking difference between infinitive and supine ASNs, namely the availability of plural marking. As we saw in (2), only the infinitive ASN displays morphological plural (cf. also (3) and (9a)). Even if some nouns homophonous with the supine can display plural marking, the presence of an

[7] Some relational adjectives seem to be grammatical with the supine, but we think that this has to do with the nature of these adjectives as substituting arguments of the original verb. Thus they cannot modify purely nominal categories, but most likely are DP-modifiers. This, however, is a topic for future research.

[8] We note that adverbs in Romanian are usually homophonous with adjectives and can only be distinguished from the latter due to their position. See also the discussion with respect to example (24).

[9] A *JL* referee mentions that the supine combines with the negative prefix *ne-*, which is a nominal property, as is shown in (ia). This, however, cannot be right, since fully verbal non-finite forms like the present participle (*gerunziu*) in (ib) also combine with the prefix *ne-* and assign (verbal) accusative case at the same time.

- (i) (a) **neplecatul** la gară la timp
NEG.leave.SP.the to station in time
(b) **Negăsind** soluția perfectă, Ion a fost foarte dezamăgit.
NEG.finding solution.the perfect Ion has been very disappointed

argument is not allowed, which indicates that these nouns are not ASNs (see (9b)).

- (9) (a) Numeroasele **interpretări ale acestui rol** de către
 numerous interpret.INF.PL of this role.GEN by to
 diverși actori i-au schimbat stilul inițial.
 various actors it-have changed style initial
 ‘The numerous interpretations of this role by various actors changed
 its original style.’
 (b) tunsul (ierbii) – tunsurile (*ierbii)
 cut.SUP.the grass.GEN – cut.SUP.PL.the grass.GEN

Moreover, as (10) illustrates, the infinitive combines with discrete quantifiers, whereas the supine only accepts mass quantifiers.

- (10) (a) **Multe** spălări/o spălare a(le) rufelor
 many wash.INF.PL/one wash.INF of laundry.GEN
 distrug(e) țesătura.
 destroy(s) fabric.the
 (b) **Prea mult/*un** spălat al rufelor distruge țesătura.
 too much/one wash.SUP of laundry.GEN destroys fabric.the

The infinitive thus resembles count nouns which project Number and the supine resembles mass nouns which do not project Number.

Following Picallo’s (2006) insight that the gender features under Class are a prerequisite for the Number projection, and considering the evidence for Class in infinitive ASNs and the lack of it in supine ASNs, we take the infinitive to project ClassP and NumP. In the following section, we will investigate the aspectual properties of the two ASNs, while seeking to determine which syntactic categories are projected in the supine.

2.4 Aspectual properties

Another important difference between the infinitive and the supine ASN concerns aspectual information. Cornilescu 2001 argues that infinitives are telic and supines atelic and that this information is carried by the two suffixes: *-re* (telic) and *-t/-s* (atelic). Although we agree that this aspectual contrast exists, we argue that the explanation is more complex and the two suffixes do not play similar roles in it. The aspectual information of the infinitive ASN is simply an inner aspect specification inherited from the VP (the original verb). The supine ASN, however, contributes outer aspect to the extent that it triggers aspect shift. Thus only the supine projects AspP.

First, Cornilescu (2001: 489) notes that the infinitive is sensitive to the root to which it attaches and can only be derived from verbs that project their internal argument, (11). Thus unergative verbs can build supine ASNs, but not infinitive ASNs.

- (11) UNERGATIVE VERB INFINITIVE SUPINE
 a locui ‘to live’ *locuire locuit
 a munci ‘to work’ *muncire muncit
 a râde ‘to laugh’ *rîdere rîs

Second, the infinitive ASN must project its internal argument: it cannot project only the external argument like the supine does. (12a) contrasts with (13), where the presence of the theme allows the realization of the external argument in a ‘by’-phrase.

- (12) (a) *Infinitive + Subject* (b) *Supine + Subject*
 *cîntarea lui Ion (only RN) cîntatul lui Ion
 sing.INF.the the.GEN Ion sing.SUP.the the.GEN Ion
 (13) cîntarea imnului de către Ion
 read.INF.the hymn.GEN by to Ion
 ‘the singing of the hymn by Ion’

The supine *cîntatul* in (12b) allows the projection of the external argument in the absence of the theme. We can be sure that it is not an RN, because the supine generally cannot turn into an RN, unlike the infinitive. As Cornilescu shows, locative PPs that modify common nouns in Romanian must be preceded by the preposition *de* ‘of’, as in (14a). The same condition holds of infinitival RNs, (14b), and this is explained by the fact that RNs behave like common nouns, in that they no longer have verbal properties. But the supine can only be modified by the locative PP alone, (14c), as in the case of verbs, (14d). This indicates that the supine in (14c) is an ASN and not an RN.

- (14) (a) oglinda *(de) la baie
 mirror.the of at bathroom
 ‘the mirror in the bathroom’
 (b) cîntarea lui Ion *(de) la baie
 sing.INF.the the.GEN Ion of in bathroom
 (c) cîntatul lui Ion *(de) la baie
 sing.SUP.the the.GEN Ion of in bathroom
 (d) Ion cîntă *(de) la baie.
 Ion sings of in bathroom
 ‘Ion is singing in the bathroom.’

These properties led Cornilescu to conclude that the infinitive carries telic aspect (see Cornilescu 2001: 484–490 for details). However, it seems that

although most verbs that project their internal argument are telic, this is not always the case. The infinitive can be built from atelic verbs as long as they have an internal argument:

- (15) urmărirea suspectului timp de 3 zile /*în 3 zile
 follow.INF.the suspect.GEN time of 3 days/in 3 days
 ‘the following of the suspect for 3 days/*in 3 days’

The grammaticality of the *for*-PP and the ungrammaticality of the *in*-PP indicate that the infinitive ASN in (15) is atelic, just like the original VP. This means that the infinitive does not contribute telic aspect; it simply inherits the telic/atelic specification of the VP, and it can be derived from any verb that has an internal argument.¹⁰

The aspectual contrast between the infinitive and the supine ASN can, however, be observed if we compare the two ASNs derived from a telic verb. To simplify the discussion, we use Jackendoff’s (1991) feature [\pm b] (BOUNDEDNESS) to characterize both nominal and verbal entities with respect to number and aspect. Under the assumption that [+b] events can be located in space/time, while [–b] ones cannot, the contrast in (16) below shows that the infinitive ASN preserves the telic/[+b] aspect of the verb, while the supine ASN changes this specification to [–b] (Iordăchioaia & Soare 2008).

- (16) Citirea/*cititul cărții a avut loc ieri/în sala
 read.INF.the/read.SUP.the book.GEN has had place yesterday/in
 de lectură.
 room of reading
 ‘The reading of the book took place yesterday/in the reading room.’

Jackendoff argues that *until* is a function that binds [–b] events with a time to return [+b] events. Thus the supine, but not the infinitive, is expected to be compatible with *until*, as illustrated in (17). Given that pluralization turns [+b] entities into a [–b] multiplicity of entities, the plural infinitive is also grammatical with *until*, as confirmed below:

- (17) (a) arestările/#arestarea lui Miron Cozma pînă la
 arrest.INF.the.PL/arrest.INF.the the.GEN Miron Cozma until at
 schimbarea guvernului
 changing government.GEN
 ‘Miron Cozma’s arrestings until the government changed’
 (b) cititul benzilor desenate pînă la vîrsta de 16 ani
 read.SUP.the strips.GEN drawn until at age of 16 years
 ‘reading comic strips until the age of 16’

[10] We thank an anonymous *JL* referee for drawing our attention to the fact that this property may be independent of the telic aspect argued for in Cornilescu (2001).

2.5 *Aspect shift, pluractionality and AspectP*

In this section we address this aspectual difference in relation to the structural make-up of the two ASNs. We will show that unlike the infinitive, which preserves the inner aspect of the VP, the supine interacts with telic/[+b] verbal bases and imposes its own [–b] specification on them. Thus the supine nominal introduces ASPECT SHIFT (de Swart 1998). Consider the interaction between the supine and various verbal classes below.

With verbal bases denoting achievements, which are [+b], the supine is grammatical and expresses habituality, a semantic effect of a [–b] plurality of events (see also Lasersohn 1995):

- (18) sositul lui Ion cu întârziere la toate întrînririle
 arrive.INF.the the.GEN Ion with delay at all meetings
 importante
 important
 ‘Ion’s (habit of) arriving late at all important meetings’

With states, known as [–b], the supine usually requires a bounding function like *until* to turn the unbounded event into [+b]. In (19) *pînă* ‘until’ is obligatory and, in this case, the supine expresses a plurality of bounded states and habituality.

- (19) statul lui Ion la Maria/dormitul lui
 stay.SUP.the the.GEN Ion at Maria/sleep.SUP.the the.GEN
 Ion *(pînă după-amiaza tîrziu)
 Ion until afternoon late
 ‘Ion’s (habit of) staying at Maria’s/sleeping until late in the afternoon’

I-level predicates are impossible to locate in space and time (Kratzer 1995), so they never become [+b]. Consequently, they are also excluded in the supine:

- (20) *cunoscutul limbilor străine/*descinsul omului
 know.SUP.the languages.GEN foreign/descend.SUP.the man.GEN
 din maimuță
 from monkey

Accomplishments, punctual events and semelfactives pattern with achievements as [+b] and activities with states as [–b] (see Iordăchioaia & Soare 2008: 205–208).

Iordăchioaia & Soare (2008) argue that the aspectual contribution of the supine resembles that of PLURACTIONAL OPERATORS (POs) in polysynthetic languages (see Lasersohn 1995, Van Geenhoven 2004). To confirm this, note the similarity between the Romanian supine in (21c) and the West Greenlandic PO *qattaar* ‘again and again’ in (21a) and (21b) in

exhibiting DISTRIBUTIVITY EFFECTS WITH PLURALS, a property typical of POs (Laca 2006):

- (21) (a) ?**Qaartartoc** sivisuumik qaa**qattaar**poq.
 bomb.ABS.SG lengthy.INS explode.again.and.again.IND.ITR.3SG
 ‘?A bomb exploded again and again for a long time.’
 (b) **Qaartartut** sivisuumik qaa**qattaar**put.
 bombs.ABS.PL lengthy.INS explode.again.and.again.IND.ITR.3PL
 ‘Bombs exploded again and again for a long time.’
 (c) ucisul **jurnaliștilor**/***jurnalistului** de către
 kill.SUP.the journalists.GEN/journalist.the.GEN by to
 mafia politică
 mafia political
 ‘the killing of journalists/*the journalist by the political mafia’

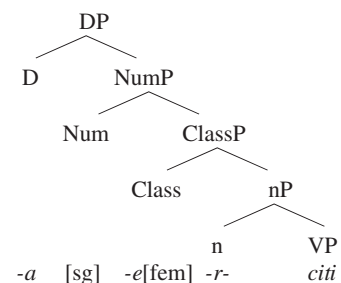
The PO *qattaar* in (21a) and (21b) turns the [+b]/telic event of ‘explode’ into [-b] and suggests a plurality of explosions. The singular theme ‘a bomb’ in (21a) is only grammatical if it is understood as a ‘magic bomb’ that explodes more than once (Van Geenhoven 2004). No problem arises with the plural ‘bombs’ in (21b), since the multiple explosions are distributed over the various bombs, each involved in one explosion. The same explanation applies to the supine in (21c). The supine contributes a PO which suggests a plurality of killing events. Since the same journalist cannot be killed more than once, the singular theme is ungrammatical. The plural is fine, as it is distributed over the plurality of events.

Since the supine contributes intrinsic [-b] aspect by pluralizing bounded events and thus triggering aspect shift, Iordăchioaia & Soare (2008, 2009) argue that this specification should be correlated with an Aspect projection in the syntax, in the same way the grammatical aspect contributed by particular verb forms is captured by such a projection (see also Section 3 below). Aspect shift motivates an AspP in the syntax.

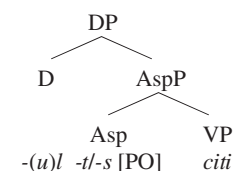
2.6 The functional structure of Romanian ASNs

On the basis of the observations above, we conclude that the two Romanian ASNs realize two different syntactic ways of expressing plurality/unboundedness. There is, on the one hand, a nominal pattern projecting NumP which hosts morphological plural. This is the pattern of the telic infinitive ASN and is represented in (22). On the other hand, there is a verbal pattern where plural is expressed semantically under AspP [-b] via a PO. This is the structure of the supine ASN in (23).

(22) *The infinitive*



(23) *The supine*



In (23) we place the supine suffix *-t/-s* under the Asp head as contributing the [-b] PO, as this suffix is also responsible for perfective/[+b] aspectual information in the structure of past participle verbal forms. Thus *-t/-s* is underspecified for the context of insertion. It can realize pluractional aspect as well as perfective aspect depending on the syntactic context in which it appears, either nominal or verbal. In this we follow Halle & Marantz (1993), but see also Embick (2004) for an analysis of English participles based on underspecification and Ippolito (1999) for Italian nominalizations ending in *-ata*, which resemble Romanian supines in having a participial-like structure. In Section 3 we will discuss another case with the English suffix *-ing* which occurs in the verbal progressive, the verbal gerund and the nominal gerund.

The projection of an AspP in the supine ASN is also supported by the compatibility with aspectual adverbs like *constantly* (see Alexiadou 1997, Cinque 1999). Infinitive ASNs disallow aspectual adverbs and much prefer the corresponding adjectives, see (24b, c). Aspectual adjectives are ungrammatical with the supine, as the contrast between (24c) and (24d) with a prenominal adjective shows.

- (24) (a) *cititul* (**constant** al) *ziarelor* (**constant**)
 read.SUP.the constantly of newspapers.GEN constantly
 ‘constantly reading newspapers’
 (b) *omiterea* (***constant** a) *unor informații* (??**constant**)
 omit.INF.the constantly of some information.GEN constantly
 (c) ***constantul** *citit* al *ziarelor*
 constant read.SUP of newspapers.GEN
 (d) **constantă** *omiterea* a *informațiilor*
 constant omit.INF of information.GEN

Assuming the structures in (22) and (23) above, the two ASNs in Romanian confirm the idea of a complementary distribution between

nominal NumP and verbal AspP. The presence of morphological plural in ASNs depends on the projection of these categories.

2.7 *English verbal vs. nominal gerund*

In this section we show that the distinction between verbal and nominal gerunds in English provides further support for the verbal vs. nominal patterns that we identified with respect to the supine and the infinitive ASNs in Romanian.

Depending on the possibility of assigning accusative case to the theme argument, we distinguish between the verbal and the nominal gerund: the former assigns accusative case, as in (25a), the latter realizes its theme as an *of*-PP (see Lees 1960, Chomsky 1970).

- (25) (a) Emma's **reading the poem**.
- (b) Emma's **reading of the poem**.

Further properties correlate with this distinction: the subject of the verbal gerund cannot be replaced by a determiner, but this is possible with the nominal gerund, (26); the verbal gerund only allows adverbial modifiers, the nominal gerund only allows adjectives, (27).

- (26) (a) ***That**/***The** criticizing the book annoyed us.
- (b) **The** jumping of the cows annoyed us.
- (27) (a) Pat disapproved of my **quietly**/***quiet** leaving the room.
- (b) **The careful**/***carefully** restoring of the painting took six months.

Under the standard assumption that adverbs modify verbal structures and adjectives nominal structures, this contrast suggests that the verbal gerund contains a verbal internal structure (Abney 1987, Borer 1993, Kratzer 1994 and others), while the nominal gerund has a nominal internal structure. This difference is maintained with respect to aspectual modifiers, as illustrated in (28).

- (28) (a) I am sick of her **constantly**/***constant** criticizing me.
- (b) He could not tolerate her **constant**/***constantly** criticizing of him.

Following Alexiadou (1997) and Cinque (1999), this suggests that, like the Romanian supine, the verbal gerund hosts an AspP which is absent in the nominal gerund.¹¹ For now, we assume with Pustejovski (1995) and

[11] There are of course differences between the English verbal gerund and the Romanian supine concerning their internal syntax. As an anonymous *JL* referee has pointed out, the English verbal gerund assigns accusative, while the Romanian supine assigns genitive case. We will not provide a complete comparative analysis of the two ASNs in this paper; our main concern is to point out the similarities that indicate the presence of outer aspect in both. See Alexiadou et al. (to appear a) for some preliminary thoughts on that issue.

Alexiadou (2001) that the verbal gerund *-ing* suffix carries imperfective aspect. We will return to this in Section 3.

The general consensus with respect to the structure of verbal gerunds is that they lack nominal internal properties. As a consequence, they also lack plural morphology:

- (29) *He could not stand her **criticizings** me.

In view of the parallelism between the Romanian supine/infinitive ASNs and the English verbal/nominal gerunds, we expect the nominal gerund to allow plural and to project NumP. As we will see, plural is indeed possible with some nominal gerunds, but it is impossible with others, a fact for which we offer a detailed explanation below.

3. THE NATURE OF THE ASPECT PROJECTION IN ASNs

3.1 *The English nominal gerund*

The data in (30)–(31) illustrate the interaction between the nominal gerund and plural morphology. Some gerunds allow plural, (30), others disallow it, (31a), but in some cases, the nominal gerund is excluded in favor of some other nominalizer, (31b).

- (30) I heard of repeated **killings** of unarmed civilians.
- (31) (a) *The repeated **fallings** of the stock prices induced their further decline.
- (b) The frequent late **arrivals**/***arrivings** of the train made me take the bus.

We believe that the explanation of these facts lies in the sensitivity of the nominalizer *-ing* (different from the verbal gerund suffix *-ing*) to the INNER ASPECT of the original verb and its competition with other deverbal nominalizers.

This was noted in Borer (2005, vol. 2: 239–245), who claimed that the nominalizer *-ing* is ungrammatical with telic events like the achievements in (32), but is fine with atelic events (activities and semelfactives), as in (33).

- (32) (a) *the arriving of the train
- (b) *the erupting of Vesuvius
- (c) *the exploding of the balloon
- (33) (a) the sinking of the ships
- (b) the falling of the stock prices
- (c) the jumping of the cows

Other affixes, (34a), the verbal gerund, (34b), and the progressive, (34c), accept telic verbs.

- (34) (a) the arrival of the train
 (b) The train arriving at 5 pm is unlikely.
 (c) The train is arriving.

We previously said, following Jackendoff (1991), that only [+b] entities may pluralize. If the nominalizer *-ing* tends to select atelic events, which are [–b], we expect it to reject plural. This explains the example in (31a) above in contrast with (33b). The ungrammaticality of (31b) is a consequence of the incompatibility of the nominal gerund with telic verbs, so the nominalizer *-al* is preferred (see also (34a)).

However, note that the inner aspect sensitivity of the nominalizer *-ing* also has to do with the availability of other nominal suffixes for the same structure. For instance, with respect to *arrive*, the nominalizer *-ing* loses the competition with the suffix *-al*. But given that there is no other ASN available for *kill* (another telic verb), the nominalizer *-ing* is grammatical and it may mark plural, as expected (see (30) above).

We conclude that Number is projected only in nominal gerunds from telic verbs, which are rare.¹² With the Romanian infinitive ASN the situation is different because most of the verbs they derive from are telic, so NumP and plural are usually available.

3.2 Inner vs. outer aspect

So far, we have concluded that the verbal gerund projects Aspect, while the nominal gerund usually requires atelic aspect. In this section, we investigate the nature of the aspectual specification in the two ASNs, in particular, whether the nominal gerund projects the same kind of AspP as the verbal gerund, a different one, or none at all.

Telicity is a property usually associated with the inner aspect/Aktionsart, i.e. an aspectual value lexically determined and composed within the VP. Verkuyl (1993), Borik (2002) and others distinguish between INNER ASPECT (or Aktionsart) and OUTER (or grammatical) ASPECT. The latter is usually associated with the notion of perfectivity and is a functional projection above the VP. Here, we make use of telicity and perfectivity as referring to inner

[12] An anonymous *JL* referee has given us several counterexamples, as in (i), to the claim that nominal *-ing* rejects telic bases. As mentioned in the main text, this idea was argued for in Borer (2005, vol. 2) and we have provided counterexamples to it as well (see (30)). What is important for our purposes is that telic nominal gerunds can pluralize, as is shown (ii).

- (i) (a) the **crossing of the street** three times
 (b) the **reading of the book** several times
 (ii) (a) On his frequent **crossings** of the Atlantic he has often be accompanied by his wife.
 (b) In my many/frequent **readings** of this book I failed to see its structure.

and outer aspect, respectively, while boundedness is a term that covers both, as well as the mass–count distinction in the nominal domain.

The projection of AspP in Romanian supine ASNs has to do with outer aspect, since the supine imposes its own [–b] aspectual value independently of the inner aspect of the verb. The same may be noticed with the progressive form, a typical outer aspect specification, and the verbal gerund in English. In (34b, c) above we saw that the two are compatible with telic events, but they are just as fine with atelic ones. Moreover, a telic event in the verbal gerund can be modified by a *for*-PP (36).¹³

- (35) (a) John **is working** now.
 (b) John's **reading books** until late in the night worries his mother.
 (36) (a) John wrote the letter **in 3 days**/***for 3 days**.
 (b) John's writing the latter **for 3 days** annoyed everybody.

We thus conclude that the structure of the verbal gerund resembles the one of the Romanian supine, with the suffix *-ing* contributing and realizing imperfective outer aspect (see also Alexiadou 2005).^{14,15} The only nominal layer

[13] A *JL* referee has expressed doubts concerning our claim that the verbal gerund *-ing* contributes imperfective aspect like the progressive *-ing*. They argue that two progressives, like those in (ib), are incompatible, while the verbal gerund is fine with the progressive, which may indicate that the two *-ings* in (ia) contribute different information.

- (i) (a) He recalls his **having been running** for two hours.
 (b) *He is **being running**.

We believe that (ia) is grammatical because the verbal gerund *-ing* turns the perfective/bounded *have been running* into imperfective/unbounded. In (ib) the progressive/unbounded *-ing* cannot attach to another unbounded form. But note that the verbal gerund *-ing* is just as ungrammatical with a progressive form, shown in (ii). This indicates that, like the progressive, the verbal gerund *-ing* is imperfective/unbounded.

- (ii) *his **being running** for the whole afternoon

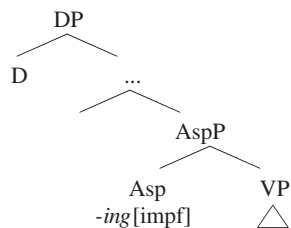
We agree, however, that the nature of the imperfectivity/unboundedness in the gerund *-ing* may be different from that in the progressive *-ing*, but this is an issue we have to leave for future research.

[14] But see footnote 11.

[15] As correctly pointed out by a *JL* referee, matters are not that simple when it comes to the internal syntax of English gerunds. First, we have not discussed subtypes of the verbal gerund, e.g. Acc-ing, PRO-ing, and Poss-ing, and how these differ (see Abney 1987, Siegel 1998). Second, it has been pointed out in the literature that the verbal gerund is interpreted as an assertion of a fact (e.g. Fraser 1970, Zucchi 1993). This indicates that the verbal gerund might internally be more like a clause than is suggested here. This does not undermine our point that the verbal gerund contains an AspectP. Third, the referee is also correct in pointing out that the *-ing* affix does not strictly express progressive aspect (see also Siegel 1998), and nor does it introduce pluractionality. Following Siegel, we assume that the verbal gerund contains an AspectP which (i) is insensitive to inner aspect, and (ii) modifies the inner aspect of the predicate. As we are more interested in establishing cross-linguistic patterns, we leave a more detailed discussion of all the issues raised by the referee for future research.

in the verbal gerund is the DP which explains its nominal external syntax (see Borer 1993). We do not exclude the presence of possibly other verbal layers between the DP and the AspP, (see footnote 15).

(37) *The verbal gerund*



In contrast to the verbal gerund, the nominal one inherits the inner aspect of the verb: if the verb is [+b], the plural is available, as in (30) above; if the verb is [-b], the plural is unavailable, as in (31a) above.¹⁶ This also means that the nominal gerund does not trigger aspect shift. In this situation, a syntactic Aspect projection is unmotivated, just as in the Romanian infinitive.

3.3 *English verbal gerund vs. Romanian supine*

Let us make a short digression to compare the English verbal gerund with the Romanian supine. The two ASNs differ in two important respects which are related to each other and reflect language-specific properties. First, in Romanian, the enclitic definite article realizes D. In English, no determiner is present and the subject moves from its base position to SpecDP (Borer 1993, Kratzer 1994). This correlates with the properties of the DP projection across languages. DP is an A-position in English (Abney 1987) and rather similar to a CP projection (subordinator) in Romanian.¹⁷

[16] The strong unbounded character of the nominal gerund is reminiscent of the feature [-perf] of the progressive *-ing*. Note that the nominalizer *-ing* has some properties of the progressive, but not all. There is a complex diachronic relationship between the two. The modern English progressive derives from a structure of the following form: *I am on hunting*, i.e. the progressive is a nominal construction embedded in a locative PP (see also Bolinger 1971).

[17] In English, Abney (1987) argues in detail that SpecDP can license thematic arguments and thus is an A-position. However, Horrocks & Stavrou (1987) point out that languages differ as far as the status of SpecDP is concerned: in other languages, it functions as an A'-position enabling extraction out of the DP.

Moreover, if we are right in analyzing the verbal gerund as lacking ClassP and more importantly NumP, we also expect that no definite determiner will appear in English. This is especially clear in systems like the one put forth by Borer (2005, vol. 1), who argues that the definite determiner in English can be merged lower than D in projections that correspond to our ClassP and NumP. Importantly, the definite article can merge as low as Class. If gerunds lack NumP as well as ClassP, there is no position for the definite article to merge. This means that the English definite article is not only a form to lexicalize definiteness but can also lexicalize Class, in the absence of other class marking in the language. We will encounter this case with nominal gerunds in Section 4.

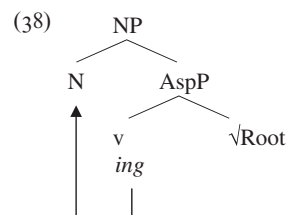
The definite article in Romanian is different. According to Dobrovie-Sorin 1987 and Giusti 1995, the Romanian definite determiner lexicalizes D, i.e. it is merged directly under D. The article itself cannot be a Classifier or a Number marker in Romanian, as also suggested by the fact that the language makes use of distinct exponents to realize these categories (see our remarks on class/gender marking in Section 2.2 above). These are absent in the supine, so the structure of this ASN involves only a D head. As D must be licensed, the definite article is inserted in D.

The second important difference between the English gerund and the Romanian supine concerns the case of the internal argument. In the supine, it bears genitive case; in the gerund, accusative case. We believe that this is related to the first property. Because of its properties, the affixed article in the supine creates a nominal environment, albeit a defective one, hence the case that appears is the one found in nominal environments.

4. THE CLASSIFIER PROJECTION AND ASPECT

Returning to the nominal gerund, the question that arises is how to represent its inner aspect specification in the syntax, so that we allow a Number projection only with telic verbs. In other words, do we need an inner Aspect projection?

If inner aspect can be derived from the properties of the VP within the ASN, ideally we do not need such a projection in the syntax. In her decomposition of verbal structure, Borer (2005, vol. 2) argues that *-ing* realizes one of the inner aspect heads, namely the so-called 'process head'. Her analysis is as follows: *-ing* is first projected within the domain of inner aspect realizing Process and then moves to N (our n), as it is inherently nominal and needs to check N features. This is illustrated in (38).



We believe that such an analysis cannot work for the following reason: It has been argued that English has special affixes realizing Process (e.g. *-ify* in (39) below) and these appear inside the nominalizer (Alexiadou 2009, Harley 2009). On a strong decomposition view, *-ing* should realize some other, additional, head.

(39) humid-if-y humid-if-ying

We agree with Borer that the inner aspect of an event is compositionally derived from its lexical specification and its (non)quantized arguments, within the VP (see Verkuyl 1993). We thus propose that the nominalizers *-ing* and *-re* in Romanian infinitives do not contribute anything to the inner aspect. Instead they simply select a VP with atelic or telic aspectual properties.

4.1 The [\pm count] feature on ClassifierP

For Romanian infinitives, we showed that a Classifier projection is motivated to host the nominal properties of the ASN (gender features and/or general declension information) and as the input for a further Number projection (see Picallo 2006). Given the parallelism between the verbal inner aspect and the nominal classifier as set out by Fassi Fehri (2005), we propose to express the telic inner aspect of Romanian infinitives under a [+count] feature on ClassP.

Picallo (2006) does not address the technical details of how ClassP is meant to ‘feed’ nominal Number. But given that NumP hosts the plural marker and that only bounded entities may be pluralized, the Classifier should provide some information about the (un)bounded character of the nominal. The feature [+count] is meant to provide precisely the syntactic specification of a nominal as being [+b]. We take this feature to be available for both events and common nouns: it is thus present on telic ASNs and on count nouns, both [+b] and capable of undergoing pluralization. In these terms, ClassP [+count] may be viewed as the input for NumP, as Picallo argues.

Within this picture, mass nouns should have a ClassP [–count], since they are uncountable and thus exclude the projection of NumP. Note that a

ClassP is still motivated for mass nouns, if we think of Class as hosting the nominal information of a noun. Mass nouns do have all the nominal properties that count nouns have, the only difference is that they are unbounded and thus lack Number. We express this property by appealing to a ClassP [–count] feature, which blocks the projection of NumP.

The same feature [–count] can be taken to supply the information that the English nominal gerund from atelic verbs is unbounded and thus does not allow pluralization. The nominal features we included under the Classifier for Romanian infinitive ASNs are hard to verify in English, since inanimate nouns are all neuter and there is no case declension. But the literature has already argued for a Classifier projection in English nouns (e.g. Kratzer 2005). In order to show that the feature [–count] is motivated in atelic ASNs with nominal properties, as in the English nominal gerund (see Section 2.7 above), we provide evidence from a similar ASN in Spanish, a language that clearly expresses gender features on nominals (Picallo 2006).

4.2 Spanish nominal infinitives (SNIs)

De Miguel (1996) distinguishes between verbal and nominal infinitive ASNs in Spanish. These differ primarily in the way they realize their external argument: either with nominative case or with *de* ‘of’, respectively.¹⁸

- (40) (a) el murmurar **la gente**
the murmur.INF the people.NOM
‘the murmuring of the people’
(b) el murmurar **de** las fuentes
the murmur.INF of the fountains
‘the murmuring of the fountains’

Here, we are concerned with the nominal pattern in (40b). De Miguel (1996), Demonte & Varela (1997) and Fábregas & Varela (2006) show that SNIs carry atelic/unbounded aspect, since they systematically reject telic verbs. They are ungrammatical with achievements and accomplishments, as seen in (41a, b). But a typical accomplishment that becomes atelic due to a bare plural argument, as in (41c), is fine. As expected, SNIs also reject plural, in (41d).

- (41) (a) *El llegar tardío de Juan nos preocupó a todos.
the arrive.INF late of Juan us worried to all
(b) *El comprar una casa de Juan nos alegró.
the buy.INF a house of Juan us made.happy

[18] The internal argument receives accusative case in the verbal infinitive and can only surface as an incorporated bare noun (cf. the theme *casas* ‘houses’ in (41c)) in the nominal infinitive.

- (c) el constante **construir** casas de los albañiles
the constant build.INF.SG houses of the workers
- (d) *los (constantes) **construieren** casas de los albañiles
the constant build.INF.PL houses of the workers

In this respect, SNIs resemble English nominal gerunds. Likewise, SNIs are known to allow only adjectival modifiers: either manner, as in (42a), or aspectual, (42b).

- (42) (a) el andar **errabundo**/***errabundamente** de Juan
the go.about.INF aimless/*aimlessly of Juan
- (b) el **constante** temer (***constantamente**) de Juan
the constant fear.INF constantly of Juan

Unlike English nominal gerunds, SNIs can be tested for gender features. De Miguel (1996) shows that SNIs carry masculine gender which, although not visible in the nominalizer *-r*, becomes obvious in anaphoric contexts, in which an SNI can be referred to only by the masculine pronoun *él* and not by the default neuter pronoun *ello*, usually employed with CPs. In this respect, SNIs are similar to the Romanian infinitive in (6b):

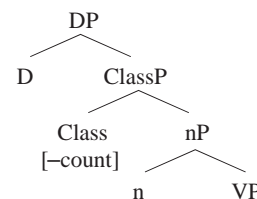
- (43) Acostumbrado al dulce mirar de su amada, ya no
used.to to.the sweet gaze.INF of his beloved now not
podía vivir sin **él**/***ello**.
could live without him/it
'Used to the sweet gaze of his loved one, he could no longer live without it.'

Thus there is clear evidence that SNIs, like Romanian infinitives, project a ClassP which hosts their gender features. Since the nominalizer *-r* only selects atelic verbs, the Classifier in SNIs should carry a [-count] specification which, just as in the case of mass nouns, blocks a further NumP. We take the syntactic structure in (44) to be available for SNIs and for most English nominal gerunds, i.e. the atelic ones.

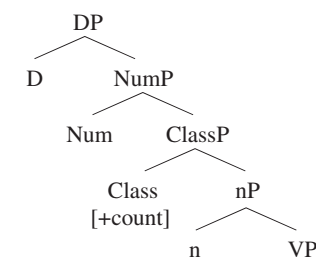
For the few English nominal gerunds which are available with telic verbs (e.g. (30), see also footnote 12), we assume the syntactic structure in (45), the same as for the Romanian telic infinitive in (22), now including the feature [+count] on the Classifier. The D head hosts the determiner, Num the plural marker, Class carries nominal features and the [\pm count] feature, and n hosts the suffix that nominalizes the VP.¹⁹

[19] This analysis crucially requires for the ClassP to see the features within the VP domain, which can be formalized in terms of an Agree relationship: the specification of ClassP concerning singularity, division and homogeneity (Borer 2005, vol. 1: ch. 4) has to Agree with the specification of the predicate via probing into the VP (see Alexiadou to appear). This is possible irrespectively of whether or not nP is a phase, as Agree is not subject to the Phase-Impenetrability Condition and intervention effects; see Bošković (2007).

(44) *Atelic nominal ASNs*



(45) *Telic nominal ASNs*



4.3 German -ung ASNs

The clear sensitivity of an ASN nominalizer to the inner aspect of the verb, as is the case with SNIs, is not always given. We have seen that ASNs that have been considered to be inner-aspect sensitive are in fact more flexible. The Romanian infinitive is mostly derived from telic VPs, and the nominal gerund from atelic ones, but the other option is also available in either case. These ASNs are ambiguous between the two structures in (44) and (45).

Another case is given in Alexiadou et al. (to appear a), who show that German *-ung* ASNs are ambiguous with respect to inner aspect. They may be derived from both telic and atelic verbs, but plural is only available for the former, see (46a, b) and (46c, d).

- (46) (a) die **Beobachtung** von Vögeln
the observe.UNG of birds
'the observation of the birds'
- (b) *die **Beobachtungen** von Vögeln
the observe.UNG.PL of birds
- (c) die gezielten **Tötungen** der politischen Führer durch
the targeted kill.UNG.PL the.GEN political leaders by
die Armee
the army
'the targeted killings of the political leaders by the army'
- (d) seine zahlreichen **Erfindungen** von Sportspielen
his numerous invent.UNG.PL of sport.games
'his numerous inventions of sport games'

The atelic ASN in (46a) does not maintain its ASN status when pluralized. The plural nominal *Beobachtungen* in (46b) may only be interpreted as an RN and, in this case, the theme in (46a) is understood as an agent, a role

incompatible with the non-human property of the noun *Vögel*.²⁰ With telic ASNs, the plural is available, as seen in (46c, d); the theme is also present, so there is no doubt as to the ASN status of these nominals.

In conclusion, German *-ung* ASNs are also ambiguous between the syntactic patterns in (44) and (45). In the following section, we will summarize the results on the internal structure of ASNs and its relation to the availability of morphological plural.

4.4 Pluralization patterns in ASNs

On the basis of the interaction between the aspectual properties of ASNs and their nominal/verbal properties, we have identified four syntactic projections relevant for the (un)availability of morphological plural in ASNs: Asp, Num, Class and n. The first two are directly related to boundedness and plural marking; the last two encode nominal properties with significant implications for plural marking. The table in (47) summarizes our results on ASNs in Romanian, English, Spanish and German:

(47) *Plural marking and functional projections in ASNs*

ASN	ASPECT [±BOUNDED]	PLURAL	FUNCTIONAL CATEGORY	SUFFIX & ITS POSITION
ROMANIAN INFINITIVE	+	+	Number Classifier[–count]	<i>-re</i> : n <i>-re</i> : n
ROMANIAN SUPINE	–	–	Aspect	<i>-t/-s</i> : Aspect
VERBAL GERUND	–	–	Aspect	<i>-ing</i> : Aspect
NOMINAL GERUND	+	+	Number Classifier[–count]	<i>-ing</i> : n <i>-ing</i> : n
SNI	–	–	Classifier[–count]	<i>-r</i> : n
GERMAN <i>-UNG</i> ASNs	+	+	Number Classifier[–count]	<i>-ung</i> : n <i>-ung</i> : n

[20] In Grimshaw (1990) the impossibility of projecting the theme argument indicates that the nominal is not a complex event (ASN, in our terms). The agent, if projected, is an adjunct and not an argument.

Given that plural marking is a nominal characteristic, ASNs allowing morphological plural are first of all nominal, a fact confirmed by the presence of n, Classifier and Number, all of which are nominal projections. This is the case with most Romanian infinitives and other telic ASNs. Despite the nominal properties hosted by the n and Classifier heads, in Spanish nominal infinitives and other atelic ASNs, Number is blocked by the atelic inner aspect encoded under Class [–count].

The nominal character of the morphological plural already anticipates the unavailability of plural with ASNs exhibiting verbal properties for which projections higher than the VP are responsible. In particular, the presence of an AspectP has long been argued in the literature to be in complementary distribution with a NumberP (see Fassi Fehri 2005 for an overview). This is confirmed by the Romanian supine and the English verbal gerund, both carrying verbal aspectual properties and lacking the nominal features usually apparent with other (rather nominal) ASNs. Importantly, both the supine and the verbal gerund lack a nominalizer, their suffix expressing aspectual information. It is only the D head that makes these ASNs behave like nominals with respect to their external syntax. The internal structure is verbal. We come back to this issue in Section 5.

5. CHALLENGES AND REFINEMENTS: SLAVIC ASNs

The ASN data in Romanian, English, Spanish and German we have discussed confirm two important generalizations in the literature concerning the relation between pluralization and boundedness on the one hand, and their syntactic representation on the other. One of them says that only bounded entities may be pluralized (Mourelatos 1978, Jackendoff 1991). The other concerns the mutual blocking effect between verbal Aspect and nominal Number in the syntax (Rouveret 1994, Alexiadou 2001).

The aspectual properties of the ASNs play a fundamental role in our argumentation. However, none of the above-documented languages preserves clear verbal aspectual morphemes in the structure of the ASNs. Note that the past perfect (i.e. bounded) *-t/-s* suffix actually contributes unboundedness in the supine. The verbal gerund *-ing* maintains its unbounded value, but it is homonymous with the nominalizer *-ing*. Moreover, despite their aspectual contribution, neither of the two verbal ASNs exhibit aspectual pairs (i.e. bounded vs. unbounded), as is usually the case in the verbal domain.

In this section, we present data from Slavic languages known to exhibit a very rich morphology that carries aspectual information. Polish *-nie/-cie* ASNs and Bulgarian *-ne* nominals preserve unambiguous aspectual morphemes from the verbal domain. In addition, in Polish, aspectual pairs of ASNs with perfective vs. imperfective value are available. These two kinds of ASNs allow us to test our generalizations and to propose

further refinements to our analysis and the ASN patterns established thus far.

5.1 Polish *-nie/-cie* ASNs

Polish *-nie/-cie* ASNs inherit the full aspectual specification of their related verbs, as is shown by the verbal patterns in (48a, b) and the corresponding ASNs in (49a, b).²¹

- (48) (a) Jan **przeczytał/*czytał** gazetę w dwie godziny.
 Jan read.PF/read.IMPF newspaper in two hours
 ‘Jan read the newspaper in two hours.’
 (b) Jan **czytał/*przeczytał** gazetę przez dwie godziny.
 Jan read.IMPF/read.PF newspaper for two hours
 ‘Jan read newspapers for two hours.’
 (49) (a) **przeczyta-nie/*czyta-nie** gazety w dwie godziny
 read.PF-NIE/read.IMPF-NIE newspaper.GEN in two hours
 (b) **czyta-nie/*przeczyta-nie** gazety przez dwie godziny
 read.IMPF-NIE/read.PF-NIE newspaper.GEN for two hours

The Polish ‘in’-PP in (48a) and (49a), which is known to modify bounded events, is only grammatical with the perfective form of the verb or the ASN; the imperfective forms are excluded. By contrast, the Polish ‘for’-PP in (48b) and (49b) is compatible with the imperfective forms and incompatible with the perfective ones in both verbs and ASNs.

The aspectual similarity between ASNs and verbs indicates that these ASNs project an AspectP in the syntax (see also Schoorlemmer 1995, Rozwadowska 1997). Along with maintaining verbal aspectual morphology, the *-nie/-cie* ASNs also exhibit aspectual pairs perfective vs. imperfective, in our terms bounded vs. unbounded.

5.1.1 Plural morphology

An important generalization we highlighted in the first part of this paper is that the projection of Aspect blocks Number. Given that Polish *-nie/-cie* ASNs project Aspect, we expect them to block Number, and thus to disallow plural marking. However, the data in (50) below clearly indicate that this is not the case:

- (50) (a) częste opóźnione **przyby-cia/odejś-cia** pociągu
 frequent delayed arrive.PF-CIE.PL/depart.PF-CIE.PL train.GEN

[21] Polish does not have a determiner system, but we include determiners in our English translations where appropriate to convey the intended meaning.

- (b) Częste **odkry-cia** nowych terapii raka
 frequent discover.PF-CIE.PL new treatments cancer
 przyniosły naukowcom międzynarodową sławę.
 brought researchers international fame
 ‘The frequent discoveries of cancer treatments brought the researchers international fame.’
 (c) częste **wyjs-cia** Jana przez tylne drzwi w
 frequent exit.PF-CIE.PL Jan.GEN through back door in
 celu uniknięcia spotkania z szefem
 order avoiding meeting with boss

The above ASNs have both aspectual and plural marking. The former is a verbal characteristic, the latter a nominal one. This is a pattern we did not encounter in the languages we investigated earlier in this paper: the supine ASN and the verbal gerund disallow plural.

A first important fact to notice about the ASNs in (50) is that their corresponding imperfective pairs are ungrammatical with plural marking. This means that our second generalization is respected: only bounded (perfective) ASNs allow plural, the unbounded (imperfective)²² ones, in (51), do not.

- (51) (a) *częste opóźnione **przybywania/odjeżdżania** pociągu
 Frequent delayed arrive.IMPF.NIE.PL/depart.IMPF.NIE.PL train.GEN
 (b) *Częste **odkrywania** nowych terapii raka
 frequent discover.IMPF.NIE.PL new treatments cancer
 przyniosły naukowcom międzynarodową sławę.
 brought researchers international fame
 (c) *częste **wychodzenia** Jana przez tylne drzwi w
 frequent exit.IMPF.NIE.PL Jan.GEN through back door in
 celu uniknięcia spotkania z szefem
 order avoiding meeting with boss

Second, if we compare *-nie/-cie* ASNs with the Romanian supine and the verbal gerund, the other two ASNs which project an AspP, we note that the suffixes *-i/-s* and *-ing* that we associate with the supine and the gerund are not nominalizers, but rather aspect markers. Polish ASNs, however, bear both an aspectual affix and a nominalizing suffix. The aspect comes with the verbal root (e.g. the perfective prefix *prze-* in (48), (49), the imperfective suffix *-wa-* in (51), etc.), but the nominalizer is either *-cie* or *-nie* and it does not carry

[22] The imperfective of these ASNs is formed with the suffix *-nie*, substituting *-cie*. The two suffixes are not in complementary distribution (i.e. the former attaching only to imperfective roots and the latter only to perfective ones), since *-nie* may attach to both forms in (49). It would, however, be worth investigating whether *-cie* requires perfective roots. This, too, is a topic that we must leave for future research.

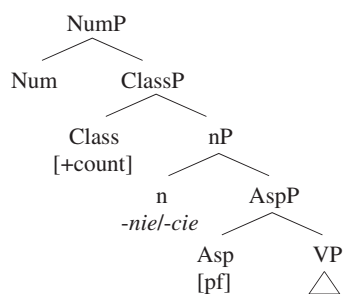
any aspectual information. In conclusion, Polish *-nie/-cie* ASNs provide morphological evidence for the presence of both an Aspect and an n head.

5.1.2 *Co-occurrent AspectP and NumberP*

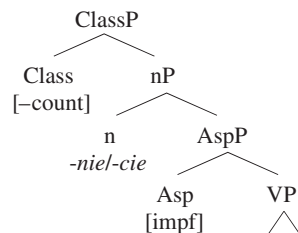
In view of the evidence for both an AspP and an nP, we follow Schoorlemmer (1995) and Rozwadowska (1997), and propose that *-nie/-cie* ASNs are nominalizations of AspP. That is, n nominalizes the AspP layer, and not the VP layer, as was the case before.

If an n head is present in the syntax, in our approach, a Classifier is the next projection (Piccolo 2006). The aspectual properties of *-nie/-cie* nominals may be encoded on the [\pm count] feature under Classifier, just as in the ASNs that host a nominalizer. Perfective *-nie/-cie* ASNs thus resemble other telic ASNs in hosting a Class [+count]. The presence of ClassP [+count] supports the projection of Number and explains the grammaticality of plural in (50). Imperfective ASNs resemble SNIs and other atelic ASNs in hosting a Class [-count] which blocks plural in (51). Assuming that Polish does not project a DP, *-nie/-cie* ASNs are either NumPs or ClassPs:²³

(52) *Perfective -nie/-cie ASNs*



(53) *Imperfective -nie/-cie ASNs*



The difference between *-nie/-cie* ASNs and the other ASNs discussed here is that the Classifier encodes outer aspect in the former and inner aspect in the latter. But considering that the feature [\pm count] is meant to accommodate verbal aspect/boundedness within a nominal structure and that both inner and outer aspect are the verbal manifestations of boundedness, nothing prevents us from treating inner and outer aspect similarly when it comes to their interaction with nominal features.

If Polish lacks a DP (but see footnote 23), the NumP and the ClassP are responsible for the nominal external syntax of the *-nie/-cie* nominals. Supine

[23] The presence of a D layer in languages without overt determiners has been controversially discussed in the literature (see Alexiadou et al. 2007 for an overview). If Polish is assumed to have a DP layer, then Polish ASNs are DPs. Our argumentation remains unaffected.

ASNs and verbal gerunds do not have an nP above AspP, but they do have a DP layer.

A further piece of evidence for this analysis comes from the compatibility of *-nie/-cie* ASNs with adjectival modifiers, including the aspectual adjectives in (54b):

- (54) (a) Janka **ciche** wyjś-cie z pokoju pozostało
 Janek.GEN quiet exit.PF-CIE from room remained
 niezauważone.
 unnoticed
 (b) **Nieustannie/Ciągle** pomija-nie szczegółów przez Janka
 constant omit.IMPf-NIE details.GEN by Janek.ACC
 zmusiło jego szefa do zwolnienia go.
 made his boss to fire.PF.NIE.GEN him
 ‘The constant omitting of details by Janek made his boss fire him.’

In contrast to supine ASNs and verbal gerunds, which exclusively allow aspectual adverbs, it can only be the ClassP that the aspectual adjective in (54b) modifies. On the assumption that aspectual adverbs modify AspP and that ClassP encodes the aspectual properties of the ASN, an aspectual adjective must modify ClassP in the structure of an ASN.²⁴ Supines and verbal gerunds host AspP, but no ClassP, so they allow only aspectual adverbs. The suffix *-nie/-cie* ASNs in Polish have both ClassP and AspP, so they allow both aspectual adjectives and adverbs:

- (55) ?Pomijanie **nieustannie/ciągle** szczegółów przez Janka
 omit.IMPf.NIE constantly details.GEN by Janek
 zmusiło jego szefa do zwolnienia go.
 made his boss to fire.PF.NIE.GEN him

The fact that the aspectual adverb in (55) is less natural than the adjective in (54b) indicates that the higher functional layer is more salient, so *-nie/-cie* ASNs are more nominal than verbal despite the AspP. This is expected, if we consider that their internal syntax is actually closer to that of the nominal ASNs (Romanian infinitive, English nominal gerund, etc.) than to that of the verbal ones (supine and verbal gerund).

5.2 *Bulgarian -ne ASNs*

In the previous section, we presented Polish ASNs that seemed to challenge our generalization that Number and Aspect exclude each other. As we have

[24] An exhaustive analysis of aspectual adjectives as modifying the ClassP should also take into account the fact that this kind of modification is only possible in the presence of an event (i.e. a VP layer) in the nominal. This condition will exclude aspectual adjectives modifying all nouns that project Class.

shown, Number and Aspect may co-occur if they target different categorial levels in the structure.

Bulgarian *-ne* ASNs pose a challenge for our second generalization, according to which only bounded entities may be pluralized. These nominals are known to attach exclusively to imperfective verbal stems as the data below indicate (see also Popova 2006, Markova 2007 and references therein):

(56)	ASPECT	VERB	<i>-ne</i> ASN	INTERPRETATION OF THE ROOT
	PERFECTIVE	zamestja	*zamest-ne	'act as a deputy', 'replace'
	IMPERFECTIVE	zamestv am	zamest- va -ne	
	PERFECTIVE	prepisha	*prepisa-ne	'copy'
	IMPERFECTIVE	prepisv am	prepis- va -ne	

Although they preserve the imperfective morpheme from the verb, *-ne* ASNs in Bulgarian easily accept morphological plural, as (57) indicates:

- (57) (a) Chestite **razrushavanija** na grada ot vragovete go
 frequent-the destroy.IMPF.NE.PL of city.the by enemies-the it
 promeniha napulno.
 changed completely
 'The frequent destructions of the city by the enemies changed it completely.'
- (b) Chuh za mnogo **ubivanija** na grajdani po vreme
 heard of many kill.IMPF.NE.PL of civilians during time
 na vojnata.
 of war.the
 'I heard of many killing of civilians during the war.'
- (c) chestite kusni **pristiganija/otputuvanija** na
 frequent.PL.the late arrive.IMPF.NE.PL/depart.IMPF.NE.PL of
 vlaka
 train.the
 'the frequent late arrivals/departures of the train'

On the assumption that the *-ne* ASNs in (57a, b) carry verbal imperfective aspect, they challenge our claim that [-b] ASNs disallow pluralization. We argued that this is the case even if [-b] Aspect is embedded in a nominal structure: see the imperfective Polish ASNs which disallow plural (51). But we will see in the next section that *-ne* nominals FAIL to exhibit the properties we usually associate with an Aspect projection, even if they morphologically inherit the imperfective morpheme.

5.2.1 The lack of imperfective Aspect in *-ne* ASNs

Schoorlemmer (1995) argues that despite the aspectual morpheme and unlike Polish *-nie/-cie* ASNs, Russian nominals lack Aspect. A similar claim has

been made by Popova (2006) with respect to Bulgarian *-ne* nominals. In this section, we argue for the same idea.

First of all, it should be noted that the incompatibility of *-ne* nominals with perfective morphology leads to the absence of aspectual pairs with such ASNs, which contrasts with the situation in Polish, in which the verbal aspect in ASNs is preserved with both values. This casts doubt on the projection of Aspect in *-ne* ASNs.

Second, *-ne* nominals are compatible with 'in'-PPs, as shown in (58a). If they carried imperfective/unbounded aspect, they should be ungrammatical with 'in'-PPs because these PP's indicate perfective/bounded aspect. Crucially, the imperfective verb form in (58b) corresponding to the ASN in (58a) disallows 'in'-PPs.

- (58) (a) **pisaneto** na statijata ot Ivan **za 30 minuti/30 minuti**
 write.IMPF.NE.the of article.the by Ivan in 30 minutes/30 minutes
 'Ivan's writing of the article in/for 30 minutes'
- (b) Ivan **pisheshe** statjata **30 minuti/*za 30 minuti**.
 Ivan wrote.IMPF article.the 30 minutes/in 30 minutes
 'Ivan wrote the article for 30 minutes.'

The aspectual value of the *-ne* nominal as reflected in its ability to be modified by 'in'- or 'for'-PPs apparently comes from the inner aspect of the VP. For instance, the achievement verb *otkriva* 'discover' is telic/bounded, so it only accepts *in*-PPs. The same holds of the corresponding *-ne* ASN, despite the imperfective morphology:

- (59) **otkrivaneto** na **novite** lechenija **za dve godini/*dve godani**
 discover.IMPF.NE.the of new.the treatments in two years/two years
 'the discovery of the new treatments in two years'

If the *-ne* ASN carried outer imperfective aspect like the verbs, this unbounded value should be imposed independently of the inner aspect, so the 'for'-PP should be allowed. The Romanian supine in (60) allows both 'in'- and 'for'-PPs, but the former refers to the singular event of discovering a treatment that takes two months, (60a), while the latter refers to the ([-b]) plurality of discovering events spread over two years, (60b).

- (60) **descoperitul** unor **tratamente noi în două**
 discover.SUP.the some.GEN treatments new in two
luni/timp de doi ani
 months/time of two years
 'the discovery of some new treatments in two months/for two years'
- (a) each discovery took two months, but there were more of them
 (b) the various discoveries spread over two years

The incompatibility of the Bulgarian *-ne* ASN with a 'for'-PP, in contrast to the Romanian supine, indicates that the former does not carry

imperfective/unbounded outer aspect. Rather, it only maintains the inner aspect of the verb. Thus the plural *-ne* nominals in (57) above do not contradict our generalization that unbounded entities cannot be pluralized, because those ASNs do not have imperfective aspect. The morphological plural is available for them, because the bounded inner aspect of the accomplishments in (57a, b) and the achievements in (57c) allows for pluralization. As expected, the unbounded *-ne* ASN derived from an activity verb like *raboti* ‘work’ rejects plural marking:

- (61) *Ivanovite narochni **rabotenija** do kusno s
 Ivan’s intentional work.IMPF.NE.PL until late in
 cel da jadosa jena si
 order to annoy wife his

In conclusion, we consider Bulgarian *-ne* ASNs to be ambiguous between the internal structures in (44) and (45), without AspP. The presence of the nominalizer *-ne* (cf. Markova 2007) is a further confirmation of the nominal status of these ASNs.

5.2.2 Perfective prefixes in *-ne* ASNs

The only *-ne* nominals which we think project (outer) Aspect in Bulgarian are the ones derived from verb forms which contain a perfective prefix. According to Markova (2007) and references therein, perfective affixes turn the imperfective basic verb into a perfective one, most of the times also involving a slight change in the lexical meaning. For instance, from the imperfective verb *pisha* ‘write’, we can form the perfective *prepisha* ‘copy’, from *melja* ‘grind’, we get *smeljam* ‘grind up’. These perfective forms can further become imperfective by means of the morpheme *-(v)a*. The result is the stem for the *-ne* nominals *prepisvane* and *smilane*.

Unlike the imperfective forms of these verbs, which clearly display unbounded aspect in (62a), note that the corresponding *-ne* nominals are only compatible with the ‘in’-PP indicating bounded aspect in (62b) (see also Markova 2007).

- (62) (a) Ivan **pre-pisvashe** statiat/a/s-mila kafeto
 Ivan PF.copied.IMPF article.the/PF-ground.IMPF coffee.the
30 minuti.
 30 minutes
 ‘Ivan copied the article/ground the coffee for 30 minutes.’
 (b) **prepisvaneto** na statiat/a/**smilaneto** na
 PF.copy.IMPF.NE.the of article.the/PF.grind.IMPF.NE.the of
 kafeto ot Ivan **za 30 minuti/*30 minuti**
 coffee.the by Ivan in 30 minutes/30 minutes
 ‘the copying of the article/the grinding of the coffee in 30 minutes’

Comparing the role of the imperfective morpheme *-va* with that of the perfective prefixes *pre-* and *s-* in the ASNs in (62b) leads us to conclude that only the aspectual value of the latter is maintained. These nominals have a bounded aspect, as do the corresponding perfective verb forms in (63). If the imperfective morpheme contributed aspect in these nominals, we would expect similarity with (62a) and not with (63).

- (63) Ivan **prepisa** statiat/a/**smlja** kafeto **za**
 Ivan PF.copied article.the/PF.ground coffee.the in
30 minuti/*30 minuti.
 30 minutes/30 minutes
 ‘Ivan copied the article/ground the coffee in 30 minutes.’

The prefixed perfective *-ne* nominals in (62b) also contrast with the corresponding non-prefixed *-ne* nominals with respect to aspect. While the prefixed *prepisvane* is clearly perfective, the non-prefixed *pisaneto* in (58a), derived from the imperfective verb form, is neutral to aspectual PP-modification, so it does not carry imperfective aspect (cf. also the corresponding imperfective verb in (58b)).

These facts show that in Bulgarian the perfective prefix contributes perfective aspect even in *-ne* ASNs. As expected in our analysis, these nominals freely pluralize (see (64) below). Syntactically, they are characterized by the internal structure of the Polish perfective *-nie/-cie* ASNs in (52), the only difference being that Bulgarian ASNs also project a DP hosting the enclitic definite article or the possessive NP (see (61) above, for example).

- (64) (a) Chestite **smilanija** na kafe ot Ivan v tazi staja
 frequent PF.grind.IMPF.NE.PL of coffee by Ivan in this room
 ja pravi da mirishe tolkova hubavo
 her makes to smell so good
 (b) Povtarjashtite se **napisvanija** na
 repeated RF PF.write.down.IMPF.NE.PL of
 stihotvorenieto ot Ivan
 poem.the by Ivan

In conclusion, in Bulgarian *-ne* ASNs the only outer aspect information is contributed by the perfective prefix. The obligatory imperfective morpheme seems to have lost its original aspectual meaning and to have been grammaticalized for ASNs. The (un)availability of plural marking with these ASNs confirms our findings on the basis of the ASNs patterns we have determined for the other languages.

6. CONCLUSION

In this paper we have developed a flexible syntactic account that captures the mixed behavior of ASNs across languages. This approach has been motivated by novel empirical evidence that contradicts two very influential

previous generalizations: that ASNs cannot pluralize (Grimshaw 1990), and that NumP and AspP exclude each other (Rouveret 1994, Alexiadou 2001). We determined that ASNs can pluralize, as long as they contribute bounded events (Mourelatos 1978), and that boundedness characterizes both the nominal (Num, Class) and the verbal domain (Asp, VP). The picture that emerges is summarized in (65), where the parentheses indicate the projections that may be missing in some ASNs:

(65) DP > ((NumP) > ClassP > nP) > (AspP) > VP

The ASNs examined differ in terms of two parameters. The first parameter concerns the presence of a nominalizer. If a nominalizer is not available, ASNs lack nominal internal properties, and their external syntax is accounted for by the DP layer. If a nominalizer is included, a second parameter characterizes variation with respect to the height of attachment of the nominalizer. Specifically, a nominalizer can attach to (and thus nominalize) either the VP or the AspectP layer. This parameter offers us a way to integrate the verbal aspectual properties of Polish and Bulgarian ASNs in the picture that we have built on the basis of the ASNs in Romanian, English, German and Spanish.

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A further insight into the syntax-semantics of pluractionality*

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Abstract In this paper we aim at a better understanding of the syntax-semantics of pluractional operators (POs) as markers of verbal plurality (Lasersohn 1995, Van Geenhoven 2004, Laca 2006). While previous literature argues or assumes that POs are (possibly lexical) plural operators that attach at the V level, we bring evidence in favor of a treatment of POs as Aspect level operators that bind plural event variables (as in Ferreira 2005). We formulate our claims on the basis of the Romanian supine, the nominal form of which has previously been argued to carry a PO (Iordăchioaia & Soare 2008).

Keywords: syntax-semantics, pluractionality, distributivity, Romanian supine

1 Introduction

This paper focuses on the syntax-semantics interface of pluractional operators (henceforth, PO) from the perspective of a covert PO that has been shown to appear in the Romanian (deverbal) supine nominal (Iordăchioaia & Soare 2008). Starting with the assumption that plural operators have direct correspondents in the nominal and the verbal domain (see Mourelatos 1978, Krifka 1989, Jackendoff 1991, among others), a closer examination of the properties of the supine offers us a deeper insight into the role of POs in language.

Pluractional operators have been described as “frequently reduplicative, most often derivational rather than inflectional” morphemes “that attach to the verb to indicate a multiplicity of actions, whether involving multiple participants, times, or locations” (Lasersohn 1995: 238, 240). Thus in the presence of such a marker, “the verb is understood to represent the occurrence of multiple events” (Lasersohn 1995: 238-241, see also Van Geenhoven 2004, Laca 2006, Wood 2007, Tovena & Kihm 2008, and Cabredo Hofherr 2010 for an overview).

For the purposes of our paper it is important to distinguish between “event-

internal” and “event-external” pluractionality (Wood 2007, based on Cusic 1981). The former notion is best illustrated in English by lexical verbs like *nibble* as opposed to *bite*, while the latter is usually contributed by adverbs that indicate a repeated event on a single occasion (e.g. ‘to bite the cheese *again and again*’), or on several occasions (e.g. ‘to *always/often/usually* bite the cheese’). We take the former type to be specified in the lexical semantics of the verb (see also Tovena & Kihm 2008), and we consider the latter to involve compositional semantics above the lexicon. Our aim is to throw more light into the syntax-semantics of the second type of pluractionality. Since, we will see, the PO effect in the Romanian supine is obtained in the syntax, it cannot be the result of a lexical operation.

It has been customary in the semantic literature that analyzes pluractionality (in particular, Lasersohn 1995, Van Geenhoven 2004, Laca 2007) to consider the PO as a kind of V level operator that pluralizes the event of the verb. The effect of a PO is thus very similar to Link’s (1983) star operator, to which the various special pluractional effects of each PO are added as, for instance, low or high variant frequency (Van Geenhoven 2004). These approaches, we will see, pose two independent problems: one that directly has to do with the PO in the Romanian supine which cannot be accommodated under such an analysis, and another one that has to do with language economy. First, the supine PO cannot be treated as a V level operator as this cannot account for the lack of PO effects in contexts where the morphological form of the verb is identical to that of the nominal supine. The PO effect in the Romanian supine is necessarily related to the nominal context in which this particular verbal form is used and its properties can only be explained if the PO is taken to be hosted by AspectP, the functional projection carrying grammatical aspect. Second, under the widespread assumption that lexical verbs (at least) in languages like English and Romanian are cumulative, i.e. start out with a plural event denotation (see Krifka 1992, Schein 1993, Landman 1996, Kratzer 2008), the use of POs in natural language to mark precisely event plurality at the V level seems superfluous.

Our present examination of the PO in the Romanian supine contributes to the latter issue by showing that, independently of whether POs are used to express plurality of events at the V level in, possibly, some language(s), there are also POs that act at the level of grammatical aspect. We make use of Ferreira’s (2005) insight that natural languages have plural (nominal and verbal) operators and we will argue that the supine PO in Romanian is an aspectual operator that binds plural events. At the same time, we reconcile the insights of the above-mentioned V level analyses with our previous syntactic account in Iordăchioaia & Soare (2008) where we argue that the supine PO is hosted by an aspectual functional projection and we thus pave the ground for a syntax-semantics interface of POs.

The rest of the paper is organized as follows. In Section 2, we introduce the Romanian supine, and present evidence for the pluractional semantics of the

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nominal form. Section 3 revisits previous analyses on pluractionality and their shortcomings with respect to the nominal supine. In Section 4 we investigate the properties of the PO in the nominal supine by comparison with nominal operators and bare habituals. We conclude that the PO must be an operator over plural events. We sketch a syntax-semantics interface for the nominal supine in Section 5, and conclude in Section 6.

2 Pluractionality in the Nominal Supine

2.1 Romanian supine: an overview

The supine in Romanian is built on the past participial stem as in (1); one could consider it a special use of the past participle.¹ Traditional grammars distinguish between a 'nominal supine' and a 'verbal supine', the function of the latter preserving some of the uses of the Latin supine. The nominal supine is an event-denoting deverbal nominalization in which the masculine-neuter form of the (enclitic) definite determiner '-(u)!' is added to the past participial stem.² It only combines with the definite determiner, while its arguments either carry genitive case or are bare plurals preceded by the preposition *de* 'of' (see (2a)). The verbal supine shows up in verbal periphrases, reduced relatives and 'tough'-constructions, it is bare, is usually preceded by prepositions (e.g. *de* 'of', *la* 'at'), and can take arguments marked with (weak) accusative case (see Soare 2002, and (2b)). In this paper we focus on the nominal supine and we will often employ the term 'supine' to refer to the nominal form in (2a).

- | | | | | |
|-----|----------------|-----------------|--------------------|------------------------|
| (1) | Infinitive | Past participle | Nominal supine | Verbal supine |
| | a chema | chema-t | chema-t -ul | de/la chema-t |
| | to call | call -PastPrt | call -Sup-the | of/to call -Sup |
| | 'to call' | 'called' | 'the calling' | '(of) calling/to call' |
- (2) a. **Culesul merelor/ de mere** durează zile în șir
harvest.Sup.the apples.the.Gen/of apples lasts days in row
'The harvesting of (the) apples lasts days in a row.'
- b. Ion {s-a apucat **de/a plecat la} cules merele.**
John RF-has grabbed of/has left at harvest.Sup apples.the
'John started harvesting/went to harvest the apples.'

1 We use the gloss Sup for 'supine' for consistency with the label of the construction, but the morphology is actually identical to the past participle.

2 Note that this is different from what is called a past participial nominalization in Romanian which denotes an individual (not an event): e.g. *nou venitul* 'the newly arrived one'.

2.2 The pluractional operator

Iordăchioaia & Soare (2008) notice a contrast between infinitive and supine nominalizations in Romanian, to the extent that the former allow plural marking, while the latter do not, as illustrated in (3). They explain this difference by arguing that the nominal supine already denotes a plural (of events) which is incompatible with further (nominal) pluralization.

- (3) **demolă -r -i -le/*demola -t -uri-le** frecvente **ale cartierelor vechi**
demolish-Inf-Pl-the/demolish-Sup-Pl-the frequent-Pl of quarters.Gen old
de către comuniști
by to communists
'the frequent demolitions of old quarters by the communists'

The first piece of evidence that the plural denotation of the nominal supine is contributed by a covert PO comes from the lack of multiplicity effects with singular indefinites, and the multiplicity effects with plurals which have also been observed in the behavior of POs in West Greenlandic and Spanish (Van Geenhoven 2004 and Laca 2006). The use of the singular indefinite *un jurnalist* 'a journalist' in (4) only has an interpretation in which there are several killing events whose patient is one and the same journalist.

- (4) Ucisul **de jurnaliști/*unui jurnalist** de către mafia politică a
kill.Sup.the of journalists/a.Gen journalist by to mafia political has
stârnit mass media.
stirred mass media
'The killing of journalists by the political mafia stirred the mass media.'

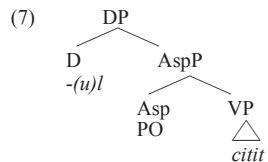
Second, the nominal supine is incompatible with idiomatic adverbials like '*in one gulp*', '*in one breath*', '*in one sweep*' which preclude a subdivision of the running time of the event, although they are not punctual as their compatibility with accomplishments in (5a) indicates (Laca 2006). To show that the incompatibility does not lie in the nominal nature of the supine nominalization in (5b), note that the infinitival nominalization is grammatical in the same context.

- (5) a. A citit romanul **dintr-o răsuflare.**
has read novel.the in one breath
'He read the novel in one breath.'
- b. **citirea/ *cititul** romanului **dintr-o răsuflare**
read.Inf.the/read.Sup.the novel.the.Gen in one breath
'the reading of the novel in one breath'

Third, the nominal supine triggers aspect shift (see de Swart 1998): it pluralizes achievements and makes them compatible with *for*-adverbials, which are known to only modify unbounded events (6a). Activities often require the bounding function *until* to be compatible with the plural triggered by the supine (6b). The logic behind this is that, like the nominal plural which can only be added to bounded entities (i.e. count nouns), the supine PO must combine with bounded/telic events (see Mourelatos 1978, Jackendoff 1991, Borer 2005: vol. I, Alexiadou, Iordăchioaia & Soare 2010). Activities are unbounded, so they must be turned into bounded events by *until* to undergo pluralization in the supine. Both sentences in (6) receive a habitual interpretation which is a typical reading for the nominal supine, besides the generic one (see Soare 2006 for details).

- (6) a. **Sositul** lui Ion cu întârziere **timp de 2 ani** i -a
arrive.Sup.the John.Gen with delay time of 2 years him-has
adus concedierea.
brought firing
'John's (habit of) arriving late for two years brought about his being fired.'
- b. **Muncitul** lui Ion *(**până** la miezul nopții) o
work.Sup.the John.Gen until at middle night.Gen her
îngrijorează pe soția lui.
worries Acc wife his
'John's (habit of) working till midnight worries his wife.'

The evidence for aspect shift in (6), besides syntactic evidence from the compatibility with aspectual adverbs, leads Iordăchioaia & Soare (2008) to conclude that the nominal supine must include a grammatical/outer aspect projection just like verbal constructions, with the difference that AspectP is now embedded under a DP, and not a TP. This claim is made from the perspective of a nominal-verbal parallelism a la Abney (1987) between AspectP and NumberP (see Alexiadou, Iordăchioaia & Soare 2010 for details and other deverbal nominalizations that inherit AspectP from the original verb). They propose the structure in (7) for the nominal supine, where AspectP hosts the PO whose contribution is unboundedness/plurality.



3 Previous approaches to pluractionality and challenges

Following Lasersohn's (1995) first formal semantic proposal, later accounts of POs in various languages assumed that these markers attach at the V level in the syntax. Lasersohn's analysis is motivated by the initial observation that POs are morphemes that are incorporated in the verb form. However, other instances of POs such as, for instance, the Spanish pluractionals *andar* 'walk'/ir 'go' + gerund addressed in Laca 2006 are periphrastic. Laca takes POs to attach at the V level in order to account for the different scope properties that POs and frequency adverbs like *regularly* or *occasionally* have. Unlike POs, the latter can take either wide or narrow scope with respect to singular indefinites as in (8), an effect that Laca explains in the syntax: for the wide scope reading, the adverb attaches at the VP level in (8a), and for the narrow scope reading, it attaches at the V level in (8b). The Romanian data in (4) and the West Greenlandic (9), where the use of the PO *qattaar* only allows a reading where the same bomb exploded several times, should consequently indicate that POs only take narrow scope with respect to indefinites, so they must attach at the V level, but we will argue against this idea.

- (8) He **occasionally** met a sailor.
a. [occasionally [meet a sailor]]
b. [[occasionally meet] a sailor]
- (9) ?Qaartartuq sivilisuu-mik qaar **-qattaar-puq**
bomb.Abs lengthy.Ins explode-PO -Ind.[-tr].3sg
'A/the bomb exploded again and again for a long time.'

(Van Geenhoven 2004: 147)

Van Geenhoven's (2004) analysis is built on the same assumption, although she does not exclude the possibility that POs might also attach at a higher level. In addition, Van Geenhoven also argues that POs contribute atelicity, i.e. only act on the lexical aspect of the verb, which we will show is incompatible with the nominal supine in Romanian.³

There are two kinds of challenges for these accounts: one comes from the particular behavior of the nominal supine and one concerns the theoretical compatibility between V level POs and the lexical cumulativity of verbs as a (possible) semantic universal. We address both of them below.

³ We assume that (a)telicity is a matter of lexical aspect and is built within the VP, while (im)perfectivity expresses grammatical aspect and is hosted by AspectP.

3.1 The PO in the nominal supine is higher than V

To begin with, the PO in the nominal supine cannot successfully be accounted for if we assume that it attaches at the lexical level as in Lasersohn 1995. First, the PO has no morphological realization of its own (see the morphology of the nominal supine in (1)). Second, the two morphological components of the nominal supine are neither individually nor together responsible for the PO effects. In support of this claim, note that the two components of the nominal supine (the past participle and the definite determiner) may appear in other contexts without PO effects: the past participle in complex verbal forms is fine with singular indefinites (10a) and so is the verbal supine in (10b), while the definite article can appear with infinitival eventive nominalizations without PO effects (see (10), (11) vs. (4)).

- (10) a. Mafía politică a **ucis un jurnalist**.
mafia political has killed a journalist
'The political mafia killed a journalist.'
- b. Rămâne de **găsit soluția**.
remains of find.Sup solution-the
'The solution remains to be found.'
- (11) **Uciderea unui jurnalist** de către mafía politică a stârnit mass media.
kill.Inf.the a.Gen journalist by to mafia political has stirred mass media
'The killing of a journalist by the political mafia stirred the mass media.'

In addition, Romanian has deverbal nouns like the ones in (12) which are made up of the past participle verbal form and the definite determiner, but they usually denote 'the entity that is V-ed' (12c), or they acquire a lexicalized meaning (12a, b), so they are not eventive, and, importantly, they are not pluractional. This suggests that the *morphological* combination of a past participle and the definite determiner into a deverbal nominal does not necessarily trigger pluractionality either. Thus it must be some additional covert element in the make-up of the eventive nominal that contributes the PO. Below we argue that it is a grammatical aspect value that is realized in the syntax.

- (12) a. *avut-ul* (have.PastPrt-the) 'the wealth'
b. *venit-ul* (come.PastPrt-the) 'the income'
c. *urmărit-ul* (follow.PastPrt-the) 'the followed one'

Laca (2006) analyzes the POs in Spanish verbal periphrases as attaching to V to account for the obligatory narrow scope of the PO with respect to singular indefinites as in (4). Given the comparison with frequency adverbials, it is

obvious that she assumes the PO to be represented in the syntax, and not inserted by a lexical rule like in Lasersohn 1995. However, it is hard to imagine how such an analysis would cope with the aspectual properties of the nominal supine, in particular with the evidence that it contributes grammatical aspect. A V level analysis of the PO leads one to state that its aspectual contribution is atelicity, just like Van Geenhoven (2004) proposes for West Greenlandic. Under this account, however, the co-occurrence of *in*-PPs, which modify telic events, with *for*-PPs, which modify atelic events, in the nominal supine in (13) is left unexplained, as one expects the lexical aspect value to be either telic, or atelic, but not both.

- (13) Traversatul râului **în cinci minute timp de două luni**
cross.Sup.the river.the.Gen in five minutes time of two months
(zi de zi) I-a făcut pe Ion vedetă printre localnici.
(day by day) him-has made Acc John star among locals
'John's (daily) crossing the river in five minutes over a period of two months made him a star among the locals.'

This behavior is in turn easy to account for if we assume that there is a grammatical aspect level (AspectP) in the nominal supine that hosts the PO, and that the *in*-PP modifies the inner (telic) aspect of the accomplishment verb, while the *for*-PP modifies the outer (unbounded) aspect of the supine, just like in a purely verbal context as the one in (14) (see Verkuyl 1993, Borer 2005: vol II).

- (14) Ion a traversat râul **în cinci minute (zi de zi) timp de două luni**.
John has crossed river.the in 5 minutes (day by day) time of two months
'John (daily) crossed the river in five minutes over a period of two months.'

3.2 V level pluractionality and the lexical cumulativity of verbs

Besides the problems specific to the nominal supine in Romanian, the V level analysis of POs also encounters a more theoretical challenge.

(15) below, adapted from Lasersohn 1995, is the simplest formulation of the semantic analysis of POs under the assumption that they attach to the verb. It says that the V-PO complex selects sets E of events e of which the predication of the verb holds, such that the cardinality of the selected set is greater than or equal to some contextually specified number n.

- (15) $[[V-PO]] = \lambda E. \forall e \in E [V(e) \ \& \ |E| \geq n]$

Various works like Krifka 1989, Schein 1993, Landman 1996, Kratzer 2008 provide compelling evidence that at least in languages like English, lexical verbs

come with a plural denotation as in (16), where the *V is the closure of the set V under sum formation. This property generally explains the fact that sentences like (17) freely get a distributive reading (i.e. several events), besides the collective one (i.e. one event): the verb is ambiguous between a singular event and a plural event which can be distributed over the plural individuals. For theories that take the distributive reading in (14) to come exclusively from the plural DPs, examples like (18) taken from Kratzer 2008 cannot be explained: (18) says that one single phone number was dialed several times, and this can only be obtained if the verb itself has a plural denotation.

(16) $[[V]] = *V$

(17) a. **John, Mary and Paul** lifted the chair.
b. John lifted **three chairs**.

(18) I dialed a wrong phone number for five minutes.

The Romanian sentences in (19) exhibit the same readings as the English ones, so lexical cumulativity also characterizes Romanian verbs.

(19) a. Ion, Maria și Paul au ridicat scaunul.
John, Mary and Paul have lifted chair.the
b. Ion a ridicat trei scaune.
John has lifted three chairs
c. Am format un număr greșit timp de cinci minute.
have dialed a number wrong time of five minutes

If verbs are lexically cumulative in (at least) some languages, the use of POs in those languages is unexpected, or at least poses questions as to why language economy should allow this redundancy at the cost of an additional operator.⁴ What we expect is either that a language employs POs because its verbs are lexically singular, or that the PO contributes more information than a simple plural in a language with lexically cumulative verbs.⁵

To bring some light into this general issue and to find out what contribution the supine PO has in Romanian, in the next section we compare its behavior with

4 Müller & Sanchez-Mendes (2008) describe such a situation for Karitiana POs where they argue that verbs are lexically cumulative and POs disambiguate them for a plural-only interpretation. Their prediction is that the PO in this language simply reduces the number of possible readings of a verb and thus triggers ungrammaticality in a context that would be grammatical in its absence.

5 The supine PO in Romanian has no additional information like *FREQ* or *INCR* in Spanish (Laca 2006) or West Greenlandic (Van Geenhoven 2004).

that of pluralities of individuals in the nominal domain. The aim is to identify what kind of nominal plural the PO in the supine resembles.

4 The PO in the supine and nominal operators

The candidate in the nominal domain which the PO could most likely resemble is the bare plural. The V level approaches to POs already make this prediction, if we stay within a simple analysis of plural marking as an operator on the nominal head N.⁶ To test this hypothesis, we investigate the interaction of the supine PO with what Farkas (1997, 2002) calls 'dependent indefinites', but we will refer to them as '*câte* indefinites' to avoid any commitment to her analysis. We will see that the nominal supine differs from bare plurals in being able to *license* such indefinites.

4.1. The supine and *câte* indefinites

Câte indefinites are distributive operators that must co-occur with a form of plural individuals or events with respect to which they distribute. Farkas (1997, 2002) formulates this as a condition on the variable introduced by *câte* to co-vary with another individual or situational variable provided by the context. Without making any commitment to a particular analysis of such indefinites, we will loosely call the expressions in whose context *câte* can occur its (possible) *licensors* and we will investigate what properties they have in common.

(20) summarizes the nominal licensors for *câte*: definite plurals, quantifiers with plural nouns, and *every* are fine, but singular indefinite or definite nouns are not.⁷ According to Farkas, universal *every* licenses *câte* because the variable it binds gets at least two variable assignments, so it counts as plural.

(20) **Studentii/ mulți/doi/niște** studentii/**fiecare**/***un** student/***studentul**
students.the/many/two/some students/every/ a student/student.the
au/a citit **câte** o carte.
have/has read CI a book
'The students/many/two/some students/every student/*a student/*the student read a book each.'

Importantly for our discussion, bare plurals are not able to license *câte*, although they technically may denote plural individuals, even if they also denote singular ones in contexts where they are number neutral. The data in (21) leads us

6 Even in frameworks that associate a very rich syntactic structure to the DP, as for instance Borer 2005: vol. I, the plural appears right above N. In a reduced syntactic structure like the one assumed in semantic approaches to POs this corresponds to N level attachment.

7 We translate *câte* with adnominal *each* without committing to a parallelism between the two.

to conclude that the licenser of *câte* not only needs a plural denotation, but it must also carry an operator that binds the plural variable.

- (21) Ion a dat **(toate) florile/ *flori câte** unei fete.
John has given (all) flowers.the/flowers CI a.Dat girl.Dat
'John gave (all) the flowers/*flowers to a girl each.'

Unlike bare plurals, the supine in (22) is compatible with *câte* indefinites, which indicates that the supine cannot be a simple bare plural of events. Note that unlike in (4) above, the indefinite now takes narrow scope with respect to the supine PO. Similarly, (4) becomes grammatical if the singular indefinite contains *câte*, as illustrated in (23).

- (22) **Sositul câte** unui student târziu a enervat-o pe profesoară.
arrive.Sup.the CI a.Gen student late has irritated-her Acc teacher
'The late arrival of a student (now and then) irritated the teacher.'
- (23) ucisul ***(câte) unui jurnalist** de către mafia politică
kill.Sup.the (CI) a.Gen journalist by to mafia political
'the killing of a journalist now and then by the political mafia'

From this and the data in (20)-(21), we can only conclude that the PO in the nominal supine must contain an operator besides the plural. The supine being now known to carry grammatical aspect (Section 3.1), we consider the PO an aspectual operator. As further confirmation that the supine PO does not only disambiguate the verb for a plural-only denotation, note that the lexical cumulativity of verbs is not enough to license *câte* either (cf. (19c)).⁸

- (24) Am format ***(câte)** un număr greșit timp de cinci minute.
have dialed (CI) a number wrong time of five minutes
'I dialed a wrong phone number for five minutes.'

To understand the nature of the aspectual operator the supine PO involves, we now turn to a comparison with the covert habitual operator, which exhibits a striking resemblance to the supine.

⁸ To make *câte* possible in (21) we need a quantificational adverb like *mereu* 'always', or the adverb *tot* 'adverbial all' which we think is also a pluractional operator in Romanian.

4.2 The supine and bare habituals

It is well known that present tense allows a habitual reading in many languages, although no overt habitual operator is present. In Romanian, (25) is ambiguous between an episodic and a habitual reading.

- (25) Ion scrie **poezii**.
John writes poems
i. HAB: John writes poems.
ii. John is writing poems.

As noticed in Krifka et al. 1995, Rimell 2004, Cabredo Hofherr to appear and others, a habitual reading is excluded with a singular indefinite. The same holds of (26a) in Romanian, which in the habitual reading means that the same poem is written several times. This reminds us of the data in (4) with the supine. Similarly, a *câte* (singular) indefinite makes the habitual reading available, just like in the case of the supine in (23): the singular indefinite now varies with respect to the different occasions provided by the habitual.

- (26) What does John do at work?
a. Ion scrie **o poezie**.
John writes a poem
i. #HAB (cf. (4))
ii. John is writing a poem.
b. Ion scrie **câte o poezie**.
John writes CI a poem
i. HAB: John writes a poem now and then. (cf. (23))
ii. #John is writing a poem.

We do not take this evidence to indicate that the supine PO and the bare habitual are one and the same operator, especially since the latter is far from being well understood, while the former is not always interpreted habitually. What the two must have in common, we think, is the type of operator that they express. Just like frequency adverbials, for instance, form a type of aspectual adverbs although they are different from one another (cf. *occasionally*, *regularly*, *repeatedly* etc.), we take the supine PO and the habitual to be aspectual operators over plural events, as in Ferreira 2005.

4.2 Operators over plural variables

Ferreira (2005) argues that the covert operator involved in bare habituals must be

a (verbal) THE (similar to the nominal definite article) that binds plural events. Although we take no stand on whether this is the right analysis for habituals, we make use of his insight that there are plural operators both in the nominal and the verbal domain and argue that the PO in the Romanian supine is such an operator.

Ferreira compares the scope interaction of nominal operators with singular indefinites and concludes that *every* and *no* in (27a) bind singular variables, whereas plural *the* and *some* in (27b) bind plural variables. In binding singular variables, *every* and *no* allow a singular individual (mother) to be related to another singular individual provided by the singular indefinite (one-year old child) in a way that is pragmatically felicitous in (27a). The infelicity of (27b) arises from the fact that by binding plural variables, *the* and *some* only associate plural individuals (mothers) to the singular individual introduced by the singular indefinite (one-year old child), which is pragmatically odd.

- (27) a. **Every/No mother of a one-year old child** agreed to sign this form.
b. **#The/Some mothers of a one-year old child** agreed to sign the form.

The restrictors of the two kinds of quantifiers are represented in (28) and (29): while the restrictor of the singular operators in (27a) selects singular mothers x for a singular child y in (28), the restrictor of the plural operators in (27b) selects sums X of mothers that are mapped onto a singular child y in (29). The latter leads to pragmatic anomaly.⁹

- (28) [[SG mother of a one-year old child]] = $\lambda x. \exists y$ [child(y) & mother(x, y)]

- (29) [[PL mother of a one-year old child]] = $\lambda X. \exists y$ [child(y) & mother(X, y)]

Further on, Ferreira observes that introducing a relative clause with plural operators makes the mapping of singular mothers onto singular children possible in (27b) and (29). This is illustrated in (30). To explain (30), he argues that the syntactic movement involved in relative clauses introduces a distributive operator that distributes the plural variable bound by the plural operator, thus allowing for the pragmatically felicitous reading (see Ferreira 2005: 106).

- (30) The/some mothers [who have a one-year old child] agreed to sign this form.

More importantly for our discussion, Ferreira argues that in the verbal domain we have correspondents of the singular and plural operators in (27). He illustrates this parallelism with the adverb *always* and the bare habitual:

⁹ Capital letters are used from now on as variables over sums of individuals/events, as defined in Link 1983 and not for sets as in (15), which follows Lasnik 1995.

- (31) a. John **always** writes a **romantic song** [at the pub]_{Foc}.
b. #John **writes a romantic song** [at the pub]_{Foc}. (habitual)

The corresponding representations are in (32) and (33) with the focused expression occupying the nuclear scope of the quantifier. As an operator over singular event variables, *always* maps a singular event of writing onto one romantic song. The habitual operator being identical to a verbal plural THE which binds plural events as Ferreira assumes, (33), the logical representation of habitual (31b), suggests that a single song y is written within a plural event E . The pragmatic oddness thus rules out this interpretation for (31b).¹⁰

- (32) $\forall e$ [$\lambda e. \exists y$ (song(y) & write(e, j, y))] [$\lambda e. \text{at_the_pub}(e)$]

- (33) THE_E [$\lambda E. \exists y$ (song(y) & write(E, j, y))] [$\lambda E. \text{at_the_pub}(E)$]

Like in the case of the nominal quantifiers in (30), the addition of an adverbial clause makes a sentence like (31b) allow a habitual interpretation as in (34a). This grammaticality change receives the same explanation as (31): the movement of the adverb within the relative clause introduces distributivity over atomic parts of the plural event E . The result is the interpretation in (34b) where for each singular writing event e that is part of the plural event E there is one song that is written.¹¹

- (34) a. **When** John writes a **romantic song**, he goes to the pub.
b. THE_E [$\lambda E. \forall e \leq E$ ($\exists y$ (song(y) & write(e, j, y)))]
[$\lambda E. \exists E'(\text{go_to_the_pub}(E') \ \& \ \Theta(E, E'))$]

From the perspective of these facts, we can now explain the similarity between the supine PO and the bare habitual as a consequence of their both being operators over plural events. The effect of the PO in (35) — which repeats the singular indefinite version of the nominal supine in (4) and (23) — is that the plural killing event E is mapped onto a single journalist y (cf. (33)). The distributive operator brought in by the *câte* indefinite allows the atomic parts of the plural event to be distributed over various single journalists as in (36), which is in this respect similar to (34b). The representations (35) and (36) are only tentative for now and stand for the sets of plural events that are part of the denotation of the two nominal constructions in the supine.

¹⁰ The two expressions within square brackets in (32) and (33) represent the restrictor and the nuclear scope of the operator.

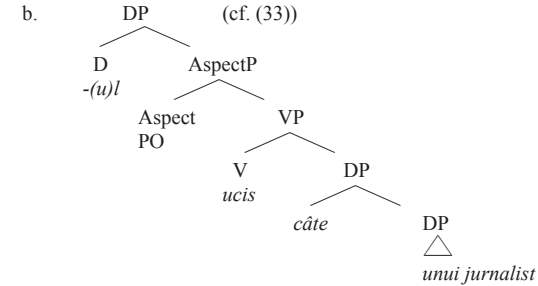
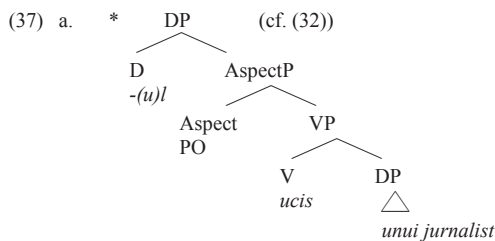
¹¹ The predicate Θ is taken in Ferreira 2005 to stand for a contextually determined relation between events for which he sends the reader to Rothstein 1995.

- (35) ***ucisul unui jurnalist** de către mafia
'the killing of a journalist by the mafia'
[$\lambda E. \exists y (\mathbf{journalist}(y) \ \& \ \mathbf{kill}(E, m, y))$]
- (36) **ucisul câte** unui jurnalist de către mafia
'the killing of a journalist now and then by the mafia'
[$\lambda E. \forall e: e < E (\exists y \mathbf{journalist}(y) \ \& \ \mathbf{kill}(e, m, y))$]

5 The syntax-semantics of the nominal supine

In this section we sketch the syntactic and semantic components of the nominal supine including the PO in Romanian. We will not go into details concerning whether the PO has a tripartite structure like the bare habituais with a focused constituent that Ferreira discusses, and we do not follow his analysis beyond the straightforward claim that there are operators that bind plural variables among which we also include the Romanian PO.

We are rather interested in obtaining the right effects with the singular indefinites and with *câte* for the nominal supine, so we will follow a semantic analysis in the spirit of Lasersohn 1995, Van Geenhoven 2004 and Laca 2006 with a slightly modified syntax that can account for the grammatical aspect effects in Section 3.1 and the licensing conditions of *câte* indefinites described in Section 4.1. Given that we are dealing with a nominal construction that involves the definite determiner, we assume that the whole of it denotes a definite description of plural events, so it involves an iota operator over properties of plural events. We follow the syntactic structure given in lordăchioaia & Soare 2008: (37a) represents (35) and (37b) stands for (36), where we take distributive *câte* to be an operator that attaches to the DP it precedes.



- (38) a. [[ucis]] = $\lambda x_e \lambda E_s. \mathbf{*kill}(x)(E)$
- b. [[unui jurnalist]] = $\lambda P_{e(st)} \lambda E'_s. \exists y [\mathbf{journalist}(y) \ \& \ P(y)(E')]$
- c. [[PO]] = $\lambda V_{st} \lambda E''_s. V(E'') \ \& \ \mathbf{card}(E'') > 1$
- d. [[ul]] = $\lambda V_{st}. \iota(V)$

In what follows, we compositionally describe the semantic components in the trees in (37). As we discussed in Section 3.2, we take Romanian verbs to be lexically cumulative, so the node V in both trees has the denotation in (38a). We take only the theme to be part of the VP as in Kratzer 2003, and we leave the external argument and VoiceP out for the sake of simplicity. We take the DP *unui jurnalist* to be a generalized quantifier as in (38b), while the null PO is a modifier of properties of plural events as in (38c). It eventually enforces the verb it selects to predicate of only sums of more than one event. To avoid confusion with the cardinality of a set as in (15), we use the function **card**(X) to return the number of elements that are part of a sum X. The semantics for the PO is not much different from the one Lasersohn (1995) gives, except for the syntactic level where it attaches. Constraints like the lack of overlap between events given in Van Geenhoven 2004 and Laca 2006 can easily be mapped onto the PO, but we leave them aside as we have not discussed to what extent they hold for the supine. The definite determiner receives the usual denotation as an iota operator with type flexibility: in the nominal supine it takes properties of plural events and returns the largest such event (i.e. sum of events). Given the denotations in (38), we can derive the intermediate levels of the tree in (37a) as follows:

- (39) a. [[VP]] = [[ucis unui jurnalist]] = [[unui jurnalist]]([[ucis]])
- = [$\lambda P_{e(st)} \lambda E'_s. \exists y [\mathbf{journalist}(y) \ \& \ P(y)(E')]$] ($\lambda x_e \lambda E_s. \mathbf{*kill}(x)(E)$)
- = $\lambda E'_s. \exists y [\mathbf{journalist}(y) \ \& \ [\lambda x_e \lambda E_s. \mathbf{*kill}(x)(E)](y)(E')]$
- = $\lambda E'_s. \exists y [\mathbf{journalist}(y) \ \& \ \mathbf{*kill}(y)(E')]$

- b. [[AspectP]] = [[PO ucis unui journalist]]
 = [[PO]]([[ucis unui journalist]])
 = [$\lambda V_{st} \lambda E''_s. V(E'') \ \& \ \mathbf{card}(E'') > 1$]
 ($\lambda E'_s. \exists y$ [journalist(y) & *kill(y)(E')])
 = $\lambda E''_s. (\lambda E'_s. \exists y$ [journalist(y) & *kill(y)(E')]) (E'') & $\mathbf{card}(E'') > 1$
 = $\lambda E''_s. \exists y$ [journalist(y) & *kill(y)(E'')] & $\mathbf{card}(E'') > 1$
- c. [[DP]] = [[ucisul unui journalist]] = [[ul]]([[PO ucis unui journalist]])
 = [$\lambda V_{st} \iota(V)$]($\lambda E''_s. \exists y$ [journalist(y) & *kill(y)(E'')] & $\mathbf{card}(E'') > 1$)
 = $\iota(\lambda E''_s. \exists y$ [journalist(y) & *kill(y)(E'')] & $\mathbf{card}(E'') > 1$)

According to (39c), the DP node in (37a) denotes the largest plural event in which a single journalist is killed. This gives the pragmatically odd interpretation in (35). To derive (36), with the distributive operator, we associate *câte* with the denotation in (40): it selects for a generalized quantifier, then a verb still missing its theme, and eventually, an event modifier, the PO itself, which introduces the plurality requirement on the event variable.¹² If we introduce *câte* at the DP level, we obtain (41) for the complex nodes in (37b). (41d) stands for the plural event such that in each *atomic* sub-event a (different) journalist was killed.

$$(40) \text{ [[câte]]} = \lambda Z_{(e(st))(st)} \lambda V_{e(st)} \lambda Q_{(st)(st)}. Q(\lambda F_s. \forall e: (e < F \ \& \ \mathbf{atom}(e)) \rightarrow Z(V)(e))$$

- (41) a. [[câte unui journalist]] = [[câte]]([[unui journalist]])
 = [$\lambda Z_{(e(st))(st)} \lambda V_{e(st)} \lambda Q_{(st)(st)}. Q(\lambda F_s. \forall e: (e < F \ \& \ \mathbf{atom}(e)) \rightarrow Z(V)(e))$]
 ($\lambda P_{e(st)} \lambda E'_s. \exists y$ [journalist(y) & P(y)(E')])
 = $\lambda V_{e(st)} \lambda Q_{(st)(st)}. Q(\lambda F_s. \forall e: (e < F \ \& \ \mathbf{atom}(e)) \rightarrow$
 $\exists y$ [journalist(y) & V(y)(e)])
- b. [[ucis câte unui journalist]] = [[câte unui journalist]]([[ucis]])
 = [$\lambda V_{e(st)} \lambda Q_{(st)(st)}. Q(\lambda F_s. \forall e: (e < F \ \& \ \mathbf{atom}(e)) \rightarrow$
 $\exists y$ [journalist(y) & V(y)(e)])] ($\lambda x_c \lambda E_s. \mathbf{*kill}(x)(E)$)
 = $\lambda Q_{(st)(st)}. Q(\lambda F_s. \forall e: (e < F \ \& \ \mathbf{atom}(e)) \rightarrow$
 $\exists y$ [journalist(y) & *kill(y)(e)])
- c. [[PO ucis câte unui journalist]] = [[ucis câte unui journalist]]([[PO]])
 = [$\lambda Q_{(st)(st)}. Q(\lambda F_s. \forall e: (e < F \ \& \ \mathbf{atom}(e)). \exists y$ [journalist(y)
 & *kill(y)(e)])] ($\lambda V_{st} \lambda E''_s. V(E'') \ \& \ \mathbf{card}(E'') > 1$)
 = [$\lambda V_{st} \lambda E''_s. V(E'') \ \& \ \mathbf{card}(E'') > 1$]
 ($\lambda F_s. \forall e: (e < F \ \& \ \mathbf{atom}(e)) \rightarrow \exists y$ [journalist(y) & *kill(y)(e)])

¹² To make sure that *câte* only attaches to DPs with numerals, one would have to assume that it selects for NumPs in the syntax, but we do not go into further details on this issue. Importantly for our analysis, the syntactic label is the same before and after *câte* attaches. For simplicity, we take it to be DP.

$$= \lambda E''_s. \forall e: (e < E'' \ \& \ \mathbf{atom}(e)) \rightarrow \exists y$$
 [journalist(y) & *kill(y)(e)] & $\mathbf{card}(E'') > 1$

- d. [[ucisul câte unui journalist]] = [[ul]]([[PO ucis câte unui journalist]])
 = [$\lambda V_{st} \iota(V)$]($\lambda E''_s. \forall e: (e < E'' \ \& \ \mathbf{atom}(e)) \rightarrow \exists y$ [journalist(y)
 & *kill(y)(e)] & $\mathbf{card}(E'') > 1$)
 = $\iota(\lambda E''_s. \forall e: (e < E'' \ \& \ \mathbf{atom}(e)) \rightarrow \exists y$ [journalist(y) & *kill(y)(e)] & $\mathbf{card}(E'') > 1$)

6 Conclusion and further questions

We have argued in favor of the existence of pluractional operators that are best treated as affecting the grammatical aspect, and not the lexical aspect of a verb. The syntactic consequence is that such POs are hosted by AspectP, and are not V level modifiers as usually assumed in the literature. This analysis also brings light into the role of POs in languages where verbs are lexically cumulative.

Our case study involved the Romanian nominal supine. The next issue one needs to clarify is which semantic pieces in this construction are responsible for the pluractional semantics. A first comparison with the verbal supine leads to the idea that the definite determiner plays an important role, since its absence in the verbal supine correlates with the lack of pluractional effects: the supine in (42) may receive both a singular and a plural event denotation.

- (42) S -a apucat **de citit** **ziarul** **acum două minute/doi ani**.
 Rf -has grabbed of read.Sup newspaper.the now two minutes/two years
 'He started reading the newspaper two minutes/two years ago.'

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NOMINALIZATIONS

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NOMINALIZATIONS: NEW INSIGHTS AND THEORETICAL IMPLICATIONS

Introduction

Nominalizations (*i.e.*, the formation of nominals from deverbal and de-adjectival bases) remain something of a puzzle for linguistic theory, in spite of the central place they have taken in linguistic investigation for about fifty years (starting with the seminal work of Lees 1960 and Chomsky 1970). One of the reasons for this is their obvious trans-categorical status, responsible for their having mixed properties of both nominals and the predicative items (either verbal or adjectival) they derive from. This mixed status still presents an interesting challenge to standard syntactic theories.

If one thinks of the prototypical function of verbs as naming actions or events and that of nouns as naming things/individuals, one fundamental property that distinguishes deverbal nominalizations from other nouns is their ability to denote events. This ability is present with verbs and generally absent with nouns, with some possible exceptions, such as *movie*, *game* if we conceive them as denoting events (*cf.* below). Note that if one were to treat events as entities, one could plausibly suppose that the function of Ns is to name entities across the board (including things, individuals, and also events).

Deverbal nominals such as *destruction*, *proposition*, *achievement* may denote events (*e.g.*, *the destruction of the towers by Godzilla*), and therefore raise the issue of the source of the event interpretation inside nominals. One option is that the event interpretation is a lexical property of these nouns. This amounts, however, to multiplying lexical entries in order to account for the existence of the eventive nominals and homophonous non-eventive ones. This leads, for instance, to distinguishing EXAMINATION1 (as in *The examination of the students by*

the professor) and EXAMINATION2 (as in *The examination is on the table*), with different lexical semantic specifications. Another option explored in recent works (Alexiadou 2001, Borer 2001, 2003, 2005) would be that the source of the event which is present in eventive deverbal nominals is indeed structural, and relates to the presence in such nominals of a true event-related (either verbal or aspectual) structure. In this case, the observed properties are mere results of linguistic computation: functional layers that typically characterize verbs are responsible for similar properties in both verbs and derived nominals.

In this introduction, instead of providing a complete overview of the field (and for such an overview, we refer the reader to Alexiadou *et al.* 2007, Alexiadou & Rathert 2010, Kornfilt & Whitman (in press), in particular), we will rather focus on some major but often neglected issues underlying the reflection on nominalizations, present several new developments and insights that have recently emerged, and show how a range of open questions may find answers in the papers collected in the present issue.

2. A correlation between the projection of arguments and an event reading

A classical problem in the study of nominalizations has always been their semantic ambiguity. Since Grimshaw's (1990) seminal study, deverbal nominals are known to exhibit an important correlation between the obligatory presence of an argument structure (associated with the base verb) and the eventive interpretation (*i.e.*, the event that carries the aspectual properties of the underlying verb). For instance, a nominal like *examination* can be eventive and realize obligatory argument structure in (1a), and it can be non-eventive and lack an argument structure in (1b); in turn, a nominal like *exam* unambiguously denotes an object and has no eventive properties (1c):

- (1) a. the examination of the patients in one day/*was on the table.
 b. the examination *in one day/was long/was on the table.
 c. the exam *in one day/was long/was on the table.

Grimshaw relates this ambiguity to a distinction between *Complex Event* nominals and *Result* nominals.¹ Given the observed correlation between Argument Structure and eventive interpretation, in recent work on nominalizations (*cf.* Borer 2005, Alexiadou 2010a-b among others) the distinction has been restated in terms of *Argument-Supporting* (or AS)-nominals and *Referential* (R)-nominals. The table in (2) provides a map of their characteristic properties.

1. But see section 3, below, for a third class of *Simple Event* nominals.

(2)	AS-Ns	R-Ns
i.	event reading	no event reading
ii.	obligatory arguments	arguments not obligatory
iii.	compatible with aspectual modifiers like <i>in three hours</i>	not compatible with aspectual modifiers
iv.	<i>constant, frequent</i> with the singular	<i>constant, frequent</i> possible only with the plural
v.	<i>by</i> -phrase is an argument	<i>by</i> -phrase is not an argument

This map of acknowledged properties of the two main classes of deverbal nominalizations provides the basis for syntactic accounts of AS-Ns, known broadly as the “[NP [VP]] approach” (see Fu, Roeper & Borer 1991/2004 for a recent overview). The projection of argument structure inside deverbal nominals is seen in this type of analysis as a property of a verbal layer included in their structure. The compatibility with aspectual modifiers is related to the existence of verbal functional layers that have received different labels throughout the literature, from “Event Phrase” in Van Hout & Roeper (1998), to different flavors of AspP as in Borer (2005), Alexiadou et al. (2010).

The presence of eventive layers in the representation in syntactic approaches to nominalizations provides a nice interface with the neo-davidsonian semantic tradition, where the dynamic character of verbal constructions is related to the presence of an event variable in the semantics of these nominals as well. The representation of events inside nominals, however, raises a number of further questions. We will address some of these questions in what follows, as they are directly relevant to the papers presented in this volume.

3. What event inside nominals?

The first question relates to the idea of ‘events’ inside nominals altogether. What does it mean for a nominal to be eventive? Is it the same thing as with a verb? Is it the same thing across nominals?

3.1. Simple event Ns

In addition to the distinction between CENs and RNs, mentioned above, Grimshaw (1990) also distinguishes a class of *Simple Event* nominals, such as *game, movie, crime, meeting*. These nominals are possibly eventive, even though they are devoid of overt arguments. They differ from *R*-nominals in referring to an event rather than an individual entity (cf. *table, book, boy*).

This view clearly implies two different senses of ‘eventivity’ and possibly the existence of a ‘strong eventivity’ and a ‘weak eventivity’.² There is a consensus that the projection of argument structure is responsible for the presence of a structural eventive layer in AS-Ns (Grimshaw’s CENs), determining the range of properties that are listed in the first column in table (2) in section 2. This strong eventivity is correlated to the presence of arguments, aspectual structure, etc. A SEN, which denotes a (simple) event but does not project argument structure is not eventive in the strong sense.

We note, in this respect, that when *by*-phrases are present, they will have an argument status in CENs, as a reflect of their obligatory argument structure, while they will only be adjuncts in SENs (sometimes even taking a possessive or ‘author’ interpretation). This is supported by differences in prepositions in languages such as Romanian, in which “*de către*” *by*-phrases are unambiguously argumental (see Cornilescu 2001 among others):

- (3) a. interpretarea acestei sonate **de către** Dinu Lipatti în 1960 a surprins pe toți
interpretation this. Gen sonata by Dinu Lipatti in1960 has surprised ‘pe’ everyone
- b. *interpretarea de către Dinu Lipatti a surprins pe toți
interpretation by Dinu Lipatti has surprised ‘pe’ everyone
- b. acest concert **de** (***către**) Dinu Lipatti a fost difuzat la radio
this concert by Dinu Lipatti has been transmitted on radio

What SENs are, however, remains unclear. From a purely semantic perspective, the split might seem unfounded: both SENs and CENs belong to the same ‘event-denoting’ class: *meeting* and *destruction* are, from this point of view, rather similar. There are, however, further arguments to distinguish them (besides the projection of obligatory argument structure already mentioned). First, CENs can inherit temporal adverbials associated with the underlying verb, while SENs cannot:

- (4) a. the destruction of the house in 3 hours
b. they destroyed the house in 3 hours
- (5) a. #the meeting for 3 hours (in the main conference room)
b. they met for 3 hours (in the main conference room)

2. The terms ‘strong’ and ‘weak’ eventivity should be understood descriptively, as meaning that the nominal expression shares most or only few (morpho-syntactic and semantic) properties of verbal events. No ontological claim is intended, and it is conceivable that the weak/strong distinction relates to different structures.

Another property that supports the distinction between the two classes, is the availability of control in purpose clauses in CENs but not in SENs (6):

- (6) a. John's playing cello in order to win a medal
b. *John's cello concert in order to win a medal

Moreover, in Romanian, SENs, on a par with R-Ns, admit adjectival *de* 'from'-time/place adjuncts – see (7a-b) vs. (8a), which are incompatible with CENs, as (8b) shows (cf. Cornilescu 2001).

- (7) a. casa de pe deal
house.the from on hill
'the house on the hill'
b. catastrofa de la Fukushima
disaster.the from at Fukushima
'Fukushima disaster'

- (8) a. discuția din acest paragraf
discussion.the from this paragraph
'the discussion in this paragraph'
b. discutarea acestor argumente în/*din acest paragraf de către autor
discuss.Inf.the these.Gen arguments in/*from this paragraph by the author

There is, then, sufficient empirical basis to motivate a distinction between CENs and SENs, and it can be concluded that despite their having a certain common eventive semantics, the properties of SENs make them merely similar to R-Ns in the table in (2), rather than AS-Ns. The realization of argument structure, correlating with all other 'strong' event properties, seems to be the relevant discriminating factor, as originally described by Grimshaw; it is therefore justified to distinguish 'strong' events from 'weak' events, the latter behaving on a par with individuals and things.

3.2. 'Agent'-nominals

Aside from CENs, names for participants in an event (e.g., *-er* nominals and their equivalent across languages) have also been claimed to be eventive, or episodic (cf. Alexiadou & Schäfer 2010, Roy & Soare (to appear), specifically). Their eventive component can be shown by their compatibility with event-modifying adjectives such as '*frequent/occasional*' (9), as well as adjectives such as '*beautiful/old*' in their event-oriented interpretation (10):

- (9) a. *frequent* flyer; the *occasional* buyer
(10) a. *beautiful* dancer (= who dances beautifully); an *old* learner of Chinese (=who has been learning Chinese for a long time)

We note, however, that compatibility with event-modifying adjectives is not unique to deverbal nominals (cf. *an old friend*, which can be interpreted as having a long lasting friendship), suggesting that the adjectival modification test does not signal the 'strong event' under discussion here specifically. This is confirmed by the impossibility of temporal modification illustrated in (11), as also pointed out by Alexiadou (2001) for Greek, examples in (12):

- (11) *the flyer in 5 hours (to Paris)
(12) a. *i damastes ton fotonion mesa se/gia enan eona
the tamers the.Gen photons within/for a century
b. *o katharistis tu ktiriu epi ena mina telika apolithike
the cleaner the.Gen building for a month finally got fired

Nevertheless, we must be able to distinguish these ('weak') eventive *-er* nominals from, for example, instruments (which are non-eventive altogether). As shown in Roy & Soare (to appear) for French, the distribution of event-oriented adjectives *big/happy/old* distinguishes instrumental nominals (incompatible with the event-oriented reading of adjectives), from dispositional nominals (which admit them), as in (13a-b):

- (13) a. Les gros consommateurs/vendeurs font tourner la machine économique.
the big consumers/sellers run the economy
b. #un gros broyeur est toujours utile
a big grinder is always useful (with the event-oriented reading, meaning
'which grinds much')

In turn, Roy & Soare (to appear) show that, even though both episodic (14a) and dispositional (14b) participant nominals involve an event, which is absent from instrumental nominals, they are different in that the former, but not the latter, are compatible with *frequent* modifiers. Episodic nominals involve a particular event, while dispositional nominals do not. The combination of the two tests (*big/happy/old* in their event-oriented reading, and *frequent*-type modifiers) therefore provides a three-fold classification of participant nominals that better describes their properties (see also below).

- (14) a. un consommateur fréquent de plusieurs drogues douces
a frequent user of many soft drugs
b. #un consommateur fréquent; #un vendeur fréquent de voitures
a frequent consumer a frequent seller of cars

The idea of an event inside *-er* nominals is therefore defensible. In German this goes even further, inasmuch as in this language *-er* nominals not only function as ‘agent’-nominals, but may also function as truly event-denoting nouns (with specific aspectual properties): *ein Piepser* ‘a beep’, *ein Klopfer* ‘a knock’. This provides an interesting ground for exploring events inside *-er* nominals, if one is to assume that there is only one *-er* morpheme (cf. Schäfer, this volume).

3.3. Non-eventive bases: state verbs

In this line of reasoning, very little attention has been paid to nominals derived from non-event predicates. Two important cases that do *not* involve a dynamic event, but plausibly an eventuality in a broader sense, nevertheless, have often been neglected: nominalizations of stative verbs (e.g., *knowledge*, *hatred*) and deadjectivals (e.g., *redness*, *pride*, *length*). These two classes of nominals have little in common, however, and we shall postpone a discussion of deadjectivals until section 6 below, focusing here on nominals derived from stative verbs.

Nominals formed from stative verbs are not eventive *per se*; although they may be argued to involve an ‘eventuality’ in a broader sense, here a *state*. Recent work on stativity has claimed that stative verbs may in fact involve a state variable. Parsons (1990), and more recently Roy (2006) and Martin (2009) have argued that states do not differ from events in having a DAVIDSONIAN argument. Maienborn (2004) and Rothmayr (2009) claim that two groups of stative verbs must be distinguished, those involving a DAVIDSONIAN state (a concrete state variable), and those involving a KIMIAN state (an abstract state variable). Without entering into the details of the argumentation, these positions open the way to a new reflection about nominals derived from statives (as in Fábregas & Marín 2011, for instance). How do nominals derived from statives behave with respect to the three classes distinguished by Grimshaw? Is there a correlation between an eventuality reading for nominals derived from statives and argument structure as found with event nominals?

One issue concerns the putative inheritance of the stative aspect, and/or the stative verb properties inside the related nominal. Recent works (cf. Barque, Fábregas & Marín (to appear), among others) have shown, for instance, that psychological verbs, may form nominalizations alternating between a (psychological) state-noun (which allows argument structure) and

an object/cause of the state (which lacks arguments). The psychological state interpretation is related to the presence of an experiencer, suggesting that fine-grained aspectual and argument structure properties of the stative verb are visible for nominalizations (and see also Fábregas, Marín and McNally (to appear)).

The question of the argument structure with stative verbs is, however, far from trivial. The external argument of a stative is normally seen as a Holder/Experiencer (and we may remain agnostic as to whether the distinction is needed at all; see Landau 2010, for instance). Most views on statives accept that their complements, when realized, are in fact part of the description of the state (i.e., ‘rheme’ objects for Ramchand 2008; ‘fusionned’ predicates for Krifka et al. 2005). This difficult question transfers to the nominalizations as well, and very few reliable tests can tell us whether (15) has an argument structure (as opposed to a genitive of possession):

- (15) John’s knowledge of music

In most cases a direct transfer of the verb’s arguments into the nominal construct is simply impossible:

- (16) a. Mon fils croit au Père Noël.
my son believes in Santa Claus
b. *la croyance de mon fils au Père Noël
the belief of my son in Santa Claus
- (17) a. Sarah connaît le résultat de l’opération.
sarah knows the result of the operation
b. *la connaissance de Sarah du résultat de l’opération
the knowledge of Sarah of the result of the operation

Example (17) demonstrates the fact that a double genitive is generally banned, a generalization that holds cross-linguistically.

The correct typology of stative nominals needs also to be investigated. In that perspective, an interesting path would be to consider forms that alternate between an active and a stative reading: *John decorates the house/The flowers decorate the table*, as opposed to verbs that do not allow such alternation (cf. Alexiadou, this volume). As Fradin (2010) pointed out, in the vast majority of cases, with such alternating verbs, the nominal can only pick the active base (*John’s decoration of the house/*The flowers’ decoration of the house*). On the other hand, as discussed by Fradin (this volume), we also find that nominals interpreted as stative (*emprisonnement*, lit. im-prison-ment

'detaining') do not necessarily derive from a stative verb (*emprisonner*, lit. imprison 'put in jail'). The interpretational/structural relationship between stativity and dynamicity, and/or agentivity, needs to be better understood if we are to understand the inheritance properties of derived nominals generally. The inheritance of stative aspect in derived nominals remains an open issue; as does the role of (overt *vs.* zero derived) morphology in the building of stative aspect inside these nominals.

4. Outer aspect and plurality

The idea of aspectual distinctions inside nominals goes again back to Grimshaw (1990), according to which the difference in properties between ASNs (her CENs), on the one hand, and R-Ns (her SENs and Result Nominals), on the other, – such as the projection of obligatory argument structure, the availability of adverbial aspectual modifiers, and control into purpose clauses, discussed above – is connected to the presence of an internal (complex) aspectual structure (leading to 'strong' eventivity) in these nominals (*cf.* for example, (4)/(5) above). If we take this claim seriously, it means that at some level deverbal AS-Ns must not only encode the inner aspect of the verb base (*i.e.*, lexical aspect/Aktionsart), but also, and maybe more importantly, outer aspect as well (*i.e.*, grammatical aspect, such as imperfectivity, for instance).

Recent studies of the fine-grained distinctions among AS-Ns point to the possibility that this is indeed the case. Cornilescu (2001) has argued, for instance, that the Romanian infinitive and supine nominalizations encode different aspectual values (telicity *vs.* atelicity, respectively). This difference is plausibly situated at the level of outer aspect (*i.e.*, imperfectivity; see Iordăchioaia & Soare 2008, 2009). As another illustration, Ferret *et al.* (2010) have argued that French event nominals in *-age vs. -ée* encode imperfectivity (in (a)) and perfectivity (in (b)), respectively:

- (18) a. (??après) **l'arrivage** de la marchandise (est en cours).
 after the. arriving of the merchandise is in process
 b. (après) **l'arrivée** de la marchandise (*est en cours)
 after the. arrival of the merchandise is in process

Whether nominalizing morphemes themselves may contribute an (outer) aspectual value, or such value is provided by the internal make-up of the nominalizations is subject to some debate. In the light of minimal pairs such as *arrivage/arrivée* (from *arriver* 'arrive') (18), *perçage/percée* (from *percer* 'drill'), where the only

difference seems to be the actual suffix involved, the role of morphology appears rather straightforward. **Knittel (this volume)** presents arguments, however, in support of the opposite view, according to which the aspectual properties of derived nominals are related to the inflectional system inside the nominal, and more particularly number, addressing the relationship between semantic/morphological plurality.

The idea that aspect inside event-nominals is correlated to number, and more specifically, plurality, has been explored in various works in recent years. One generalization put forward by Grimshaw (1990) for CENs (our AS-Ns) states that they are unable to pluralize (19a-b) (which is often seen as a consequence of their being [-count]), and is confirmed by the general ban on discrete determiners and quantifiers (19c):

- (19) a. The shooting of rabbits is illegal. (AS-Ns)
 b. *The shootings of rabbits are illegal.
 c. *A/*One/*That shooting of rabbits is illegal.

Recent works on Romance languages have challenged this generalization; see Roodenburg (2006) for French, Iordăchioaia & Soare (2008, 2009) for Romanian and Alexiadou *et al.* (2010) for a cross-linguistic perspective. This forces a redefinition of the issue, the problem arising from these studies being that AS-Ns display a non-uniform behavior with respect to plurality; what precise property determines the blocking of plural in some – but not all – event nominals across languages? How does this relate to the mass/count distinction among nominals across the board? (see **Huyghe, this volume**).

From a structural perspective, one possibility that has been seriously explored is to relate it to the correlation between inner aspect (telicity) and number (as put forward by Mourelatos 1978, Borer 2005; *cf.* also **Knittel, this volume**); only telic deverbal nominals are predicted to pluralize. Another possibility has been to relate this property to the competition between the projection of (outer) Aspect and Number in these nominals (*cf.* Iordăchioaia & Soare 2008, 2009 and Alexiadou *et al.* 2010). What seems to be shared by these views is the general agreement on the fact that aspect (either the Aktionsart contributed by the verbal base or built-in aspect inside nominals) determines the count properties of derived nominals, and this again shows that typically verbal information is accessible inside derived nominals.

5. Beyond the verbal phrase and inflectional layers

Additional properties of nominalizations seem to go beyond the (verbal) phrasal and inflectional layers (*i.e.*, Tense, Aspect or Number), grounding another

parallel, namely between nominalizations and clauses. We know, that clausal nominalizations do exist across languages (as for instance, in Turkish and Greek (cf. ex (20) from Alexidou *et. al* 2007), Malagassy (Ntelitheos 2006), but they seem to be absent in others (Romance languages, Germanic languages, etc.), where nominals involving a complementizer (CP) and/or Tense (TP) layer seem to be lacking:

- (20) To oti irthe me stenaxori
 the that he-came me upsets
 'The fact that he came upsets me'

However, looking at names of event participants, Roy & Soare (to appear) have argued that they may involve an inner genericity, necessarily contributed by a full clause upon which the nominalization is built. Genericity can be built at the clausal level; similarly to characterizing sentences such as *Lions have bushy tails* (Carlson & Pelletier 1995). It may also be associated with differences in the specificity of the object (the episodic reading being associated with specific arguments, and the generic reading with non-specific ones): *Ben likes this book/Ben likes (good) books*. For Roy & Soare (to appear), the role of the internal argument in bringing about an episodic vs. generic reading for nominalizations is therefore identical to what is found at the clausal level. They point out the neat mapping between the specificity of the internal arguments, the episodicity of the underlying event and the episodicity of the derived nominal, such that [-specific] arguments give rise to a generic interpretation inside the derived nominals (also sometimes referred to as a 'dispositional' reading, cf. Alexiadou and Schäfer 2010), as is commonly the case at the clausal level.

- (21) a. le vendeur de voitures > dispositional/generic 'agent' N
 'the car-seller'
 i. /vendre des voitures/ > generic event
 'sell the cars'
 ii. des voitures > non-specific DP object
 'PART. cars'
- b. le vendeur des voitures > episodic 'agent' N
 'the seller of the cars'
 i. vendre les voitures/ > episodic event
 'sell the cars'
 ii. les voitures > specific DP object
 'the cars'

- c. le vendeur de cette voiture > episodic 'agent' N
 'the seller of this car'
 i. vendre cette voiture/ > episodic event
 'sell the car'
 ii. cette voiture > specific DP object
 'this cars'

The parallelism between the semantic effects at the clausal level and the ones found with nominalizations suggests strongly that *-er* nominals are derived from full clauses, thereby possibly expressing genericity vs. episodicity. This type of nominalization illustrates new dimensions of the correlation between eventive (sentential) layers and argument structure in deverbal nominals.

6. Deadjectival Nominalizations

The other large group of non-eventive predicates that has often been neglected is that of deadjectival nominalizations. Some issues here are similar to the ones introduced by nominalizations based on stative verbs (section 3.3.), while others are more specific: (i) are all occurrences of deadjectival nominals the same? And what is the right typology of deadjectival nominalizations? (ii) what is their relationship to event nominals across the board?, and (iii) do deadjectival nominals have arguments?

The issue of typology breaks down into two different, though related, questions. First, one might wonder if deadjectival nominals form a unified class, with unified interpretational and morpho-syntactic properties. We are not particularly concerned here with whether deadjectival nominals all express a unique type of object (e.g., they may express qualities and properties, as in Van de Velde 1995 and Flaux & Van de Velde 2000), but rather whether they are the same item in all of their occurrences. Is *kindness* always the same nominal, or are further distinctions needed, reminiscent at some level of Grimshaw's distinctions? Roy (2010) has shown that deadjectival nominals with and without the realization of the argument structure of the base adjective behave differently, in particular in their compatibility with temporal modifiers. This finding suggests that, as for 'complex-event' nominals, deadjectival nominals contain an underlying eventuality in (22) but not in (23). The contrast between the two types is confirmed by the obligatory presence of the article in (22) and its absence in (23):

- (22) The kindness of John towards his mother was greatly appreciated.
 (23) Kindness is a quality that is valued by all persons.

If a distinction between quality-nominals and property-nominals is needed, it is super-imposed on the distinction in (22) and (23). The contrast in (22) and (23) shows also that early views that exclude deadjectivals from the set of nominalizations (and therefore claim the absence of a derivational relationship between *kind* and *kindness*) are problematic, as further confirmed by the well-described fact that only adjectives that have a predicative use can form the base of a nominalization (see Fradin & Kerleroux 2003, for the French suffix *-ité* in particular, and Roy 2010 for a more general discussion). If there were no derivational relationship between the base adjective and the noun, such a restriction should not exist, and there should not be a ban on any class of adjectives in particular.

The second aspect of the issue is how best to describe the properties of the expressions in (22) and (23), and the ontology of these expressions, *i.e.*, whether these properties are derivable from other principles or primitives. Moltmann (2004) and Villalba (2009) argue that deadjectival nominals such as those in (22) are ‘tropes’ (which for Villalba can come in different flavours, *i.e.*, property-tropes and quality-tropes, thereby reintroducing the earlier distinction by van de Velde). Taking the opposite stand, deadjectival nominals may express properties. Taking seriously the idea that properties are predicates, and that this is reflected in the structures, it can be argued that deadjectival nominals are derived from properties, and that there may be no linguistic relevance for a further enrichment of the ontology (*cf.* Arsenijević, **this volume**).

Another issue that bears also on the question of typology, in the domain of deadjectival nominals in particular, comes from the conjunction of the fact that the nominal expression in (23) can generally be combined with a genitive (*e.g.*, *John’s kindness*) and the across-the-board absence of reliable tests for distinguishing arguments (introduced by a genitive) and mere possessives. The status of nominal complements with such nominals must be further investigated, namely whether they are N modifiers or real arguments. We would like to suggest that French may offer such a test; or at least, offers a way to think about this issue. Genitives of possession are expressed by *de*-phrases in French, but colloquial French tends to prefer the dative to express the possessor:

- | | | |
|------|---|---|
| (24) | la voiture de Jean ;
the car of John
‘John’s car’ | le problème de Jean
the problem of John
‘John’s problem’
(can potentially express all sorts of relations. It may mean: the problem that belongs to John, the problem that John created, or the problem that John represents, etc.) |
|------|---|---|

- | | | |
|------|--|--|
| (25) | la voiture à Jean ;
the car at John
‘John’s car’ | le problème à Jean
the problem at John
‘John’s problem’
(only means possession) |
|------|--|--|

When a deadjectival nominal is accompanied by a *de*-phrase (*e.g.*, *la gentillesse de Paul*; ‘Paul’s kindness’ (26)) it could either be a possessive genitive or a holder argument inherited from the adjective. If a possessive, it can be replaced by the dative:

- | | | |
|------|---|--|
| (26) | la gentillesse de Paul
the kindness of Paul
‘Paul’s kindness’ | la gentillesse à Paul
the kindness at Paul
‘Paul’s kindness’ |
|------|---|--|

However, when the argument structure is fully realized, the substitution of *de* with *à* becomes impossible, which can only be shown with transitive adjectives. Pending further investigation, the realization of a full argument structure seems, in French, to block the dative replacement:³

- | | | |
|------|--|--|
| (27) | la gentillesse de Paul envers sa mère ;
the kindness of Paul towards his mother | #la gentillesse à Paul envers sa mère
the kindness of Paul towards his mother |
|------|--|--|

This point illustrates the difficulty to find appropriate tests for argumenthood, with deadjectival Ns and Ns derived from stative predicates more generally.

7. Conclusion

Recent and ongoing research on nominalizations point in the direction of refined verbal/aspectual distinctions inside derived nominals, once the right classes of nominals are considered, teasing apart the cases where inheritance of the properties of the base are expected from cases where it is not. This introduction has presented current issues in the domain of nominalizations to which the papers gathered in this volume offer a ground for discussion. Among these issues are the notion of events inside nominals, the typologies of derived nominals, the correlation between morpho-syntactic and semantic properties in the domain of number, argument realization and aspectual distinctions, which we hope open the way to a better understanding of what NOMINALIZATIONS are.

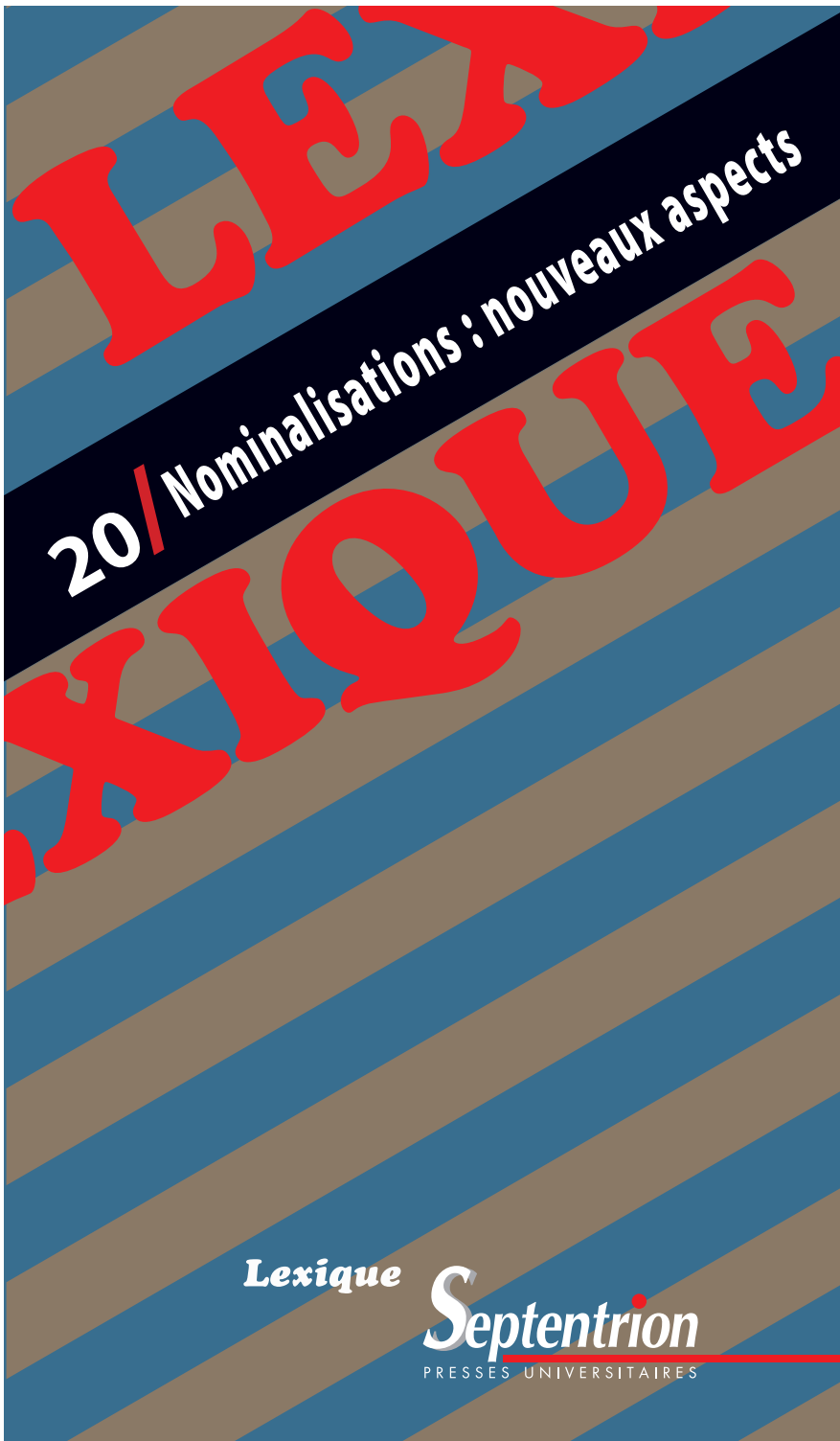
3. Two notable issues would have to be considered before offering a firm test: (i) the relatively low number of testable adjectives (*i.e.*, only transitive ones), (ii) the possible language clash between the use of nominalizations with the dative-possessor (*i.e.*, found in different language registers plausibly).

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L'enquêteur, le surveillant et le détenu : les noms déverbaux de participants aux événements, lectures événementielles et structure argumentale *

Isabelle Roy, Elena Soare

1. INTRODUCTION

Nous nous intéressons dans cet article aux différentes lectures auxquelles donnent lieu les noms déverbaux de participants aux événements (Agents, Patients, Instruments, etc.). Notre recherche adopte une approche syntaxique de la formation des mots, et veut vérifier l'hypothèse d'une corrélation entre la lecture événementielle des noms déverbaux et la réalisation obligatoire de la structure argumentale de la base verbale à laquelle ils sont associés. Depuis Grimshaw (1990), il est communément accepté que les noms déverbaux comme *construction* peuvent être interprétés ou bien comme des noms d'événement complexe (*La construction de la cathédrale par les ouvriers a duré un siècle*), ou bien comme des noms de "résultat", aussi appelés "référentiels d'objet" (*Cette construction date de 1813*). Dans le premier cas, le nom *construction* dénote un événement et doit nécessairement réaliser la structure argumentale du verbe *construire* sur lequel il est dérivé (ce qui donne lieu à l'agrammaticalité de **La construction a duré un siècle*, sauf lorsque les arguments implicites, nécessairement présents, peuvent être identifiés par le contexte).¹ Dans le second cas, le nom dénote un objet (matériel), et n'a de relation à un événement que dans le sens où

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1. Il est communément admis que le parallélisme structurel entre verbe (*Les ouvriers construisent une cathédrale*) et nom (*la construction de la cathédrale par les ouvriers*) constitue une indication du statut d'argument pour les syntagmes prépositionnels compléments du nom. Nous acceptons cette vue ici.

il peut en exprimer le résultat (par exemple, *une construction, une peinture, un rapport*). Dans ce cas, aucun argument n'est réalisé. Du point de vue de la structure interne de ces noms, des travaux récents ont suggéré que, alors que les noms d'événements complexes reposent sur une structure qui inclut les arguments du verbe, les noms référentiels d'objet sont construits sur une structure plus "simple", incluant essentiellement une racine verbale dépourvue de ses arguments (cf. Borer (1999), Alexiadou (2001) pour la distinction *argument-structure nominals / referential nominals*).

Dans ce contexte, les noms de participants aux événements posent une question intéressante. Puisque de tels noms dénotent des participants aux événements, ils ne peuvent, par hypothèse, qu'être construits sur une base verbale "complète", c'est-à-dire qui inclut ses arguments, étant eux-mêmes des nominalisations de tels arguments. Partant de l'hypothèse qu'il existe une corrélation entre réalisation de la structure argumentale et lecture événementielle dans les nominalisations, il est attendu que ceux-ci donnent nécessairement lieu à une lecture événementielle (impliquant une participation à un événement particulier). Ceci n'est cependant pas toujours le cas. Par exemple, le nom *constructeur* (nom d'Agent) peut être événementiel dans *Le constructeur de cette maison ne veut pas raboter les fondations* (où *constructeur* est interprété en relation à un événement sous-jacent particulier de *construire*), mais pas dans *La municipalité a auditionné un nouveau constructeur*. Ici le nom renvoie à une "disposition" et n'implique pas nécessairement un tel événement. La lecture dispositionnelle est assez inattendue et doit être expliquée, dans un effort pour fournir une théorie unifiée de la relation entre sens événementiel et structure argumentale dans les nominalisations.

Nous montrerons que les noms de participants appartiennent à trois classes distinctes, une tripartition fondée sur (i) la présence vs absence d'une structure événementielle dans ces noms, et (ii) le caractère épisodique vs générique de l'événement en question. Nous montrerons, en particulier, que la lecture dispositionnelle est une lecture événementielle, mais que celle-ci comporte une force générique, construite dans l'éventualité sous-jacente. Ces distinctions sont corrélées avec des propriétés de structure argumentale cohérentes au sein de chaque classe. Il apparaîtra que la réalisation des arguments dans ces trois classes est prédictible si nous acceptons que le type d'interprétation événementielle (épisodique ou générique) dépend du type de construction verbale sous-jacente. En d'autres termes, nous apportons un argument en faveur de la vision défendue dans des travaux récents concernant l'héritage des propriétés aspectuelles dans les nominalisations (cf., parmi d'autres, Alexiadou (2001), Borer (2003), Haas, Huyghe & Marin (2008), Ferret, Soare & Villoing (2009) et Ferret & Villoing (2012 (dans ce volume)), Alexiadou, Iordăchioaia & Soare (2010)). Nous soutenons ici une position similaire en ce qui concerne la généricité, qui, nous le montrerons, est construite dans les nominalisations de façon syntaxique.

Notre discussion s'appuie sur l'étude de l'opposition entre les noms en *-eur* et les noms en *-ant*, qui nominalisent en apparence tous deux des arguments externes, et les prédictions de notre analyse pour les nominalisations d'argument interne en *-é/-i/-u*.² Deux remarques préliminaires sont nécessaires sur les données prises en compte dans cette étude.

Tout d'abord, notre propos ne concerne que les noms de participants dans leurs usages strictement argumentaux, c'est-à-dire lorsqu'ils réalisent effectivement un argument d'une éventualité (par exemple, *La municipalité a auditionné un nouveau constructeur*, où *constructeur* renvoie au Patient d'*auditionner*), à l'exclusion des usages prédicatifs (par exemple, *Pierre est un constructeur*, *Pierre est constructeur*), qui semblent présenter leur propre relation aux événements sous-jacents, indépendamment de leur dérivation lexicale ou non (cf. *Pierre est capitaine*, *Paul est avocat*) ; cf. Roy (2006), Martin (2008), parmi d'autres.

D'autre part, bon nombre de formes en *-eur*, *-ant* et *-é/-i/-u* sont ambiguës entre un nom et une forme adjectivale qui peut apparaître comme modifieur de nom, avec des marques de degré, par exemple : *une militante / une proposition très militante*, *un menteur / le poker menteur*, *une mariée / les femmes non mariées*, etc. Lorsque de telles formes apparaissent seules précédées d'un article, comme en (1), nous pouvons avoir affaire ou bien au nom, ou bien à un adjectif modifiant une tête nominale vide (*pro*) (voir aussi Corblin (1990), Sleeman (1996), Marandin (1997), parmi d'autres). Nous nous intéressons ici seulement aux noms véritables (2), à l'exclusion donc de ce que Borer & Roy (2005) appellent des *constructions Adj-pro* (dans lesquelles un adjectif modifie un (*pro*)nom nul), et qui ne peuvent pas, contrairement aux premiers, apparaître dans les contextes faibles, tels que les phrases existentielles, par exemple (3).

- (1) *une militante, l(es) enseignant(s), le collant, un soignant*
un menteur, le destructeur, les amateurs
une mariée, un blessé, les pendus, etc.
- (2) a) *Une militante / Quelques passants / Des coopérants étai(en)t là* (N véritables)
 b) *Des navigateurs / Des inspecteurs étaient là*
 c) *Des mariées / Des blessés étaient là*
- (3) a) **Trois acceptants / *Des entrants étaient là* (Adj-pro)
 b) **Un menteur / *Quelques dominateurs / *Des flatteurs étai(en)t là*
 c) **Trois insoumis étaient là*

2. L'opposition entre argument externe et argument interne renvoie syntaxiquement aux sites de réalisation des arguments à l'extérieur ou à l'intérieur du groupe verbal. Les compléments sont des arguments internes. Les sujets sont généralement des arguments externes, sauf pour les verbes inaccusatifs, qui se distinguent des autres intransitifs par la présence d'un sujet provenant d'un argument interne (*Les feuilles tombent / Il tombe des feuilles vs Les enfants rient / *Il rit des enfants*). Voir Williams (1980), Chomsky (1981), Kratzer (1996).

Nous commençons par l'étude des noms en *-eur* dans la section 2. ; suivront celles des noms en *-ant* en section 3. et des noms en *-é/-i/-u* en section 4.

2. NOMINALISATIONS DE L'ARGUMENT EXTERNE : LES NOMS EN *-EUR*

2.1. Généralisation de l'argument externe

Les noms en *-eur* (productifs en français) sont traditionnellement décrits comme dénotant des noms d'agent – ou de proto-agent dans les termes de Dowty (1991) – (cf. Anscombe (2001, 2003), Fradin & Kerleroux (2003)). Cette caractérisation est correcte, mais largement incomplète puisqu'elle ne rend pas compte, d'une part, de la diversité des thêta-rôles exprimés par *-eur*, et d'autre part de l'ambiguïté entre les noms événementiels, qui ont un agent à proprement parler, et d'autres noms, comme les noms d'instrument ou d'objet en général, qui n'en ont pas (voir (4)). Plus justement, nous devrions dire que les noms en *-eur* dénotent des participants à l'événement qui correspondent à l'argument externe en général (voir aussi Fabb (1984), Keyser & Roeper (1984), Sproat (1985), Rappaport-Hovav & Levin (1992), qui ont établi cette généralisation pour les noms en *-er* de l'anglais en particulier). Les thêta-rôles exprimés par les noms en *-eur* sont variés. Au-delà du rôle Agent, on trouve aussi des rôles Cause, Siège, Expérient, Instrument, Source, tous correspondant systématiquement à l'argument externe de la base verbale sous-jacente dont ils sont dérivés.

- (4) a) *un mangeur de pommes* (Agent)
 b) *un distributeur d'argent* (Cause/Source)
Obama, un vendeur de journaux
 c) *un détenteur de ressources pétrolières* (Siège)
 d) *un admirateur de Napoléon* (Expérient)
 e) *un compteur de visiteurs gratuit pour votre site* (Instrument)

Par conséquent, et comme nous nous y attendons, les noms en *-eur* ne sont normalement pas dérivés sur des bases verbales inaccusatives, lesquelles sont dépourvues, par définition, d'un rôle thématique associé à l'argument externe. Dans les exemples (5), la base verbale n'assigne qu'un seul thêta-rôle, associé à l'argument interne, qui ne peut pas donner lieu à une nominalisation en *-eur*³ :

- (5) **un alleur (aller), *un veneur (venir), *un arriveur (arriver)*

3. Nous reviendrons sur les nominalisations des arguments internes en section 4.

Les exemples (6) ci-dessous semblent contredire une telle généralisation. Notons cependant qu'ici le nom *tombeur* est dérivé, non pas de l'inaccusatif *tomber*, mais bien de *faire tomber*, un causatif, qui par conséquent a un argument externe (cf. Fradin & Kerleroux (2003)) :

- (6) a) *un tombeur de femmes*
b) *le tombeur d'Agassi*

D'autre part, la notion de "nom d'agent" est aussi partiellement incorrecte face à la diversité des classes sémantiques des noms en *-eur*. Dans la littérature, deux grandes classes de noms en *-eur* sont communément distinguées sur la base de leur caractère [animé] et [inanimé]. Le terme de "noms d'agent" à proprement parler ne s'applique qu'au premier cas (par exemple, *marcheur*, *plongeur*, *videur*) et non pas au second, qui correspond à des noms d'instrument (par exemple, *aspirateur*, *broyeur*, *écouteur*).⁴

À cela s'ajoute le fait qu'en français, seule une sous-classe des noms en *-eur* animés vérifient les tests classiques permettant d'identifier l'agentivité, à savoir admettent la modification adjectivale avec *délibéré*, *volontaire*, *intentionnel*, *obstiné*, adjectifs dont l'interprétation est orientée vers l'agent (7) :

- (7) a) *Ce défenseur délibéré / volontaire des opprimés n'abandonne pas sa cause*
b) *L'accusateur obstiné de cette jeune femme a tout fait pour l'envoyer en prison*

Comme l'ont fait remarquer Rappaport Hovav & Levin (1992), la modification par de tels adjectifs n'est possible que lorsque les arguments du nom (hérités de la base verbale à laquelle celui-ci est associé) sont réalisés. Ceci suggère que les formes simples du nom (cf. (8)) contrastent avec les formes à structure argumentale (cf. (7) ci-dessus), et ne sont pas agentives :

- (8) a) **Un défenseur délibéré / volontaire*⁵ *n'abandonne jamais sa cause*
b) **L'accusateur obstiné ferait n'importe quoi pour vous envoyer en prison*

De toute évidence, aucun des noms inanimés ne passe les tests pour l'agentivité, que leurs arguments soient réalisés ou non, comme on doit s'y attendre puisque les noms d'instrument sont normalement dénués d'agentivité (9) :

4. Voir aussi Rappaport Hovav & Levin (1992) dans le contexte des noms en *-er* de l'anglais.

5. Il existe une lecture non orientée vers l'agent de *obstiné* (= dont le caractère est obstiné) et *volontaire* (= dont le caractère est volontaire) qui est possible en (8) ; l'astérisque ne renvoie ici qu'à l'agrammaticalité de la lecture agentive. De même en (10).

- (9) a) *un écouteur (*intentionnel) (de musique)*
b) *un broyeur (*volontaire) (de vieux papiers)*
c) *un aspirateur (*délibéré) (de poussière)*

De même, la modification par des adjectifs orientés vers l'agent n'est pas possible avec les noms de Siège et d'Expérient, comme attendu encore, puisque ceux-ci ne sont pas agentifs (10) :

- (10) a) *un connaisseur (*délibéré) (des arts)*
b) *un détenteur (*intentionnel) (du permis de conduire)*
c) *un admirateur (*volontaire) (de Voltaire)*

Nous concluons que les noms en *-eur* sont des noms d'argument externe, quel que soit le thème-rôle qu'ils expriment (Agent, ou autres), quelle que soit la valeur agentive à proprement parler du nom (suivant qu'il y ait présence ou absence de structure argumentale), et indépendamment de son caractère animé ou inanimé. Les véritables noms d'agent ne concernent qu'un sous-groupe restreint des formes en *-eur*, lorsqu'ils sont animés et réalisent leur structure argumentale.

2.2. Noms en *-eur* et caractère événementiel

Nous avons remarqué précédemment que la présence vs absence de la structure argumentale dans les nominalisations en *-eur* peut mener à des différences d'interprétation notables, la lecture véritablement agentive des noms qui expriment un rôle externe Agent n'apparaissant qu'en présence de la structure argumentale. Ceci nous renvoie à une corrélation établie dans la littérature sur les noms en *-er* de l'anglais (cf. Rappaport Hovav & Levin (1992)), à savoir qu'un nom en *-er* réalise sa structure argumentale si et seulement si il a une interprétation événementielle, que nous noterons [+event]. Ceci est visible par exemple en (11) ci-dessous (exemples de Rappaport Hovav & Levin (1992)). Les noms de la première et de la deuxième colonnes en (11) diffèrent dans la réalisation de leurs arguments. Dans la première colonne, les arguments (introduits dans un syntagme prépositionnel en *of*) sont réalisés, alors que, dans la deuxième colonne, le nom tête est dénué d'arguments (les exemples (a') et (b') correspondant à des cas d'incorporation lexicale). Cette différence s'associe à des différences interprétationnelles entre les deux groupes de noms. Seuls les noms qui réalisent obligatoirement leurs arguments (colonne de gauche) ont une lecture d'événement particulier sous-jacent, à la différence de ceux de la colonne de droite. Concrètement, en (11a), *the mower of the lawn* implique qu'il y a eu un événement de tonte de gazon dont la personne désignée par *mower* est le sujet, alors que, pour (11a'), il n'y a aucune implication de ce genre, et nous avons affaire à un instrument, comme nous y reviendrons en section 2.3. Le contraste se répète pour les exemples (b), où le terme de droite renvoie à une disposition ("qui peut dresser des chiens") (b') :

- (11) a) *the mower of the lawn*
le tondeur de le gazon
"celui qui tond le gazon"
b) *the trainer of the dogs*
le dresseur de les chiens
"celui qui dresse les chiens"
- a') *the lawn-mower*
le gazon tondeur
"la tondeuse à gazon"
b') *the dog-trainer*
le chien dresseur
"le dresseur de chien"

Un argument syntaxique en faveur de la présence d'un événement dans les exemples de la colonne de gauche, par opposition à ceux de la colonne de droite, provient de la distribution des adjectifs comme *frequent* "fréquent", *constant* "constant", qui ne peuvent être interprétés que comme modifiant un événement sous-jacent. Lorsque la structure argumentale est présente (colonne de gauche), le nom peut être modifié par de tels adjectifs (12). La lecture événementielle n'étant disponible que lorsque la structure argumentale du verbe servant de base est réalisée, la présence de l'adjectif est corrélée nécessairement avec celle des arguments.

- (12) a) *the frequent mower *(of the lawn)*⁶
le fréquent tondeur de le gazon
"celui qui tond fréquemment le gazon"
b) *the frequent trainer *(of the dogs)*
le fréquent dresseur de les chiens
"le fréquent dresseur des chiens"
c) *the constant defender *(of the government's policies)*
le constant défenseur de les gouvernement politiques
"le défenseur constant des politiques du gouvernement"

La généralisation vaut aussi pour le français, comme le montre la similarité des exemples en (13) avec ceux de (12) ci-dessus. Ici aussi la modification avec des adjectifs dont l'interprétation porte sur l'événement est corrélée avec la réalisation des arguments de la base verbale dans le nom. Les noms dénués de structure argumentale ne supposent pas un événement *particulier* sous-jacent, cf. (14).

- (13) a) *un défenseur constant *(des droits de l'homme)*
b) *un consommateur fréquent *(de plusieurs drogues douces)*
- (14) a) *un défenseur *(constant)*
b) *un consommateur *(fréquent)*

Cependant les noms en *-eur* [animés], qu'ils soient pourvus ou non de structure argumentale, vérifient également d'autres tests pour le caractère événementiel, qui semblent indiquer que, même en l'absence de structure argumentale explicite, un événement est nécessairement présent. En particulier, nous notons que les noms en *-eur* animés admettent systématiquement l'interprétation événementielle des adjectifs comme *grand*, *vieux*, *heureux*, *gros*, *petit*, *splendide* (voir aussi Anscombe (2001), pour qui la modification par les ad-

6. Par convention, l'astérisque à l'extérieur de la parenthèse indique le caractère obligatoire du constituant entre parenthèses.

jectifs de cette classe renvoie à un groupe verbal sous-jacent). Ces adjectifs ont en commun de pouvoir être interprétés ou bien comme modifiant le nom tête (dans la lecture intersective), ou bien comme modificateurs d'un événement (dans la lecture non-intersective) – lectures parfois associées à des positions post-/pré-nominales différentes. Dans le cas de (15a), par exemple, l'ambiguïté de l'adjectif *grand* entraîne une ambiguïté du syntagme *grand voyageur*, qui veut dire, dans la première interprétation, "quelqu'un qui voyage et qui est grand", et "quelqu'un qui voyage beaucoup" dans la seconde, où l'adjectif prend une valeur adverbiale. De même pour (b) :

- (15) a) *un grand voyageur*
(i) lecture intersective : "qui voyage et qui est grand"
(ii) lecture adverbiale : "qui voyage beaucoup"
b) *un vieil enquêteur*
(i) lecture intersective : "qui enquête et qui est âgé"
(ii) lecture adverbiale : "un enquêteur expérimenté"

La lecture adverbiale de ces adjectifs n'est possible que si le nom qui les accompagne est événementiel (voir Larson (1998), par exemple). Nous devons conclure que les noms animés en *-eur* dépourvus de structure argumentale ont néanmoins un événement sous-jacent, d'une nature différente de celle des noms en *-eur* à structure argumentale, possiblement.

Ceci distingue les noms événementiels en général des noms référentiels d'objet (qui incluent les noms de résultat, cf. Grimshaw (1990) : *construction*, *emballage*, *pincement*), qui n'acceptent jamais ce genre de modification. La lecture adverbiale de *gros*, *vieux*, *heureux* est impossible avec les noms référentiels en raison de l'absence, ici, d'un événement sous-jacent (16). La seule interprétation possible est alors intersective, comme donnée sous (i) en (16a-b). Lorsque la lecture intersective n'est pas disponible (par incompatibilité sémantique ou pragmatique), l'adjectif est simplement exclu (cf. 16c) :

- (16) a) *un gros ouvrage*
(i) "qui est un ouvrage et qui est gros"
(ii) [#]un ouvrage intense (dans lequel on œuvre beaucoup)
b) *un vieil oreiller*
(i) "qui est un oreiller et qui est ancien"
(ii) [#]un oreiller expérimenté / de longue date"
c) [#]*un heureux tableau*

Nous concluons que trois classes de noms déverbaux en *-eur* doivent être distinguées selon qu'ils acceptent ou non la modification en *fréquent* / *constant* / *occasionnel* et en *heureux* / *gros* / *grand* / *vieux*. La classe 1 est celle des noms qui peuvent prendre à la fois la modification avec *fréquent* et avec *heureux* / *gros* / *grand* ; la classe 2 est constituée des noms qui ne peuvent prendre que *heu-*

reux / gros / grand et pas fréquent ; la classe 3 n'est compatible ni avec l'un ni avec l'autre. ⁷

(17) Classe 1

- (i) a) *Un consommateur fréquent de plusieurs drogues douces vient d'être arrêté*
- b) *Ce constant défenseur de Besson, Hortefeux et Sarkozy a publié des propos vraiment malsains*
- c) *Un vendeur occasionnel de hot-dogs a été assassiné à Mexico*
- (ii) a') *Un vieux consommateur de plusieurs drogues douces vient d'être arrêté*
- b') *Ce grand défenseur de Besson, Hortefeux et Sarkozy a publié des propos vraiment malsains*
- c') *Un petit vendeur de hot-dogs a été assassiné à Mexico*

(18) Classe 2

- (i) a) **Un consommateur fréquent vient d'être arrêté*
- b) **Un vendeur occasionnel a été assassiné*
- c) **Un constant défenseur a publié des propos vraiment malsains*
- (ii) a') *Les gros consommateurs font tourner la machine économique*
- b') *Les vieux vendeurs ont appris les ficelles du métier*
- c') *Un grand défenseur a fait la force de cette bonne équipe*

(19) Classe 3

- (i) a) **un broyeur fréquent*
- b) **un mixeur occasionnel*
- c) **un transmetteur constant*
- (ii) a') **un gros broyeur*
- b') **un vieux mixeur*
- c') **un heureux transmetteur*

Comme l'ont montré Grimshaw (1990) et Rappaport Hovav & Levin (1992), pour les noms de procès et les noms en *-er* de l'anglais, respectivement, la présence ou l'absence de structure argumentale dans les noms de participants donne lieu à des acceptations différentes avec les adjectifs comme *fréquent*. Cependant, nous montrons ici que les noms des classes 1 et 2 impliquent tous un événement, à un certain niveau, puisqu'ils sont compatibles avec la lecture adverbiale de *heureux / gros / grand / vieux*.

Les noms de la classe 3, pour leur part, sont de véritables noms d'objet référentiels. Ils n'impliquent aucune sorte d'événement sous-jacent. Pour Rappaport Hovav & Levin (1992), une conséquence de l'absence d'agentivité dans les noms d'instrument est qu'ils n'apparaissent pas dans les lectures événementielles. Par conséquent, l'alternance [+/-event] n'est visible que pour les noms animés, et jamais pour les noms d'instrument. Dans nos termes, nous avons affaire ici à une classe de noms référentiels dénués d'événement (et apparentés aux noms de résultats) qui ne vérifient ni les tests

7. Des idiosyncrasies sont attendues (comme l'a aussi fait remarquer un relecteur anonyme), mais elles ne remettent cependant pas en question la pertinence du test fondée sur l'existence possible (mais pas nécessairement universelle) des contrastes.

pour l'agentivité, ni aucun des tests pour l'événement. Nous concluons cependant qu'à la fois les noms de la classe 1 et de la classe 2 sont événementiels, contrairement à Rappaport Hovav & Levin (1992), mais en accord avec les conclusions d'Alexiadou & Schäfer (2010), comme nous le préciserons ci-dessous.

2.3. Événements épisodiques et dispositions

Nous proposons deux lectures d'événement pour les noms en *-eur* en français (classes 1 et 2), que nous nommerons la lecture *dispositionnelle* et la lecture *épisodique* (en adoptant la terminologie de Alexiadou & Schäfer (2010)), et qui sont distinguées formellement par leur (in)compatibilité avec les adjectifs *fréquent / constant / occasionnel* (voir ci-dessus). Plus précisément, ce qui est dénoté dans le premier cas, c'est *l'habileté ou la disposition de faire x*. La lecture dispositionnelle n'implique donc pas nécessairement qu'il y ait eu un événement particulier de *faire x* (20). Par exemple, dans le cas des noms de métiers comme *constructeur*, le nom dénote un statut, une disposition qui n'est pas nécessairement associée à l'exercice de l'activité dénotée par le verbe en question (ici, *construire des maisons*, par exemple) (20a). La lecture épisodique, en revanche, est celle qui implique qu'il y ait eu un *événement* particulier de *faire x* dans lequel l'individu dénoté ait été impliqué (21) :

- (20) a) *Le constructeur de maisons arrive dans un quart d'heure*
- b) *Le vendeur de journaux à la criée se tient au coin de la rue*
- c) *Le dresseur de lion(s) a changé Simba de cage*
- (21) a) *Le constructeur de cette maison arrive dans un quart d'heure*
- b) *Le vendeur du caisson l'avait acheté 180 euros il y a un an*
- c) *Le dresseur des trois lions du cirque prendra sa retraite bientôt*

À la lumière de ces exemples, il apparaît immédiatement que le changement de valeur de l'événement (épisodique vs dispositionnel) s'accompagne d'un changement visible de la nature syntaxique des arguments de N. Nous sommes en présence d'un groupe nominal à dénotation spécifique dans un cas, et d'indéfinis pluriel et singulier nus dans l'autre. Plus généralement, pour donner lieu à la lecture épisodique, l'argument doit être un GN spécifique (typiquement un DP défini, un possessif ou un nom propre), alors que la lecture dispositionnelle se manifeste en présence d'arguments non spécifiques (typiquement des noms indéfinis, singuliers nus ou pluriels nus ⁸).

8. Nous notons que le français admet les singuliers et pluriels nus dans des contextes limités seulement, à savoir sous le gouvernement d'une préposition (*bureau de vin, boîte à musique, en construction*) et dans les prédicats complexes (*donner ordre, prendre note*), mais pas dans la phrase : **Paul boit vin, *Il dresse lions, *Il écoute musique*, contrairement à d'autres langues proches comme l'espagnol (*Pablo toma vino, Come caramelos*) ou même l'anglais (*Paul drinks soda, He*

Ceci n'est pas un hasard mais présente une situation tout à fait comparable à celle du niveau phrastique. Nous savons que les arguments spécifiques sont typiquement ceux qui peuvent donner lieu à une lecture épisodique (*Jean ne mange pas son pain*), alors que les arguments non-spécifiques donnent typiquement lieu à une lecture générique ou dispositionnelle (*Jean ne mange pas de pain*), certains groupes nominaux donnant lieu potentiellement aux deux lectures (*Le commissaire achète des cigarettes américaines*). Sur la base de ces faits, nous corrélons la lecture dispositionnelle des noms en *-eur* (classe 2) avec l'expression de la généricité dans la structure interne de la nominalisation.⁹ La lecture *dispositionnelle* surgit en présence d'une quantification générique sur les événements au sein du N, c'est-à-dire, plus concrètement, lorsque l'événement sous-jacent construit dans le nom implique un opérateur de généricité. Par extension, nous concluons que la généricité exprimée potentiellement dans l'événement dénoté par le groupe verbal sous-jacent peut être transmise à la nominalisation, ce qui appuie les conclusions de travaux récents sur les nominalisations qui ont montré que le nom peut hériter des propriétés sémantiques (par exemple aspectuelles – lexicales ou grammaticales) de la base sur laquelle il est construit (voir aussi, entre autres, Haas, Huyghe & Marín (2008), Alexiadou, Iordăchioaia & Soare (2010), Ferret, Soare & Villoing (2009) et Ferret & Villoing (2012)).

En soutien à cette conclusion, nous observons qu'au degré de spécificité dans la structure argumentale du groupe verbal servant de base à la nominalisation correspond le degré d'épisodicité vs généricité dans l'éventualité dénotée par le nom. Nous illustrons cette corrélation dans le tableau en (22) ci dessous :

(22)	DP				
	spécifique	>	>		non spécifique
	<i>ce verre / le verre / mon verre</i>	<i>des verres</i>	<i>des verres</i>		<i>du verre</i>

sales cars). Les noms nus régis par la préposition *de* dans le cas des noms dispositionnels entrent bien dans le cadre des constructions possibles en français.

9. La généricité inhérente dans les noms dispositionnels a, par conséquent, une source structurelle, étant construite de façon syntaxique au sein de ces noms et héritée des propriétés de l'éventualité sous-jacente. Il est nécessaire de distinguer cette généricité "interne", qui affecte la dénotation du nom lui-même, d'une généricité "externe" construite au niveau de la phrase, comme dans *Les lions ont des crinières* ; ici, il n'y a pas de généricité inhérente au nom *lion*, qui se trouve acquérir une interprétation générique dans le contexte du déterminant et par le prédicat caractérisant de la phrase générique. Dans un exemple comme *Un vendeur doit bien servir son client*, donc, nous devons distinguer deux niveaux de généricité : celle qui est inhérente au nom *vendeur*, et celle qui est donnée par le type de prédicat, la généricité externe de la phrase. Le nom *vendeur* reste générique (et donc interprété comme dispositionnel) même dans une phrase spécifique comme *Cette boutique vient d'embaucher un nouveau vendeur*.

Événement sous-jacent			
particulier épisodique	>	>	générique
[souffler ce verre / le verre / mon verre]	[souffler des verres]	[souffler des verres]	[souffler du verre]
Nominalisation			
épisodique	>	>	dispositionnelle
le souffleur de ce verre / du verre / de mon verre	le souffleur des verres	le souffleur des verres	le souffleur de verre

Pour ce qui est des noms qui apparaissent nus, c'est-à-dire sans argument interne apparent, ceux-ci sont des dispositionnels (23). L'absence d'argument explicite ne veut pas dire qu'aucun patient n'est réalisé. En effet, dans les exemples en (23), le patient est nécessairement présent, ce qui se voit à travers les contraintes de sélection des bases qui servent à la nominalisation.¹⁰ Par exemple, *dresser* concerne des animaux, et non des personnes, et on ne dit pas de quelqu'un qui "dresse" des enfants que c'est *un dresseur*, ce qui suggère que les bases qui servent d'input à une opération morphologique sont totalement spécifiées (voir aussi Fradin & Kerleroux (2003)), et donc soutient l'idée que les bases en (23) sont bien des verbes "complexes". Nous en concluons que l'argument interne inexprimé contribue à la généricité de la même façon que les indéfinis ou les noms nus, du fait de l'absence de spécificité explicite, comme attendu.

- (23) a) *Ce souffleur a fait attention à tous les détails*
 b) *Un vendeur doit bien servir son client*
 c) *L'acheteur veut avoir de meilleures garanties*

Il découle de notre discussion que le test des adjectifs *fréquent / constant / occasionnel* met en évidence non pas la présence d'un événement sous-jacent, mais bien celle d'un événement *particulier* (épisodique et ponctuel) par opposition à un événement générique. Cette analyse affine celle de Rappaport Hovav & Levin (1992) concernant la corrélation entre structure argumentale et caractère événementiel. Selon leur analyse, les modificateurs comme *fréquent* et *constant* ne devraient apparaître qu'en présence de la structure argumentale. Dans l'analyse que nous proposons, la lecture épisodique est corrélée à une structure argumentale *spécifique*, alors que la structure argumentale *non spécifique* donne lieu à une lecture générique. C'est donc seulement avec une lecture épisodique et une structure argumentale *spécifique* qu'on peut avoir les modificateurs *fréquent* et *constant*. Ceci peut être expliqué, puisqu'un événement

10. Cette remarque est due à un relecteur anonyme.

ne peut avoir lieu fréquemment ou constamment que s'il inclut une itération d'événements particuliers, donc épisodiques et pas génériques. La corrélation entre structure argumentale et événementialité doit être reformulée en termes d'une corrélation entre "arguments spécifiques" et "lecture épisodique" seulement. Nos conclusions se rapprochent en partie de celles d'Alexiadou & Schäfer (2010), pour qui une distinction doit être opérée, parmi les noms événementiels en *-er* de l'anglais, entre les noms épisodiques et les dispositionnels. Nous n'acceptons cependant cette distinction que pour les noms événementiels (c'est-à-dire nos classes 1 et 2, mais pas 3). Comme nous l'avons montré, les noms instrumentaux ne sont pas événementiels, et doivent être distingués des noms dispositionnels (voir section 2.2. ci-dessus).¹¹

Nous partageons avec Alexiadou & Schäfer (2010) l'idée que les inanimés et les dispositionnels, qui, pour eux, ne forment qu'une classe, ont des traits fondamentaux en commun. En particulier, ils ne peuvent pas exprimer des Agents. Mais ceci n'est qu'un artefact de la généralité. La généralité induit la stativité (dans les noms en *-eur* comme ailleurs, y compris au niveau phrastique – voir Carlson & Pelletier eds (1995) pour l'idée que les opérateurs génériques agissent comme des "stativiseurs"), ce qui veut dire que les noms dits "d'agent" en *-eur* ne sont véritablement agentifs qu'en (21) sous une lecture épisodique, mais pas en (20) et (23). En (20) et (23) le nom dénote l'argument externe d'un événement quantifié génériquement, et s'apparente donc davantage à des Sièges qu'à des Agents véritables. Dans ce cas, l'agentivité qui peut être perçue dans la lecture dispositionnelle n'est en fait qu'une implicature (il s'agit de la disposition à être l'agent dans un événement particulier s'il a effectivement lieu). Néanmoins, comme nous l'avons montré, une différence doit être faite entre des noms événementiels dispositionnels, qui induisent une lecture stativité, et des noms complètement dénués d'événementialité. Notre typologie rend mieux compte du comportement des noms déverbaux en *-eur* que, à la fois, la typologie d'Alexiadou & Schäfer (2010), qui ne distingue que deux classes (à savoir noms événementiels épisodiques vs dispositionnels), et celle de Rappaport Hovav & Levin (1992), qui ne distingue que des noms d'"agent" et des noms d'instrument (non-événementiels).

11. Alexiadou & Schäfer (2010) veulent prouver la présence d'un événement dans les noms d'instrument sur la base de leur compatibilité avec le modificateur *rapide*. Cependant, l'adjectif *rapide* a un comportement particulier qui le rend compatible avec de nombreux autres noms, pas nécessairement déverbaux (cf., par exemple, *un film rapide*, *un café rapide*, etc.). La présence de l'événement ne peut être montrée, selon nous, que par la modification par *heureux*, *vieux*, *gros*, etc.

3. LES NOMS EN *-ANT*

Le français dispose d'une autre façon de former productivement des noms dénotant des participants sujets de l'action du verbe, à savoir par les formations en *-ant* : *gérant*, *trafiquant*, *attaquant*, *gagnant*, *soignant*, *écoutant*. Ces formes semblent, de prime abord, contredire l'hypothèse selon laquelle la lecture épisodique vs dispositionnelle des noms de participants peut être prédite sur la base de la structure interne des arguments. Nous montrerons ici que les noms en *-ant* sont en réalité formés sur un autre patron que les formations en *-eur* et ne réalisent pas directement les arguments d'un prédicat verbal, mais sont construits sur des structures phrastiques plus complexes, sources de leur différence.

3.1. Propriétés des arguments et héritage sémantique

Comme précédemment pour les noms en *-eur*, nous devons distinguer les noms en *-ant* liés à une éventualité sous-jacente des noms référentiels d'objet (la classe 3 : *un tranquilisant*, *un amincissant*, *le détachant*, *un cicatrisant*, *le stimulant*), qui ne renvoient, eux, à aucune éventualité sous-jacente. Rappelons que les noms événementiels (classes 1 et 2) se distinguent des noms d'objet référentiels en acceptant la modification par les adjectifs du type *heureux* / *gros* / *grand* / *vieux* ((24) vs (25)) :

- (24) a) *les (bien)heureux accompagnants des élus locaux*
 b) *un gros gagnant du loto*
 c) *les petits publiants*
 d) *les vieux aidants des malades de Parkinson*
 (25) **un vieux tranquilisant*, **un gros amincissant*, **le petit détachant*, **un heureux cicatrisant*

Les créations nouvelles de noms en *-ant* animés apparaissent généralement sans arguments et sont souvent employées dans un sens générique (26) :

- (26) *les écoutants*, *le discutant*, *un aidant*, *les publiants*, etc.

Néanmoins, des occurrences existent dans lesquelles la structure argumentale de la base verbale est héritée par le nom, comme en (27)-(29) ci-dessous. Lorsque c'est le cas, un argument non-spécifique est associé à la présence d'un événement sous-jacent générique dans la nominalisation en *-ant*, comme attendu si les noms en *-ant* présentent une quelconque similarité avec les noms en *-eur* (27). Nous pouvons dès lors formuler l'hypothèse que (27) illustre des *-ant* dispositionnels :

- (27) a) *Si le trafiquant d'iPad est retrouvé, il faudra le faire savoir*
 b) *L'enseignant de roumain sera en grève demain*
 c) *Un fabricant de meubles s'est installé avenue de Saint-Ouen*

Lorsque l'argument interne est spécifique, deux situations sont possibles, cependant : ou bien le nom en *-ant* est interprété en relation avec un événement sous-jacent épisodique (28), ou bien le nom en *-ant* reste lié à une éventualité sous-jacente générique (ou plus précisément habituelle, qui implique la répétition d'un événement particulier, et en ce sens doit être distinguée des dispositions) (29) :

- (28) a) *Le gagnant du gros lot n'a pas encore réclamé son prix*
 b) *Le discutant du dernier papier d'Umberto Eco a remis ses notes au comité*
 (29) a) *Le soignant d'Henri Gomez connaissait parfaitement sa réaction aux antibiotiques*
 b) *Les aidants des malades de la chambre 304 sont au conseil administratif*

Les exemples (29) posent un problème particulier, puisque, bien que les noms *le soignant d'Henri Gomez* et *les aidants des malades de la chambre 304* impliquent qu'un événement de *soigner* et d'*aider* a eu lieu (à la différence de (27)), celui-ci ne peut pas être compris comme épisodique, en dépit de la présence d'un patient défini spécifique (*Henri Gomez* et *les malades de la chambre 304*, respectivement). Ceci semble donc contredire la corrélation établie plus tôt, et sur la base des noms en *-eur*, entre spécificité des arguments et interprétation de la nominalisation (section 2.). Concrètement, le contraste dans l'interprétation de l'événement sous-jacent en (28) et (29) semble tenir essentiellement aux propriétés sémantiques et aspectuelles du verbe servant de base (*gagner / discuter* vs *soigner / aider*) et non pas uniquement à la nature des arguments.

Sans entrer ici dans les détails de la contribution des prédicats verbaux, nous notons que d'autres faits conduisent à la même conclusion. En particulier, considérons la distribution de la modification avec *fréquent / constant / occasionnel*, qui, dans le cadre des noms en *-eur*, teste le caractère épisodique de l'éventualité sous-jacente (classe 1). Les noms en *-ant* sont (parfois) compatibles avec une telle modification, ce qui suggère qu'ils peuvent impliquer une éventualité épisodique sous-jacente (30) :

- (30) a) *un fréquent militant contre la peine de mort*
 b) *un aidant occasionnel des malades de l'aile A*

Cependant, d'une part, la modification avec *fréquent, occasionnel* n'est pas possible avec les nominalisations en *-ant* construites sur des verbes d'achèvement, alors que ceux-ci donnent typiquement des nominalisations épisodiques. Par exemple, alors que *le gagnant du gros lot* ne peut être interprété qu'en relation à un événement épisodique sous-jacent de *gagner le gros lot* (et non pas à une dis-

position, voir (28a)), le contraste entre (31) et (30) ci-dessus est tout à fait inattendu dans ce contexte :

- (31) **le gagnant occasionnel / fréquent du gros lot*

D'autre part, la modification par de tels adjectifs n'est pas conditionnée par la présence d'arguments internes spécifiques (cf. (32), et aussi (30a), ci-dessus).

- (32) *un écoutant occasionnel de candidats au suicide*

Les contrastes décrits ci-dessus (exemples de (30) à (32)) suggèrent que ce n'est pas la nature spécifique ou non-spécifique de la structure argumentale seule (cf. (30a) et (32) vs (30b)), mais un ensemble de facteurs, dont le type aspectuel du prédicat impliqué (cf. (30) vs (31)), qui déterminent l'interprétation de la nominalisation en *-ant*.

3.2. Agentivité

D'autres propriétés semblent aussi distinguer les noms en *-ant* des noms en *-eur*. Les règles qui conditionnent la nominalisation en *-eur* vs *-ant* ne sont pas *a priori* triviales lorsque l'on considère des paires, comme (33) ci-dessous, qui opposent des formes souvent très proches du point de vue sémantique :

- (33) a) *un attaquant* vs *un défenseur*
 b) *un enseignant* vs *un chercheur*
 c) *un soignant* vs *un guérisseur*

La distribution et la contribution sémantique des deux types de nominalisations sont tout à fait différentes, cependant. Tout d'abord, il est important de noter que les noms en *-ant* nominalisent le *sujet* de la base verbale sous-jacente, et non pas seulement l'argument externe. Ainsi, ils peuvent prendre, à la différence des noms en *-eur* (voir ci-dessus), des bases inaccusatives :

- (34) a) *un habitant* vs **un habitateur*
 b) *un arrivant* vs **un arriveur*

Lorsqu'ils prennent des arguments externes, nous observons que les noms en *-ant* peuvent être dérivés sur des verbes de même classe aspectuelle que les noms en *-eur* (par exemple, des activités, des achèvements). En particulier, tout comme les noms en *-eur*, ils peuvent dénoter des arguments externes souvent liés à un thème-rôle Agent dans la base verbale associée (35) :

- (35) *un fabricant, un trafiquant, un militant, un manifestant, un étudiant, un détaillant, le commandant, les apprenants, un manifestant, les militants, un soignant*

L'existence de paires telles que (36) suggère cependant que les deux types de formations nominales s'associent à des différences de sens :

- (36) a) *un accompagnateur* vs *un accompagnant*
 b) *un serveur / serviteur* vs *un servant*
 c) *un suiveur / successeur* vs *un suivant*
 d) *un exécuteur* vs *un exécutant*
 e) *un débiteur* vs *un débitant*

Les noms en *-ant* admettent aussi des bases statives ou de perception (37), ainsi que des verbes réfléchis (38), se distinguant en ceci encore des noms en *-eur* (données de Anscombe (2001)) :

- (37) a) *un voyant* vs #*un voyeur* (sens spécialisé uniquement, lié à "regarder intensément", verbe d'activité, et non pas à "voir", statif)
 b) *un débutant* vs #*un débuteur*
 c) *un apprenant* vs **un appreneur*
 d) *un savant* vs **un saveur*
 (38) a) *se défendre / un défendant* vs *défendre / un défenseur*
 b) *se plaindre / un plaignant* vs **un plaigreur*

Ces données suggèrent que la concurrence entre *-eur* et *-ant* n'est en fait que partielle et peut-être seulement apparente. Les véritables cas où une concurrence semble exister ont trait aux formations à partir de bases agentives dénotant des activités : *accompagnant / accompagnateur* (*accompagner*), *soignant / soigneur* (*soigner*), *servant / serveur* (*servir*). Avec d'autres bases verbales (inaccusatives, statives, perception), seule la formation en *-ant* est possible, comme nous l'avons vu ci-dessus.

En réalité, les paires *-ant / -eur* se distinguent par une propriété essentielle, à savoir que les noms en *-ant*, par opposition aux noms en *-eur*, pour lesquels une telle lecture est possible dans la classe 1 (voir section 2.), ne réalisent jamais de rôle Agent. Plus précisément, bien qu'ils expriment un sujet, ils n'expriment jamais un Agent, même lorsqu'ils sont construits sur des bases qui, elles, sont agentives.

Tout d'abord, les noms en *-ant* correspondent généralement à des théta-rôles non-agentifs, à savoir l'Expérient ou le Thème (pour les bases inaccusatives), puisqu'ils prennent des bases statives que les noms en *-eur* ne prennent pas :

- (39) a) *un mourant, un soupirant, un voyant* (Expérient)
 b) *un arrivant, un accédant, un gisant* (Thème)

Mais la différence la plus importante est que, contrairement à ces derniers, les noms en *-ant* ne peuvent jamais prendre de modificateurs orientés agent comme *délibéré, volontaire*¹², *intentionnel* :

12. Ici encore l'agrammaticalité renvoie bien à la lecture orientée vers l'agent et non pas à l'interprétation purement prédicative de l'adjectif, voir n. 5. De même en (41).

- (40) a) **un enseignant délibéré*
 b) **un accompagnant volontaire des enfants*
 c) **un manifestant intentionnel contre la peine de mort*

Bien qu'ils puissent être construits sur des verbes d'activité qui ont un agent inhérent (par exemple, *enseigner* (*enseignant*), *manifeste* (*manifestant*), *accompagner* (*accompagnant*), *trafiquer* (*trafiquant*), *soigner* (*soignant*)), l'agentivité disparaît dans la nominalisation, comme le montre (40). Il est important de noter que le contraste dans la distribution des adjectifs avec *-ant / -eur* est de nature véritablement grammaticale (et est liée à la forme morphologique du nom modifié) plutôt que sémantique (voir les paires en (41) ci-dessous). Par exemple, en (41a), alors que les prédicats *attaquer la vieille dame* et *agresser la vieille dame*, qui impliquent tous deux un agent, peuvent donner lieu à la modification adverbiale du type *attaquer délibérément la vieille dame* et *agresser délibérément la vieille dame*, seule la nominalisation en *-eur* associée à l'une de ces deux bases, et non pas celle en *-ant*, permet la modification adjectivale correspondante. De même dans les exemples (b) à (d) ci-dessous :

- (41) a) **un attaquant délibéré* vs *un agresseur délibéré de la vieille dame*
 b) **le fervent soignant* vs *le fervent guérisseur de la vieille dame*
 c) **un votant déterminé* vs *un électeur déterminé de Sarkozy*
 d) **des enseignants obstinés* vs *des chercheurs obstinés*

Comme les verbes *attaquer / soigner / voter / enseigner*, d'un côté, et *agresser / guérir / élire / chercher*, de l'autre côté, sont tout aussi agentifs, nous devons conclure que le contraste entre les deux nominalisations ne peut pas venir de différences associées à la base verbale sous-jacente, mais bien des différences entre les formes nominales elles-mêmes. Il est alors possible que le fait que les noms en *-ant* expriment des Expérients (38) ne soit qu'un aspect d'un phénomène plus large qui restreint les noms en *-ant* à des sujets non-agentifs.

3.3. *Patrons de nominalisation*

Alors que les noms en *-eur* sont construits directement sur les groupes verbaux sous-jacents (voir section 2.), une telle hypothèse n'est pas possible pour les noms en *-ant*. En effet, la structure nominalisée doit nécessairement être plus large, de manière à englober le sujet d'une phrase (comme on le voit pour les noms en *-ant* dérivés sur des bases inaccusatives¹³). L'interprétation non-agentive de ces noms, alors même qu'ils sont dérivés parfois sur une base

13. Nous admettons que les sujets des verbes inaccusatifs sont des arguments internes déplacés en position de sujet, donc dans une position externe au groupe verbal. Voir aussi n. 2 dans l'« Introduction ».

indiscutablement agentive, indique également qu'ils ne peuvent pas être formés simplement sur des syntagmes verbaux incluant le verbe et ses arguments. En effet, si tel était le cas, la nominalisation de l'argument externe d'un verbe agentif ne pourrait être qu'un nom d'Agent. Par opposition, les propriétés des noms en *-ant*, à savoir (i) qu'ils réalisent des *sujets* seulement, (ii) qu'ils sont *non-agentifs* (même si construits sur des bases verbales agentives), tendent vers une analyse de ces nominalisations comme des dérivés de bases phrastiques. En d'autres termes, nous admettons que les noms en *-ant* sont dérivés sur une phrase participiale de nature prédicative (dont la dénotation est "qui a la propriété de V") et dont ils réalisent le sujet.

Cette différence majeure entre les noms en *-eur* (construits sur des groupes verbaux complexes) et les noms en *-ant* (construits sur des phrases entières de nature prédicative) s'accompagne d'une différence morphologique notable en ce qui concerne le statut des deux suffixes *-eur* et *-ant*. Alors que *-eur* peut raisonnablement être analysé comme un suffixe nominal, *-ant* est également une flexion participiale en français. Dans le premier cas, nous avons affaire à un véritable suffixe dérivationnel nominal ; dans le second cas, nous pouvons penser que la nominalisation est obtenue par conversion (ou suffixation d'un morphème nominal nul) sur une base verbale (participiale) dérivée en *-ant*.

L'hypothèse alternative d'une dérivation à partir d'une base adjectivale stative (proposée dans la littérature, entre autres, par Anscombe (2001)) est à exclure selon nous, du fait du nombre significatif de noms en *-ant* qui n'ont pas d'adjectif associé, comme par exemple *habitant* (**la personne habitante*) mais aussi *arrivant*, *fabricant*, *trafiquant*, *enseignant* (qui, même s'il peut acquérir un usage adjectival dans *l'équipe enseignante*, subit dans ce cas une recatégorisation : comparer avec **les adultes enseignants*). Par ailleurs, une source adjectivale devrait permettre, parfois, l'expression de degrés au sein de la nominalisation, comme c'est le cas dans *le bien-aimé*, *le très miséricordieux*. Ceci n'est pas attesté pour les noms en *-ant* : **les très publiants*, **le bien enseignant*.¹⁴

Nous relient l'absence d'agentivité dans les noms en *-ant* à l'hypothèse d'une stativité sous-jacente induite par la prédication. Nous considérons que la stativité ainsi que la prédication sont associées à des niveaux structurels, mais ce n'est pas dans les objectifs de cet article de fournir une formalisation précise de ces différents niveaux.

Le nom en *-ant* résultant de la nominalisation ne peut dénoter que le Siège d'une propriété ou d'un état, et non plus un agent à proprement parler. Concrètement, *un soignant* renvoie donc à "celui qui a la propriété de soigner", et non pas "celui qui est en train de soigner", *un militant* à "celui qui a la propriété de militer", et non

14. Bien que *le bien-pensant* soit attesté, cette nominalisation renvoie à une échelle de valeurs (celui qui a la propriété de bien vs mal penser) et non pas à un degré de pensée (celui qui a la propriété de beaucoup penser).

pas "celui qui est en train de militer", *un apprenant* à "celui qui a la propriété d'apprendre" et non pas "celui qui est en train d'apprendre". Par conséquent, l'unique rôle thématique auquel un nom en *-ant* peut renvoyer est celui du Siège d'une propriété associée à la base verbale. Ceci veut dire que les noms en (38) ci-dessus n'expriment pas non plus des Expérients ou des Thèmes véritables (puisque les noms en *-ant* ne nominalisent pas des arguments du verbe), mais des sujets Sièges d'une propriété.

Notons enfin que les noms en *-ant* partagent des propriétés avec les prédicats statifs. Pour le montrer, nous adaptons le test de l'impératif de Lakoff (1966), pour le contexte des noms en *-ant* et *-eur*, avec la copule *être*. Une propriété bien connue des prédicats statifs est qu'ils ne sont jamais compatibles avec le mode impératif (cf. 42b). Comme le montre (43), alors que le contexte est admis par les noms en *-eur* épisodiques (classe 1), cf. (a), il est refusé par les noms en *-ant* (en présence ou non de structure argumentale), cf. (b), ce qui crée un parallélisme clair entre (42b) et (43b) :

(42) a) *Embrasse Marie !*
b) **Aime Marie !*

(43) a) *Sois l'accompagnateur des enfants !*
b) **Sois l'accompagnant (des enfants) !*

La conclusion à laquelle nous aboutissons est que les contraintes définies en section 2, portant sur la contribution de la nature (spécifique ou non-spécifique) de la structure argumentale dans l'interprétation (épisodique, dispositionnelle et d'objet référentiel) des noms "agentifs" sont valables uniquement pour les nominalisations d'*argument* d'un syntagme verbal complexe. Puisque les noms en *-ant* nominalisent des *sujets* d'une prédication, nous assistons à une redéfinition de leurs propriétés, mais dans des termes qui restent prédictibles : on observe en effet un héritage des propriétés aspectuelles englobées dans l'éventualité décrite par la phrase nominalisée. En revanche, nous nous attendons à ce que les généralisations établies pour les noms d'argument externe soient valables dans le cas d'autres noms d'argument, et en particulier les noms d'argument interne, comme nous allons le voir dans la section suivante.

4. NOMINALISATION DE L'ARGUMENT INTERNE EN *-É/-I/-U*

Nous avons établi en section 2. que la nature syntaxique des arguments internes peut jouer un rôle majeur dans l'interprétation de la nominalisation (lorsque celle-ci prend comme base un syntagme verbal complexe). Pour finir, nous nous intéressons aux propriétés des noms de participants aux événements en *-é/-i/-u*, homophones des participes passés, et qui dénotent des participants correspondant

à l'argument interne du verbe : *le détenu, le marié, un immigré, l'arrondi, un insoumis, un imprévu, un malvenu, un perdu*. Nous montrerons que le comportement et l'interprétation de ces noms sont exactement ce que nous devrions prédire.

Par hypothèse, les noms en *-é/-i/-u* doivent nécessairement réaliser la structure argumentale du verbe de base puisqu'ils *dénotent* le participant qui correspond à l'argument interne (Patient, Thème). Concrètement, donc, *le blessé* doit être dérivé d'un groupe verbal du type "[Agent_X] a blessé [Patient_Y]", où la nominalisation exprime *Y*.

- (44) a) *le détenu, un invité* (Patient)
b) *les nouveaux venus, un insoumis* (Thème)

Alternativement, nous pourrions imaginer que le blessé soit *celui qui a été blessé*, ce qui suppose une structure passive et un état résultatif.¹⁵ Cependant, cette analyse ne peut s'appliquer aux nominalisations construites sur des prédicats intransitifs inaccusatifs comme *nouveaux venus*. Il semble donc préférable de considérer, comme nous le faisons ici, ces noms comme la réalisation de véritables arguments internes dans des constructions actives (voir aussi n. 17 ci-dessous).

Exprimant des arguments internes, ces noms sont généralement construits, comme nous pouvons l'attendre, sur des bases transitives (45a), intransitives avec *se* réfléchi (45b), ou inaccusatives (45c)¹⁶ :

- (45) a) *un blessé, le perdu*
b) *la mariée, un vendu*
c) *les nouveaux venus*

Il est nécessaire de distinguer, comme nous l'avons fait précédemment, une classe de noms dont l'interprétation est liée à un événement, et qui prend majoritairement des animés, et une classe de noms d'objets référentiels (classe 3), qui inclut des inanimés : *un arrondi, un sablé, un coupé*. Ces derniers n'admettent pas la modification par *heureux, grand, nouveau, gros, vieux*, etc. dans leur lecture orientée vers l'événement (46) :

- (46) a) *un grand blessé, un heureux élu, les nouveaux venus, un heureux imprévu*
b) **un grand arrondi, *un gros sablé, *un nouveau coupé*

En ce qui concerne les noms événementiels, si nous étions dans un cas similaire à celui des noms en *-eur*, nous nous attendrions à ce que, lorsque l'objet *Y* nominalisé est spécifique, on obtienne une

15. Cette analyse alternative est due à un relecteur anonyme.

16. À la fois les nominalisations en *-ant* et les nominalisations en *-é/-i/-u* peuvent nominaliser l'argument interne des bases inaccusatives. Ceci est le cas parce que les noms en *-ant* peuvent exprimer des Thèmes sujets, et les noms en *-é/-i/-u* des Thèmes objets.

lecture épisodique, et lorsque l'objet est non-spécifique, on obtienne une lecture dispositionnelle. Ce qui veut dire que la nominalisation du Thème de *L'ennemi a blessé des soldats*, par exemple, donnerait lieu à une interprétation dispositionnelle de *les blessés* ("ceux qui ont la capacité d'être blessés"), alors que celle de *L'ennemi a blessé ce jeune homme*, par exemple, donnerait lieu à une lecture épisodique ("celui qui a été blessé"). Il apparaît immédiatement, cependant, et à la lumière de cette paire, que la lecture dispositionnelle n'est pas disponible. La nominalisation *un / le blessé* ne veut jamais dire "celui qui a la disposition d'être blessé". De même pour tous les autres nominaux déverbaux en *-é/-i/-u* : *la mariée* ne veut pas dire "une femme qui a la capacité d'être mariée", mais "la personne qui se marie" ; *les nouveaux venus* sont "ceux qui viennent d'arriver" ; *trois inconnus* sont "trois individus que je ne connais pas en ce moment". L'épisodicité de ces noms est maintenue même dans les contextes génériques du type *Un détenu est rarement heureux*.¹⁷ Ici, *détenu* reste épisodique : il ne renvoie pas à la personne qui a la disposition d'être détenue, mais bien à la personne qui est effectivement détenue.¹⁸ La lecture épisodique est indiquée par la possibilité de la modification adjectivale en *fréquent / occasionnel*¹⁹ :

- (47) a) *Un invité fréquent de Patrick Poivre d'Arvor a fait scandale à l'antenne*
b) *Un détenu occasionnel de la prison de Fresnes s'est évadé ce matin*
c) *Ces immigrés récents briguent la naturalisation*

Bien que surprenant au premier abord, le fait que la lecture dispositionnelle n'est jamais disponible est cependant ce à quoi nous devrions nous attendre, si on fait l'hypothèse que seuls les arguments *spécifiques* peuvent être nominalisés. Cette hypothèse fait sens lorsque l'on considère les noms d'argument externe en *-eur*. Dans ce cas aussi, l'argument qui est nominalisé ne peut être que spécifique, à savoir "le X qui fait V" (dans la lecture épisodique) ou "le X qui a la capacité de faire V" (dans la lecture dispositionnelle). En soi, un argument non-spécifique ne donne pas lieu à une nominalisation ; ceci est également vrai des noms de participants nominalisant l'argument interne ("le X qui subit V"). Ce qui se passe avec les arguments internes est donc similaire à ce que l'on voit pour les arguments externes.

À la lumière de cette analyse, deux facteurs, indépendants mais reliés, déterminent l'interprétation des nominalisations d'arguments,

17. Exemple invoqué par un relecteur anonyme.

18. À la différence des noms en *-eur* dispositionnels (voir n. 8, section 2.), qui ont une généricité inhérente, les noms en *-é/-i/-u* ont une épisodicité inhérente. Une fois encore, l'épisodicité interne est compatible avec des contextes génériques (où la généricité est construite au niveau de la phrase par la composition avec un prédicat caractérisant, par exemple).

19. L'exemple (47a) montre que les arguments externes des noms en *-é/-i/-u* ne sont pas introduits par la préposition *par*, mais par le *de* marqueur de génitif. Ceci confirme que ces noms ne peuvent pas être dérivés sur une base passive.

à savoir (i) la restriction sur les arguments spécifiques et (ii) la corrélation entre l'argument spécifique et le caractère épisodique. La conséquence, pour les noms d'argument interne, est que ceux-ci ne peuvent avoir qu'une lecture épisodique.

5. CONCLUSION

Cette étude des noms de participants à l'événement en *-eur*, *-ant* et *-é/-i/-u* en français a permis de montrer que la structure argumentale et l'interprétation événementielle sont étroitement liées dans les nominalisations et de proposer une analyse cohérente des propriétés qui déterminent leur interprétation. Plus particulièrement, nous avons défendu l'idée que l'épisodicité et la généralité peuvent être héritées par le nom, et que celles-ci ont une source structurelle, en rapport direct avec le type d'arguments qui accompagnent (ou non) le nom déverbal.

Nous avons distingué deux types d'interprétation événementielle, selon le type de modification adjectivale admise par ces noms : la classe des noms de participants épisodiques et la classe des noms de participants dispositionnels. Nous avons aussi montré qu'il serait incorrect de penser que tous les noms déverbaux sont liés à une interprétation événementielle, et nous avons ainsi abouti à une classification tripartite plus à même de rendre compte des propriétés de ces noms, que des typologies binaires antérieures (en particulier, Rappaport Hovav & Levin (1992) [animé]-[événementiel] ou Alexiadou & Schäfer (2010) [épisodique]-[dispositionnel]).

La structure argumentale se trouve effectivement jouer un rôle déterminant dans l'interprétation (épisodique, dispositionnelle) des noms de participants aux événements, mais va au-delà d'une simple corrélation bi-univoque entre structure argumentale et présence d'un événement sous-jacent (comme dans les termes de Grimshaw (1990) et Rappaport Hovav & Levin (1992)). On a pu en effet constater que dans le cas des noms en *-eur* et des noms en *-é/-i/-u*, la spécificité de la structure argumentale est en rapport direct avec la présence sous-jacente d'un événement plus ou moins particulier, et détermine les lectures respectives.

Crucialement, cependant, ces conclusions ne sont valables que pour les véritables arguments construits sur un syntagme verbal complexe. Pour les noms en *-ant*, qui sont des noms de sujets de prédication, il y a héritage à un certain niveau des propriétés aspectuelles de l'éventualité sous-jacente, mais aussi un changement d'interprétation en direction de la stativité. Nous avons proposé que ces noms sont des convertis de phrases participiales prédictives, et non pas des noms d'arguments ; on s'attend donc à ce que la structure argumentale ne joue pas le même rôle dans l'interprétation obtenue. Cependant, l'interprétation stative laisse transparaître les propriétés de l'éventualité sous-jacente (épisodique ou habituelle).

Nous aboutissons ainsi à un système cohérent dont il est possible de tester les prédictions et qui permet de décrire l'ensemble des noms de participants étudiés ici. La question, cependant, de la validité de cette analyse à travers des langues proches reste ouverte pour des recherches futures.

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CHAPTER XXX

EVENT RELATED NOMINALS

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Abstract

The literature on nominalizations often distinguishes classes of derived (deverbal) nominals with an event related interpretation, commonly analyzed as inherited from the semantics of the underlying verbal/aspectual structure. However, the classes of nouns that have been called ‘eventive’ exhibit sometimes contrastive properties. Dealing here with three such classes of derived nominals, i.e., Complex Event nominals (CENs), Simple Event nominals (SENs) and ‘eventive’ *-er* nominals, we propose a system that distinguishes between a ‘strong’ grammatical event and a ‘weak’ semantic event to account for the properties of event inheriting nominals. We further account for well-known differences between these classes of nominals using semantic type distinctions, and pave the way to an integrated compositional analysis of deverbal nominals.

1. Introduction^{1/2}

As has been widely argued for in the literature, deverbal nominals fall into two categories, depending on whether they retain the event from their verbal base or not. The original observation is due to Chomsky (1970); see also Lees (1960), Marantz (1997), Borer (2003). For English *-ation* and *-ing* nominals (e.g., *destruction*, *examination*; *forming*, *examining*) and for zero-derived nominals (e.g., *form*, *exam*), this has led to distinguishing two classes of nominals: complex-event vs. result nominals (CENs/RNs–

Grimshaw 1990) or Argument-Supporting nominals (AS-Ns, cf. (1)) vs. Referential nominals (R-Ns, cf. (2)–Borer 1999):

- (1) a. the destruction of the city by the enemy
b. the examination of the students by the teacher
c. their building new quarters
- (2) a. a complete destruction
b. a difficult exam
c. an impressive building

The nominals in (1) have an event interpretation (hence, Grimshaw’s 1990 label of CENs). The eventive interpretation has been noted to correlate with various syntactic properties, as, for instance, the (possible) presence of temporal/aspectual modifiers.

- (3) a. They destroyed the city in two hours.
b. the destruction *(of the city) in two hours

The pattern in (3b) also has another important property, which is the obligatory realization of the arguments of the verbal base (hence the term Argument Supporting nominals; cf., Borer 1999, 2003). This property is compulsory when the event structure is activated in the presence of event-related modification (see Grimshaw 1990, Borer 1999, 2003, Alexiadou 2001, among others). The correlation between the event interpretation and obligatory realization of argument structure has been an important point since Grimshaw (1990). The fact that both go hand in hand has been claimed in the literature to show that both are realized grammatically and that eventivity and arguments are inherited from the verbal and/or aspectual structure present with AS-Ns but are missing with R-Ns (the latter being simply derived from bare roots)–cf. Borer (2003); Alexiadou (2001); Van Hout and Roeper (1998). The syntactic approaches to word formation represented by these scholars take eventivity in AS-Ns to be correlated with the projection of syntactic functional layers detectable through argument structure projection and aspectual modifiers. The source of the eventive interpretation is the presence of a verbal base upon which AS-Ns are built. Nominalizations may thus inherit verbal properties, when (and only when) they involve a verbal / aspectual structure.

The term ‘event’ (or ‘eventive’) nominals, however, is often the subject of some misunderstanding, or at least suffers from variable definitions depending on whether it is taken in the syntactic tradition

where eventivity is correlated with particular structural properties, or from a (lexical)-semantic point of view where a much larger class of nominals would be considered as ‘eventive’.³ For instance, Grimshaw’s (1990) Simple Event Nominals (SENs) fall into this class when semantically defined. Such nouns (e.g., *meeting, play*) are ‘semantically’ associated to an event interpretation but do not exhibit the common event related properties of AS-Ns described above. SENs cannot take typical verbal / temporal modifiers otherwise found with AS-Ns (even in cases where there is a related verb, with the relevant temporal-aspectual modifiers):

- (4) a. They met / played for two hours.
b. the meeting / the play (*for two hours)

This suggests that SENs are not structurally derived from verbs, and hence if they involve an event, it cannot be inherited from a VP. Nevertheless, they do have an event interpretation which, it has been claimed in the literature, cf., Haas et al. (2008), can be tested in the context of, e.g. the *take place* predicate. *Take place* requires an eventive subject, and is compatible with both AS-Ns and SENs subjects, while rejecting R-Ns, as expected:

- (5) a. The destruction took place at noon. (AS-Ns)
b. The movie / meeting took place at noon. (SENs)
c. *The table / form took place at noon. (R-Ns)

Another problematic group of nominalizations is also often associated with an event interpretation, namely *-er* nominals (see Rappaport Hovav and Levin 1992, Alexiadou and Schäfer 2010, Roy and Soare (to appear)). *-Er* nominals differ from AS-Ns in that they denote individuals (e.g., *driver, teacher, scuba-diver*). However, recent works by Alexiadou and Schäfer (2010) and Roy and Soare (to appear) have shown that some of them at least are interpreted in association with an actual eventuality. Independently of the typology one accepts (whether retaining three groups: episodic / dispositional / instruments, as in Roy and Soare (to appear) or just two groups based on the episodic / dispositional contrast alone, as in Alexiadou and Schäfer (2010)), there is a common agreement that some *-er* nominals at least relate to particular events, arguably inherited from their verbal base again. For instance, as commonly noted for English, phrasal *-er* nominals as in (6a), entail that the individual denoted by the N has taken part in the action expressed by the related verb (i.e., saved lives); whereas such entailment does not exist with the

compound nominals as in (6b). One could hypothesize that the source of the event-related meaning for (6a) resides in the presence of an underlying event, plausibly derived from a full verbal phrase.

- (6) a. a saver of lives (has saved lives)
b. a life-saver (hasn’t necessarily saved lives)

However, as for SENs, ‘eventive’ *-er* nominals do not take event modifiers otherwise possible with AS-Ns (compare (7) with (3) above):

- (7) a. He drove the truck (for two hours).
b. the driver of the truck (*for two hours)

Evidently, while there is a strong sense in which both AS-Ns and episodic *-er* nominals refer to events or are related to an event interpretation, they do not do so in the same way, as the diagnostics for eventivity clearly indicate. These facts further illustrate why in the present-day literature on nominalizations there is no consensus on the definition of eventive nominals and their variable properties.

The aim of this paper is to gain some understanding into the semantic relationship derived nominals entertain with their verbal base, and to provide a principled analysis of AS-Ns, SENs and (eventive) *-er* nominals that accounts for the different flavors in which the interpretation of a deverbal nominal is said to be ‘event-related’. We offer an analysis that bears crucially on a difference between strong/grammatical eventuality and lexical/conceptual eventuality cast in terms of a semantic type difference between entity-denoting vs. event-denoting nominals.

This paper is organized as follows. Section 2 deals with ‘event’ nominals, i.e., AS-Ns and SENs, providing a summary of the literature that will serve as a starting base for our discussion, and argues for a first distinction between strong/grammatical events and lexical/conceptual events. Section 3 turns to a detailed discussion of the properties of eventive *-er* nominals, which manifest event properties in a different way from event-denoting nominals. We first show that these nominals are event-related in a strong/grammatical sense, and that a unified structural account is warranted, for event-denoting and for *-er* AS-Ns as well. We proceed in section 4 to a type semantic analysis of derived nominals that captures the differences between individual nominals and event nominals and the interaction of semantic types with the grammatical vs. conceptual events. In section 5, we extend our proposal to include SENs, and then conclude in section 6.

2. Event nominals

2.1. AS-nominals

The literature on deverbal nominalizations starting with Lees (1960); Chomsky (1970); Grimshaw (1990) pays special attention to the question of their ambiguity. Taking, as an illustration, *-ation* nominals (e.g., *examination, destruction, manifestation*), they may denote either an event or an entity (i.e., object), which may but must not be the result of an event. As stated above, this is commonly expressed in the literature under the form of the CENs / RNs distinction (initially proposed by Grimshaw 1990), and is implemented broadly in terms of a structural ambiguity, as we will see below.

An overview of the properties distinguishing CENs from RNs is summarized in Table 1. Given the observed correlation between argument structure and eventive interpretation, in recent works on nominalizations (cf. Borer 1999, 2003; Alexiadou 2001, 2010a,b; Kornfilt and Whitman 2011, among others) the distinction has been restated in terms of Argument Supporting (or AS)-nominals and Referential (or R)-nominals (terminology from Borer 1999, 2003). The properties in the left column, including obligatory realization of the (internal) arguments and modification with aspectual modifiers, are generally seen as a hallmark for eventivity inside nominals. The properties are exemplified in (8) for AS-Ns and (9) for R-Ns.

	AS-Ns	R-Ns
(i)	event reading	no event reading
(ii)	obligatory arguments	arguments not obligatory
(iii)	compatible with aspectual modifiers like <i>in three hours</i>	not compatible with aspectual modifiers
(iv)	<i>constant, frequent</i> with the singular	<i>constant, frequent</i> possible only with the plural
(v)	<i>by</i> -phrase is an argument	<i>by</i> -phrase is not an argument

Table 1: properties of AS-nominals and R-nominals

- (8) AS-Ns
- the examination of the students by the teachers
 - the examination *(of the students) (by the teachers) (in three hours)
 - the (frequent) examination of the students by the teachers
- (9) R-Ns
- the form; the exam
 - the exam (*by the teachers) (*in three hours)
 - the frequent exam*(s)

As illustrated above in (8), in presence of event-related modifiers like adjectives *frequent, constant* or *in/for*-PPs, AS-Ns obligatorily realize their argument structure. Removing the arguments in the presence of the modifiers would give rise to ungrammaticality. This is not the case with R-Ns, which are noneventive and do not have arguments (9b). *Frequent/constant* modification is possible with R-Ns but in the plural (9c), which gives rise to an iterative reading only (“frequently giving/taking exams”; compare with (8c)). *In/for*-PPs are impossible.

Furthermore, R-Ns can be selected by predicates that require an entity noun and not an eventive noun:

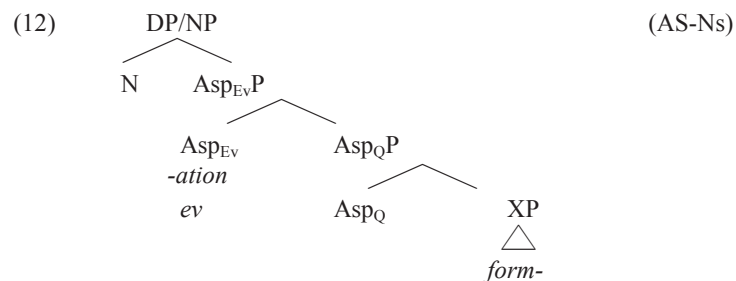
- (10) a. *The examination of the patients was on the table.
b. The exam was on the table.

For ambiguous nominals, such as *assignment, painting, building, manifestation*, the compatibility with *be on the table* excludes the presence of arguments:

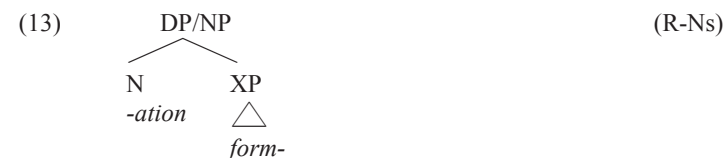
- (11) a. *The assignment of the tasks to the participants was on the table.
b. The assignment was on the table.

The literature offers different views on the AS-N / R-N ambiguity. Lexicalist approaches take the ambiguity as being stored in lexical entries, and consequently assume the existence of *assignment-_{AS-N} / assignment-_{R-N}* pairs. This direction has been developed since Halle’s (1973) lexical Word Formation Rules, and continued in Booij (1977), Aronoff (1976), Di Sciullo and Williams (1987), among many others. By opposition, structural/syntactic approaches reject the idea of rampant ambiguity in the

lexicon, and see the AS-N/R-N contrast as corresponding to a systematic structural difference in the form of the nominalization. The latter position is argued for by Marantz (1997), Borer (1999), Alexiadou (2001), among others, which endorse a syntactic approach to word formation. Building on Grimshaw’s criteria, it has been argued in this tradition that AS-Ns are derived on the basis of a full structure including verbal / aspectual layers; while R-Ns are simple, root-derived nominals. Syntactic approaches to deverbal nominals formation thus assume that the correlation between the eventive interpretation and the obligatory argument structure must be implemented by assigning different structural representations to the two classes of nominals. The correlation with the argument realization is therefore not accidental but derives from the internal syntactic properties of the relevant nominal expressions. The projection of argument structure inside deverbal nominals is also to be taken as a property of the verbal layers. These different layers have received different labels throughout the literature, from “Event Phrase” (Van Hout and Roeper 1998), to different flavors of AspP (Borer 1999, 2003, 2005; Alexiadou et al. 2010); and different executions have been proposed. For instance, Borer (1999, 2003, 2005), implements the correlation between event structure and argument structure by proposing that arguments are introduced by functional heads, one of which is also responsible for introducing the event variable. In the structure of AS-Ns in (12) below, Asp_{Ev} (standing for Aspect of Event) thus introduces the external argument and Asp_Q (standing for Aspect of Quantity) the internal one (which is likewise severed from the root). Asp_{Ev} is also responsible for introducing the event variable *ev*. In this paper, we will by and large adopt Borer’s framework; but see Alexiadou (2001); Van Hout and Roeper (1998) among others for alternative implementations.



R-nominals in (13), in turn, are built directly from a root. They lack verbal structure and, therefore, the event variable introduced by Asp_{Ev} .



Recent work on AS-Ns denoting processes have, thus, reached the conclusion that eventivity in these nominals is structurally built-in, and that the projection of argument structure is also a consequence of their functional structure. The syntactic approaches to deverbal nominals formation share the idea that eventivity is encoded in the syntax. Therefore, we will refer to these cases as cases of “grammatical eventivity”, in which the presence of the event is structure-related and results from the presence of dedicated verbal functional projections in the structure of the nominal, identifiable by aspectual and manner modification. We will call this structurally built-up eventivity ‘strong/grammatical’ eventivity.

2.2. Simple Event nominals

In her original typology of deverbal nominals, Grimshaw (1990) distinguished not two, but three classes of deverbal nominals. Besides CENs and RNs, (here replaced by AS-Ns and R-Ns, respectively), her taxonomy includes a third class of so-called *Simple Event Nominals* (SENs). Nominals in the SENs class also denote events as they can combine with predicates like *take place*, *last x time* and *be interrupted* that take an event as a subject (cf. Haas et al. 2008) (14). According to this test, they pattern with AS-Ns (15) rather than R-Ns (16), leading many current researchers to class them with ‘event’ nominals:

- (14) a. The concert/ the movie/ the game took place at nine (SENs)
 b. The concert / the movie/ the game lasted three hours.
 c. The concert/ the movie/ the game has been interrupted.
- (15) a. The examination of the papers by the committee took place today at 5pm. (AS-Ns)
 b. The examination of the papers by the committee lasted three hours.
 c. The examination of the papers by the committee has been

interrupted.

- (16) a. #The paper/ table took place yesterday. (R-Ns)
 b. #?The paper/ table lasted three hours.⁴
 c. #The paper/ table has been interrupted.

SENs also pattern with AS-Ns in being satisfactory in the *during the N PP* construction which calls for a temporal extension:

- (17) a. during the movie/concert/game (SENs)
 b. during the examination of the paper by the committee (AS-Ns)
 c. #during the paper/table (R-Ns)

However, while the class of SENs represented by *concert, movie, game* in (14) above, shares with AS-Ns the property of being eventive (in a way to be defined later), they clearly do not necessarily project argument structure. Incidentally, it turns out that, as opposed to AS-Ns (and R-Ns for that matter) SENs may, but need not to, be derived from a verbal base (with or without derivational morphology) (e.g. *a movie, a concert, a game* vs. *a meeting, an attack*). SENs are thus eventive by the semantic tests above⁵, but not in the way AS-Ns are; i.e., presumably not in the strong/grammatical sense defined in the previous section. Recall that standard syntactic views on AS-Ns assume that what we call a 'grammatical event' must be contributed by an underlying verbal base (or VP), and is identified by the standard tests summarized in Table 1. SENs, which do not require a verbal base, by assumption, cannot involve a grammatical event.

Crucially, and as expected, SENs are not compatible with aspectual PP modifiers (*in/for PP*), and in that respect pattern with R-Ns (20) rather than AS-Ns (19), independently of the existence of a related verb (18a) or not (18b).⁶

- (18) a. the meeting/attack (*for three hours) (SENs)
 b. the concert/movie/boycott (*for three hours/months)
- (19) a. The president met with the Prime Minister (for three hours).
 b. the meeting of the president with the Prime Minister (for three hours) (As-Ns)
- (20) the paper/table (*for three hours) (R-Ns)

Further properties distinguish SENs from AS-Ns. Recall from Table 1 that R-Ns are compatible with frequency modifiers when in the plural only, while AS-Ns accept frequency modifiers in the singular. As (21) shows, in that respect again, SENs pattern with R-Ns in (9c), and not with AS-Ns in (8c).

- (21) the frequent concert*(s); the frequent movie*(s) (SENs)

In general there is no particular restriction on plurality and quantification with SENs (as for R-Ns and other nominals: *three exams; many dogs*); while certain restrictions on quantifiers, numerals and determiners, as illustrated in (22b), are commonly reported on AS-Ns (see Grimshaw 1990, Snyder 1998).⁷

- (22) a. many concerts; three movies (SENs)
 b. *several/two/these elections of John by the department (AS-Ns)

The count properties of SENs can be seen as a result of their being event sortals (cf. Bennett 1988, Snyder 1998). The fact that SENs can be counted is correlated to the fact that they can be individuated, unlike AS-Ns. The contrast is visible in existential constructions, which require an individuated N, and accept SENs but reject AS-Ns (cf. also Mourelatos 1978):

- (23) a. There is a movie/ are three movies starting at 5.
 b. *There is a destruction/ are three destructions of the city by the enemy starting at 5.

In sum, SENs have heterogeneous properties, sometimes similar to those of AS-Ns and sometimes not (and hence making them similar to R-Ns and other non-derived nominals). In view of these apparently contradictory properties, SENs have always been rather problematic and left aside in many recent accounts. If we follow a structural approach, as discussed earlier, and if we assume that both the projection of argument structure and the event interpretation depends on the presence of a verbal/(aspectual) structure, SENs do not involve a 'grammatical event', structurally built up in the nominal, in the sense defined in the previous section. We must conclude that there is another possible source of eventivity inside nominals, which is not structure-related. Nominals can refer to events in the absence of verbal bases and therefore of any verbal

layers. We will name this kind of eventivity, which is not inherited from a base predicate, a weak/conceptual(/or lexical) eventivity.

2.3. Interim conclusion

In order to describe event-related nominals, a first distinction is needed between strong/grammatical eventivity and weak/conceptual eventivity. Among the tests commonly used to identify an underlying event, or eventuality more generally, inside derived nominals, some pertain to the grammatical event, others to the conceptual/lexical event. The tests are split as indicated in Table 2. This understanding of the tests turns crucial to apprehend the properties of SENs specifically, and how they differ from AS-Ns. (More on this in Section 5).

Tests for underlying eventuality	Strong/ Grammatical eventuality	Weak/ Conceptual eventuality
(i) subject of <i>be on the table</i>	-	-
(ii) subject of <i>take place, be interrupted</i>	+	+
(iii) <i>during the N</i>	+	+
(iv) obligatory arguments	+	-
(v) <i>constant, frequent</i> possible with the singular	+	-
(vi) compatible with aspectual modifiers like <i>in/for three hours</i>	+	-

Table 2: Tests for strong/grammatical eventuality vs. weak/conceptual eventuality

3. Further issue: individual nominals

3.1. Eventive *-er* nominals

-Er derived nominals (often called ‘Agent’-nominals) present a further difficulty to an already complex notion of eventuality inside nominals. On the one hand, they denote individuals (rather than events); but on the other hand they have a strong/grammatical eventuality that can be linked to an AS-Ns structure (Alexiadou & Schäfer 2010; Roy and Soare (to appear)).

Nominals denoting participants in an eventuality have been characterized in the literature as being sensitive to a distinction between eventive and noneventive, on the basis of pairs like *saver of lives / life-saver* and *mower of the lawn / lawn-mower* (Rappaport Hovav and Levin 1992, Van Hout and Roeper 1998, among others). Only in the first case is the participant denoted by the nominal entailed to be involved in an actual event; no such entailment arises with the compound forms. Animacy plays a role here, as instrument *-er* nominals (*grinder, blender*) never involve a participation in an event (cf., Rappaport Hovav and Levin 1992; Roy and Soare to appear).

As argued in Roy and Soare (to appear), when interpreted as eventive, animate *-er* nominals have properties of strong/grammatical events rather than weak/conceptual events. This can be shown by the tests (iv) and (v) in Table 2, which discriminate between the two types of eventualities. With respect to these two tests (and we will come back to test (vi) later), eventive *-er* Ns pattern with AS-Ns (and not SENs). As argued by Rappaport Hovav and Levin, the eventive interpretation, which is highlighted by the presence of frequency modifiers, correlates with the obligatory realization of arguments. *-Er* nominals can take frequency modifiers, but only when they realize their arguments.⁸ In addition, frequency adjectives are possible with the singular (24b). Compare with AS-Ns in (8c) above.

- (24) a. the constant defenders *(of human rights)
b. this frequent consumer *(of tobacco)

On the basis of the similarities between (24) and (8c), a unified account for eventive *-er* Ns and AS-Ns, in terms of strong/grammatical eventuality, seems plausible. Recent works have argued for such an account, but assume further distinctions within the class of eventive *-er* Ns - cf. Alexiadou and Schäfer (2010), Roy and Soare (to appear), in particular, in terms of the episodic/dispositional distinction. According to Alexiadou and Schäfer (2010), dispositional *-er* nominals have event-related properties and share the same syntactic structure as episodic *-er* nominals. Both are eventive and involve verb-like internal structure, i.e., Aspect and Voice heads (in a standard Distributed Morphology approach), but they differ in terms of aspectual specifications. Episodic and dispositional meanings are, in this approach, two flavors of an aspectual head necessarily present in eventive nominals.

- (25) a. Dispositional *-er* Ns
 i. fire-fighter, live-saver, baker, teacher
 (educated but not necessarily experienced)
 ii. $[_{NP} \text{-er} [_{AspP-DISPO} [_{VoiceP} \text{ } \lambda [_{VP} \text{ } eV [_{RootP} \checkmark]]]]]]$
- b. Episodic *-er* Ns
 i. saver of lives, fighter of the fire
 (necessarily experienced in action)
 ii. $[_{NP} \text{-er} [_{AspP-EPISO} [_{VoiceP} \text{ } \lambda [_{VP} \text{ } eV [_{RootP} \checkmark]]]]]]$

For Roy and Soare (to appear), dispositional and episodic *-er* Ns involve a full verbal structure akin to the one found in AS-Ns, and differ by the type of quantification on the event variable, namely existential vs. generic:

- (26) a. Dispositional *-er* Ns
 GEN $[_{NP} N [_{AspEvP} \text{-er} [_{AspEv} \text{ } \lambda [_{VP} \text{ } eV [_{AspQP} [_{RootP} \checkmark]]]]]]$
- b. Episodic *-er* Ns
 $\exists [_{NP} N [_{AspEvP} \text{-er} [_{AspEv} \text{ } \lambda [_{VP} \text{ } eV [_{AspQP} [_{RootP} \checkmark]]]]]]$

They show, on the basis of French data, that both episodic and dispositional Ns allow event-related adjectival modification, which can be of two types; *frequency* adjectives, allowed by episodic *-er* Ns only, and *big/happy* adjectives with an event-related meaning (cf., Larson 1998), allowed by both dispositional and episodic *-er* Ns. The interpretive contrast between episodic and dispositional Ns comes from their internal argument, either specific or nonspecific, leading to a particular vs. generic underlying eventuality. For further details regarding adjectival modification, and their event-related meanings in particular, as well as the correlation between event type and nominal meanings, we refer the reader to Roy and Soare (to appear).

- (27) Dispositional *-er* Ns
 a. *Nous avons interviewé un vendeur fréquent de voitures/ les
we have interviewed a seller frequent of cars the
 consommateurs fréquents de drogue.
consumers frequent of drug
 "We have interviewed a frequent car-dealer/ the frequent drug users."
 b. Nous avons interviewé un petit vendeur de voitures/ les
we have interviewed a small dealer of cars the

- gros consommateurs de drogue.
big consumers of drugs
 "We have interviewed a small car-dealer/ the big drug users."
- (28) Episodic *-er* Ns
 a. Un consommateur fréquent de plusieurs drogues douces/ de
a consumer frequent of several drugs soft of
 LSD a témoigné au procès.
LSD has testified at.the trial
 "A frequent user of several soft drugs/ of LSD testified in court."
 b. Un heureux/ gros consommateur de plusieurs drogues douces/
a happy big user of several drugs soft
 de LSD a témoigné au procès.
of LSD has testified at.the trial
 "A happy/big user of several soft drugs/ of LSD testified in court."

Crucially, no event-related properties can be observed in the case of instrument *-eur* nominals. Event-related meanings of adjectives are never allowed. Instruments differ in a clear way from dispositional Ns in (27).

- (29) Instruments⁹
 a. #Un broyeur fréquent nous serait utile.
a grinder frequent us would.be useful
 "A frequent grinder would be useful to us."
 b. #Un gros broyeur nous serait utile.
a big grinder us would.be useful
 "A big grinder would be useful to us."

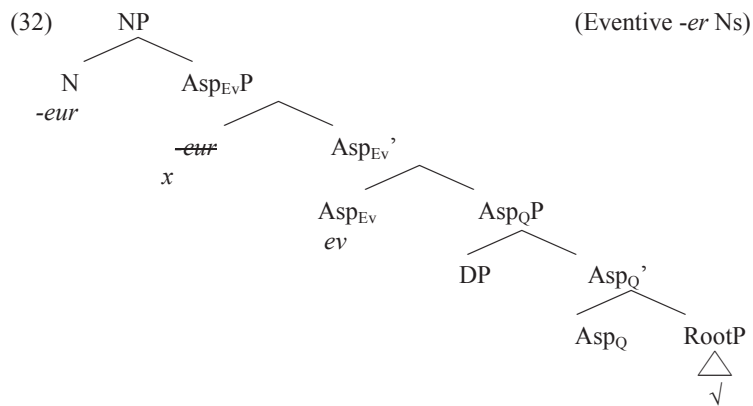
Moreover, instruments never project true arguments. In particular, definite-specific objects are always ruled out, which we take to indicate that instruments do not take arguments (30) and that when they appear with a *de*-phrase, the latter is a mere modifier (31). The nonargumental status of *de*-phrases with instruments is further supported by the possibility of substituting them with a purpose *à*-phrase adjunct (never found with true arguments).

- (30) a. L'aspirateur (*de la poussière) n'a pas bien fonctionné.
the aspirator (of the dust) not-has well worked
 "The vacuum-cleaner (of the dust) didn't work well"

- b. Le photocopieur (*de l'article) a été très efficace.
the photocopier (of the paper) has been very efficient
 "The copy-machine (of the paper) has been very efficient"

- (31) a. broyeur de végétaux vs. dresseur de lions
blender of vegetables tamer of lions
 "vegetable blender" "lion tamer"
- b. broyeur à végétaux vs. *dresseur à lions
blender at/to vegetables tamer at/to lions
 "vegetable blender"

Accordingly, instrument *-er* Ns must be treated on a par with R-Ns, as simple, root-derived nominals. A structurally built-in grammatical event must be assumed in the two classes of eventive (animate) *-eur* Ns, which must share the structure of AS-Ns in (12). Instrument Ns pattern with root-derived nominals with which they share the structure (13). Accordingly, they have the following structure, respectively:



However, if episodic/dispositional *-er* nominals are a form of AS-Ns, involving a case of strong/grammatical event, some differences between

process-denoting AS-Ns and individual-denoting eventive *-er* Ns need to be addressed. We turn to this issue below.

3.2. Some unexplained differences

The presence of a grammatical event inside *-er* Ns has often been questioned and is the subject of some controversies. Proponents of the noneventive view, invoke two types of evidence that they take as arguing against a unified treatment of process AS-Ns and individual *-er* Ns. Baker and Vinokurova (2009) argue on the basis of the grammaticality of adverbials in pairs like (34) for separating process AS-Ns and *-er* Ns, assigning a 'purely nominal' status to the latter, which, according to them, are deprived of any internal verbal structure (even in languages in which they are able to assign Accusative case to their object, like Sakha). Absence of adverbial modification is not a reliable test for absence of grammatical events, however, as adverbs are also precluded with many process AS-Ns (even in cases where they are semantically compatible with the base verb) (35).

- (34) a. finding the wallet quickly
 b. *the finder of the wallet quickly
- (35) a. the enemy found/destroyed the city quickly
 b. the finding/destruction of the city by the enemy (*quickly)

Another piece of evidence taken to argue against a unified treatment of process AS-Ns and *-er* Ns concerns the test (vi) in Table 2: eventive *-er* Ns never allow for aspectual PP modifications typically found with process-denoting AS-Ns. This contrast is taken by Borer (2012), for instance, to suggest the purely nominal (i.e. not verbal based) character of *-er* Ns altogether.

- (36) a. le domptage des chiens (pendant des années)
the taming of the dogs for many years
 b. la vente du chien (en cinq minutes)
the sale of the dog in five minutes

- (37) a. le dompteur des chiens (*pendant des années)
the tamer of the dogs for many years

- b. le vendeur du chien (*en cinq minutes)
the seller of.the dog in five minutes

This contrast was originally noted for Greek by Alexiadou et al. (2000) (and reported in Alexiadou 2001) and taken as an indication of a diminished verbal character for *-er* nominals, even in their eventive meaning.

- (38) a. *i damastes ton fotonion mesa se/ gia enan eona
the tamers the-gen photons within for a century
 b. *o katharistis tu ktiriu epi ena mina telika apolithike
the cleaner the-gen building for a month finally got.fired

Alexiadou et al. (2000) suggested that an explanation for the ungrammaticality of aspectual PPs would rely on the fact that *-er* Ns lack an Asp(ectual) projection, which would rule out adverbial modification across the board—and manner modification can only be spelled out as an adjective. This in turn, as also suggested by Alexiadou (2001), relates to the semantics of *-er* nominals, which denote individuals, while process nominals denote events. The difference is, thus, expected to the extent that aspect is relevant for processes and not for individuals. However, a precise implementation of the difference has never been proposed. In our view, and since we accept a split between eventive and noneventive (i.e., instrument) *-er* Ns, the issue remains to understand the ban on aspectual PPs with individual Ns, as they involve a strong/grammatical event. The properties of eventive *-er* Ns are the combined result, as we shall argue below, of their involving both a grammatical/structurally built-in event and an individual variable. We will turn to this account in the next section.

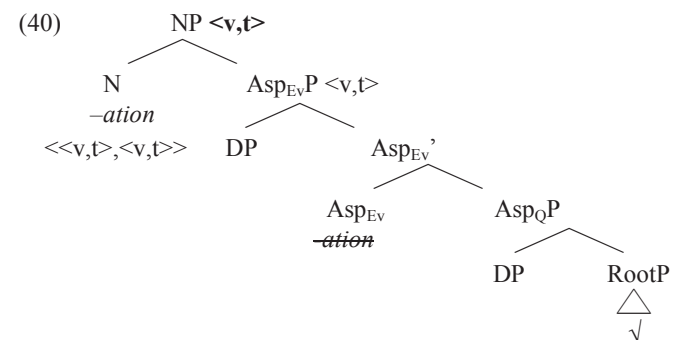
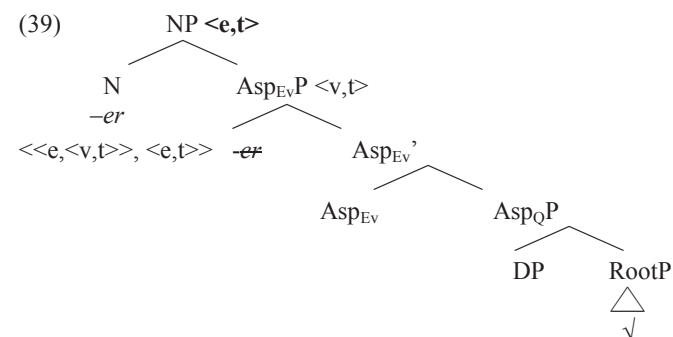
4. Event nominals and semantic types

4.1. Event vs. individual argument

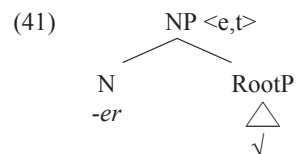
One fundamental difference between eventive *-er* Ns and process AS-Ns that, we will argue, has a major bearing on their contrastive properties, concerns their denotations. Evidently, on the one hand *-er* Ns denote individuals (*the driver* = the person who drives), whereas on the other hand process AS-Ns denote events properly speaking (*the driving of the car* = the event of driving the car). The difference is associated to the semantic properties of the nominal suffixes themselves (*-er* vs. *-ation*, -

ing, etc.), and has structural consequences. As argued in Roy and Soare (to appear), the nominalizing suffix *-er*, which picks out an individual, is assumed to realize the external argument (i.e., occupies the specifier of $Asp_{Ev}P$; cf., (32) above).¹⁰ Following Borer (1999; 2003), the nominalizing suffix *-ation*, for instance, which picks out an event, is the realization of the aspectual head Asp_{Ev} responsible for introducing an eventuality. Hence, even though eventive *-er* Ns and process AS-Ns share the same internal structural frame (that of AS-Ns rather than root derived R-Ns), the semantic difference in their denotation is expressed structurally as well. Cf. the representations in (32) vs. (12).

We propose that the two types of nominals correspond to a semantic difference between nouns of individuals and nouns of events. Assuming that nominalized constructs are NPs, and that NPs are predicative by nature (while referentiality would require a DP layer), we claim that the former take an individual argument, hence are of type $\langle e, t \rangle$ (39); whereas the latter take an event argument, hence are of type $\langle v, t \rangle$.¹¹



For process AS-Ns, type $\langle v, t \rangle$, the outcome of the nominalization is a (nominal) predicate of events (40). The event semantics is introduced by the Asp_{Ev} phrase complement of N° . As with AS-Ns, Asp_{Ev} also introduces the event component in eventive *-er* Ns (39); however, both differ in the semantics of their nominalizing suffix and hence the interpretation of their resulting nominalization. The individual reading in (39) leads to the participant/agent interpretation as often characterized. Importantly, the source of the eventive interpretation in both (eventive) *-er* Ns and process AS-Ns is the presence of the event variable associated with Asp_{Ev} . Both *-ation* and (eventive) *-er* suffixes take constituents of type $\langle v, t \rangle$ as argument. Other *-er* nominals, i.e. instruments (see Roy and Soare (to appear)), are noneventive and do not involve an event variable at all. In that case, we will assume a homophonous *-er* suffix that is noneventive and takes a bare root as complement; the resulting nominalization is consequently of type $\langle e, t \rangle$ only:



The important point here is that both process AS-Ns and eventive *-er* nominals involve an event variable, and hence share a strong/grammatical eventuality interpretation. They only differ in the type of the outcome nominal. We claim in the rest of this section that this difference alone plays a crucial role in explaining the compatibility / incompatibility of the two sorts of eventive nominals ($\langle e, t \rangle$ vs. $\langle v, t \rangle$) with event-related modifiers, namely aspectual PPs. The relevant data have been presented above and will now be discussed.

4.2 Locality of Predicate Modification

The puzzling difference between AS-Ns and eventive *-er* nominals concerning temporal/aspectual adjunct modifiers, has sometimes been taken as evidence that *-er* Ns are never eventive. We argue instead that they mark the type difference between $\langle e, t \rangle$ and $\langle v, t \rangle$ nominals, rather than the absence of underlying eventuality itself.

Temporal and aspectual event modifiers are structurally adjuncts. We assume that they combine with the nominal they modify via the rule of Predicate Modification (PM) stated in Heim and Kratzer (1998: 65).

- (42) Predicate Modification
 If α is a branching node, $\{\beta, \gamma\}$ is the set of α 's daughters, and $[[\beta]]$ and $[[\gamma]]$ are both in $D_{\langle e, t \rangle}$, then
 $[[\alpha]] = \lambda x \in D_e . [[\beta]](x) = [[\gamma]](x) = 1$.

PM is a conjunction operation. PM amounts to ‘intersective modification’ (i.e., Conjunctive composition) and captures the intersective reading of predicate modifiers:

- (43) $[[\text{city in Texas}]]$
 a. $\lambda x \in D_e . [[\text{city}]](x) = [[\text{in Texas}]](x) = 1$
 b. $\lambda x \in D_e . x$ is a city and x is in Texas

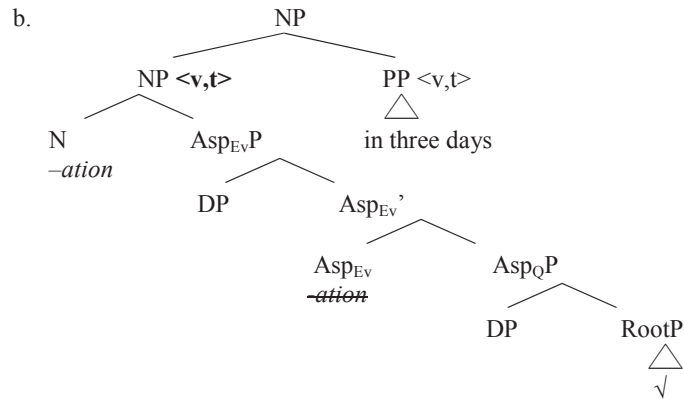
PM predicts that the intersective reading of an adjunct modifier and the nominal is only possible at the level where they merge. Importantly, however, PM is only applicable when the two constituents β and γ are of the same semantic type. In their original proposal, both the β and γ elements are of type $\langle e, t \rangle$ (for predicates of individuals). Here, however, we extend the system to include a type difference between predicates of events, type $\langle v, t \rangle$ and predicates of individuals, type $\langle e, t \rangle$. True to the basic principle, PM is only possible between two expressions of the same $\langle v, t \rangle$ or $\langle e, t \rangle$ type.

If modifiers are adjoined at the $\text{Asp}_{\text{Ev}}\text{P}$ level (i.e., associated to the underlying grammatical eventuality; cf. (39)-(40)), PM should be applicable in both eventive *-er* Ns and AS-Ns alike, and both classes of nominals should be equally compatible with the relevant aspectual PPs. The event modifying PPs are possible with AS-Ns but not with *-er* nominals, however. This suggests that the nominal type plays a role in allowing PM, and consequently that PM takes place at a level where the distinction is expressed. Concretely, it means, we propose, that adjunction takes place at the NP level, i.e. “after” nominalization rather than before nominalization.

The ban on aspectual PPs can be explained solely on the basis of the type difference between eventive nominals that take individuals or events. The basic intuition is that *driver* (type $\langle e, t \rangle$) is not compatible with *for two hours* modifiers (type $\langle v, t \rangle$) simply because it is a predicate of individual and not of event. With process AS-Ns, the type of the PP

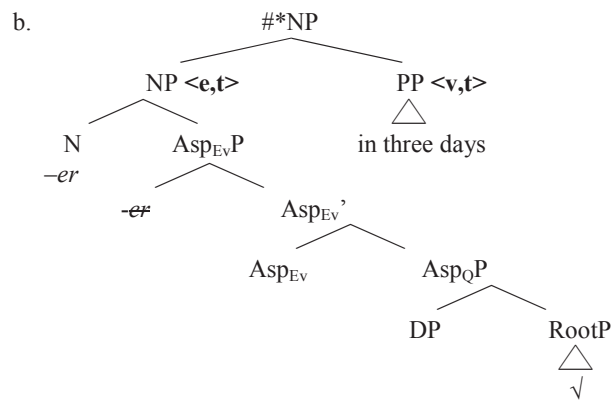
modifier matches the type of the nominal and the rule of compositionality can be applied:

- (44) a. the destruction of the city by the enemy in three days



While for eventive *-er* Ns, the type of the event modifying PP mismatches that of the nominal, which prevents PM from deriving the compositional meaning of the nominal complex:

- (45) a. *the painter of the room in three days



By definition, PM is a local compositional rule. Aspectual PPs can only be interpreted intersectively with respect to the predicate they immediately modify. Since aspectual PPs can only be interpreted intersectively with respect to the eventuality (and only the eventuality) they are directly combined with, structurally, it must correspond to the eventuality introduced by the functional projection they are directly adjoined to. Hence, modifiers adjoined at the NP level are interpreted intersectively with NP. This is only possible with AS-Ns: aspectual PPs are intersective with the noun:

- (46) [[the destruction of the city by the enemy in 3 days]]
 a. $\lambda e \in D_v. [[\text{destruction of the city by the enemy}]](e) = [[\text{in 3 days}]](e) = 1$
 b. $\lambda e \in D_v. e$ is a destruction of the city by the enemy and e is (completed) in 3 days.¹²

As already discussed, this is excluded with eventive *-er* Ns because of type mismatch. If we wanted to adjoin an aspectual PP in the frame in (44), adjunction (and PM) could only take place at the $\text{Asp}_{\text{Ev}}\text{P}$ level (due to the type constraints). This situation has, however, one important consequence for event nominals and for the understanding of how eventive *-er* Ns and process AS-Ns differ in their respective interpretation, even though both involve an underlying grammatical eventuality. Very clear predictions are made in terms of interpretation of the adjuncts: the aspectual PPs can only be interpreted intersectively with respect to $\text{Asp}_{\text{Ev}}\text{P}$, and not to the NP. In other terms, PPs will be intersective with the embedded event and not with the (complex) NP. Cases of event modifiers inside the NP are possible with *-er* Ns and have been noted in the literature on French nominalizations (cf., in particular Kerleroux 2007). They behave in a systematic way: they are intersective with respect to the inner event, but non-intersective (and that may include a variety of interpretations; e.g., subjective) with respect to the N itself. Consider the following example:

- (47) les pêcheurs sous la glace (=subset of fishers)
 the fishers under the ice
 "under-ice fishers" (due to Kerleroux 2007)

It has been noted that the nominal in (47) can under no circumstances describe individuals that are fishing and located under the ice. However, the important point is that the locative PP is interpreted intersectively with

respect to the fishing (and *not* the fisher(s)): the fishing must take place under the ice, while no location is specified for the fishers. Modifiers at the VP /AspP level will always lead to a nonintersective reading for NP (i.e. a subset). Accordingly, going back to the original examples, (48) is possible but only when understood as subclasses of a (prototypical) class of nominals, and *not* in an event interpretation. Concretely, (48a) for instance, cannot be interpreted as *the x such that x is a runner and x is in 9 seconds* (because type mismatch prevents PM from applying at the NP level); but can be interpreted (with more or less pragmatic felicity; cf. (48) vs. (49)) as a subclass of runners (i.e. those than run in less than 9 seconds, with respect to a contextually determined run or running).

- (48) les sprinters en moins de 9 secondes
the runners in less than 9 seconds
 "the runners in less than 9 seconds"
- (49) a. le donneur de sang (#?en cinq minutes)
the giver of blood in five minutes
 "the blood donor (#?in five minutes)"
 b. le dompteur des lions (#?pendant des années)
the tamer of the lions for many years
 "the lion tamer (#?for years)"

To conclude, adjunct PPs (including aspectual *in/for*-PP) are never allowed with *-er* Ns, as adjunction is precluded at the NP level. If adjunction takes place it can only be at the Asp_{Ev}P level, leading systematically to a subsective interpretation with respect to NP (but intersective with respect to the lower Asp_{Ev}P). The subsective reading, however, is constrained by pragmatic reasons. Nominalization forms a local domain where the meaning is computed first and then further modifiers are possible, provided that they are of the right semantic type for PM to apply. Adjunction at the Asp_{Ev}P level is possible but is interpreted as intersective with respect to the event only (via PM); adjunction is, in this case, not visible/accessible for the individual.¹³

Our results confirm what has been claimed in the literature since Grimshaw (1990); Van Hout and Roeper (1998); Borer (1999), namely that aspectual modifiers signal the presence of an underlying aspectual/verbal structure. However, the underlying event is only visible to adjuncts if the nominalization expresses a predicate of events and not of individuals. For a nominal to be built on an underlying event (hence a verbal/aspectual structure) does not equate to express a predicate of

events. In that sense, there is no incompatibility between the fact that *-er* Ns denote individuals and the fact they, nevertheless, involve a grammatical event.

5. Extension to simple event nominals (SENs)

This view of events inside nominals, forced by semantic compositionality, allows us in turn to gain some understanding of the Simple Event Nominals (SENs) traditionally left aside as problematic cases. Recall that SENs are interpreted as related to an event (e.g., *movie*, *meeting*, *concert*), yet they do not pass the tests for a strong/grammatical eventuality, but only the tests for a weak/conceptual eventuality: while they do accept predicates like *be interrupted*, *last x time*, and enter in the *during the N* construction, they do not (i) project arguments, (ii) allow *frequency* adjectives in the singular, (iii) allow PP aspectual modifiers like *in/for x time* (cf., Table 2).

Since SENs lack a grammatical event, they are not syntactically derived from a verbal/aspectual structure and we assume that they are simply formed from a root (whether they are morphologically complex as in the case of *meeting* or not, as in *concert*, *movie*, *attack*). Accordingly, they pattern structurally with R-Ns (including instrument *-er* Ns) rather than AS-Ns. Cf. (41).



If this is correct, then the difference between SENs and AS-Ns boils down to the same semantic type difference between <e,t> nominals on the one hand and <v,t> nominals on the other. What we have described as grammatical vs. conceptual eventuality interacts with the type difference: conceptual eventuality is found with nominals that are of the <e,t> type, whereas grammatical eventuality is found with *event* denoting nominals that are of type <v,t>. In other words, SENs differ from AS-Ns in that they take an individual as argument (rather than an event); it just happens that for SENs that individual variable is an abstract entity, conceptually an event (rather than a concrete object as with *table*, *book*, and so on). Accordingly, SENs share properties with other R-Ns that are associated

with reference to individual entities (including abstract ones): they are count and allow discrete quantification (*three movies, many concerts*; cf. (22a)), they do not take frequency adjectives in the singular (**the frequent concert*; cf. (21)) and do not take aspectual *in/for* PPs (52b). They differ, however, from other R-Ns in appearing with predicates like *took place, last x time* which seek for an event-denoting subject. However, this is only the result of their denoting abstract conceptual events (rather than concrete entities). In terms of the nominalization, for AS-Ns, (51a) and (51b) are structurally and semantically related: the nominal form in (b) is derived from the verbal form in (a) and hence they share common semantic features. By contrast, for SENs, (52a) and (52b) are only conceptually related in the sense that their roots share the same conceptual/lexical content, but do not have internal grammatical structure.

- (51) a. On a construit la cathédrale (en 100 ans).
one has built the cathedral in 100 years
 b. La construction de la cathédrale (en 100 ans)
the building of the cathedral in 100 years
- (52) a. Les membres du projet se sont réunis (pendant 3 heures).
the members of the project refl have met for 3 hours
 b. La/une réunion des membres du projet (#pendant 3 heures)
the/a meeting of the members of the project for 3 hours

As earlier, the incompatibility of SENs with *in/for* PPs derives from a type mismatch between $\langle e, t \rangle$ nominals and $\langle v, t \rangle$ type adjuncts. Nothing special needs to be said of SENs in that respect; nor regarding frequency modification. As expected, SENs accept frequency adjectives when in the plural only, and thus pattern with R-Ns. The *frequent* modifier is adjoined at the NP level and forces pluralization of the individual with $\langle e, t \rangle$ type Ns. By contrast, recall that frequency adjectives do not force the plural on the nominal when they quantify over the inner event introduced by AspEvP in eventive *-er* Ns and AS-Ns.

In sum, SENs can be straightforwardly integrated in our type semantic account as $\langle e, t \rangle$ Ns and their apparently mixed properties can be derived from their semantic type and the special kind of abstract object they denote.

6. Conclusion

To conclude, event-related nominals (and nominalizations) form a rather heterogeneous group that is traditionally split into three coherent classes: AS-Ns, SENs, eventive *-er* Ns. They share event related properties that distinguish them from noneventive nominals altogether (R-Ns). The distinct properties of the three groups of event-related nominals can be accounted for on the basis of two interacting notions of event inside nominals. On the one hand, we have argued that a fundamental difference exists between grammatical eventuality, associated to the structural projection of VP/AspP and hence a verbal syntactic base, and conceptual eventuality that is expressed lexically on roots. On the other hand, the semantic type of the outcome of nominalization turns out crucial in distinguishing nominals that denote individuals (type $\langle e, t \rangle$) and those that denote events (type $\langle v, t \rangle$). The two notions interact in a very straightforward way, leading to the typology of nominals in Table 3.

NP types	Underlying eventuality	Nominal form
$\langle e, t \rangle$	conceptual eventuality	SENs: <i>movie, play, concert</i>
$\langle e, t \rangle$	grammatical eventuality: AspEvP $\langle v, t \rangle$	eventive <i>-er</i> Ns: <i>driver, consumer</i> (e.g., <i>the driver of the truck to Paris</i>)
$\langle e, t \rangle$	no eventuality	R-Ns (concrete individual entities): <i>table; exam; boy</i>
$\langle v, t \rangle$	conceptual eventuality	**impossible
$\langle v, t \rangle$	grammatical eventuality: AspEvP $\langle v, t \rangle$	process AS-Ns: <i>destruction, examination, forming</i> (e.g., <i>the destruction of the city by the enemy</i>)
$\langle v, t \rangle$	no eventuality	**impossible

Table 3: Typology of eventive and noneventive nominals

Nominals of type <e,t> come in three flavours. They may not involve any event (and thus be interpreted as concrete entities); or involve an underlying eventuality, which can be a conceptual one only (SENs) or a grammatical one (eventive *-er* Ns). For nominals of type <v,t> the logically possible combinations are much more restricted, however. As <v,t> nominals are eventive in the strong/grammatical sense (i.e., they involve an event variable that is introduced, by assumption, structurally), they require a grammatical event: <v,t>. They cannot involve a conceptual event or no event at all. The attested classes of nominals are, thus, precisely the ones that we should expect in our system.

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² We use the following abbreviations: *ev*–event; $\sqrt{\quad}$ –Root; *gen*–Genitive, *refl*–reflexive pronoun.

³ We use the terms 'event' and 'eventivity' in a loose sense that does not discriminate between events properly speaking and states, and interchangeably with the term 'eventuality' introduced by Bach (1986).

⁴ There is an interpretation for (16b) in which *lasted 3 hours* applies to the lifetime of the subject (here a concrete entity) and not to an event duration per se. Nevertheless, the conclusion that R-Ns are different from both SENs and AS-Ns is supported by their respective behavior with the other predicates, namely *take place*, *be interrupted*, among others.

⁵ Similarly, the literature invokes the subject position of *occur*, *start* or *finish* (see e.g. Vendler 1967, Snyder 1998 among many others). We take all these tests as broadly indicating semantic eventivity in nominals, and do not broach on further semantic distinctions like the one between events and propositions, pointed at in the literature.

⁶ As pointed out to us by a reviewer, SENs are compatible with another type of apparently temporal modifiers, namely *of x time*. Structurally, this modifier is not a VP modifier, however, and involves clear nominal modification; e.g. *a meeting/concert/movie of three hours in length*; we leave it aside at it is not relevant to the question of an internal grammatical event.

⁷ Recent works on pluralization have shown that AS-Ns may sometimes accept plurals and discrete quantification when the nominals denote a bounded event; Borer (2005); Alexiadou et al. (2010). What is important here is that no such requirement is made for SENs.

⁸ As discussed in the literature, frequency adjectives are often ambiguous between (at least) three readings: internal, adverbial and generic interpretations (cf., in particular, Gehrke and McNally 2012). Typical cases of frequency adjective + N, that do not involve argument structure (e.g., *an occasional sailor*, *an occasional beer*) are generic or adverbial. We are not concerned with these cases here, and refer the reader to Roy and Soare (to appear) for further discussion.

⁹ As specified in Roy and Soare (to appear), the (b) example is ungrammatical under the right, i.e., event related, interpretation and in argumental position. Predicative uses generally seem to render the eventive reading accessible; compare *I bought a big grinder* (# "a tiny machine that grinds much") vs. *This is a big grinder* (ok: "a tiny machine that grinds much"). Predication may, however, contribute its own eventuality; for that reason we focus our discussion on argumental nouns exclusively.

¹⁰ For the syntactic derivation of *-er* nominals we assume the results of Roy and Soare (to appear).

¹¹ In type semantics, *e* stands for entity; *v* stands for events. We use the following types: $\langle e, t \rangle$ for predicates of individuals, $\langle v, t \rangle$ for predicates of events, and $\langle e, \langle v, t \rangle \rangle$ for a predicate with an open argument position.

¹² Preposition *in* gives the duration of the agent action that brings about the telos, for a telic predicate (Giorgi and Pianesi 2000)

¹³ A phase-based approach to nominalization seems relevant to account for the domains of adjunction and interpretation (see, Chomsky 2008; Roeper and Van Hout 2011, Bauke and Roeper to appear). The details of such an analysis would need to be worked out and we leave a proper implementation open for future research.

On the internal eventive properties of -er nominals

Abstract

Deverbal -er nominals (*driver, lifesaver, blender*) may have eventive properties as they may or may not entail an actual event. For Rappaport Hovav and Levin (1992), eventivity is linked to animacy. More recent studies have concluded that eventivity is always there but comes in different aspectual flavors (e.g. episodic/dispositional Alexiadou and Schäfer, 2010). This paper argues, on the basis of French data, that both views are partially correct in the sense that instruments are never eventive, and that eventive nominals (always animate) fall into two groups depending on whether they involve an episodic event or a generic one. The eventive properties are demonstrated by the interpretation of -*eur* Ns in combination with modifying adjectives, and specifically the event-related meanings of attributive adjectives (cf., Larson 1998), a context often neglected by previous studies. For eventive nominals, the episodic/generic sense is contributed by the argument structure under the assumption that eventive nominals are built on complex verbal structure lacking with non-eventive Ns. We argue that -*eur* nominals can be integrated in a larger view of deverbal nouns in a syntactic approach to complex word formation that distinguishes nouns derived from roots and argument structure nominals derived from full verbal phrases. Thus we contribute to a view in which the correlation between event reading and argument structure (as commonly assumed for event-denoting deverbal nominals since Grimshaw 1990) is uniformly maintained.

Keywords: nominalization, deverbal -er nominals, argument structure, event structure, instruments, dispositions, syntax-lexicon interface.

1. Introduction: issues with -er nominals

The literature on deverbal -er nominals (Rappaport Hovav and Levin 1992, van Hout and Roeper 1998, Alexiadou and Schäfer 2010, among others) commonly distinguishes two classes: eventive (*saver of lives, mower of the lawn*) and non-eventive nominals (*life-saver, lawn-mower*). The observed interpretive difference between the two classes concerns event entailment: nominals in the first class entail occurrence of an event; while nominals in the second class do not. For instance, it is often reported that while *a*

saver of lives has necessarily saved lives, *a lifesaver* has not necessarily been engaged in any event of saving a life. In actuality, noneventive -er nominals have been considered to encompass both dispositional nouns (*life-saver, lawn mower*) and instruments (*mixer, blender, grinder*), for which an eventive reading is also excluded. In both cases, the entity denoted by the nominal is trained or designed for a function but does not have to be involved in an actual event (cf., Alexiadou and Schäfer 2010's *dispositional reading* and McIntyre 2011's *purpose interpretation*).

A second standard assumption regarding -er nominals is that the eventive reading correlates with the obligatory presence of argument structure. As shown by Rappaport Hovav and Levin (1992), the eventive reading, forced by event related modifiers like *constant, frequent* adjectives in (1), is correlated with argument realization (via the insertion of an argumental *of*-phrase). Hence, while phrasal formations such as *mower of the lawn, saver of lives* receive an eventive interpretation, synthetic compounds such as *lawn mower, lifesaver, firefighter*, which do not involve an argument, never allow the eventive interpretation (see also Borer 2012).

- (1) a. People will probably re-elect the constant defender *(of the government's policies).
 b. A frequent consumer *(of tobacco) buys more than 3 packs a week.
 c. A (*frequent) teacher / a (*frequent) firefighter is the head of our school.

As expected, (inanimate) instrument -er nominals, which do not have an argument structure, also lack an eventive reading, as attested by their incompatibility with event-oriented adjectival modification.

- (2) a. Our only transmitter (*to headquarters) had broken down.
 b. The (*frequent) transmitter produces strong radio waves.

According to this description, -er nominals further instantiate the long-acknowledged correlation between event interpretation / argument structure in the context of process-denoting vs. result deverbal nominals more generally (cf., Grimshaw 1990). The literature on deverbal nominalizations consensually assumes a two-fold partition between 'Complex Event' nominals and 'Result' nominals (Grimshaw 1990), later re-named 'Argument-Structure' nominals (AS-Ns) and 'Referential'-nominals (R-Ns) (Borer 1999, 2005a), a terminology we will adopt in this paper. The availability of an

eventive reading for deverbal nominals has been shown to correlate with the projection of argument structure; both present with AS-Ns and absent with R-Ns. Event modifiers like *constant*, *frequent*, *in three hours*, agent-oriented adjectives like *deliberate*, *intentional* or the presence of *by*-phrases render the realization of the arguments obligatory; cf., (3). In turn, in (4), in the absence of argument structure, event-oriented modifiers become impossible:

(3) AS-nominals

- a. the frequent expression *(of one's feeling) is desirable.
- b. the instructor's deliberate examination *(of the papers) took a long time.
- c. the examination *(of aggressive feelings) by patients.
- d. the examination *(of the cat) in three hours.

(4) R-nominals

- a. the (*frequent) examination *(of the papers) was on the table.
- b. the (*deliberate) exam *(of the students).
- c. the exam *(by linguists) was on the table.
- d. the expression *(of her feelings) *(in a second) on her face.

In syntactic approaches to deverbal nominal formation, the correlation between eventive interpretation and obligatory argument structure is captured by assigning different structural representations to AS-Ns and R-Ns. The eventive reading with AS-Ns is brought in by a full-fledged verbal structure inherited from the underlying verbal (hence eventive) structure. Borer (2003, 2005b), for instance, implements the correlation between event structure and argument structure by proposing that arguments are introduced by functional heads, one of which is also responsible for introducing the event variable. In this paper, we will by and large adopt Borer's framework, but see Alexiadou (2001); van Hout and Roeper (1998) among others for alternative implementations. In the structure of AS-Ns (5a), AspEv introduces the external argument and AspQ the internal one, likewise severed from the root. AspEv is responsible for introducing the event variable *e*. R-Ns in (5b), are built directly from a root, and thus present no verbal/aspectual layers, which captures both the lack of the eventive reading and of arguments.

(5) a. AS-nominals:

$$[DP/INP\ N\ [_{AspEvP}\ [_{AspEv}\ -ation\ e]\ [_{AspQP}\ [_{AspQ}]\ [_{rootP}\ form\]]]]$$

b. R-nominals:

$$[DP/INP\ N\ -ation\ [_{rootP}\ form\]]$$

Going back to *-er* nominals, as stated above, earlier descriptions have argued that eventive reading patterns with phrasal *-er* nominals while non-eventive reading patterns with compounds (Rappaport Hovav and Levin 1992). If this is correct, thus, the correspondence between event reading and argument realization seems to hold as well, and, as we shall argue, it appears reasonable to extend the distinction between AS-N vs. R-Ns in (5) to *-er* nominals.¹ The recent literature has mostly abandoned the distinction however, and for sometimes completely divergent reasons. For Alexiadou and Schäfer (2010), all derived *-er* nominals are eventive; some episodic and others dispositional. Instruments are analyzed as dispositional eventive Ns. Their arguments come from interpretation, from morphology and, specifically, the overt verbal derivational morphology found in some derived instruments; e.g., *humid-ify_v-er*, and from the fact that instruments always express thematic roles in the theta-grid of the nominalized predicate. These facts are taken as evidence for an underlying verb, and hence an eventive meaning. Alexiadou and Schäfer (2010) argue that the sole difference between episodic and dispositional nominals (including instruments) is in the kind of aspectual head they involve (episodic vs. dispositional), and which is responsible for the actual/non-actual event reading in their interpretation. What matters, thus, for distinguishing *lifesaver* and *saver of lives*, from their perspective, is not whether the arguments are projected or not, as, by assumption, they always are, but whether the projected arguments are specific (leading to the episodic interpretation) or generic (leading to the dispositional interpretation). We reproduce their structures in (6).

(6) a. episodic Ns

$$[NP\ -er\ [_{AspP}\ Asp-EPIS\ [_{VoiceP}\ [VP\ [_{RootP}\]]]]]]$$

b. dispositional Ns

$$[NP\ -er\ [_{AspP}\ Asp-DISP\ [_{VoiceP}\ [VP\ [_{RootP}\]]]]]]$$

¹ Incidentally, note that the correlation holds for deadjectival nominals as well, with a stative eventuality; cf., Roy (2009).

Other recent works on *-er* nominals argue for the opposite view that all *-er* nominals are non-eventive (Baker and Vinokurova 2009, Borer 2012, in press). This view is supported by the incompatibility of *-er* nominals with some modifiers standardly taken as diagnostics for grammatical event inside AS-Ns. One such modifier is the aspectual *in/for*-PP, considered a robust indication for grammatical eventivity inside nominals since Grimshaw (1990). According to this criterion, verbal structure *is* present in AS-Ns (7); but must be absent in *-er* nominals (8). (Examples from Borer 2012).

(7) The breaking of the door (by Mary) (in seven minutes) (in order to retrieve the luggage).

(8) The breaker of the door (*in seven minutes) (*in order to retrieve the luggage).

The fact has originally been reported in Alexiadou (2001) for Greek, who suggests, however, that the contrast might only be related to the different denotation (individual vs. event) of the derived nominal. A formal account based on the shared intuition that individual/event denotations play a crucial role in allowing PP modification is developed in Roy and Soare (in press). We refer the reader to this paper for details.

- (9) a. *O katharistis tu ktiriu epi ena mina telika apolithike.
the cleaner the.Gen building for a month finally got.fired.
b. *I damastes ton fotonion mesa se/ gia enan eona.
the tamers the.Gen photons within for a century

Another proposed test for underlying verbal structure is adverbial modification. Baker and Vinokurova (2009) argue, on the basis of the distribution of adverbs such as *quickly*, that while gerunds and (eventive) *-ing* nominals do have verbal (hence eventive) properties (10), *-er* nominals, which reject such modification, are not built on verbal structure (11).

(10) Finding the wallet (so quickly) was a big relief.

(11) The finder of the wallet (*quickly) returned it to the front desk.

We object, however, that by this test, event-denoting AS-Ns should also be excluded from having event structure (cf., (12)). There is an apparent conflict in (12) between, on the one hand, the realization of argument and temporal *in/for*-PPs and, on the other hand, the ungrammaticality of the adverbial *quickly*, which we take as indicating, instead, that adverbials are not a proper test for events inside nominals.

(12) The destruction (*so quickly) of the city by the enemy (in seven minutes).

Verbal gerunds as in (10) have a more articulated sentential structure than event-denoting AS-Ns (e.g., *-ation* in (12)) and other derived nominals for that matter. For instance, they presumably involve a non-finite inflectional (tense/aspect) layer, lacking in deverbal nominals (cf., Abney 1987 and subsequent literature; as well as Grimshaw 1990 and Borer 2005 on nominalized gerunds and references therein). It is plausible that adverbs relate to these sentential projections; cf. sentential nominalizations in Malagasy, for instance, which do accept adverbs (Ntelitheos 2012).

Contra the views presented above, this paper argues that French *-eur* nominals fall into distinct classes according to whether they involve an event or not and whether, when they express an event, it is episodic or dispositional. More specifically, we will argue for a three-way partition between (a) instruments that are never associated with an event meaning, and eventive nominals that can express (b) episodic or (c) dispositional events (building on the semantic distinction between episodic vs. dispositional nominals from Alexiadou and Schäfer 2008, 2010). Structurally, we argue that instruments belong to the class of R-Ns, and hence are root-based structures involving a bare root and the nominalizing head *-eur* (14). These nominals do not have an argument structure since they lack a verbal structure:

- (13) ventilateur, aspirateur, mixeur, diffuseur
ventilator suck.ator mix.er diffuse.er
'ventilator', 'vacuum cleaner', 'mixer', 'diffuser'

(14) [DP/NP N *-eur* [rootP]]

By contrast, French has true eventive participant nominals for which we assume a full verbal structure as in (16), similar to (5a) above. For event related participant nominals, the affix *-eur* realizes a true argument position, namely, the external argument.²

- (15) a. le conducteur de train; le dresseur de lions; le souffleur de verre
 the driver of trains the tamer of lions the blower of glass
 'the train driver'; 'the lion tamer'; 'the glass blower'
 b. le conducteur du train; l'entraîneur de l'équipe de France; l'acheteur de ma
 voiture
 the driver of this train the trainer of the team of France the buyer of my car
 'the driver of this train'; 'the trainer of the French team'; 'the buyer of my car'

(16) [DP/NP N [_{AspEvP} *-eur* [_{AspEv} *e*] [_{AspQP} DP_{object} [_{AspQ}] [_{rootP} *conduct-*]]]

We further argue that the structure in (16) is shared by both dispositional and episodic nominals (along the lines of Alexiadou and Schäfer 2010), providing evidence from event-related adjectival modification. The interpretational difference between them relates to the type of event description they involve, whether a particular event (leading to the episodic reading) or a generic event (leading to the dispositional reading). Internal arguments play, we will show, a crucial role in bringing about genericity.

Our arguments are based primarily on adjectival modification, a context that, to the best of our knowledge, has never been discussed in detail in the literature on derived nominals, even though frequency adjectives are generally considered a standard test for grammatical eventivity inside nominals since Grimshaw (1990). We focus here on two classes of event-related adjectives: the frequency adjectives (Grimshaw 1990 and subsequent literature), and the nonintersective adjectives with event-related readings as discussed in Larson (1998). As shown by the following contrasts, *-eur* nominals exhibit heterogeneous behavior with respect to event-related adjectival modification that suggests that some but not all may involve an underlying event.

² The well-known generalization according to which *-er* nominals denote not only 'agent' nominals but participants with quite different theta-roles, as long as they are assigned to the external argument (*teacher* (agent); *diffuser* (theme); *admirer* (experiencer); *holder* (holder); *receiver* (beneficiary) – see Fabb 1984, Keyser and Roeper 1984, Rappaport Hovav and Levin 1992, van Hout and Roeper 1998) is directly captured in this account. We leave open, however, the exact operation that will link the *-eur* suffix (in our analysis a constituent and not a head) with the N position.

- (17) a. un acheteur fréquent de nos voitures
 a buyer frequent of our cars
 'a frequent buyer of our cars' (= frequently buys our cars)
 b. *un aspirateur fréquent de la poussière
 a suck.ator frequent of the dust
 'a frequent vacuum-cleaner of dust'
 (18) a. un grand consommateur de drogue
 a big consumer of drug
 'a big drug consumer' (ok: consumes a lot of drug)
 b. un grand/gros mixeur
 a big blender
 'a big blender' (≠ blends much)

Moreover, derivation from a verb appears to be an important factor in allowing event-related adjectival modification, since *-eur* nominals that are not derived from verbs (e.g. *docteur* 'doctor', *fleuriste* 'florist') systematically reject it.

- (19) a. *un fréquent docteur;
 a frequent doctor
 'a frequent doctor';
 b. *un grand fleuriste
 a big florist
 'a big florist' (≠ flowers much/ acts as a florist much)

The simple paradigms in (17)-(19) show that the adjectival modification issue cannot be disregarded without ignoring important properties of *-eur* nominals, compared to other classes of derived or non-derived nominals that can be interpreted as event-related or not.

The paper is organized as follows. Section 2 offers a detailed discussion of event-related adjectival modification (*frequent*-type and *big*-type adjectives), and shows that among the various readings they give rise to, only the internal reading is relevant as a test for a grammatical event inside derived nominals. In section 3, we argue, on the basis of adjectival distribution and interpretation that French *-eur* nominals are split into

two distinct but coherent groups depending on whether they allow internal readings. The two groups form natural classes: inanimate non-eventive, on the one hand, animate eventive, on the other. Section 4 addresses the class of eventive *-er* nominals and argues for a further distinction between nominals expressing episodic events and nominals expressing dispositions, as well as the role of argument structure (and more specifically internal arguments) in bringing about the episodic/dispositional semantics. Finally, our conclusions are presented in section 5.

2. Event-related adjectives and the nouns they modify

In the recent literature, event-related meanings of English *-er* nominals have been invoked in relation to adjectival modification in the context of: (i) frequency adjectives (FAs): *frequent, constant, occasional* (in particular Larson 1998, Gehrke and McNally 2012) and (ii) adjectives such as *big, small, happy, old, skillful, quick, main, just*, which have been discussed in the literature as being nonintersective with event-related readings (cf., Larson 1998, and references therein). The latter do not represent a natural semantic class, and may have various meanings (duration, manner, quantity); we will refer to them as the *big*-type adjectives (BAs). Some but not all will prove relevant for our discussion.

In order to use event-related adjectives as evidence for eventivity inside nominals, we first need to consider their semantic properties. Event-related adjectives in general present a high degree of ambiguity. It is common, for instance, that the modification expressed by the adjective applies at the sentential level (i.e. adverbial interpretation). However, it is precisely because they present such ambiguities that FAs and BAs will constitute an important criterion in diagnosing internal event-properties with derived nominals. Existing works on event-related adjectives commonly distinguish two types of interpretations: internal vs. external readings (cf. Larson 1998, for instance). Intuitively, under the internal reading, the adjective applies to some event inside the nominal itself. For instance, in *the frequent destruction of the city by the enemy* the adjective 'frequent' modifies the destroying event. By contrast, with external readings the modification applies to some event outside the nominal. One such example is the adverbial reading in *an occasional sailor strolled by*: here the adjective 'occasional' modifies the sailor's strolling by and *not* a sailing event. Only the internal reading is the hallmark for an event inside nominals, which we will refer to as the internal event.

In the literature, FA modification (e.g., *frequent, constant, occasional*) has been standardly considered to support the correlation between eventivity and argument structure projection, as it entails, in the case of (at least some) *-er* nominals, the realization of argument structure (cf. Rappaport Hovav and Levin 1992).

- (20) a. the constant defender *(of the government's policies)
b. a frequent consumer *(of tobacco)

In that respect, the *-er* nominals in (20) behave like eventive AS-Ns, cf. (21):

- (21) a. the frequent/constant defense *(of the government's policies)
b. a frequent/constant consumption *(of tobacco)

It has been noted, however, that FAs are also possible with so-called *simple event nominals* (SENs; Grimshaw 1990), which do not force the realization of argument structure. Although SENs are arguably eventive (i.e., they name events), the absence of arguments indicates that they do not involve a verbal base, and therefore belong to R-Ns rather than AS-Ns (see also Borer 1999, and subsequent works). Examples as in (22) have often been taken as evidence that FAs can modify all sorts of nominals, including R-Ns, and are not exclusively constructed with AS-Ns (cf., Meinschaefer 2005, Snyder 1998, for instance).

- (22) a frequent trip to Paris; an occasional visit; a weekly dinner; her daily beer; etc.

SENs, in actuality, only serve to illustrate a difference in the interpretation of FAs. As Larson (1998) has argued, these adjectives are ambiguous between an internal and an external reading. Building on this distinction, Gehrke and McNally (2012) have further argued that they have at least three distinct interpretations: the adverbial reading, the generic reading and the internal reading, illustrated in (23a,b,c), respectively. (The adverbial and the generic readings are subsumed under the external reading in Larson 1998).

- (23) a. An occasional sailor strolled by.
b. The/an occasional beer is good for you.
c. This claim has been made by an occasional/frequent sailor.

The adverbial interpretation, as in (a), obtains when the FA outscopes the entire sentence and acts as a modifier for the main predication. Sentence (23a) means ‘Occasionally, some sailor strolled by’; and the adjective plays the role of a sentential adverb. The generic interpretation, as in (b), is possible when the FA modifies any sortal noun, provided that this N has a generic or a kind interpretation (i.e., it is *not* a token). FAs with a generic interpretation outscope the kind/generic nominal. Sentence (23b) is paraphrasable by ‘A beer on an occasional basis is good for you’.

In neither the adverbial nor the generic reading do the FAs apply to an internal event inside nominals. The only reading that signals an event inside nominals is the internal reading, as in (c). The internal reading is the one paraphrasable by a full verb (upon which the nominal is, by assumption, derived) and an adverb. In (23c) [an occasional/frequent sailor_N] is equivalent to ‘someone who sails_V occasionally/frequently’. This sentence cannot mean either that ‘Occasionally/Frequently, this claim has been made by a sailor’ (adverbial reading), or that ‘A sailor on an occasional/frequent basis makes this claim’ (generic reading). Instead the adjective expresses the meaning of an adverb scoping over the verb inside the derived nominal.

Importantly, the internal reading is also the one that shows up with eventive AS-Ns more generally (cf., Grimshaw 1990, Alexiadou 2001, among others):

- (24) a. the frequent sailing of the boat by John (= John frequently sails the boat)
 b. the frequent expression of one’s feelings (= one frequently expresses one’s feelings)
 c. the constant destruction of old quarters (= old quarters are constantly destroyed)

The evident parallel between (24) and (23c) emphasizes the similarity between eventive AS-Ns and at least some *-er* nominals; this point will be addressed in more details in the next sections.

Crucially, however, when FAs modify SENs, as in (22) above, it is never under the internal interpretation. FAs with SENs either lead to the generic reading (25a), or are legitimated by a plural (25b). Plurality plays a crucial role in licensing frequency modification in (25b): in order to be sortally compatible with *frequent*, the (conceptual) event denoted by the SEN (here, concerts, exams, movies) needs to be iterated. In the

case of SENs iteration can only be expressed by a morphological plural (recall that SENs are root-derived nominals). The FA scopes over the plural nominal and hence, expresses an external reading. It follows that FAs with SENs never give rise to an internal reading.

- (25) a. a frequent/rare concert/ exam/ movie
 b. her frequent/rare concerts/ exams/ movies

Plurality is not required in the case of AS-Ns with internal FAs (cf., (24)), because in that case iteration is expressed by the internal eventive (or aspectual) layers (cf., lordăchioaia and Soare 2008; Alexiadou et al 2010). In other words, for a derived nominal to allow for FA-modification with the internal reading, the nominal must be built on a verbal, and therefore eventive, structure. This is the case for AS-Ns (*destruction, examination, singing*) but not for SENs (*concert, exam, movie*). Hence, to test for the internal event-properties of nominals, we will thereafter retain singular nouns only, as plural is always associated with an external event.

Turning to French, we find that FAs support the same generalizations. FAs in construction with a singular noun can have an internal interpretation if and only if the nominal they modify is an AS-N as in (26) and not a SEN as in (27) (where the plural would otherwise be needed).

- (26) la destruction fréquente de la ville par les ennemis a duré des années.
 the destruction frequent of the city by the enemies has lasted some years
 ‘the frequent destruction of the city by the enemy lasted for years.’
- (27) a. *la/ *sa visite fréquente b. ses visites fréquentes
 the her visit frequent her visits frequent.pl
 ‘the/her frequent visit’ ‘her frequent visits’

The ungrammaticality of (27a) contrasts with the grammaticality of cases like (28). As argued in English, this contrast only illustrates the different grammaticality conditions for internal vs. external readings. French FAs with SENs (and other nominals that do not

support an argument structure) can have a generic reading, which as in English imposes strict constraints on the choice of the article.³

- (28) On ne peut pas s'accommoder d'un/*du logement occasionnel.
 one not can Neg se-accommodate of.an of.the accommodation occasional
 'No one can put up with an(*the) occasional accommodation.'

We note that the generic reading is much less systematic in French than it is in English (see (29)). Some of the ungrammatical cases can be rescued by plurality (30b), while the absence of (30a) is, we believe, simply idiosyncratic.

- (29) a. *une bière occasionnelle;
 a beer occasional
 'an occasional beer';
 b. *une visite fréquente; *un contrôle fréquent des freins
 a visit frequent a check frequent of.the brakes
 'a frequent visit' 'a frequent brakes check'
- (30) a. *des bières occasionnelles
 some beers occasional
 b. des visites fréquentes; des contrôles fréquents des freins
 some visits frequent.pl some checks frequent of.the brakes
 'frequent visits'; 'frequent brakes checks'

French also has another external reading of FAs that is not the generic reading (and has not been reported for English), as exemplified in (31). Here the FA is interpreted as modifying an external predication. *De rares passants* 'rare passers-by' is paraphrasable as 'the passers-by are rare' and *not* as 'rarely passing-by people'. The scope of the FA is, thus, over the passers-by (i.e. the full nominal in a predication) and not over the passing (i.e., the internal event). The FA in (31) lacks the internal reading.

³ As argued by Gehrke and McNally (2012), internal and generic readings of FAs impose different restrictions on determiners: internal FAs modify Ns that can be introduced by the full range of determiners (cf., *the/this/any frequent consumer, the/this/any occasional sailor*); while generic FAs modify nouns that can only be introduced by a generic determiner (cf., **This/*Any/An/The occasional beer is good for you*). This extends to the French data in (28) as well.

- (31) De rares passants nous donnaient le bonjour.
 some rare passers-by us gave the good-day
 'Rare passers-by greeted us.'

Example (31) contrasts with (32), for instance, as visible in the paraphrase: there, *travailleurs occasionnels* is only interpreted as 'people who work occasionally', and the FA only has an internal reading:⁴

- (32) Ce travailleur occasionnel n'a pas de sécurité sociale.
 this worker occasional not-has Neg of security social
 'This occasional worker does not have social security.'

The same logic must be applied to BAs of the type *big, happy, old, beautiful*, for which we also need to carefully distinguish the internal reading, and set aside the external ones. These adjectives are argued by Larson (1998) to be systematically ambiguous between an intersective and a nonintersective reading, the latter associated with an event related meaning. The class of BAs is rather heterogeneous, however, and we will identify a mere sub-class as associated with internal event-properties.

The well-known example in (33) is often cited as having a possible interpretation where the adjective is associated to an event reading. The adjective *beautiful* is ambiguous between a reading where it applies to the subject Olga (intersective) (a) and a reading where it applies to Olga *qua* dancer/ Olga's dancing (nonintersective) (b). Larson argues that nonintersective adjectives are akin to VP adverbial modifiers, and

⁴ French FAs systematically lack the adverbial reading (ia); in which context, a true sentential adverb is commonly needed (b):

- (i) a. *Un marin occasionnel passait sur les quais.
 a sailor occasional strolled on the quays
 intended meaning: 'Occasionally a sailor strolled on the quays'
 b. Occasionnellement, un marin passait sur les quais.
 'Occasionally a sailor strolled on the quays'

consequently analyze them as modifiers of events (in a Davidsonian approach to event semantics; cf., Davidson 1967), leading to the event related interpretation in (b).⁵

(33) Olga is a beautiful dancer.

- a. Olga is a dancer and Olga is beautiful.
dancer(x,e) & beautiful(x)
- b. Olga is beautiful as a dancer / Olga dances beautifully.
dancer(x,e) & beautiful(e)

As Larson points out, nonintersective readings can potentially be either internal (when the modification applies to an event inside the nominal) or external (when the modification applies to some level above the NP). In (33b) *beautiful* has an internal reading rather than an external one. In turn, adjectives like *former*, *rightful* in English and *ancien* 'former' (lit. old), *vrai* 'true' in French express external modifications, as they only have the adverbial reading; cf., (34) (also Larson 1998; and see references therein). These BAs form a coherent sub-class that cannot be used to test internal event properties.

- (34) a. a former restaurant (= formerly a restaurant)
- b. my former teacher (= formerly my teacher)
- c. my rightful inheritance (= rightfully my inheritance)
- d. un ancien voisin
an old neighbour (= formerly my neighbour)
- e. un vrai génie
a true genius (=truly a genius)

Another sub-class of BAs needs to be distinguished, namely adjectives like *skillful*, *punctual* in English and *attentif* 'attentive', *soigneux* 'careful', *habile* 'skillful' in French, see (35).

- (35) a. a skillful mother; a punctual guest

⁵ For Larson (1998) simple nouns like *president* also involve an event variable: president(x,e). We differ in assuming that only complex deverbal nouns may involve an event inherited from the verb. The reason we can have, e.g. *former president* is because *former* modifies the state/situation of BE-ing a president. See below.

- b. une maman attentive; des hôtes soigneux; un diplomate habile
'an attentive mother' 'careful hosts' 'a skillful diplomat'

With these BAs, the event-related (i.e., nonintersective) meaning arises in two separate cases only. First, the event-related meaning can arise with generic nominals. The interpretation of (36) is akin to that of FAs with a generic reading in (23c) and (28) above.

- (36) a. A good father is not so hard to find.
- b. A skillful doctor knows how to write a prescription.
- c. Un diplomate habile aurait résolu cette crise bien vite.
a diplomat skillful would.have resolved this crisis well fast
'A skillful diplomat would have resolve the crisis quickly'

On a par with the generic FAs, the generic meaning of BAs leads to an interpretation where the adjective scopes over the kind term rather than modifies an event inside the nominal.

Second, the event-related reading appears when the nominal is in predicative position, cf., (37). We note that BAs that modify a nominal that is neither predicative nor generic are interpreted as intersective only, and accordingly do not relate to any event. In (38)-(39) the nonintersective reading of BAs is lost:

- (37) a. She is a skillful mother; He is a punctual guest, etc.
(= skillful as a mother; punctual as a guest)
- b. C'est une maman attentive; C'est un invité ponctuel, C'est un diplomate habile
- (38) a. The three skillful mothers organized a big fundraiser.
(=skillful persons AND mothers)
- b. The four skillful brothers (skillful persons AND brothers)
- c. As we waited for Max to arrive, I served drinks to my punctual guests.
(=punctual person AND my guests)
- d. My punctual doctor gave me an appointment at 3:15 tomorrow.
(=punctual person AND my doctor)
- (39) a. Les trois mamans attentives ont organisé la fête de l'école.

the three mothers attentives have organised the party of the-school

'The three attentive mothers have organised the school party'

(=attentive persons AND mothers)

b. Ce parquet a été entretenu par un homme soigneux / habile.

this wooden.floor has been maintained by a man careful skillful

'This wooden floor has been maintained by a careful/skillful man'

(=careful/skillful person (in his maintaining) AND a man)

It is plausible, thus, that in (37), the event/eventuality related interpretation comes from the predication (i.e. the copular construction) rather than from the nominal itself.

Assuming, as in Bowers (1991), Svenonius (1994) that the predication is established via the mediation of a functional head Pred (responsible for introducing the external argument), and that Pred is associated to an event variable, *skillful* may modify the (stative) eventuality of, e.g. being a mother (a state or a situation) even when *mother* itself does not contribute an event variable.⁶ Additional cases where the event-related meaning of BAs is related to an underlying predication concern, for instance, the adjective *old* as in (40).

(40) a. J'ai appelé mon vieil ami hier soir.

b. I phoned my old friend last night.

(= someone who has been a friend for a long time)

(≠ someone who friended me for a long time)

Such adjectives of duration are expected to be compatible with predicative contexts, as they may modify states or situations (e.g. *being a friend*).

In sum, if we are correct, the three types of readings identified by Gehrke and McNally for FAs (internal / adverbial / generic) are also found with BAs. To this list, we also added the external reading that arises in predicative context (for BAs in French and English and for FAs in French only). Among these different interpretations for FAs and BAs, only the internal reading diagnoses internal event-properties inside nominals. To control for external readings, we will exclude from our discussion all adjectives that

⁶ This is coherent with Roy (2006, 2013) who argues that all nominals in predicative position are eventive (and generally relate to a stative eventuality). Only the argumental position will allow to draw the line between *-eur* nominals that have an internal grammatical event (similar to derived AS-Ns) and those that do not (similar to R-Ns).

cannot have an internal reading (e.g., *skillful*, *punctual*, *former*; see above). To the same end, we will also, thereafter, concentrate on singular nominals occurring in argument position only.

3. Eventive interpretation and structures

This section is concerned with the distribution of the internal reading of event-related adjectives across derived and non-derived participant nominals / instruments. With the results of section 2 in mind, let us first consider the distribution of FAs. First, we observe that animate French deverbal *-eur* nominals may sometimes allow for the internal reading of FAs:

(41) a. Un consommateur fréquent de cette marque nous a donné une opinion valable.

a consumer frequent of this brand us has given an opinion valuable
'A frequent consumer of this brand gave us a valuable opinion.'

b. Le conducteur occasionnel de ce camion est en prison

the driver occasional of this truck is in jail
'The occasional driver of this truck is in jail.'

c. Un utilisateur fréquent/ constant de ce produit risque des brûlures profondes.

a user frequent constant of this product risks some burns deep

'A frequent/constant user of this product would risk developing deep burns.'

We also note that, FA internal modification becomes impossible when the nominals in (41) are substituted by non-derived nominals in (42):

(42) *Un docteur/ pianiste/ boucher fréquent/constant/occasionnel occupe cette

boutique.

a doctor pianist butcher frequent/constant/occasional occupies this store

This contrast sets a clear parallel between the derived animate *-eur* nominals in (41) and AS-Ns more generally, cf. (43), suggesting that in both cases, the internal reading of FAs arises when they modify an underlying event inside the derived nominal. For the internal reading to arise, it presupposes that the nominal is morphologically derived and

involves a verb; we take this as an indication that at least some *-eur* nominals are derived from verbs (while others are not, as we shall argue below).

- (43) a. la consommation fréquente d'alcool nuit gravement à la santé.
 the consumption frequent of.alcohol impairs gravely to the health`
 'the frequent consumption of alcohol seriously impairs one's health.'
 b. L'utilisation fréquente/ constante de ce produit peut altérer les couleurs.
 the.use.ation frequent constant of this product may alter the colors
 'The frequent/constant use of this product may alter colors.'

According to the observed parallel between (41) and (43), we propose that the *-eur* nominals in (41) are a type of AS-Ns, with the structure in (44):

- (44) [DP/NP N [_{AspEvP} *-eur* [_{AspEv} e] [_{AspQP} DP_{object} [_{AspQ}] [_{rootP}]]]]

Among derived *-eur* nominals, we further note, however, that they are not all equal in allowing FA internal modification. More concretely, two types of *-eur* nominals reject such modification: the animate nominals in (45) and the instruments in (46). The forms in (45) differ from those in (41) in expressing dispositions rather than a participant in an actual event; as already mentioned, e.g., *un vendeur de voiture* 'a car-dealer' does not need to have sold any cars. The forms in (46) denote instruments and, hence, are inanimate.

- (45) a. Un vendeur (*fréquent) de voitures a ouvert un magasin dans la Grand Rue.
 a seller frequent of cars has opened a store in the main street
 'a (*frequent) car-dealer has opened a store on Main street.'
 b. Les consommateurs (*fréquents) de drogue sont à risque.
 the consumers frequent of drug are at risk
 'the (*frequent) drug-users are at risk.'
- (46) a. un émetteur (*fréquent) (à tous les postes de travail de l'entreprise)
 a transmitter frequent to all the positions of work of the.firm
 b. notre (*constant) broyeur de végétaux (*occasionnel)
 our constant crusher of plants occasional

A possible hypothesis to account for the common behavior of dispositional Ns and instruments in (45)/(46) would be that, since are incompatible with FA internal modification, they both belong to the class of R-Ns, on a par with non-derived Ns. This would mean that Alexiadou and Schäfer (2010) are right in grouping dispositions and instruments together; but that they are wrong in assigning them a complex AS-N structure. It would also mean that animacy does not straightforwardly match with eventivity, as some animate nouns, namely dispositions, would be non-eventive (contra Rappaport Hovav & Levin 1992).

In actuality, however, we note that dispositions and instruments are not alike when it comes to the second type of adjectival modification, namely, BA modification. While dispositions do accept BA internal modification, instruments do not. Instruments systematically preclude BAs and FAs alike (cf., (46) above and (47)).

- (47) a. J'ai acheté un gros photocopieur/ petit éplucheur de patates.
 I.have bought a big photocopy-er small peeler of potatoes
 'I bought a big copy machine/ a small potato peeler.'
 (≠ a copy-machine that copies much / potato peeler that peels few potatoes)
 b. Nous avons acheté un gros mixeur.
 we have bought a big grinder
 'We've bought a big grinder' (≠ a tiny machine that grinds much)

Attested uses of event-related adjectives with instruments concern predicative uses only, which we have argued are not informative for internal event-properties inside nominals (see section 2). The event related meaning of the adjective, present in (48), is absent in (47):

- (48) a. This machine is our frequent transmitter to headquarters.
 (ok: transmits frequently to headquarters)
 b. This (tiny) machine is a big grinder. (ok: tiny machine but grinds much)

We conclude from the above facts that instruments form a coherent and distinct class both from a semantic and from a syntactic point of view (contra Alexiadou and Schäfer 2010). Semantically, we conclude that they never name an (inanimate) participant in an

event. Structurally, we analyze them as instances of R-Ns; i.e., nominals derived directly from roots, and not associated with an underlying verb (49).⁷

(49) [DP/NP N *-eur* [_{rootP}]]

By opposition, dispositions are compatible with BA internal modification.

- (50) a. Un heureux/ gros consommateur de LSD court des risques importants.
 a happy big user of LSD runs some risks important.pl
 'A happy/ big user of LSD runs important risks.'
 (ok: people who consume LSD much / happily)
- b. Un petit vendeur de voitures paye moins d'impôts.
 a small seller of cars pays less taxes
 'A small car-dealer pays less taxes.'
 (ok: people who don't sale cars much/ sale few cars)

In that respect, dispositional Ns (50) are clearly different from instruments (47). Despite the fact that dispositional nominals do not accept FA internal modification, they do involve a certain form of eventivity. We take the compatibility of dispositional nominals with BA internal modification as evidence for an internal event, by assumption associated with the verbal base. As opposed to instruments (49), we analyze, thus, dispositional *-eur* nominals as instances of AS-Ns with the structure in (44), repeated below in (51), on a par with other animate *-eur* nominals. (The nature of the contrast between animate *-eur* nominals that do or do not allow FAs remains to be explained and is addressed in the next section).

(51) [DP/NP N [_{AspEvP} *-eur* [_{AspEv} e] [_{AspQP} DP_{object} [_{AspQ}]] [_{rootP}]]]] (same as (44))

⁷ The verbal morphology sometimes found with instruments (e.g., *humid-ify-er*) is not an argument in favor a verbal structure inside instruments (contra Alexiadou and Schäfer 2008, 2010). The verbalizing/causative role of the *-ize/-ify* morphemes, invoked in the literature, is not clear, as their presence is not necessarily associated with compositional causative meaning. Consider for instance, French *atomiseur* (lit. atom-iz-er) 'a spray'; *vaporisateur* (lit. vapor-iz-ator) 'a spray'; *vérificateur d'orthographe* (lit. ver-ifi-cator of orthography) 'a speller/spellchecker'. Similar examples with derived adjectives and verbs are e.g. *métallisé* 'metallized', *diplomatiser* 'act as a diplomat' (for the last example, see Martin and Piñon 2013).

Our analysis predicts, correctly, that nominals not derived from a verbal base as *docteur* 'doctor', *pianiste* 'pianist', *boucher* 'butcher', will behave like instruments in rejecting both BA and FA internal modification (while dispositional Ns accept BAs; compare (50) with (52a)):

- (52) a. Un gros/ heureux docteur/ pianiste/ boucher s'est installé dans ma rue.
 a big happy doctor pianist butcher se-is installed in my street
 (=/= someone who doctors/plays piano/butchers much/happily)
- b. Un (*fréquent/ *constant) fleuriste/ jardinier/ pompier m'a sauvé la vie.
 a frequent constant florist gardener firefighter me.has saved the life

Importantly, existing analyses of *-er* nominals fail to account for the observed distributional patterns of event-related adjectives in French. The difference in acceptability between instruments (47) vs. derived *-eur* dispositions (50) cannot be explained in accounts where all derived *-eur* nominals would be treated as non-eventive on a par with instruments (cf. Baker and Vinokurova 2009, Borer 2012, in press). If dispositions were non-eventive in French, BA internal modification should not be possible, since the internal event-related reading applies to an internal event by assumption lacking with R-Ns. Similarly, such accounts would also fail to predict the observed contrast between derived *-eur* dispositions (50) vs. non-derived dispositions (52). Again, if all *-eur* nominals were R-Ns, derivation from a verb should not matter as verbs are by assumption absents with R-Ns. Moreover, Alexiadou and Schäfer (2008, 2010) also fail to predict the restrictions on event related adjectives noted with instruments, since they analyze *-eur* nominals as a homogeneous class with event properties.

Turning to argument realization, it is important to observe that the representation for instruments in (49) preserves the well-established correlation between the absence of event and the absence of argument structure. Instruments can never project arguments since they are not built on a verbal base but on a (bare) root. As predicted by (49), instruments are arguably deprived of arguments. This can be shown by the impossibility to express a definite argument in a complement *de*-phrase (53):⁸

⁸ We thank an anonymous reviewer for pointing this fact out to us.

- (53) a. L'aspirateur (*de la poussière) n'a pas bien fonctionné.
 the.suck-ator of the dust neg.has not well functioned
 'The vacuum-cleaner (*of the dust) didn't function properly.'
 b. Le photocopieur (*de l'article) a vraiment été très efficace.
 the copy-er of the.article has really been very efficient
 'The copy-machine (*of the article) has been really efficient.'

Evidently, not all *de*-phrases are barred with instruments in French, but grammatical cases involve a bare noun instead of a definite DP, cf., (54). We take these cases to involve a mere modifier and not real arguments (because of the ungrammaticality of arguments in (53)). While French uses *de*-phrases both for arguments and modifiers, the latter would systematically be realized as synthetic compounds in English instead of phrasal *-er* nominals:

- (54) concasseur de maïs; distributeur de cartes; absorbeur de neutrons
 crusher of corn distributor of cards absorber of neutrons
 'corn crusher'; 'card distributor'; 'neutrons absorber'

So, if synthetic compounds are any indication in English, we would always expect that they are non-eventive (since they correspond to the modifier *de*-NPs in French). In that we agree with Borer (2012) that English synthetic compounds do not have, and are not expected to have, properties of grammatical event at all. This should generalize to all synthetic compounds, including those expressing dispositions (e.g. *truck-driver*, *firefighter*, *story-teller*). Consequently, we predict a difference between English dispositions expressed by noneventive compounds and French dispositions expressed by eventive AS-Ns. Pending further investigation of English data, we note that this prediction seems to be on the right track, as French dispositions *can* realize (oblique) arguments; while English compounds never do (55):

- (55) a. le conteur d'histoires aux enfants vs. the story-teller (*to (the) kids)
 b. les conducteurs de camion entre Lyon et Paris vs. truck-drivers (*from Lyon to Paris)
 c. un mangeur de riz avec des baguettes vs. a rice-eater (*with sticks)

The realization of arguments with *-eur* AS-Ns calls for a more detailed discussion and will be addressed in the next section.

4. Episodic/dispositional semantics and argument structure

As argued in the previous section, all animate *-eur* nominals have eventive properties and hence are, by assumption, derived from a verb. They do not form a homogeneous group, however, as some but not all accept FA internal modification; while BA internal modification is always possible. To account for the existence of these two classes, we adopt Alexiadou and Schäfer (2010)'s distinction between *episodic* and *dispositional* nominals. Episodic nominals, illustrated in (56), are those that relate to a particular underlying event of, e.g. building / selling / training. On the other hand, dispositional nominals do not involve a particular event, but rather a generic one; see (57).

- (56) a. Le constructeur de cette maison arrive dans un quart d'heure.
 the builder of this house arrives in a quarter of.hour
 'The builder of this house will arrive in 15 minutes.'
 b. Le vendeur du caisson l'avait acheté 180 euros il y a un an.
 the seller of.the box it.had bought 180 euros a year ago
 'The seller of the box had bought it for 180 euros a year ago.'
 c. Le dresseur des trois lions du cirque prendra sa retraite bientôt.
 the trainer of.the three lions of.the circus will.take his retiring soon
 'The trainer of the circus' three lions will retire soon.'
- (57) a. Le constructeur de maisons arrive dans un quart d'heure.
 the builder of houses arrives in a quarter of.hour
 'The house-builder will arrive in 15 minutes.'
 b. Le vendeur de journaux se tient au coin de la rue
 the seller of newspapers is standing at.the corner of the street
 'The newspaper seller is standing at the corner of the street.'
 c. Le dresseur de lion(s) a changé Simba de cage.
 the trainer of lion(s) has changed Simba of cage
 'The lion trainer has changed Simba's cage.'

We analyze episodic and dispositional nominals as AS-Ns, i.e. as supporting argument structure (cf. (52)). Crucially, thus, we take the *de*-phrases in (56)/(57) to realize an argument and not a mere modifier of the noun, as opposed to the *de*-phrase found with instruments. The argumental vs. modifier status of French *de*-phrases has been a lasting issue since Milner (1982), and subsequent literature. In the case of specific *de*-phrases (cf., 56), their argumental status is generally accepted. The claim that non-specific *de*-phrases in (57) are also arguments is more controversial however. In particular, we need to show that the *de*-phrases in (57) are different from the *de*-phrases that can be constructed with instruments (54) despite the fact that both are non-specific only. A further issue is that dispositional Ns can sometimes lack *de*-phrases altogether.

Two facts point in the direction of a different status for the *de*-phrases with dispositions vs. instruments. First, *de*-phrases with instruments have the same interpretation as purpose *à*-phrases in, for instance *machine à laver* 'washing machine', *broyeur à feuilles* 'leaf shredder'; and hence are generally substitutable by an *à*-phrase (58). With dispositional Ns, no such substitution is observed (59). The ungrammaticality of (59b) is expected if dispositions are constructed with an argument, as arguments can only be introduced by *de*.

- | | | |
|------|--|---|
| (58) | a. broyeur de végétaux
crusher of plants
'plant crusher' | b. broyeur à végétaux
crusher at/for plants
'plant crusher' |
| (59) | a. dresseur de lions
tamer of lions
'lion tamer' | b. *dresseur à lions
tamer at/for lions |

Second, *de*-phrases with instruments are always optional (e.g., *broyeur* 'shredder', *mixeur* 'blender', *ventilateur* 'fan'). *-Eur* instruments are commonly associated to human activities, but this information is not grammatically encoded, and in that respect, *-eur* instruments are not different from e.g. *radio* 'radio', *voiture* 'car', *téléphone* 'phone', for which the issue of argument structure does not even arise. With the dispositional *-eur* nominals, however, when omitted (if it is possible at all; i.e. not in (60a)), the *de*-phrase is always implicit on a par with cognate objects (60b).

- (60) a. souffleur *(de verre); laveur *(de carreaux); etc.
blower of glass washer of windows
b. vendeur; consommateur; conducteur
seller consumer driver

In sum, on the one hand, the *de*-phrases found with instruments are always optional and substitutable by other prepositions. On the other hand, the *de*-phrases found with dispositional Ns are always realized (but can be implicit) and they are not substitutable. Hence, we analyze the former as PP modifiers and the latter as arguments, which in the case of dispositions are only non-specific. The contrast between modifier *de*-PPs and arguments can be cast in terms of property-denoting *de*-PPs (for modifiers) vs. individual-denoting *de*-phrases (for arguments) (see Kolliakou 1999 for a detailed discussion); hence deriving the different specificity conditions. Both properties and individuals can be non-specific; while only individuals can be specific.

Going back to the paradigm in (56/57), we argue that the distinction between episodic and dispositional nominals is correlated with different treatments of argument structure. We note that, in the above sets of examples, the episodic meaning is available with specific internal arguments only (definite expressions, demonstratives, etc.) as in (56); whereas the dispositional meaning arises with non-specific arguments (bare singulars, indefinite plurals, etc.) as in (57). Remaining agnostic as to how genericity is brought about in the clause, the properties of argument structure in *-eur* AS-Ns mirror the clausal level: a systematic correlation is observed between the underlying eventuality type (particular vs. generic) and the interpretation of the derived nominal. The episodicity vs. genericity of the event, we claim (and here we depart from Alexiadou and Schäfer 2010), is co-extensive with the (non-)specificity of the internal argument. This is visible in the paradigm in (56/57), and further illustrated by the examples below, where the decrease in specificity in the DP clearly correlates with a lower degree of 'concreteness/particularity' of the events expressed in the VP, and with decreasing episodicity (and hence increasing dispositional character) in the resulting nominalization. Specificity may have different sources (for instance, through the determiner system, but also the presence of modifiers), which we are not discussing. We are only concerned, here, with how specificity (or its absence) affects the interpretation of the verbal phrase (and hence the event) and translates into the derived nominals. Cf. (61)-(63).

- (61) a. Particular event (specific DP object)
souffler *ce/le/mon* verre
blow *this/the/my* glass
b. Episodic *-eur* N
le souffleur de *ce/du/de* mon verre
the blower of *this/of.the/of* my glass
- (62) a. Particular event (specific quantity object)
souffler *des* verres
blow *of.the* glasses
'to blow *some (specific)* glasses'
b. Episodic *-eur* N
le souffleur *des* verres
the blower *of.the* glasses
'the blower of *the* glasses'
- (63) a. Non-particular event (non-specific quantity object)⁹
souffler *des* verres
blow *of.the* glasses
'to blow *glasses*'
b. Dispositional *-eur* N
le souffleur *de* verres
the blower *of* glasses
'the blower of *glasses*'
- (64) a. Non-particular event (non-specific mass object)
souffler *du* verre
blow *of.the* glass
'to blow *glasses*'
b. Dispositional *-eur* N

⁹ The *inner* genericity contributed by the nature of the internal argument in dispositional nominals inside the NP is to be distinguished from the *outer* genericity brought in by the determiner system at the DP level (e.g., *my best car-dealer / car dealers*, both dispositional Ns). The interaction between the two types of genericity, as well as the interaction between inner genericity and the semantics of the underlying predicate need to be better understood. We leave these issues open for future research.

le souffleur de verre
the blower of glass
'the blower of glass'

(61)-(64) show that the event semantic properties of the animate *-eur* nominals are straightforwardly inherited from the underlying verbal phrase. This could not be explained if these nominals were not derived from an actual verbal phrase. The correlation between the internal event structure and the interpretation of the nominalization is a strong additional argument, we suggest, in favor of analyzing them as AS-Ns and not as R-Ns.

Structurally, we assume that the source of the episodic vs. dispositional meaning for animate *-eur* nominals lies in the type of quantification over the internal event variable. In the representation in (52) we distinguish, thus, two cases depending on whether the event variable introduced by AspEv is quantified over by the existential or by the generic operator, leading to the episodic vs. dispositional interpretation, respectively (cf. (65) vs. (66)).

(65) episodic nominals

$$\exists [DP/NP \ N [AspEvP \ \textit{-eur} [AspEv \ e] [AspQP \ DP_{\textit{specific}} [AspQ]] [rootP]]]]$$

(66) dispositional nominals

$$GEN [DP/NP \ N [AspEvP \ \textit{-eur} [AspEv \ e] [AspQP \ DP_{\textit{non-specific}} [AspQ]] [rootP]]]]$$

In sum, the correlation established by Grimshaw (1990); Rappaport Hovav and Levin (1992) between the obligatory realization of argument structure and the event interpretation, needs to be restated, in the context of *-eur* nominals, in terms of a correlation between 'specific' arguments and 'episodic' reading. It is not the presence vs. absence of argument structure altogether, since episodic and dispositional *-eur* nominals are both AS-nominals, but the nature of the arguments that matters in determining the episodic/dispositional reading.

Finally, our analysis in terms of event quantification (existential vs. generic) derives straightforwardly the contrastive distribution of FAs with episodic vs. dispositional nominals. Since dispositional *-eur* Ns involve generic quantification, they are not expected to be compatible with frequency modification. Frequency and genericity are in complementary, as frequency is associated with existential

quantification only: iterations, pluractionals and so on are built from existentially quantified, hence episodic, events (see, for instance, Van Geenhoven 2004, Laca 2006 and references therein). This point constitutes further support for the representations in (63)/(64).

5. Conclusion

To conclude, adjectival modification provides important tests for event-properties inside derived *-eur* nominals once we tease apart the internal reading, which is the only one associated with an internal event. It is not sufficient to look at the distribution of adjectives without also considering their semantic properties in particular contexts. We have argued that the classes of derived *-eur* nominals that arise from the distribution of these adjectives (under the internal reading) can only be accounted for in a syntactic approach to *-eur* nominals formation. All accounts that assume no eventive structure inside *-eur* nominals will fail to explain the observed distribution of event-related adjectival modification. In turn, accounts that assume event structure for all *-eur* nominals will also fail to explain the particular behavior of instruments vs. animate nominals. As we have shown, clear contrasts are also attested between derived and non-derived forms, further supporting an analysis that accepts distinct classes of *-eur* nominals, some pertaining to AS-Ns (with event related properties and argument structure), others to R-Ns (lacking these properties). Furthermore, it follows from our view that the important correlation between event interpretation and argument realization is uniformly maintained across event-denoting (e.g., *-ation* nominals) and individual-denoting nominals (i.e., *-eur* nominals).

Another important result of our study concerns dispositions. According to the distinct behavior of dispositional *-eur/-er* nouns in French and English, respectively, it appears that the dispositional sense can be associated with rather different (complex) structures. French dispositions (*mangeur de riz*; *conducteurs de camions*) are phrasal and manifest argument structure properties. The dispositional meaning comes from generic quantification over the internal event. The situation is quite different with English synthetic compounds (*rice eater*, *truck-driver*). There, the nominal is not derived from a verb, and hence do not involve any argument-structure. Following Borer (2012), synthetic compounds are 'simple' nominalizations of roots, where the nominal (e.g., *rice*, *truck*) acts as a modifier. This view is compatible with our results and brings some light to the issue of what dispositions are from a structural perspective. Semantically,

however, and since in English it cannot be compositionally derived, the dispositional meaning remains to be better understood.

Finally, we have also argued that genericity can be structurally built-up inside nominalizations. Recent studies at the interface between syntax and semantics point to the idea that derived nominals may inherit or contribute much finer event-related distinctions than originally thought, in terms, for instance, of aspect (perfectivity, telicity; cf., Haas et al. 2008; Alexiadou et al. 2010; Knittel 2011, among others) and event internal structure more generally (Sichel 2010). This, we believe, extends to genericity as well (cf. also Alexiadou and Schäfer 2010).

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The structural source of stative nominalizations from psych verbs

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1. Introduction

The literature on deverbal nominalizations has so far mainly concentrated on eventive nominals (Chomsky 1970, Grimshaw 1990, Picallo 1991, Alexiadou 2001, Borer 2003 among many others). Recently, researchers have started taking some interest into stative nominalizations, see for instance Alexiadou (2012), Fábregas & Marín (2012), Barque, Fábregas & Marín (to appear), Fábregas, Marín & McNally (2012), but our understanding of their behavior is still very limited, in comparison to event nominals.

In this paper, we contribute to this recent literature with an investigation of stative nominalizations from psych verbs in Greek and Romanian. We are particularly interested in determining the structural source of stative nominalizations that are derived from alternating object-experiencer (OE) psych verbs (i.e. OE verbs have subject-experiencer (SE) counterparts) and realize the experiencer argument.

Romanian has three nominalizations that are derived from OE verbs and we consider here:¹ i) supine, ii) infinitival, and iii) so-called zero-derived nominals which contrast with the previous two suffix-based ones.² The supine, illustrated in (1a), only gets an eventive interpretation (see Iordăchioaia & Soare 2008 where the supine is shown to pluralize events); in (1b) the infinitive may receive a stative or an eventive reading; zero-derived nominals are always stative (1c).

¹ Other suffixes like *-eală* (*plietiseală* 'boredom'), *-ie* (*bucurie* 'joy') are much less productive in Romanian.

² Like in English zero-derived nominals, it is mostly unclear whether the noun is derived from the verb, or the other way around, but in some cases the morphology indicates that the verb was derived from the noun. We will call them both zero-derived, as this matter does not interfere with our analysis.

2

Iordăchioaia, Alexiadou, Soare

- (1) a. *supăra-t-ul* părinților (de către Ion de fiecare dată
upset-Sup-the parents.the.Gen by John of every time
când vine acasă)
when comes home
i. John's upsetting his parents every time he comes home
ii.#the parents' state of being upset
- b. *supăra-re-a* părinților (de către Ion anul trecut)
upset -Inf -the parents.the.Gen by John year last
i. the upsetting of the parents (by John last year)
ii.the parents' state of being upset
- c. *frica/groaza* lui Ion de câini
fright/dread John.Gen of dogs
John's fear/dread of dogs

In Greek, there are only two types of nominalizations derived from these verbs: i) zero-derived, and ii) affix-derived. The latter are transparently related to the verb as they are formed via the addition of an affix, *-m-* or *-s* to the verb stem (Kolliakou 1995, Alexiadou 2001, 2009). We will see that for certain verbs both forms are possible, as in (2), and when this happens, the affix-derived lacks a stative reading (see (2b) vs. (2a)).

- (2) a. I *orgi* tu Jani me ti Maria
the rage the John.Gen with the Mary
John's anger at Mary
- b. O *eksorgismos* tu Jani me ta gegonota
the engaging the John.Gen with the events
John's engaging with the events

In this paper we are only interested in the stative nominalizations, but we will occasionally make reference to eventive nominals for comparison. The reason why we consider these nominalizations in our study is that the verb they are derived from is highly ambiguous (i.e. may receive several syntactic structures) which means that the nominalization could be derived from one or more such structures. We are interested in finding out which verbal structure is embedded in the nominalization.

As we will see in section 2, the OE form of the verb is three-way ambiguous between two eventive (agentive or causative-only) readings and a stative reading (see, e.g., Belletti and Rizzi 1988, Pesetsky 1995, Arad 1998). The eventive readings involve a bi-eventive structure: there is a (possibly, agentive) causing event that triggers a change of state in the experiencer (i.e., the result state, which is realized as the root phrase). The latter are stative

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eventualities (see the dichotomy states vs. events).³ All the structures share the root phrase. The stative nominal may thus be the nominalization of the result state of a causing event, or the nominalization of a stative eventuality (including a v_{stative} level on top of the root phrase). Our question is then which of the two states is the source of the stative nominalization: is it the result state of the event, i.e., the root phrase, or the stative eventuality?

A similar question is raised with respect to the SE form of the verb which will be shown to exhibit the eventive-stative ambiguity as well, especially in Romanian. Moreover, given that nominalizations in Greek and Romanian do not preserve the complex morphology of the SE form, another question that arises is whether the nominalization is derived from the OE or the SE counterpart of the verb. This will be easiest to answer, since we will see that both verbs that lack a SE form and those that lack the OE form can derive stative nominalizations. The conclusion is that these nominalizations are derived from some lower structure that is shared by both OE and SE verbal forms.

The question of whether the stative nominalization embeds the result state or the stative eventuality, we will see that the facts are less clear. The decisive factor will be the observation that stative nominalizations can also be formed from psych verbs that are unambiguously eventive. We will conclude that these nominals must be derived from the verb without the level v_{stative} contributing the stative eventuality: v_{stative} cannot be available since eventive-only verbs also derive such nominalizations and they only involve a v_{eventive} layer which is incompatible with a stative reading.

We start with a presentation of the interpretations that have been associated with OE verbs in the literature and present a few tests to disambiguate the aspectual properties of these verbs in Greek and Romanian (section 2). In section 3 we introduce the nominalizations that are derived from these verbs and present some tests that tell apart the stative from the eventive ones. In section 4, we present our syntactic analysis for alternating psych verbs (section 4.1) and for the stative psych nominalizations derived from them (section 4.2). In section 5 we present our conclusions and some theoretical implications of our results.

2. The aspectual ambiguity of psych verbs in Romanian and Greek

In this section, we investigate the aspectual properties of psych verbs that alternate between OE and SE forms in Romanian and Greek. We want to be able to tell apart the eventive readings from the stative ones. We will see that

³ We use *eventuality* as a cover term, and distinguish between states and events, where the latter may be achievements, accomplishments or activities.

most OE forms are ambiguous between eventive and stative readings. SE forms in Greek are eventive with few exceptions (e.g. *interest* which is stative both in the OE and the SE form), while Romanian has a subclass of SE verbs that are ambiguous between eventive and stative. In addition, Romanian contains a subclass of psych verbs that are eventive-only in both the OE and the SE form.

2.1. Alternating object experiencer verbs

We focus on OE psych verbs that have SE counterparts, i.e. display the causative alternation as described in Alexiadou, Anagnostopoulou & Schäfer (2006), cf. Kallulli (2007). (3/4a) and (3/4b) display the *agentive OE* and the *causative OE* reading, while (3/4c) illustrates what we will call the *anticausative SE* reading (see Belletti and Rizzi 1988, Pesetsky 1995, Arad 1998, 2002, Anagnostopoulou 1999, Pykkänen 2000, Martin 2006, Rothmayr 2009, Landau 2010):

Romanian:

- (3) a. Ion a enervat-o pe Maria dinadins/cu un băț.
John has annoyed-her Acc Mary intentionally/with a stick
John annoyed Mary intentionally/with a stick.
- b. Freza lui Ion a enervat-o pe Maria (timp de o oră).
haircut the.Gen John has annoyed-her Acc Mary time of an hour
John's haircut annoyed Mary (for an hour).
- c. Maria s-a enervat (pe Ion) de la fleacuri (*dinadins/*cu un băț).
Mary RF-has annoyed (at John) from trifles (intentionally/with a stick)
Mary got annoyed (at John) from trifles.

Greek:

- (4) a. O Janis *enohlise* ti Maria epitides /me ena bastuni
The John annoyed.3sg the Maria intentionally/with a stick
John annoyed Mary intentionally/with a stick
- b. *To kurema tis Marias* (ton) *enohlise* to Jani (ja mia ora)
the haircut the Mary.Gen him annoyed the John.Acc (for an hour)
Maria's haircut annoyed John (for an hour)
- c. O Janis *enohlithike* (*epitides/*me ena bastuni) /me ti Maria
the John annoyed.Nonactive.3sg intentionally/with a stick/ with Mary
John got annoyed at Mary

The agentive OE reading in (3/4a) has been argued to always be eventive. Its structure involves two events: an agent *acts* in such a way that it triggers a change of *state* in the experiencer. The subject is interpreted as agentive and the object experiencer verb loses its psych properties. The agentivity is

indicated by the possibility to add modifiers like *intentionally* or instruments like *with a stick*.

The reading in (3/4b) is non-agentive (the subject is just a causer)⁴ and has been claimed to be ambiguous between an eventive and a stative reading: the former involves a change of state in the experiencer, while the latter does not (Arad 1998, 2002, cf. Pykkänen 2000). This difference is explained by Arad as in (5): the eventive reading presupposes a preceding event that triggers the psychological state of the experiencer which then may last independently of the triggering event (5a); the stative reading appears when the psychological state is triggered in the experiencer at the continuous perception of a stimulus.⁵ Once the stimulus is not perceived anymore, the psychological state (i.e. stative eventuality) ends.

- (5) a. -----|----- eventive causative reading
 causing event psych state
- b. perception of stimulus
 |-----|
 psych state stative reading

Various factors favor one or the other reading in OE contexts: present tense alone usually suggests a stative reading, and past tense an eventive reading. The presence of the *for*-PP in Romanian (3b) makes past tense ambiguous between the two readings: either an iterative event (where Mary was exposed several times to John's haircut and she got angry every time), or a state (Mary was uninterruptedly exposed to John's haircut for an hour and was angry all this time). See section 2.2, where we tell apart the two readings in Greek and Romanian.

Previous literature concentrated on the readings that appear with OE forms, given that English lacks the OE-SE alternation (see Pesetsky 1995, but also Belletti & Rizzi 1988 for Italian, and Marin & McNally 2011 for Spanish). In Romanian and Greek most of these verbs alternate: the SE form employs a reflexive pronoun in Romanian (3c) and non-active voice in Greek (4c), the usual morphological marking that these languages use for anticausatives. We will show that in Romanian most SE counterparts are

⁴ Note that a human subject can also appear in (3/4b), if no agentivity triggers cooccur. Such sentences are ambiguous between three readings: agentive, eventive causative and stative causative (see (5)). In what follows, we keep the agentive and the causative contexts apart for simplicity.

⁵ We use *stimulus* or *subject matter* (Pesetsky 1995) as the thematic role that appears in the context of (5b) and *causer* for (5a); the causer is part of an event that triggers a change of state in the experiencer.

ambiguous between stative and eventive readings like in (3b), while Greek only has sporadic SE verbs that are stative, the rest are eventive.⁶ Importantly, SE forms cannot be agentive, they are only causative and may realize the causer with the prepositions *de la* 'from' (3c) and *me* 'with' (4c).⁷

As already mentioned, for our discussion on stative nominalizations we are interested in both eventive and stative readings, so the readings in (3/4b-c) are relevant for us. We will not pay special attention to the agentive (3/4a), since it can only be eventive and this reading also appears in (3/4b) and in (3/4c), so (3/4a) doesn't pose any additional problem.

2.2. Stativity and eventivity tests in Romanian and Greek

Romanian and Greek lack the progressive, so this standard test cannot be used to check the stativity of (3/4b) and (3/4c). However, the interpretation of aspectual modifiers like 'in'/for' PPs can be used to distinguish between eventive and stative readings. We consider 'for'-PPs in what follows.

Typically, 'for'-PPs are OK with atelic/durative eventualities, but depending on whether they modify inner or outer aspect (see, e.g., Verkuyl 1993), they measure out the extension of one eventuality or of several iterated eventualities together, as illustrated in (6) below.

- (6) a. Ion a alergat/cântat/dansat/bătut la ușa lor timp de 3 ore/3 ani.
 John has run/sung/danced/knocked at door their time of 3 hours/3 years

⁶ There is a long debate about the precise aspectual value of OE psych verbs (see Grimshaw 1990, Van Voorst 1992, Tenny 1987, 1994). In the following, we try to stick to simple facts that are relevant for our discussion on stative nominalizations and how their aspectual value comes about.

⁷ Concerning (3/4b), Pesetsky (1995) claims that reflexive (SE) forms have non-causative semantics: for instance, in French, the object of the preposition bears either the target or the subject matter role:

- (i) Marie s'étonne *de Paul/*de cette table/du bruit qu'on fait sur cette histoire.
 Marie RF-amazes of Paul/of this table/of the fuss made about this story.

This is not the case in Greek (iia) and Romanian; in Romanian (iib) *de la* 'of at/from' introduces the causer, *de* 'of' the subject matter, and *pe* 'on' the target.

- (ii) a. I Maria endiposiatike me to Jani/me to trapezi/me to
 Mary amazed-nonactive with the John/with the table/with the
 thorivo pu proklithike
 fuss that was caused
- b. Maria s-a supărat pe Ion de la jocul de cărți/de problemele lui Ion
 Mary RF-has upset on John of at game of cards/of problems John.Gen
 Mary got upset with John because of the card game/with John's problems

- John ran/sang/danced/knocked at their door for 3 hours/3 years.
 b. O Janis etreксе/horepse ja tris ores/tria hronia
 John ran/danced for three hours/three years.

Achievements are non-durative events, so they only allow the iterative reading in the presence of a repetitive adverb (with both the shorter and the longer time). In (7) the repetitive adverbs *iar și iar* 'again and again' and *kat'epanalipsi* 'repeatedly' are obligatory:

- (7) a. Ion a găsit cheia/intrat pe ușă ??(*iar și iar*) timp de 3 ani/3 ore.
 John has found key/entered on door again and again time of 3 years/3 hours
 John found the key/entered the door again and again for 3 years/3hours.
 b. O Janis kerdise to vrvavio ??(*kat'epanalipsi*) ja 3 hronia/#3 ores
 John won the prize repeatedly for 3 years/#3 hours.

States are durative, but unlike the activities in (6), allow only the eventuality-span reading and prefer the longer time-span.

- (8) a. Ion a iubit-o/ disprețuit-o pe Maria (**iar și iar*)
 John has loved-her/despised-her Acc Maria again and again
 timp de trei ?ore/ani
 time of three hours/years
 John loved/despised Mary (*again and again) for 3 ?hours/years.
 b. O Janis misuse ti Maria (**kat'epanalipsi*) ja 3 hronia/?3 ores
 John hated Mary repeatedly for 3 years/3 hours.

2.3. The aspectual value of alternating psych verbs

Arad (2002) points out that (3/4b) behaves either like the agentive reading in some languages or like the stative reading in some other languages. In languages like Romanian and Greek, a stative reading is favored in the presence of clitic-doubling, while an agentive/eventive reading is forced in the absence of clitic doubling.

Note that Anagnostopoulou (1999) claims that clitic-doubling of the experiencer is obligatory in (4b), on the assumption that (4b) only has a stative reading, but we will see in (12a) that we can also get an eventive reading in the absence of clitic-doubling (see also Verhoeven 2009 for a more complex picture). It seems to us, however, that in both languages, clitic doubling is obligatory with stative-only verbs like *interest* in (9).

- (9) a. *Maria/*Fotbalul interesează băiatul.
 Mary/Soccer interests boy.the
 b. Maria/Fotbalul il interesează pe băiat

- Mary/Soccer him interests Acc boy
 Mary/Soccer interests/preoccupies the boy.
 c. To podosfero ??(*ton*) endiaferi to Jani
 soccer him interests the John.Acc

Thus a sentence without clitic-doubling indicates an eventive reading (and excludes a stative one) in both languages. The difference, we will see, is that clitic-doubling in Romanian is also compatible with an eventive reading (besides the stative one), while in Greek we have a one-to-one relation: clitic-doubling appears only with stative readings, eventive readings occur only without clitic-doubling.

In Romanian, both OE forms in (10) and SE counterparts in (11) may receive both readings with 'for'-PPs: iterative and eventuality-span. The former indicates an eventive reading and is favored by the presence of a causer PP and modification by *iar și iar* 'again and again' (10a, 11a). The latter is stative and is favored by the perception of a stative stimulus which triggers the psychological state.

- (10) a. Știrile TV (l)-jau supărat/îngrijorat (pe) băiat(ul) (*iar și iar*)
 News TV (him)-has upset/worried Acc boy(the) again and again
 timp de cinci zile.
 time of five days
 The TV news upset/worried the boy (again and again) for five days.
 b. Starea Mariei *(l)-a supărat/îngrijorat pe băiat (?*iar și iar*)
 state M.-Gen him-has upset/worried Acc John again & again
 timp de cinci zile.
 time of five days
 Mary's state upset/worried the boy for five days.

The difference between (10a) and (10b) lies in the properties of the subject: the TV news in (10a) are usually short, internally diverse and vary over the time span of 5 days, so they cannot be interpreted as a stative stimulus that would trigger a prolonged psychological state. This favors the eventive interpretation (5a) in which several smaller events cause a change of state in the experiencer as described in (5a). Mary's state, on the other hand, is understood as a prolonged homogeneous stimulus whose perception triggers a psychological state in the experiencer. This state will stop once Mary's state stops being the same and/or the experiencer does not perceive it anymore.^{8,9} This correlates with the stative reading described in (5b). With

⁸ Note that we use *perception* with its wide meaning: through the senses or the mind. Thus thinking of Mary's (bad) state counts as perceiving the state.

respect to clitic doubling, note that it is obligatory in (5b) and optional in (5a).

In (11) we have the same two readings with the SE counterpart of (10). Importantly, in (11a) *de la* 'from' introduces the causer and thus favors the eventive reading, while *de* 'of' in (11b) introduces the subject matter and favors the stative reading. In particular, *de la* seems to only introduce causers in Romanian (see Iordăchioaia 2008, Alexiadou & Iordăchioaia to appear): if we replace *de* in (11b) with *de la*, the sentence becomes marginal and may only get an eventive reading ((11c); see also footnote 9 for an appropriate context).

- (11) a. Ion s-a supărat/îngrijorat (*iar și iar*) *de la* știrile TV
John RF-has upset/worried (again and again) from news TV
 timp de cinci zile.
time of five days
John got upset/worried (again and again) because of the TV news for five days.
- b. Ion s-a supărat/îngrijorat (*??iar și iar*) *de* starea Mariei *timp de 5 zile.*
John RF-has upset/worried (again & again) of state M.Gen time of 5 days
John was upset/worried about Mary's state for five days.
- c. ??Ion s-a supărat/îngrijorat **(iar și iar) de la* starea Mariei *timp de 5 zile.*
John got upset/worried because of Mary's state for five days

In Greek, OE forms are ambiguous, but, as already mentioned, the influence of clitic doubling is more clear-cut than in Romanian: the presence of clitic-doubling indicates a stative reading (12b) and the absence of clitic-doubling gives the iterative eventive interpretation (12a).

- (12) a. Ta nea stin tileorasi stenahorisan to Jani kat'epanalipsi ja 5 meres
The TV news saddened the John repeatedly for 5 days
- b. I katastasi tis miteras tu ton stenahorise to Jani (*kat'epanalipsi) ja 5 meres
The state the mother his him saddened the John repeatedly for 5 days

⁹ Of course, in a very developed context both sentences could receive the other reading as well. If John used to work for the TV news and got fired which makes him be upset/worry about, say, his future (the subject matter in Pesetsky 1995) when watching TV news, and if he watched TV news uninterruptedly for five days, then we could get the stative reading in (11a) in the absence of 'again and again'. Similarly, in (11b) if Mary's state keeps changing in several ways over the five days and John gets upset/worried about a possibly different subject matter, using 'again and again' would favor the iterative eventive reading. However, out of context, the most salient readings for (11a) and (11b) are the eventive and the stative one, respectively.

There are two kinds of SE forms in Greek: stative-only and eventive-only. The stative ones are derived from stative-only OE verbs and receive the eventuality span reading (13a); the eventive ones only have the iterative reading and lack the eventuality span reading (13b).

- (13) a. O Janis endiaferthike ja ta fita ja 5 hronia (*kat'epanalipsi)
The John interest-Nonactive about the plants for 5 years repeatedly
- b. O Janis stenhorthike kat'epanalipsi ja 5 meres
John saddened- Nonactive repeatedly for 5 days

2.4. Eventive-only verbs

Romanian and Greek have a subclass of alternating psych verbs that cannot get a stative reading in either the OE or the SE form. Thus they only allow the (eventive) iterative reading with 'for'-PPs, and require an adverb of repetition like 'again and again' in (14a, b) and 'repeatedly' in (14c, d).

- (14) a. Ion s-a înviorat/însuflețit/înfiorat ??(*iar și iar*) *timp de 3 zile.*
John RF-has cheered-up/enlivened/thrilled again and again time of 3 days
- b. Veștile l-au înviorat/însuflețit/înfiorat ??(*iar și iar*) *timp de 3 zile.*¹⁰
News him-have cheered-up/enlivened/thrilled again & again time of 3 days
The news cheered up/enlivened/thrilled John again and again for 3 days
- c. O Janis anazoogonithike ??(kat'epanalipsi) ja tris meres
John invigorated-Nonactive repeatedly for three days
- d. Ta nea ton anazoogonisan to Jani ??(kat'epanalipsi) ja tris meres
the news him invigorated the John repeatedly for three days

Despite their being only eventive, we will see that these verbs derive stative nominalizations like all the other psych verbs. This will turn out very important for our discussion on the structure of stative nominalizations, as it suggests that the stative aspect of nominals need not be inherited from the verb.

¹⁰ Without an adverb of repetition, (14b) may get a reading in which the for-PP measures the result state of the event (see Piñón 1999), but the most natural way to express this would be with the preposition *pentru* 'for':

- (i) Vestea l-a înviorat/înflăcărat/însuflețit/înfiorat/revigorat pe Ion
news him-has cheered-up/inflamed/enlivened/thrilled/invigorated Acc John
 pentru trei zile.
for three days
The news made John be cheered up/inflamed/enlivened/thrilled/invigorated for three days.

3. Nominalizations from alternating psych verbs

After having determined what aspectual values alternating psych verbs may receive, we now turn to their nominalizations, in particular the stative ones, for which we are interested in determining what part of the verbal structure they nominalize. We first discuss some tests that differentiate the stative nominals from the eventive ones and then discuss their morphology.

3.1. Tests for stativity in nominalizations

To show that the nominalizations we are investigating are indeed stative (i.e., psych nominals), we address a few tests that distinguish them from both eventive nominals, and what Grimshaw calls 'result' nominals, i.e., derived nominals that do not describe an eventuality, but a more or less abstract entity, just like common nouns. Syntactically, the latter do not contain any verbal eventuality projection.

First, unlike eventive nominals, psych nominals cannot be the subject of 'take place' and 'happen', a standard diagnostic for eventivity. Eventive nominals like in (15/16a) are compatible with these predicates, but psych zero-derived nominals like in (15c) and (16b) are not. Romanian infinitival nominals are ambiguous between events and states, which explains their compatibility with 'take place'. Zero-derived nominals are unambiguously stative.

- (15) a. demolarea casei/citirea cărții a avut loc ieri
demolish.Inf house.Gen/read.Inf book.Gen has taken place yesterday
b. enervarea/supărarea/măhnirea/îngrijorarea Mariei a avut loc azi
annoy.Inf/upset.Inf/grieve.Inf/worry.Inf Mary.Gen has taken place today
c. *frica/groaza/*furia/*interesul Mariei a avut loc ieri
fright/dread/fury/interest Mary.Gen has taken place yesterday
- (16) a. i enhirisi tu baba sinevi sto Londino
the operation the father.Gen took.place/happened in London
b. *o thimos/*i thlipsi tu baba sinevi sto Londino
the anger/the grief the father.Gen took.place/happened in London

Martin (2010) argues that *assister à* 'witness' is a predicate that rejects object denoting individuals, states and facts, but is fine with achievements, activities, accomplishments (i.e., events). For Greek and Romanian, 'be witness at' seems to work similarly and makes the same predictions like in (15) and (16) with respect to zero-derived and infinitival nominals from

psych verbs: the former are entirely excluded (17/18b), while the two infinitives in (17b) are OK, given their ambiguity between states and events.

- (17) a. *am fost martor la găsierea/căutarea soluției/construirea casei*
have been witness at find.Inf/seek.Inf solution.Gen/build.Inf house.Gen
b. *am fost martor la *frica/*interesul/supărarea/îngrijorarea Mariei*
have been witness at *fright/*interest/upset.Inf/worry.Inf Mary.Gen
- (18) a. *imun martiras sti katastrofi tis polis*
was witness at the destruction the city.Gen
b. **imun martiras sto misos/fovo/orgi/stin thlipsi tu Jani ja ti Maria*
was witness at the hate/fear/rage/to the grief the John for Mary

Second, psych nominals are unacceptable as subjects of verbs like 'finish' and 'stop' that select durative dynamic eventualities (see a similar discussion in Fábregas, Marín & McNally (2012) with respect to Spanish psych nominals). (19/20) show that these predicates are incompatible with achievements as the latter are not durative (19/20a), but OK with activities and accomplishments (19/20b), since they involve duration and change.

- (19) a. *sosirea lui/*intrarea lui pe ușă s-a încheiat/terminat
arrive.Inf his/enter.Inf his through door RF-has closed/finished
b. căutarea soluției /citirea cărții s-a încheiat/terminat
seek.Inf solution.Gen/read.Inf book.Gen RF-has closed/finished
c. *enervarea/*măhnirea/*îngrijorarea Mariei s-a încheiat/terminat
annoy.Inf/grieve.Inf/worry.Inf Mary.Gen RF-has closed/finished
d. *frica/*groaza/*furia/*interesul Mariei s-a încheiat/terminat
fright/dread/fury/interest Mary.Gen RF-has closed/finished
- (20) a. *i afiksi tu Jani teliose/stamatise
the arrival the John.Gen finished/stopped
b. i anazitisi/to diavasma tu vivliu teliose/stamatise
the seeking/the reading the book.Gen finished/stopped
c. *o thimos/*i enohlisi tu Jani teliose/stamatise
the anger/the annoyance the John.Gen finished/stopped

The unacceptability of zero-derived nominals with 'finish/stop' together with their impossibility to denote events illustrated in (15/16a) indicates that they must denote states in (19d/20c) as well. From (19d/20c), we can conclude that 'finish' and 'stop' are incompatible with states. Furthermore, from (15b) we know that infinitives can be eventive. The incompatibility of infinitives with 'finish' and 'stop' in (19c) tells us that infinitives derived from psych

verbs must be achievements (if eventive), or states, since only achievements and states are ruled out in the context of 'finish' and 'stop' (see (19a), (19d)). To see now that these infinitives do not only denote achievements, but can also be stative, note their compatibility with 'to last' (by contrast with achievements like 'arrival') in (21).¹¹

- (21) a. enervarea/supărarea/măhnirea/îngrijorarea/teama/*sosirea/*intrarea
 annoy.Inf/upset.Inf/grieve.Inf/worry.Inf/fear/*arrive-Inf/*enter.Inf
 Mariei pe ușa a durat trei secunde/zile
 Mary-Gen through door has lasted three seconds/days
- b. i orgi /i enohlisi /i anisihia /o fivos/*i afiksi tis Marias
 the rage/the annoyance/the worry/the fear/the arrival the Mary-gen
kratise 3 meres
 lasted 3 days

While (15c) and (16b/17b/18b) clearly show that zero-derived nominals from psych verbs are only stative, (19c) and (21a) provide evidence that the Romanian infinitival nominals may also denote states (besides events).

The most reliable test to tell apart stative nominals realizing the experiencer argument from cognate result nominals which have no arguments is plural marking (see Grimshaw 1990, cf. also Alexiadou, Iordăchioaia & Soare 2010). As (22) indicates, most of the nominals we address lack plural marking altogether.

- (22) a. *enervările/*îngrijorările/*mirările/*uimirile/*deprimările/
 annoy.Inf.PI/worry.Inf.PI/wonder.Inf.PI/amaze.Inf.PI/depress.Inf.PI/
 *înduioșările/*inflăcărările/*fricile Mariei
 touch.Inf.PI/inflame.Inf.PI/fright.PI Mary
- b. *i enohlisis/*i stenahories/*i erethismi tis Marias
 the worries/the upsets/the irritations the Mary.Gen

For the nominals that are ambiguous between stative nominalizations with an experiencer argument and result nominals, we can safely say that when they realize the plural, they are not stative anymore. This is shown by the test with the predicative position of the genitive: if the genitive experiencer is an argument, it cannot appear in the predicative position; if it can be predicative, then the genitive is an adjunct (or a possessor, see Grimshaw 1990). As (23) indicates, psych nominals in the plural allow the genitive to appear in predicative position, unlike the singular form and nouns that are

¹¹ To make a small interval like 'three seconds' compatible with achievements in this context, one would need to use 'take' instead of 'last': e.g. Mary's arrival took three seconds.

unambiguously stative. We illustrate this below with Romanian data, but the same holds in Greek.

- (23) a. temerile/interesele (acestea) sunt ale Mariei
 fear.Inf.PI/interest.PI (these) are of Mary.Gen
 These fears/interests are Mary's
- b. *interesul/*enervarea/*îngrijorarea este a(l) Mariei
 interest.the/annoy.Inf.the/worry.Inf.the is of Mary.Gen

3.2. The morphology of nominalizations derived from alternating psych verbs

In Romanian, alternating psych verbs build zero-derived nominals, supine nominalizations with the past participle suffix *-t/s*, and infinitive nominalizations with the suffix *-re*. Iordăchioaia & Soare (2008, 2009) showed that supine nominalizations are always eventive, so we concentrate on zero-derived and infinitive nominals.

Depending on the kind of stative nominal that they derive, in Romanian we distinguish two groups of alternating psych verbs: 1) verbs that only have zero-derived nominals (their infinitive nominal, if available, is eventive); 2) verbs that derive stative infinitives and do not have zero-derived nominals at all. In the latter group, the infinitive is possibly ambiguous between eventive and stative. A few examples for each of the two classes are given in (24a) and (24b).

- (24) a. **Group I:** only zero-derived stative Ns (infinitives are eventive)
înfuria 'enrage' = *în + furie* 'fury' + *-a*; *înfurie-re-a* is eventive, *furie* is stative
îngrozi 'terrify' = *în + groază* 'dread' + *-i*; *îngrozi-re-a* is eventive, *groază* is stative
teroriza 'terrorize' = *teroare + -iza*; *teroriza-re-a* is eventive, *teroare* is stative
necăji 'bother' = *necaz* 'trouble' + *-i*; *necăji-re-a* is eventive, *necaz* is stative
încuraja 'encourage' = *în + curaj* 'courage' + *-a*; *încuraja-re* is eventive, *curaj* is stative
înfrișoșa 'frighten' = *în + frică* 'fear/fright' + *-a*; *înfrișoșa-re* is eventive, *frică* is stative
interesa 'interest' = *interes* 'interest' + *-a*; only *interes* 'interest' (the verb is stative-only)
- b. **Group II:** stative infinitival Ns (no zero-derived nominals):¹²

¹² The nominals in bold font are derived from eventive-only verbs (see (14)).

enerva 'annoy' - *enervare*; *supăra* 'upset' - *supărare*; *irita* 'irritate' - *iritare*; *demoraliza* 'demoralize' - *demoralizare*; *descuraja* 'discourage' - *descurajare*; *deprima* 'depress' - *deprimare*; *înduioșa* 'touch' - *înduioșare*; *măhni* 'grieve' - *măhni*; *tulbura* 'confuse' - *tulburare*; *dezamăgi* 'disappoint' - *dezamăgire*; *însufleți* 'enliven' - *însuflețire*; *înviora* 'refresh' - *înviorare*; *înfiora* 'thrill' - *înfiorare*.

The two classes of verbs clearly indicate a competition between zero-derived and infinitive stative nominals: if there is a zero-derived nominal, the infinitive is blocked and may only get an eventive reading (24a); the infinitive may be stative only if there is no zero-derived counterpart (24b). This competition suggests that the meaning of the stative infinitive must be very similar to that of the zero-derived nominal which in turn indicates that the structure of the stative infinitive probably does not include any additional layers that are semantically relevant for the state they express. We will see at the end that the stative infinitive only has a categorizing v level in addition to the structure of the stative zero-derived nominal.

In Greek we find four groups of psych nominals (cf. Markantonatou 1992), as follows:

Group I: there is a basic (stative) noun and the verb is transparently related to it via the addition of some verbalizing morphology, e.g. *-az-*, *-on-*, *-iz-*, see Alexiadou (2009, 2012) for further discussion.

- | | |
|--|-------------------------|
| (25) <i>trom-az-o</i> : terror-verbalizer-1sg | <i>trom-os</i> 'terror' |
| <i>aidi-az-o</i> : disgust-verbalizer-1sg | <i>aidi-a</i> 'disgust' |
| <i>thim-on-o</i> : anger-verbalizer-1sg | <i>thim-os</i> 'anger' |
| <i>eks-org-iz-o</i> : out-anger-verbalizer-1sg | <i>org-i</i> 'rage' |

Group II: the same (stative) 'stem' is used for the noun and the verb. Note that this is the case of subject experiencer predicates that are only stative:

- | | |
|---------------------------------------|-------------------------------|
| (26) <i>endiafer-o</i> : interest-1sg | <i>endiafer-on</i> 'interest' |
| <i>mis-o</i> : hate-1sg | <i>mis-os</i> 'hate' |
| <i>trem-o</i> : have terror of-1sg | <i>trom-os</i> 'terror' |

Group III: special nominalizing morphology is added to the verbal form (*-s* in (27)). These verbs do not have zero-derived nominals and the *-s* nominals have stative or result readings. Some of the verbs in this group contain overt verbalizing morphology, e.g. *-ev-*, or a thematic vowel *-a-*:

- | | |
|--|---------------------------------------|
| (27) <i>apo-goit-ev-o</i> : from-appeal-verbalizer-1sg | <i>apogoitev-s-i</i> 'disappointment' |
| <i>enohl-a-o</i> : annoy-1sg | <i>enohli-s-i</i> 'annoyance' |
| <i>thliv-o</i> : grieve-1sg | <i>thlip-s-i</i> 'grief' |

Group IV: two forms, a zero nominal and one containing *-m-*; the latter is always eventive (Alexiadou 2012):

- | | | |
|-------------------------|-------------------------|-------------------|
| (28) <i>eksorg-iz-o</i> | <i>eksorgis-m-os</i> | <i>orgi</i> |
| enrage-1sg | enraging | rage |
| <i>endiposi-azo</i> | <i>endiposi-as-m-os</i> | <i>endiposi-i</i> |
| impress-verb-1sg | impressing | impression |

This suggests that in Greek, there are mainly zero-derived stative nominals, and when such a nominal does not exist, we get a stative nominal by means of an affix (e.g. *-s*) as in (27). This picture resembles that of Romanian stative infinitives in (24b) and the competition between zero-derived and affix-derived stative nominals.

With respect to whether the source of the stative nominalization is the OE or the SE verbal form (our second question in section 1), we can now see that the difference between the two verb forms is irrelevant to the availability of a stative nominalization. Besides alternating verbs, non-alternating OE verbs like *nemulțumi* 'displease' in Romanian (29) derive stative nominalizations, and non-alternating SE verbs like *dispera* 'despair' in (30) do so, too. The incompatibility of these nominals with 'finish'/'stop' and their compatibility with 'last' indicate that they have a stative reading (see the discussion in (19) and (21a) above). From this we conclude, just like Fábregas, Marín & McNally (2012) for Spanish that the stative nominalizations of psych verbs must be derived from a structure that the two verbal forms (OE and SE) share which, we will see below, must be the root phrase plus, possibly, the categorizing v level.

- (29) *nemulțumirea* *Mariei* *a durat două zile/*s-a încheiat/*s-a terminat*
displease.Inf.the Mary.Gen has lasted two days/RF-has closed/RF-has finished
Mary's displeasure lasted two days/*finished/*stopped
- (30) *disperarea/ dileala* *Mariei* *a durat două zile/*s-a încheiat*
despair.Inf.the/go.crazy.NSuffix Mary.Gen has lasted two days/RF-has closed
Mary's despair/insaneness lasted two days/*finished

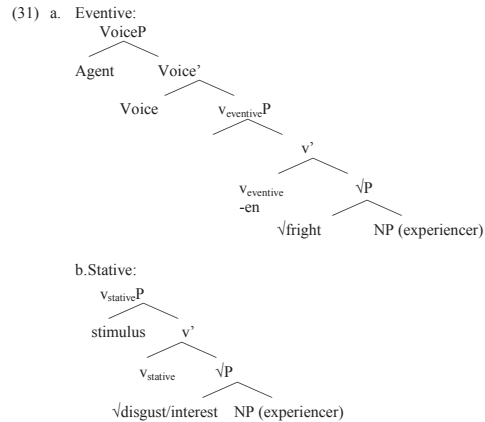
4. The structural source of stative nominalizations

4.1. The structure of alternating psych verbs

We saw in section 2 that OE verbal forms are usually ambiguous between eventive and stative readings. SE forms were shown to exhibit the same ambiguity for a subclass of psych verbs in Romanian. In Greek SE forms are unambiguously eventive or stative, but the latter are very few and have stative-

only OE counterparts. In addition, both languages have a class of eventive-only psych verbs.

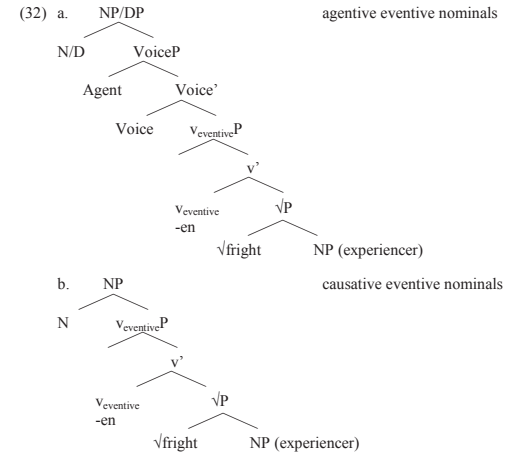
Below we introduce the structures we assume for OE predicates. Building on Kratzer (1996) and Arad (1998, 2002), we assume that agentive/causative eventive OE verbs have the structure in (31a), while stative ones the structure in (31b). Both the stative and the (agentive) eventive reading are formed on the basis of the same root; the difference arises from the functional heads they combine with in the agentive/causative and the stative reading. In the eventive reading, they combine with a $v_{eventive}$ head, and a Voice head (Kratzer 1996) that introduces the external argument. In the other case, they combine with $v_{stative}$.¹³ In our structures, we assume that the experiencer argument is an argument of the root, following Arad (1998).



¹³ Note that we assume here that all verbs, including states, have an eventuality/Davidsonian argument (and thus a syntactic eventuality layer), just like nouns have an individual argument. Whether one needs to restrict this argument to events only (as in Kratzer 1995) is a complex issue which we will not address here, although our results could be interpreted to suggest that the syntactic $v_{stative}$ layer might not be present (see section 5).

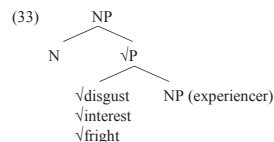
4.2. The structure of psych nominalizations

Following much recent work on nominalization, we assume that nominalizers can attach to structures of different complexity. Eventive nominals from psych verbs, just like other eventive nominals, nominalize some segment of the structure in (31a) as shown in (32) (see also Alexiadou, Anagnostopoulou & Schäfer 2009, Sleeman & Brito 2010, Alexiadou, Iordăchioaia & Schäfer 2011). The Romanian eventive infinitives thus nominalize VoiceP when they realize the agent (as in (32a)), or $v_{eventive}$ P (as in (32b)) if they only realize a causer PP¹⁴ (see Iordăchioaia 2008, which shows that the infinitive doesn't have to, but may realize VoiceP). The Greek affix-based nominals in (28) have the structure in (32a) or (32b) under conditions similar to those of the Romanian eventive infinitive (see Alexiadou, Anagnostopoulou & Schäfer 2009).

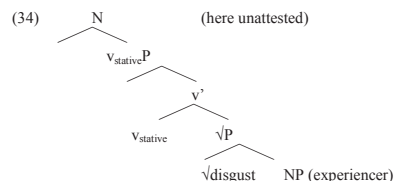


¹⁴See Alexiadou, Anagnostopoulou & Schäfer (2006), Iordăchioaia (2008) who show that VoiceP introduces agents and agentive PPs, while $v_{eventive}$ P introduces causers and causer PPs in Greek and Romanian.

We take zero-derived stative nominals to be nominalizations of the root phrase, given that they do not realize any verbal morphology. The zero-derived nominals in (15c), (16b), (24a), (25), and (26) thus receive the structure in (33). Given that the experiencer is an argument of the root, all the nominals may realize it in the syntax.



Suffix-derived stative nominals should in principle nominalize the stative eventuality structure in (31b), as given in (34). Among the nominals we addressed, the Romanian infinitive and the group III -s-based Greek nominals in (27) have a suffix and can be stative. As the infinitive, in particular, can nominalize a $v_{\text{eventive}}P$ (32b), it would be expected to nominalize a $v_{\text{stative}}P$ like in (34) as well. However, stative infinitives derived from eventive-only verbs provide clear evidence that this analysis cannot be right.¹⁵



We mentioned that some stative infinitives are derived from eventive-only verbs (see (16b)). Note that besides their eventive reading, these nominalizations indeed also have a stative reading, as they are simultaneously incompatible with ‘to finish’ (indicating that they can only be

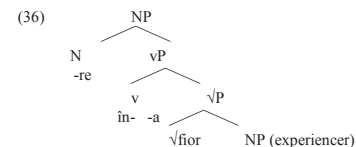
¹⁵ But see Fábregas, Marín & McNally (2012), who show that Spanish stative psych nominals inherit the stativity of the original verb thus providing support for the Aspect Preservation Hypothesis, which says that “the lexical aspect of a verb is preserved under nominalization if the resulting nominal denotes an eventuality and there is no independent evidence that the nominalizing morphology consistently induces a particular aspectual effect.”

achievements or states, see (19) above) and compatible with ‘to last’ (indicating that they are not only achievements, see (21a)):

- (35) *însuflețirea/înflăcărarea/înfiorearea Mariei a durat trei ore/*
enliven.Infl/inflame.Infl/thrill.Infl Mary.Gen has lasted three hours/
**s-a încheiat/*s-a terminat*
 RF-has closed/RF-has finished

The infinitives in (35) must be stative according to our discussion in section 3.1. But given that the verbs they are derived from do not have the stative reading in (31b), the nominals in (35) obviously cannot be derived from (31b), they must be derived from some sub-structure of the eventive reading in (31a). The only such sub-structure that is not eventive is the root phrase. This suggests that the nominals in (35) should receive the structure in (33) just like zero-derived nominals. But this analysis cannot be right, either, since infinitives clearly inherit the verbal thematic vowel from the original verb (e.g. *în* ‘in’ + *fior* ‘thrill’ + *a* (thematic vowel) > *înflăcăr-a-re*) and have a more complex morphology than zero-derived nominals.

We propose that the infinitive nominalizes the categorizing *v* layer which assigns the verbal category to a root. This way we argue against the idea that categorizing *v* comes directly with an eventuality, as assumed for instance in Oltra-Massuet 1999 (see Anagnostopoulou & Samioti 2009, Borer 2009, for an approach similar to ours and independent reasons). We therefore assume that categorizing *v* appears between the root phrase and the eventuality level with $v_{\text{eventive}}P$ or $v_{\text{stative}}P$, and that it is this level that the infinitival suffix *-re* nominalizes when it receives a stative reading. The structure of the stative nominal *înfioreare* ‘thrill’ is in (36).



In support of this analysis, note that the infinitival suffix *-re* in Romanian is unspecified as to the height of attachment (it is the default nominalizer): for instance, it can appear in both configurations in (32). Moreover, in support of the analysis in (36), note that the infinitive may also build result nominals from eventive verbs: *a lucra* ‘to work’ - *lucrarea* ‘piece of work’, *a plânge* ‘to cry’ - *plângerea* ‘complaint’, *a vorbi* ‘to speak’ - *vorbirea* ‘speech (property)’ (see Cornilescu 2001). In this case, the infinitive will receive a structure

similar to (36), as they again inherit the verbal morphology with the thematic vowel.

For Greek stative -s-derived nominals in (27), the same analysis applies, since they also inherit the verbalizer without exhibiting eventuality properties. Note that such nominals can also be formed from eventive-only predicates as the ones in (14).

5. Conclusions and theoretical implications

In this paper we argued that stative nominalizations from psych verbs are not derived from the stative eventuality reading of a psych verb, but from a lower structure including the root phrase which is shared between the eventive and the stative readings of the verb. It may be the root phrase alone, as in the case of zero-derived psych nominals in Greek and Romanian (the structure in (33)) or a slightly more complex structure that also involves the v-layer which categorizes the root into a verb (the structure in (36)).

There are two dimensions of research our present study contributes to. First, the results concerning nominalizations supply us with a new perspective in the study of psych verbs whose heterogeneous aspectual behavior is known to pose particular challenges to linguistic theory in general. Second, it provides new data and phenomena that enrich our understanding of how the process of nominalization functions, and in particular how the aspectual value of derived nominals relates to the aspect of the original verb cross-linguistically. With respect to this latter point, it is interesting that nominals in Greek and Romanian seem to disobey the Aspect Preservation Hypothesis proposed in Fábregas, Marin & McNally (2012) for Spanish. A closer cross-linguistic comparison is thus necessary to determine to what extent verbal aspect may be preserved in nominalizations.

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Pluractionality with Lexically Cumulative Verbs

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Abstract

We offer a syntax-semantics interface for external readings with pluractional operators, i.e., readings where the event is interpreted iteratively. While previous literature argues or assumes that POs are (possibly lexical) plural operators that attach at the V level, we bring evidence in favor of a treatment of POs as Aspect level operators that bind plural event variables. This analysis allows a better understanding of pluractional operators as markers of verbal plurality in languages where verbs are lexically cumulative and pluractionality as accounted for previously would appear to be superfluous. We formulate our claims on the basis of the Romanian supine, whose nominal form has previously been argued to carry a pluractional operator.

1 Introduction

This paper focuses on the syntax-semantics interface of pluractional operators (henceforth, PO) from the perspective of a covert PO that has been shown to appear in the Romanian (deverbal) supine nominal (see Iordăchioaia and Soare (2008)). Starting with the assumption that plural operators have direct correspondents in the nominal and the verbal domain (see Mourelatos (1978), Krifka (1989), Jackendoff (1991), among others), a closer examination of the properties of the supine offers us a deeper insight into the role of POs in language.

Pluractional operators have been described as ‘frequently reduplicative, most often derivational rather than inflectional’ morphemes ‘that attach to the verb to indicate a multiplicity of actions, whether involving multiple participants, times, or locations’ (Lasersohn (1995)). In the presence of such a marker, ‘the verb is understood to represent the occurrence of multiple events’ (Lasersohn, 1995, 238-241); see also van Geenhoven (2004), Laca (2006), Wood (2007), Tovena and Kihm (2008), and Cabredo Hofherr (2010) for an overview.

For the purposes of our paper it is important to distinguish between *event-internal* and *event-external* pluractionality (Cusic (1981), Wood (2007)). The former notion is best illustrated by English lexical verbs like *nibble* as opposed to *bite*, while the latter is usually contributed by adverbs that indicate a repeated event on a single occasion (e.g., ‘to bite the cheese *again and again*’), or on several occasions (e.g., ‘to *always/often/usually* bite the cheese’). We take the former type to be specified in the lexical semantics of the verb (see also Tovena and Kihm (2008)), and we consider the latter to involve compositional semantics above the lexicon. Our aim is to throw more light into the syntax-semantics of event-external pluractionality. Since, we will see, the PO effect in the Romanian supine is obtained in the syntax, it cannot be the result of a lexical operation.

It has been customary in the semantic literature on pluractionality (in particular, Lasersohn (1995), van Geenhoven (2004), Laca (2006)) to consider the PO as a kind of V level operator that pluralizes the event of the verb. The effect

of a PO is thus very similar to Link (1983)'s star operator, to which the various special semantic effects of each PO are added as for instance low or high variant frequency (van Geenhoven (2004)). These approaches, however, pose two independent problems: one that directly has to do with the PO in the Romanian supine which cannot be accommodated under such an analysis, and another one that has to do with language economy.

First, the supine PO cannot be treated as a V level operator as this cannot account for the lack of PO effects in other nominal contexts that employ the same morphological form of the verb including what we will refer to as the *verbal supine*. The PO effect in the Romanian supine is necessarily related to the one supine form which exhibits aspectual properties that have previously been associated with grammatical aspect, under the well-known dichotomy between lexical and grammatical aspect (e.g., Smith (1997), Verkuyl (1993), Depraetere (1993), de Swart (1998), Borik (2002)). Assuming a strict syntax-semantics mapping where lexical aspect is composed within the VP and grammatical aspect is contributed by AspectP, this suggests that the PO must be an Aspect level operator and not a V level one, as the latter would be limited to an interpretation at the lexical aspect level. Further syntactic evidence will be brought to support the idea that the nominal supine, but not the verbal one, involves an AspectP projection that correlates with its pluractional meaning.

Second, under the widespread assumption that lexical verbs (at least) in languages like English and Romanian are cumulative, i.e., start out with a plural event denotation (see Krifka (1992), Schein (1993), Landman (1996), Kratzer (2008)), the use of POs in natural language to mark precisely event plurality at the V level seems superfluous. Our present examination of the PO in the Romanian supine contributes to the latter issue by showing that, independently of whether POs may be used to express plurality of events at the V level in some language(s), there are also POs that act at the level of grammatical aspect. We make use of Ferreira (2005)'s insight that natural languages have plural (nominal and verbal) operators and argue that the supine PO in Romanian is an operator that binds plural events. We eventually offer a syntax-semantics interface for event-external pluractionality in which the AspectP level contributes the pluractional operator that constrains the VPs it combines with to be predicates of plural events.

The rest of the paper is organized as follows. In Section 2, we introduce the Romanian supine, and present evidence for the pluractional semantics of the nominal form. Section 3 revisits previous analyses on pluractionality and their shortcomings mentioned above. In Section 4 we argue that the nominal supine projects Aspect in the syntax and support this claim by means of a comparison with the verbal supine, which is not pluractional and also lacks the evidence for AspectP. Section 5 investigates the properties of the supine PO by comparison with other nominal and verbal plural operators. We conclude that the PO must be an operator over plural events. We flesh out a syntax-semantics interface for the nominal supine in Section 5, and conclude in Section 6.

2 Plurality in the Romanian supine

2.1 The Romanian supine

The supine in Romanian is built on the past participial stem ending in *-t* or *-s* as in (1).¹ Traditional grammars distinguish between a *nominal supine* and a *verbal supine*, the function of the latter preserving some of the uses of the Latin supine (see GLR (2008)).

	<i>Infinitive</i>	<i>Past participle</i>	<i>Nominal supine</i>	<i>Verbal supine</i>
(1)	a chema	chema-t	chema-t-ul	de/la chema-t
	to call	call-PastPrt	call-Sup-the	of/to call-Sup
	'to call'	'called'	'the calling'	'(of) calling/to call'

The nominal supine is an event-denoting deverbal nominalization in which the masculine-neuter form of the (enclitic) definite determiner '*-(u)l*' is added to the past participial stem.² It only combines with the definite determiner, while its arguments either carry genitive case or are bare plurals preceded by the preposition *de* 'of' (see (2a)). The compatibility with *a se petrece* 'happen' in (2a) confirms its eventive semantics. The verbal supine appears in verbal periphrases, reduced relatives and *tough*-constructions where it follows a preposition (e.g., *de* 'of', *la* 'at'), has a bare form, and can take arguments marked with accusative case (see (2b) and Soare (2002) for details).

- (2) a. *Culesul merelor/de mere s-a petrecut*
 harvest.Sup.the apples.the.Gen/of apples Rf-has happened
peste noapte.
 over night
 'The harvesting of (the) apples happened over the night.'
- b. *Ion s-a apucat de/are de cules merele.*
 John Rf-has grabbed of/has of harvest.Sup apples.the
 'John started harvesting/must harvest the apples.'

In conclusion, the 'supine' term stands for a participial form that appears in a nominal context which is introduced either by the definite determiner (for the nominal one) or a preposition (for the verbal one). Our focus in this paper is the nominal supine, but occasionally we will compare it with the verbal supine, especially in Section 4.2, where we discuss the differences between them in terms of pluractionality.

¹We use the gloss Sup for 'supine' for consistency with the label of the construction, but the morphology is actually identical to the past participle.

²Note that this is different from what is called a past participial nominalization in Romanian and denotes an individual (not an event): e.g., *nou venitul* 'the newly arrived one'.

2.2 The pluractional operator

The pluractional meaning of the nominal supine is documented in Iordăchioaia and Soare (2008). Here we present in detail three main arguments that support this idea. First, the data in (3) show that the nominal supine is incompatible with idiomatic adverbials like *dintr-o răsuflare* ‘in one breath’, *dintr-o lovitură* ‘in one stroke’, which, as argued in Laca (2006)), preclude a subdivision of the running time of the event. These adverbials are not punctual, given their compatibility with the sentential accomplishments in (4). Moreover, note that this incompatibility does not lie in the nominal nature of the supine nominalization in (3), since the infinitival nominalization, which lacks a pluractional denotation, is grammatical in the same context, as illustrated in (5).

- (3) a. **cititul romanului dintr-o răsuflare*
read.Sup.the novel.the.Gen in one breath
- b. **dărâmatul castelului de nisip dintr-o lovitură*
demolish.Sup.the castle.the.Gen of sand in one stroke
- (4) a. A *citit romanul dintr-o răsuflare.*
has read novel.the in one breath
‘He read the novel in one breath.’
- b. A *dărâmat castelul de nisip dintr-o lovitură.*
has demolished castle.the of sand in one stroke
‘He demolished the sandcastle in one stroke.’
- (5) a. *citirea romanului dintr-o răsuflare*
read.Inf.the novel.the.Gen in one breath
‘the reading of the novel in one breath’
- b. *dărâmarea castelului de nisip dintr-o lovitură*
demolish.Inf.the castle.the.Gen of sand in one stroke
‘the demolishing of the sandcastle in one stroke’

Second, the nominal supine fails to exhibit multiplicity effects with singular indefinites and shows distributivity effects with plurals, two properties that have also been considered to be typical of POs and have also been identified in the behavior of POs in West Greenlandic and Spanish (van Geenhoven (2004) and Laca (2006)). The use of the singular indefinite *un jurnalist* ‘a journalist’ and *o biserică* ‘a church’ in (6) only has an interpretation in which there are several killing/destroying events whose patient is one and the same journalist/church. This reading is obviously ruled out for pragmatic reasons. To make the construction felicitous, the patient must be a plural as in (7).

- (6) a. **Uciful unui jurnalist de către mafia politică a*
kill.Sup.the a.Gen journalist by to mafia political has
stârnit mass media.
stirred mass media
‘The killing of a journalist by the political mafia stirred the mass media.’
- b. **Distrusul unei biserici de către comuniști a*
destroy.Sup.the a.Gen church by to communists has
revoltat credincioșii.
rebeled believers.the
‘The destruction of a church by the communists scandalized the church-goers.’
- (7) a. *Uciful de jurnaliști de către mafia politică a* stârnit
kill.Sup.the of journalists by to mafia political has stirred
mass media.
mass media
‘The killing of journalists by the political mafia stirred the mass media.’
- b. *Distrusul de biserici de către comuniști a* revoltat
destroy.Sup.the of churches by to communists has rebeled
credincioșii.
believers.the
‘The destruction of churches by the communists scandalized the church-goers.’
- The data in (6) clearly contrast with the sentential contexts in (8) and the infinitival nominalization in (9), which easily allow a singular event interpretation and are thus compatible with the singular indefinite and don’t require a plural like the supine.
- (8) a. *Mafia politică a ucis un jurnalist/jurnaliști.*
mafia political has killed a journalist/journalists
‘The political mafia has killed a journalist/journalists.’
- b. *Comuniștii au distrus o biserică/biserici.*
communists.the have destroyed a church/churches
‘The communists destroyed a church/churches.’
- (9) a. *Uciderea unui jurnalist/de jurnaliști de către mafia*
kill.Inf.the a.Gen journalist/of journalists by to mafia
politică a stârnit mass media.
political has stirred mass media

- ‘The killing of a journalist/journalists by the political mafia stirred the mass media.’
- b. Distrugerea unei biserici/de biserici de către destroy.Inf.the a.Gen church.Gen/of churches by to comuniști a revoltat credincioșii. communists has rebelled believers.the
‘The destruction of a church/churches by the communists scandalized the church-goers.’

The third piece of evidence for the presence of a PO in the nominal supine comes from contexts where it triggers what de Swart (1998) calls *aspect shift*: for instance, when used with a punctual event like the achievements in (10), the nominal supine pluralizes the event making it compatible with *for*-adverbials. The latter are known to only modify unbounded eventualities; they are thus infelicitous with achievements in a neutral sentential context, as the one in (11).³ In this respect, the supine in (10) resembles, for example, the English progressive in (12).

- (10) a. *Găsitul soluției* perfecte la fiecare curs *timp de* find.Sup.the solution.Gen perfect at every lecture time of *un semestru* l-a făcut pe Ion studentul preferat. a semester him-has made Acc John student.the favorite
‘John’s finding the perfect solution in every lecture for a semester made him the favorite student.’
- b. *Sositul* lui Ion cu întârziere *timp de doi ani* arrive.Sup.the the.Gen John with delay time of two years i-a adus concedierea. him-has brought firing.
‘John’s (habit of) arriving late for two years brought about his being fired.’
- (11) a. *Ion *găsi soluția* perfectă *timp de un semestru*. John found solution.Gen perfect time of a semester
‘John found the perfect solution for a semester.’
- b. *Ion *sosi* cu întârziere *timp de doi ani*. John arrived with delay time of two years
‘John arrived late for two years.’

³Some speakers might marginally accept the sentences in (11) if they can attribute them a past habitual interpretation, which to us seems hard to obtain with the simple past tense in Romanian. If such interpretations could be obtained in some contexts, they would qualify as cases of *aspectual coercion* in de Swart’s (1998) terms, which also explains their context dependence, by contrast to the cases of aspect shift in (10).

- (12) a. The train was arriving for ten minutes.
b. John has been finding the perfect solution for a whole semester.

Following Jackendoff (1991) we use (*un*)*boundedness* as a cover term for both the nominal and the verbal domain: atelic and imperfective aspect, as well as mass and plural count nouns are unbounded, while telic and perfective aspect, as well as singular count nouns are bounded. From this perspective, a pluractional operator like in (10) is expected to only combine with bounded events, just like a nominal plural marker, which is only compatible with bounded singular count nouns (see Mourelatos (1978), Jackendoff (1991), Alexiadou et al. (2010)). In the aspectual domain, coercion is a very frequent phenomenon (see de Swart (1998)), but despite this, in Romanian we often find activities that are incompatible with the nominal supine, precisely because they are unbounded and coercion seems to be prevented: see, for instance, (13). Such activities, however, become grammatical in the supine if they are accompanied by *until*, which according to Jackendoff (1991) is a function that maps unbounded entities onto bounded ones. The resulting bounded activities are then compatible with the plural triggered by the nominal supine as illustrated in (14).

- (13) a. **Muncitul* lui Ion o îngrijorează pe soția lui. work.Sup.the the.Gen John her worries Acc wife him
b. **Rămasul* Mariei la Dan nu-i încântă pe părinți. stay.Sup.the Mary.Gen at Dan not-them pleases Acc parents
- (14) a. *Muncitul* lui Ion *până* la miezul nopții o îngrijorează pe soția lui. worries Acc wife him
‘John’s (habit of) working till midnight worries his wife.’
- b. *Rămasul* Mariei la Dan *până* seara nu-i încântă pe părinții ei. Acc parents.the hers
‘Mary’s (habit of) staying at Dan’s till evening doesn’t please her parents.’

Like the example in (10b), the ones in (14) receive a habitual interpretation, which is typical of external readings of pluractional operators (see also Cusic (1981), Lasersohn (1995), Laca (2006), Wood (2007), Cabredo Hofherr (2010)).

3 Previous approaches and two challenges

Following Lasersohn’s (1995) first formal semantic proposal, later accounts of POs in various languages assume that these markers attach at the V level in

the syntax. Lasersohn's analysis, which is given in a simplified form in (15), is motivated by the initial observation that POs are incorporated in the verb form: PA in (15) stands for 'pluractional marker', a morpheme that attaches to the verb. However, other instances of POs such as, for instance, the Spanish pluractionals *andar* 'walk'/*ir* 'go' + gerund addressed in Laca (2006) are periphrastic, so the morphemic nature of POs should not be taken as decisive in determining the syntactic level at which their semantics is contributed.

- (15) $V\text{-PA}(E) \Leftrightarrow \forall e \in E [V(e)] \ \& \ |E| \geq n$, where n is pragmatically fixed, but no less than 2. (Lasersohn (1995, 242))

Laca takes POs to attach at the V level in order to account for the different scope properties of POs and frequency adverbs like *regularly* or *occasionally*. Unlike POs, the latter can take either wide or narrow scope with respect to singular indefinites as in (16), an effect that Laca explains in the syntax: for the wide scope reading, the adverb attaches at the VP level in (16a), and for the narrow scope reading, it attaches at the V level in (16b).

- (16) He *occasionally* met a sailor.
 a. [occasionally [meet a sailor]]
 b. [[occasionally meet] a sailor]

The Spanish data in (17) and the West Greenlandic (18), where the POs *andar* + gerund and *qattaar* only allow a reading where the same hen/bomb is killed/explodes several times, should consequently indicate that POs only take narrow scope with respect to indefinites, so they must attach at the V level.

- (17) ?? El zorro *anduwo matando* una gallina.
 the fox walked killing a hen
 'The fox has been killing a hen.'
 (Laca (2006, 203))
- (18) ?? Qaartartuq sivisuumik qaar-*qattaar*-puq.
 bomb.Abs lengthy.Ins explode-PO-Ind.[-tr].3sg
 'A/the bomb exploded again and again for a long time.'
 (van Geenhoven (2004, 147))

For the Romanian supine we will shortly see that the picture is more complex and we need to make appeal to the distinction between lexical and grammatical aspect (as in, e.g., Smith (1997), Verkuyl (1993), Depraetere (1993), Borik (2002) and others). Under this distinction, a V level aspectual operator only makes a contribution to lexical aspect, since lexical aspect is composed within the VP, while grammatical aspect is contributed by the syntactic AspectP level, above the VP. Since we will show that the PO in the Romanian supine involves

grammatical aspect, and the corresponding Aspect layer in the syntax, it consequently cannot be a V level operator. Instead of an account in terms of scope as in Laca (2006), the lack of multiplicity effects with singular indefinites in (6), which are analogous to Spanish (17) and West Greenlandic (18), will be explained in section 5 by means of a parallelism with plural nominal operators that display a similar behavior.

van Geenhoven (2004)'s analysis is built on the same assumption, namely, that POs are V level operators, although she does not address issues about the syntax-semantics interface and speaks of POs as introducing atelicity, where the latter term covers both lexical *atelicity* and grammatical aspect *imperfectivity* in our understanding. Notably, however, van Geenhoven does not exclude the possibility that POs might also attach to a higher verbal projection (see fn 14 in van Geenhoven (2004, 157)).⁴

There are two kinds of challenges for the semantic accounts that take POs as V level operators: one comes from the particular behavior of the nominal supine, as mentioned slightly above, and one concerns the theoretical compatibility between V level POs and the lexical cumulativity of verbs as a (possible) semantic universal. We describe each of them immediately below, and we will offer our solution to these problems in sections 4 and 5, afterwards.

3.1 The PO in the nominal supine is higher than V

The semantic proposals that take POs to attach at the lexical V level cannot successfully account for the PO in the nominal supine for two main reasons: 1) the PO doesn't have a V-dependent morphology, which for Romanian eliminates Lasersohn's main motivation for treating POs as attaching to V, and 2) constructions with the nominal supine PO involve a two-level aspectual contribution.

⁴What appears to us to be incompatible with the Romanian supine in van Geenhoven's analysis is her interval-based semantics. Given that in a strict syntax-semantics interface, constraints on time intervals are contributed by operators that act at the Tense level, such an account would presuppose the existence of a Tense projection in the Romanian nominal supine. While we will argue that it involves AspectP, the supine is known to lack any evidence for a Tense layer (Cornilescu (2001), Soare (2002)): see, e.g., in (19) its inability to host pronominal clitics, which attach to Tense in Romanian. In addition, we find an event-based analysis of pluractionality more intuitive than an interval-based one, given that pluractionality is independent of the sentential context (see Laca (2006) for additional reasons).

- (19) a. Ion *își tunde/șî-a* tuns barba
 John Cl cuts/Cl cut beard
 'John cuts/cut his beard'
 b. (**își/*șî*) tunsul bărbii de către Ion
 Cl cut.Sup.the beard.Gen by to John
 'John's cutting the beard'

First, the PO has no morphological realization of its own, more precisely, it has no overt realization. The morphology of the nominal supine, which carries the PO, is borrowed from the past participle (see (1)), but importantly, in the latter context this morphology does not have a pluractional meaning. This is obviously not the case in verbal contexts (see the grammaticality of the present perfect including a past participle form in (8)), but not even in nominalizations of the past participle, which have a singular interpretation, albeit object denoting: see, e.g., *rănitul* ‘the wounded one’, *arestatul* ‘the arrested one’, *amendatul* ‘the one who got a fine’, *angajatul* ‘the employee’. In addition, the verbal supine, which is also a past participle in a nominal context (see section 2.1), doesn’t have a pluractional reading either. Thus, the constructions with the verbal supine in (20), where both a singular indefinite and the idiomatic adverbial *dintr-o lovitură* ‘in one stroke’ are felicitous, contrast with the ones in (3) and (6) above.

- (20) a. Mafia politică are de ucis un jurnalist dintr-o lovitură.
mafia.the political has of kill.Sup a journalist in-one stroke
‘The political Mafia has a journalist to kill in one stroke.’
- b. Rămâne de distrus o biserică dintr-o lovitură.
remains of destroy.Sup a church in-one stroke
‘There remains a church to destroy in one stroke.’

Second, a V level analysis of the PO leads one to state that its aspectual contribution is unboundedness at the level of lexical aspect (i.e., atelicity). Under this account, however, the co-occurrence of *in*-PPs, which modify bounded events, with *for*-PPs, which modify unbounded events, in the nominal supine in (21) is left unexplained. One expects the lexical aspect value to be either bounded, or unbounded, but not both simultaneously.

- (21) a. Traversatul râului în cinci minute timp de două luni
cross.Sup.the river.Gen in five minutes time of two months
(zi de zi) l-a făcut pe Ion vedetă printre localnici.
(day by day) him-has made Acc John star among locals
‘John’s (daily) crossing the river in five minutes over a period of two months made him a star among the locals.’
- b. Plantatul de copaci ore în șir timp de trei ani
plant.Sup.the of trees hours in row time of three years
l-a făcut pe Ion un mare grădinar.
him-has made Acc John a great gardener
‘The planting of trees for hours in a row over a period of three years turned John into a great gardener.’

This behavior is in turn easy to account for, if we assume that the nominal supine in (21) involves both levels of aspectual information that are mentioned in

the literature: a lexical level that specifies the aspectual value of the VP independently of its morphological form and the context of occurrence, and a grammatical level that brings in the additional aspectual contribution of the external context. The lexical aspect in (21a) is bounded and can be modified by the *in*-adverbial, while the grammatical aspect is unbounded and thus compatible with the *for*-adverbial. In (21b), we have two adverbials that go with unboundedness: *hours in a row* modifies the lexical atelic aspect, while *three years* modifies the grammatical unbounded aspect. The interpretation of the two constructions, where the pluractional reading has scope over the telic and the atelic event introducing a habitual meaning, clearly indicates that the grammatical aspect value comes from the PO. In this respect, the aspectual value of the nominal supine in (21) is similar to that of a purely verbal context as the one in (22) (see also Verkuyl (1993), Borer (2005, vol II)).

- (22) a. Ion a traversat râul în cinci minute timp de două
John has crossed river.the in five minutes time of two
luni (zi de zi).
months (day by day)
‘John (daily) crossed the river in five minutes over a period of two months.’
- b. Ion a plantat copaci ore în șir timp de trei ani.
John has planted trees hours in row time of three years
‘John planted trees for hours in a row over a period of three years.’

In conclusion, we have shown that there is no morphological reason to consider the PO in the nominal supine as being part of the lexical verb and thus operate at the V syntactic level as follows from Lasersohn’s (1995) original proposal, because the PO cannot be identified morphologically. It is rather a covert operator whose semantics associates with grammatical aspect information. In section 4 we will also argue that the nominal supine hosts a syntactic Aspect projection, which is usually taken to host grammatical aspect in accounts of the syntax-semantics interface.

3.2 The lexical cumulativity of verbs

Besides the problems specific to the nominal supine in Romanian, the V level analysis of POs also encounters a more theoretical challenge. Various works like Krifka (1989), Schein (1993), Landman (1996), Kratzer (2008) provide compelling evidence that at least in languages like English, lexical verbs come with a plural denotation as in (23), where *V is the closure of the set V under sum formation. This property generally explains the fact that sentences like (24) freely get a distributive reading (i.e., several events), besides the collective one (i.e., one event):

the verb is ambiguous between a singular event and a plural event which can be distributed over the plural individuals. For theories that take the distributive reading in (24) to come exclusively from the plural DPs, examples like (25) taken from Kratzer (2008) cannot be explained: (25) says that one single phone number was dialed several times, and this can only be obtained if the verb itself has a plural denotation.

(23) $[[V]] = *V$

- (24) a. *John, Mary and Paul* lifted the chair.
 b. John lifted *three chairs*.

(25) I dialed a wrong phone number for five minutes.

The Romanian sentences in (26) exhibit the same readings as the English ones, so lexical cumulativity also characterizes Romanian verbs.

- (26) a. Ion, Maria și Paul au ridicat scaunul.
 John, Mary and Paul have lifted chair.the
 ‘John, Mary and Paul have lifted the chair.’
 b. Ion a ridicat trei scaune.
 John has lifted three chairs
 ‘John lifted three chairs.’
 c. Am format un număr greșit timp de cinci minute.
 have dialed a number wrong time of five minutes
 ‘I have diled a wrong number for five minutes.’

If verbs are lexically cumulative in (at least) some languages, the use of POs in those languages is unexpected under the V level analysis mentioned above, or at least poses questions as to why language economy should allow this redundancy at the cost of an additional operator.⁵ The expectation is either that a language employs POs because its verbs are lexically singular, or that the PO contributes more information than a simple plural in a language with lexically cumulative verbs.

West Greenlandic in van Geenhoven (2004)’s description seems to be a language where verbs are lexically singular, since, unlike in English and Romanian, a plural argument is interpreted collectively in the absence of a PO on the verb. Thus, (27a) refers to a single explosion of several bombs, which is incompatible with the *for*-adverbial. Introducing the PO in (27b) allows a plural event reading which can last for a long time.

⁵Müller and Sanchez-Mendes (2008) describe such a situation for Karitiana POs, where they argue that both nouns and verbs are lexically cumulative and POs play a disambiguating role for plural-only interpretations. In Romanian, common nouns usually carry singular denotation like in English (see Kratzer (2008)) and POs are not commonly used in the verbal domain (see, e.g., (26)), so the supine PO does not play a disambiguating role like in Karitiana.

- (27) a. ??Qaartartut sivisuumik qaarput.
 bombs.Abs lengthy.Ins explode.Ind.[-tr].3pl
 ‘Bombs exploded for a long time.’
 b. Qaartartut sivisuumik qaarqattaarput.
 bombs.Abs lengthy.Ins explode.PO.Ind.[-tr].3pl
 ‘Bombs exploded again and again for a long time.’
 (van Geenhoven (2004, 147–148))

To bring some light into this general issue and to find out what contribution the supine PO has in Romanian, in section 5 we compare its behavior with that of pluralities of individuals in the nominal domain and other plural operators in the verbal domain. But before we do that, we provide further syntactic support for the presence of a grammatical aspect projection in the nominal supine to conclude the discussion in section 3.1.

4 AspectP in the syntax of the supine

In this section we discuss a further property of the nominal supine that we take as evidence for the existence of an aspectual projection in its structure which hosts the covert pluractional operator. By comparison, we will show that the verbal supine, which does not have a pluractional meaning, lacks this property.

We follow Smith (1997), Verkuyl (1993), Depraetere (1993), de Swart (1998), Borik (2002) and others in assuming a split between lexical aspect and grammatical aspect. From a syntactic point of view, we take the lexical aspect to be composed within the VP, and the grammatical aspect to be hosted by a higher syntactic layer AspectP (as in, e.g., Schoorlemmer (1995), de Swart (1998)). Here we focus on the latter, so we will not be concerned with the way lexical aspect is composed within the VP.

4.1 The nominal supine

We have already seen two properties of the nominal supine that suggest that it contributes grammatical aspect: in (10) it triggers aspect shift and in (21) it allows two (similar or different) aspectual adverbials, one modifying lexical aspect and the other modifying grammatical aspect. As mentioned above, the former resembles the sentential domain (e.g., (12)), where aspect shift is triggered by aspectual operators that are hosted by AspectP (de Swart (1998)), while the latter forces a split between two syntactic levels at which the two adverbials attach and contribute their meaning in a non-contradictory way: VP and AspectP.

In addition to this, syntactic evidence comes from the compatibility of the nominal supine with aspectual adverbs like *frecvent* ‘frequently’, *mereu* ‘always’, *constant* ‘constantly’, *periodic* ‘periodically’, which have been argued to be hosted by AspectP (see Alexiadou (1997), Cinque (1999)). This is illustrated in (28).

- (28) a. Plantatul de copaci *frecvent/meru/constant/*
 plant.Sup.the of trees frequently/always/constantly/
periodic previne alunecările de teren.
 periodically prevents flows.the of earth
 ‘Frequently/Always/Constantly/Periodically planting trees pre-
 vents earth flows.’
- b. Cititul ziarelor *frecvent/meru/constant/*
 read.Sup.the newspapers.Gen frequently/always/constantly/
periodic îl ține la curent cu știrile.
 periodically him keeps at current with news.the
 ‘Frequently/Always/Constantly/Periodically reading the news-
 papers keeps him updated on the news.’

4.2 The verbal supine

The so-called verbal supine (termed as such by traditional grammars) usually participates in complex predicate formation with a series of aspectual and modal verbs like *start*, *finish*, *have*, *be* and *remain*. Although it sometimes receives habitual readings that might make one think it is also pluractional, we will show here that it does not contribute this meaning by itself, but is compatible with it when brought about by the matrix verb with which it appears. In addition, it also seems to be incompatible with frequency adverbs that modify AspectP.

From a semantic point of view, one can distinguish three types of contexts in which the verbal supine may appear, according to the type of event the main verb embeds, which are given in (29) with corresponding examples in (30).

- (29)
- (i) verbs that embed single events (e.g., *a avea de* ‘to have to’, *a termina de* ‘to finish’, *a rămâne de*, lit. ‘to remain to’, ‘to still have to’) as in (30a);
- (ii) verbs that allow both for a singular and a plural event reading (e.g., *a se apuca de*, lit. ‘to grab at’, ‘to start (having a habit)’) as in (30b);
- (iii) verbs that select for plural events only (e.g., *a se lăsa de*, lit. ‘to leave’, ‘to stop, quit’, *a se pune pe*, lit. ‘to put oneself on’, ‘to start having a habit’) as in (30c).
- (30) a. Ion are de citit ziarul până la prânz.
 John has of read.Sup journal.the until at noon
 ‘John has to read the journal by noon.’
- b. Ion s-a apucat de citit ziarul acum cinci
 John RF-has grabed of read.Sup newspaper.the now five
 minute/acum cinci ani.
 minutes/now five years

- ‘John started reading the newspaper five minutes/five years ago.’
- c. Ion s-a lăsat de fumat trabucuri.
 John RF-has left of smoking cigars
 ‘John quit smoking cigars.’

(30a) refers to one newspaper-reading event that must be completed by noon. (30b) receives a single event reading in the scenario in which the reading started five minutes before the speech time, but a plural event (habitual) reading, if the reading (habit) started five years before the speech time. (30c) only has a plural event habitual reading, which in view of the contrast with (30a) and (30b) must originate in the main verb and not in the verbal supine.

In support of the idea that the verbal supine in verbal periphrases of type (i) and (ii), as in (30a) and (30b), don’t (obligatorily) have a pluractional reading, note that it is compatible with a singular indefinite in (31), unlike the nominal supine in (6).

- (31) a. Mafia are de ucis un jurnalist.
 mafia has to kill.Sup a journalist
 ‘The mafia has to kill a journalist.’
- b. Comuniștilor le-a mai rămas de distrus
 communists.Dat them-has still remained to destroy.Sup
o biserică.
 a church
 ‘The communists still have to destroy a church.’
- c. Comuniștii s-au apucat de distrus o biserică.
 communists.the RF-have grabbed of destroy.Sup a church
 ‘The communists started destroying a church.’

In addition, the verbal supine does not provide any evidence for aspect shift: achievements preserve their lexical aspect in the verbal supine in (32a) and (32b), which is supported by their compatibility with *in*-adverbials only, while the activity in (32c) is only felicitous with a *for*-adverbial.

- (32) a. Am de găsit soluția în/*timp de cinci minute.
 have of find.Sup solution.the in/time of five minutes
 ‘I have to find the solution in/*for five minutes.’
- b. Ion are de ajuns/sosit la doctor în/*timp de zece minute.
 John has to arrive.Sup at doctor in/time of ten minutes
 ‘John has to arrive at the doctor’s in/*for ten minutes.’
- c. Am de plantat copaci timp de/*în trei ani.
 have of plant.Sup trees time of/in three years
 ‘I have to plant trees for three years.’

From a syntactic point of view, the verbal supine in these constructions does not seem to host an Aspect projection either. Unlike in the case of the nominal supine, frequency adverbs can only modify the main verb and not the verbal supine: by contrast to (33a), the adverb in (33b) modifies the matrix event and not the supine.

- (33) a. Cititul *frecvent/meru* al romanelor e un bun obicei.
read.Sup.the frequent/always of novels.Gen is a good habit
'(Always) Reading novels (frequently) is a good habit.'
- b. Am de citit *frecvent/meru* romane.
have of read.Sup frequently/always novels
'I frequently have to read novels.'
'I have to frequently/always read novels.'

As further evidence that frequency adverbs modify the main verb, not the supine, note that in the context of (34), where it is impossible to interpret the adverbial with a *termina* 'finish' taking a single embedded event, the whole sentence (34b) is ruled out.

- (34) a. *Context:* Ion a fost pedepsit timp de o lună să recite
John has been punished time of a month SJ recite
frecvent/meru poezia în clasă.
always/frequently poem.the in class
'John was punished for a month to always/frequently recite the poem in class.'
- b. *Ion a terminat de recitat *frecvent/meru* poezia.
John has finished to read.Sup always/frequently poem.the
'John finished to always/frequently read the poem.'

Turning now to class (iii) main verbs, we seem to obtain a pluractional reading in these constructions. In particular, singular indefinites are disallowed in (35) just like in (6) above.

- (35) a. Mafia s-a pus pe/s-a lăsat de ucis
mafia RF-has put on/RF-has left of kill.Sup
*jurnaliști/*un* *jurnalist*.
journalists/a journalist
'The mafia started/quit killing journalists/*a journalist.'
- b. Comuniștii s-au pus pe/s-au lăsat de
communists.the RF-have grabbed of/RF-have left of
distrus *biserici/*o* *biserică*.
destroy.Sup churches/a church
'The communists started/quit destroying churches/*a church.'

The comparison with (31), however, clearly indicates that the pluractionality cannot come from the verbal supine independently of the main verb, but must be contributed by the latter. In this respect, it seems that these verbs denote habits and only embed plural events to this end. This is perfectly compatible with the verbal supine, which should be lexically cumulative like any other verbal forms and thus able to provide a plural event when the main verb requires it. This hypothesis is confirmed by the fact that in these constructions the verbal supine can be replaced by bare count nouns, the noun *obiceiul* 'the habit' or a verbal infinitive, still preserving the habitual plural event interpretation, as in (36).

- (36) a. Ion s-a lăsat de *carte/școală*.
John RF-has left of book/school
'John quit studying/school.'
- b. Ion s-a lăsat de *obiceiul* de a fuma.
John RF-has left of habit.the of to smoke
'John quit his smoking habit.'
- c. Ion s-a lăsat de a *mai face comentarii la ore*.
John RF-has left of to more make comments at hours
'John quit making comments in class.'

To summarize, the verbal supine may denote a plural event, but does not always do so, so it differs from the nominal supine in lacking the pluractional operator that is always present in the latter. This conclusion corroborates with the syntactic evidence for an Aspect projection: the nominal supine is compatible with aspectual adverbs, but the verbal one is not. Consequently, we take the difference between the nominal and the verbal supine to lie in the presence/absence of the pluractional meaning hosted by grammatical Aspect in the syntax. With this picture, we conclude our presentation in section 3.1, which showed that the PO in the Romanian nominal supine cannot be a V level plural operator. If it were so, nothing could explain the difference from the morphologically similar verbal supine.⁶

5 The supine PO and other plural operators

In this section we return to the discussion in section 3.2 in order to find an explanation for why a language that has lexically cumulative verbs would also employ pluractional operators without the risk of redundancy. To better understand what role the PO plays in the nominal supine, we take a closer look at pluralities in the nominal domain and eventually compare the PO with some plural operators in the event domain.

⁶Clearly the definite determiner in the nominal supine also plays an important role, but the determiner itself has nothing to do with the lexical verb, so a V level analysis cannot account for this either.

The candidate in the nominal domain which the PO could most likely resemble is the bare plural. The V level approaches to POs already make this prediction, if we stay within a simple analysis of plural marking as an operator on the nominal head N.⁷ To test this hypothesis, we investigate the interaction of the supine PO with what Farkas (1997, 2002) calls ‘dependent indefinites’, but we will refer to them as ‘*câte* indefinites’. We will see that the nominal supine differs from bare plurals in being able to license such indefinites.

5.1 *Câte* indefinites

Câte indefinites are distributive operators that must co-occur with a form of plural individuals or events with respect to which they distribute. Farkas (1997, 2002) formulates this as a condition on the variable introduced by *câte* to co-vary with another individual or situational variable provided by the context. Without making any commitment to a particular analysis of such indefinites, we will loosely call the expressions in whose context *câte* can occur its (possible) licensers and we will investigate what properties they have in common.

(37) summarizes the nominal licensers for *câte*: definite plurals, quantifiers with plural nouns, and *every* are fine, but singular indefinite or definite nouns are not. According to Farkas, universal *every* licenses *câte* because the variable it binds gets at least two variable assignments, so it counts as plural.

- (37) a. *Studentții/mulți* studenți/*niște* studenți/*doi* studenți au citit *câte* o carte.
students.the/many students/some students/two students have read CI a book
‘The students/many students/some students/two students read a book each.’
- b. *Fiecare/*un* student/**studentul* a citit *câte* o carte.
every/a student/student.the has read CI a book
‘Every student/a student/the student read a book each.’

Importantly for our discussion, bare plurals are not able to license *câte*, although they technically may denote plural individuals, even if they also denote singular ones in contexts where they are number neutral. The data in (38) lead us to conclude that the licenser of *câte* not only needs a plural denotation, but must also carry an operator that binds the plural variable.

- (38) a. Ion a dat (*toate*) *florile/*flori* *câte* unei fete.
Ion has given all flowers.the/flowers CI a.Dat girl.Dat

⁷Even in frameworks that associate a very rich syntactic structure to the DP, as for instance Borer (2005, vol. I), the plural appears right above N. In a reduced syntactic structure like the one assumed in semantic approaches to POs this corresponds to N level attachment.

- ‘John gave (all) the flowers/flowers to a girl each.’
- b. Maria a donat (*toate*) *cărțile/*cărți* *câte* unei biblioteci.
Mary has donated all books.the/books CI a.Dat library.Dat
‘Mary donated (all) the books/books to a library each.’

If we turn to the nominal supine, *câte* indefinites appear to be perfectly fine in (39a), where the indefinite takes narrow scope with respect to the supine PO. Moreover, the presence of *câte* makes the singular indefinites in (6) grammatical, with the same narrow scope interpretation: see (39b) and (39c).

- (39) a. Sositul *câte* unui student târziu a enervat-o pe profesoară.
arrive.Sup.the CI a.Gen student late has irritated-her Acc teacher
‘The late arrival of a student (now and then) irritated the teacher.’
- b. ucisul *câte* unui jurnalist de către mafia politică
kill.Sup.the (CI) a.Gen journalist by to mafia political
‘the killing of a journalist now and then by the political mafia’
- c. distrusul *câte* unei biserici de către comuniști
destroy.Sup.the CI a.Gen church by to communists
‘the destruction of a church now and then by the communists’

The compatibility of the nominal supine with *câte* indefinites, by contrast to the bare plurals in (38) leads us to conclude that the PO cannot be a simple bare plural of events, but must contain an additional operator. Given that in section 3.1 and section 4 we provided evidence that the nominal supine has grammatical aspect information that correlates with the pluractional effect, we consider the PO to be an aspectual operator.

As further confirmation that the supine PO does not simply disambiguate the verb for a plural-only denotation (like it has been argued for Karitiana POs in Müller and Sanchez-Mendes (2008))⁸, note that the lexical cumulativity of the verb is not enough to license *câte* either (cf. (40) with (26c)).⁹

- (40) Am format (**câte*) un număr greșit timp de cinci minute.
have dialed (CI) a number wrong time of five minutes
‘I dialed a wrong phone number for five minutes.’

Similarly, the constructions with the verbal supine are compatible with *câte* only when the main verb embeds a plural event, i.e., in class (ii), with a habitual

⁸See fn. 5.

⁹To make *câte* possible in (38b), we need a quantificational adverb like *mereu* ‘always’, or the adverb *tot* ‘adverbial all’, which we think is also a pluractional operator in Romanian.

reading, and class (iii): see the ungrammaticality with a singular event in (41a) and (41b), and the felicity with a plural event in (41b) and (41c).

- (41) a. Mafia are de ucis (**câte*) un jurnalist.
 mafia has to kill.Sup CI a journalist
 ‘The mafia has to kill a journalist.’
- b. Comuniștii s-au apucat de distrus *câte* o
 communists.the RF-have grabbed of destroy.Sup CI a
 biserică acum trei ani/*două zile.
 church now three years/two days
 ‘The communists started destroying a church now and then three
 years/*two days ago.’
- c. Comuniștii s-au pus pe distrus *câte* o
 communists.the RF-have grabbed of destroy.Sup CI a
 biserică.
 church
 ‘The communists started destroying a church now and then.’

To summarize for now, the behavior of the nominal supine with respect to *câte* indefinites indicates that it must involve an (aspectual) operator in addition to its plural meaning, it cannot be a simple bare plural of events. To understand the nature of this operator, we now turn to a comparison with the covert habitual operator, which exhibits a striking resemblance to the supine.

5.2 Bare habituals and adverbial pluractionals

It is well known that present tense allows a habitual reading in many languages, although no overt habitual operator is present. In Romanian, (42) is ambiguous between an episodic and a habitual reading.

- (42) Ion scrie poezii.
 Ion writes poems
 i. HAB: ‘John writes poems.’
 ii. ‘John is writing poems.’

As noticed in Krifka et al. (1995), Rimell (2004), Cabredo Hofherr (to appear) and others, a habitual reading is excluded with a singular indefinite. The same holds of (43a) in Romanian, which in the habitual reading means that the same poem is written several times. This reminds us of the data in (6) with the supine. Moreover, a *câte* indefinite makes the habitual reading available, just like in the case of the supine in (39b): the singular indefinite in (43b) now varies with respect to the different occasions provided by the habitual.

- (43) What does John do at work?

- a. Ion scrie *o poezie*.
 John writes a poem
 i. #HAB.
 ii. ‘John is writing a poem.’
- b. Ion scrie *câte o poezie*.
 John writes CI a poem
 i. HAB: ‘John writes a poem now and then.’
 ii. # ‘John is writing a poem.’

It is worth noting that overt adverbial clitics, which disambiguate the reading of the present by forcing the habitual-pluractional reading, do allow *câte*-indefinites:

- (44) Ion *tot/cam* scrie poezii/*câte* o poezie.
 John all/pretty writes poems/each a poem
 ‘John keeps writing poems/a poem now and then.’
 ‘John pretty much writes poems/a poem now and then.’

We do not take these similarities to indicate that the supine PO and the bare habitual are one and the same operator, especially since the latter is far from being well understood, while the former is not always interpreted habitually. What the two must have in common, we think, is the type of operator that they express. Just like frequency adverbials, for instance, form a type of aspectual adverbs although they are different from one another (cf. *occasionally*, *regularly*, *repeatedly* etc.), we take the supine PO and the habitual to be aspectual operators over plural events, as in Ferreira (2005).

5.3 Plural operators

Ferreira (2005) argues that the covert operator involved in bare habituals must be a (verbal) THE (similar to the nominal definite article) that binds plural events. Although we take no stand on whether this is the right analysis for habituals, we make use of his insight that there are plural operators both in the nominal and the verbal domain and argue that the PO in the Romanian supine is such an operator.

Ferreira compares the scope interaction of nominal operators with singular indefinites and concludes that *every* and *no* in (45a) bind singular variables, whereas plural *the* and *some* in (45b) bind plural variables. In binding singular variables, *every* and *no* allow a singular individual (mother) to be related to another singular individual provided by the singular indefinite (one-year old child) in a way that is pragmatically felicitous in (27a). The infelicity of (27b) arises from the fact that by binding plural variables, *the* and *some* only associate plural individuals (mothers) to the singular individual introduced by the singular indefinite (one-year old child), which is pragmatically odd.

- (45) a. Every/No mother of a 1-year old child agreed to sign the form.
 b. # The/Some mothers of a 1-year old child agreed to sign the form.

The restrictors of the two kinds of quantifiers are represented in (46) and (47): while the restrictor of the singular operators in (45a) selects singular mothers x for a singular child y in (46), the restrictor of the plural operators in (45b) selects sums X of mothers that are mapped onto a singular child y in (47). The latter leads to pragmatic anomaly.¹⁰

$$(46) \quad [\text{SG mother of a one-year old child}] = \lambda x. \exists y [child(y) \wedge mother(x, y)]$$

$$(47) \quad [\text{PL mother of a one-year old child}] = \lambda X. \exists y [child(y) \wedge mother(X, y)]$$

Further on, Ferreira observes that introducing a relative clause with plural operators makes the mapping of singular mothers onto singular children possible in (45b) and (47). This is illustrated in (48). To explain (48), he argues that the syntactic movement involved in relative clauses introduces a distributive operator that distributes the plural variable bound by the plural operator, thus allowing for the pragmatically felicitous reading (see Ferreira (2005, 106), following Heim and Kratzer (1998)).

- (48) The/some mothers [who have a 1-year old child] agreed to sign.

More importantly for our discussion, Ferreira argues that in the verbal domain we have correspondents of the singular and plural operators in (45). He illustrates this parallelism with the adverb *always* and the bare habitual:

- (49) a. John always writes a romantic song [at the pub]_{Foc.}
 b. # John writes a romantic song [at the pub]_{Foc.} (habitual)

The corresponding representations are in (50) and (51) with the focused expression occupying the nuclear scope of the quantifier. As an operator over singular event variables, always maps a singular event of writing onto one romantic song. The habitual operator being identical to a verbal plural THE which binds plural events as Ferreira assumes, (51), the logical representation of habitual (49b), suggests that a single song y is written within a plural event E . The pragmatic oddness thus rules out this interpretation for (49b).¹¹

$$(50) \quad \forall e [\lambda e. \exists y (song(y) \wedge write(e, j, y))] [\lambda e. at_the_pub(e)]$$

$$(51) \quad THE_E [\lambda E. \exists y (song(y) \wedge write(E, j, y))] [\lambda E. at_the_pub(E)]$$

¹⁰Capital letters are used from now on as variables over sums of individuals/events, as defined in Link (1983) and not for sets as in (15), which follows Laserson (1995).

¹¹The two expressions within square brackets in (50) and (51) represent the restrictor and the nuclear scope of the operator.

Like in the case of the nominal quantifiers in (48), the addition of an adverbial clause makes a sentence like (49b) allow a habitual interpretation as in (52a). This grammaticality change receives the same explanation as (49): the movement of the adverb within the relative clause introduces distributivity over atomic parts of the plural event E . The result is the interpretation in (52b) where for each singular writing event e that is part of the plural event E there is one song that is written.¹²

- (52) a. When John writes a romantic song, he goes to the pub.
 b. $THE_E [\lambda E. \forall e \text{ greater equal } E (\exists y (song(y) \wedge write(e, j, y)))]$
 $[\lambda E. \exists E' (go_to_the_pub(E') \wedge \Theta(E, E'))]$

From the perspective of these facts, we can now explain the similarity between the supine PO and the bare habitual as a consequence of their both being operators over plural events. The effect of the PO in (53), which repeats the singular indefinite version of the nominal supine in (6) and (39) is that the plural killing event E is mapped onto a single journalist y (cf. (51)). The distributive operator brought in by the cte indefinite allows the atomic parts of the plural event to be distributed over various single journalists as in (54), which is in this respect similar to (52b). The representations (53) and (54) are only tentative for now and stand for the sets of plural events that are part of the denotation of the two nominal constructions in the supine.

- (53) *ucisul unui jurnalist de către mafia
 kill.Sup.the a.Gen journalist by to mafia
 ‘the killing of a journalist by the mafia’
 $[\lambda E. \exists y (journalist(y) \wedge kill(E, m, y))]$

- (54) ucisul câte unui jurnalist de către mafia
 kill.Sup.the CI a.Gen journalist by to mafia
 ‘the killing of a journalist now and then by the mafia’
 $[\lambda E. \forall e : e < E (\exists y (journalist(y) \wedge kill(e, m, y)))]$

6 The definite determiner

In section 4 we showed that the nominal supine differs from the verbal one in triggering pluractionality. An obvious difference between the two supine forms lies in the presence of the definite determiner only in the nominal one. Ideally, one would expect the semantic difference in terms of pluractionality to be correlated, at least to some extent, to this difference in form. In this section, we provide evidence that this is indeed the case: we will argue that the definite determiner in

¹²The predicate Θ is taken in Ferreira (2005) to stand for a contextually determined relation between events for which he sends the reader to Rothstein (1995).

the nominal supine is not the typical iota operator, but Chierchia's (1998) down operator, which according to Chierchia only combines with pluralities (in the nominal domain). We propose that AspectP hosting the pluractional operator is projected in the nominal supine precisely to meet this plurality requirement of the down operator. From this perspective, we can also understand how so-called past participial nominalizations like *avutul*, *det*, *inutul* come about - they instantiate the other possibility of a definite determiner to combine with a past participial form: this time the iota operator combines with a singular noun giving an object interpretation. In this case there is no aspectual projection and no plural meaning.

7 The syntax-semantics of the nominal supine

In this section we sketch the syntactic and semantic components of the nominal supine including the PO in Romanian. We will not go into details concerning whether the PO has a tripartite structure like the bare habituals with a focused constituent that Ferreira discusses, and we do not follow his analysis beyond the straightforward claim that there are operators that bind plural variables among which we also include the Romanian PO.

We are rather interested in obtaining the right effects with the singular indefinites and with *cate* for the nominal supine, so we will follow a semantic analysis in the spirit of Lasnik (1995), van Geenhoven (2004) and Laca (2006) with a slightly modified syntax that can account for the grammatical aspect effects in Section 3.1 and the licensing conditions of *cate* indefinites described in Section 4.1. Given that we are dealing with a nominal construction that involves the definite determiner, we assume that the whole of it denotes a definite description of plural events, so it involves an iota operator over properties of plural events. We follow the syntactic structure given in Iordăchioaia and Soare (2008): Figure 1 represents (53) and Figure 2 stands for (54), where we take distributive *cate* to be an operator that attaches to the DP it precedes.

- (55)
- $[\text{ucis}] = \lambda x_e \lambda E_s. *kill(x)(E)$
 - $[\text{un } journalist] = \lambda P_{e(st)} \lambda E'_s. \exists y [journalist(y) \wedge P(y)(E')]$
 - $[\text{PO}] = \lambda V_{st} \lambda E''_s. V(E'') \wedge \mathbf{card}(E'') > 1$
 - $[-(u)] = \lambda V_{st.t}(V)$

In what follows, we compositionally describe the semantic components in the trees in Figures 1 and 2. As we discussed in Section 3.2, we take Romanian verbs to be lexically cumulative, so the node V in both trees has the denotation in (55a). We take only the theme to be part of the VP as in Kratzer 2003, and we leave the external argument and VoiceP out for the sake of simplicity. We take

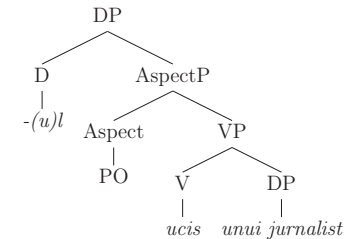


Figure 1: **ucisul unui jurnalist*

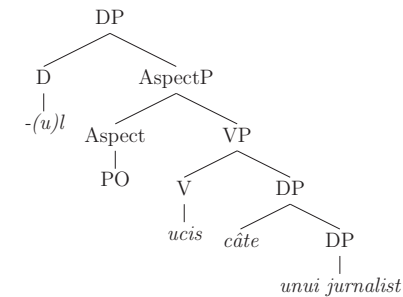


Figure 2: *ucisul câte unui jurnalist*

the DP *unii jurnalist* to be a generalized quantifier as in (55b), while the null PO is a modifier of properties of plural events as in (55c). It eventually enforces the verb it selects to predicate of only sums of more than one event. To avoid confusion with the cardinality of a set as in (15), we use the function $\text{card}(X)$ to return the number of elements that are part of a sum X . The semantics for the PO is not much different from the one Lasersohn (1995) gives, except for the syntactic level where it attaches. Constraints like the lack of overlap between events given in van Geenhoven (2004) and Laca (2006) can easily be mapped onto the PO, but we leave them aside as we have not discussed to what extent they hold for the supine. The definite determiner receives the usual denotation as an iota operator with type flexibility: in the nominal supine it takes properties of plural events and returns the largest such event (i.e. sum of events). Given the denotations in (55), we can derive the intermediate levels of the tree in Figure 1 as follows:

$$\begin{aligned}
(56) \quad & \text{a. } [\text{VP}] = [\text{ucis unii jurnalist}] = [\text{unii jurnalist}]([\text{ucis}]) \\
& = [\lambda P_{e(st)} \lambda E'_s \exists y [\text{jurnalist}(y) \wedge P(y)(E')]] (\lambda x_e \lambda E_s \cdot * \text{kill}(x)(E)) \\
& = \lambda E'_s \exists y [\text{jurnalist}(y) \wedge [\lambda x_e \lambda E_s \cdot * \text{kill}(x)(E)](y)(E')] \\
& = \lambda E'_s \exists y [\text{jurnalist}(y) \wedge * \text{kill}(y)(E')] \\
& \text{b. } [\text{AspectP}] = [\text{PO ucis unii jurnalist}] \\
& = [\text{PO}]([\text{ucis unii jurnalist}]) \\
& = [\lambda V_{st} \lambda E''_s \cdot V(E'') \wedge \text{card}(E'') > 1] \\
& \quad (\lambda E'_s \exists y [\text{jurnalist}(y) \wedge * \text{kill}(y)(E')]) \\
& = \lambda E''_s [\lambda E'_s \exists y [\text{jurnalist}(y) \wedge * \text{kill}(y)(E')]](E'') \wedge \text{card}(E'') > 1 \\
& = \lambda E''_s \exists y [\text{jurnalist}(y) \wedge * \text{kill}(y)(E'') \wedge \text{card}(E'') > 1] \\
& \text{c. } [\text{DP}] = [\text{ucisul unii jurnalist}] = [-\text{(u)}]([\text{PO ucis unii jurnalist}]) \\
& = [\lambda V_{st} \iota V] (\lambda E''_s \exists y [\text{jurnalist}(y) \wedge * \text{kill}(y)(E'') \\
& \quad \wedge \text{card}(E'') > 1]) \\
& = \iota (\lambda E''_s \exists y [\text{jurnalist}(y) \wedge * \text{kill}(y)(E'') \wedge \text{card}(E'') > 1])
\end{aligned}$$

According to (56c), the DP node in Figure 1 denotes the largest plural event in which a single journalist is killed. This gives the pragmatically odd interpretation in (53). To derive (54), with the distributive operator, we associate *câte* with the denotation in (57): it selects for a generalized quantifier, then a verb still missing its theme, and eventually, an event modifier, the PO itself, which introduces the plurality requirement on the event variable.¹³ If we introduce *câte*

¹³To make sure that *câte* only attaches to DPs with numerals, one would have to assume that it selects for NumPs in the syntax, but we do not go into further details on this issue. Importantly for our analysis, the syntactic label is the same before and after *câte* attaches. For simplicity, we take it to be DP.

at the DP level, we obtain (58) for the complex nodes in Figure 2. (58d) stands for the plural event such that in each atomic sub-event a (different) journalist was killed.

$$\begin{aligned}
(57) \quad & [\text{câte}] \\
& = \lambda Z_{(e(st))(st)} \lambda V_{e(st)} \lambda Q_{(st)(st)} \cdot Q(\lambda F_s \cdot \forall e [(e < F \wedge \text{atom}(e)) \rightarrow Z(V)(e)]) \\
(58) \quad & \text{a. } [\text{câte unii jurnalist}] = [\text{câte}]([\text{unii jurnalist}]) \\
& = [\lambda Z_{(e(st))(st)} \lambda V_{e(st)} \lambda Q_{(st)(st)} \cdot Q(\lambda F_s \cdot \forall e [(e < F \wedge \text{atom}(e)) \\
& \quad \rightarrow Z(V)(e)])] (\lambda P_{e(st)} \lambda E'_s \exists y [\text{jurnalist}(y) \wedge P(y)(E')]) \\
& = \lambda V_{e(st)} \lambda Q_{(st)(st)} \cdot Q(\lambda F_s \cdot \forall e [(e < F \wedge \text{atom}(e)) \\
& \quad \rightarrow \exists y [\text{jurnalist}(y) \wedge V(y)(e)]]) \\
& \text{b. } [\text{ucis câte unii jurnalist}] = [\text{câte unii jurnalist}]([\text{ucis}]) \\
& = [\lambda V_{e(st)} \lambda Q_{(st)(st)} \cdot Q(\lambda F_s \cdot \forall e [(e < F \wedge \text{atom}(e)) \\
& \quad \rightarrow \exists y [\text{jurnalist}(y) \wedge V(y)(e)]]) (\lambda x_e \lambda E_s \cdot * \text{kill}(x)(E)) \\
& = \lambda Q_{(st)(st)} \cdot Q(\lambda F_s \cdot \forall e [(e < F \wedge \text{atom}(e)) \\
& \quad \rightarrow \exists y [\text{jurnalist}(y) \wedge * \text{kill}(y)(e)]]) \\
& \text{c. } [\text{PO ucis câte unii jurnalist}] = [\text{ucis câte unii jurnalist}]([\text{PO}]) \\
& = [\lambda Q_{(st)(st)} \cdot Q(\lambda F_s \cdot \forall e [(e < F \wedge \text{atom}(e)) \\
& \quad \rightarrow \exists y [\text{jurnalist}(y) \wedge * \text{kill}(y)(e)]]) \\
& \quad (\lambda V_{st} \lambda E''_s \cdot V(E'') \wedge \text{card}(E'') > 1)] \\
& = [\lambda V_{st} \lambda E''_s \cdot V(E'') \wedge \text{card}(E'') > 1] (\lambda F_s \cdot \forall e [(e < F \wedge \text{atom}(e)) \\
& \quad \rightarrow \exists y [\text{jurnalist}(y) \wedge * \text{kill}(y)(e)]]) \\
& = \lambda E''_s \cdot \forall e [(e < E'' \wedge \text{atom}(e)) \\
& \quad \rightarrow \exists y [\text{jurnalist}(y) \wedge * \text{kill}(y)(e)]]) \\
& \text{d. } [\text{PO ucisul câte unii jurnalist}] \\
& = [-\text{(u)}]([\text{PO ucis câte unii jurnalist}]) \\
& = [\lambda V_{st} \iota (V)] (\lambda E''_s \cdot \forall e [(e < E'' \wedge \text{atom}(e)) \\
& \quad \rightarrow \exists y [\text{jurnalist}(y) \wedge * \text{kill}(y)(e)]]) \\
& = \iota (\lambda E''_s \cdot \forall e [(e < E'' \wedge \text{atom}(e)) \\
& \quad \rightarrow \exists y [\text{jurnalist}(y) \wedge * \text{kill}(y)(e)]])
\end{aligned}$$

Verbal periphrases select a VP (the supine) that binds plural events; in a way, they contribute a pluractional meaning.

8 Conclusions

We have argued in favor of the existence of pluractional operators that are best treated as affecting the grammatical aspect, and not the lexical aspect of a verb. The syntactic consequence is that such POs are hosted by AspectP, and are not V level modifiers as usually assumed in the literature. This analysis also brings light into the role of POs in languages where verbs are lexically cumulative. Our case study involved the Romanian nominal supine.

Somehow in our approach the plural is at the V-level (which gives us the scope effects that Laca was worried about), but the pluractional operator is not just this, it involves additional information/structure that associates with the grammatical aspect semantics.

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Nominalizing with or without ‘N’

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Abstract

This paper addresses deverbal nominals denoting events (Complex Event Nominals or AS-Ns, cf. Grimshaw 1990 and Borer 1999 respectively), that have been argued to convey aspectual information. I put a particular emphasis on French *-age* and *-ée* nominals, which have been recently argued to encode grammatical (im)perfective Aspect (Ferret et al 2009, Knittel 2011). My aim is to contribute to a general syntactic theory of nominalizations involving aspectual projections, and investigating their interaction with other layers of structure, in particular with categorizing morphology. I distinguish between n-Nominalizations which involve derivational affixes introducing categorial information, and default D-Nominalizations in which the Determiner embeds aspectual (i.e. perfective vs. imperfective morphology). I demonstrate that outer Aspect (an inflectional layer selecting verbalized structure) is only expected in the nominal domain by the latter type of nominalizations, and that in the other cases, a relevant analysis should derive effects on the aspectual calculus by entailments at the level of a Classifier projection, specified in terms of +/-bounded, +/-count.

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1. Introduction

1.1 Some background on Nominalizations, Aspect and Plural

This paper addresses the issue of Aspect-projecting event nominalizations in general, with a particular emphasis on French *-age* and *-ée* nominals. My particular concern is to reach a general syntactic theory of nominalizations that involve aspectual projections, and the precise way in which these interact with other layers of structure, in particular with categorizing morphology. The present paper is a contribution to this general agenda.

One has recently argued for the idea that Number and (outer) Aspect are somehow in complementary distribution in the system, on the basis of deverbal nominals that project imperfective outer Aspect but no Number (cf. Soare 2007, Iordăchioaia and Soare [IS] 2008, 2009, Alexiadou, Iordăchioaia and Soare [AIS] 2010, Knittel 2011). In this view, “Complex-Event” or Argument-structure nominals (cf. Grimshaw (1990) and Borer (1999), respectively¹) are not a homogeneous class, and exhibit different behaviors with respect to aspectual properties. These behaviors are correlated to distinct patterns of nominalizations and to the availability of morphological plural.

As is well known, there are differences between the various classes of English Gerunds in terms of their verbal/nominal properties. These have been recently argued (cf. AIS10 among others) to correlate to the ‘nominalizing’ or ‘verbalizing’ status of *-ing* (see also Borer 2005 for the idea that *-ing* may be either a nominalizer, or a kind of inflectional marker). When *-ing* is a nominalizer, more nominal properties are manifested – including adjectival modification and sometimes Number variation. Otherwise, it is a marker of outer Aspect (imperfective)².

- (1) a. I am sick of her **constantly**/***constant** criticizing me.
 b. He could not tolerate her **constant**/***constantly** criticizing of him.
- (2) a. ***He could not stand her criticizing** me.
 b. There have been several pushings of the cart by John

¹ Note on CENs and AS-Ns.

² Actually, the general intuition has been already expressed in the literature since Chomsky (1970). See also Borer (2005) for a discussion of different types of *-ing*.

The idea of a correlation between Number and nominal layers – and between Aspect and the lack thereof – has been documented with more empirical support by IS08, who study a pair of productive nominalizations in Romanian (see (3) below). IS08 show that the availability of morphological Number in Romanian infinitive AS-Ns, as opposed to the supine nominals, depend on the lack of a grammatical Aspect projection, and the presence of a nominalizing layer. In turn, another, more verbal, pattern of nominalization is involved in the supine, which does project grammatical (imperfective) Aspect but no Number, as a result of the absence of this nominalizing layer.

- (3) **demolă-r-i-le/*demola-t-uri-le** frecvente ale cartierelor vechi de către
 demolish-inf-pl-the/demolish-sup-pl-the frequent.pl of quarters.gen old by
 comuniști
 communists
 ‘the frequent demolitions of old quarters by the communists’

The existence of these two nominalizing patterns suggests that the projection of Number and the projection of outer Aspect are mutually exclusive. The projection of nominal layers depends on the existence of a nominalizer (n), further allowing a Classifier projection which introduces gender specification and [count] features. The ‘more verbal’ nominalizing pattern is just default nominalization by placing a verbal projection in a nominal environment, i.e., complement of D. Thus the distribution of Number is related to the one of Outer Aspect, both being inflectional layers, one above n, the other in presence of verbal layers.

It has also been observed (by Roodenburg 2006) that French AS-Ns, contrary to one of Grimshaw’s generalizations, may allow plural, like in the example below.

- (4) les désamorçages de bombes lourdes par des recrues (pour prouver l'efficacité du
the defusing of bombs heavy by recrues (for prove the efficiency of the
génie militaire)
engineering military)

The example above involves an *-age* deverbal nominal, a class recently argued by Ferret et al (2009, 2010) to involve grammatical aspectual information, i.e. imperfectivity. One can note, for instance, the presence of aspectual PP-modifiers classically taken to be connected with aspectual information in the structure; above, *-age* and *-ée* nominals seem to instantiate an aspectual opposition, argued by Ferret et al (2009, 2010) to instantiate outer Aspect, i.e. imperfectivity and perfectivity, respectively.

- (5) a. le perçage du tunnel pendant une semaine
the percings of the tunnel for a week
b. la percée du tunnel en une semaine
the percings of the tunnel in a week

The obvious problem with these nominals is that here, the grammatical Aspect and a nominal morphology, that allows for the projection of Number, would co-occur. Then the correlation stated in syntactic approaches like IS08, AIS10 would not hold for French nominals, except if one puts forth a blocking/neutralization account for cases like (4). Another problem is that, when assuming outer Aspect in the nominal system, it would be

expected to show up in contexts where a part of the *verbal* inflection is inherited in the nominal, i.e. cases of *syntactic* nominalization.

Other problematic cases of this type seem to exist. English *-ing* nominals have been argued to involve an imperfective (i.e., outer aspectual) value by Pustejovsky (1995), Siegel (1997), a view countered by Borer (2005). Following her view, aspect is not projected when *-ing* is a nominalizer; this is in line with AIS10's account which does not exclude the possibility of a bleached nominalizer *-ing*, accordingly allowing morphological plural. AIS10 also study the case of Polish *-cie/nie* nominals, which involve both aspectual and nominal affixes (cf. Rozwadowska 1995), and argue that the projection of Number is only blocked by the presence of outer imperfective Aspect (but not by perfective Aspect).

1.2. Issues addressed in this paper

The broad question that I address in this paper is what pattern French nominalizations in *-age* and *-ée* follow in a syntactic account. To settle this issue, I will compare them with Romanian infinitive/supine nominalizations, which illustrate Number/Aspect competition, and with Polish *-cie/nie* nominalizations, a system in which *morphological* aspectual marking is detectable. What is the best way to capture the apparently opposite properties of projecting both an n and Asp layer? Is it possible to maintain a syntactic analysis for these French nominalizations? What does it mean to have grammatical Aspect in the nominal domain, to begin with?

A syntactic analysis has been proposed for French deverbal nominals (i.e., *-age*, *-ée*, *-ation* and *-ment* nominals) by Knittel (2011), who proposes that aspectual information is introduced by Number, the specific inflectional layer in the nominal domain. The system is somewhat different from the one put forth in AIS10: instead of having Aspect that blocks

Number, Number would determine the presence of Aspect below in the structure. However, it is still not completely clear what kind of aspect is projected – whether one need to assume it is outer aspect as in Ferret et al (2009, 2010), or rather inner Aspect (as Knittel 2011 finally seems to assume). Not to mention that none of these authors address the problem of examples like the one in (4). If the idea of an outer-aspectual projection in nominals seems to be on the right track, at this point details still remain to be worked out, especially concerning the status of affixal morphology involved, how categorization is contributed, and what are the restrictions on the combination of the different layers with respect to each other (Asp>n, n>Asp, n/Asp/Num, etc).

In this paper, I take as a starting point the structure of nominalizations that emerges from IS08 and AIS10, on the basis of Romanian nominalizations and much other evidence, namely that in presence of category-changing, nominal morphology (that according to the theory can be identified as nP, ClassP, or simply NP), the resulting inflectional properties are nominal, too. We then deal with n-nominalizations. The inflectional domain of a nominalization may also be typically verbal, i.e. aspectual, when the relevant morphology is absent. The role of the nominalizer is taken up by the determiner system, or by whatever has the role of determination (probably, an underspecified classifier in Slavic) – and we have a (default) D-nominalization, which is syntactic in nature, i.e. not contributed by a derivational affix.

The paper is organized as follows. I first present the two-nominalization-patterns system, and formulate generalizations about categorizing and functional morphology. I then address the challenge of mixed functional categories in nominalized projections, and sketch a map of the possible combinations of properties, with special attention to the Poss-ing English Gerund and the Polish imperfective nominalizations. In line with Borer (2005), I

further argue that the presence of a nominalizer with specific inner-aspectual properties can cancel the aspectual properties of the base, without introducing an aspectual value by itself, like nominalizing *-ing*. In turn, I argue that a default nominalizer that combines with a stem marked for grammatical aspect only preserves this value without changing it (Polish, AIS10). Finally, I address the role of D in nominalizations, and argue that when this nominalization strategy is picked up in a language, the result can only be a sentential nominalization of some kind, and that the inflectional layers are typically verbal, going from outer Aspect up to Tense (and in some languages, Complementizer). This is the case of the English ‘verbal’ and mixed gerund and of the Romanian Supine.

I then turn to French nominalizations in *-age* and *-ée*, and show that they do not contribute grammatical aspect by themselves, even though they are compatible with aspectual modifiers, as the example in (5) shows. First of all, the presence of properties that have been demonstrated to diagnose grammatical aspect in nominalizations is conditioned to the presence of argument structure. From this point of view then, French nominals exhibit the well-documented ambiguity of CENs, unlike D-nominalizations which are unambiguous. Second, grammatical Aspect is *not* systematically present, which means that it is not contributed by the nominalizing affix. These affixes, in turn, contribute categorial specification together with other (aspect-sensitive) semantic information. What happens in *-age* (and probably *-ée*) nominals is just that the nominalizing affix operates on the inner Aspect and inherits the value projected there, and provides an environment for entailments of (un)boundedness to appear. Therefore, the Number may be projected, and has to match the feature specifications downwards.

According to AIS, in Polish ASNs, which exhibit morphological marking of both number and aspect, *n/ClassP* in Nominalizations can be projected over Aspect. A similar

account can be proposed for French nominalizations; the idea is that as far as the (un)boundedness specification is observed at all levels, nothing prevents the projection of nP/ClassP above Asp, resulting in a mixed pattern, in which outer aspectual information and nominal layers (Number) coexist. However, this appears slightly puzzling in view of the idea that Outer Aspect is a morphological notion (cf. Borer 2005) – and is usually introduced by non-nominal inflection, e.g. in Romance.

In my analysis, categorization arises from specific combinations of (grammatical) layers, namely layers involving gender/count/boundedness specifications, the presence/absence of which determine the structure; upwards, these layers feed inflectional projections either specific to the nominal, or to the verbal domain; downwards, selectional restrictions apply on inner-aspectual/argument structure layers. This way, I build a Classification system which is responsible for categorization, correlated to other semantic specifications. If this layer is absent, definite D provides default DP status and quantifies over another type of structure, e.g. verbal, AspP³.

The layers projected above in the inflectional domain of the structure will accordingly be either nominal inflection (Number) or verbal inflection (Aspect). In presence of an n layer brought in by pure nominalizers like *-ation, -age, -ment, -ée* in French, infinitive *-re* in Romanian, nominalizing *-ing* in English etc, gender and count specifications are provided, and the projection of Number will follow. The combination of a +n Class with –bounded specification, and the projection of inner Aspect below, will give similar effects as the realization of grammatical Aspect in the inflectional domain of the projection, and block the projection of Number.

³³ Obviously, we only deal here with deverbal nominalizations. The D vs. N pattern parameter, though, can probably extend to deadjectival nominalizations, cf. Fr/Romance *le beau /vs/ la beauté* ‘the beauty’. See a recent account of Spanish cases by Villalba (2013).

Importantly, there is really projection of ‘grammatical’ Asp only in the ‘outer’, inflectional domain (hence, only above verbal layers and not above a nominal Class), and I claim that this happens when, and only when, a nominalizing layer is absent, as is the case in the Romanian Supine, in the English Gerund, and possibly in a sub-class of Spanish and Italian nominalized infinitives. Verbal/nominal specifications in Class thus determine the functional categories that appear in the extended projection. A stronger decompositional view is of course possible, and the features that are here attached to Class may be further unfolded. However, as a matter of theory-internal choices, I will leave this aside for now. My general point here is to throw some light on how categorial information is contributed in the structure, and its interaction with inflectional layers projected above.

2. Introducing N

In the following, I show that plural (and therefore the projection of Number) is only possible for those nominalizations that involve a genuine n-affix, a “pure nominalizer”, which determines the projection of Class. Number has even been taken by certain scholars to introduce the nominal category (see Alexiadou 2001); instead, I assume that it is correlated with /an effect of the presence of such a categorizing layer.

2.1. N in *-ings*

As well known, the *-ing* affix in English gerunds is several ways ambiguous. There is the ‘nominalizer’ *-ing*, labeled as such by Borer 1993, 1999, and subsequent work, which gives rise to the “ing-of” Gerund (cf. for instance Abney 1987’s classification), a form that has nominal properties as attested by adjectival modification and absence of Accusative case

assignment, unlike the “Poss-ing” in (6)b and the verbal “acc-ing” gerund in (6)c which allow adverbial modification and assign Accusative case to its object.

- (6) a. The systematic /*systematically destroying of ancient cities by the authorities for decades
- b. The authorities’ *systematic/systematically destroying ancient cities for decades
- c. Systematically destroying ancient cities erased this country’s history.

The *-ing* nominalizing affix is characterized by sensitivity to the inner aspect of the base, as shown by AIS10 in line with Borer 2005: it selects atelic bases – but does not encode Aspect by itself. As a result of its nominal internal properties, it is expected to allow plural, which indeed it does, under certain conditions (the inner – inherited Aspect has to be specified as +bounded, i.e., telic; I return to this issue below).

- (7) a. I heard of repeated killings of unarmed civilians
- b. *the repeated fallings of the stock prices

The nominal status of the *ing*-of Gerund has been captured in the literature by including an n-head: hence, *-ing* counts as a categorizing head that gives a nominal status to a verbal projection. In the other types of gerunds that have more verbal properties, *-ing* competes for an inflectional status, the best candidate for which is (imperfective) Aspect⁴.

⁴ This does not mean, of course, that English Gerunds are always imperfective. Clausal gerundial adjuncts, in fact, do not have aspectual properties; note also that I don’t take *-ing* to be the proper mark of progressive, and leave aside here an overall investigation of all the instances of *-ing* morphology (see Cornilescu, 2003).

However, the well-known differences between the classes of gerunds also interfere with categorization.

The assumptions above point into the direction that in nominal gerunds an n (therefore Class, see below) layer is present, which is absent from the verbal gerund. Borer mentions the idea of having a ‘nominalizing *-ing*’. This form has full nominal properties, including adjectival modification and the combination with a definite determiner.

However, the other two types of gerunds are also DPs, as shown by their nominal distribution (cf. Cornilescu 2003): they may appear in argument positions, can be topicalized, etc. It is a standard assumption in the literature that they contain a ‘silent D’, and that a nominal Agr category assigns Genitive/Possessive case to the subject, or, in the case of Acc-ing, a non-finite Infl assigns Acc to the same position. But they are dominated by a D layer, which is the default nominalizing strategy in English. No nominal classification is present, hence Number is never allowed, explaining the contrast between verbal and (some of the) nominal gerunds on this point.

Gerund DPs in English thus illustrate two nominalization strategies: one uses D as a nominalizer, and has more verbal properties, the second uses a true nominalizer *-ing*, and has nominal properties. One might assume that *-ing* is associated to a classifier layer in the nominal (ing-of) gerund, but to an inflectional layer (Agr or Asp) in the other gerundial forms. One will see in the next section that the projection of n/Class distinguishes between two available strategies for nominalization in Romance.

2.2. Romance nominalizations and the presence of Class

Diagnostics for Class seem to be straightforward in Romance nominalizations, as they are usually derived by nominalizing affixes. Taking the class of AS-Ns, for instance *-ation*, *-ment*,

-age, -ée nominals in French, variation in Number, adjectival modification attest for the presence of nominal layers. The specific affixes introduce gender specification, reflected in agreement on the determiner.

- (8) a. les destructions systématiques de quartiers populaires
the destructions systematic.pl of quarters popular
(afin d'ériger des tours stalinienne)
(for to raise Indef tours stalinian)
- b. les désamorçages de bombes lourdes par des recrues
the defusing.pl of bombs heavy by indef recrues
- c. les traversées fréquentes de cette rivière par des nageurs téméraires
the crossings frequent of this river by of swimmers brave

Romanian infinitive nominalizations, a productive pattern creating AS-Ns of all syntactic and aspectual verb bases, show similar behavior (cf. IS08 among others):

- (9) demiterile succesive ale preşedintelui Băsescu pentru a proteja anumite interese
demissions successive.pl of president.gen Basescu for to protect certain interests

In support of the presence of *n*, IS08 point out that these nominalizations trigger regular NP-anaphora (as opposed to sentential anaphora) – (10)a, and display case declension (overt in Romanian) – (10)b. Their fully nominal status is therefore doubtless. In addition, it is clear that the *-re* affix deriving them is an unambiguous nominalizer.

- (10) a. Demiterea lui Bănescu a fost un subiect actual în ultimele luni ; într-adevăr, toate demission the.Gen Bănescu has been a subject actual in last.the months ; indeedm all paginile ziarelor erau acaparate de ea/*asta.
pages.the newspapers.the were accaparated by her/it
'President Bănescu's demission has been an actual subject during the last months; the pages of all newspapers have been indeed invaded by it.'
- b. pădurile au fost distruse din cauza tăierii copacilor
forests.the have been destroyed by cause cut.the.Gen trees.the.Gen
'Forests have been destroyed with deforestation'

At the opposite, the Romanian supine nominal lacks a Class layer, as diagnosed by its opposite properties: adverbial modification, lack of nominal properties like Number, Case, sentential anaphora.

- (11) a. *arestaturile succesive ale jurnaliștilor
arrest.Sup.pl successive of journalists
- b. arestatul constant al jurnaliștilor de către mafia politică
arrest.Sup constantly of journalists by part mafia political
- (12) a. *pădurile au fost distruse datorită tăiatului copacilor
forest.pl.the have been destroyed because cutting.Gen trees.pl.Gen
- b. tăiatul copacilor a distrus pădurile
cutting.Sup trees.Gen has destroyed forests.the
- (13) S-a interzis tăiatul copacilor.
se-has forbidden cutting.the trees.Gen

Într-adevăr, *el/asta a adus pădurile românești într-o situație critică

Indeed, he/it has brought forests.the Romanian in-a situation critical

The overview of nominal properties presented above allows distinguishing between affixes that unambiguously trigger nominal categorization (*-ation, -age, -ment, -e(u)r, -re, etc*) affixes like *-ing* that may be categorizers but are not always so, and the supine stem which never introduces nominal categorization by itself⁵. Correspondingly, then, one have to distinguish two classes of AS-Ns: affixe-derived (and probably zero-derived) nominals, that have argument structure and Aktionsart, and what one could call inflected derived nominals, that have both but no nominal layers, and in turn are able to project grammatical aspect. In the next section, I will discuss the idea of a tight correlation between the absence of Number (and accordingly the absence of n) and the projection of grammatical aspect.

3. Grammatical Aspect in nominalizations

3.1. Why grammatical Aspect

Recall that the starting point of this paper is the correlation between aspectual properties in nominalizations and Number inflection. As Mourelatos (1978) puts it, telicity is one property that allows realization of plural morphology in event nominals. Telicity is but a realization of boundedness in the verbal domain; boundedness, in turn, is a condition for counting, as shown by the behavior of mass nouns (cf. **a sand/ a piece of wood, etc*). One has on a par atelicity and mass nominals – and on the other, telicity and count nominals. However, as

⁵ In support of this, we note in line with the literature (ISO8 etc) that adverbial modification is possible, and we will see in the next section that the supine stem conveys grammatical aspectual information. The supine nominal is never ambiguous between a result/referential meaning (it is not a R-N), as opposed to all the other types of nominals cited above, including the nominal *-ing*.

recently shown by IS08, AIS10 for Romanian and a number of other languages, Martin (2008) and Knittel (2011) for French, lexical aspectual distinctions are orthogonal to the presence of number inflection, as morphological plural in event nominals is possible with both telic and atelic: activities, accomplishments, and achievements as well.

(14) a. Les lavages répétés de la chemise n'ont pas donné un résultat satisfaisant
the washings repeated of the shirt have not gave a result satisfying

b. Plimbările timp de ore în șir pe malul lacului l-au obosit
walkings.the time of hours in row on shore.the lake.the him-have tired

(15) a. Les démolitions fréquentes de quartiers populaires...
the demolitions frequent.pl of quarters popular.pl

b. Demolările repetate ale cartierelor populare au compromis orice plan de urbanism
demolitions repeated of quarters popular.pl have compromised any plan of urbanism

(16) a. Ses arrivées en retard n'ont pas passé inaperçues
his arrivals in delay have not passed unobserved

b. Sosirile repetate în întârziere la serviciu
arrivals.the repeated in delay at work

More importantly, in the case of the Romanian supine nominals, which according to Cornilescu (2001) is atelic, we find also telic verbal bases:

(17) demolatul monumentelor istorice pentru a construi blocuri de locuințe
demolish.Sup.the monument.Gen.Pl historical for to build blocks of housing

Another direction that has been put forward (for Romanian in the first place, cf. IS08, AIS10) is that of a grammatical aspectual projection that would block the projection of morphological number. The distinction between lexical (or inner) and grammatical (or outer) aspect that I endorse here goes as presented in Borer (2005), who sheds some light on this domain affected by important terminological confusion. I assume that inner aspect is the aspect that characterizes the verbal low projection, and is straightly connected to the presence of arguments, i.e. distinctions in terms of (a)telicity (Aktionsart). Borer (2005) presents a view in which this type of aspect is also 'syntactic', e.g. sensitive to the cardinality of the object, in the case of telicity (her AspQ). She also discusses the distinction between Slavic primary and secondary imperfectives. The first are bare stems, by default imperfective (and Borer suggests that they convey atelicity), and the latter are suffix-derived forms on the prefixed perfective form. Secondary imperfectives, Borer assumes, are realizations of outer aspect, and introduce a morphological distinction. If one follows the idea of a grammatical aspectual opposition in deverbal nominals, it is this kind of morphological distinction that one has to identify.

Interpretive differences that show up in productive pairs of nominalizations like Romanian infinitive and supine nominals, reviewed in the next section, very much suggest aspectual oppositions of the paradigmatic type. Moreover, forms as the supine nominal and the English gerund are indeed aspectually marked and introduce a systematic aspectual value (imperfective/habitual/iterative), which is also a hallmark of aspectual grammatical values.

3.2. Identifying the projection of grammatical Aspect in nominalizations

I argue that inasmuch grammatical-outer aspect may be present in nominalizations, it has to instantiate the type of morphological distinction mentioned above, even if not necessarily overtly. What we are looking for across languages, then, is a specialization in terms of aspectual distinctions, instantiated in dedicated derived forms. The purpose of this section is to look at some of such cases, which naturally lead to the idea that those languages ‘grammaticalize’ aspectual properties in nominalizations. This is particularly clear in Romanian, where a fully productive pair, the infinitive and the supine nominalizations, are clearly distinguished by their aspectual properties.

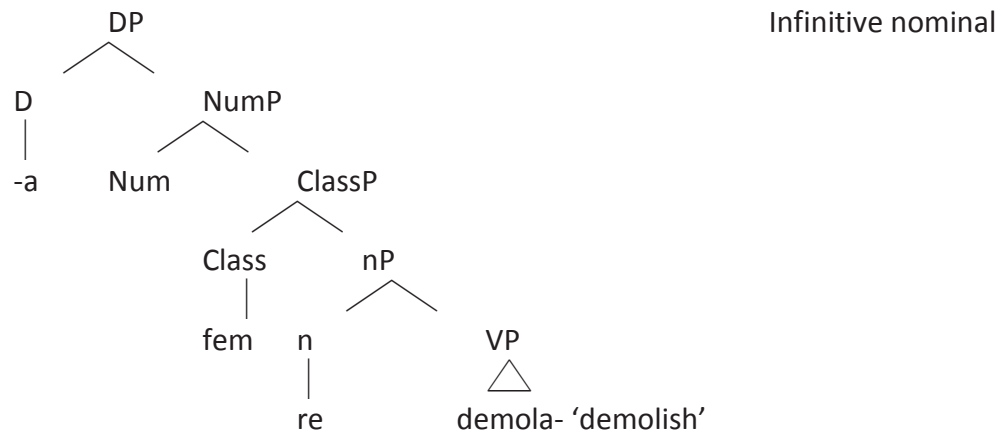
3.2.1 Romanian

The Romanian infinitive nominal does not change the value of the verbal base but is sensitive to its properties, and by and large selects telic bases, as already demonstrated by Cornilescu (2001).

- (18) a. cartierul a fost demolat în trei zile
 quarter.the has been demolished in three days
- b. demolarea cartierului în trei zile
 demolition.Inf.the quarter.the.Gen in three days

Telicity in the nominal brings in a [+bounded] feature that percolates to the layer of Class [+count] (see above) – responsible for the projection of Number. The infinitive nominal thus has a fully nominal structure as in (19), proposed by IS08 and AIS10.

(19) demolarea cartierelor populare



In the above representation, no grammatical aspectual layer is projected; only inner aspect is present. Following Picallo (1996), Class[Gender] specifications feed the projection of Number. Hence the infinitive nominal is assigned an analysis in terms of a fully nominal projection, embedding only whatever verbal layers are necessary to build up argument structure and telicity. Here, and in the structures proposed in IS08-09, AIS10, these layers are subsumed by VP, but nothing prevents including further verbal layers responsible for Voice, for instance⁶.

The supine nominal, in turn, does change the value of the verbal base, introducing an iterative or habitual reading (see IS, AIS for more details). This is visible in combination with achievements verbal bases in (20) which take habitual readings in the supine. Some stative bases (21), normally ungrammatical in the supine, become grammatical if first made [+bound] by adding a modifier like *until* PPs.

(20) sositul lui Ion cu întârziere la toate întâlnirile importante

⁶ If one adopts for instance a view like the one adopted in Borer (2005), the structure would include layers like EvP and Asp-QP, which in her system built up telicity in a syntactic fashion. I do not discuss these theoretical issues here; note simply that her EvP is not outer Aspect in the terms discussed here. And see section 4 for a more detailed, unifying proposal.

arrive.INF.the the.GEN Ion with delay at all meetings important

'Ion's (habit of) arriving late at all important meetings'

- (21) statul lui Ion la Maria/dormitul lui Ion *(până după-amiaza târziu)

stay.SUP.the the.GEN Ion at Maria/sleep.SUP.the the.GEN Ion until afternoon late

'Ion's (habit of) staying at Maria's/sleeping until late in the afternoon'

On the other hand, the data indicate positive diagnostics for pluractionality, which is arguably hosted by outer Aspect. For instance, the supine exhibits distributivity effects with plurals, a property of typical pluractional operators documented in polysynthetic languages (Van Geenhoven 2004, Laca 2006)⁷:

- (22) ucisul jurnaliștilor/*jurnalistului de către mafia politică

kill.SUP.the journalists.GEN/journalist.the.GEN by to mafia political

'the killing of journalists/*the journalist by the political mafia'

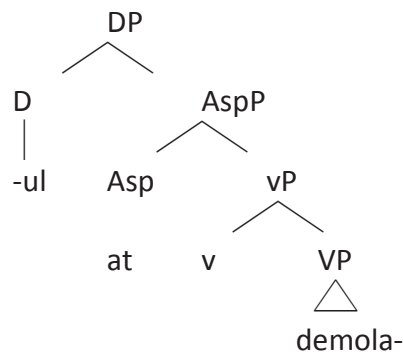
Because it introduces aspectual shift, the supine contributes an aspectual value in the inflectional domain. As a consequence, the analysis proposed in AIS10 is the one in (23), where an AspP is projected in the inflectional domain of the nominal projection, below D:

⁷ For convenience, here are Van Geenhoven's (2004) examples from Greenlandic, illustrating the effect:

- (i) ?Qaartartoq sivisuumik qaaqattaarpoq.
bomb.ABS.SG lengthy.INS explode.again.and.again.IND.ITR.3SG
'?A bomb exploded again and again for a long time.'
- (ii) Qaartartut sivisuumik qaaqattaarput.
bombs.ABS.PL lengthy.INS explode.again.and.again.IND.ITR.3PL
'Bombs exploded again and again for a long time.'

(23) demolatul cartierelor populare

Supine nominal



Difference in modification is clearly in favor of an analysis based on two nominalizations patterns: infinitive nominals seem to differ from supine nominals in not allowing adverbs (see IS08). In (24a), adjectival modification with feminine agreement in the infinitive has a free order, and more importantly can appear in the upper nominal domain – whereas only adverbial modifiers in the verbal domain (Asp-VP) are available in the supine (24b):

- (24) a. atenta studiere a datelor / studierea atentă a datelor
 attentive.the study.Inf of data.Gen / study.Inf.the attentive of data.Gen
- b. *atentul studiat al datelor / studiatul atent al datelor⁸
 attentive.the study.Sup of data.Gen / study.Sup.the attentively of data.Gen

As a conclusion, only the supine nominal projects an aspectual layer, which is genuine verbal morphology inherited in the nominal structure, thus a sentential nominalization, and not an

⁸In more support for the adverbial status of the supine' modifier, we can find examples in which the adjectival and the adverbial forms are not homophonous – like the manner adverb in (i). In some cases, both the adverb and the adjective are ok, like in (ii), with so-called 'thematic adjectives'.

- (i) corectatul tezelor bine/*bun
 grading-Sup-the assessments-Gen well/good
 'grading the assessments well'
- (ii) împărțitul frățește/frățesc al averii
 sharing-Sup-the brotherly of welth
 'sharing the welth brotherly'

affix-based one. It offers a criterion for distinguishing grammatical aspect in the nominal domain, and behaves on a par with sentences in allowing adverbs and triggering aspectual shift; we can conclude that grammatical Aspect is marked in this nominal, even if there is no specific morphology.

One can thus distinguish, on this ground, between n-nominalizations and D-nominalizations, the first fully nominal, but built on top of verbal projections, the second involving outer-aspectual inflection, thus receives more empirical support. Inflected AS-Ns are default (D)-derived AS-Ns, like the Romanian supine and the English gerund, that involve no nominalizer but a combination between D and an outer AspP.

As a working definition, I assume here that outer Aspect is an inflectional layer which always changes the aspectual value of the VP. Thus, as already mentioned above, (im)perfectivity is a morphological notion (see Borer 2005, vol II, fn 6: 34), it has always a morphological instantiation, either by a specific affix, or by a specialized stem. Outer Aspect is conditioned by (overt or covert) verbal inflectional material.

Note that, in general, it is not an expected situation to have an n layer projected over a verbal inflectional layer. Indeed, in languages where one can nominalize CPs and TPs (for instance, Greek and Turkish), no derivational affix bearing the category n can appear on top of such projections. They are not expected to appear on top of (im)perfective outer Aspect. What Romanian and English offer seems to respect this general principle of, say, domain integrity of extended projections.

3.2.2 Slavic

A complication appears however when one looks to Slavic. There, co-occurrence of Number and Aspect looks possible, provided that a class/nP layer be projected above AspP, as AIS10 show for Polish nominalizations, which project aspect as shown by the following pairs:

(25) a. Jan przeczytał/*czytał gazetę w dwie godziny.

Jan read.PF/read.IMPF newspaper in two hours

'Jan read the newspaper in two hours.'

b. Jan czytał/*przeczytał gazetę przez dwie godziny.

Jan read.IMPF/read.PF newspaper for two hours

'Jan read newspapers for two hours.'

(26) a. przeczyta-nie/*czyta-nie gazety w dwie godziny

read.PF-NIE/read.IMPF-NIE newspaper.GEN in two hours

b. czyta-nie/*przeczyta-nie gazety przez dwie godziny

read.IMPF-NIE/read.PF-NIE newspaper.GEN for two hours

They nevertheless allow morphological plural, cf. (27). However, this is possible only with perfective, thus [+bounded] forms of the nominalization. Imperfective counterparts are ruled out in presence of plural morphology.

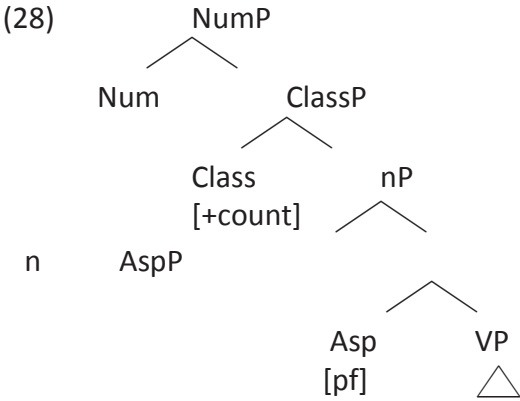
(27) a. częste opóźnione przyby-cia/odejś-cia pociągu

frequent delayed arrive.PF-CIE.PL/depart.PF-CIE.PL train.GEN

b. * częste opóźnione przybywania/odjeżdżania pociągu

frequent delayed arrive.IMPF.NIE.PL/depart.IMPF.NIE.PL train.GEN

Polish perfective nominalizations can thus be analyzed as in (28) below. The overall make-up of the projection is a nominal one (i.e. involving Class and NumP, responsible for plural and adjectival modification). A concord mechanism ensures the match in boundedness specifications between the different layers: with a perfective AspP projection, the [+bounded] specification allows [+count] Class. In this case, it looks that in Polish, a nominalizing affix may be compatible with a lower Asp projection.



If the system proposed by AIS is completely coherent in terms of the constraints on the projection of Number and its relation with aspectual specifications in the structure below, it still raises a problem concerning the idea that outer Aspect is a morphological – inflectional category, and should not be available in n-nominalizations (i.e., nominalizations involving pure nominalizers). As I already pointed out above, if outer Aspect is a grammatical, morphological category – a verbal inflectional layer –, it is not expected to be nominalized by affixation but only by combination with a determiner (“conversion”, or D-nominalization as termed above). Why is it then that Polish nominalizations above may allow the projection of a n/Class layer on top of it?

Borer (2005) suggests that, (contra Filip 2003?), perfective aspect is not grammatical aspect in Slavic, but telicity – in her terms quantity Aspect. If this is so, perfective Polish nominalizations are not a problem anymore, as there would be no outer Aspect projection in those nominalizations that allow plural. Still, the idea of an AspP projection below n remains problematic in the case of imperfective nominalizations, which, while not allowing morphological plural, admit adjectival modification indicating nominal projections.

3.3. French deverbal nominals in *-age* and *-ée* : a more serious problem

This is exactly the situation illustrated by some French deverbal process nominals, according to recent studies. Having investigated pairs of *-age/-ée* nominals in French, Ferret et al (2009) put forward the idea of their conveying grammatical aspect information (see also Haas, to appear, for similar ideas). They base their conclusion on the fact that when built on the same base, these affixes seem to be correlated to two ways of ‘conceptualizing events’, namely as ongoing vs. whole eventuality. However, in this corpus-based work, the morphological and lexical-semantic properties are favored in spite of syntactic tests, and the general idea didn’t receive strong empirical support. In what follows, I look in more details to these pairs, in order to shed a different light on the data, and propose a syntactic analysis that restates and improves conclusions of preceding work. French data are important inasmuch they allow us to investigate the puzzling situation of aspectual distinctions in presence of derivational n-suffixes.

Let me begin by setting the scene properly. Recall that here SENs are to be excluded (cf. footnote 1 above); only ASNs are expected to project grammatical eventive structure,

correlated with the presence of arguments, according to Grimshaw's (1990), and see also Roy & Soare(2012b). This is obvious in the following pairs, where the absence of the arguments combined with aspectual PP-modifiers activate the event structure leads to ungrammaticality:

- (29) a. *Le lavage (de la chemise) pendant des heures/ en trois minutes
the washing (of the shirt) during hours / in three minutes
b. *la traversée (de la Manche) en quelques heures
the crossing (of the English Channel) in a few hours

In order to identify the relevant class of nominals, we must apply relevant tests, like *in/for PPs*, compatibility with *frequent* modifiers in the singular, and the presence of *by*-phrases, the first being taken to identify the presence of complex event structure and aspectual information. As made clear in Roy & Soare (2013b), eventive denotation is not sufficient for the presence of a grammatical event (and grammatical event structure, in turn, is always present in nominalizations that project grammatical Aspect). Compatibility with the context of *last x time* predicates, or the contexts of PPs like *during the x*, *after the x*, invoked in the lexical-semantic literature (cf. Haas et al 2008 among others) does not identify the kind of eventive-aspectual properties that I am looking for in the present paper, but test just for some properties of the conceptual events denoted by the (sometimes underived) nominal.

- (30) a le lavage/le film a duré des heures (undetermined, SEN)
the washing / the movie have last for hours
b le lavage de la chemise par des tailleuses chinoises pendant des heures (AS-N)

the washing of the shirt by some seamstress chinese during hours

PP-modifiers are often considered as typical diagnostic for the presence of aspectual information, as they obviously test the telic/atelic aspectual value of the VP. It has been proposed recently (Borer 2005, IS 2011, 2012) that for-PPs identify outer Asp, while in-PPs identify telic inner Asp. I will adopt here the more traditional position according to which both PP-s identify lower aspectual projections, atelic and telic, respectively. For the rest, I will stick to the view, introduced above for Romanian nominalizations, that not all AS-Ns (i.e. not all nominals that inherit a grammatical event identified by PP-modifiers) project grammatical Aspect, but only those that introduce aspectual shift (de Swart 1993). Co-occurrence of both types of PP, however, indicates the existence of aspectual shift, which in turn warrants the projection of outer Aspect (cf. de Swart 1998).

Another test for the existence of outer aspect information, I assume, besides checking the effects of the morphology on the lexical aspect of the VP (i.e. aspectual shift), is the availability of adverbial modification, cf. section 2 above. The Romanian supine nominal, the English verbal gerund and the Spanish verbal nominalized infinitive are candidates for this verbal pattern of nominalizations (see AIS10 for an overview).

Let me now discuss some of the main arguments put forward by Ferret et al (2009) in identifying grammatical aspect in *-age/-ée* pairs. Such are the context of prepositions like *after* (that work for *-ée* nominals, supposedly perfective, but not for *-age*, supposedly imperfective), and the compatibility with predicates like *be interrupted*, only possible with imperfective *-age* nominals.

- (31) a. ??après l'arrivage de la marchandise / après l'arrivée de la marchandise'
 'after the arriving of the merchandise / after the arrival of the merchandise'
- b. après être arrivée, la marchandise a été vendue
 'after being arrived, the merchandise has been sold'
- (32) a. l'arrivage des ouvriers a été interrompu par la police
 the arriving of.the workers has been interrupted by the police
- b. *l'arrivée des ouvriers a été interrompue par la police
 the arrival of.the workers has been interrupted by the police

These kinds of contexts, however, do not identify the presence of a grammatical event structure. (Im)perfective aspect cannot be present in nominals like *film* 'movie' (*le film a été interrompu* 'the movie has been interrupted'; *ils ont discuté après le film* 'they have discussed after the movie'), that are unmarked for aspect and correlatively lack any complex event structure. I make the case that they are exactly like *last x time* predicates, that only select conceptual events as arguments, and highlight the boundaries of the event denoted by the nominal. But crucially, this is not a reliable test for the presence of grammatical aspect.

The presence of PP-modifiers attests argument structure inheritance and Aktionsart (telicity – cf. 33). In turn, adverbial modification is strictly impossible (cf. 34), again rendering the presence of grammatical aspect questionable.

- (33) a. le lavage de la chemise pendant des heures
 the washing of the shirt during of hours
- b. l'atterrissage de l'avion en quelques minutes
 the landing of the plane in a.few minutes

(34) a. *le lavage continuellement de la chemise

the washing continuously of the shirt

b. *l'atterrissage de l'avion soigneusement

the landing of the plane carefully

Ferret et al also argue that *-age* nominals give rise to pluractionality effects, as a manifestation of their aspectual imperfective value.

(35) a. *l'arrivage d'un légume / OK des légumes, de la marchandise

'the arriving of a vegetable / of vegetables, of the merchandise'

b. *le tuage d'une mouche / OK de mouches

'the killing of a fly / of flies'

Recall that this has been argued also for the supine (see above) in support of a grammatical aspectual value introduced in AspP by a pluractional operator. The examples in (35) come in validation of one of the tests that I consider relevant here for grammatical aspect, as they illustrate a shift of the aspectual value of the base predicate.

In support of a more verb-like structure, *-age* deverbal nominalizations (among others) have been argued to behave akin Romanian supine with respect to anaphora (see. Knittel 2011), indicating a more verbal structure. The lack of number would follow from this behavior.

(36) a. Le désamorçage des bombes par les recrues n'a pas été approuvé; en effet, ça/*il

the defusing of bombs by the recrues has not been approved; indeed, it/he

avait eu des conséquences désastreuses dans le passé.

has had some consequences disastrous in the past

b. ?Les destructions systématiques... en effet, elles ont compromis le plan

the destructions systematic... indeed, they have compromised the plan

d'urbanisme

of.urbanism

Despite this, it is clear that these nominalizations have nominal properties, inasmuch Gender and adjectival modification is always present⁹. Moreover, number is never clearly excluded, as we have seen above, but seems to depend on lexical aspect specification (unboundedness). Should these deverbal nominals show finer-grained distinctions in terms of verbal/nominal properties, they nevertheless clearly include a Class layer.

Moreover, unlike in the case of the supine, the aspectual (pluractional) effects in French are far from systematic; Ferret et al (2009) point out that the effect shows up only in the case of morphological pairs. When looking separately at the two affixes, one finds that there are contexts in which the aspectual shift is not triggered. So, in a syntactic approach, we have at least to assume that *-age* and *-ée* derived nominals have more than one structure, while the supine formation is unambiguous.

Note also that as far as *-age* is concerned, the ambiguity between the complex event reading and the result reading is compulsory. In addition, this affix also combines with non-verbal bases; in these, the semantic effect triggered is something like a collection, sum or group – cf. (37) below:

⁹⁹ Knittel 2011 argues that adjectival modification is restricted in *-age* nominals. However, it is not the internal structure of *-age* nominals that blocks adjectival modification, but their overall (in this case, generic) interpretation (cf. *j'ai fait du jardinage difficile 'I made difficult gardening').

(37) branchage, feuillage, vitrage

It has been assumed that event nominals in general often behave like mass; however, what we seem to have here is not a simple similarity but mass semantics (brought by the suffix), combined with an eventive base.

As I already pointed out, I assume that grammatical aspect, manifested by (im)perfectivity, is a morphological matter. It is so in Slavic, even though the combination of derivational and inflectional affixes (and the status of each) needs more investigation. It is not in French nominals, where we have mere derivational affixes with [+/-count] specifications.

Hence, *-age/-ée* nominals in French may definitely be analyzed as AS-Ns that convey (im)perfective aspectual entailments; however these are not structure-related and cannot be assigned an inflectional status, i.e. a genuine grammatical aspectual value. They surely involve verbal layers; but only layers that are responsible for the inheritance of argument structure (EvP / Asp-QP in Borer (2005) or various types of Voice/vP in other frameworks – DM or nanosyntax). Aspectual entailments of perfectivity / imperfectivity are induced through +/- count specifications at the level of the Class.

In turn, grammatical aspect layers are inflectional, thus they cannot appear above nominal projections; indeed, inflected forms cannot be further derived, as frequently pointed out in the literature. Hence the ungrammaticality **walkingation*, etc. – see for instance Borer 2005. Moreover, as already pointed out, sentential nominalizations across languages (cf. Greek, Turkish or Malagassy), are never affix-derived, and therefore may

involve inflectional sentential categories up to Tense. The sentential pattern of nominalization involves a D layer only, on top of CP/TP levels.

4. Towards a system of aspect in nominalizations.

In what follows, I turn to a comparison between the Polish and the French systems and show they are not alike. Polish nominalizations are D-nominalizations (where D stands for default, since in principle there is no D in the structure); they are syntactic in the classical sense, and affixation counts as ‘grammatical’ or maybe ‘superlexical’ in the sense of Ramchand & Svenonius 2002, Svenonius 2004, Romanova 2004; in my own terms, it contains verbal classifying layers.

French *-age/-ée* nominals, in turn, are derivational nominalizations, they bear gender features, [+/- bounded] specifications in their classifying system, which is nominal and determines nominal projections above. In certain conditions, the specific combination of these features may trigger pluractional – imperfective entailment.

4.1. More on the Slavic pattern

Slavic has separate morphological markers for n/Class and for Aspect.

In the following, I review some of the main recent developments in the treatment of Slavic aspectually-marked stems. Thus, it seems that the split between outer and inner Aspect is still unclear. I propose to give room to these in-between aspectual markers, and place them in a verbal Class layer, like recently suggested by Janda & collaborators (to appear). Perfective markers may thus appear below n without problems for the analysis.

Another peculiarity of Slavic nominal system is the lack of (overt) D. Without going into a discussion of this point here, I suggest that adding a Class layer is the default strategy of nominalization in Slavic, in the absence of D. Hence, a secondary (outer) imperfective AspP will be selected by a default [-count, -Gender] classifier that will not allow the projection of NumP. The existence of both Class and Asp layers are reflected in the morphology of the nominalization.

One could suggest that for Slavic, the unavailability of a D-nominalizing strategy (unlike in Romance and English), makes n-nominalization the unique default nominalizing strategy. In this case, n can combine with an outer Asp projection (which, crucially, can only be imperfective aspect in Slavic), and project by default a nominal classifier on top of AspP. Only neuter Gender and [-count] Class are a possible option, hence the mass behavior of the imperfective nominalizations in Polish, noted above.

In support of this idea, note that Polish nominalizations both have an aspect marker (a prefix or a suffix for perfective and imperfective aspect respectively), and a nominalizing layer. More serious problems would arise if a language in which nominalization is 100% derivational introduces outer aspect specifications in the deverbal system, while not having overt, unambiguous aspectual markers.

4.2. Event, but not aspectually marked ASN-s

The situation in French, I argue, is not the same, though. Even if the default nominalizing strategy is n-nominalization, in this case the projection of Asp is not grammaticalized in the deverbal system, but is induced by the selectional properties of the n layer.

The gender-marked French affixes are unambiguous nominalizing affixes, but they may appear on top of several types of structure. This means that *-age* and *-ée* nominals (and probably others) are ambiguous between three patterns:

- (i) SENs, in which case they allow of course pluralization (DP>NumP>NP>RootP)
- (ii) AS-Ns embedding an unbounded AspP under n (a verbal classifier level)
- (iii) AS-Ns embedding a bounded AspP under n, and in this case they may pluralize, like marginal ing-of nominals and perfective Polish nominals

-age: neuter Gender, -count specification = unbounded Asp => imperfective entailment

-ée: feminine gender, +count specification = bounded Asp => perfective entailment

5. Open questions

Some questions remain of course open in this attempt to study the event structure of a series of nominalizations throughout languages; such is the precise relation between nominal Class, verbal Class, and classification, and the situation of a functional head Voice with respect to all these. Besides, it would be interesting to further study the contribution of D, in order to determine if it is the same in all the cases where there is no overt nominalizing morphology.

6. Conclusions.

This paper has shown that the map of aspectual properties in nominalizations is tightly connected to the type of nominalization pattern, inasmuch a genuine nominalizing affix is or not present. I have focused on some cases from Slavic in comparison to French and show that the status of a ClassP may not be the same, and that a default 'D' structure can be supposed for the Slavic nominalizations projecting Aspect, but not for the French ones.

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LA RELATION DE PRÉDICATION DANS LES RELATIVES NON FINIES DU FRANÇAIS ET DU ROUMAIN*

ELENA NEGOIȚĂ SOARE

1. INTRODUCTION

Cet article se propose de faire quelques remarques sur la relation de prédication qui sous-tend les structures à verbe non fini se trouvant sous la dépendance d'un N, et que l'on pourrait appeler des relatives non finies.

Les relatives non finies sont des structures enchâssées dans le GN et comportant un V non fini, un infinitif en français ou un supin en roumain. Elles se caractérisent par le fait qu'elles occupent une position de modifieur dans le GN (par opposition à la position de complément). Elles ont statut de prédicats, et la relation de prédication est instaurée par le relateur qui introduit la relative.

- (1) a un appartement à louer
- b un appartement de închiriat

Ce type d'analyse est proposée dans le cadre théorique du Gouvernement et Liage, afin de rendre compte de la même manière de la structure des relatives finies et des relatives non finies. En effet, si dans les relatives finies la prédictivité est construite du point de vue structural par le déplacement en position initiale d'un pronom relatif coindexé avec l'antécédent nominal de la principale¹, rien n'empêche d'adopter une analyse dans laquelle les relatives non finies sont introduites elles aussi par ce type de pronom déplacé en position de Complémenteur, mais ici le pronom serait vide.

Toutes les structures adnominales à forme verbale non finie ne sont pourtant pas des relatives. Nous avons par conséquent affaire à une ambiguïté de ces structures, notamment dans le cas du roumain qui, à la différence du français, utilise toujours le même type de marqueur. Dans (2) et (3), la différence entre les

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¹ C'est l'analyse courante dans le modèle GB, voir par exemple Zribi-Hertz (1984), Haegeman (1991). La relation de prédication consiste à appliquer le contenu de la relative à l'antécédent (le GN déterminé) qui se trouve dans la principale. Cela se fait par l'intermédiaire d'un mécanisme d'abstraction, permis formellement par un opérateur pronominal qui est également l'élément introducteur de la relative.

exemples a et b est donnée par la position occupée par la petite proposition non finie; et les différences superficielles (alternance de "préposition" ou de mode utilisé) sont des conséquences de cette différence structurelle.

- (2) a la decisi3n de partir
b la decisi3n 3 prendre dans ce cas
- (3) a hot3r3rea de a pleca
b hot3r3rea de luat in acest caz

Dans ce qui suit, je me propose de présenter cette distinction et de fournir des critères formels dans ce sens, ainsi que de mieux comprendre, à travers la mise en contraste des données des deux langues, les mécanismes linguistiques à l'œuvre dans chacune.

2. DISTINCTION COMPLÉTIVE RÉDUITE / RELATIVE RÉDUITE

Comme je viens de le suggérer, tout constituant qui se trouve dans la dépendance d'un centre nominal n'est pas un modifieur. A l'intérieur du GN (ou GDét) il n'y a pas seulement ce type de relation, mais aussi la relation tête-complément, surtout dans le cas des N centre déverbaux. Le problème se pose alors de faire la distinction.

Cristea (1978: 168) fait état de l'existence de N-opérateurs qui admettent des Inf à statut de complétive. Je reprends ici deux de ses exemples:

- (4) a il avait l'impression qu'on le regardait
b tu as l'impression d'attendre quelque chose

Pour le français, par conséquent, la distinction entre les infinitifs à statut de relative et les infinitifs à statut de complétive est établie de longue date.²

Par ailleurs, dans Cristea-coord. (1978), l'une des structures examinées dans le cadre de la complémentation non finie dans les deux langues est la structure V + GN + Inf

Voici quelques exemples repris à l'article cité:

- (5) a j'ai encore quelques détails à régler
b mai am câteva detalii de rezolvat
- (6) a j'ai, moi aussi, quelque chose à dire
b am și eu ceva de spus

Prenant en compte une analyse non linéaire, hiérarchisée, on peut considérer que V prend ici pour complément la structure GN + Inf qui correspond à un GN modifié par une relative non finie. Dans ce cas, dans la structure de départ, l'infinitif se trouve en position prédicative, après une copule éli3dée en surface, conformément aux représentations proposées en (7) et (8):

² Pour le roumain, comme on le verra dans ce qui suit, cette distinction n'est pas si évidente. Au niveau du GN, on fait mal la différence entre ce qui est complément du nom et ce qui est modifieur du nom. Pourtant, dans cet article, l'idée de base est que cette distinction non seulement peut, mais doit être faite, et qu'elle est pertinente pour rendre compte de phénomènes de langue assez frappants.

- (7) a j'ai [GN quelques détails [P à régler]]
b mai am [GN câteva detalii [P de rezolvat]]

- (8) a quelques détails (qui) sont à régler
b câteva detalii (care) sunt de rezolvat

En revenant au problème qui se pose pour l'analyse de (2) et (3), nous aurions à disposition deux patrons syntaxiques:

- (9) a j'ai pris [la decisi3n [de partir]]
b j'ai pris [la decisi3n] [de partir]]

Le problème de l'ambiguïté syntaxique est cependant résolu si l'on fait la distinction complément vs. modifieur. Cette distinction est illustrée par des exemples comme ceux de (10) en roumain, où l'on utilise des modes non finis distincts, l'infinitif en (10)a et le supin en (10)b. Loin d'avoir affaire, comme le proposent les grammairiens roumains, à des infinitifs à valeur de modifieurs de N, les structures du type (10)a sont des compléments, autrement dit des complétives réduites. Elles occupent une position interne au GN, et non pas une position adjointe.³

(10) a ideea de a pleca: complétive en position argumentale

- b cartea de citit: relative réduite (modifieur), obtenue par l'effacement de la copule

La conséquence de l'analyse est que l'élément *de* du roumain doit recevoir un statut différent:

– élément subordonnant ("complémenteur") dans les complétives;

– élément relativisant ("abstracteur") dans les relatives.

En tant qu'élément relativisant, il assure le statut prédicatif de la proposition non finie.⁴ En effet, on peut comparer le fonctionnement de *de* à celui de *să*. Celui-ci ne fonctionne pas comme abstracteur dans des relatives, selon ce qui est illustré par le contraste en (11)a-b, qui montre l'impossibilité des relatives introduites par *să*. Parallèlement à *de*-Inf, nous avons donc des complétives introduites par *să* et non pas des relatives finies.

³ Cette distinction peut sembler difficile à soutenir et à représenter. Néanmoins, on peut poser qu'une telle proposition réduite est générée directement sous la recton du N, tout comme un COD à l'intérieur du GV:

- (i) GDét
^
Dét Dêt
^
GN GAdj
^
N Ph-Inf

a idee de a pleca interesant-
A cette structure de base, des règles de mouvement (de l'Adj à Dêt) s'appliquent pour donner la structure finale du GDêt:

- (ii) interesanta idee de a pleca

⁴ Il a d'ailleurs le même statut dans le cas d'autres modifieurs du N, par exemple dans *articolul de lux, dămă de roșu*, où il convertit des expressions référentielles (N) dans des prédicats.

Par ailleurs, si l'on compare les relatives réduites au supin, en (11)d, avec les complétives à l'infinitif introduites par *de*, en (11)c, on peut constater que seules les premières – (11)d – acceptent des éléments qui se combinent obligatoirement avec des prédicats. Le statut de complément des Infinitifs introduits par *de* dans cette position est donc tout à fait clair.

- (11) a *ideea să plecăm*
 b **cartea să citim*
 c **ideea cea de a pleca*
 d *cartea cea de colorat*

Le mécanisme par lequel se réalise la prédication dans les relatives finies repose, comme je l'ai rappelé plus haut, sur la coindexation du pronom relatif avec son antécédent. En l'absence d'un pronom ouvert qui assure la prédication, on a besoin d'un élément ouvert dans le site initial de la petite proposition, qui a pour effet d'attirer un pronom relatif vide. Ceci, comme il a été affirmé ci-dessus, est valable uniquement pour *de* introduisant une relative au supin.

L'analyse proposée, qui accorde un statut différent à l'élément *de* introduisant la complétive à l'infinitif et la relative au supin en roumain, est appuyée, de façon indépendante, par l'alternance *à / de* en français. Le français, en effet, se sert de deux éléments distincts pour introduire des petites propositions où la forme verbale est la même en apparence, mais reçoit des usages distincts.

- (12) a *problema (este) de a studia / problema (este) de studiat*
 b *le problème (est) d'étudier / le problème (est) à étudier*

Il est clair (et ceci a été d'ailleurs proposé) que ces deux "prépositions" du français doivent elles aussi être analysées de manières différentes. En tant qu'introducteur de la complétive, *de* est un Comp, ou similaire à un élément de ce type. Il est moins clair comment on peut analyser *à*, qui sémantiquement fait fonction d'abstracteur, du point de vue syntaxique.

Une suggestion dans ce sens, qui fonctionnerait pour le français comme pour le roumain, tient de l'analyse en termes formels de la structure des relatives (finies aussi bien que non finies). Celles-ci devraient reposer sur le déplacement en position initiale de phrase d'un pronom opérateur. Cet opérateur est lexical dans certains cas ("pronoms relatifs"); dans le cas des relatives non finies, il est vide. Or, justement, dans ce cas, on aurait besoin d'un élément qui marque la frontière de ce déplacement, et ce serait *à* l'instanciation d'un Complémentaire relatif non fini, qui assumerait cette fonction. Mais, certes, ceci est encore matière à recherche.

En revenant au roumain, on retrouve l'élément *de* en tant qu'élément "prédicativisant" ou "adjectivisant" dans d'autres structures, comme celles citées dans la note (2) ou celles des exemples (13)a et b.

- (13) a *de acolo, de mâine*
 b *de groază, de minune*

À en français joue, conformément aux suggestions que je voudrais faire dans ce article, un rôle similaire – celui d'opérer un changement de type de l'élément avec lequel il se combine. On le retrouve aussi dans d'autres types de structures que celles étudiées ici:

- (14) à merveille, à ravir

Une autre question qui pourrait se poser est pourquoi le roumain se sert d'un seul élément à deux effets – et à deux statuts – différents, alors que le français en utilise deux, comme on s'y attendrait. La réponse doit être cherchée dans la morphologie verbale: il s'agit du fait que les modes utilisés sont différents en roumain, et de ce fait, le domaine généré par le verbe ne donne pas lieu à une ambiguïté. Je m'interroge sur cette question dans la prochaine section.

3. CONTRAINTES SUR LE CHOIX DU MODE

Il faudrait par conséquent mieux préciser la nature de la relation entre le type d'élément subordonnant et le mode sélectionné. Le choix du mode est d'ailleurs un point de contraste entre le français et le roumain. Doit-on l'enregistrer en tant que tel, ou bien le relier à d'autres propriétés dans le système de la langue en question?

Afin de construire une réponse, il nous faut regarder de plus près les différences qui séparent l'infinitif et le supin. Dans le cas des structures analysées, nous avons vu que l'infinitif fait fonction de complétive, tandis que le supin apparaît dans une structure de relative. Il faut remarquer, cependant, que le supin adnominal ne correspond pas toujours à une relative, mais, précédé de prépositions lexicales, il se comporte comme un modifieur nominal. En roumain comme en français, les relatives réduites sont en règle générale des structures passives. L'infinitif actif est marginal en français (v. plus bas), tandis que le roumain sélectionne une forme participiale, ayant elle aussi une structure de passif.

La raison pour laquelle, en français, le sujet ne peut pas, en principe, être relativisé est le fait que la position sujet des infinitives est PRO, qui n'est pas une position casuelle. Il est établi, dans l'analyse standard des relatives qui implique un mouvement wh, que la trace du mouvement wh doit porter un cas.

Pourquoi l'infinitif en roumain n'apparaît-il jamais en position de relative? La suggestion que je voudrais faire est que l'infinitif ne peut jamais rester "ouvert", ne peut pas être prédicatif. Certes, cela devrait être traduit en termes structurels. Le sujet PRO de l'infinitif en roumain "clôt" le domaine. D'autre part, la relativisation de l'argument interne supposerait l'assignation de l'accusatif dans l'infinitivale, ce qui n'est pas possible en roumain. Dans le cas des relatives au supin, il s'agit très probablement d'une projection (de type) CP, dans laquelle le supin est de type verbal et projette au moins une position de complément (l'objet direct) qui sera promu en position de sujet. Cela vaut la peine de s'arrêter avec plus d'attention sur la manière précise dont ceci se réalise.

En discutant le comportement des constituants wh en roumain, Dobrovie-Sorin (1994) arrive à la conclusion que le roumain ne dispose pas de quantificateurs structuraux, et partant, ne dispose pas non plus d'opérateurs nuls; en d'autres termes, le mécanisme de prédication qui repose dans d'autres langues sur le déplacement de "pronoms relatifs" vides, devrait en roumain se réaliser d'une autre

façon. Cette hypothèse est vérifiée par le fait que le roumain ne dispose pas d'un ensemble de structures: les relatives introduites par des compléments (du type *that* en anglais, *que* en français), les clivées et les structures à Tough Movement.

Dans les langues où ces structures existent, elles ont été analysées comme impliquant la présence d'un Opérateur Nul. L'agrammaticalité des exemples du roumain (15-16) montre que cette langue ne permet pas les structures à Opérateur Nul.

(15) *omul că am văzut (relative introduite par C°)
homme-Dét que ai vu

'l'homme que j'ai vu'

(16) *e pe acest om că am văzut (clivée)

est Acc cet homme que ai vu

'c'est cet homme que j'ai vu'

Selon Dobrovie-Sorin (1994), l'absence des relatives infinitivales en roumain, signalée dans les paragraphes précédents, s'explique par le même paramètre: la réalisation de l'objet devrait être légitimée par un opérateur. Si l'opérateur est lexical, on trouve, marginalement, des relatives infinitivales en roumain:

(17) (?am găsit o carte din care citi

j'ai trouvé un livre dans lequel lire

'j'ai trouvé un livre dans lequel lire'

Si l'opérateur est nul, les relatives infinitivales sont agrammaticales:

(18) a *caut o carte de a citi

cherche un livre de PRT lire

'je cherche un livre à lire'

b *caut o fată de a iubi

cherche une fille de PRT aimer

'je cherche une fille à aimer'

En ce qui concerne les relatives au supin, Dobrovie-Sorin (1994) considère que ce type de relatives repose non pas sur le Mouvement A', mais sur le Mouvement A. Cette hypothèse est confirmée par certains tests. Ainsi, les relatives au supin ne semblent pas admettre de lacunes à distance:

(19) a *cărți de criticat când citești

livres de critiqué lorsque lis

'livres à critiquer quand on lit'

b *haine de spălat când murdărești

vêtements de lavé lorsque salis

'vêtements à laver quand on salit'

Cette propriété distingue les relatives réduites avec supin des relatives réduites à l'infinitif dans les autres langues romanes. Les relatives à infinitif des autres langues romanes reposent sur le Mouvement wh, et légitiment des lacunes à distance:

(19) c des articles à ficher lorsqu'on lit
d des habits à brosser lorsqu'on salit

On peut donc proposer, suivant Dobrovie-Sorin (1989, 1994), que les relatives réduites participiales du roumain ne soient pas analysées par chaîne A'. Si cela est correct, la structure des relatives à supin n'est pas (20)a, mais (20)b.

(20) a #am adus o carte; [CP [Spec,C Op] [C [C-Ø] de citit t_i]

ai apporté un livre de lu

b am adus o carte; [CP [Spec,C e_i] [C [C-Ø] de citit t_i]

ai apporté un livre de lu

'j'ai apporté un livre à lire'

Cependant, cette analyse pose d'emblée un problème pour le supin. Il peut en effet sembler contradictoire de proposer une catégorie vide sujet à l'intérieur de la relative participiale, alors que le sujet n'est pas projeté par le participe. En fait, le participe externalise son argument interne, qui sera réalisé dans une position syntaxique extérieure au GV participial. C'est ce qui se passe dans le cas des relatives participiales: la catégorie vide qui occupe une position sujet (ici, de type "petite proposition") occupe une position sujet et correspond à l'argument interne du GV participial, qui a été externalisé. On peut donc admettre une catégorie vide en position sujet de la participiale, à condition qu'elle corresponde à l'argument interne externalisé.

Pour ce qui est de la contrainte sur l'argument relativisé – qui est obligatoirement l'argument interne –, on peut remarquer que, même si l'on suppose que le supin implique un Mouvement A de l'argument interne, ce qui est relativisé sera toujours le sujet. On peut conclure que le supin permet de relativiser l'argument interne justement parce que celui-ci est externalisé, c'est-à-dire réalisé dans une position syntaxique de sujet.

Par ailleurs, le paramètre établi par Dobrovie-Sorin (1994) est susceptible d'être raffiné: la raison pour laquelle le supin peut être utilisé dans ces configurations, c'est justement le fait qu'il permet le déplacement d'une catégorie vide *sujet*; il s'avère ainsi que le supin permet de relativiser l'argument interne *parce qu'il* le réalise en position sujet.

Une autre remarque occasionnée par la comparaison roumain-français dans cette zone de la grammaire est représentée par la possibilité – très marginale en fait – de l'infinitif actif dans les relatives non finies du français et du roumain.

Comme on l'a déjà mentionné, en règle générale, les relatives non finies à l'infinitif (en français) et au supin (en roumain) sont passives. On ne devrait pas avoir de relatives actives à l'infinitif en français, pour la même raison que l'on n'a pas de relatives à l'infinitif en roumain.⁵

⁵ Cette raison n'est pas importante pour les points que je me suis proposé de faire ici, et elle va dans le sens d'une propriété morphologique des domaines générés par l'infinitif et le supin, respectivement. Je renvoie à Dobrovie-Sorin (1994) et Negoită-Soare (2002).

Cependant, de façon parallèle au subjonctif, l'infinitif (actif) en français est marginalement déclenché par une visée critique ou bien par le contexte négatif; c'est un fait soigneusement noté pour le subjonctif dans les grammaires du français, mais ignoré, à ma connaissance, pour l'infinitif. Pourtant, il semble assez frappant:

(21) c'est le seul homme à pouvoir résoudre ce problème
On pourrait penser à mettre sur le compte de la modalité (type de phrase négatif, unicité de l'antécédent qui est sélectionné sur un ensemble parcouru exhaustivement) le choix de la forme modale non finie dans des exemples comme (21) qui semblent soulever des problèmes pour une généralisation sur l'argument que l'on peut relativiser.

Le fait que ceci doit être correct est encore une fois appuyé par une contrainte similaire qui semble jouer dans les situations marginales où l'infinitif roumain a un rôle de relative:

(22) a nu e om (de) a spune așa ceva
b nu e om să spună așa ceva

En effet, si (22)a peut sembler douteux à certains locuteurs, (22)b devrait être tout à fait acceptable: ce serait en fait la version préférable de la phrase avec infinitif. Ce parallélisme, néanmoins, devrait nous mettre encore une fois sur une autre piste, qui en fait a déjà été suggérée par l'analyse de Huot (1981). L'alternance avec un subjonctif en roumain indique le fait que la proposition en question, en apparence modifiant le N "om", n'a pas en fait statut de prédicat. Huot (1981) suggère une analyse à corrélatif vide, qui, en d'autres termes, reviendrait à considérer que le N centre comporte un adjectif vide du type "tel" modifié par une complétive d'adjectif. De tels exemples seraient paraphrasables par:

(23) un homme tel qu'il peut/ puisse faire cela
Dans ce cas, la relation de prédication ne s'instaure pas entre la proposition non finie à l'infinitif et le N centre, mais entre ce N et l'adjectif vide associé; cet adjectif vide est spécifié par une complétive.

On est encore une fois en présence d'un cas où les deux langues marquent par des solutions différentes des problèmes du même ordre; ces observations offrent également la clé de l'analyse, qui serait beaucoup moins évidente en dehors de la perspective comparée.

4. CONCLUSION

J'ai formulé, dans cet article des remarques sur la manière dont est constituée la relation prédicative dans les relatives non finies du français et du roumain. J'ai présenté la distinction modifieur / complément (argument) dans le cas des domaines non finis qui se trouvent dans la dépendance d'un N, et qui s'avère très utile dans l'analyse de l'infinitif en français, du supin par rapport à l'infinitif en roumain, ainsi que des éléments introducteurs de ces domaines dans les deux langues.

La conclusion qui s'est imposée est que l'élément *de* qui introduit, indistinctement en apparence, aussi bien infinitifs que supins adnominaux en roumain, a un statut complètement différent dans les deux cas, de même qu'il introduit des domaines à statut différent, de complément et, respectivement, de modifieur. Ce statut distinct d'un élément introducteur se trouve vérifié en français, où l'on trouve en alternance, dans les mêmes contextes, des introducteurs différents, à savoir *de* et *ă*.

Du même coup, il faut attribuer un statut distinct également à l'infinitif français dans les deux cas, ce qui ne semblait pas poser de problèmes pour la description du français (à la différence du roumain).

J'ai également mis en évidence un facteur qui gère le choix du mode dans les mêmes relatives non finies. Il s'agit de la structure interne de ces relatives: j'ai montré que celle-ci repose sur le mouvement *wh* dans les relatives à infinitif du français, mais sur un autre type de déplacement dans les relatives à supin. Le choix du mode doit par conséquent être relié à la manière dont la prédication est réalisée dans les deux langues respectivement.

Les phénomènes discutés ici me semblent illustrer une fois de plus le fait que la comparaison entre les langues est importante pour éclairer les mécanismes linguistiques qui les caractérisent. En effet, ce n'est qu'en faisant contraster les données que les généralisations font surface, et ce n'est qu'à travers les différences que l'on peut proposer de meilleures solutions d'analyse à des problèmes que l'on se contenterait, autrement, de constater.

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1. Introduction

This paper deals with some unsolved problems raised by *Tough-* adjectives in Romance languages. *Tough-* adjectives are characterized by the alternation pattern exemplified in (1). The construction exemplified in (1)b-c is known as the T(ough) C(onstruction), illustrated here in its predicative use (1b) and in its attributive use (1c), the latter being less addressed in the literature.

- (1) a. Il est difficile de lire ces livres (Fr.)
 It is hard to read those books
 b. Ces livres sont difficiles à lire (predicative use)
 These books are hard to read
 c. des livres difficiles à lire (attributive use)
 books hard to read

This pattern distinguishes *tough-* adjectives from other adjectives taking an infinitival:

- (2) a. Cette femme est belle à regarder
 This woman is beautiful to look at
 b. *Il est beau de regarder cette femme
 it is beautiful to look at this woman

The TC illustrated in (1)b has been a long standing problem in the P&P framework. The debate is still open today. The various competing analyses can be subsumed under two main classes: with raising of the subject (Rosenbaum 1967, Postal 1971, Berman 1973, Bayer 1990, Sportiche 2002, 2006, Hicks 2004), and with the subject base generated. This latter class has the following variants: (i) object deletion under identity (Akmajian 1972, Ross 1967), (ii) null operator movement (Chomsky 1977) and (iii) complex predicate formation by reanalysis (Nanni 1978, 1980, Chomsky 1981)

The aim of this paper is to contribute to this debate with new data from Romance supporting a raising analysis. We will also show that in Romance infinitivals in TC are reduced structures, which do not case-mark the object. Since arguably the same reduced structures appear in modal non-finite relatives, we will extend our analysis to these constructions.

2. Arguments for Raising

2.1. General arguments

Some well-known arguments put forward in the literature on raising also have been argued to hold for TCs. The most important are the following.

First, the subject seems not to be theta-marked by the *tough-* adjective. This is shown for instance by the possibility to have idiom chunks, illustrated in (3);

- (3) a. The hatchet is hard to bury after long years of war (Berman 1973)
 b. La justice sera difficile à rendre (Ruwet 1991)

The justice will be difficult to render

Moreover, the nominalization is unavailable (Miller and Chomsky 1963, Chomsky 1970 – cf. (4)a-b). When the nominalization is obtained, as in (4)c, it is however not for the form that selects the infinitival.

- (4) a. *John's easiness to please
 b. John's eagerness to please
 c. Mary's prettiness (*to look at)

Goh (2000) argues against Kim (1995) which claims that the subject in TC is assigned a Cause role, being somehow causally related to the easiness/difficultness. (5)b is Goh's counterexample, which shows that the subject cannot be inherently a cause of the difficulty.

- (5) a. This mountain is difficult to walk up (Kim 1995)
 b. Even the smallest mountain is difficult to walk up while wearing size 14 stilettoes
 (Goh 2000)

Another classic argument comes from properties indicating reconstruction. On the one hand, TCs allow low readings of numerals. The sentence in (6) has a reading in which *dix livres* "ten books" is interpreted under the modal introduced by the infinitival ("it is hard to find ten books"). This reading can only be derived by reconstructing the subject inside the infinitival, providing an argument in favor of raising.

- (6) Dix livres de mathématiques sont difficiles à trouver dans cette maison (Fr)
 ten books of mathematics are hard to find in this house

On the other hand, variable-binding is possible. In (7), *his* can only be interpreted in a position c-commanded by *every photographer*, so it must have raised from such a position:

- (7) Pictures of his_i friends are hard for every photographer_j to sell t_i (Sportiche 2002)

The same reasoning holds for anaphor-binding, illustrated in (8).

- (8) A book about himself_i would be tough for John_i to forget

2.2. Arguments specific to the Romance family

We add to this list some new arguments from the Romance domain. First, we may notice that TCs license subject bare nouns:

- (9) a. Prestiti stranieri sono difficili da ottenere (Italian)
 loans external are difficult to get
 b. Împrumuturi externe sunt greu de obținut (Romanian)
 c. Informații de calitate privitoare la piață sunt dificil de obținut
 informations of quality regarding market are hard to get

As is well known (see Dobrovie-Sorin 1997, Beyssade & Dobrovie-Sorin 2004, Kleiber 2001, McNally 1995, 1998), argumental bare plurals in Romance languages are allowed only with predicates that provide existential closure, typically "localizing" predicates:

- (10) a. *În cameră erau bolnavi/triști copii. (rom.)
 in room were ill/sad children
 a'. *Nella stanza erano /tristi bambini (it.)
 b. *Admir/respect profesori (rom.)
 I-admir/I-respect teachers
 b'. *Ammiro/rispetto professori. (it.)
 c. În cameră dormeau copii (rom.)
 in room were-sleeping children
 c'. Nella stanza dormivano bambini (it.)
 d. Caut/ascult profesori (rom.)
 I search/listen teachers
 e. Această demonstrație conține erori
 this proof contains errors
 f. Pe pereți erau hieroglife
 on walls were hieroglyphs
 g. Bordeaban cipreses el camino (sp.)
 were bordering cypresses the road

Tough- adjectives don't qualify as localizing predicates, as proven by (11). We have to conclude that in the examples (9), the subject must be interpreted inside the non-finite clause.

- (11) a. *Prestiti stranieri sono difficili
 b. *Împrumuturi externe sunt dificile

Another piece of evidence is represented by the existence of non-agreeing *tough-* adjectives. In Romanian, unlike in the other Romance languages, the adjective in the TC doesn't agree with the subject, although the copula does. This proves that in this language the subject is not the external argument of the adjective:

- (12) Aceste ipoteze sunt greu/*grele de acceptat (Romanian)
 these hypotheses.fpl. are difficult.msg/difficult.fpl to accept

3. Problems for the Raising Analysis

The raising analysis, however, is not without problems.

First, this constructions has both A and A' movement properties. The target position is a case position, which indicates A-movement. But other properties are incompatible with A-movement. For instance, the base position seems to be a case position, which would lead to improper movement

- (13) a. The solution is easy to find_
 b. This tray is easy to forget about_

- (14) *John is likely that comes

Furthermore, according to Kaplan and Bresnan 1982, the base position may be inside a finite clause, which point to a less local movement in the case of TCs:

- (15) Mary is tough for me to believe that John would ever marry

Finally, licensing of parasitic gaps seems to be possible in TCs:

- (16) This book is hard to understand without reading twice

A mixed solution has been proposed in order to capture these mixed properties: it is a special kind of movement which has some of the properties of A-bar movement + A movement (Brody (1993), Hornstein (2001), Hicks (2004)). To discuss the most recent, Hicks (2004) avoids the case problem by resorting to the hypothesis of a 'big-DP': the higher DP, headed by the Null Op, would receive case in the embedded clause, while its DP complement would raise from Spec of the embedded C to the matrix subject position.

This analysis also has some problems. On the one hand, there is no independent evidence for big DPs elsewhere in the grammar. On the other hand, there is no clear semantic role for the Null Operator; this item is normally interpreted as forming a predicate, but it is not clear how a predicate of individuals can combine with a *tough* adjective.

Moreover, a raising analysis should be able to deal with the attributive use of TCs (illustrated in (17)), and this is not addressed in the afore-mentioned papers.

- (17) This is a movie hard to forget
 C'est un film difficile à oublier (fr.)
 Țsta e un film greu de uitat (rom.)

4. Towards an analysis of TC in Romance

4.1. The infinitival in TC and Modal Reduced Relatives – reduced structures

The proposal that we defend here is that in Romance TC the infinitival represents a reduced structure, which does not case-mark the object, behaving on a par with participles and not with finite relatives. We propose a unified analysis following this line for TC and modal reduced relatives. Our main arguments in support of this view come from a parallel behaviour observed for the two kinds of structures, concerning the form of the embedded verb, the distribution and the locality constraints.

The non-finite form in TC is the same as the one used in modal reduced relatives (as noticed, for French, by Kayne 1972).

- (18) a. Ces livres sont difficiles à lire (Fr.)
 these books are hard à read.Inf
 b. livres à lire "books to read"
 books à read.Inf

- (19) a. Questi libri sono difficili da leggere (It.)
 these books are hard da read.Inf
 b. libri da leggere
 books da read.Inf

- (20) a. Aceste cărți sunt greu de citit (Rom.)
 these books are hard de read.Sup
 b. cărți de citit
 books de read.Sup

The non-finite form used in TC is different from the form used in clausal complements of evaluative control adjectives of the type *clever, kind* (which do case-license the object) (in western Romance, the introductory element is different - fr. *de* vs. *à*, it. *di* vs. *da*; in Romanian, the form itself is different – supine in TC and modal relatives vs. subjunctive in control clauses):

- (21) a. Vous avez été gentil **de** le faire (Fr.)
you have been kind *de* it do
b. cela est difficile à faire
this is difficult *à* do
- (22) a. Lei è gentile **di** averlo fatto (It.)
you are kind *de* have-it done
b. Questo è difficile **da** fare
this is hard *da* do
- (23) a. Ați fost amabil **să** o faceți (Rom.)
you-have been kind Subj it you-do
b. Asta e greu **de** făcut
this is hard *de* do.Sup

In Western Romance, in the impersonal use of Tough adjectives, the clausal complement has the same form as with control adjectives, which is different from that used in TCs.

- (24) a. Il est difficile **de** soutenir cette analyse (Fr.)
it is difficult *de* defend this analysis
b. Cette analyse est difficile **à**/*de soutenir
this analysis is difficult *à* defend
- (25) il a été gentil **de** soutenir cette analyse
he has been kind *de* defend this analysis

In Romanian, both forms may be used: the subjunctive and the supine (see discussion under 42 below).

- (26) a. e greu să răspundem la aceste întrebări
is hard Subj answer.1pl to these questions
b. e greu de răspuns la aceste întrebări
is hard *de* answer.Sup to these questions

Assuming that the formal resemblance between infinitivals in TC and in Modal relatives reflects a similar structure, it is worth noticing that Romance modal infinitival relatives are reduced relatives, unlike their English counterparts. They verify indeed Bhatt's (1999) criteria for reduced relatives, namely:

(i) they can appear in postcopular position (cf., for this criterion, Embick 1997, Iatridou et al. 1999):

- (27) a. Ces livres sont à lire jusqu'à mardi (fr)
these books are *à* read until Tuesday
b. Questi libri sono da leggere fino a martedì (it)

c. Aceste cărți sunt de citit până marți (rom)

- (28) * These books are to read until Tuesday

(ii) relativization is strictly local:

- (29) a. * Un livre à dire à tes enfants de lire (fr.)
a book *à* tell to your children *de* read
b. *O carte de zis copiilor să citească (rom.)
a book *de* tell.Sup children.the.D Subj. read.3pl
- (30) A book to tell your children to read

On the other hand, infinitival relatives involving relativization of the subject, which in English do qualify as reduced structures, do not exist in Romance:

- (31) a. a man to fix the sink
b. *un homme à réparer l'évier (fr.)
c. *un om de reparat chiuveta (rom.)

A further difference is that periphrastic passive is not allowed in Romance, as opposed to English:

- (32) a. a book to be read
b. *un livre à être lu

Some of these properties are also found with TCs. First, the gap in the non-finite clause only corresponds to the object:

- (33) a. ces livres / *ces personnes sont difficiles à lire (fr.)
these books/these persons are hard to read
b. *Cette personne est difficile à dormir
this person is difficult to sleep
c. *Cette personne est difficile à parler avec
this person is tough to speak with

Secondly, the gap cannot be further embedded inside the complement of the infinitival, it must be an argument of the infinitival, unlike in English:

- (34) a. *Un livre difficile à convaincre tes enfants de lire
b. *O carte greu de convins pe elevi să (o) citească
c. A book hard to convince your children to read

On the other hand, no periphrastic passive is allowed:

- (35) * un livre difficile à être lu
a book difficult to be read

The Romanian Supine, used in *tough-* constructions and modal reduced relatives, arguably has a more reduced structure than the Infinitive, since it does not allow clitics of any

sort, nor “clausal” negation (which is the same as constituent negation in Romanian) – it only allows a participial negation (*ne*) in the reduced relative construction, which then gets a special meaning (impossibility; the obligation meaning is lost) (cf. Soare 2002):

- (36) a. înainte de a-i spune
before of to-him(DCl) do.Inf
b. * e greu de-i spus
is hard *de*-him(DCl) tell
c. pentru a nu rata
for to not fail
d. *carte greu de nu citit
book hard *de* not read.Sup

To make this more precise, we propose to adapt the following cross-linguistic generalization proposed by Bhatt (1999):

“Reduced relatives are only based on the relativization of the external argument”

We propose that this generalization should be restated in terms of case-marking:

“external” = **non-case-marked** (cf. the passive participle)

So - in spite of active morphology, we can assume that modal reduced-relatives are passive-like structures.

Further evidence comes from the fact that in Romanian, agent adjuncts with supine (in modal relatives and even in TCs) are possible for some speakers:

- (37) a. Sunt multe lucruri de rezolvat de către ministerul Agriculturii
are many things *de* solve.Sup by ministry.the agriculture.the.G.
“There are many things to be solved by the Ministry of Agriculture
(www.amosnews.ro/PrintArticle201911.phtml)
b. Japonia este greu de înțeles de către cineva care nu locuiește acolo
Japan is hard *de* understand.Sup by somebody who not lives there
“Japan is difficult to understand for somebody who doesn’t live there”
(www.targetonline.ro/articol_168/soc_cultural_in_japonia.html)
c. Prețurile (...) par greu de “înțeles” de către mulți dintre români.
prices-the seem hard *de* understand.Sup by many among Romanians
“The prices (...) seem to be difficult to understand for many Romanians”
(www.stiriauto.ro/articol/888/Romanii-se-orienteaza-catre-masini-din-import)

• A unified analysis

Based on the formal and syntactic resemblances between non-finite forms used in TCs and in modal reduced relatives, we can assume that the same structure underlies both. Then we can conclude that:

- Raising in TC in Romance can dispense with A-bar movement. A-movement suffices.
- TCs as well as modal reduced relatives are based on a passive-like inflection.

• Modal Inflection

We consider this inflection to be an inflection with modal properties, I_{Mod} , which normally combines with a Pred head in order to externalize the object, as passive morphology normally does in these languages. The only exception would be TCs, in which the *Tough* adjective directly selects I_{Mod} . Since the introductory element appears both in attributive/predicative

uses and in argument uses (in TC), we cannot take it to represent C or Pred, so we consider the whole complex $WRom. \hat{a}+Inf.$, Rom. *de*+Sup. to represent the Spell-Out of I_{Mod} .

We assume that I_{Mod} has a subspecified modal meaning. Either it is modal by itself – deontic necessity under Pred –, or it is selected by a modal, when selected by the *tough*-adjective. We assume that *tough*-predicates introduce modality, as shown in Addendum 2.

Moreover, in Romanian, under Pred with participial Negation (*ne*-), it expresses impossibility:

- (38) carte de necitit
book *de ne*-read.Sup
“unreadable book”

This analysis encounters some potential problems. One of them is that these structures use active morphology. The answer that we could suggest runs in the following terms. Historically, the origin of the construction is the nominal use of the infinitive. This is clear in Romanian and Latin, where the Supine form is also one of the Complex-Event-Nominalizations, and in Latin (where it can also build (simple and complex) event nominalizations). (Latin uses its ‘Supine’ in TCs but not in modal reduced relatives, for which it has a special participial form – *-nd-us*).

- (39) tunsul oilor de către păstori (Rom.)
sheep.the.Gpl. by shepherds
- (40) a. facile dictū (Latin)
easy say-*tu*-Abl. (*tu*=Sup)
b. (frequens) concursus omnium
frequent gather-*tu*-Nom. all.Gpl. (*tu*=Nominalizer: “ing”)
c. (...) a mulieribus, quas frequens partus debiles reddit (Serv., *Aen.* 5, 396)
from women which.Apl. frequent childbirth.Nsg. weak.Apl. makes

In Western Romance, the nominal use of the Infinitive is more sporadic, but still possible:

- (41) le manger
the eat.Inf

Since with event nominalizations, the object is not accusative-marked, but case-marked by some nominal functional material (getting genitive), we must conclude that v^* is lacking¹. So lack of v^* is not incompatible with infinitive morphology. We consider that the same lack of v^* is found with I_{Mod} . The difference is that case-marking does not come from a nominalizer (since I_{Mod} is not a nominalization), so it must obtain externally to the structure.

Another potential problem concerns object case-licensing in the Romanian supine. We saw that in Romanian the supine may also appear in the impersonal use of *tough*-adjectives, where we don’t expect a passive form (see 26 above).

¹ Active nominalizations do exist, cf. Borer (2007), Cornilescu (2001), contra Grimshaw (1990), but they still do not assign accusative in English and in Romanian. English allows two types of genitive in this case, whereas in Romanian these nominalizations are unergative. For these cases, we should assume an active v without the property of accusative case assignment.

However, the supine only marginally allows an object in the impersonal construction. DPs morphologically marked for Accusative are impossible (pronouns including clitics and PE-accusatives):

- (42) *E greu de convins pe deputați/ pe mine
is hard *de* convince.Sup Ac deputies/Ac me

Even DPs without an explicit Accusative marking are not always good; only weak DPs seem to be allowed:

- (43) a. E greu de trimis atâtea pachete prin poștă
is hard *de* send.Sup so-many packs by post
b. ??E greu de trimis aceste pachete prin poștă
is hard *de* send.Sup these packs by post

This could indicate that in Romanian there are two kinds of object case assignment: a strong Accusative and a weak one (for strong vs. weak Accusative, see Cornilescu & Dobrovie-Sorin (forth.)) and that in the supine construction strong Accusative case is not available.

Since weak DPs may also raise, we must assume that weak case assignment is always optional:

- (44) Atâtea pachete sunt greu de trimis
so-many packs are hard *de* send.Sup

Finally, another question that could be raised with respect to this analysis is the nature of raising found in attributive uses of TCs and in reduced relatives. The following section is devoted to this matter.

4.2. The trigger of raising and Case Marking. Raising Reduced Relatives

Given the present hypothesis, the ultimate trigger of raising in predicative TCs is T, which case-licenses the object assigning it Nominative. However, for attributive TCs, a different mechanism is needed. We assume raising reduced relatives.

Bhatt (1999) shows that the arguments which support raising relatives also apply to reduced relatives:

- (45) a. The headway made Idiom chunks
b. the twenty people likely to come for dinner Low reading of numerals

So, we propose that if a raising analysis can be assumed for full relatives, the same kind of analysis could very well apply to reduced relatives. More specifically, we follow Bhatt's (1999) idea that raising relatives are instances of projecting movement (an idea which has first been proposed for free relatives, by Iatridou, Anagnostopoulou and Izvorsky (published in 2001)). Let us make this idea precise.

Chomsky (2000, 2001) proposes a general labelling rule for the operation Set Merge, according to which the label of the object formed by Merge (α, β) is the label of whichever of the two selects the other. As he acknowledges, this is an assumption independent from the

other principles of the system. Chomsky suggests that building this rule into the computational system reduces computational burden. But we may also consider it a default rule, which can be overridden by a positive specification on the selector head which indicates that the label of the object formed by Merge will be the label of the selected item. The effect of reducing computational burden may be achieved by default rules too.

In minimalism, labels are not primitives, but are short-cuts for bundles of combinatorial properties. So, in $\{\alpha, \beta\} \rightarrow \gamma$, there are in fact more than two labelling possibilities:

- γ inherits properties of α
- γ inherits properties of β
- γ inherits properties of both

The inclusiveness condition prohibits γ from adding properties of its own.

Movement is an instance of selection-driven merge (Chomsky's Set-Merge). The remerged element has some feature X which verifies a feature of the head/selector H. According to Chomsky, this happens in two steps: first, X or the bearer of X is identified by Agree, checking an unvalued feature of H. Then, in case H has an additional EPP feature, the bearer of X is remerged to SpecH.

If selector-projecting is the default, we may assume that selectee-projecting is triggered by a special feature, let's say +proj, always associated to a selectional feature (in this case EPP, but it is conceptually possible that this feature may be c-selectional; perhaps, this could work for conjunctions, and even for adjuncts).

For raising relatives, the feature-complex $\{+N +EPP\}$ will have a +proj feature².

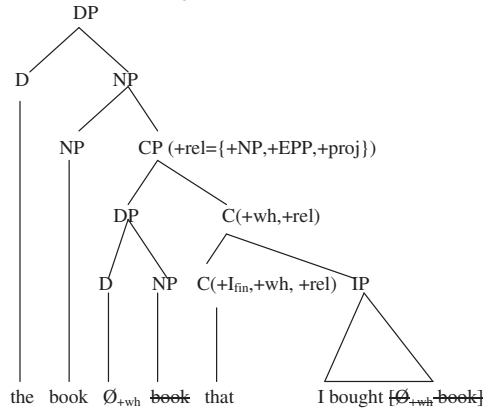
This analysis of relative clauses solves an important problem which the previous analyses, of which the most recent and full-fledged is Bianchi's (1999), raised, namely the fact that D is a nominal functional item, typically selecting (projections of the) N (it belongs to the extended projection of the N). Bianchi claimed that the NP in SpecCP sufficed to satisfy the categorial +N feature of D (adopting Kayne's (1994) proposal to extend government by head H to the specifier of the complement of H). But this proposal doesn't dispense us with having two selectional features on D. The feature +N is still not enough, because an item cannot simply select just the specifier of its complement. Otherwise, we would expect, for instance, that an IP having a DP as its specifier (the subject) could behave as a DP wrt. selection, which, of course, is not the case. Moreover, it predicts that the relative could be ambiguous, being able to be selected both as a +N and as a +C. But this is not the case either. [[NP][CRel...]-phrases are always nominal.

The structures we propose for full relatives, adapted from Bhatt 1999, are represented in the following trees:

² Chomsky (2005) proposes another labelling mechanism, based on two principles: (i) in $\{H, \alpha\}$, H an LI, H is the label, and (ii) if α is internally merged to β , forming $\{\alpha, \beta\}$ then the label of β is the label of $\{\alpha, \beta\}$. This system allows "projecting movement" only when the moved item is a head, in which case either item may project. Following Donati (2006), he takes free relatives to illustrate this situation.

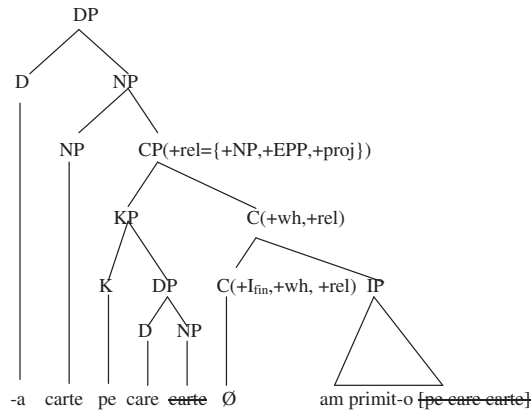
(a) With a relative complementizer:

(46) the book (that) I got



(b) With a relative pronoun:

(47) cartea pe care am primit-o
book-the Ac which I-have received-AcCl

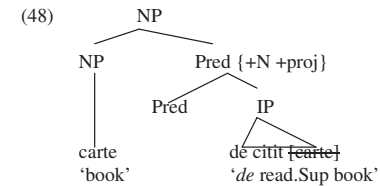


To account for the differences between full and reduced relatives, we propose the following analysis of reduced relatives:

The head responsible for raising is not $C_{+rel,+wh}$, but rather $Pred_{+rel}$. This $Pred_{+rel}$ head does not have a $+wh$ feature, so that it cannot attract a nominal with a special mark (namely $+wh$). It just looks for a $+N$, with the effect that the closest nominal will be attracted.

If we assume Chomsky's activeness condition, this closest nominal must lack case in order to be accessible to attraction. Since it does not have an unsatisfied $+wh$ feature to make it active, the only feature which could do this job for him is Case. This explains Bhatt's generalizations, that in reduced relatives relativization is strictly local, and it only affects "external" arguments – i.e. non-case-marked arguments.

Lack of case-marking of the relativized nominal explains the predicative use of reduced relatives, which is another feature distinguishing them from full relatives. In the predicative use, all we have to assume is a $Pred$ not endowed with $+rel+proj$. The un-case-marked argument raises (perhaps through the specifier of this $Pred$) in order to be case-marked by T or by another higher head in the sentence (e.g. v^* or $AgrO$ for ECM).



For the interpretation of an NP without a $+wh$ D, we may assume that Trace-Conversion creates the expression $\{the\ x.\ N(x)^{x=n}\}$, where n is λ -bound by the relativizer, anyway, regardless of the presence of a D. (See Fox 2003 for Trace Conversion)

Notice that a special Trace-Conversion rule is needed anyway. Traces cannot be interpreted either as generalized quantifiers or as bare NPs (predicates).

For attributive TCs, we assume a $Pred_{+rel}$ above the *tough*- adjective.

5. Agreement in TCs

Recall (12): in standard Romanian, the *tough*- adjective doesn't agree with the "subject" (or head-noun in attributive use), while in western Romance and regional varieties of Romanian: the *tough*- adjective does agree:

- (49)
- | | | | |
|----|---|-------------|------------|
| a. | Aceste ipoteze sunt greu/*grele | de acceptat | (Romanian) |
| | these hypotheses(fpl) are difficult.msg/difficult.fpl | to accept | |
| b. | Ces hypothèses sont faciles à admettre | | (French) |
| | these hypotheses(fpl) are difficult.fpl. to accept | | |
| c. | Queste ipotesi sono difficili da accettare | | (Italian) |

We propose that this difference comes from the selectional properties of the *tough*- adjective. We consider that predicative adjective agreement is realized in the configuration $SpecPred - Comp-Pred$. Agreeing *tough*- adjectives take the clause as an internal argument. Furthermore they project a $Pred$ (or a) endowed with an attracting feature. Raising adjectives are adjectives

combining with a Pred endowed with an attracting feature. So, we assume that SpecPred is a position which can also be filled by Movement, not only by Merge.

Non-agreeing *tough*- adjectives do not have two c-selectional patterns, one with an internal argument and one without. Their subject may be a DP, a full clause or a reduced clause. When it is a reduced clause (the supine) and there is an object in need for case-licensing, the object directly moves to SpecTP, triggering agreement with the copula but not with the adjective. It cannot pass through SpecPredP because this position is occupied by the IP (the clause to which it belongs).

We have to assume that a clausal 'subject' (SpecPred) is always linearized to the right.

- (50) a. E [_{PredP} [_{Pred} Pred [_{AP} greu]]] [_{Cpsă} susții această ipoteză]]
 is hard Subj hold.2sg this hypothesis
 b. Această ipoteză e [_{PredP} [_{Pred} Pred [_{AP} greu]]] [_{IP} de susținut această ipoteză]]
 this hypothesis is hard de hold.Sup

This may be viewed as an instance of a rightward placement rule of heavy constituents, which underlies many linearization phenomena across languages:

- (51) a. I often came to this conference
 b. I (*many times) came to this conference (many times)
 (52) a. I carefully did the job.
 b. I (*with care) did the job (with care)

Left-hand sentences are generally marked. So we may consider them to be in a peripheral position (SpecTop):

- (53) Să susții această ipoteză e greu
 Subj hold.2sg this hypothesis is hard

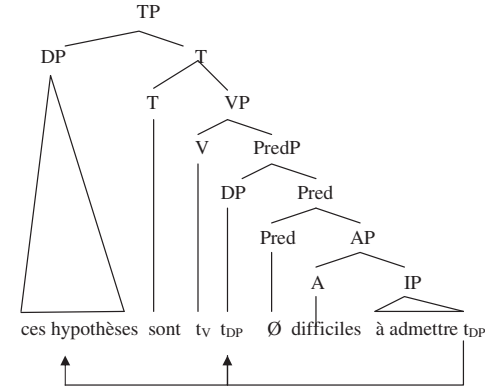
In the attributive use, the Pred_{+rel} takes as a complement the entire *tough*+IP construction, which is a PredP, finding the un-case-marked nominal inside the IP as the closest matching goal:

- (54) o [_{NP} [_{NP} ipoteză]] [_{Pred} Pred_{+rel} [_{PredP} [_{Pred} [_{AP} greu] Pred] [_{IP} de susținut ipoteză]]]
 a hypothesis difficult de hold.Sup

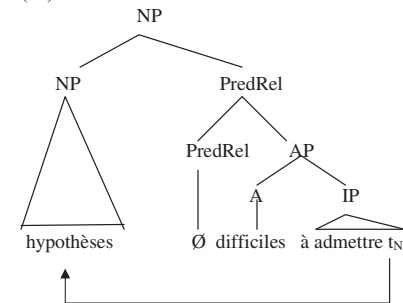
Here are the structures we propose for agreeing and non-agreeing *tough*- adjectives:

Agreeing *tough*-

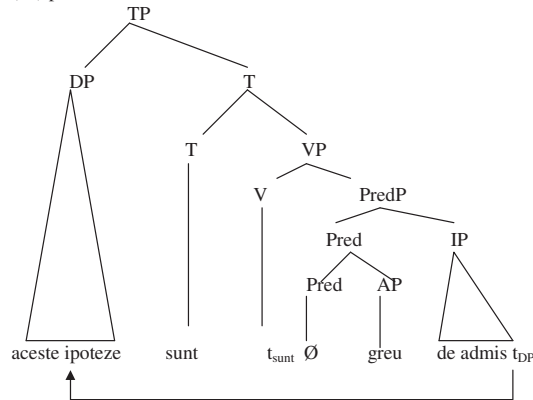
(55) Predicative :



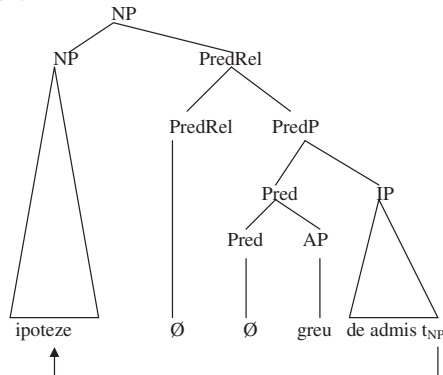
(56) Attributive :



Non-agreeing *tough*:
(57) predicative



(58) attributive



Addenda

1. Non-agreeing *tough*- adjectives are not “adverbs”:

If we call non-agreeing predicative adjectives (such as in (58)) “adverbs”, then, of course *tough*- adjectives are ‘adverbs’.

- (59) E imposibil să câștige
is impossible Subj wins

But it was proposed that they are ‘real adverbs’ inside the non-finite clause (IP here) (Soare 2002, Soare & Dobrovie-Sorin (2002)). However, this does not seem to be correct, as no *bona fide* adverb can ever appear before the *de* head which introduces the non-finite clause:

- (60) a. cărți greu de citit
books hard *de* read.Sup
b. *cărți bine/adesea de citit
books well/often *de* read.Sup
c. cărți de citit bine/adesea
books *de* read.Sup well/often

2. Tentative semantics for TCs

- *Tough* + Experiencer:

- (61) $[[\text{tough}]] = \lambda F_{\langle e, \langle w, t \rangle \rangle} \lambda x \lambda w \forall w' \in f_{\text{CIRC}}(w) ((w' \leq_{\text{stereotyp.}(w)} w) \wedge \exists e (\text{attempt}(e, x, F(x), w'))))$
 $\rightarrow \forall e ((\text{attempt}(e, x, F(x), w') \rightarrow \text{tough-for}(e, x, w'))))$
 $F = \lambda x \lambda w [\exists e (\text{read}(e)(y)(x)(w))]$

- Purely modal *Tough*:

- (62) $[[\text{tough}]] = \lambda F_{\langle e, \langle w, t \rangle \rangle} \lambda x \lambda w \text{FEW } w' \in f_{\text{CIRC}}(w) ((w' \leq_{\text{stereotyp.}(w)} w) \wedge \exists e (\text{attempt}(e, x, F(x), w')))) [F(x)(w')]$

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MODALITY AND MOOD IN ROMANCE

MODAL INTERPRETATION, MOOD SELECTION,
AND MOOD ALTERNATION

LA LINGUISTISCHE ARBEITEN



LA
SER

Martin G. Becker, Eva-Maria Remberger (Eds.)
MODALITY AND MOOD IN ROMANCE



This collective volume contains a selection of research contributions, presented at the 30th *Deutscher Romanistentag* [German Conference on Romance languages and literatures] in 2007 in Vienna in the section "Mood and Modality in Romance". The Romance languages studied here include Portuguese, Italian, Spanish, Romanian, Catalan and French. All contributions thematically explore the status and importance of modality and mood and their reciprocal relationships with reference to theoretical approaches.

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Modal interpretation, mood selection,
and mood alternation

Edited by
Martin G. Becker and Eva-Maria Remberger

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Ion Giurgea & Elena Soare

Modal non-finite relatives in Romance

1. Introduction

This paper investigates non-finite modal relatives in Romanian and two other Romance languages (French and Italian). These constructions, which express deontic necessity or teleological possibility (section 2) and are only object-gap constructions, will be argued to be *reduced relatives* in Bhatt's (1999) terms, i. e. *participials* unlike their English counterparts (section 3). After presenting a general analysis of reduced relatives (section 3.2), we will propose a syntactic analysis of the Romance modal participials (section 3.3). We will argue then that there are other environments in which this structure appears (section 4), in particular *Tough Constructions* (section 4.3).

2. Modal non-finite relatives in Romance: the forms and their meanings

2.1. The forms

Like English, Romance languages have modal non-finite relatives involving relativization of the object. They are built by an introductory element – French *à*, Italian *da* and Romanian *de* – (see section 3.3 for an analysis of this element) and a non-finite form, the infinitive in all Romance languages except Romanian, and the so-called ‘supine’ in Romanian:

- (1a) Cărțile de citit sînt pe masă. (Rom.)
books-the of read-SUP are on table
- (1b) Les livres à lire sont sur la table. (Fra.)
the books to read-INF are on the table
- (1c) I libri da leggere sono sul tavolo. (Ita.)
the books of read-INF are on-the table

The Romanian ‘supine’ is formally identical to the past participle, except in terms of agreement (it lacks agreement marks). It is usually preceded by *de*, and more rarely by the prepositions *la* ‘to’, *pentru* ‘for’. The same stem is used

as a base for a productive nominalization (the 'nominal supine'; see Soare 2002).

2.2. Meanings

Generally, modal non-finite relatives in Romance express deontic necessity (see the possible combination with adverbs such as *no matter what, at all costs*):

(2a) livres à lire à tout prix (Fra.)

(2b) cărți de citit neapărat (Rom.)
books to read at all costs

A less frequent reading is teleological potentiality (something that you can do if you want to achieve a certain goal). The goal is often unexpressed but we can always paraphrase these sentences with sentences containing an expressed goal (purpose clauses or conditionals + bouletic verbs). In the following example, "something to read" can be paraphrased as "something that you can read if you are in the mood for reading / if you want to have a good time":

(3a) Ai adus ceva de citit? (Rom.)
have-2.SG brought something to read

(3b) Tu as apporté quelque chose à lire? (Fra.)
you have-2.SG brought something to read
'Did you bring something to read?'

In the following Spanish example, the goal is overtly expressed in the parenthetical clause:

(4) Puede dar miedo pensar que los libros de leer – que se leen por el placer de leer libros – puedan utilizarse en la escuela para enseñar valores.
'It can be frightening to think that the books to read – the one that are read for the pleasure of reading books – can be used in school to teach values.'

We can also find teleological necessity and intermediate cases between teleological necessity and possibility, like in the English *be worth*.

Since the interpretation is either deontic or teleological, the highest role in the argument list of the verb is always an agent (obligations, permissions and goal-oriented modality only apply to *actions* – events which are controlled by a conscious being). Even if this role is not syntactically projected – see the next section, where we propose that these constructions are passive – it is semantically active, as in normal passives. The ungrammaticality of the examples in (5) is due to the fact that an agent is missing; this is particularly

clear in (5b); note that the corresponding construction with the supine is grammatical when the external argument bears an agent role.

(5a) *flori de ofilit (Rom.)
flowers to wither

(5b) ploaia spală mașina → *mașină de spălat (de către ploaie)
rain-the washes car-the car to wash by rain

The epistemic reading is unavailable, as expected in a non-finite structure. Ability and stereotypical readings are also not found.

If negation is present, in French it scopes under the deontic necessity:

(6) C'est une chose à ne pas dire à tout le monde.
this is a thing to not tell to all the people
'This is something not to tell to everybody.'

The teleological possibility reading is blocked with negation.

In Romanian, the use of negation (which has the form of participial negation, see the next section) triggers a change of meaning: the construction expresses inability / circumstantial impossibility:

(7) carte de necitit
book *de ne-read-sup*
'unreadable book'

Marginally, it expresses deontic necessity over negation:

(8) lucru de nemărturisit
thing to un-confess-SUP
'undisclosable thing'

In spite of the special meaning, the condition of the existence of an Agent role is observed:

(9) *floare de neoflit
flower to un-wilt-SUP

In sum, the type of modality found in these constructions involves an agent and has a circumstantial modal base.

3. Syntactic analysis

3.1. Romance modal non-finite relatives are reduced relatives (i. e. participials)

Unlike their English counterparts, it can be shown that Romance modal non-finite relatives are *reduced relatives* according to Bhatt's (1999) criteria: (i) they can appear in postcopular position (cf., for this criterion, Embick 1997, Iatridou et al. 1999) (see (10)) and (ii) relativization is strictly local (see (11)):

(10a) Ces livres sont à lire jusqu'à mardi. (Fra.)
these books are to read until Tuesday

(10b) Questi libri sono da leggere fino a martedì. (Ita.)

(10c) Aceste cărți sunt de citit până marți. (Rom.)

(10d) *These books are to read until Tuesday. (Eng.)

(11a) *un livre à dire à tes enfants de lire (Fra.)
a book to tell to your children to read

(11b) *o carte de zis copiilor să citească (Rom.)
a book of tell-SUP children-the.DAT SUBJ read.3.PL

(11c) a book to tell your children to read (Eng.)

On the other hand, infinitival relatives involving relativization of the subject, which in English do qualify as reduced structures (see (12): (12b) shows the predicative use, (12c) the strict locality condition), are restricted in Romance (see (13)); in some languages they are absent (Romanian), in others, they are probably subcategorized by ordinals, superlatives and *only*, and are not modal (see French, ex. 14):¹

(12a) a man to fix the sink

(12b) The wine is to complement the cheese.

(Bhatt 1999: 11, Bsp. 7)

(12c) *the boy [Op_i [it would be fun [t_i to dance]]]

(Bhatt 1999: 10, Bsp. 6c)

(13a) *un homme à réparer l'évier (Fra.)
a man to fix the sink

(13b) *un om de reparat chiuveta (Rom.)
a man of fix-SUP sink-the

¹ Note that in this case the past infinitive is allowed (see (14a, 14c), which is impossible in modal infinitival relatives. Since this type of infinitival is not modal, it falls outside the scope of this paper.

(14a) le premier homme à avoir résolu ce problème (Fra.)
the first man to have solved this problem

(14b) la seule personne à porter ce genre de robe à cette soirée
the only person to wear this kind of dress at this party

(14c) le plus jeune pianiste à avoir interprété ce concert
the most young pianist to have performed this concert

A further difference is that the periphrastic passive is not allowed in Romance, as opposed to English:

(15a) a book to be read

(15b) *un livre à être lu (Fra.)
a book to be read

Note that according to the distributional properties that define it, the term *reduced relative* is equivalent to the term *participial* (reduced relatives thus defined have the distribution and interpretation of participles). Romance reduced relatives differ morphologically from what is traditionally called a "participle" (in languages with adjectival agreement) by the fact that they do not show agreement. However, we consider the term "participial" to be more appropriate than the term "reduced relative" because relatives are normally inside a nominal projection – or constitute one, in the case of free relatives –, while reduced relatives may appear predicatively, as we have seen. In the following, no distinction is made between the two terms.

3.2. The structure of reduced relatives

Bhatt (1999) proposes the generalization that reduced relatives are only based on the relativization of the *external* argument. Since we have seen that Romance modal non-finite relatives are reduced relatives based on the relativization of the object, we propose a reformulation of Bhatt's generalization in terms of case marking:

(16) Reduced relatives involve "relativization" of the non-case-marked argument

Another instance of reduced relatives based on an internal argument which is not case marked is passive participles:

(17a) the cake [made by John]

(17b) The cake was [made by John].

Modulo this reformulation, we will adopt the core of Bhatt's analysis of reduced relatives, whose central assumptions are: (i) the relativized position is not case-marked; (ii) relatives are internally headed (the NP raises from the reduced relatives to its surface position); (iii) reduced relatives do not contain a C (contra Kayne 1994). The lack of C is meant to account for the fact that the relativization chain is not an A-bar chain (since the base position is not case-marked), as opposed to full relatives. Bhatt only concentrates on the attributive use, and considers that the base position is not case marked because it is occupied by an NP (the "pivot" of the relative) and NPs, contrary to DPs, do not need case. We would like to propose instead a unified analysis of predicative and attributive reduced relatives. Note that some of the arguments which Bhatt provides in favour of movement for attributive reduced relatives also hold for the predicative use (see idiom chunks in (18)):

(18a) the headway made

(18b) What headway has been made!

So, for the predicative use, we propose that the subject DP raises from the object position in order to be case-marked. Then it seems reasonable to assume that the same motivation determines the movement of the pivot in the attributive structure. We may thus explain how this movement is possible without a +wh C: while in the case of full relatives the pivot has a +wh or +rel determiner which makes it an active goal for the attractive property of the C probe², in reduced relatives, since there is no +wh determiner, what makes the pivot active is an unvalued Case. As for the Probe, we may assume that it simply has a +N feature. For the predicative use, the object probably first raises to SpecPred (if predicative constructions are defined by the presence of a Pred head, see Bowers 1993), from where it can further raise to SpecTP in order to be case-marked or receive case from outside in ECM constructions³. This can be illustrated by the following bracketing structures, where (19a)

² In minimalist terms, dependencies like Move and Agree are encoded in terms of relations between an element which has an unvalued feature, called a *probe*, and an element in the c-command domain of the probe on which that feature is valued, called a *goal*; the goal must also have an unvalued feature which has a valued counterpart on the probe, in which case it is said to be *active*. See Chomsky (1995, 2000).

³ ECM (i. e. Exceptional Case Marking) constructions are constructions traditionally labelled as Accusative-Infinitive constructions. For instance, in English, the verb *consider* may take an infinitival complement with an accusative subject, like in *I consider him to be the best*. In the classical Government & Binding literature, it is assumed that the subject of the infinitive exceptionally receives accusative case from the main verb, hence the name of the construction (cf. Chomsky 1981).

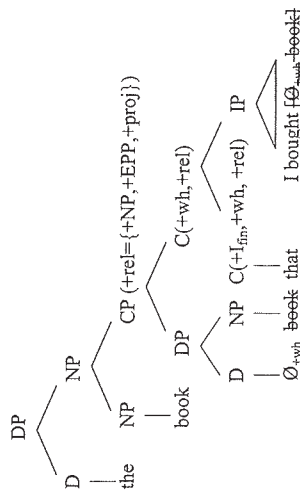
represents the copular predicative construction, and (19b) the ECM construction:

(19a) [DP_i T [V_{cop} [_{Prep} t_i Pred [_{VP/Asp} .. v [V t_i]]]]
 [t_i [_{the book}] [_{was}] [_{VP/Asp} Pred [_{VP/Asp} sold [_{the book}]]]]]

(19b) [v .. [_{Prep} DP_i Pred [_{VP/Asp} .. v [V t_i]]]]
 [_v make [_{Prep} [_{the book}] [Pred [_{VP/Asp} sold [_{the book}]]]]]

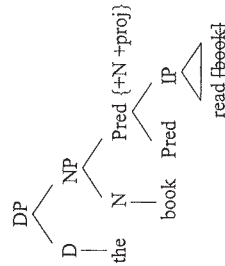
For the attributive structure, we adopt Bhatt's view that the movement involved is linked to the transformation of the clausal projection into a nominal one. This transformation characterizes not only reduced relatives, but also full relatives. The main idea is that the projection obtained after the raising of the pivot becomes nominal before combining with the determiner. Bhatt proposed two implementations of this idea (the first in Bhatt 1999, the second in Bhatt 2002), which try to solve a drawback of the standard analysis of raising relatives, whose most recent and full-fledged variant can be found in Bianchi (1999). The problem which Bhatt addresses concerns the selectional properties of D: in the standard analysis, one must assume that D, as well as other functional nominal items merged above relatives, does not always select for a +N projection, but may sometimes select for a CP. Bhatt solves this problem by considering that raising relatives become, during the derivation, nominal projections. In the 1999 analysis, he uses the idea of 'projecting movement', initially proposed by Iatridou, Anagnostopoulou and Izvorski in various drafts of their 2001 paper for free relatives. The idea is that raising relatives instantiate a structure whereby a selected item, the NP outer specifier of the relative C, gives its label to the object formed by its merger with the CP. This analysis is represented, for full relatives, in the tree below, where we introduced a feature +proj [projecting] signalling label inheritance from the specifier, for the second specifier of the relative C:

(20) the book (that) I bought



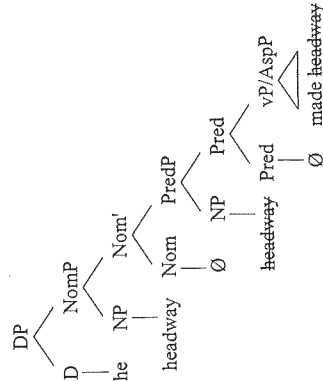
For reduced relatives, we may assume that the +proj feature is borne by a Pred head. As we said, the pivot in this case is made eligible for raising not by virtue of a +wh feature, as classically assumed in the literature on relatives, but by virtue of having unvalued case (not being case-marked). After raising, it will be in a position where it will be able to inherit case from the determiner merged above it (roughly the same proposal concerning case is made in Kayne 1994 and Bianchi 1999):

(21) the book read



In his 2002 paper, Bhatt replaces projecting movement, which is not a standard device in the current minimalist syntax (although the possibility is recognized by Chomsky 2005), with a nominalizer head. Instead of having an outer specifier in (20), we would have a Nom head selecting a +wh CP, attracting an NP in its specifier and marking the projection as nominal. Bhatt does not develop this analysis for reduced relatives, but we may assume that the Nom head selects a PredP in their case, as shown below:

(22) the headway made



We will not decide here between these two analyses, which are largely equivalent. What is important is that a raising analysis for reduced relatives is feasible. This analysis directly accounts for the fact that the relativized position is not case-marked. As for the strict locality, it is arguably due to the same fact: the Pred head cannot probe until it finds a +wh element; since it only has a +N feature it will be sensitive to the closest element +N. If this element is not active (being, for instance, case marked), an intervention effect will arise.

3.3. The structural analysis of Romance modal reduced relatives (participials)

Having established that Romance modal non-finite relatives are reduced relatives and that in reduced relatives the relativized position is not case-marked, it follows that Romance modal non-finite relatives (“modal participials”), which, as we have seen, always involve relativization of the object, are passive. This immediately accounts for the fact that they do not allow a form infinitive *be* + past participle (see (15b) above): since they are already passive, they cannot undergo further passivization.

This idea is problematic given the fact that modal non-finite relatives do not have explicit passive morphology: the infinitive used in French and Italian as well as the Romanian “supine” are active in other contexts. However, the passive analysis is supported by the possibility of using agentive PPs in French and (at least for some speakers) in Romanian:

(23a) livre à lire par tous (Fra.)
 book to read by all
 ‘a book everybody should/must read’

(23b) Sunt multe lucruri de rezolvat de către ministerul Agriculturii. (Rom.)

are many things *de* solve-SUP by ministry-the agriculture-the.GEN

'There are many things to be solved by the Ministry of Agriculture.'

(www.amosnews.ro/PrintArticle201911.phtml [02/09/2009])

There is another context, in French, where infinitival morphology is associated with passive properties: the causative *faire* + Inf. constructions, in which either the subject or the object receive accusative, but never both, suggesting that this case is assigned by *faire*. Moreover, in the *faire par*-construction, the subject is realized as a PP-agent, like in (standard) passives⁴:

(24a) J'ai fait manger Marie.

I have done eat-INF Marie

(24b) J'ai fait manger la pomme *(à/par) Marie.

I have done eat-INF the apple (to/by) Marie

This shows that infinitival inflection is not incompatible with a passive *v* (the infinitival in (24)), as in other restructuring construction, presumably represents a mere *VP*.

So far we have established that modal participials contain a passive *v*, at the bottom, and do not have a *C*, but merge with a *Pred* head, at the top. Other facts will help us to establish what other functional projections they contain (between *Pred* and *v*).

In French and Italian, clitics and sentential negation may appear before the infinitive. In Romanian, the supine inflection does not allow either clitics or sentential negation – see (26) – while the infinitive, which is not used in modal participials, allows for both, except in the one restructuring context, with a *putea* 'can' – see (27):

(25a) une chose à lui transmettre à tout prix (Fra.)
a thing to him.DAT communicate at all costs

(25b) una cosa da trasmettergli (Ita.)
a thing to communicate-him.DAT

(25c) une chose à ne pas avouer (Fra.)
a thing to not confess

⁴ See Kayne (1975), Rouveret & Vergnaud (1980) for the similarities between passive and causative structures. Some researchers assume that causatives are bi-clausal structures (like for instance Guasti 1996); more recently, Homer et al. (2009) argue that they are actually monoclausal. An analysis of infinitives in causative structures, though, falls outside the scope of this paper.

(25d) una cosa da non ammettere (Ita.)
a thing to not admit

(26a) *lucru de-i spus (Rom.)
thing of him.DAT tell-SUP

(26b) *lucru de nu spus (Rom.)
thing of not say-SUP

(27a) înainte de a-i spune
before of to-him.DAT do-INF

(27b) pentru a nu rata
for to not fail

(27c) N-am cu cine îl lăsa
not-have.1 with whom him.ACC leave

The Romanian supine only allows the prefixal negation *ne-*, also found with past participles. As we have shown in 2.2, the meaning also changes when this negation is used: it may be circumstantial, not only deontic (compare (7) and (8) above).⁵

(28a) lucru neînțeles
thing un-understood

(28b) lucru de neînțeles
thing of un-understand-SUP

We consider that the possibility of having clitics and sentential negation is indicative of a Tense (or I) head. So, French and Italian modal participials have a non-finite Tense, while Romanian does not.

A further problem concerns the status of the introductory element – Fra. *à*, Italian *da*, Spanish *de*, Romanian *de*. This element cannot be *C*, given the assumption that reduced relatives in general do not contain a *C*. Could it be the realization of the *Pred* head? We will present arguments against this view in the next section: there, we will show that the structure we are examining, which we called a "modal participial", is also found in Tough Constructions.⁶

⁵ The use of the negative form is not equally acceptable with all verbs, which seems to indicate that the construction is at least partially lexicalized:

(1) ? *intâmplare de nepovestit*

incident of un-report-SUP

⁶ The 'Tough Construction' is a construction in which an adjective which otherwise may take a clause as its single argument, takes as a complement a non-finite clause containing a gap and has a subject which is interpreted as the filler of this gap: e. g. *it is easy to please John* (the impersonal use) vs. *John is easy to please* (the

However, there it does not combine with a Pred head, but is selected by the *tough/-adjective*. Since the introductory element is also present in that environment, it cannot be Pred:

- (29) *livre difficile à lire* (Fra.)
book difficult to read

Should we consider it a part of the inflection, realizing a modal inflection, perhaps in a scattered form (*à/de ...-er*, where *-er* is the infinitival inflection)? This does not seem acceptable either because of the position of negation and clitics: in Romance the negation normally appears before I, while clitics either appear before I or after a suffixal I (like in Italian gerunds and infinitivals). But in this case, clitics appear between the introductory element and the infinitival in French and Romanian, and the negation appears between the introductory element and the infinitival in all three languages. This behavior recalls that of the so-called Romanian “mood particles”, subjunctive *să* and infinitival *a*: they too precede clitics and negation; moreover, subjunctive *să* can co-occur with a complementizer, which shows that it is not (always) a C:

- (30a) *Vreau ca Ion să-i vorbească.*
want-1.SG that Ion *să* him/her.DAT talk-SUBJ.3.SG
‘I want Ion to talk to him/her.’

- (30b) *să nu veniți*
să not come-2.PL

- (30c) *a nu-l asculta*
to not him.ACC listen-INF

Several authors proposed that these particles realize a functional head Mood which is placed above Tense (Rivero 1987 and Terzi 1993 for *să*, Avram 1999 for *să* and *a*). Adopting this proposal for the introductory elements of modal participials has the advantage of explaining their modal properties, in addition to the distributional similarities we have just shown. For Romanian, we assume that *de* is also a Mood head (which accounts for the modal meaning) but does not select a TP. Since the supine does not have any aspectual oppositions, we may assume that Mood directly selects a VP.

‘Tough Construction’). An influential line of research, which we adopt here, has analyzed this construction as relying on movement (see Rosenbaum 1967, Postal 1971, Berman 1973, Bayer 1990, Sportiche 2002, 2006, Hicks 2004, Giurgea & Soare 2006).

To conclude, we propose the following structures for modal participials:

- (31a) (Pred) [Mood [Tense(non-finite) [v (pass.) ..]]] (Fra. & Ita.)
à lire

- (31b) (Pred) [Mood [v (pass.) ..]]] (Rom.)
de citit

The idea that Romance modal participials are based on a passive v faces several possible objections, which will now be addressed. First, why don't these forms show agreement, as passive (past) participles do in these languages (cf. (32) and (33))? Note that agreement in passive modal participles is found in some languages, for instance in Latin (cf. (34)).

- (32a) *cărți de citit(*e)* (Rom.)
books to read(-AGR)

- (32b) *cărți citite*
books read-AGR

- (33a) *livres à lire* (Fra.)
books to read-INF

- (33b) *livres lus*
books read-AGR

- (34) *libri legendi* (Lat.)
books-NOM.PL read-MODPART.MASC.NOM.PL

We take the lack of agreement to be an indicator that the functional structure of the two participles is not identical, overt agreement characterizing a head which is not found in modal participials – perhaps an Asp head (past participles do not qualify as IPs according to our criteria, since they do not allow clitics). The lack of agreement in modal participials is a morphological peculiarity which has a historical explanation (modal participials originate from preposition + nominalized infinitive structures of the type “books for reading”).

A more important problem is the absence of modal participials with unaccusatives: it is known that past participles in Romance may also be built on unaccusatives. Why then modal participles cannot do so?

- (35a) *om căzut* (Rom.)
man fallen

- (35b) **om de căzut*
man of fall-SUP

(35'a) *personne tombée* (Fra.)
person fallen

(35'b) **personne à tomber*
person to fall

This situation suggests that modal participials always have an unexpressed agent, necessarily distinct from the object, to which the deontic modality refers. We have shown in 2.2 that modal participials always presuppose the existence of an agent. We may assume then that the semantic entry of Mood refers to the implicit agentive argument of passives. Unaccusatives lack this argument role; their only argument is a deep object. Therefore they do not provide the argument required by the modal head.

But there are some data which suggest that the agent may be syntactically projected (even if it is null). Modal participials allow some secondary predicates referring to the agent, such as 'only', unlike passive past participles:

(36a) *problema de rezolvat singur* (Rom.)
problem of solve-SUP alone

(36b) *problème à résoudre seul* (Fra.)

(36c) *problema da risolvere da soli* (Ita.)
problem to solve *da* alone-M.PL

(37a) **Problemele au fost rezolvate singur*. (Rom.)
problems-the have been solved alone

(37b) **Les problèmes ont été résolus seul*. (Fra.)

(37c) **I problemi sono stati risolti da soli*. (Ita.)

This construction indicates the existence of a PRO agent. But passive verbal forms do not allow this kind of subject, as shown in (37). We claim that what introduces an agent PRO is not the lexical verb itself, but the Mood head. It has long been observed that the subject of deontics receives a theta-role from the deontic and controls the subject of its verbal complement (see Ross 1967, Zubizarreta 1982, Roberts 1985, Hacquard 2006, Avram 1999): the obligation, permission or teleological modality expressed by the deontic is attributed to an agent. To conclude, we propose the following structures (where (38a) is illustrated by examples (33a), (36b, c) and (38b) by examples (32a) and (36a)):

(38a) (Pred) [_{Mood} PRO [_{Mood} [Tense(non-finite) [v (pass.) . .]]]] (Fra. & Ita.)
[_{Mood} PRO [_{Mood} à [T lire [_{VP} t_v t_{inf}]]]]

(38b) (Pred) [_{Mood} PRO [_{Mood} [v (pass.) . .]]] (Rom.)
[_{Mood} PRO [_{Mood} de [_{VP} citit t_{inf}]]]]

This analysis helps us to solve a third problem, which has not yet been mentioned: the fact that structures with an overt PP agent, as in (23), are not at all common: in Romanian in particular, the presence of a PP agent is marginal for some speakers. The structures in (38) offer a straightforward explanation for this vacillation: for some speakers PRO is always projected, for others not. If PRO is projected, a PP agent cannot appear because it will violate the principle C⁷:

(39) **lucruri* [_{Mood} PRO]_i de [_{VP} de către elevi]_j
things of do-SUP by pupils

Further evidence for the possibility of a modal element introducing an argument is offered by the deontic necessity construction of Latin and other Indo-European languages, where the deontic participle is clearly passive, since it agrees with the object, but the agent may also be expressed as a dative:

(40a) *Mihi est liber legendus*.
me.DAT is book(MASC)-NOM read-MODPART.MASC.SG.NOM
'I have to read a book.'

(40b) *liber mihi legendus*
book(MASC)-NOM me.DAT read-MODPART.MASC.SG.NOM
'a book I should read'

The form of the agent cannot be explained by a passive v, because passive v is not associated with a dative agent, but to a PP agent introduced by *ab*:

(41) *Liber a me legitur*.
book from me read-PRES.3.SG.PASS
'The book is read by me.'

So it must be the element which introduces modality that assigns the agent dative case. Moreover, the agent could not have originated inside the passive vP and be case-marked via raising to SpecMood, because passive vPs do not project a non-case-marked agent⁸. The agent is either introduced by a PP or is

⁷ Principle C of the Binding Theory states that a 'referential expression' (a full nominal expression, as opposed to personal and reflexive pronouns) cannot be bound (i. e., cannot be co-indexed with a c-commanding nominal expression). In (39), PRO would bind *elevi* and violate this principle. See for instance Chomsky (1981) for an overview of the Binding Theory, a module of the grammar which accounts for the referential relations between nominal expressions (anaphors, pronouns and referential expressions).

⁸ If the agent had originated as a non-case-marked argument in the passive vP, it would have been case-marked by T in contexts in which this low deontic Mood was not present, because it is closer to T than the object. But in passives it is the object

absent from the syntactic representation (see (37) as an argument against the presence of a null PRO in passives). We must conclude then that in Latin the modal head present in modal passive participles comes with an argument position for the agent, to which it assigns dative case.

The difference between Romance and Latin is that Romance deontic Mood has lost the ability to case-mark the agent. Therefore only (arbitrary) PRO is allowed.

4. Other occurrences of modal participials

4.1. Romanian copular construction based on the impersonal passive

In Romanian, intransitive verbs may appear in the supine (preceded by *de*) following the copula, with a deontic necessity meaning:

- (42) E de vorbit cu profesorul.
is of talk-SUP with professor-the
'We/one should talk to the professor.'

As we have already mentioned, the Romanian verbal supine appears in other environments than the modal participial (for instance, it can be active). However, the supine in (42) has several properties which support the idea that it represents a modal participial: the modal meaning (deontic necessity), the fact that it combines with the copula and the fact that objects are not allowed

which is case-marked by T, thus becoming the subject. This argument is based on the following standard assumptions in the current generative analyses of argument realization alternations: (i) the object originates in the same position in active and passive constructions, but in passives there is no accusative assignment (see Baker 1988, Chomsky 1981, Grimshaw 1990), (ii) a case assigner assigns case to the closest non-case-marked nominal in its c-command domain (where for Y, Z c-commanded by X, Y is closer to X than Z if Y asymmetrically c-commands Z) (see Chomsky 1995), (iii) nominative case is assigned by T (see Chomsky 1981, 1995). Since Chomsky (1995), the source of accusative case is considered to be a functional head *v* immediately above V, which may be identified with the category of Voice: when *v* is active, it assigns accusative and takes an external argument which is not case-marked and will become the subject; in passives, either *v* is absent or it lacks the accusative assignment property and introduces the agent as an optional PP. Object-to-subject raising is also found in unaccusatives, but in their case there is no agent in the argument structure of the verb, so the object is the only candidate for case-marking by T.

(see Avram 1999). Compare (43a) to (43b), where we see a verbal supine selected by a verb (the verb *a se apuca* 'to start'). In (43b) *de* probably represents a preposition, as shown by the fact that this verb may also be followed by *de* + DP (see 43c). Note that in this case an object may appear:

- (43a) *E de spălat geamurile.
is of wash-SUP panes-the
(43b) M-am apucat [de spălat geamurile].
me.ACC have-1.SG seized of wash-SUP panes-the
'I started washing the (window) panes.'
(43c) M-am apucat de treabă.
me.ACC have-1.SG seized of work
'I started the work / I set to work.'

If (42) is an instance of a modal participial, what is its object? We propose that it is a null cognate object. The existence of a null cognate object has been proposed by Dobrovie-Sorin (1998) for Romanian impersonal reflexive unergatives, exemplified in (44) below. Having established that Romanian does not have a nominative *se* like Italian and Spanish, Dobrovie-Sorin analyzes Romanian intransitive impersonal reflexives as impersonal reflexive passives based on the passivization of a cognate object:

- (44) Se vorbește cu profesorul.
REFL talks with teacher-the
'People talk to the teacher / Somebody talks to the teacher.'
Ø_i se vorbește t_i

4.2. Small clause in the complement position of *have*

In the complement position of *have*, a Small Clause based on the modal participial may appear in an ECM configuration.

- (45a) Am multe lucruri de făcut. (Rom.)
have-1.SG many things of do-SUP
I have many of things to do
(45b) J'ai beaucoup de choses à faire. (Fra.)
have-1.SG many things to do
'I have many things to do.'

The interpretation shows that we do not have to deal with an attributive modal participle: (45) does not imply a possession relation between the subject of *have* and the object of the participle. So we assign it the following structure:

(46) [_{NP} am... [_{PREP} multe lucruri] [_{Pred} [_{Modop} de [_{VP} făcut [_{DP} multe-~~te~~##]]]]]]

This construction only expresses deontic necessity (cf. also (47a)): if in the construction *have* + *DP* + *modal participle* the participle expresses teleological possibility, the interpretation shows that we are dealing with the possessive *have* (there is a possession relation between the subject of *have* and the object of the participle, cf. (47b)) and the modal is simply attributive (it is part of the DP):

(47a) am o carte de citit (deontic necessity) → am o carte

(47b) am o carte de citit (teleological potentiality) → am o carte
'I have a book to read.'

4.3. *Tough*-constructions

The non-finite complement in Romance *Tough* Constructions [TCs] is arguably also a modal participial.

Tough-adjectives⁹ are characterized by the alternation pattern exemplified in (48).

(48a) Il est difficile de lire ces livres.
it is hard to read those books.

(48b) Ces livres sont difficiles à lire.
these books are hard to read.

(48c) des livres difficiles à lire
books hard to read

In TCs, the external argument (subject/head noun) of the *tough*-adjective is interpreted as the object of the embedded infinitival. The infinitival appears to be the complement of the *tough*-adjective and the entire constructions *Tough* + Infinitival functions as an attribute or a predicate. However, there are several similarities between the verbal complement in TCs and modal non-finite relatives which led to the proposal that they both represent the same verbal structure (see Kayne 1972, Sportiche 2002, 2006, Soare 2002, Soare & Dobrovie-Sorin 2002, Giurgea & Soare 2006): (i) The non-finite form

⁹ In French, a list of these adjectives is provided by Léger (2006): *aisé, difficile, dur, évident (il est pas...), facile, impossible, malaisé, pénible, simple*.

in TC is the same as that used in modal reduced relatives (as noted for French by Kayne 1972):

(49a) Ces livres sont difficiles à lire. (Fra.)
these books are hard to read-INF

(49) livres à lire
books to read-INF

(50a) Questi libri sono difficili da leggere. (Ita.)
these books are hard to read-INF

(50b) libri da leggere
books to read-INF

(51a) Aceste cărți sunt greu de citit. (Rom.)
these books are hard to read-SUP

(51b) cărți de citit
books to read-SUP

Note that this form is often different from the form used in clausal complements of evaluative control adjectives of the type *clever, kind* (which do case-license the object) (in French and Italian, the introductory element is different – French *de* vs. *à*, cf. (52), Italian *di* vs. *da*, cf. (53); in Romanian, the form itself is different – supine in TC and modal relatives, cf. (54b), vs. subjunctive in control clauses, cf. (54a)):

(52a) Vous avez été gentil de le faire. (Fra.)
you have been kind to do-INF

(52b) Cela est difficile à faire.
this is difficult to do-INF

(53a) Lei è gentile di averlo fatto. (Ita.)
you are kind to have-INF-it done

(53b) Questo è difficile da fare.
this is hard to do-INF

(54a) Ați fost amabil să o faceți. (Rom.)
you-have been kind SUBJ it do-2.PL

(54b) Asta e greu de făcut.
this is hard to do-SUP

In French and Italian, in the impersonal use of *tough*-adjectives (cf. (55a)), the clausal complement has the same form as with control adjectives (cf. (56a)), a form that is different from the one used in TCs (cf. (55b)).¹⁰

(55a) Il est difficile de soutenir cette analyse. (Fra.)
it is difficult *de* defend-INF this analysis

(55b) Cette analyse est difficile à soutenir.
this analysis is difficult *à* defend-INF

(56) Il a été gentil de soutenir cette analyse.
he has been kind *de* defend-INF this analysis

(ii) The gap in the non-finite clause only corresponds to the object:

(57a) ces livres / *ces personnes sont difficiles à lire (Fra.)
questi libri / *queste persone sono difficili da leggere (Ita.)
aceste cărți / *aceste persoane sînt greu de citit (Rom.)
these books / these persons are hard to read

(57b) des livres / *des personnes à lire (Fra.)
libri / *persone da leggere (Ita.)
cărți / *persoane de citit (Rom.)
books / persons to read

(iii) No periphrastic passive is allowed:

(58a) *un livre difficile à être lu (Fra.)
*un libro difficile da essere letto (Ita.)
*o carte greu de a fi citită (Rom.)
a book difficult to be read

(58b) *un livre à être lu (Fra.)
*un libro da essere letto (Ita.)
*o carte de a fi citită (Rom.)
a book to be read

(iv) The dependency is strictly local in Romance, while in English it is unbounded:

(59a) ??un livre difficile à convaincre tes enfants de lire sans mémoriser (Fra.)
a book difficult to convince your children to read without memorize

¹⁰ In Romanian, both the subjunctive and the supine may be used:

- (i) a. e greu să răspundem la aceste întrebări
is hard SUBJ answer-1.PL to these questions
b. e greu de răspuns la aceste întrebări
is hard de answer-SUP to these questions

(59b) *o carte greu de convins pe elevi să (o) citească fără a reține (Rom.)
a book difficult to convince OBJ pupils SUBJ it read without memorize

(59c) a book hard to convince your children to read without memorize (Eng.)

(v) In Romanian, agent PPs are allowed for some speakers (cf. (23)):

(60a) Japonia este greu de înțeles de către cineva care nu locuiește acolo.
Japan is hard *de* understand-SUP by somebody who not lives there
'Japan is difficult to understand for somebody who doesn't live there.'
(www.businessmagazin.ro/arta-si-societate/lifestyle/soc-cultural-injaponia4073249 [02/09/2009])

(60b) Prețurile [...] par greu de "înțeles" de către mulți dintre români.
prices-the seem hard *de* understand-SUP by many among Romanians.
'The prices [...] seem to be difficult to understand for many Romanians.'
(www.stiriuato.ro/articol/888/Romanii-se-orientateaza-catre-masini-din-import [02/09/2009])

In order to explain the similarities observed between modal participials and the non-finite complement in TCs, we assume that TCs contain the same structure as modal participials, except for the Pred head which in their case appears above the *tough*-adjective.¹¹ We adopt a raising analysis for TCs (for various arguments in favour of a raising analysis of TCs, see Berman 1973, Ruwet 1991, Goh 2000, Sportiche 2002, 2006, Hicks 2004; for arguments specific to the Romance family, see Giurgea & Soare 2006).

(61a) [_{FP}DP [Pred [_{AP} *tough* [Mood [T(non-fin.) [V_{pass} ..t_{DP}..]]]]]] (Fra. & Ita.)
livres difficiles à lire
'books tough to read'

(61b) [_{PredDP} DP [Pred [_{AP} *tough* [Mood [V_{pass} ..t_{DP}..]]]] (Rom.)
cărți greu de citit
'books tough to read'

The main problem with this analysis is the meaning: with *tough*-adjectives the Mood head does not have the modal meaning found in modal participles. We believe however that even in this case there is a link between this head and modality: even if it does not introduce modality itself, it is selected by an element having a modal meaning, namely the *tough*-adjective. The *tough*-adjective introduces quantification over possible worlds. There are two

¹¹ Both the participial relative and the adjective-and-infinitive construction (i. e., the TC) are predicative (PredP), but obviously they have different structures. In TCs, the whole construction adjective + non-finite clause appears in PredP positions (i. e. after the copula and adnominally), so we must assume that the Pred head is inserted above the *tough*-adjective.

readings: a psychological one, in which an action is experienced as being difficult, and a purely modal one, stating that the worlds in which the action takes place are few. In the first reading (the psychological one), 'tough' takes an experienter, and states that in all the possible worlds (with a circumstantial modal base and a stereotypical accessibility relation) where the experienter attempts to do a certain action, this action will be felt to be difficult by him:

- (62) $[[\text{tough}]]=\lambda F_{\langle e, x, s, w \rangle} \lambda x \lambda w \forall w' \in \mathcal{I}_{\text{CIRC}}(w) ((w \leq_{\text{stereotyp}} w' \wedge \exists e (\text{attempt}(e, x, F(x), w))) \rightarrow \forall e' ((\text{attempt}(e', x, F(x), w') \rightarrow \text{tough-for}(e', x, w'))))$
 $F = \lambda x \lambda w \exists e (\text{read}(e)(x)(w))$

In the other readings, 'tough' does not take an experienter, but is purely modal, stating that few of the worlds in which the agent attempts to perform a certain act are worlds in which this act takes place:

- (63) $[[\text{tough}_2]]=\lambda F_{\langle e, x, s, w \rangle} \lambda x \lambda w \text{FEW } w', w' \in \mathcal{I}_{\text{CIRC}}(w) \wedge w' \leq_{\text{stereotyp}} w$
 $\wedge \exists e (\text{attempt}(e, x, F(x), w)) (F(x)(w'))$

We conclude that like other inflectional elements linked to modality, such as the subjunctive, the Mood head of modal participials is not always associated with a particular modal meaning. We may assume that when it is not selected by a modal element such as the *tough*-adjective, there is an abstract modal operator of deontic necessity or teleological possibility, which either selects it or is inserted in its specifier (in which case the agent PRO may be inserted in an outer specifier). In 2.2 we have seen that the deontic reading may be lost with prefixal negation in Romanian. This may indicate that the modal operator combines with the negation, which supports the idea that the modal operator is inserted in a different position than Mood⁶.

In standard Romanian, TCs have a peculiar property which may indicate a different structure: unlike in the other Romance languages, the *tough*-adjective does not agree with the subject/head noun:

- (64a) *Aceste ipoteze sunt greu/*grele de acceptat.* (Rom.)
 these hypotheses(FEM) are difficult-MASC.SG/difficult-FEM.PL to accept
 (64b) *Ces hypothèses sont faciles à admettre.* (Fra.)
 these hypotheses(FEM) are difficult-FEM.PL to accept
 (64c) *Queste ipotesi sono difficili da accettare.* (Ita.)
 these hypotheses are difficult-PL to accept

There are two possible analyses for non-agreeing TCs:

- (i) We may assume that the clause is the external argument of the adjective (as proposed in Giurgea & Soare 2006). The difference between Romanian

and the other Romance languages would be that in Romanian *tough*-adjectives do not have two selectional patterns, with and without an internal clausal complement. The supine would occupy SpecPred, and the fact that it appears on the right of the adjective would be due to a linearization rule requiring extraposition for clausal subjects of predication (probably due to their heaviness). A problem is that the subject/head noun should raise directly from the object position of the clausal subject (should be extracted from SpecPred):

- (65) *[aceste ipoteze] [sunt] [_{SpecPred}] [Pred [_{AP} greu]] [_{MoodP} de acceptat aceste-ipoteze]]*

(ii) We may assume that the *tough*-word occupies the specifier of MoodP. In this case it would no longer be an adjective, but a modal adverb, which would explain the lack of agreement. A similar analysis was proposed in Soare (2002). This analysis appears somehow more costly, because *tough*-adjectives do not have a uniform syntactic behavior, as they are sometimes predicates, and sometimes modal operators. However, it is independently needed in other languages, namely in German and Dutch. These languages allow prenominal TCs (cf. (67)), although prenominal phrases must end in a head – west Germanic languages obey Emonds' (1976) Head-Final-Filter in the nominal domain; as shown by Haider (2004), this rule is characteristic of head-initial structures. Since in German and Dutch noun phrases are head-initial, they obey the Head-Final-Filter (which forbids a pre-head modifier to end in anything but the head, cf. (66)). This suggests that the verb is not an argument of the adjective, but rather the head of the string *tough* + verbal projection.

- (66a) *eine [viel größere (*als ich dachte)] Summe* (Deu.)
 'a much bigger (*than I thought) sum'
 (66b) *ein [unzufriedener (*damit)] Syntaktiker*
 'an unsatisfied (*it-with) syntactician'
 (66c) *ein [viel schöneres (*als ich dachte)] (neues) Haus*
 'a [much-more beautiful (*than I thought)] (new) house'
 (67) *ein schwer zu lesendes Buch* (Deu.)
 a tough to read-AGR book

Moreover, it is the verb and not the adjective which agrees, as shown in (67) above. In German, although in predicative, cf. (68a), and postnominal positions, cf. (68b), the *tough*-adjective combines with the infinitive, in prenominal position the verb takes the form of the present participle: infinitive + *d* + agreement, cf. (68c):

(68a) Dieser Philosoph ist schwer zu verstehen.
this philosopher is tough to understand

(68b) ein Buch, schwer zu lesen
a book tough to read

(68c) ein schwer zu lesendes Buch
a tough to read-AGR book

This suggests that the verb is the lexical head of the TC, and that the *tough*-adjective is probably in a Specifier position (Petra Sleeman, p. c.). Note that the combination *zu* + infinitive is only found in non-agreeing environments (in German adjectives and participles agree only in prenominal position). So, it is reasonable to assume that we have to deal with the same structure and *-nd-* is an allomorph used before the agreement markers.

Note that the same pattern *zu ...-nd-*agreement / *zu ...-n* is found in modal participials, which are passive like in Romance (see Haider 1984, 1986):

(69a) Das Buch ist zu lesen.
the book is to read-*n*

(69b) ein zu lesendes Buch
a to read-*nd-*NEUT.SG.NOM book(NEUT)

The fact that a passive modal participial is also used in TCs gives indirect support to the analysis we have proposed for Romance.

5. Conclusion

In this paper, we hope to have shown that Romance modal non-finite relatives are reduced relatives, in which the relativized position (which is the object position) is not case-marked; i. e., they are passive structures which have the syntactic behaviour of participials (therefore we labelled them 'modal participials'). We analyzed the introductory element of modal participials as a functional head with modal properties, labelled *Mood*, which takes a non-finite TP complement in French and Italian and a *vp* complement in Romanian. We argued that this kind of *Mood* is also present in other syntactic environments – Tough Constructions, small clause complements of *have* and, in Romanian, the post-copular position in an impersonal construction. We proposed that in Romanian *tough*-adjectives in Tough Constructions are adverbials occupying the specifier position of *Mood*, which explains the lack of agreement. This analysis probably also holds for German and Dutch.

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Edges, Heads, and Projections

Interface properties

Edited by
Anna Maria Di Sciullo
Virginia Hill

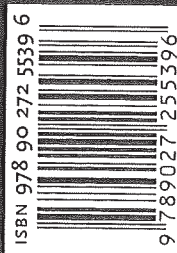
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This collection deals with central issues in the syntax of clauses and their interfaces with the conceptual-intentional system. The book targets the syntactic properties that have an impact on the interpretation of discourse and temporal dependencies, functional fields including CP, pragmatic markers at the syntax-pragmatic interface, and on the possible parameterization of these properties. The papers in this volume bring to the fore the role of the edges (specifier and adjuncts), heads and projections in the grammar and at the interfaces. They address the question to what extent the relevant configurations at the level of edges, head, and projections determine the syntax/semantic, semantic/pragmatic connections. The contributions clarify the notion of edge and bring evidence that this notion is core to the analysis of various phenomena at the left periphery of clauses and phrases. This volume also discusses functional heads and their projections, particularly insofar as the properties of these heads determine the composition of the CP field, and cases where a CP may or may not be projected.



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Edges, Heads, and Projections

Interface properties

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Edges, Heads, and Projections. Interface properties
Edited by Anna Maria Di Sciullo and Virginia Hill

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Predication and the nature of non-finite relatives in Romance*

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This paper investigates non-finite verbal constituents that qualify as modal non-finite relatives in Romanian, French, and Italian. We show that these constructions are reduced relatives based on the relativization of the object. The analysis extends to reduced relatives in general, and argues for a different head edge in these clauses: i.e., PredP versus CP (as assumed in the literature); the Pred head attracts the closest active nominal, which is not Case-marked. Consequently, Romance modal non-finite relatives qualify as passive structures dominated by a functional head that selects a non-finite (deficient) TP in Western Romance and a VP in Romanian. We extend this analysis to *toough*-constructions; crucially, the difference between predicative and argumental infinitives in Romance is that between full and reduced clauses: the former have a subject position and an EPP-feature satisfied (qualifying as strong *phases*), whereas raising, object-gap infinitives do not have these properties, and behave as weak *phases*.

1. Introduction

English and Romance languages are alike insofar as they display modal non-finite adnominal constituents, as in (1), that we also call *non-finite modal relatives*.

- (1) a. *money [to spend]*
b. *argent [à dépenser]*

However, the Romance constructions differ in several interesting ways from their English counterparts. Inside the Romance family, there is also some variation,

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especially between Romanian and western Romance. In this paper we shall examine the non-finite modal relatives in three Romance languages – Romanian, French, and Italian. We aim to provide a formal analysis of these constructions that may account for the differences between Romanian and English as well as for the micro-variation found between the three Romance languages examined.

The constructions examined are presented in (2).

- (2) a. [*Les livres [à lire]] sont dans la bibliothèque.*
the books to read-INF are in the library
b. [*I libri [da leggere]] sono nella biblioteca*
the books of.to read-INF are in the library
c. [*Cărțile [de citit]] sunt în bibliotecă.*
books-the of read-sup are in library
'The books to be read are in the library.'

These examples show that non-finite modal relatives are built with *à*+Infinitive in French (2a), *da*+Infinitive in Italian (2b), and *de*+supine in Romanian (2c)¹. These non-finite constructions qualify as *modal* because they convey deontic necessity and (more seldom) teleological possibility.

2. Romance non-finite modal relatives are reduced relatives

This section presents the criteria that define non-finite modal relatives as *reduced relatives* in Romance languages. A comparison with English shows a systematic cross-linguistic variation in the position from which the relativized noun is extracted.

Romance modal non-finite relatives contrast with their English counterparts in two respects: (1) they can appear in post-copular position, as in (3a-Fr, b-It, c-Rom.) versus (3d); and (2) relativization is strictly local, as in (4a-Fr, b-Rom.) versus (4c).

- (3) a. *Ces livres sont [à lire jusqu' à mardi]*
the books are to read-INF until at Tuesday
b. *Questi libri sono [da leggere fino a martedì]*
these books are of.to read-INF end of Tuesday

1. The Romanian supine, formally identical to the stem of the past participle, behaves as an infinitive in combination with *de*, and as a verbal noun with determiners and prepositions; see Hill (2002); Iordăchioaia & Soare (2008); Soare (2002).

- c. *Aceste cărți sunt [de citit până marți]*
these books are of read-sup until Tuesday
'The books must be read until Tuesday.'
d. **These books are to read until Tuesday*
(4) a. **Un livre à dire à tes enfants de lire*
a book to tell to your children to read
b. **O carte de zis copiilor să citească*
a book of tell-sup children-the.DAT to-SUBJ read-3PL
c. *A book to tell your children to read*

These properties allow us to characterize Romance modal non-finite relatives as *reduced relatives*. According to Bhatt (1999), reduced relatives are distinguished from full relatives by the following properties: (a) the relativized element is always in the subject position, (b) the subject position does not receive case (from the relative clause); (c) the relativization is very local – only the matrix subject can be relativized; (d) the clausal structure that functions as a reduced relative can appear as the complement of predicative *be* (cf., for this criterion, Embick 1997; Iatridou et al. 2001); (e) no complementizer is permitted; (f) no relative pronoun is permitted. We consider that properties from (a) to (c) should be reformulated as a single property: relativization involves the (highest/most accessible) argument position that does not receive case from the relative clause (see Section 3 for discussion). This allows us to include passive participles in this category, as well as the Romance constructions we discuss, which involve an object gap.

English also has modal reduced relatives, but they involve the relativization of the subject, whereas their Romance counterparts relativize the direct object.² Thus, the English examples in (5) show that modal relatives with a subject gap, as in (5a), can function predicatively, as in (5b), and can involve a local dependency, as in (5c).

2. French has a construction that looks like a non-finite relative with a subject-gap:

- (1) *le premier homme à avoir résolu ce problème*
the first man to have solved this problem

This construction, however, displays different properties from the constructions discussed (see also Siloni 1995, Sleeman & Verheugd 1998, Sleeman 2005): (1) it is restricted to contexts where the noun is modified by ordinals, superlatives or the adjective *seul* 'only'; (2) it does not have a deontic reading, but has a *realis* interpretation, at least when applied to the external argument (the référent) of the noun phrase; (3) it allows perfect and passive auxiliaries, which are impossible in modal non-finite relatives. We will not treat this construction in this paper.

- (5) a. *a man to fix the sink*
 b. *The wine is to complement the cheese.*
 c. **the boy [Op_i [it would be fun [t_i to dance]]]*
 (Bhatt 1999: 7)
 (Bhatt 1999: 6c)

The relativization of the subject, on the model in (5), rules out the clause in the Romance counterpart, as shown in Fr. (6a) and in Rom. (6b).

- (6) a. **un homme à réparer l'évier*
 a man to fix the sink
 b. **un om de reparat chiiveta*
 a man of fixed sink-the

These examples show that reduced relatives may occur with either object relativization or subject relativization, but not in both ways in the same language.

3. Redefining reduced relatives

In this section we attempt to unify the conditions underlying the two types of reduced relatives. We propose a generalization in terms of Case marking, which assigns the weight of syntactic operations to 'little' v, that is, the head of the projection at the edge of the VP phase.

Bhatt (1999), as we have seen, proposes the generalization that reduced relatives are only based on the relativization of the *subject*. However, the data presented indicate that Romance modal non-finite relatives are reduced relatives based on the relativization of the object. Moreover, according to the criteria presented in the previous section, we point out that participles as in (7a) also qualify as reduced relatives.

- (7) a. *the cake [made by John]*
 b. *The cake was [made by John].*

Since participles may be passive (e.g., (7b)), this is another situation in which a reduced relative involves the relativization of the object.

In light of these data, Bhatt's generalization in terms of thematic role is inadequate to capture the range of reduced relatives. We find, however, that the conditions for Case are uniformly shared among these constructions. Thus, we can reformulate Bhatt's generalization as in (8).

- (8) Reduced relatives involve the relativization of the argument that is not Case marked.

This reformulation covers the English constructions because the subject cannot be Case marked in an infinitive clause, such as (5a). For object relativization,

however, the generalization in (8) means that the respective construction must qualify as a passive; hence, we take Romance reduced relatives to represent passive constructions.

This seems *prima facie* counterintuitive, given that the morphology of the forms is active, and there are contexts in which both the Rom. *de*+supine (9a) and Fr. *à*+infinitive (9b) take accusative objects.

- (9) a. *M-am apucat [de completat formularele].*
 REFL-have taken of filled forms-the
 'I started filling the forms.'
 b. *J'ai commencé [à remplir les formulaires].*
 I have begun to fill the forms
 'I started filling the forms.'

However, there is empirical evidence that modal reduced relatives have the construction (although not the morphology) of passive constructions in Romance:³

- They allow the PP Agents used in passives (10a-Fr; b-Rom.; c-It.).

- (10) a. *livre à lire par tous*
 book to read by all
 'a book to be read by everybody'
 b. *Sunt multe lucruri de rezolvat de către Ministerul Agriculturii.*
 are many things of solved by ministry-the agriculture-the.GEN
 'There are many things to be solved by the Ministry of Agriculture'
 c. *Non pensiamo dunque che sia solo un problema*
 not think-1PL therefore that be only a problem
finanziario da risolvere dai grandi centri decisionali.
 financial of-to solve by-the great centers decision-making
 'We do not think, therefore, that this is just a financial problem to be solved by the important decision-making offices.'

- They do not have a passive counterpart (infinitive copula + passive participle), as shown in (11a, b-Fr.; c-Rom.; d-It.). Note that the copula does not have a supine form in Romanian; however, in French and Italian, where the infinitive is used, the copula may be used with a passive participle to build a passive infinitive.

3. Mismatches between syntactic voice and morphological voice are known from Latin grammar, which has a number of active verbs (transitive/energetic) with passive morphology – the so-called deponents'. Our examples show the reverse situation – active morphology combined with a passive reading, which we may call 'anti-deponent'.

- (11) a. **des livres à être lus*
 INDEF books to be read
 b. **Les livres sont à être lus.*
 the books are to be read
 c. **Cârmile sunt de fost citit(e)*
 books are of been read
 d. **libri ad essere letti*
 books to be read

– French grammar shows that infinitival inflection is compatible with a passive:

- (12) *Je lui fait réparer par Jean*
 I it have made repair by Jean
 'I had it repaired by Jean.'

The example in (12) presents a causative construction with a PP-agent and no case licensing of the object.

For a formalization of the active/passive alternation, we adopt the view according to which such alternation is encoded in the v head (for which Kratzer 1996 proposed the label Voice). We consider that transitive verbs always project an object position, but do not assign it a Case (lexical heads only assign inherent Cases). These verbs may combine with two types of v: the active v (v^{*}), which assigns accusative to the object and has a thematic Specifier position; and the passive v, which does not assign any Case to the object and has a Specifier that is optionally projected and is assigned inherent Case via a preposition (or an oblique Case, in languages with a rich morphological Case system). In this view, the defining property of passive constructions (as well as unaccusative ones) is that the object is not Case-licensed inside the vP. Its Case feature is valued (or 'checked,' in an alternative formulation)⁴ via Agree with a higher head (which may be T, in object-to-subject raising, or v*, in ECM), which may be accompanied by Movement, if this head has an EPP feature.

Crucially, the distributional properties by which we characterized *reduced relatives* in (8), in addition to the possibility that they appear in predicative position, as

4. In the minimalist framework of the 90's, Case licensing and agreement relations were formalized as feature checking, a process needed to eliminate uninterpretable features from the LF interface; Chomsky (2000, 2001) replaced checking with valuation, speaking of '(un)valued features' instead of '(un)interpretable features', in order to solve the problematic status of 'interpretability', which should be an interface property and therefore not operative in narrow syntax.

in (3), are the defining properties of *participials*⁵. Romance reduced relatives differ morphologically from what is traditionally called a "participle" (in languages with adjectival agreement) by the fact that they do not show agreement. However, we consider that the term *participial* is more appropriate than the term *reduced relative* because relatives, normally, are inside a nominal projection (or constitute a nominal projection, in the case of free relatives), while reduced relatives may appear predicatively, as we have seen in (3). In what follows, we will use the term *participial*.

4 The left periphery of a participial

In this section we argue that participial constructions do not project to CP but to PredP, where the EPP feature probes for a DP. The relativization is a property of the Pred head.

4.1 Participials are not CPs

The fact that relativization only involves the argument which is not Case-marked raises the question of what process is involved in this kind of "relativization," and makes one wonder whether this process can be called "relativization" at all. Standard cases of relativization are analyzed either as involving raising of the nominal head – or the *pivot* – (which is an NP) to the Spec of relative C (see Schachter 1973, Vergnaud 1974, Kayne 1994, Bianchi 1999, Bhatt 1999) or as involving the movement of a null operator to this position. In both cases, the relativized element is Case-marked inside the clause, and therefore relativization is not restricted to a specific argument, but it may involve any nominal inside the clause or even inside an embedded clause, as long as island constraints are obeyed. In both cases, A bar movement is involved, triggered by a C with a relative or [wh] feature, which we will call *relative C*. Since the process deriving reduced relatives does not have these properties, but is restricted to a specific argument of the highest verb of the relative (namely, the argument which is not Case-marked), we must conclude the following (also pointed out by Bhatt 1999):

- (13) Participials do not contain a relative C

5. From a syntactic point of view, participles may be defined as verbal forms which may appear as adnominal modifiers and as predicates of small clauses – complement small clauses, including complements of copular verbs, adjunct small clauses with a subject PRO coindexed with an argument in the matrix clause – 'deictives' – and 'absolute' small clauses, which are adjunct small clauses containing an overt subject.

4.2 Participials as PredPs

Since the object position is always projected with transitive verbs, and passive participials display such objects, then these constructions do not use the participle adjectivally. There are two possible ways to analyze this property of passive participials: (1) A head-external analysis, proposed by Bhatt (1999), in which the argument which is not Case marked is realized as a PRO. This analysis needs the stipulation that a PRO in certain contexts does not saturate the predicate, but remains uninterpreted, so that the reduced clause will have a <e,t> semantic type; this PRO functions, thus, as a null operator; (2) A head-internal analysis, that is also considered, but not developed, in Bhatt (1999). In this analysis, the pivot NP starts as the object of the verb and raises to a Spec position in which it can be Case-marked from outside.

Bhatt (1999, ex. 52a) gives empirical evidence for a head-raising analysis of reduced relatives: the pivot may form an idiom with the verb in the relative, as in (14a) and a cardinal modifying this head may have a low reading, in which case it is interpreted inside the relative, as in (14b).

- (14) a. *The headway [made_] was considerable.*
 b. *I am worried about the twenty five people [likely to come_for dinner].*

These facts contribute to discard a head-external analysis (i.e., option (1)) inasmuch as they show that the pivot must be interpreted inside the relative clause and not outside. Furthermore, the analysis (1) is problematic because it has to stipulate that PRO may in certain cases remain uninterpreted. Therefore, the analysis (2) is preferable.

Before we develop the analysis (2), we need to clarify what factor triggers the raising of the pivot in participials. As we have just said, this cannot be a [wh] or [rel] feature. Since we stated that only the argument that is not Case-marked is relativized, it is likely that the reason for the raising ultimately has to do with Case marking.

However, the raising is not directly triggered by the Case assigner: in the attributive use, Case is assigned to the whole DP from outside. The relativized NP goes into a position where it can be licensed by establishing a relation with the external D.

We also have to account for the most important property of participials (which has been overlooked or left unexplained in the literature), namely, their occurrence in predicative position, which is excluded for full relatives:

- (15) a. *Les livres ont été lus // Cărțile au fost citite.*
 the books have been read // books-the have been read
 b. *Les livres sont à lire // Cărțile sunt de citit.*
 the books are to read / books-the are of read
 c. **Les livres sont qui ont été lus // *Cărțile sunt*
 the books are which have been read // books-the are
care au fost citite.
 which have been read
 d. *The books have been read // are to be read*
 e. **The books are which/that have been read*

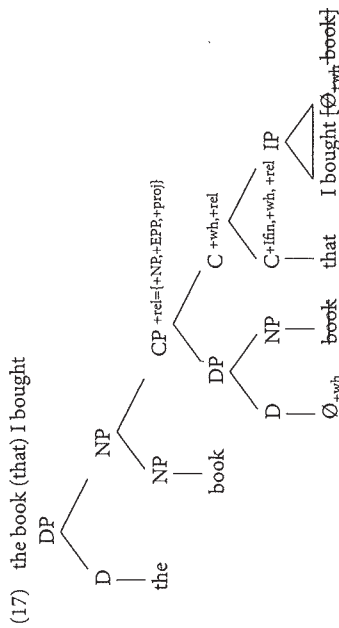
The predicative use is generally analyzed as involving a small clause, which may be selected by the copula (see Stowell 1981, 1983, Burzio 1986, Heggie 1988, also Avram 1999 for Romanian). In order to comply with the endocentricity principle of X-bar theory or, in the minimalist version, with the Inclusion Principle (the derivation cannot introduce features (including labels) which are not present on the lexical items), small clauses have been analyzed as projections of a head called Pred (Bowers 1993). Since we aim at a unifying analysis of participials in all their environments, we propose that participials always contain a Pred head, and that, in the attributive use, this is the head that plays the role of a relativizer. Our final analysis of participials can be stated as follows:

- (16) Participials are verbal projections selected by a Pred head with an EPP feature. This head attracts the closest active nominal (i.e. a nominal with an unvalued Case feature).

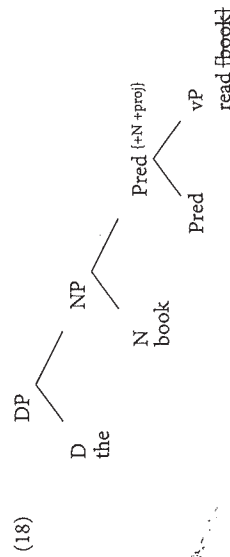
4.3 A raising analysis for participials

Since we have adopted a raising analysis for reduced relatives, we would like now to briefly address a problem concerning the raising analysis of relative clauses in general. The main drawback of this analysis, in its classical formulation, is the fact that it multiplies the selectional patterns of determiners; that is, it assumes that they do not select only nominal projections, but also clausal projections. For a solution, we adopt the proposal in Bhatt (1999, 2002), without deciding between its two implementations. The main idea is that the projection obtained after the raising of the pivot becomes nominal before combining with the determiner. In the (1999) analysis, Bhatt uses the idea of "projecting movement," initially proposed by Iatridou, Anagnostopoulou and Izvorski (2001). The idea is that raising relatives instantiate a structure where a selected item, the NP outer specifier of the relative C, gives its label to the object formed by its merger with the CP. This

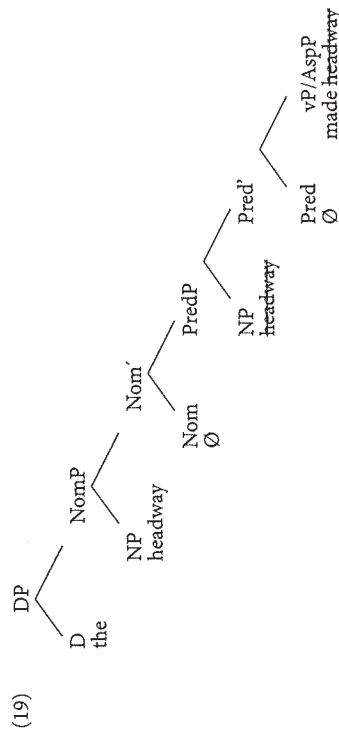
analysis is represented, for full relatives, in the tree below, where we introduced a feature [proj] signaling label inheritance from the specifier, for the second specifier of the relative C.



For reduced relatives, we may assume that the [proj] feature is borne by a Pred head. As we said, the pivot in this case is made eligible for raising not by virtue of a [wh] feature, but by virtue of having unvalued Case. After raising, the pivot will be in a position where it will be able to inherit Case from the determiner merged above it (roughly the same proposal concerning case is made in Kayne 1994 and Bianchi 1999):



In his (2002) paper, Bhatt replaces the projecting movement, which is not a standard device in the current minimalist syntax (although its possibility is recognized by Chomsky 2005), with a nominalizer head. Instead of having an outer specifier in (17), we would have a Nom head selecting a [wh] CP, attracting an NP in its specifier and marking the projection as nominal. Bhatt does not develop this analysis for reduced relatives, but we may assume that the Nom head selects a PredP in this case, as in (19).



We will not decide here between these two analyses. The important thing to retain is that a raising analysis for reduced relatives is feasible. This analysis directly accounts for the fact that the relativized position is not Case-marked, and for the strict locality: the Pred head cannot probe inside until it finds a [wh] element; since it only has a [N] feature, it will be sensitive to the closest element N. If this element is not active (being, for instance, Case marked), an intervention effect will arise.

We are now in a position to address the issue of the difference between full relatives and participials with respect to the predicative use. Full relatives, in the raising analysis, involve a nominalizing process – either directly through the head C^{rel}, or via a Nominalizer. As for appositive relatives, which are not derived by head raising, we suggest that they are referential and combine with their host via identity, so we do not expect to find them used predicatively. In participials, the role of the relativizer is played by Pred. Since Pred is also the head introducing predicates, participials are expected to appear in predicative positions. Moreover, since Pred does not have A-bar properties, it can only attract the closest active nominal (which is active in virtue of not having its Case feature valued), which explains the generalization that reduced relatives only involve relativization of the un-Case-marked argument.

To sum up, the difference in distribution between participials (or reduced relatives) and full relatives resides in the fact that they involve different relativization strategies, corresponding to the CP and the PredP layers, respectively.

The idea that Romance participials are based on a passive *v* faces another problem, which is now time to address: why don't these forms show agreement, as passive (past) participles do in these languages? Note that agreement in passive modal participles is found in some languages, for instance in Latin and German. We consider that the lack of agreement indicates that the functional structure of

the two participles is not identical, overt agreement characterizing a head which is not found in modal participials – perhaps an Asp head (note that past participles do not contain a TP layer, since they do not allow clitics). The lack of agreement in modal participials is a morphological peculiarity that has a historical explanation (modal participials originate from preposition + nominalized infinitive structures of the type *books for reading*).

5. Further issues regarding the structure of modal participials

5.1 The introductory element

In this section we discuss the status of the introductory element in participials; that is, Rom. *de*, Fr. *à*, It. *da*. This discussion must take into consideration that the left periphery of participials does not qualify as a CP, but as a PredP. Accordingly, a C analysis of the introductory elements is eliminated from the beginning.

There are two relevant properties of participial constructions that bear directly on the status of the introductory element: (1) object raising applies across this element; and (2) in certain constructions (to be shown below) agreement between the raised object and a predicative adjective displays cross-linguistic variation (i.e., it happens in some languages but not in others).

For point (1), we have argued that the relativized direct object is Case-less in the participial, but receives Case in the matrix, after crossing the participial clause border. In order to allow for such crossing, the participial must be a weak phase; hence, the introductory element cannot have the status of C, insofar as C is equivalent to Force in the cartographic framework (i.e., in Rizzi 1997 Force is a head with sentence typing features that dominates the information structure field). For this reason, it is safer not to adhere to the standard (pre-cartographic) view that the introductory elements represent C (Kayne 1994 for French, Hill 2002 for Romanian).

Therefore, we are left with two options as merging sites for *de/à/da*: either Pred, or some functional head lower than Pred. We will discuss both options.

The first option is that the relevant elements merge as Pred. According to our analysis, Pred must have a sentence typing property, since it is relativizing, and, thus, it may look like the functional equivalent to Force in this respect. However, other properties of the left periphery in the participials (mainly lack of an information structure field) show that Pred is not a structural equivalent to Force. The lack of peripheral positions related to information structure is shown in (20) (lack of Topic in (20a–a), lack of Focus in (20b–b)).

- (20) a. **povești [copililor de spus]/ * [de copililor spus]*
 stories children-the.DAT of tell-sup / of children-the.DAT tell-sup
 a'. **istorii [aux enfants à raconter]/ * [à aux enfants raconter]*
 stories to-the children to tell-INF to to-the children tell-INF
 b. **cărți la BIBLIOTECĂ de citit, nu acasă / *de la BIBLIOTECĂ citit.*
 books at library of read-sup not home of the
 library read-sup
 b'. **livres [dans la BIBLIOTHEQUE à lire, pas à la maison]/ * [à dans la BIBLIOTHEQUE lire...]*
 books in the library to read-INF not at home / to in the library read-INF

The ban on constituents with topic and contrastive focus reading at the left periphery of participial clauses indicates that Pred does not head a functional field, so it is not equivalent to Force.

Since Pred is not the structural equivalent to Force, *de/à/da* may merge in this head and allow for all the properties listed for the participial reduced relatives. There is, however, a question to consider: other participials do not allow for these introductory elements, as shown in (21), where Pred has a null realization (see also ((15a) above for passive participles).

- (21) a. *personnes (*à) appelées*
 persons (to) called-AGR
 b. *personne (*de) cherchée*
 persons (of) called-AGR

The observation on (21) is that the particles and the past participle morphology occur in complementary distribution. This may be due to some property of the participle to interfere with object agreement (as shown later in the section on Romanian *tough*-constructions).

A second problem for analyzing the introductory element as Pred will become visible in Section 5.3, where we will argue that the same type of verbal projection is used in *tough*-constructions: in this case, it is likely that the Pred head is inserted above the phrase [*tough*-adjective + Verbal-projection] (in other words, the whole construction behaves as a participial), but the introductory element appears after the *tough* adjective (the order being *tough*-adjective – introductory element – V). We conclude that the evidence for considering *de/à/da* to be Pred is insufficient.

The second option is to consider *de/à/da* as Fin elements, with FinP embedded under PredP. A Fin status for *de/à/da* has been the standard assumption in

the literature about the fine-grained structure of the periphery ever since Rizzi (1997), and it captures the quasi-modal properties of these elements.⁶ It also captures the fact that these elements are indifferent to *voice*, since *voice* is associated with the VP domain (see footnote 5), and it is not regulated by Fin. In this case, the fact that, when it takes a passive form, Fin must combine with a Pred would probably follow from the necessity to provide Case-marking for the object.

In the rest of this section, we provide evidence that the Fin status of *de/à/da* adequately captures the properties of the left periphery in participials, including the cross-linguistic micro-variation that arises within the Romance group.

5.2 Microvariation in Romance: Romanian supine vs. Western Romance infinitive

There is a difference between Romanian and Western Romance when it comes to the extent of the inflectional domain embedded under *de/à/da*. More precisely, French and Italian infinitives contrast with the Romanian supine insofar as they allow for more elements associated with the inflectional domain. We argue that the complement of *à/da* is a TP, whereas the complement of Rom. *de* is VP (also Hill 2002, Soare 2002).

First, we must mention that clausal negations and weak object pronouns are clitics in all these languages. Accordingly, (22) shows that French and Italian allow for some of these elements, while Romanian (23) does not.⁷

- (22) a. *une chose à lui transmettre à tout prix*
 a thing to to.him communicate at all costs
 'a thing to communicate to him by all means'
 b. *una cosa da trasmettergli*
 a thing to communicate.to.him
 'a thing to communicate to him'
 c. *une chose à ne pas avouer*
 a thing to not not confess
 'a thing that is better not confessed'

6. Lexical mood markers in Romanian (e.g., *să* for subjunctive, *a* for infinitive) have been recently analyzed as Fin heads (see Isac & Jakab 2004). Along these lines, we may say that *de/à/da* have an ambiguous (+/-) finiteness/mood marking status.

7. Romanian allows a negative prefix (*ne-*), equivalent to English *un-*, in participial supines (e.g., *lucru de nemărturisit* 'unspeakable thing' <thing-of-not-to-be-spoken>) and in adjectives (e.g., *nebur* 'mad' <no-good>). There are good reasons to believe that this negation operates in derivational morphology rather than in syntax, so we do not consider it in tests.

- d. *una cosa da non ammettere*
 a thing to not admit
 'a thing that is better not admitted'
 (23) a. **lucru de-i spus*
 thing of to.him told
 b. **lucru de nu spus*
 thing of not told

These examples show that French and Italian provide the functional projections that support clitics, presumably TP, whereas Romanian does not. Note, however, that this TP is deficient, since it does not provide the aspectual support for auxiliaries:

- (24) a. **une chose à lui avoir/être transmis à tout prix*
 a thing to him have/ be communicated at all costs
 b. **una cosa da avergli/ essergli comunicato ad ogni costo*
 a thing to have.him/ be.him communicated at all costs
 Intended meaning: 'a thing that had to be communicated to him'

The impossibility of clitics and clausal negation leads to the proposal that the supine embedded under *de* represents a vP (Hill 2002, Soare 2002). Further support for this analysis comes from the placement of adverbs. As shown in (25), the supine may be followed by low adverbs (i.e. adverbs which may be merged lower than v* or Voice).⁸ It cannot be preceded by any adverbs, which is probably due to the general property of Romanian mood particles to form a complex head with the verb, behaving like syntactic prefixes (see Dobrovie-Sorin 1994, Cornilescu 2000).

- (25) a. *carte de (*mereu) citit mereu*
 book of always read-sup always
 'a book to be read all the time'
 b. *carte de (*iar) citit iar*
 book of again read-sup again
 'a book to be read again'

8. See Cinque (1999) for the proposal that adverbs such as 'often' and 'again' may be merged below Voice. Note however that the supine may also be followed by adverbs placed above Voice in Cinque (1999), such as *bine* 'well', *repede* 'quickly'. This is not problematic for our approach because we do not consider that the distributional classes of adverbs must perfectly match in all languages.

On the other hand, (26) shows that the supine also excludes clitic adverbs (the five adverbs *mai* 'again, still, more', *cam* 'rather, quite', *tot* 'over and over', *prea* 'too, quite', *și* 'already, also'), which may intervene between an auxiliary and a lexical verb or between a finite mood particle and a finite verb form.

- (26) **carte de mai/tot citit*
book of again-and-again read-SUP

The peculiar distribution of these adverbs (they precede the inflected lexical verb but follow inflected auxiliaries) has been analyzed as cliticization on an Asp head (Alboiu 2002: lexical verbs pick them up in Asp; auxiliaries are generated under T in Romanian, so they cannot pick them up). We conclude that the supine lacks the relevant Asp projection.

Briefly, the tests in this section indicate that participials in French and Italian project to a deficient TP level, whereas in Romanian they are restricted to a vP level, if we assume that the *voice* projection marks the edge of the vP field. Thus, Romanian has the underlying configuration in (27a), versus the West Romance configuration in (27b).

- (27) a.
- b.

These configurations indicate that the introductory elements must be associated with a node that is able to recover the interpretation missing from the inflectional morphology; that is, temporal, aspectual and modal qualification for the state/event. Such functions belong to the Fin head.

5.3 Tough constructions

As has been often pointed out in the literature (see Kayne 1972, Sportiche 2002, 2006, Soare 2002, Soare & Dobrovie-Sorin 2002, Giurgea & Soare 2006), there are several similarities between the verbal complement in *tough*-constructions (TC) and modal non-finite relatives, which led to the proposal that they both represent the same verbal structure. (1) The introductory element and the verbal form are the same in both (28)–(30); (2) The gap in the non-finite clause only corresponds to the object (see (31)); (3) No periphrastic passive is allowed (32); (4) The dependency is strictly local (33).

- (28) a. *Ces livres sont difficiles à lire* Fr.
these books are hard to read
b. *livres à lire*
books to read
- (29) a. *Questi libri sono difficili da leggere* It.
these books are hard to read
b. *libri da leggere*
books to read
- (30) a. *Aceste cărți sunt greu de citit* Rom.
these books are hard of read
b. *cărți de citit*
books of read
- (31) a. *ces livres / *ces personnes sont difficiles à lire* Fr.
these books / these persons are difficult to read
*questi libri / *queste persone sono difficili da leggere* It.
these books / these persons are difficult to read
*aceste cărți / *aceste persoane sunt greu de citit* Rom.
these books / these persons are hard to read
b. *des livres / *des personnes à lire* Fr.
INDEF books / INDEF persons to read
*libri / *persone da leggere* It.
books / persons to read
*cărți / *persoane de citit* Rom.
books / persons of read
- (32) a. **un livre difficile à être lu* Fr.
a book difficult to be read
**un libro difficile da essere letto* It.
a book difficult to be read
**o carte greu de fost citită* Rom.
a book difficult of be read

- b. **un livre à être lu*
a book to be read
**un libro da essere letto*
a book to be read
**o carte de fost citită*
a book of be read

- (33) a. **Un livre difficile à convaincre tes enfants de lire*
a book difficult to convince your children to read
b. **O carte greu de convins pe elevi să (o) citească* Rom.
a book difficult of convinced PRT pupils to-SUBJ it read-3PL

In order to explain the observed similarities between modal participials and the non-finite complement in TCs, we assume that TCs contain the same structure as modal participials, except for the Pred head – because adjectives do not take PredPs complements. As we have seen in 5.1, this constitutes further evidence for analyzing the introductory element as Fin rather than Pred, given the fact that it appears after *tough*-adjectives, where no Pred head is expected. We adopt a raising analysis for TCs (for various arguments in favour of a raising analysis of TCs, see Berman 1973, Ruwet 1991, Goh 2000, Sportiche 2002, 2006, Hicks 2009; for arguments specific to the Romance family, see Giurgea and Soare 2006). While for English this raising has A-bar properties, in the languages we examine it can be assumed to represent A-movement, given the fact that the object is not Case-marked in its base position, as we have argued, for modal participials, in Section 3.

Romanian TCs have a further peculiar property: in the standard language, the *tough* adjective does not agree with the subject (only the copula agrees with the subject, which shows that this is indeed a TC). This sets apart Romanian from western Romance, where the *tough* adjective does agree:

- (34) a. *Chestiunile astea sunt greu/*grele de înțeles* Rom.
matters-the these are hard/hard-FPL to understand
a. *Chestiuni greu/*grele de înțeles*
matters hard/hard-FPL to understand
b. *Ces questions sont difficiles à comprendre* Fr.
these matters are hard-FPL to understand
c. *Queste cose sono difficili da capire* It.
these things are difficult-FPL to understand

The most likely explanation for this phenomenon is that the adjective is not predicative, but rather occupies a (Specifier) position inside the verbal extended projection, as proposed by Hill (2002), Soare (2002), Soare & Dobrovie-Sorin (2002)) (Hill 2002 identifies this position as SpecC, analyzing *de* as C; Soare

2002 places it inside vP). Adapting this proposal to the present analysis, we may say that the *tough* adjective is merged into the Specifier of the head spelled-out as *de* (the introductory element).⁹ On the hypothesis that this head represents Fin, the merging of the adjective into its Specifier can be explained by the modal reading it has.¹⁰

By the cartographic hierarchy, FinP must be embedded under Pred; this would explain the predicative and attributive use of TCs. Thus, adjectives in TCs function as adverbs. This is compatible with their morphology, since the majority of Romanian adjectives have the masculine singular form identical to the corresponding adverb, providing thus the opportunity for ambiguous parsing.

There is evidence that such an analysis is needed for TCs in German and Dutch. These languages allow prenominal TCs (see (35)), although prenominal phrases must end in a head – West Germanic languages obey Emonds's (1976) Head-Final-Filter in the nominal domain, which forbids a pre-head modifier to end in anything else but the head (see (36)). As shown in Hälder (2004), from which (36) is borrowed, this rule is characteristic of head-initial structures; since in German and Dutch noun phrases are head-initial, they obey the Head-Final-Filter. This suggests that the verb is not an argument of the adjective, but rather the head of the string *tough*+verbal projection.

- (35) *Ein schwer zu lesendes Buch*
a tough to read-AGR book

9. For different explanations see Giurgea & Soare (2006) and Dye (2006). Note that our judgments contrast with Dye's on certain constructions; e.g.:

- (1) **Noționi de genul acesta vor fi dificil de început de abordat* (** ours)
notions of kind-the this will be difficult of begin-sup of approach-sup
(2) **Aceste formule sunt ușor de memorat fără a înțelege* (** ours)
these formulae are easy of memorize_{SUP} without to understand

These examples were supposed to bring evidence for long *tough* movement and parasitic gaps licensed by *tough* movement, and therefore, for the existence of null operators in these constructions.

10. *Tough* adjectives introduce quantification over possible worlds. We exemplify this for the adjective 'tough'. In one reading (the psychological one), 'tough' takes an experiential, and states that in all the possible worlds (with a circumstantial modal base and a stereotypical accessibility relation) where the experienter attempts to do a certain action, this action will be felt as difficult by him. In the other reading, 'tough' does not take an experienter, but is purely modal, stating that few of the worlds in which the agent attempts to perform a certain act are worlds in which this act takes place.

- (36) a. *eine [viel größere (*als ich dachte)] Summe*
 'a much bigger (*than I thought) sum'
 b. *ein [unzufriedener (*damit)] Syntaktiker*
 'an unsatisfied (*it-with) syntactician'

Moreover, it is the verb, not the adjective which agrees (see (35)). More precisely, in German, the verb in prenominal position takes the form of the present participle: [infinitive + *d* + Agreement], while in predicative and postnominal positions, where German never displays agreement, the *tough* adjective combines with the infinitive form:

- (37) a. *Dieser Philosoph ist schwer zu verstehen*
 this philosopher is tough to understand
 b. *Buch schwer zu lesen*
 book tough to read
 c. *ein schwer zu lesendes Buch*
 a tough to read-AGR book

This suggests that the verb is the lexical head of the TC, and that the *tough* adjective is probably in a Specifier position (Petra Sleeman, p.c.). Since the combination *zu*+Infinitive is only found in non-agreeing environments (in German adjectives and participles only agree when they are prenominal), it appears that *-nd-* is an allomorph used before the agreement markers.

Note that the same pattern *zu ... -nd-*Agreement / *zu... -n* is found in modal participials, which are passive like in Romance:

- (38) a. *Das Buch ist zu lesen*
 the book is to read-*n*
 b. *Ein zu lesendes Buch*
 a to read-*nd-*AGR book

The fact that a passive modal participial is also used in TCs gives in direct support to the analysis we have proposed for Romance.

To conclude, we have shown that TCs involve the same type of verbal constituent that is embedded under Pred in reduced relatives. Since this constituent in the three languages discussed contains a passive *v*, the movement involved in TCs is A-movement. Lack of agreement in Romanian is probably due to the fact that the *tough* adjective is not the complement of Pred, but occupies Spec,FinP, functioning as a modal operator. Both the correlation between TCs and modal reduced relatives and the placement of the *tough* adjective in Spec,FinP are also found in West Germanic languages.

6. Conclusions

In this paper, we have provided a syntactic analysis of modal non-finite relatives in Romance and of reduced relatives in general. We have shown that modal non-finite relatives in Romance are reduced relatives based on a passive *VP*. Reduced relatives in general imply a different relativization mechanism, which is very local, applying only to the argument that is not Case-marked. We proposed that this mechanism does not involve a C head, but is performed by a Pred head with no peripheral features, which attracts the closest active nominal. It follows that the introductory element of modal reduced relatives cannot be C. We analyzed this element as the spell-out of a head in the verbal extended projection lower than C, which may encode a modal meaning. While in Western Romance this head takes a non-finite deficient TP complement, in Romanian it only takes a *VP*. This result is compatible with an analysis of modality as multiple-layered.

The same type of structure is used in *tough* constructions in the languages examined. *Tough*-constructions differ according to the structural position of the *tough*-adjective: while in French and Italian this adjective occupies the normal complement-of-Pred position (including the attributive use, on the assumption that it relies on a reduced relative structure), in Romanian, German, and Dutch it occupies a Specifier position (Spec,FinP). The fact that *tough*-adjectives may combine with FinP (either by selection or by sitting in its specifier) is explained by the modal component present in their meaning.

We hope that this analysis contributes to a better understanding of the make-up of non-finite domains in general, and of adnominal ones in particular. We have shown that the difference between "full" and "reduced" relatives can be straightforwardly described in phase theory: while full relatives contain both the *VP* and the CP phases, which implies that the relativization process involves A-bar movement, reduced relatives only contain a *VP* phase, and relativization relies on A movement.

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Adnominal non-finite constituents and complement clauses

Elena Soare (§§1–2, 3.1–3.4), Rodica Zafiu & Elena Soare (§3.5)

1. Introduction

Adnominal positions support verbal projections of different forms, from participials to fully inflected clauses, which function as complements/arguments, or adjuncts.

- | | | |
|--------|--|---------------------------|
| (1) a. | <i>copil bătut</i>
child beaten
'beaten child' | Passive Participle |
| b. | <i>apă de băut</i>
water SUP drink.SUP
'drinkable water' | Supine |
| c. | <i>listele conținând semnături</i>
lists-the.FPL containing signatures
'the lists containing signatures' | Gerund/Active Participle |
| d. | <i>plăcerea de a călători (de+)</i>
pleasure-the.FSG of to travel
'the pleasure of travelling' | Infinitive |
| e. | <i>dorința să plece</i>
wish-the.FSG SUBJ leave
'the desire to leave' | Subjunctive CP |
| f. | <i>întrebarea dacă pleci</i>
question-the.FSG whether leave.2SG
'the question whether you leave' | Interrogative CP |
| g. | <i>siguranța că va reuși</i>
certainty-the.FSG that will.3SG succeed
'the certainty that (s)he will succeed' | Declarative indicative CP |

Since finite relative clauses are treated in Chapter 10, we will not approach here all finite clauses. We will only examine finite complement clauses in comparison with non-finite complement clauses, and then we will concentrate on other non-finite constituents.

Finite complements are mainly selected by nominals derived from propositional attitude verbs, as in (1e–g). The inherited semantics of the derived nominal head is reflected in mood selection (indicative or subjunctive, see (1e) vs. (1f–g)) and complementizer selection (see (1f) vs. (1g)).

Non-finite constituents – infinitives, gerunds, passive participles and supines – in adnominal positions are illustrated in (1a–d). In (1d), the infinitive *a călători* 'to read' is a complement of the N *plăcere* 'pleasure'. It is introduced by the infinitival particle *a*. (1a) illustrates an adnominal, agreeing passive/resultative participle functioning as a modifier. In (1b) we have a supine modifier, i.e. an invariable participial form preceded by the functional element *de*; an adnominal gerund (functioning as an active participle) appears in (1c), a use which is quite rare/restricted, as we will see in Section 3.5 below.

Since all these constituents are based on verbs, one might be tempted to assimilate them all to clausal constituents, i.e. CPs (When adnominal verbal complements can be treated as PPs, we will see that the verbal nature of the complement of P can be questioned, cf. 1.2. below.) However, they do not behave the same way, which might reflect a categorial distinction; infinitives are rather CPs while participial constructions are smaller verbal projections. Thus, infinitives allow clausal negation and clitics, whereas for supines and passive participles, the presence of these elements is blocked. The different internal properties of these constituents is correlated to their distribution, and arguably to the different status of the characteristic particles they are introduced by (*a* for the infinitive and *de* for the supine), which behave as Infl elements.

Depending on their relationship to the head N, these adnominal non-finite constituents can be arguments or adjuncts; they are arguments when combining with relational, argument-taking nouns (cf. Chapter 11 – Deverbal Nouns); otherwise they are non-finite adjuncts, a reduced type of relative clauses; they are predicative and restrict the NP-predicate). The predicative or argumental status of the non-finite constituents is not as directly correlated to their internal make-up as for finite clauses (where relative pronouns introduce predicative constituents and complementizers introduce arguments). Nevertheless, the different types of non-finite constituents involve a certain degree of specialization in the following way: (a) non-finite arguments are most of the time realized as infinitive clauses introduced by a functional head *de*, and marginally by supines governed by lexical prepositions (see (2a–b)); (b) adjuncts, (reduced relative clauses) are realized as passive/resultative participles, supines (see (2c)) – both specialized as object-gap reduced relatives – and marginally gerunds, which are subject-gap reduced relatives, but rarely adjoin to the NP (see (2d)).

- | | |
|--------|--|
| (2) a. | <i>voința / dorința / încercarea de a se elibera</i>
wish-the / desire-the / attempt-the of to REFL deliver.INF
'the wish/desire/attempt to deliver oneself' |
| b. | <i>pofta de citit</i>
desire-the.FSG of read.SUP |
| c. | <i>carte de citit / *băiat de citit</i>
book SUP read.SUP / boy SUP read.SUP |
| d. | <i>construcțiile datând din secolul XII</i>
buildings-the.FPL dating from century-the XII |

In sum, non-finite modifiers in Romanian may be either supine or participial reduced relatives or – marginally – gerundial clauses. Adnominal infinitives can only take argument status with respect to a complement-taking nominal head (see the next section). Finally, non-finite constituents can appear as complements of prepositions introducing adnominal adjuncts (the whole PP functioning as an adnominal adjunct):

- (3) a. *bombardarea orașelor pentru a demoraliza populația*
bombing.INF-the towns-the.GEN for to demoralize population-the
b. *furtun pentru udat grădina*
pipeline for water.SUP garden-the

If we include this construction in the adnominal type, we arrive at three classes of adnominal non-finite constituents: (a) complements; (b) relatives; (c) prepositional adjuncts.

2. Finite and non-finite complements

In this section, we will examine clausal non-finite complements (and when relevant, their finite counterparts), as well as some subcategorized PPs containing non-finite verbal projections.

2.1 Infinitival and finite complement clauses

2.1.1 Types of nouns selecting sentential complements

In general, sentential N-complements appear with deverbal and deadjectival Nouns, which inherit the argument-structure of the base (see Chapter 11 – Deverbal Nouns). Sentential N-complements, in particular, may be finite (indicative or subjunctive), or non-finite (mostly infinitival).

Three main classes of nouns allow clausal complements:

- i. Nouns derived from or related to modal or propositional attitude verbs: *voință* ‘will’, *dorință* ‘wish’, *hotărâre* ‘decision’, *putere* ‘power’, *încercare* ‘tentative’, *ordin* ‘command’, *poruncă* ‘command’, *cerință* ‘request’, *rugămintă* ‘request’, *gând* ‘thought’.
- (4) a. *dorința {de a reuși / să reușească} (îl obsedează)*
desire-the.FSG of to succeed / SUBJ succeed.3SG (him obsesses)
‘He’s obsessed by the desire to succeed’
b. *gândul, ideea de a pleca / să plece*
thought-the idea-the.FSG of to leave / SUBJ leave.3SG
‘the thought/idea of leaving’
c. *voința de a munci*
will-the of to work
‘the intention of working’

- d. *puterea de a munci*
power-the of to work
‘the ability to work’
- e. *afirmația că nu are nimeni dreptate*
affirmation-the that not has nobody right
‘the claim that nobody is right’
- ii. state-denoting, mostly derived from psychological verbs and adjectives (*satisfacție* ‘content’, *fericire* ‘happiness’, *amabilitate* ‘kindness’, *mândrie* ‘pride’).
- (5) a. *amabilitatea lui de a ne ajuta ne-a surprins pe toți*
kindness-the his of to us help us-has surprised DOM all
‘His kindness to help us surprised us all’
b. *mândria lui de a fi român*
pride-the.FSG his of to be Romanian
‘his pride to be Romanian’
c. *satisfacția {că am obținut / de a fi obținut} cele mai multe medalii*
satisfaction-the that have.1PL obtained / of to PRF obtained the
most numerous medals
‘the satisfaction of having obtained the most medals’
- iii. event-classifying nouns; we use this term to refer to nouns that classify events (in a broad sense): *operațiune* ‘operation’, *acțiune* ‘action’, *activitate* ‘activity’, *obicei* ‘habit’, *fapt* ‘fact’:
- (6) a. *operațiunea delicată de a identifica suspectii*
operation-the delicate of to identify suspects-the
‘the delicate operation of identifying the suspects’
b. *acțiunea / activitatea de a pune la zi fișierele de date*
action-the / activity-the of to put to day files-the of data
‘the activity of updating the files’
c. *faptul că au pierdut alegerile*
fact-the that have.3PL lost elections-the
‘the fact that they lost the elections’

The head noun itself is in general a two-place predicate: it requires an internal argument which, in the structures under scrutiny, is realized by the infinitival clause, and an Experiencer or Agent external argument (for nouns belonging to classes 1 and 2) which may be left implicit. We will assume here that, at least for classes 1 and 2, the non-finite adnominal arguments are non-finite *complements* with respect to the head noun. Semantically, they may bear the role of Content or Theme.

2.1.2 Complement denotation and Mood selection

As mentioned in the Introduction, the nature of the clausal complement is a matter of debate; the finite complement clauses are standardly assumed to have a CP status. As for the infinitive, we may note that in the adnominal position it is obligatorily introduced by the functional element *de* (cf. (7b)), which has been analyzed as a C in the literature. Note however that this element does not appear when the infinitive is in the subject position or functions as a complement of verbs or prepositions (see (7c–d)):

- (7) a. *sperăm* (**de*) *a-l termina cât de curând*
 hope.1PL (of) to-it finish as of soon
 'We hope to finish it as very soon'
- b. *speranța* *(*de*) *a-l termina cât de curând*
 hope-the (of) to-it finish as of soon
 'the hope of finishing it very soon'
- c. *(*de*) *a-l termina era ceea ce așteptau toți*
 (of) to-it finish was what wait.IMP.F.3PL all.MPL
 'Finishing it was what everybody waited for'
- d. *pentru* *(*de*) *a-l termina*
 for (of) to-it finish

These data suggest that *de* is the functional preposition *de*, which is also used to introduce other constituents in the adnominal environment (PPs, see Chapter 8 §3, bare nouns, see Chapter 6 §6, Chapter 8 §3).

The selection of the Mood in the sentential complement, i.e. infinitive as opposed to indicative and subjunctive, is constrained by two related factors: the semantic denotation of the (non-finite) clause and the modality associated to it.

While the denotation of a VP projection is an event (i.e. a complete change, process or state located in space and time), a clausal domain is typically assumed to denote a proposition, which can be informally presented as the meaning of a (declarative) sentence, or a fact, which is a true proposition. Different classes of main predicates (propositional, factive) accordingly select different classes of clausal entities (propositions, facts). For convenience, we may assume that infinitive clauses denote propositions; as a consequence, they cannot appear as complements to factive verbs and their corresponding nominalizations, which require facts (true propositions) as complements.

Infinitive clauses often involve silent modality in adnominal contexts. When they appear in complement positions, they participate in a complex modal construal, in which the head is already modal, and selects for an irrealis form realized as the infinitival. In Romanian, irrealis modality in complement positions is expressed by the subjunctive or the infinitive, the latter being preferred in nominal environments.

Mood selection in the clausal complement of derived nominals may, but need not, be related to mood selection in the complement of the corresponding base verb. In some

cases, the adnominal complement may involve mood alternation between infinitive and subjunctive or indicative. For deverbal nouns, there is a parallelism between the selectional properties of the N and those of the corresponding V: nouns derived from verbs selecting an irrealis verb form (the subjunctive) select the infinitive (cf. 8a–b), whereas nouns derived from verbs selecting the indicative keep the same selectional pattern as the corresponding verb (cf. 8c–d). If the verb takes both declarative and irrealis forms, the infinitive will correspond to the irrealis (8e–h).

- (8) a. *Pot / Doresc / Încerc să scriu*
 can.1SG / wish.1SG / try.1SG SUBJ write.1SG
 'I can/wish/try to write'
- b. *puterea / dorința / încercarea de a scrie*
 capacity-the desire-the / tentative-the of to write
 'the capacity/desire/intention to write (of writing)'
- c. *Afirm / Cred că va veni*
 claim.1SG / think.1SG that will.3SG come
 'I claim/believe that (s)he will come'
- d. *afirmația / credința că va veni*
 claim-the / belief-the that will.3SG come
 'the claim/belief that (s)he will come'
- e. *Mă gândesc că a venit*
 REFL think.1SG that has come
 'I think that he came'
- f. *gândul că a venit*
 thought-the that has come
 'the thought that he came'
- g. *mă gândesc să vin*
 REFL think.1SG SUBJ come.1SG
 'I intend to come'
- h. *gândul de a veni*
 thought-the of to come
 'the intention of coming'

As already noted above, the derived noun, unlike the corresponding verb, prefers an infinitive as irrealis complement (whereas the verb sometimes totally disallows an infinitive):

- (9) a. *Mă gândesc să muncesc*
 REFL think.1SG SUBJ work.1SG
 'I'm thinking of working'
- b. ^{??}*Mă gândesc a munci*
 REFL think.1SG to work

- c. *gândul de a munci*
thought of to work
'the thought about working'
- d. *gândul să muncesc*
thought-the SUBJ work.1SG

With some verbs, e.g. *propune* 'propose', *spera* 'hope', *permite* 'allow', the infinitive can be used in a formal register; with the corresponding nouns – *speranță* 'hope', *propunere* 'proposal', *permisiune* 'permission', the infinitive is more or less the standard option, but the subjunctive is nevertheless possible:

- (10) a. *Sperăm a avea o creștere economică* (formal register)
hope.1PL to have a growth economic
'We hope to have an economic growth'
- b. *Sperăm să avem o creștere economică*
hope.1PL SUBJ have.1PL a growth economic
'We hope to have an economic growth'
- c. *speranța de a avea o creștere economică*
hope-the of to have a growth economic
'the hope of having an economic growth'
- d. *speranța să avem o creștere economică* (colloquial)
hope-the SUBJ have.1PL a growth economic
'the hope of having an economic growth'

The subjunctive is preferred if the subordinate clause contains a different subject (*ca* appears as a subjunctive complementizer if the subjunctive clause contains preverbal material):

- (11) a. *propunerea ca noi să cumpărăm cadourile*
proposal-the that we SUBJ buy.1PL presents-the
'the proposal that we should buy the presents'
- b. *propunerea să cumpărăm noi cadourile*
proposal-the SUBJ buy.1PL we presents-the
'the proposal that we should buy the presents'
- c. *propunerea de a cumpăra cadourile*
proposal-the of to buy presents-the
'the proposal to buy the presents'

In some cases, the subjunctive appears to be licensed by a light-verb + nominal construction, as in (12) below, where the light verb is *avea* 'have' and the nominal is derived from the modal verb *putea* 'can', and the meaning is 'have the strength/ability to'; as shown in (12b), the infinitive is not acceptable in this context, whereas if the noun *putere* appears in other contexts, it cannot take the subjunctive, but, instead, can take the infinitive.

Therefore, the infinitive is more natural in the purely nominal construction, while the subjunctive is preferred by the light verb + noun construction.

- (12) a. *Nu are puterea să muncească*
not has power-the SUBJ work.3SG
'He's not strong enough to work'
- b. **Nu are puterea de a munci*
not has power-the of to work
- c. **Puterea să muncească se dobândește/ l-a părăsit*
power-the SUBJ work.3SG REFL acquires him-has left
de mult
from long
Intended meaning: 'The ability to work is nurtured' / 'He lost the ability to work long time ago'
- d. *Puterea de a munci se dobândește / l-a părăsit*
power-the of to work REFL acquires him-has left
de mult
from long
'The ability to work is nurtured' / 'He lost the ability to work long time ago'

Another example is the abstract noun *chef* 'desire, lust', which allows the subjunctive only when it combines with the light verbs *veni* 'come', *face* 'make', *avea* 'have', etc. (see (13a–c)), whereas it can freely take the infinitive (see (13d)):

- (13) a. *I-a venit cheful să bea o cafea*
him.DAT-has come desire.the SUBJ drinks a coffee
'He felt like having a coffee'
- b. *Am chef să dorm*
have.1SG desire SUBJ sleep.1SG
'I feel like sleeping'
- c. **Cheful să bea o cafea îl chinuie de azi dimineață*
desire-the SUBJ drinks a coffee him tortures from today morning
- d. *Cheful de a bea o cafea îl chinuie de azi dimineață*
desire-the of to drink a coffee him tortures from today morning
'The need for a cup of coffee keeps torturing him since this morning'

Complement clauses – finite but also non-finite – are ruled out in the case of complex-event nominals (see Chapter 11 – Deverbal Nouns), probably because of contradictory requirements on case-assignment: the argument of a complex event nominal must be assigned case, but finite adnominal complements cannot receive case. Therefore only genitive complements are allowed (see (14c)). The grammaticality contrast between (14a–b)

and (14d) is due to the “complex event” status of the head N *afirmare* ‘affirmation’ in (14a–b) as opposed to *afirmație* ‘affirmation’ in (14d).

- (14) a. **afirmarea că va veni*
affirm.INF-the that will.3SG come
b. **afirmarea de a veni*
affirm.INF-the of to come
c. *afirmarea acestor principii în public*
affirm.INF-the these.GEN principles in public
‘the affirmation of these principles in public’
d. *afirmația că va veni*
affirmation-the that will.3SG come
‘the claim that (s)he will come’

We can also note that some declarative, desiderative, modal and epistemic verbs do not give rise to complex event nominals at all: e.g. *credință* ‘belief’ but not **credere*, *dorință* ‘desire, wish’ but not **dorire*; in other cases, the *-re* nominal has only a simple event or result interpretation: *întrebare* ‘question’ (<*întreba* ‘ask’), *putere* ‘power, capacity’ (<*putea* ‘can’), *cerere* ‘request’. Since the eventive nominals derived from these verbal bases are simple event nominals, complement clauses are allowed:

- (15) a. *credința că va veni*
belief-the that will.3SG come
‘the belief that (s)he will come’
b. *dorința de a veni / ca el să vină*
desire-the of to come / that he SUBJ come.3SG
‘the desire to come/that (s)he will come’
c. *întrebarea dacă va veni*
question-the if will.3SG come
‘the question whether (s)he would come’
d. *puterea de a muta munții*
power-the of to move mountains-the
‘the power/capacity to move the mountains’

Nominalizations of declarative verbs (i.e. verbs that select an indicative complement clause) require finite complement clauses and are incompatible with infinitives. In fact, they select a realis modal form in the embedded clause, to the exclusion of the infinitive:

- (16) a. *afirmația că a spus adevărul*
affirmation-the that has told truth-the
‘the claim that (s)he told the truth’
b. **afirmația de a spune adevărul*
affirmation-the of to tell truth-the

Nouns related to psych- verbs and adjectives, which select a realis complement, allow for both indicative and infinitival complement clauses:

- (17) a. *satisfacția de a fi reușit la examen*
satisfaction-the of to PRF succeeded at exam
‘the satisfaction of having passed the exam’
b. *satisfacția că a reușit la examen*
satisfaction-the that has succeeded at exam
‘the satisfaction that (s)he passed the exam’

Some deadjectival nouns such as *mândrie* ‘pride’ nevertheless only allow the infinitive, rejecting the indicative and the subjunctive. Note also that with the corresponding adjective *mândru* in (18a), both indicative and subjunctive are possible:

- (18) a. *E mândru că e român / de a fi român / să*
is proud that is Romanian / of to be Romanian / SUBJ
fie român
be.3SG Romanian
‘(S)he’s proud of being a Romanian’
b. ??*mândria că e român*
pride-the that is Romanian
c. *mândria de a fi român*
pride-the of to be Romanian
‘the pride of being a Romanian’
d. **mândria să fie român*
pride-the SUBJ be.3SG Romanian

The indicative is exceptionally allowed in constructions involving inherent possession, such as the *with*-PP:

- (19) (*Trăiesc cu*) *mândria că nu am făcut compromisuri mari*
(live.1SG with) pride-the that not have.1 done compromises big
‘(I live with) the pride of not having done big compromises’

The ban on the finite complement clause is general with nouns derived from evaluative adjectives qualifying the behavior of a person (see Chapter 7 §5.4.2.1). Such nouns (e.g. *amabilitate* ‘kindness’, *generozitate* ‘generosity’, *imprudență* ‘recklessness’, *prostie* ‘foolishness’) only allow the infinitive (20c vs. 20b), although the corresponding adjective can also take the indicative or the subjunctive (20a).

- (20) a. *A fost amabil că ne-a ajutat / să ne ajute*
has been kind that us-has helped / SUBJ us help.3SG
‘(s)he has been kind enough to help us’

- b. **Amabilitatea* {*că ne-a ajutat / să ne ajute*} *ne-a surprins*
 kindness-the that us has helped. / SUBJ us help) us-has surprised
pe toți
 DOM all
- c. *Amabilitatea lui de a ne ajuta ne-a surprins pe toți*
 kindness-the his of to us help.INF us-has surprised DOM all
 ‘The fact that he was so kind to help us surprised us all’

‘Event-classifying’ nouns can take infinitive complements, as we saw in (6) above, but some of them, such as *fapt* ‘fact’, can also take indicative clauses introduced by the declarative complementizer *că*:

- (21) *faptul că era sărac / de a fi sărac*
 fact-the that was.3SG poor / of to be poor
 ‘the fact that (s)he was poor/of being poor’

The complement status of these clauses has been questioned, some authors analyzing them as integrated/identifying appositions, as shown by the possibility to use them as subjects of the classifying noun:

- (22) *Că era sărac e un fapt*
 that was.3SG poor is a fact
 ‘That (s)he was poor is a fact’

The same classifying meaning of the head noun can be detected in abstract nouns referring to propositions/thoughts, such as *idee* ‘idea’, *gând* ‘thought’ (see the copular construction test in (23b)):

- (23) a. *Ideea că Pământul este rotund*
 idea-the that Earth-the is round
 ‘The idea that the Earth is round’
- b. *Că Pământul este rotund era o idee nouă*
 that Earth-the is round was an idea new
 ‘That the Earth was round was a novel idea’

Fapt, like Engl. *fact*, Fr. *fait* etc, serves a ‘support-noun’ which allows the meaning typically expressed by a clause to be syntactically realized as a DP. Thus, in some contexts, such as (24b), where indicative clauses are not fully acceptable, the corresponding meaning can be conveyed by embedding the clause in a DP with the noun *fapt*:

- (24) a. *Faptul că va pleca îl chinuie*
 fact-the that will.3SG leave him tortures
 ‘The fact that (s)e will leave makes him suffer’
- b. ??*Că va pleca e util pentru echipă*
 that will.3SG leave is useful for team

To sum up, we saw in this section that the selection of the mood in adnominal complement clauses is correlated with the modality required by the head noun: *realis* modality is expressed by the indicative, whereas the infinitive and subjunctive characterize *irrealis* modality. There are however some contexts in which the infinitive can be replaced by the indicative: with deadjectival (see (20)) and ‘event-classifying’ nouns (see (21)), suggesting that the *irrealis* modality is not at work there. Another interesting conclusion is that the infinitive is more common as an adnominal complement than as complement to verbs. We will now further analyze the internal syntactic properties of the infinitival clause, which are related to the defectiveness of Inflection and the licencing of an empty subject.

2.1.3 Interpreting null subjects of infinitives

Infinitival clauses may have null subjects, interpreted in a control relation to the Noun’s ‘subject’ (the argument bearing the Experiencer or Agent roles), which may be implicit or explicit, expressed by a Genitive DP or agreeing possessor:

- (25) a. *ideea (lui_i) de a pleca e_i*
 idea-the (his) of to leave
 ‘the/his thought of leaving’
- b. *puterea (lui_i) de a munci e_i*
 power-the (his) of to work
 ‘the/his capacity of working’
- c. *surpriza (noastră_i) de a vă vedea e_i aici*
 surprise-the (our) of to you.PL.ACC see here
 ‘his surprise to see you here’

The subject of infinitival complement clauses can be overtly realized (a possibility also found in adjunct infinitive clauses), and in this case it has to be postverbal:

- (26) *Nu s-a acceptat ideea de a pleca mama*
 not REFL-has accepted idea-the of to leave mother-the
 ‘The proposal that mother should leave was not accepted’

The presence of a null subject in adnominal infinitival clauses is proved by the possibility of subject-oriented adjuncts:

- (27) *Ideea de a pleca singură o sperie*
 idea-the of to leave alone.FSG her frightens
 ‘The idea of leaving alone frightens her’

We therefore assume a null subject, PRO for concreteness, which is co-referent with an implicit or explicit argument of the head N. In some cases, PRO can be bound by the variable left by a raised Quantifier – *oricine* ‘anybody’ in (28a) – or be identified by an implicit argument that is contextually identified (28b).

- (28) a. *Nu oricine are posibilitatea de a pleca*
not anybody has possibility-the of to leave
'Not anybody is able to leave'
- b. *Hotărârea de a pleca mai trebuie discutată / a fost luată în grabă*
decision-the of to leave still needs discussed / has been taken
in hurry
'The decision to leave still needs to be discussed/was taken in a hurry'

The implicit argument can carry person features with arbitrary reading:

- (29) a. *Gândul de a se sinucide nu-i vine oricui*
thought-the of to 3REFL.ACC suicide not-DAT.CL
comes anybody.DAT
'The thought of committing suicide doesn't cross just anybody's mind'
- b. *Gândul de a te sinucide nu-ți vine ușor*
thought-the of to YOU.ACC suicide not-YOU.DAT comes easily
'The thought of committing suicide doesn't occur easily'

The deverbal nouns from classes 1 (modals and propositional attitudes) and 2 (deadjectival statives) above involve obligatory or optional control, a property inherited from the verbal base; obligatory control is found with nouns derived from modals – e.g. *capacitate* 'capacity', *obligatie* 'obligation', *permisiune* 'permission', *datorie* 'duty', *incercare* 'attempt' – and from implicatives – e.g. *reușită* 'success'. Volitional, factive and propositional verbs have optional control. The corresponding nouns derived from factive and volitional verbs – *dorință* 'wish', *regret* 'regret', *satisfacție* 'content', *propunere* 'proposal' – therefore allow a complement clause with an overt subject (to the extent that such nouns allow an infinitival), but if the subject is null, it is normally interpreted as controlled, because the infinitive inflection does not permit the identification of a null subject (in other words, the covert subject of the infinitive can only be PRO, not *pro*) (in the following examples, we represent the implicit argument of the head noun as *e*, although we do not want to take a stance on the issue whether it is syntactically projected or not):

- (30) a. *dorința noastră de a pleca voi mai devreme*
wish-the our of to leave you(PL) more early
'our desire that you should leave earlier'
- b. *dorința (noastră_i/e_i) de a pleca PRO_{i/*j}*
wish-the (our_i/e_i) of to leave PRO_{i/*j}
'our/the desire of leaving'
- c. *propunerea lor de a ne conduce tu*
proposal-the their of to us guide you.NOM
'their proposal that you should guide us'

- d. *propunerea (lor_i/e_i) de a ne conduce PRO_{i/*j}*
proposal-the (their_i/e_i) of to us guide PRO_{i/*j}
'their/the proposal to guide us'
- e. *gândul de a nu fi nimeni acolo*
thought-the of to not be anybody there
'the thought that nobody is there'
- f. *gândul (meu_i/e_i) de a nu fi PRO_{i/*j} acolo*
thought-the (my_i/e_i) of to not be PRO_{i/*j} there
'my intention not to be there'

There are also cases when the infinitive must be controlled, although the head noun itself does not require obligatory control. Note that the relevant examples involve a realis interpretation of the infinitive (paraphrasable by an indicative):

- (31) a. *impresia (mea/e_i) de a fi PRO_{i/*j} bolnav*
impression-the (my/e_i) of to be PRO_{i/*j} sick
'my impression of being sick'
- b. *?impresia de a fi tu bolnav*
impression-the of to be you.NOM sick
- c. *impresia (mea) că ești bolnav*
impression-the (my) that are.2SG sick
'my/the impression of you being sick'
- (32) a. *senzația (noastră) că el nu mai poate continua*
sensation-the (our) that he not any_longer can continue
'the/our impression that he can't go on any longer'
- b. *senzația de a nu mai putea (*el) continua*
sensation-the of to not any_longer can (*he) continue
'the sensation of not being able to go on'
- (33) a. *satisfacția (noastră_i/e_i) de a fi câștigat PRO_{i/*j} cupa*
satisfaction-the (our_i/e_i) of to PRF won PRO_{i/*j} cup-the
'our satisfaction of having won the cup'
- b. *?satisfacția noastră de a fi câștigat Italia cupa*
satisfaction-the our of to PRF won Italy cup-the

With nouns related to psychological verbs and adjectives, where the base does not have obligatory control, the infinitive complement sometimes requires control (see (34)), in other cases control is not obligatory, as expected (see (35)):

- (34) a. *Sunt fericit că am/afi urmat calea cea dreaptă*
am happy that have.1SG/2.PL followed way-the the right
'I'm glad that I/you went the right way'

- b. *fericirea (mea) de a fi urmat (*tu) calea cea dreaptă*
 happiness (my) of to PRF followed (*you.NOM) way-the the right
 'my happiness of having gone the right way'
- (35) a. *mândria de a fi reușit la examen*
 pride-the of to PRF succeeded at exam
 'the pride of having passed the exam'
- b. *mândria de a fi reușit copilul meu la examen*
 pride-the of to PRF succeeded child-the my at exam
 'my pride in my child's passing the exam'

There are also nouns that do not involve control, because they have no 'subject'-argument, being derived from verbs or adjectives with no external argument. A case in point is *probabilitate* 'probability', derived from the modal adjectival predicate *probabil* 'probable':

- (36) *probabilitatea lor de a pleca*
 probability-the their of to leave
- ❖ For some speakers, *probabilitate* can take a genitive and an infinitive (see (37)). Such examples involve raising of the subject of the infinitive to the genitive position of the head noun.
- (37) *probabilitatea lui de a exploda*
 probability-the his of to explode

Although semantically very similar to *probabilitate*, the noun *posibilitate* 'possibility' does allow a genitive/possessive argument:

- (38) *posibilitatea lor de a face acest lucru*
 possibility-the their of to do this thing

This difference comes from the fact that, unlike for 'probability', the underlying predicate of *posibilitate* 'possibility', namely, the modal verb *putea* 'can, be able, be allowed to' has an external argument (in the capacity and deontic reading), which is inherited as the Noun's 'possessor' (genitive) argument (for the 'possessor' interpretation, see the construction with *avea* in (38b)):

- (38) a. *Ei nu pot să facă acest lucru*
 they not can SUBJ do.3 this thing
 'They cannot do this'
- b. *Au avut posibilitatea de a face acest lucru*
 have.3PL had possibility-the of to make this thing
 'they had the possibility of doing this'
- c. **Au avut probabilitatea de a face acest lucru*
 have.3PL had probability-the of to make this thing

The third class of nominal predicates, called here "event-classifier nouns" (*acțiune* 'action', *activitate* 'activity', *operațiune* 'operation') take agentive external arguments; the control relation holds between an implicit or explicit argument assigned an Agent role and the null subject of the infinitive. Some of these nominals do not have an Agent/Experiencer argument (like *fapt* 'fact'), and when they take the infinitive, the subject is contextually or arbitrarily interpreted:

- (40) a. *Mă deranjează faptul de a fi nevoit să vorbesc cu toți*
 me disturbs fact-the of to be obliged SUBJ talk.1 with all.MPL
 'It bothers me that I must talk to everybody'
- b. *faptul de a fi certat cu toată lumea*
 fact-the of to be on_bad_terms with everybody
 'the fact of being on bad terms with everybody'

As a conclusion, we can establish the following generalization: the empty PRO subject of the infinitive N-complement is controlled by an explicit or implicit argument of the head N, which, for deverbal nouns, is the same argument which controls into the subordinate clause for the corresponding verbs.

Under the assumption that implicit arguments are projected as empty categories in syntax, the control relation can be represented as a condition on the index of PRO, exactly like in ad-verbal environments.

2.2 Supines in subcategorized PPs

Adnominal supines are most of the time adjuncts. When they marginally appear in complement positions of nominals, they represent in fact subcategorized PPs, where the supine is the complement of a subcategorized lexical preposition.

Therefore, only nominal projections that subcategorize for prepositions allow the supine (see (41)), alongside the Infinitive (see (41e–f)).

- (41) a. *pofta de citit*
 desire-the of read.SUP
- b. *cheful de băut*
 desire-the of drink.SUP
- c. *pofta de lectură*
 desirethe of reading
- d. *cheful de băutură*
 desire-the of drinking
- e. *pofta de a citi*
 desire-the of to read
- f. *cheful de a bea*
 desire-the of to drink

The nouns that don't subcategorize PPs do not allow the supine:

- (42) a. *învoirea să plec / de a pleca* (PRO / Ion)
 permission-the SUBJ leave.1SG / of to leave (PRO/ Ion)
 a'. **învoirea de plecat*
 permission of leave.SUP
 a''. **învoirea de plecare*
 interdiction-the of leaving
 b. *interdicția de a pleca*
 interdiction-the of to leave
 b'. **interdicția de plimbat*
 interdiction-the of walk.SUP
 b''. **interdicția de plimbare*
 interdiction-the of walking
 c. *gândul să plec / de a pleca*
 thought-the SUBJ leave.1SG / of to leave
 'the intention to leave'
 c'. *??gândul de plecat*
 thought-the of leave.SUP
 c''. *?gândul de plecare*
 thought-the of leaving

This selectional restriction differentiating between the supine and the infinitive complement, may be due to the fact that adnominal supines are not clausal constituents in Romanian, unlike infinitives. A further indication of a more reduced structure is the fact that the supine does not license subjects, as opposed to the infinitive, and cannot combine with clausal negation and clitics:

- (43) a. **cheful de cântat Maria*
 desire-the of sing.SUP Maria
 a'. *Am chef să cânte Maria*
 have.1SG desire SUBJ sings Maria
 'I have the desire that Maria should sing'
 b. **cheful de nu cântat*
 desire-the of not sing.SUP
 c. **pofta de-l citit*
 desire-the of-it read.SUP

The absence of a subject position in supines may conflict with the requirement of a control configuration imposed by the head noun. In other words, the impossibility of (42a', b', c') may be due to the fact that the supine construction does not have a controlled subject, as required by the head noun.

Not all nouns which subcategorize for prepositions allow the supine: if the preposition is not *de* – identical to the usual introductory element of the supine, see 3.1 below – the supine is degraded:

- (44) a. *Gândul la mâncare îl face fericit*
 thought-the at food him makes happy
 'The thought of food makes him happy'
 b. **Gândul la mâncat înghețată îl face fericit*
 thought-the at eat.SUP icecream him makes happy

The context of the lexical Preposition is a typical nominal context; in this position, the supine alternates with ordinary Nouns and arguably has a more nominal structure.

The idea that the supine in this construction has a more reduced (clausal) functional structure than the infinitive is also supported by the fact that the prepositional accusative has a marginal status here:

- (45) a. *pofta de citit romane*
 desire-the of read.SUP novels
 b. *?pofta de ponegrit pe președinte*
 desire-the of criticize.SUP DOM president

This seems to suggest that supines are not non-finite clause (with a non-finite T), but rather verbal projections embedded inside a PP. A connection can be made between the PP-supine complements to V_s and abstract nominals and the supine nominalization (cf. Chapter 11 – Deverbal Nouns). However, genuine nominalizations do not allow Accusative objects at all (see Chapter 11 – Deverbal Nouns). The legitimation of objects in the examples discussed here may be due to the Preposition that governs the supine.

3. Non-finite modifiers

As stated in the Introduction of this chapter, non-finite adnominal modifiers are usually supine or (passive) participles; infinitival and gerund modifiers are rare as NP-adjuncts. We treat the supine modifiers in Sections 3.1 to 3.3, and then we briefly approach infinitival and gerund modifiers in Sections 3.4 and 3.5 respectively.

3.1 Distinguishing between supine reduced relatives and prepositional modifiers

Besides some marginal cases of subcategorized PPs with the supine (see 2.2), we can distinguish two classes of supine adnominal modifiers:

- i. object-gap reduced relatives, characterized by a modal force (deontic or alethic); some of them, with lexical negation, take a capacity reading. The “object-only” restriction was interpreted in the literature as a passive reading of the supine in these contexts.
- ii. prepositional modifiers, expressing a Goal.

In the following, we will first provide tests distinguishing between the two classes, and then offer a description of each.

- i. Reduced relatives are characterized by the “object-only” restriction. In the literature, it has been claimed that supines are ambiguous between an active and a passive reading. In the adnominal domain, the presumed “passive” reading arguably corresponds to the afore-mentioned restriction and the “active” reading only characterizes PP modifiers (and arguments, see 2.2 above).

Take the examples in (46), which have a modal meaning. We can observe that the property which modifies the head noun is obtained by relativization of the *object* of the supine: “thing which should be read”, “example which should be retained”, which corresponds to the relativization of the object (Theme). The subject (Agent) cannot be relativized in this construction (see (46b)):

- (46) a. *cărți de citit, exemple de reținut*
books SUP read.SUP examples SUP keep_in_mind.SUP
- b. **oameni de citit*
people SUP read.SUP

The second type, that of PP-modifiers, does not involve object relativization, but expresses the property of being an object used or meant to be used in a certain activity (goal/purpose reading, see (47a)), or of being a circumstance propitious for a certain activity (see (47b)):

- (47) a. *ochelari de citit, mașină de spălat*
glasses of read.SUP machine of wash.SUP
'reading glasses, washing mashine'
- b. *vreme de mers la plimbare*
weather of go.SUP to walk
'(perfect/good) weather to take a walk'

Object-gap relatives allow (for certain speakers at least) *by*-phrases (see (48a)), which are completely excluded for the PP modifiers ((48b–c)).

- (48) a. *probleme de rezolvat de către secretariat*
problems SUP solve.SUP by secretariate
'problems to be solved by the secretariate'
- b. **ochelari de citit de către bătrâni*
glasses of read.SUP by old_people

- c. **mașină de spălat de către gospodine*
machine of wash.SUP by house-keepers

The object-gap relatives have a negative counterpart, built with the prefixal negation *ne-*, also found with adjectives and passive participles. This construction also allows *by*-phrases at least for certain speakers:

- (49) *probleme de neînțeles de către ceilalți*
problems SUP non-understand by the-others
'problems incomprehensible to the others'

- ii. Reduced relatives, as opposed to prepositional modifiers, are characterized by a modal meaning: in the affirmative form, this is deontic necessity ('should', 'must', 'ought to'), which licenses adverbs such as *obligatoriu*, *neapărat* 'obligatorily'. In the negative form, there is a different modal reading, (negated) capacity/circumstantial possibility. PPs only express purpose; they never accept negation, deontic adverbials, modal paraphrases:

- (50) a. *cărți de citit obligatoriu* (deontic necessity)
books SUP read.SUP obligatorily
'books which have to be read'
- b. *exemple de neînțeles* (circumstantial impossibility)
examples SUP not-understand.SUP
= *imposibil de înțeles*
impossible SUP understand.SUP
'incomprehensible examples'
- c. *mașină de spălat (*obligatoriu) / de nespălat* (purpose)
machine of wash.SUP obligatorily / of non-wash.SUP

- iii. Reduced relatives only take the functional *de* as an introductory particle, whereas for supine purpose modifiers the preposition *pentru* 'for' can alternate with *de*, indicating the lexical status of the introductory element:

- (51) a. *exemple de / *pentru reținut*
examples SUP / for keep_in_mind.SUP
'examples to keep in mind'
- b. *ochelari de / pentru citit*
glasses of / for read.SUP
'reading glasses'

The supine inside PPs alternates with a DP (see (52b–c)), including a supine nominalization (see (52c)), which differs from the verbal supine (in (52a)) by taking determiners and marking the object with genitive case instead of accusative:

- (52) a. *un coș de cules mere*
a basket of pick.SUP apples
'a basket for picking apples'
- b. *un coș de piață*
a basket of market
'a basket for the market'
- c. *un coș pentru culesul merelor*
a basket for gather.SUP-the apples-the.GEN
'a basket for picking apples'

The case-assigning properties of the prepositional supine are also peculiar. As also stated in Section 2, the supine does not allow prepositional Accusative – at least for certain speakers – nor accusative clitics; we can describe this property by saying that it assigns *weak case* (i.e. accusative which is neither prepositional nor a pronominal clitic, which is not distinguished formally from the nominative). Note that the object cannot appear at all in the reduced relative, since the reduced relative involves an object gap.

Summarizing, the differences found below prove the existence of two different structures, corresponding to different analyses of the introductory element *de*, which could be assigned the status of a relativizing Comp of a lexical Preposition, respectively.

According to this view, a construction like:

- (53) *carte de citit*
book *de* read.SUP

is structurally ambiguous, having two readings, as shown by the following paraphrases and examples illustrating them:

- (54) a. *carte care trebuie citită* 'book that must/should be read':
(*aceasta este o carte de citit (obligatoriu până mâine)*
(this is a) book SUP read.SUP (obligatorily until tomorrow)
- b. *carte folosită pentru citit* 'book used for reading':
(*aceasta este o carte de citit și nu de colorat*
(this is a) book of read.SUP and not of colour.SUP

In the first reading, the supine is a reduced relative, with a passive reading, associated to a modal force (deontic necessity). In the second one, it is a PP modifier, with an active reading, expressing a goal (purpose).

3.2 Supine prepositional modifiers

According to the analysis sketched above, adnominal supines expressing a Goal are selected by lexical prepositions; the goal meaning is introduced by the preposition and not by the supine verbal projection itself. These PPs do not involve modality and there is no strict relationship between their argument structure and the head N. This does not mean that

the external argument of the NP cannot be coindexed with one of the implicit arguments of the supine; it can for instance be coindexed with the object, and in fact this is often the case, when the natural destination of an object is to be involved in a human action (see (55)); it can also be coindexed with an adjunct – an instrument, see (56a) and (47a), a time or space location (see (56b–c)):

- (55) *medicament de/pentru pus pe arsuri*
medicine of/for put.SUP on burns
'medicine to put on burns'
- (56) a. *medicament de/pentru calmat durerea de cap*
medicine of/for calm.SUP pain-the of head
'medicine for calming the headache'
- b. *zi de făcut plajă*
day of do.SUP beach
'day good for the beach'
- c. *câmp de păscut oile*
field of pasture.SUP sheep.the
'field for sheep pasturing'

In the preceding section, we mentioned the reduced case-assigning properties of the prepositional supine. In fact, there are two situations. On the one hand, there are prepositional supines which assign weak case:

- (57) *coș de cules porumb*
basket of gather.SUP corn
'basket for gathering corn'

On the other hand, there are supines that do not assign accusative case at all and trigger insertion of *de* before a bare noun object (see (58a)); this behaviour suggests that we are dealing with the nominal supine, the one recognized by the ability to take genitives and determiners, as exemplified in (58b) (see the chapter "Deverbal Nouns"):

- (58) a. *întâmplare la cules de porumb / *porumbul / *porumb*
happening to gather.SUP of corn / corn-the / corn
'an event during corn gathering'
- b. *întâmplarea dinainte de culesul porumbului /*
happening-the before of gather.SUP-the corn-the.GEN /
**cules porumbul*
gather.SUP corn-the
'an event before the corn gathering'

3.3 The structure of supine reduced relatives

The supine can occur in reduced relatives, i.e. adnominal (non-finite) clauses that can also appear in the complement position of the copula (unlike full relative clauses).

- (59) a. *carte de citit*
book SUP read.SUP
b. *carte care trebuie citită*
book that must read.PTCP
'book that must be read'
c. *Cartea este de citit*
book-the is SUP read.SUP
'The book is to be read'
d. **Cartea este care trebuie citită*
book-the is which must read.PTCP

Another verbal form which can occur in reduced relatives is the passive/resultative participle, in a structure involving agreement and lacking a complementizer. This construction, illustrated in (1a) at the beginning of this chapter, is briefly discussed in Chapter 7 §1.2.3.

As we have shown above, these structures are subject to a constraint on the relativized argument, being object-gap only:

- (60) a. *cartea de citit*
book-the SUP read.SUP
b. **băiatul de citit*
boy-the SUP read.SUP

The infinitive is excluded in this type of constructions:

- (61) a. **carte de citit*
book to read
b. **om (de) a citi*
man (of) to read

❖ Only very marginally, infinitives can relativize the subject:

- i. *?Asta nu este om (de) a pleca pe vremea asta*
this not is man (of) to leave by weather-the this
'He's not the man to leave by this weather'

These structures are not typical reduced relatives, though. In (i), the complex nominal is in a predicative position. It seems that only bare nouns in predicative positions allow this type of infinitives:

- ii. **Asta nu e un om (de) a pleca pe vremea asta*
this not is a man (of) to leave by weather-the this
iii. *Un om {care să plece / *(de) a pleca} pe vremea*
a man {that SUBJ leaves (of) to leave} on weather-the
asta nu e de găsit.
this not is SUP find.SUP
'A man who would leave in this weather is impossible to find'

- iv. **Iată omul (de) a ne putea ajuta*
here-is man-the (of) to us can help

In examples such as (i), the infinitive is a predicate modifier, applying to the degree of an implicit adjective ("such a _ person"), denoting the consequence of a high degree. There are other situations in which a nominal introduces an implicit scalar property:

- v. *Îmi va trebui o veșnicie ca să beau vinul*
me.DAT will.3SG must an eternity that SUBJ drink.1SG wine-the
care s-a băut aseară
which REFL-has drunk yesterday-evening
'It will take me an eternity to drink the wine that was drunk yesterday evening'

The possibility of appearing in predicative positions, illustrated in (59c) repeated below, clearly distinguishes reduced relatives from (full) relative clauses:

- (62) a. *Cartea este de citit / Cartea este citită*
book-the is SUP read.SUP / book-the is read.FSG
'The book is to be read/The book is read'
b. **cartea este care e de citit / care e citită*
book-the is that is SUP read.SUP which is read.FSG

The restriction on the relativized argument is also an important difference between these two kinds of relative clauses:

- (63) a. *cartea {cu care plecăm / care îmi place / pe*
book-the with which leave.1PL / which me.DAT likes / DOM
care o citesc}
which CL.ACC read.1SG
'the book with which we're leaving/that I like/that I read'
b. *cartea {*de plecat (cu) / *de plăcut / de citit}*
book-the SUP read.SUP (with) / SUP like.SUP / SUP read.SUP

Based on these facts, we do not analyze reduced relatives as relative CPs, but as smaller (lower) projections, more precisely small clauses, for which we use the label PredP (predicate phrase), assuming that the subject and the predicate are related by a Pred head. In the postcopular use, the subject of the PredP is the subject of the clause, and PredP is the complement of the copula. In the adnominal use, the subject is the relativized argument, acting as a null relative pronoun/operator.

As we have already seen, there is evidence that the supine in the reduced relative construction is passive (see the allowance of *by*-phrases). We can thus assume that its internal argument (the Theme), obligatorily projected, is raised to the subject position, SpecPredP.

In the adnominal use, this argument has a relative feature and raises to SpecPredP in order to establish the predication relation.

- (64) *ipoteza_i [_{PredP} Op_i de verificat e_i]*
 hypothesis-the SUP verify.SUP

The relativized object must be the object of the supine and cannot be the object of a verb further embedded under the supine, which distinguishes these structures from English modal infinitival relatives:

- (65) a. *??Iată o carte de spus părinților că o citești*
 here-is a book SUP say.SUP parents-the.DAT that it read.2SG
 b. **Iată o carte de spus părinților că citești*
 here-is a book SUP say.SUP parents-the.DAT that read.2SG
 c. Here's a book to tell your parents that you're reading

In conclusion, we assume the structure in (66) for the reduced supine relative clause:

- (66) *o carte_i [_{PredP} [_{Spec,PredP} PRO_i Pred [[_{Infl/Mood}⁰ de] citit t_i]]]*
 a book SUP read.SUP

3.4 Infinitive adnominal modifiers

Only complex event nominalizations may take infinitival adjuncts introduced by a preposition, expressing Purpose:

- (67) a. *scufundarea vasului pentru a obține asigurarea*
 sinking-the ship-the.GEN for to collect insurance-the
 'the sinkink of the ship in order to collect the insurance'
 b. *cercetarea magistraților pentru a se face curățenie*
 examination-the triers-the.GEN for to REFL make clean
în justiție
 in justice
 'the examination of the triers in order to purge the judicial system'

An apparent exception can be found in titles, like the (68a–b). But one can say that such titles are elliptical propositions, implying an elliptical V, like 'this is...' or 'we present you...':

- (68) a. *o gogoasă pentru a agăța mai mulți clienți*
 a taradiddle for to attract more much clients
 'a taradiddle to attract more clients'
 b. *primii pași pentru a învăța limba franceză*
 first-the steps for to learn language-the French
 'the first steps for learning French'

In other cases, what seem to be infinitival modifiers in the DP are in fact VP adjuncts. The presence of such *pentru* 'for' + *Inf* phrases is allowed by an explicit or an implicit V. This is proven by comparing the grammaticality status of (69a) with that of (69b–c). In (69b–c), the Purpose modifier is surely adnominal, being contained within the subject DP. Therefore, the examples are marginal:

- (69) a. *(Iată, avem...) un cuțit pentru a tăia pâinea*
 (look, have.1PL) a knife for to cut bread-the
 '(Look, we have...) a knife for cutting the bread'
 b. *?Un cuțit pentru a tăia pâinea ni se va*
 a knife for to cut bread-the us.DAT REFL will
aduce imediat
 bring immediately
 'A knife for cutting the bread will be brought to us immediately'
 c. *?Un cuțit pentru a tăia paginile îți va fi pus la*
 a knife for to cut pages-the you.DAT will be put to
dispoziție mâine
 disposal tomorrow
 'A knife for cutting the pages will be placed at your disposal tomorrow'

The normal construction used to express Purpose/Goal modifiers inside DPs is the supine, as we have seen in 3.1.–3.2 above:

- (70) *Un cuțit de tăiat paginile îți va fi pus la*
 a knife SUP cut.SUP pages-the you.DAT will be put to
dispoziție mâine
 disposal tomorrow
 'A knife for cutting the pages will be placed at your disposal tomorrow'

3.5 Gerund adnominal modifiers

Another non-finite construction that can, exceptionally, appear in an adnominal position is the gerund, or more precisely, a gerundial clause, like in (71).

- (71) *Făcuse o armă politică din teama transmițându-li-se*
 make.PLPF.3SG a weapon political from fear-the transmitting-CL.DAT-REFL
tuturor și neiertând pe nimeni.
 all.DAT and not-forgetting DOM nobody
 'He had made a political weapon from the fear that was propagating to everybody and didn't spare anybody'

In its adnominal use, the gerund introduces a subject-gap non-finite relative (as opposed to the supine which, as explained above, is object-gap). The existence of a higher functional layer than in supines is proven by the possibility of clitics (see (71)). Note however that it

takes the negation *ne-* (see the second gerund in (71)), like the supine and unlike the infinitive. The distribution of these constructions is however highly restricted and confined to the formal register.

In Romanian, this use of the gerund is very restricted, as we will show in §3.5.3 below. This property distinguishes Romanian from other Romance languages such as French or Italian, where the adnominal uses of present participles are current:

- (72) a. *les vieilles personnes habitant dans cette ville ont reçu*
the old persons living in this town have received
une allocation (French)
a benefit
- b. *??persoanele în vârstă locuind în acest sat au primit*
persons-the in age living in this village have received
o alocație
a benefit

In fact, this use of the gerund has been borrowed by Romanian from the western Romance languages, during the time of the ‘modernization’ of Romanian by massive Romance and Latin borrowings. This also explains the bookish character of this construction.

3.5.1 Identifying adnominal gerunds

It is quite difficult to set apart truly adnominal gerunds, because most of the time the gerund forms small clauses attached outside the nominal domain: thus, in (73) [*un copil*] and [*o vacă*], respectively, are the subjects of the gerunds, with which they form small clauses that occupy the subject position of the main clause:

- (73) a. *un copil râzând este o priveliște încântătoare*
a child laughing is a sight marvelous
‘A laughing child/A child laughing is a marvelous sight’
- b. *o vacă zburdând pe pășune sugerează un mediu sănătos*
a cow capering on pasture suggests an environment healthy
‘A cow capering on the pasture suggests a healthy environment’
- a’. [[_{PredP} [un copil] [Pred⁰ râzând]]] [este o priveliște încântătoare]

In (74a–b), we see gerund small clauses attached as adjuncts to the main clause; in (74a), the small clause has a PRO subject controlled by an argument in the main clause (the subject).

- (74) a. *PRO_i Fiind bolnavă, Maria_i nu a putut veni.*
being sick, Maria not has could come
‘Being sick, Maria couldn’t come’
- b. *Maria/Eu fiind bolnavă, nu s-a mai ținut petrecerea*
Maria/I being sick, not REFL-has still hold party-the
‘Maria/Me being sick, the party didn’t take place’

In the example in (74b), it is clear that we are not dealing with restrictive modification inside the DP, at the NP-level, because the proper name and the pronoun are full DPs. This test also shows that in the following examples the gerund is not adnominal, but rather the predicate of a small clause introduced by *cu* and taking the pronoun/proper name as the subject:

- (75) a. *o poză cu el alergând*
a picture with him running
‘a picture of him running’
- b. *Am ales fotografiile cu Dan zâmbind.*
have.1 chosen pictures-the with Dan smiling
‘I chose the pictures with Dan smiling’

The test that the gerund is adnominal is the existence of a restrictive interpretation (e.g. paraphrase by a restrictive relative clause), which is best visible in definite DPs. Besides (71), a clear restrictive interpretation can be seen in the examples (76), which display adnominal gerunds inside a DP with N-ellipsis:

- (76) a. *Dintre fotografii, le-am ales pe acelea aparținând*
among pictures, AC.CL-have.1 chosen DOM those belonging
unchiului meu.
uncle-the.DAT my
‘Among the pictures, I chose those belonging to my uncle’
- b. *Dintre fotografii, le-am ales pe cele aparținând*
among pictures, AC.CL-have.1 chosen DOM those belonging
unchiului meu.
uncle-the.DAT my

Another test for the adnominal status is the possibility of coordination with adnominal modifiers such as adjectives and relative clauses:

- (77) a. *Ne vorbește un om căutând liniștea.*
us speaks a man searching calm-the
‘A man seeking tranquillity is talking to us’
- b. *Ne vorbește un om obosit, ajuns la capătul puterilor și*
us speaks a man tired, arrived at end-the powers-the.GEN and
căutând liniștea.
searching calm-the
‘A tired, exhausted man seeking tranquillity is talking to us’
- c. *Ne vorbește un om căutând liniștea și care nu mai*
us speaks a man searching calm-the and which no longer
știe ce să facă.
knows what SUBJ does
‘A man seeking tranquillity and no longer knowing what to do is talking to us’

The gerund has to be distinguished from its adjectival counterpart, the so-called “agreeing gerund” (Example: *crescând* ‘increasing’: *emoție crescândă* ‘increasing emotion’), which is a prototypical adjective, with some peculiarities due to its verbal origin (impossibility of degree modifiers) but without other syntactic verbal properties. This pattern is, however, totally unproductive. The verbal gerund also differs from adjectivals, besides the lack of agreement with the nominal head, by the fact that it cannot appear in predicate position, after a copula.

- (78) a. *Copilul este sănătos*
child-the is healthy
b. **Copilul este alergând*
child-the is running

3.5.2 Non-finite restrictive vs. appositive relatives

Like the relative clauses to which they are equivalent, the gerund structures are most of the time *integrated*, restrictive modifiers inside NP (being restrictive, they are inside the complement of D), but can also function as parentheticals, appositions, i.e. non-restrictive modifiers separated by comma, adjoined to a full DP. However, gerunds outside DP are more often VP- or IP- adjuncts, with “adverbial”, “circumstantial” readings, because the gerund, as a non-finite form, is temporally dependent on the main clause. This is the reason why truly “appositional” gerunds are only found with individual-level properties, as in (79b):

- (79) a. *Mi-a oferit un catalog cuprinzând tot*
me.DAT-has offered a catalogue containing everything
ce căutam.
that search.IMPF.1SG
'(S)he offered me a catalogue containing everything I was looking for'
b. *Mi-a oferit catalogul firmei, cuprinzând*
me.DAT-has offered catalogue-the firm-the.GEN containing
tot ce căutam
everything that search.IMPF.1SG
'(S)he offered me the catalogue of the firm, containing everything I was looking for'

3.5.3 Semantic-aspectual constraints

As we have mentioned, the adnominal gerund is highly restricted, first of all being confined to a formal register. But there are other restrictions, of an aspectual nature. Thus, the adnominal gerund is almost exclusively found with atemporal, i-level predicates, such as verbs denoting abstract relationships (*privind* ‘regarding’), dimensional properties (*măsurând* ‘measuring’, *cântărind* ‘weighing’), constitution and possession (*având* ‘having’, *cuprinzând* ‘including’, *aparținând* ‘belonging’), temporal localization (*datând* ‘dating’).

- (80) a. *Au găsit amfore datând din secolul al II-lea.*
have found amphors dating from century second
'They found amphors dating back from the second century'
b. *Mai cunosc trei hoteluri purtând același nume*
more know.1SG three hotels bearing same name
'I know other three hotels bearing the same name'

The category may give rise to idiomatic structures – *privind* ‘regarding, concerning’, which can be analyzed as a preposition.

- (81) *S-au prezentat deciziile privind premiarea.*
REFL-have presented decisions-the concerning prize-awarding-the
'The decisions concerning the awards were announced'

The adnominal gerund may also be licensed by the habitual interpretation, which yields an i-level predicate:

- (82) *Mi-a povestit despre trompetele anunțând plecarea.*
me.DAT-has told about trumpets-the announcing departure-the
(= *trompetele care anunță plecarea*)
trumpets-the which announce departure-the
'(S)he told me about the trumpets that announced the departure'

A possible explanation of this aspectual constraint is that the gerund has only a dependent tense (does not have independent temporal reference), which is set relative to the matrix clause, and in the case of stage-level properties this may lead to ambiguity between adnominal gerunds and temporal small clause adjuncts. If the property expressed by the verb is atemporal, i-level, a temporal adjunct interpretation is excluded, making the adnominal construal easier to get.

The verb *a fi* ‘be’ does not appear as an adnominal gerund (see (83)), the same situation is found in French and Spanish):

- (83) **Despre casele {fiind la noi / fiind vechi} nu a*
about houses-the being at us / being ancient not has
povestit nimic.
told nothing

To sum up, adnominal gerunds usually express i-level properties, and sometimes have a habitual reading; this property is connected to the absence of an independent tense in the gerund.

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Epistemic Modality in Romanian: the role of BE

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This paper contributes to the view that the epistemic/root distinction in modals across languages relies on structural differences. I will address the behavior of Romanian modals in combination with perfective Aspect, in comparison with other Romance languages (French, Spanish and Italian). It is a well-known fact that Romance languages, inasmuch they distinguish between perfective and imperfective Aspect, have ambiguous modals in the perfective; they allow either the root or the epistemic reading. In Romanian the root, veridical reading is triggered with perfective on the Modal. I will claim that the explanation for that relies in the fact that Romanian Modals have bi-clausal structures. I will also address the conditions in which the epistemic readings can arise, and provide an explanation of their preference for embedded verbs (or Small Clauses) denoting stative situations, further developing the idea of a structural difference between the relevant readings. I will also propose a possible connection between epistemics and evidentials in Romanian.

1. Introduction

Romanian Modals – in particular CAN – and Romanian modal *presumptive* periphrases have properties that allow for a better understanding of syntactic mechanisms at work in epistemic readings.

1.1 Ambiguities of modal verbs relying on scope-reordering of Asp and Mood

It has been shown that cross-linguistically, perfective aspect affects the veridicality of the event, inducing an Actuality Entailment [AE] in languages that distinguish between perfective and imperfective Aspect (cf. Bhatt (1999), Condoravdi (2002), Demirdache & Urribe-Extbarria (2005), Laca (2005), Hacquard (2006), Borgonovo (2008)). Perfective modals allow for both epistemic and root readings, as illustrated in (1) for French.

(1) *Pierre a pu ouvrir la porte*

→It is possible that Pierre opened the door (OK if he didn't)

→Pierre managed to open the door (*he didn't)

A contrast arises between Romanian and other Romance languages with respect to the optionality of AE in the context of perfective modals, cf. (2); Romanian forces the AE in those contexts.

- (2) a. *Petre a putut să deschidă ușa* (perfective; ability reading)
Peter has could Subj open door-the
b. *Petre a putut deschide ușa* (perfective; ability reading)
Petre has could open door-the
→ *It is possible that P opened the door
→ P managed to open the door

A first question that naturally arises is why Romanian should lack scope-reordering. I will argue that this is so because of the bi-clausal structure of Romanian modals, especially CAN, and that Bhatt's (1999) and Hacquard's (2006) analyses should be completed with one more parameter, the bi-clausal vs. mono-clausal construction for modal verbs. The monoclausal construction allows the modal to be inserted at different levels in the sentence, hence the ambiguous readings. This is confirmed by the fact that, in some contexts, the epistemic reading is allowed with the monoclausal construction of CAN in the languages where, like Romanian, the two possibilities exist. The particular contexts where the relevant reading appears indicate that the epistemic operator still has to scope over a proposition. In structural terms, the category of the complement would be in this case CP/ForceP, whereas in the root case, it would probably be a mere vP.

1.2 An 'evidential' periphrasis in Romanian : the presumptive

Romanian has another way of expressing epistemic modality and evidentiality, namely the presumptive paradigm, illustrated in (4) (cf. Irimia 2008). The Romanian presumptive can be compared with the French modal future, illustrated in (3), or to Italian and Spanish progressive, but it only has the modal reading.

- (3) *Il aura lu le livre*
he may have read the book
- (4) a. *o fi citind cartea*
will be reading book-the
"he may be reading the book"
b. *o fi citit cartea*
will be read book-the
"he may have read the book"

On the basis of the Romanian data investigated here, and of the possible parallelism between the epistemic reading of modals and the periphrastic presumptive, I will claim that in both types of constructions (the first being bi-clausal and the second mono-clausal), epistemic modality relies on a syntactic structure in which the modal is inserted high, and on a stative semantics.

1.3 Goals

This paper aims, on the first hand, at supporting a multiple-layered analysis of modality in the context of bi-clausal vs. mono-clausal constructions of Romanian CAN. Secondly, it will investigate the role of BE in epistemic contexts; show that the high position of the modal and stativity (BE-insertion) play a crucial role in the epistemic constructions. Finally, it will show that there is a connection in terms of structure between epistemic and evidential construals.

2. Ambiguity of perfective modals in Romance

2.1 Modals and implicatives

Karttunen (1971) observes a difference in interpretation between modals and what he calls implicatives. In (5), the modal CAN does not entail the realization of the event denoted by the embedded verb, whereas the implicative *manage* in (6) does:

- (5) *He could open the door* -/→ he opened the door
(6) *He managed to open the door* → he opened the door

Bhatt (1999) and Hacquard (2006) observed that languages with perfective / imperfective morphology have 'implicative' constructions with modals in perfective sentences.

Let me first summarize the types of readings allowed by modals.

Imperfective modals allow for epistemic vs root (abilitative) readings, which are all averidical readings (cf the possibility to continue with "in fact, (s)he didn't")

- (7) a. *Pierre pouvait gagner la course (ou ne pas la gagner)*
b. *Pierre pouvait gagner la course (il avait la meilleure voiture)*
- (8) a. *Pierre pouvait / devait gagner la course*
b. *Pedro podia / debia ganar la carrera*
- (9) a. *Pierre peut / doit gagner la course* (epistemic, circumstantial)
b. *Pedro debe ganar la carrera* (idem)

Perfective modals allow for root and epistemic readings. Veridicality arises in the root reading; note that the epistemic reading in this case is the marked, not the default option:

- (10) a. *Pierre a pu / a dû gagner la course* (epistemic/root)
b. *Pedro ha podido / ha debido ganar la carrera* (epistemic/root)
c. *Pedro pudo / debio ganar la carrera* (epistemic/counterfactual)
- (11) a. *Pierre a pu_{ROOT} gagner la course #et il ne l'a pas gagnée.*
b. *Pierre a pu_{EPIST} gagner la course comme il a pu ne pas la gagner.*
- (12) *Pierre a dû_{ROOT} sortir #mais il n'est pas sorti.*

In the case of the epistemic reading, the T/Asp is read on the lower verb, and the Modal Evaluation Time (MET) corresponds to the Utterance Time. In the case of the root reading, the MET is prior to the Event Time; T/Asp is read on the modal. The root reading yields A(ctuality) E(ntailment), hence the ambiguity of perfective modals in those languages that distinguish between perfective and imperfective past.

In previous analyses, this situation has been explained by scope-reordering, triggered by Asp's raising at LF (Hacquard (2006)), by raising of the Modal (Cinque 1998), or by a difference in height (Stowell (2004), Borgonovo (2008), Zagana (2008)). For reasons of space, I will not discuss these analyses and their shortcomings. The data analyzed below bring support for the latter type of analysis, in

which the different readings are triggered by the level of insertion of the Modal in the structure.

2.2. Bi-clausal constructions and unambiguous perfect

As pointed out above, Romanian do not show the same systematic ambiguity as the other Romance languages¹: only root readings are available for perfect modals, as shown by the (obligatory) AE; epistemic readings are absent in (2b)/(13) with the perfect (compus) modal. Asp and Mood do not interact in the same way in French and Romanian – a situation not predicted by Bhatt (1999) and Haquard (2006).

- (13) a. *Petre a putut să deschidă/ deschide ușa #și n-a deschis-o.* (only root)
Peter has could sbj open / open.Inf door-the and did not open it
“Peter could have opened the door (and he didn’t)”
b. *Petre a trebuit să deschidă ușa #și n-a deschis-o.* (only root)
Peter has musted sbj open door-the and did not open it
“Peter must have opened the door and he didn’t”

Borgonovo (2008) establishes a classification of the position of Aspect connected with the kind of modal reading obtained. Thus, the order Mood>T>Asp corresponds to the epistemic reading; the ordering T>Asp>Mood corresponds to the implicative reading, and T>Mood>Asp corresponds to the counterfactual reading, that I do not discuss here.

In (14) vs (15), we see that languages like French and Spanish may have “opaque” morphology, in that they allow Asp of the lower verb to be read on the Modal, whereas Italian seems by default not to have this possibility. Romanian is like Italian, as illustrated in (16).

- (14) FR : Pierre a pu sortir. = P. peut être sorti (epist)
SP : P. pudo salir = P. puede haber salido. (epist)
IT *P. è potuto uscire; P. può essere uscito (epist)
Mod T Asp
- (15) FR : P. a pu sortir (root)
IT : P. è potuto uscire (root)
SP: P. pudo salir (root)
T Asp Mod
- (16) a. **P. è potuto uscire; P. può essere sortito*
b. **P a putut să plece; P (se) poate să fi plecat*
P has could sbj leave; P (se) can sbj be leaved

¹ Note that otherwise, Romanian Modals [RM] exhibit the same ambiguities as modals in other languages (in the present and the imperfective):

- (i) *Petre poate/putea imita / să imite orice sunet; e foarte talentat* (ability)
Petre can/could imitate any sound, he is very talented
(ii) *Petre poate/putea imita / să imite pe oricine; n-o să-l pedepsim* (deontic)
Petre may/could imitate anyone, we will not punish him
(iii) *Petre poate/putea fi / să fie beat la ora asta /aia* (epistemic)
Petre may/could be drunk by now/then
(iv) *Poate să plouă mâine/ a doua zi* (epistemic)
it may rain tomorrow/ the next day

Romanian *a putea* ‘can’ shares with a larger class of Italian modal and aspectual verbs the choice between the mono-clausal and the bi-clausal construction (Rizzi’s (1982) restructuring). Romanian Modals combine with subjunctive, with one exception: *a putea* ‘can’, which still has the (bare) infinitive/subjunctive alternation (Dobrovie-Sorin (1994), Avram & Hill (2007), Hill (2008)), as illustrated below.

- (17) a. *Ioana poate să plece*
Ioana can Subj.leave
b. *Ioana poate pleca*
Ioana can leave.Inf
- (18) a. *Ioana trebuie să plece*
Ioana must Subj.leave
b. **Ioana trebuie pleca*
Ioana must leave.Inf

A putea combining with Bare Infinitive shows ‘restructuring’ properties, with obligatory clitic climbing indicating that the modal and the infinitive form a V-complex (19a-b); the VP status of the complement of *a putea* is clearly shown by the absence of the inflectional infinitival particle [a] (19c) and the impossibility to insert the perfect auxiliary *fi* ‘be’

- (19) a. *Petre (nu) (o) poate (*nu) (*o) citi*
Petre (not) (her) can read
b. *Petre (nu) (se) poate (*se) rățaci*
Petre (not) (SE) can lose
c. **Petre nu se poate a rățaci*
Petre not SE can (to) lose
d. **Petre nu se poate fi rățacit*
Petre not SE can BE lost

Subjunctive complements of Modals realize iredis ForceP/MoodP; they host pronominal clitics, negation, auxiliaries, as illustrated below:

- (20) *se poate* (impersonal)
se can ‘it is possible that’
a. ...să (nu)-l iau / să (nu) le iei / să (nu) le ia...
part_{SUBJ} (not) cl take_{1sg/2sg/3sg}
b. ...să (nu) le fi luat
part_{SUBJ} (not) cl have taken

On the basis of the correlation between bi-clausal structure and unambiguous epistemic meaning, the following hypothesis can be formulated:

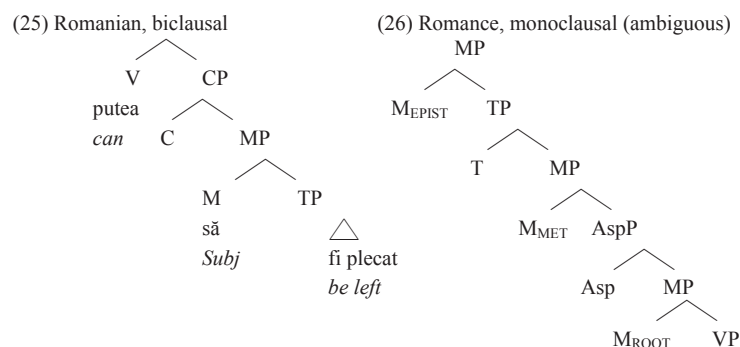
- (21) The availability of the monoclausal construction is a condition for the ambiguity of perfective modals.

This hypothesis is supported by the fact that epistemic-only *a putea* ‘may/can’ and *a trebui* ‘must’ in bi-clausal constructions always disallow the perfective, cf. (22)². The epistemic meaning is only possible with the perfective on the embedded verb, as shown in (23-24).

- (22) a. *Trebuie / *a trebuit că știa el ceva*
it-must/ has musted that knew he something
b. *Poate / *a putut să vină de la o clipă la alta.*
he-can / he could Subj come from a moment to another
- (23) a. *Petre poate / putea să fi luat trenul*
Petre can / could Subj. aux taken the train
b. *Petre trebuie / trebuia să fi luat trenul*
Petre must / must.Ipf Sbj aux taken train-the
“Petre must have taken the train”
- (24) a. **Petre a putut să fi luat trenul*
b. **Petre a trebuit să fi luat trenul*
“Petre has could / must.ipf have taken the train”

2.4. Towards an analysis: bi-clausal epistemic construction

The analysis I would like to propose goes in the following terms. Modal constructions are multiple-layered: the level of insertion of the modal (basically corresponding to CP/TP, AspP, vP) determines the interpretation. Since Romanian modals have bi-clausal constructions, the “transparent morphology” condition follows: separate inflectional levels are present on the modal as well as on the lower verb, obeying semantic restrictions (epistemics cannot be in the scope of the perfective). In the (Romance) epistemic construal, the modal is inserted above T; in Romanian, it can be inserted clause-externally (as a main clause).



² Avram (1999) suggests that this has to do with the aspectual nature of those verbs. I think this is on the right track; epistemic modals reject perfective morphology but are forced to bear it when there is no other support for it, i.e. when they appear in monoclausal constructions.

2.5. Some more arguments for the clausal-external position of epistemics

Romanian data clearly show the ‘monadic’ character of epistemic modals: they have only one argument, a full sentence. The impersonal construction, with the invariable, impersonal construction *se poate*, is always tied to the epistemic reading. In Romanian, in a structure like (27), the DP *Maria* would be in a Topic position, where it raised from the subject position of the embedded subjunctive clause.

- (27) *(Maria) SE poate să fi luat trenul*
Mary SE can să have take the train

The behaviour of *a trebui* goes in the same direction; since it can only have the bi-clausal (+impersonal) structure, it always rejects the perfective in the epistemic meaning:

- (28) a. *Maria a trebuit să ia trenul* (deontic)
Mary has must to take the train
“Mary had to take the train”
b. *A trebuit ca Maria să ia trenul* (metaphysical)
It musted that Mary take the train
“It was necessary that Mary take the train”
c. *(Maria) trebuie că (Maria) a luat trenul* (epistemic).
(Mary) has that (Mary) has taken the train
d. *Maria trebuie să fi luat trenul* (epistemic)
Mary must Subj be taken the train
“Mary must have taken the train”

Invariable *poate & trebuie* with indicative clauses developed into epistemic adverbial operators taking scope over the whole clause:

- (29) a. *Poate că Petre s-a răătăcit*
maybe that Peter se-has lost
b. *Trebuie că Petre s-a răătăcit*
mustbe that Peter se-has lost

The same connection between the epistemic reading and the impersonal construction holds in the case of Italian *potere*, unlike *dovere* (cf. Rocci (2005)):

- (30) a. *Devono essere le cinque, visto che si sta facendo buio.*
It must be five p.m., given that it's darkening.
b. *?Possono essere le cinque, visto che si sta facendo buio.*
It may be five p.m., given that it's darkening.
c. *Forse/ può darsi que sono le cinque, visto che si sta facendo buio.*

3. Monoclausal constructions and epistemic readings

3.1. A prediction and a further observation

If the present analysis is on the right track, the ambiguity of modals in the perfective is expected in languages where modals take monoclausal constructions. Since

Romanian has access to the two types of constructions, the ambiguity should arise in the monoclausal construction only³.

We saw that Romanian *putea* 'can' also enters monoclausal constructions with bare infinitives; the prediction would be that, in this case, *a putea* allows epistemic readings in the perfect, and this prediction seems to be borne out, cf (31)a-b. This seems however to depend on the kind of embedded infinitive: there seems to be a preference for unaccusatives, since in (31)c involving an unergative activity, the entailment reading is again the only one available. Note the obligatory climbing of the clitic *se* (the hallmark of the impersonal epistemic construal).

- (31) a. *Petre s-a putut rătăci*
 Petre se-has could lose
 "Petre might be lost"
 b. *S-a putut întâmpla ceva rău.*
 se-has could happen something bad
 "something bad might have happened"
 c. *Petre a putut cânta*
 Petre has could sing
 "Petre was able to sing"

This is a new observation that I would like to further question in the following section. It would be indeed interesting to know why unaccusatives should favor epistemic readings in the monoclausal construction, and what this tells us about the structure associated with these readings.

3.2. Epistemic readings, unaccusatives and (may)BE

First, note that unaccusatives do not normally give rise to root readings:

- (32) a. *#les feuilles peuvent tomber (ou ne pas tomber)*
 the leaves can fall (or not fall)
 b. *#ça peut arriver (ou non)*
 this can happen (or not)

Passives are unlikely with root readings too:

- (33) a. *Jean peut être invité à la fête (*Jean est capable d'être invité à la fête)*
 John can be invited to the party (John is able to be invited to the party)
 b. *Le livre peut être lu (*le livre est capable d'être lu)*
 The book can be read (the book is able to be read)

Interestingly, there is a difference between s-level and i-level predicates in Small Clauses with respect to epistemic vs. ability readings; i-level predicates only allow epistemic readings, whereas s-level predicates allow both:

- (34) a. *Jean peut être intelligent (ou ne pas être intelligent)*
 John can be intelligent (or not be intelligent)

³ In Italian, the possibility of clitic climbing distinguishes the monoclausal – restructuring construction from the biclausal one (Giuliana Giusti, p.c.). The bi-clausal construction (without clitic climbing) seems to be associated to the epistemic meaning. Further investigation is needed to see how the restructuring construction behaves.

- b. *Jean peut être malveillant (il est capable d'actes malveillants)*
 John can be evil (he is capable of evil actions)

The types of predicates allowing epistemic readings in monoclausal constructions in Romanian look like a natural class. However, I would like to argue that there is more to be said. Actually, I propose that the reason why these predicates in the monoclausal construction favor epistemic readings is that they are statives, or allow stativizers; and BE is such a stativizer. In a sense, the three types of predicates having this property require BE-insertion at some level.

This intuition meets the one of Veters (2004), who notes that the epistemic modality is a modality of BE, whereas root modality is a modality of DO. The fact that agentivity is connected to ability readings and raising verbs (which modify the relation between what is and what is apparent) to epistemic reading has often been noticed. See also Copley (2008) for the idea that epistemics need statives and reject eventives.

In a nutshell, I propose that epistemic operators select (an overt or covert) BE + propositional content, whereas root modals select activities (agentive vPs). Further support for this idea comes from the fact that BE lexicalizes in clausal adverbs like *maybe*; like the clitic *se* in the impersonal construction, it modifies the th-grid of *can*:

- (35) a. *peut-être (il se peut) qu'il viendra*
 can-be (it se can) that he come.Fut
 b. *maybe he will come*
 c. *Could be !*
 d. *se poate !*
 se can

Another interesting fact concerns special forms of epistemic *can* in Italian. In Italian (36)b, we can notice a formal difference between the full *potere* verb and the truncated one. A similar phenomenon seems to exist in Romanian, and the truncated form also appears with the epistemic reading rather than with the root one (cf 36a-b); moreover, exclusive epistemic forms do not allow truncation, as shown in (37)c.

- (36) a. It *potere* → *può (darsi, essere)*
 b. Rom *putea* → *poate (+ că Ph) / poa' să*
- (37) a. *Poa' să plouă*
 can to rain
 'it may rain'
 b. *??Petre nu poa' să facă tema la matematică*
 John not can to do homework at mathematics
 c. **Poa' (poate) că va ploua*
 can that will rain
 maybe it will rain
 d. **Poa' ploua*
 can rain.Inf

The data strongly suggest that epistemic CAN appears in a truncated form when it is licensed by the insertion of BE and correspondingly acquires an epistemic meaning. I would like to propose that this insertion can be overt or covert. If BE is overt on

'can', the combined form may appear outside CP/TP (cf. *peut-être que*). If BE is covert on 'can', like I suggest it is the case for Romanian, the modal combines with a Mood/TP or attracts the Mood marker forming a verbal complex (*poa' să*). Further investigation is needed to establish the exact position of the modal with respect to the embedded verb. For now, I take these data as an indication for the presence of a covert BE in epistemic contexts.

On the basis of the above observations, I propose the following analysis for monoclausal CAN in Romanian:

(38) Epistemic construal: M>BE+SC

(39) Root construal: M>VP_{agentive}

This proposal is coherent with the longstanding intuition in the literature that the epistemic construal is monadic, whereas the root one is dyadic (involves two arguments).

3.3 More evidence from evidentials: BE in the Romanian presumptive

An interesting connection can be made between modal epistemic verbs and a modal periphrase encoding evidentiality. Irimia (2008) shows that evidentiality in Romanian is modal, and not a conversational implicature. It may appear as a side effect of epistemic construals with modal *a putea* 'can' & *a trebui* 'must' and in the presumptive paradigm, a marker of Indirect Evidentiality.

I will not go into an analysis of evidentiality nor try to decide if epistemics and evidentials have to be kept distinct or rather as pertaining to the same category. I will try to put forward some common properties between the modal and the periphrastic construction, which happen to admit the both readings.

Below, I illustrate the general format of the presumptive paradigm:

(40) o fi citind / citit
MOOD + BE.Inf + GER (Present) / PST.PRT (Past)
'(he) might read (present presumptive) / he might have read (past presumptive)'

The "Mood" marker may be an inflected one (i.e., a future or a conditional particle) or an uninflected one (a subjunctive particle)⁴. The presumptive though distinguishes itself from the other corresponding irrealis paradigms by its meaning (which is not a futural or a conditional one) and formally by the fact that it involves an aspectual distinction reflected in the present vs. past participle alternation.

My concern here is that the presumptive, as well as the whole irrealis paradigm of the Romanian verbal system, involve BE as a perfective auxiliary⁵. Note that there is no have/be alternation in the Romanian indicative perfect. BE in these contexts has been previously analyzed as a perfect auxiliary (D'Hulst et al (2004)) or as bearing modal and tense features (Avram & Hill (2007)), both analyses coming with different problems. A new and interesting analysis is developed by Irimia (2008), which offers a modal analysis of Indirect Evidentials in Romanian, adapting Izvorski's (1997)

⁴ See Irimia (2008) for a detailed presentation of the Romanian presumptive.

⁵ Notice that the position of BE corresponds to the one that BE takes in the parallel (i.e., conditional, futural or subjunctive paradigm), which can be shown by the different position of the clitics, high with the former and low with the latter (subjunctive) markers.

analysis for present perfect. In her terms, FI 'be' spells out the C[onsequent]S[tate] of (subpart of) an eventuality, as in (41).

(41)

I take this semantic analysis to be in the same spirit as the one in the present paper. BE acts like a stativizer from a semantic point of view. Intuitively, it seems to me to mean "is true", "holds", and probably does the same job in 'maybe' adverbials combining with a CP/proposition.

The question that I would like to raise now is what is the syntactic role of BE. In this paper, I take BE insertion to provide a raising structure in epistemic-evidential constructions. It plays the same role in both constructions with *a putea* and with the presumptive, which both have been argued to express evidentiality. The origin of this construction is actually a (popular) modal future of BE combined with a propositional content.

(42) a. *cine-o fi?*
who-aux be?
"who could (that) be?"
b. *o fi mama*
would be mother
"it would be my mother"

(43) A. *Cred că P [Paris 8 e în grevă/ a venit mama]*
I-think that P [P8 is on strike/ has come mother]
B. *O fi!*
"it could be so, maybe"

It is interesting to notice that in (3) and (4) in the Introduction, here above (44)-(45) (only) the future of BE in French seems to induce epistemic/evidential readings:

(44) *Il aura lu le livre / #il lira le livre* (wrong in the modal reading)

(45) a. *o fi citind cartea*
will be reading book-the
"he might be reading the book"
b. *o fi citit cartea*
will be read book-the
"he might have read the book"

4. Still an open question: the control vs. raising distinction

The analysis sketched above for Romanian monoclausal constructions reminds the control vs. raising debate in the syntax of modals, which I think could be reopened. Ruwet's data (1983) discussed by Rooryck (1992) bring evidence that the modal ambiguity may be a structural one. The modal flavor associated to the expletive construction (46b) is an evaluative, attitude-like meaning. Raising diagnostics come e.g. from idiom chunks (cf. (46c)).

- (46) a. *cet home peut vous surprandre* (ambiguous)
 this man can you surprize
 "this man can surprize you"
 b. *ça peut vous surprandre*
 it may surprize you
 c. *justice peut être rendue*
 justice may be done

Interestingly, this contrast also shows up in the case of other verbs, being associated with a change in the verb's meaning, like *menacer* or *promettre* which exhibit an alternation between a control and a raising behavior.

- (47) a. *le toit de la cathédrale menace de tomber*
 the roof of the cathedral threatens to fall
 b. *ce jeune homme promet d'être un grand pianiste*
 this boy promises to be a great pianist

Interestingly, the high, "modal-flavoured" reading is incompatible with the perfective:

- (48) a. *le toit de la cathédrale *a menacé / menaçait de tomber*
 the roof of the cathedral has threat.Pf / threatened.Ipf to fall
 b. *#le jeune homme a promis (va fait la promesse) / promettait de devenir président*

the young man has promise.Pf (made the promise) / promised.Ipf to become president

These facts point into the same direction as our observations above. It seems to be the case that some verbs alternate between a raising and a control construction from a syntactic point of view, alongside with a high vs. root reading from a semantic point of view. The high reading would be connected to the raising construction, i.e. to the fact that the verb is unable to assign a th-role to its subject position, and takes only a CP complement; in semantic terms, it behaves like a propositional operator.

There are of course problems with the raising/control analysis of the epistemic/root distinction in modals, and I will not try to find a simple answer to this (cf. e.g. Wurmbrandt (1999), Avram & Hill (2007) for Romanian). However, I think that the split between monoclausal and biclausal construction in Romanian, as well as the observations regarding the conditions on which epistemic reading appears in monoclausal constructions (i.e., insertion of BE) strengthen the idea that the difference in readings does correspond to structural distinctions. A way of implementing this is a multiple-layered analysis of modality, as suggested above. One might also think in Rooryck's (1992) terms, and investigate the existence of "degrees of raising". In this case, Romanian modal constructions would show the first steps in developing raising configurations for epistemic meanings.

If the present observations and analysis are on the right track, we expect the 'implicative' effect to appear in other contexts in Romanian, which has a number of 'raising' periphrases expressing different relations between events. In fact, this is indeed the case: other Romanian periphrases also reject perfect, namely periphrases with *a urma*, which order a situation in the future with respect to another situation which can be the speech-act situation or another situation in the past. Here also, the perfective is out⁶:

- (49) a. *urmează să plecăm*
 follows to leave.1pl
 we shall leave
 b. *urma să plecăm*
 followed to leave.1pl
 we were supposed to leave
 c. *?*a urmat să plecăm*
 has followed to leave

5. Conclusions

In this paper, epistemic readings have been shown to depend on the existence of a raising configuration: the Romanian data show that when this configuration does not obtain, veridical readings are induced with past modals.

The raising configuration is provided by merge of BE with a CP or a Small Clause; this explains why epistemic readings in monoclausal constructions are possible with unaccusatives, passives and adjectival predication. The same idea can be maintained for the role of BE in the Romanian presumptive paradigm, in agreement with the long-standing intuition of BE as a core raising verb.

This analysis could also capture observations by Mari & Martin (2008), concerning the lack of actuality entailment in some circumstantial (probably metaphysical) readings in the perfective; while these authors propose the existence of different kinds of abilities, I propose a structural distinction between the relevant uses of CAN.

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⁶ The same for another Romanian future-in-the-past periphrasis with have: cf. *avea să plece* 'he would leave' which does not allow the perfective.

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1. STRUCTURE AND INTERPRETATION IN NON-FINITE PREDICATION – ASPECT, VOICE AND ARGUMENT STRUCTURE

1. CONTEXT AND POSITIONING OF THE PROPOSAL

My area of interest for the several years is the domain of non-tensed predication across languages; this includes nominalizations and non-finite verbal forms like participles and infinitives. These are related topics which have always been at the core of theoretical linguistic investigation through the last decades since Chomsky's 1970 *Remarks on nominalizations*. The treatment of non-tensed predicates is important because as it can provide insights on both the grammatical properties of sentences and of words, making comparison between domains more obvious. By its situation at the interaction of linguistic components and theories, it encourages investigation at the interfaces between lexicon, syntax and semantics, by the study of argument structure and Aktionsart and the way they relate, but also grammatical properties like Voice and Aspect. This study may provide important insights on both the domains of word and sentence.

My research project for the next five years is thus to compare these different non-tensed domains in a given set of languages, and establish a map of their properties across these languages. The hypotheses that I formulated during the several years after PhD (Soare 2002, 2007, then Iordachioaia & Soare 2008, Alexiadou, Iordachioaia et Soare 2010 and Soare, in preparation - see below) lead me to investigate questions like: i) why some languages (like Romanian, Polish or Bulgarian), but not others (like French), have inflected nominalizations? ii) is there a relationship between this and the panel of other non-tensed forms that exist in the language, e.g. infinitives and participles (Romanian as a Balkan language has lost its infinitive but uses a participial in some infinitival contexts)? iii) what is the part of grammatical verbal properties that a non-tensed form may still have, and how do they distribute within the non-tensed verbal system of the language?

A core field of investigation in view is thus represented by nominalizations. Actually, it is my starting point, which I intend to relate to the larger field of non-tensed verbal predication, for reasons that will become clear in the following. The hypotheses formulated about nominalizations (like the presence of grammatical properties, e.g. grammatical aspect and voice) will be extended and tested in the field of verbal non-finite forms in general.

The research on nominalizations (i.e., in a broad sense, nominals derived from other categories, especially verbs and adjectives, like *destruction* built on *destroy*, or *nominalization* built on *nominalize*) has attracted some of the greatest linguists in the world, such as, in the USA, Noam Chomsky (MIT), Alec Marantz (MIT), Hagit Borer (USC), Jane Grimshaw (Rutgers), Tom Roeper (UMass), Heidi Harley (Arizona U.). The National Science Foundation (NSF) has founded NomLex, the first corpus on nominalizations in English, as part of the Proteus Project (NYU). This topic is without doubt one of the most fascinating in fundamental theoretical research in linguistics, and begins to be an important part of the applied NLP research worldwide.

There are several reasons for this constant and even increasing interest, often noticed in the literature, (e.g., Roeper's 2005 overview) going from seminal works such as Lees (1960), Chomsky (1970) and Grimshaw (1990) until more recent studies. First, from a morphological point of view, nominalizations are classes of words of mixed nature, as they are derived from other categories, mainly verbs and adjectives. Second, this mixed nature confers them with certain characteristics that, in theory, are not typically nominal, as for example the fact that they have an argument structure (and

therefore a thematic structure as well) and the predicative force that this property attributes to them (Pustejovsky, 1995). Third, nominalizations present multiple ambiguities, and it is important to develop linguistic tools and tests which clarify their behavior, their sources and the constraints which underlie them.

Currently, there are different research teams in Europe developing independent, but related, work on nominalizations. In Germany, nominalizations have been the subject of intensive research by Artemis Alexiadou (Stuttgart), member and director of the project « The Formation and Interpretation of Derived Nominals » as part of the « Incremental specification in context » SFB 732. The SFB 732 Incremental Specification in Context is a collaborative research centre (Sonderforschungsbereich) established in 2006 and funded by the German National Science Foundation (DFG).

It is also the subject of some research effort in France. The project « Structure aspectuelle et structure argumentale » (Paris 8), funded by the Fédération typologie et universaux linguistiques (FR 2559), and co-directed by E. Soare, F. Villoing and K. Ferret, deals in part with important issues in deverbal nominals, with a particular emphasis on cross-linguistic variation. The project NOMAGE, funded by the ANR, and directed by Rafael Marín at the UMR « Savoir, Textes, Langues » (Lille 3) aims both at developing a formal semantic theory of nominalizations and developing a corpus of nominalizations, one of the two existing until now (with NomLex/NomBank); also, a project is about to begin in Nancy Université, coordinated by Marie-Laurence Knittel (ANCOR).

However, the research on nominalizations is still at its beginning in France, and has been drawn especially in an isolated fashion and from a single perspective. In the NOMAGE project, coordinated by Rafael Marín, the work is essentially done in Lille 3 and from a semantic perspective. The ANCOR project in Nancy focuses mainly on syntactic constraints on nominalizations as reflected in corpora. There is obviously no connection between this topic and the one of non-finite forms in the language. This amounts to the treatment of nominalizations in a limited perspective and without correlation with the other properties of the language. Moreover, in France, the comparative dimension is not taken into account, inasmuch researches deal only with French and from a single point of view.

In fact, this is true not only for the French research, but also for the rest of the academic world in which these problems are approached. In spite of the interest devoted to this topic, the theoretical approaches so far concentrate on very distinct aspects, with, on the one hand, the study of the argument structure from a syntactic point of view (Grimshaw, 1990; Picallo, 1991; Alexiadou, 2001, Kelling, 2003, Meinschaefer, 2005,) and, on the other hand, more recently, the aspectual analysis of nominalizations from a semantic point of view (Brinton, 1995; Snyder, 1998; Huyghe & Marín, 2007). We also observe that most studies tend to focus on a single language (cf. Grimshaw 1990 for English, Picallo 1991, Fábregas in press for Spanish); comparative investigations are rather rare, see e.g. Alexiadou 2001, and Alexiadou, Iordachioaia & Soare 2010 for a first attempt. Needless to say, no existing research project is concerned with the connection between the type of nominalizations that a language may have, and the map of non-finite forms it has.

Nevertheless, the existence of a connection between nominalizations and non-finite verbal forms in the language is worth being pursued. The dynamics of non-finite forms across languages is in this respect highly informative. Category and function change between the verbal and the nominal system, as often indicated, is related to the loss of the infinitive inflection in the language; this has led to the development of the different varieties of gerund in English. The same parameter has been often invoked to explain the development of the embedded subjunctive in Balkan languages; but there is also a parallel development of verbal nouns (syntactic/inflected nominalizations), which take some functions of the infinitive in these languages. In Romanian, Bulgarian, and probably Albanian, for instance, but also in Slavic languages which are not part of the Balkan Sprachbund, the co-occurrence of non-finite forms like the supine or the active participle and nominalizations with inflectional properties (e.g. aspectual oppositions) must be more than a simple coincidence. From my point of view, it is thus absolutely crucial that these forms be studied *in connection* with one each other, given their close properties and functions. In fact, there are languages like Turkish, in which it is difficult to

distinguish between nominalization and subordination. Competition and the link between all these forms represents the centre of interest of my research for the next several years.

In my future research, I aim at approaching the nominal deverbal system (which was the main topic of my research in the past several years) in the perspective of the whole non-finite verbal system (a direction already sketched, but not enough developed, in my PhD dissertation). I will pay a special attention to *highly productive* nominalizations, which have clause-like properties, in the same time examining the properties of related non-finite verbal forms. I will use the results and hypotheses developed in my own recent research, but also results of other studies and projects mentioned here, in developing a new and more complex base of the non-tensed verbal form across languages. The present project is thus connected, but not competing, with the projects mentioned above, and it is in direct continuity with my own research so far.

I thus propose to enlarge the data and exploit new aspects of the matter, while integrating recent theoretical results from the research in non-finite verbal system. On the descriptive side, I will explore a range of data that have been disregarded in the literature on nominalizations so far, namely Balkan languages by comparison with some non-balkan Slavic languages – especially Polish, but also Romance and English, where some phenomena have not been fully understood. For instance, the “mixed” gerund in English (structures like *John’s watching television*) still remains a mystery in linguistics analysis, which is quite curious given the amount of studies devoted to English gerund in general. Productive nominalizations in French still need some more attention, by their highly ambiguous status and their understudied syntactic properties (cf. below, State of the article).

On the theoretical side, I will provide analyses that integrate the morphological, semantic and syntactic aspects of the phenomenon. Most approaches to nominalizations are concerned with one dimension only, and very little attention has been paid to the level of interfaces. The goal of my project is to shed a new light on how the morpho-lexical, syntactic and semantic components interact in the formation and the structure of nominalizations, participles and infinitives, and thereby to develop a more articulate theory of compositionality inside both the lexicon and non-finite sentence structure.

The project aims, thus, at offering a better global theory of non-tensed predication across languages. A side concern will be to prepare these findings to the development and improvement of linguistics tools such as reference grammars, online dictionaries, computational data bases. Another possible link is with language acquisition; one would expect that the acquisition of the non-finite verbal form be done differently in languages with a richer non-finite system.

To the success of this project, I need to develop a series of new competences:

- a more serious specialization in Balkan languages, and a wider investigation of Romance and Slavic
- a closer collaboration with semanticists (Roumyana Pancheva) and morpho-syntacticians (Heidi Harley, Hagit Borer, Peter Svenonius, Gillian Ramchand) and careful investigation of the limits of the existing theoretical frameworks at the interface between lexicon, syntax and semantics
- a cooperation with informants and linguists with competences in languages like Polish, Albanian and Bulgarian, combined with exploration of the (rare) existing corpora.

It is obvious that this can hardly be done without special support in terms of time and mobility, and the conditions offered by the IUF look as the ideal environment for such a project, which has an important international dimension of cooperation. It will allow me to confront my results with the ones of previous work in local projects and the ones recently drawn in several European academic centres (Stuttgart, Tromsø, Vienna, Barcelona and Bucharest). In the past years, mobility projects on Nominalizations have existed between Paris 8 University and CASTL at the University of Tromsø, on the one hand, and between Tromsø and Stuttgart on the other hand, involving also several researchers from Lille 3 (leded by myself and Isabelle Roy, respectively). This was an important

starting point which allowed me to cooperate with researchers from European academic centres. However, the direction of my actual research asks for multiplying this kind of cooperation, and for more personal time for research. My affiliation to the IUF would allow this cooperation to continue, become more focalized and get a coherent evolution.

2. SCIENTIFIC AND TECHNICAL DESCRIPTION

2.1. BACKGROUND, STATE OF ARTICLE

2.1.1 *Ambiguity in deverbal nominal system and the problem of feature inheritance.*

The study of nominalizations was especially developed within the generative framework, starting with the work of Lees 1960 and especially Chomsky 1970, which distinguished between two ways of building derived nominals, i.e. in the syntactic component and in the lexical component. This paved the way to different approaches to this topic and also opened fields of research in modern linguistics.

One of the properties that have retained the attention in the research on nominalizations is their ambiguity. Nominals like *destruction* or *building* exhibit this ambiguity, that has been recognized since Grimshaw’s (1990) seminal study as three-fold: event denotation proper, admitting verb-like modifiers (cf. *the building of the cathedral by the peasants for centuries*), another reading where modifiers and complements of this type are absent but there is still reference to an event (like in *They are trained in building*), and finally an entity reading, where the reference to an event is completely lost (like in *This building is very ugly*). In the first case, the literature talks about complex event nominal (more recently Argument-Structure Nominals), as opposed to simple event nominal in the second case, and result nominal that in the third class (also called referential nominals). While the difference in interpretation is quite easy to capture, the task of the linguist is more difficult, and consists in identifying the precise grammatical properties that distinguish these nouns, and the parameters that count for the classification and the formal analysis thereof.

The ambiguity put forward by Grimshaw clearly exists at a high level in French, but to my mind it has not been enough studied, except for some attempts like Gross & Kieffer 1995 for event nominals, and Fradin & Kerleroux 2003 for –eur nominals, whose efforts have not been pursued in the French morphological or syntactic literature. Even the tests that Grimshaw proposed to distinguish between the two types of nominals in English (such as: presence (for event nominals) vs absence (for result nominals) of agent-oriented modifiers, argument vs possessor interpretation of subjects; argument vs. non-argument status of by-phrases, implicit argument control vs. absence thereof, modifiers like frequent possible with the singular vs. only with the plural, impossibility vs. possibility of pluralization) have not been systematically studied for French. These tests and criteria have been criticized more (cf. Roodenburg 2006) or less directly (cf. Huyghes & Marin 2007, Haas et al 2008), or have been refined for French (cf. Gross & Kieffer 1995, Van de Velde 1995a, 2006..., Heyd & Knittel 2009), or for Romanian (Cornilescu 2001, Iordachioaia & Soare 2008, Alexiadou, Iordachioaia & Soare 2008, to appear). However, the very task of checking their predictions on French nominalizations has not been undertaken systematically yet, and this lack in the linguistic literature on French is still waiting for a reaction.

There are however cases where the ambiguity is less salient or even absent. Such is the case of the Romanian Supine nominal, which lacks a result interpretation and only gets an event interpretation, as highlighted by Cornilescu 2001, and developed in more details by Soare 2002, Iordachioaia and Soare, 2008, Alexiadou, Iordachioaia and Soare 2010, who show that the lack of ambiguity is predicted in a structural approach for this type of nominals.

The absence of ambiguity, while documented, has not been deeply studied either. In my research on the Romanian supine nominalization (which only has an event reading), I showed that

these nominalizations also have other verbal grammatical properties (aspect and voice), unexpected in the nominal system. But the correlation between the type of system (derivational or syntactic-grammatical system) in nominalization, and the presence or absence of ambiguity deserves to be pursued by more careful investigation and with more data. To what extent the more “grammatical” nominalizations do present typically verbal properties? One can only answer this question by a fine-grained comparison between the different types of verbal-nominal forms.

A case in point is, to my mind, the English gerund in its “mixed” variety, (as in *John’s watching television*) – which only has the event interpretation. Surprisingly, it is the less studied *-ing* form; if certain researchers agree with Abney 1987 in assigning it the nominal – DP – status from a distributional point of view (thus, it would be a nominalization), there is no general agreement on this matter. The internal properties (absence of a proper Determiner, Accusative case assignment, availability of auxiliary insertion, among others – cf. Chomsky 1970, Abney 1987, Alexiadou 2001) make it look more as a non-finite sentence with an inflectional layer including at least aspectual information. What is the status of this form to begin with? To what other forms throughout languages is it comparable?

Another crucial issue is the one of the formal approach that would better account for the nominal ambiguity. An answer to this question implies evaluating several mainstream approaches to word formation. The classical approach seems to encode this as an aspect of polysemy, induced by a metonymy, a lexical semantic operation. More recently, two kinds of treatment have been proposed. It is for instance possible to adopt a view according to which the affix is underspecified, and this kind of approach has been proposed by Grimshaw herself, followed by subsequent work in morphology (e.g. Plag 1998; Booij & Lieber 2004; Lieber 2004) where the affix is treated as polysemous. Another type of underspecification is the one assumed in Distributed Morphology, where the difference is treated in structural terms, in terms of lower or higher attachment of the affix. Still another similar structural approach is the one proposed in Borer (2008), where items are categorized by the functional structure.

Therefore, important questions have to be answered in order to understand these semantic ambiguities, such as the following: i) do they rely on the underspecification of the base, or the suffix? ii) are they the result of possible coercion? iii) are they subject to particular morpho-syntactic constraints? In order to provide some answers, the work in this project will be based on the combined study of the properties of the bases and those of the affixes, looking at the interplay of argument structure and aspectual properties thereof, in order to see how these properties constrain the morphological derivation.

2.1.2 Grammatical properties in nominalizations and non-finite verbs: Aspect and Voice.

A crucial question that arises in the study of event nominal or Argument-Structure Nominals is the one of the inheritance of the semantic features of the verbal base by the deverbal nominals. One such important feature is Aspect, a category that has received full attention in the study of deverbal nominal since Grimshaw 1990. The nominal in this class can express the internal phases of a process, a property that is not present in the case of Simple Event Nominals, including nominals like *film* or *concert*. This can be seen, in the syntactic models of word formation (which make use of adjunction and complementation rules just like in syntactic computation), as being the contribution of a grammatical category Aspect, exactly like in the verbal projections proper. But does this Aspect category have the same content throughout nominalizations and across languages?

The research that I developed over the several past years, first in my own independent work and then in collaboration with Gianina Iordachioaia, then with Artemis Alexiadou from Stuttgart, allowed me to highlight the heterogeneous properties inside event nominals. The starting point of this study is the existence in Romanian of two types of productive nominalizations – built respectively on

the infinitive and the supine bases -, with an event interpretation and the inheritance of typically verbal properties (argument structure and aspectual structure), differ on a crucial point: the interaction between aspect and the plural morphology. More precisely, there are event nominalizations which have more nominal categories – including Number – and others that are more verbal and project grammatical Aspect, being therefore defective of nominal projections, and lacking morphological plural.

This is an important empirical observation to begin with, that at least at the first sight contradicts one of the major generalizations in Grimshaw 1990, namely the fact that, according to her theory, complex event nominal should not allow morphological plural; this is a property that they share with verbs, and can be associated to other such typically verbal properties, also inherited to a certain extent from the base. We have established, in these works (Soare 2007, Iordachioaia et Soare 2008, 2009, Alexiadou, Iordachioaia and Soare 2010) a correlation between the fact that the nominal infinitive allows morphological plural, rejected by the supine, and the nature of the aspect present in these two types of nominalizations. More precisely, the nominal infinitive only inherits the aspectual properties of the base (by selecting telic bases), the supine nominal introduces an Aspect projection in the structure, and induces a change in the aspectual base, which turns out pluractional.

Moreover, these studies represent two major contributions to the theory of nominalizations. The first is represented by the idea that nominalizations can instantiate values of grammatical aspect, which was never argued for in detail in the previous literature, even if it was sometimes mentioned before. The second contribution was to identify for the first time pluractional behaviours in the nominal system. This research field continues in this moment, with a more in-depth study on pluractional operators in general, and in the supine in particular, comparing them with quantification and plurality operators in the nominal system, on the one hand, and in the verbal system on the other hand (Iordachioaia & Soare, to appear).

Other studies in which I have been involved with Florence Villoing and Karen Ferret (Ferret et al 2009a-b), seem to validate the hypothesis of the relevance of grammatical aspect category in French nominalizations in *-age* and *-ée*, which seem to manifest the opposition perfective/imperfective. If this was correct, the problem of the aspectual projection gets another dimension, because these nominalizations are really derivationally formed, unlike supine nominalizations. In Soare (2012a), I show that, if one wants to account for the whole types of behavior that exist in Romance, one have to avoid the view according to which derivational affixes (that may take other bases than verbal) may introduce aspectual oppositions by themselves. It would be more accurate to consider them as selecting domains that encode this type of information; the status of these domains have to be identified by the linguistic theory.

In recent research, Fàbregas & Marin 2011 have formulated the *Aspect preservation hypothesis*, establishing that the default behavior of deverbals is the preservation of the aspectual value of the base. In Soare (in preparation), I argue that this working hypothesis has to be balanced by parameters of aspectual inheritance; there are nominalization patterns – like the Romanian supine – that systematically *changes* the aspect inherited from the base, and thus introduce grammatical aspect information, according to the afore-mentioned studies.

In some of these studies, I have also formulated hypotheses on the presence of grammatical (imperfective) aspect in Romanian nominalizations, correlated to the presence of Voice and agentive properties (cf. Soare, 2002n 2007a-b, Iordachioaia & Soare 2008, Alexiadou, Iordachioaia & Soare 2010). The nominalization thus must have access to a verbal base that includes a rich functional structure, which must be available independently in languages like Romanian.

In some studies on affix rivalry in nominalization, one has proposed generalizations and parameters that constrain the affixal rule (such as in *-tion*, *-ment* and *-age* nominal in French). If agentivity, incrementality, the length of the eventive chain are relevant distinctions, as proposed by Martin 2008, the role of grammatical properties inside deverbal nominal has been neglected, and no connection has been done between these different properties. Ferret, Soare & Villoing 2009 propose a

model in which the aspectual differences are at the origin of the extension in argument structure, and bring up agentivity in *-age* nominalizations, which are imperfective and agentive.

This leads to another important question, the one of the weight of the nominalization pattern (say, lexical or grammatical) on the properties observed. Identifying properties that determine the existence of one pattern or another in a given language will thus be a related task. One could think of parametrizing, in the spirit of Reinhart and Siloni (2005), the choice between lexical and grammatical patterns in deverbal formation across languages. At one side, one would have the languages that use mostly derivational affixation, and at the other, languages that use grammatical patterns for each type of deverbal (like Malagasy). Different mixtures of these two options would be illustrated by in-between languages like Romanian, and probably Bulgarian, Albanian, etc. In any theoretical option, a map of nominalizations that would take into account their pattern of derivation and the related non-finite verbal forms still has to be realized – and I guess that given the advancement of present research, this enterprise should be undertaken.

2.1.3. Towards a hierarchical ordering of the properties in the non-finite verbal system.

A comparison between the system of deverbal formation and the system of non-finite verbal forms of a language may reveal the existence of a scale of verbal/nominal properties. The existence of such a scale is implicit in the studies on nominalizations in isolation. The relevant hypotheses must though be tested by comparison with languages in which markers of grammatical aspect might show up in both nominalizations and in non-finite forms (in Slavic, Bulgarian, and other Balkan languages). Therefore, the study of voice in participles must be undertaken in parallel to this enterprise. It might be the case that languages in which inflectional properties are present in nominalizations is related to the availability of voice in these forms; and is supposedly related to the presence of active participles in the language.

Connected hypotheses have been proposed in recent studies on the universal reading of the perfect, in languages that have a rich participial system from a morphological point of view (see Iatridou et al 2007). If these two properties are related at the sentence level, there might also be an impact of the existence of a ‘rich’ participial stem on the interpretive and grammatical properties in the deverbal system, and not only on the readings of perfect. This type of hypotheses provides further ground to the idea of comparing productive nominalizations and the non-finite system in the language, which is the leading idea of the present project.

One might find, at the term of the research I propose, that certain languages but not others have access to non-finite verbal patterns used in word formation and in inflection and sentence formation, and manifesting a richer event structure that one would in principle expect for such reduced domains. If this is on the right track, these properties might pop-up in other deverbal forms, like participant nominals, in the relevant languages. All this might lead, in the end, at changing the perspective on the categorial system of languages and its relation with voice marking.

2.2. RATIONALE HIGHLIGHTING THE ORIGINALITY AND NOVELTY OF THE PROPOSAL

This project proposes an original line of research, which has never been undertaken previously in modern linguistics, i.e. an approach in comparative terms within the same language and in different languages in parallel, of the overall non-finite verbal system. As put forward above, despite the clear interest for nominalizations in France, this topic does not have the place it needs. I propose to open the

area of investigation not only to new languages, but to restate it inside a given language, in line with the panel of non-finite forms, in search for correlations.

The originality of this project relies in a multi-faced and cross-linguistic approach, integrating morphology, syntax and semantics, with a special interest in the interfaces between these three linguistic components (never studied before in this spirit, despite the fact that nominalization and non-finite verbal forms represent an ideal field for this type of study). The representation of events in both the nominal and the verbal system should benefit from new insights and a better understanding by the study of common and distinctive properties between these two domains, and the inclusion of the non-finite verbal system of each language.

The results that will be obtained might contribute to improving the linguistic tools for each language approached. As Gaston Gross has put it in several occasions, tools like electronic dictionaries should be enriched by grammatical information like aspect and argument structure. Thus, in my opinion, the present research is complementary to previous data-base projects like NomLex and NOMAGE, but also with fundamental theoretical research, introducing new factors and parameters of comparison.

2.3. PROJECT SCHEDULE AND TASKS

Overview and intermediate goals

- Nominalizations: lexicon-syntax interface; the hierarchical ordering of internal grammatical properties (affixal derivation vs. quasi-inflectional nominalizations)
- Non-finite forms: availability of stems involving aspectual and voice information (Romanian, Bulgarian, Albanian)
- A scale of eventivity within the verbo-nominal system (i.e. non-finite verbal forms including nominalization). Redefinition of the voice system and the derivational system and their interrelations.
- Designing networks of non-finite verbal forms in each language, in the shape of a small network that would make a starting point for an inter-related data base (including a critical number of verbal bases covering the main syntactic and aspectual classes, their derived nominals and the non-finite forms).

Tasks

- Data collection: map of the nominalizations and non-finite forms in each language (½ year)
- Study of the behavior of nominalizations, participles (present and past, including gerund) and infinitives in each language (1 year per language)
- Comparisons and finer-grained analyses (1 ½ year)

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Acronym	TAM
Proposal title (in French)	TEMPS, ASPECT, MODALITE DANS LES PREDICATIONS NON-FINIES: L'INFINITIF ET LE SUPIN.
Proposal title (in English)	TENSE, ASPECT, MOOD IN NON-FINITE CLAUSES: THE INFINITIVE AND THE SUPINE.
Type of research	<input type="checkbox"/> Basic Research
International cooperation	International cooperation with ROMANIA UMR 7011 Laboratoire de Linguistique Formelle UMR 7023 Structures Formelles du Langage Université de Bucarest & Institut de Linguistique de l'Académie Roumaine (Carmen Sorin, Elena Soare, Alexandra Cornilescu & colleagues)

which roughly have the same distribution, bringing into discussion the gerund and the participle only for the purpose of intra-language comparison.

Non-finite clauses have often been regarded as nominalizations, ever since Lees 1963. In the light of more recent research (see, for a detailed presentation of the problem Cornilescu 2003), it appears that the term nominalization can be used in a double acceptation: in a broad sense, any subordinate clause (a CP projection) finite or non-finite is nominalized in the sense that it has become an argument of the main predicate, therefore a recipient of a theta-role. In contrast, verbal non-nominal categories (V, A) assign, but do not receive theta-roles. From this perspective, a complementizer, as well as elements of Inflection can be viewed as nominalizing elements. On the other hand, from a narrower syntactic perspective, CPs are not nominalizations, since the CP is the extended projection of the verb in the sense of Grimshaw 1991. Nominalizations will be constructions which include a mixed functional domain, putting together verbal categories (Aspect) and nominal categories (nominalizing light n constituents, determiners). In this research we will treat non-finite clauses as verbal domains, detailing their internal syntax.

The topic which is proposed is opened to interdisciplinary research, since Tense, Aspect and Mood can be investigated as syntactic projections of the verb, but also as semantic operators on the VP. The syntactic and the semantic investigation are often kept apart and it is one reason of this project to bring them together, systematically correlating syntactic structure and semantic interpretation. The project therefore employs an integrating framework, that of DRT, coupling Generative Syntax in its late Minimalist variant with DRS representations. As known, DRT offers explicit steps of mapping syntactic trees onto DRSs.

Objectives of the projects:

a. On the **syntactic** side, the **objective** of the project is to present a description of the functional structure of non-finite clauses, specifying whether these clauses include projections for Tense (a TP), Aspect (an AP) and Mood (a MP). The presence of Tense has important consequences for the subject of non-finite clauses, allowing or disallowing the presence of an overt subject.

b. On the semantic side, there are several empirical questions, which are raised by the data; answering them represents the **semantic objective** of this research.

1. In a large number of contexts, the infinitive and the supine are interchangeable and, moreover, are equivalent with finite subjunctive complements. Given the very different syntactic structure of infinitives, subjunctives and supines, it is not clear how they can be semantically equivalent, in other words it is necessary to offer a compositional account of these complements, which could account for their semantic equivalence. (Example)

2. However, the equivalence is imperfect and the question that arises is why the three forms cease to be equivalent. The differences may be due to the contribution of the main verb, as well as to variations in the internal structure of the non-finite complements. Both factors must be described by a detailed presentation of the distributions of these forms. The format of the semantic description is that of alternative semantics and DRT. This will allow the implementation of these representations (DRSs) in a functional programming language.

c. A third **empirically oriented objective** of the project is to get a more faithful representation of contemporary Romanian data, regarding the use of the infinitive and of the supine. It has recently been (wrongly) claimed that the infinitive is excluded from spoken Romanian (see Jordan 1995), lingering however in more formal written language contexts. On the other hand, the supine is “officially” used only with a handful of verbs (see for instance GALR 2005). Both claims seem to be unwarranted as we have noticed in Cornilescu and Cosma, (to appear), on the basis of a brief informal examination of examples on the Internet. To remedy this situation we propose:

a. to: explore informal Romanian examples from the Internet, with respect with the occurrence of the infinitive/supine.

b. To collect experimental data from two sources: grammaticality judgment tasks by adults and language acquisition data. The corpus collected will be statistically processed and will hopefully give a better description of these two moods in contemporary Romanian.

1. EXECUTIVE SUMMARY OF THE PROPOSAL

The present project is an interdisciplinary research in linguistics and informatics, aiming at a description of the syntax and interpretation of Romanian and French non-finite clauses, focusing on three of their dimensions: Tense, Aspect and Mood. The description is centered on the infinitive and the supine clauses, which roughly have the same distribution, bringing into discussion the gerund and the participle only for the purpose of intra-language comparison. The topic which is proposed is opened to interdisciplinary research, since Tense, Aspect and Mood can be investigated as syntactic projections of the verb, but also as semantic operators on the VP. The syntactic and the semantic investigation are often kept apart and it is one reason of this project to bring them together, systematically correlating syntactic structure and semantic interpretation. The project therefore employs an integrating framework, that of DRT, coupling Generative Syntax in its late Minimalist variant with DRS representations. As known, DRT offers explicit steps of mapping syntactic trees onto DRSs.

2. CONTEXT, POSITION AND OBJECTIVES OF THE PROPOSAL

2.1. OBJECTIVES, ORIGINALITY AND NOVELTY OF THE PROJECT

The present project is an interdisciplinary research in linguistics and informatics, aiming at a description of the syntax and interpretation of Romanian and French non-finite clauses, focusing on three of their dimensions: Tense, Aspect and Mood. The description is centered on the infinitive and the supine clauses,

The **framework** of the semantic research is Discourse Representation Theory (DRT), presumably the most efficient model of formal pragmatics, on account of its capacity to incorporate the syntactic structure of the constructions under study. From among the currently available variants of DRT, we have chosen the one put forth by Kamp and Reyle (1993), since it covers the main semantic problems of natural languages: quantification, determination, tense, aspect. Extending to the discourse level the tripartite structure of Montague Grammar (cf. Montague (1974)), DRT also has a tripartite structure: each discourse is associated with a syntactic representation, a semantic representation, called discourse representation structure (DRS), as well as with a model theoretic interpretation on a locally defined domain. Both the semantic rules which enable the construction of the DRS and the model theoretic interpretation are completely formalized and can thus be implemented in a programming language (such as Prolog or Haskell).

The project is feasible, since the conceptual tools and considerable empirical research in the area already exist.

An **original** contribution of the project we propose is its methodological consisting in the elaboration of an adequate global theoretical framework, through the selection and unification of several current syntactic, semantic and natural language processing theories.

DRT is an interpretive theory which can be coupled with any syntactic model, the construction of the derivational tree being an obligatory stage of any research. With respect to syntax, we intend to couple DRT with minimalist syntax (Chomsky (1995, 1998, 1999)).

The **end-products** of the project include:

a. The first end-product is a Minimalist grammar of Romanian/French non-finite clauses, presenting a full specification of the functional structure of the supine, infinitive, participle and gerund clauses. The description will shed light on the considerable structural differences between the considered range of non-finite complements. Differences refer to the presence versus absence of certain functional projections with some types of non-finites (for instance, non-finite clauses which realize negations by the negation clitic *ne* do not have an independent TP, rather Tense and Aspect may represent a syncretic projection: this is the case of the Romanian supine, contrasting with the Romanian infinitive, which has a full functional structure). Secondly, even when a projection is present, it may be realized by elements that have different syntax. For instance, negation is present in all non-finite complements, but it is realized as an affixed clitic *ne*, for supine, participles and gerunds and it is realized as an morphological independent head for the infinitive. The investigation of the functional structure of the non-finite complements shows that those complements have different “sizes”, i.e. they are complements of different categories. Some are APs (for instance the past participle), some are IPs, some are defective CPs (infinitives and supines), some are full CPs (infinitive, supines, gerunds).

b. The second end-result is a semantic description of the interpretation of non-finite complements with respect to Tense, Aspect and Mood, coached in terms of formal semantics and DRT. The interpretation should be compositional, that is it should derive from the functional categories present in the syntactic categories of the respective complements. This is a challenge since, as shown, these complements are often equivalent, while their internal structure is vastly different. While traditionally it is assumed that non-finite complements lack not only person, but also Tense, it will appear that non-finite complements express specific temporal, aspectual and mood values. These values should read off the syntactic structure of the complement.

c. The third end-product is a statistically processed corpus of spoken Romanian examples, portraying the distribution of the infinitive and the supine in contemporary Romanian.

2.2. STATE OF THE ART

Within the framework of Generative Grammar, non-finite complements have first been investigated as nominalizations, as constructions which allow a clause to function as an argument of another verb.

Non-finite complements appeared to be mixed categories with both verbal and nominal properties and their internal structure has primarily been regarded from this verbal-nominal perspective. An important early work on non-finite complements as mixed categories is Pană Dindelegan 1992.

In time, work has been done on all non-finite complements as we will show below. At the same time, the focus of the research has become more complex, combining a syntactic and semantic description with a typological perspective on these complements. Romanian has been approached from the double perspective of Romance and Balkan language. A seminal point is the GB description of the infinitive and the subjunctive, proposed in the most complete Generative Grammar of Romanian, Dobrovie-Sorin (1994). This work decisively contributes to the understanding of the categorial status of the mood particles *să* (subjunctive) and *a* (infinitive) as mixed Complementizer/Tense operators, as well as to the understanding of verb movement and Control Theory in Romanian. Dobrovie-Sorin's research is continued in a minimalist framework work by Alboiu (2002), with important contributions on the functional structure of the Romanian clause. Alboiu insists on the presence of the Mood projection in the Romanian clause, *să* and *a* being viewed as mood markers. She also discusses verb movement, focus and control from a typological Romance/Balkan perspective.

There are also many Romanian contributions to the study of particular non-finite complements: Jordan (1995) is devoted to the diachronic evolution of the Romanian infinitive complement, tracing the rise of the infinitive, its extension up to 18th century and then its decline in late modern Romanian. Diaconescu is the first detailed presentation of the supine clause, also discussed by Hill (2002). Both authors insist on the mixed verbal-nominal nature of the supine. Topics which have been intensely researched for the supine include Tough-Movement (Giurgea and Soare 2007a,b, 2010a,b, Dye 2006) and Control (see especially Dragomirescu 2011, Cornilescu and Cosma in press).

Dragomirescu (in press) parallels Jordan (1995) in describing the diachronic evolution of the supine, the manner in which the supine nominalization (a fully nominal structure) acquires verbal properties, such as the possibility of assigning Accusative case to the internal argument.

A comparatively well researched area is that of nominalizations – projections which include both verbal and nominal elements (Cornilescu 2001, 2004, Alexiadou et al. 2010, 2011, Roy and Soare 2011, Iordăchioaia and Soare 2011). An important result of this research is the demonstration that supine and infinitive nominalizations include an Aspect projection which licenses the event interpretation of these nominals.

While infinitives and supines have often been approached as mixed projections, they have seldom been regarded as clauses – i.e., as fully verbal projections. An early important exception is Soare (2002). What is an important valid result is the distinction she proposes between supines introduced by lexical prepositions (*pentru*, *la*) and supines introduced by the complementizer *de*. Since supine constructions are described as CPs, it follows that supine clauses can be fully verbal domains on a par with infinitives and finite clauses. In her study, Soare is concerned especially with the grammar of the direct object and the subject of the supine clause. Her study, however, opens the way towards an investigation of the realization of Tense, Aspect and Mood in supine clauses. The mood interpretation of the supine and the infinitive has also been discussed in relevant studies by Giurgea and Soare (2010a,b) and in Cornilescu 200?, following a work by Bhatt 2005. Avram 200? convincingly demonstrates that gerund (present participle) clauses are aspectual projections, rather than Mood Phrases. This important insight can be extended to the view that gerund clauses necessarily contain an aspect projection.

The present project therefore addresses a topic - that of the verbal categories of the non-finite forms - that has not been systematically discussed.

In modern approaches of French syntax (since Kayne 1975, Rochette 1988), infinitives have been at the core of grammatical studies. *De completat! alte lucruri despre infinitiv!*

A well-investigated area in the syntax of French infinitives are causative constructions (Kayne 1975, Rouveret & Vergnaud 1980, Burzio 1983, 1986, Baker 1988, Bouvier 2000, Roberts 2010).

The nominal supine has special properties of particular theoretical interest also offers a very interesting perspective, inasmuch it shows a richer structure and properties than lack in other deverbal nominals studied in classical work like e.g. Grimshaw (1990) – the most relevant to our purposes

being the aspectual value involved by supine nominalizations. The comparison with the verbal domain is thus relevant to the study of the aspectual value of this form across its distribution.

B. Preliminary results obtained by the team.

Carmen Dobrovie Sorin (Paris) - Dobrovie Sorin (1994) focuses on the description of the infinitive and the subjunctive in Romanian. This work decisively contributes to the understanding of the categorial status of the mood particle *sa* (subjunctive) and *a* (infinitive) as mixed Complementizer/Tense operators, as well as to the understanding of verb movement and Control Theory in Romanian. The syntax of infinitives and subjunctives is the subject of two chapters of this book, which were further developed and approached in a Balkan-comparative perspective in Dobrovie-Sorin (2000). Carmen Dobrovie-Sorin has consistently investigated the syntax-semantics interface of a wide variety of linguistic phenomena, e.g., indefinites and genericity (Dobrovie-Sorin & Beyssade 2004, 2012, Dobrovie-Sorin 2005, ed.), possessive constructions (Dobrovie-Sorin 2000, 2001, 2002), predicational configurations.

Alexandra Cornilescu (Bucharest) – Cornilescu (2001, 2004) important study on Romanian infinitive and supine nominalizations. The main result obtained is the demonstration that the supine and infinitive nominalizations include an Aspect projection which licenses the event interpretation of these nominals. While infinitives and supines have often been approached as mixed projections, they have seldom been regarded as clauses i.e. as fully verbal projections.

Cornilescu (???) also discusses the mood interpretation of the supine and the infinitive. Building on Bhatt 2005. Avram 20??, Cornilescu demonstrates that gerunds (present participles) clauses are aspectual projections, rather than Mood Phrases. This important insight can be extended to the view that gerund clauses necessarily contain an aspect projection.

Cornilescu & Cosma (in press) – focus on the functional structure of the supine and demonstrate that the functional structure of this construction is incomplete. The paper analyses supine constructions introduced by the complementizer *de* and concentrates on the syntax and interpretation of the internal argument of the supine verb. From a syntactic perspective, Cornilescu & Cosma focus on the problem of how the internal argument values its case feature. It may be shown that complementizer *de* supine clauses are not homogeneous from this point of view. Rather, they claim that there are three case-valuation strategies. In non-restructuring supine clauses, the supine verb gets uninterpretable ϕ -features by agreeing with the prepositional complementizer and it subsequently licenses its object. In restructuring supine clauses the case of the internal argument is valued by a functional head of the main clause, but the internal argument stays in the supine clause. Finally, in raising supine clauses, the internal argument is still licensed by a matrix functional head and there is movement of the internal argument into the main clauses. These syntactic differences between *de*-supine clauses are shown to follow from the feature specification of the prepositional complementizer *de*.

From an interpretative perspective, Cornilescu & Cosma discuss the range of admissible types of internal arguments and their discourse roles. Non-restructuring supine clauses impose restrictions on the internal argument. Specifically, DPs which are highly referential, namely personal pronouns and proper names cannot be internal arguments in the supine clause. This is due to the fact that pronominal clitics are also excluded and this entails the absence of strong personal pronouns and proper names which are clitic doubled. Restructuring supines allow the whole range of internal arguments from personal pronouns to bare NPs and null arguments. Finally, raising supines are also selective in the range of internal arguments of the supine verb. But this time, it is weakly referential internal arguments which cannot be raised: null arguments and bare NPs.

Larisa Avram (Bucharest) – Avram (2003) focuses on the functional structure of Romanian gerund clauses and demonstrates that they are merely Aspect phrases in that they have contain neither a Tense nor a Complementizer projection.

Elena Soare (Paris) – In Soare (2002), the Romanian supine receives a first systematic and extended investigation. In further work, hypotheses first formulated in this work have been investigated and tested. A first area of investigation is that of the supine nominalization.

Soare et al (i.e.: Soare 2008, Iordăchioaia & Soare 2008, 2009, Alexiadou, Iordăchioaia & Soare 2010) have shown that the category of (grammatical) Aspect is relevant for the deverbal nominal system across languages. More precisely, only a sub-class of Complex Event Nominals (CENs – terminology from Grimshaw 1990) includes this category. This research has been initiated by the observation that the infinitive and the supine nominalizations (the two productive nominalizations in Romanian) differ with respect to their compatibility with morphological plural: it is accepted in infinitive, but rejected by the supine nominalizations. This observation apparently goes against Grimshaw's (1990) generalization that CENs do not allow morphological plural.

- (1) a. areștirile succesive ale acestui politician pentru a proteja anumite interese
arresting.inf.the.pl successive.pl gen this.gen politician for to protect certain interests
b. *areștaturile succesive ale acestui politician pentru a proteja anumite interese
arresting.sup.the.pl successive.pl gen this.gen politician for to protect certain interests

The studies mentioned above, starting with Iordăchioaia and Soare (2008), show that the responsible factor for this heterogeneity in the behavior of Romanian CENs is the projection of grammatical *imperfective* aspect in the supine, but not in the infinitive CEN. This is supported by a wide range of factors, from which we cite here the aspectual shift to a habitual-iterative interpretation introduced by the supine nominalization with all aspectual classes of verbs (e.g. with states, providing previous bounding by an *until*-PP, and with achievements that are already bounded) – cf. 0. Thus, the effect of the supine is to take a [+bounded] situation and return a [-bounded] one, i.e. by introducing imperfectivity.

- (2) a. statul lui Ion la Maria pâna seara târziu
stay.Sup.the gen Ion at Maria until evening late
'Ion's (habit of) staying at Maria's until late in the evening'
b. sositul târziu la serviciu i-a adus concedierea
arriving.sup.the late at work him-has brought firing-the
'His (habit of) arriving late at work caused his dismissal/firing'

Another similar fact is the presence of positive diagnostics for pluractionality (of the type documented in Laca 2004 for Spanish and Van Geenhoven 2004 for West Greenlandic), in the nominal supine. More precisely, this nominal lacks multiplication effects with indefinites and presents distributivity effects with plurals:

- (3) a. *ucisul unui jurnalist de către mafia politică
kill.sup.the a.gen journalist by mafia-the political
b. ucisul jurnaliștilor de către mafia politică
kill.sup.the journalists.the.gen by mafia-the political

It is thus very interesting to note that the supine preserves its aspectual component across both the verbal and the nominal domain. However, as Alexiadou, Iordăchioaia and Soare (2010) argue, the identity of the relevant projection is Outer (grammatical) Aspect, which in the verbal system is a category in interaction with Tense. More research is needed in order to fully understand the relation between the verbal and the nominal supine and their internal structure.

Another investigation of aspect in nominalization is Alexiadou et al. (2010), which discusses Polish and Bulgarian. This paper shows that, although both languages have imperfective markers, Polish but not Bulgarian CENs really include an imperfective Asp layer in nominalizations, thus excluding the plural.

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- (5) *częste opóźnione przybywania /odjeżdżania pociągu (Pol)
 frequent delayed arrive.IMPF.NIE.PL/depart.IMPF.NIE.PL train.GEN
- (6) a. pisaneto na statijata ot Ivan za 30 minuti/30 minuti (Bg)
 write.IMPF.NE.the of article.the by Ivan in 30 minutes/30 minutes
 'Ivan's writing of the article in/for 30 minutes'
 b. Ivan pisheshe statiata 30 minuti /*za 30 minuti.
 Ivan wrote.IMPF article.the 30 minutes/in 30 minutes
 'Ivan was writing the article for 30 minutes.'

The hypothesis of the presence of grammatical aspect in nominalizations has also been put forward in a study on French nominalizations in –age and –ée (Ferret, Villoing & Soare 2009a-b). Some diagnostics for imperfectivity seem to hold in these nominalizations: for instance, the lack of distributivity effects.

- (7) a. *le tuage d'un journaliste
 b. *l'écrasage d'une banane

This hypothesis, however, needs to be clarified and further tested with more data across languages, and determine the exact morpho-syntactic properties of the nominalizations that involve the presence of Aspect.

Another important contribution by Elena Soare is the analysis of *Tough* Constructions and reduced relatives in Romanian, which has been presented in her 2002 dissertation and further elaborated in a number of articles (Soare and Dobrovie-Sorin 2002, Giurgea and Soare 2007a,b, 2010a,b). These constructions involve the supine form:

- (8) a. carte de citit
 book of read.sup
 b. carte greu de citit
 book tough of read.sup

Soare proposed that the supine has a similar structure in both constructions, representing a passive verbal projection. For the lack of agreement in TCs, she proposed that the *tough*-adjective is in fact an adverb occupying a specifier position in the extended projection of the verb (in Romanian, adjectives and adverbs are not morphologically distinguished). Another solution concerning agreement is investigated in Giurgea and Soare (2007a,b) but abandoned in Giurgea and Soare (2010a,b), who refine Soare's original idea, based on a comparison with German, where there is evidence that the non-finite form is the lexical head of the attributive TC.

Another important contribution of Soare (2002) is the discussion of the modality of the supine, where a distinction is made between modal (deontic) and non-modal readings.

3. SCIENTIFIC AND TECHNICAL PROGRAMME, PROJECT ORGANISATION

3.1. SCIENTIFIC PROGRAMME AND PROJECT STRUCTURE

This project is devoted to the study of non-finiteness across languages, with a special emphasis on French and Romanian in a comparative perspective. We examine the domain of non-finite clauses and reduced clauses (infinitivals, supines, participials and gerunds) and the domain of nominalizations,

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examining their grammatical properties (negation, clitic placement, agreement, aspectual markers, voice) and their semantic properties (modal and aspectual interpretation, temporality). We will thus pursue a typological-parametrical investigation which extends to Romance and Balkan languages, and for relevant points, to Germanic and Slavic languages.

Parametrization Romanian & French

We will investigate in parallel data from Romanian and French in both the domain of non-finite clauses (infinitives, supines, participials and gerunds) and nominalizations, with the goal of establishing the precise map of categories in their syntactic structure. This goal necessitates empirical investigation, data collection and formulation of generalizations to which members from the two teams will participate. Thus, empirical work by the computational team and postdoc researchers will start in the first phase of the project, followed by work on empirical generalizations with the whole team.

Theoretical investigation

We will pursue theoretical investigations on the **syntax and semantics of tense, aspect and modality** in parallel in both the non-finite domain and the domain of nominalizations, both independently and in a comparative perspective.

The goal is, **on the syntactic side**, to determine the set of functional categories determining the difference between the different non-finite domains under investigation. We will thus study the status of introductory markers, of affixal markers, evidence in favor of the presence of syntactic categories tense, aspect and mood.

This investigation will be pursued also in the domain of nominalizations like the Romanian supine have been argued to include more verb-like categories (aspect).

We will also investigate in detail modality, tense and aspect in infinitives **from a semantic point of view**, trying to see whether it is possible to establish correlations between the functional structure established on syntactic evidence and interpretive properties, and to provide a compositional account.

3.2. DESCRIPTION BY TASK

During the 3 years of the project we will work on the following work plan, whose different parts will overlap in time. Regular meetings, local seminars with reading groups and presentations, and extended visits of the researchers between the Romanian and French teams will ensure the relations between these packages, in particular between data extraction and elicitation and the computational data-base and between the syntax and semantics.

Two workshops per year will ensure the overall coherence of the project.

WP1: Description of the functional structure of non-finite complement clauses (Cornilescu (leader), Soare, Dobrovie-Sorin, Avram, postdoc, Tigău, Cotfas)

The **first most comprehensive task is the specification of the functional structure of non-finite complement clauses**. The topic has been partly addressed for some of the complement types, but it is incumbent on us to present a comprehensive compared description, based on the examination of all complement types from an intra-lingual as well as inter-lingual perspective.

WP1.a. The categorial status of non-finite clauses and the status of the introductory elements

A first problem is that of the categorial status of non-finite clauses. It has already been shown that non-finite complements differ in their size, ranging from (in)complete CPs to merely Aspect Phrases. Thus, for Romanian, starting from the parallelism between the complementizer mood particle *să* of the subjunctive, Dobrovie-Sorin (1994) argues that *a* has the same Complementizer/Inflection status, so that infinitive complements are mixed CI projections. Further research (Alboiu 2002, 2012), however,

analyzes *a* as an Inflection constituent (Mood marker), showing that in older stages of the language (Jordan 1995) the infinitive was introduced by its own complementizer *de*. *De* is apparently used with this function until the 19th century in argumental positions (*au hotărât de a pleca* ‘have.3PL decided *de* to leave’). We explore the possibility that it is the infinitive complementizer *de* which introduces the infinitive complements of nouns (*hotărârea de a pleca* ‘decision.the *de* to leave’ vs. *au hotărât a pleca* ‘have.3PL decided to leave’). This disparity between nominal and verbal complements follows from the categorial nature of verbs and nouns, as also shown by Pesetsky and Torrego (2007) for English that complements (*They decided (that) he would receive a prize, but the decision *(that) he would receive a prize*). This situation regarding the analysis of the infinitive raises the more general problem of finding a battery of tests which are indicative of a particular functional head, rather than another one. This will allow for a more precise and accurate description of non-finite clauses. We will start from the hypothesis that infinitives are complete CP domains, at least in control contexts.

In French, some problems in the analysis of infinitives come from the fact that the same forms can realize different underlying structures, with different interpretations: thus, the introductory elements *à* and *de* can be either prepositions, or complementizers or other functional heads in the extended projection of the verb (Fin or Mood); the voice can be either active or passive; the functional structure can involve a projection which licenses clitics or disallow such a projection (which explains clitic climbing in causative constructions).

French infinitives show up in argument positions, as complements of verbs, adjectives or nouns (see (1)), and also in adjunct positions, either to the clause / VP (see (2)), or to the NP (see (3)).

- (1) a. J’aime / je peux / je veux [jouer de la flûte].
 b. incapable [de plaire]
 c. le désir [d’aller au cinéma]
- (2) J’ai acheté cette flûte [pour (en) jouer].
- (3) a. Une machine [à laver]
 b. des problèmes [à résoudre]

When they are complements of verbs or subjects, they can lack an introductory element; otherwise, they must have such an element. In some cases, such as (1)b, (2) and probably also (3)a, the introductory element is a preposition. When introducing complements of nouns (as in (1)c), *de* can be analyzed as the genitival preposition or case marker, being correlated to the fact that the complement-taking head is a noun (compare *je désire aller au cinéma*). But the elements *de* and *à* can also represent introductory elements specialized for infinitives, appearing in positions in which a P+DP is excluded:

- (4) a. Il est bien [de ne pas manger de viande]
 a’. *Il est bien de la nourriture sans viande
 b. J’ai commencé [à jouer]
 b’. *J’ai commencé au jeu

Traditionally, they have been analyzed in this case as complementizers (Huot 1981, Dobrovie-Sorin 1994, Mensching 2000), although it has also been proposed that they represent case markers of sorts, reflecting the nominal properties of infinitive constituents (Rowlett 2007). However, unlike finite complementizers, these elements follow, rather than precede, dislocated elements, appearing in strict adjacency with the verb (or the clitic+negation+verb complex). Therefore, Rizzi’s (1997) seminal study, which opened the cartographic tradition, has analyzed them as lower functional heads in the C field, called Fin (markers of finiteness: in this case, -finite).

The parallel with Romanian mood markers (subjunctive) *să* and (supine) *de* suggests another possible analysis of French infinitive markers, which has been proposed by members of the project (Giurgea and Soare 2010a,b): they might represent, at least in some environments, a Mood head (a high functional head in the inflectional field), which can explain the modal interpretation which arises in the context of reduced relatives illustrated in (3)b.

A syntactic analysis of the infinitive must also account for the cases in which the introductory element is absent: is there a null Fin, or is the C-layer completely lacking?

WP1.b. The presence of a Tense projection

Accepting that the major syntactic categories of the verb are C, T, v, it is important to check whether non-finite clauses show **evidence of a Tense projection**. [Carstons] It has been already shown that past participle clauses are merely Aspect Phrases – i.e., they contain neither a Tense nor a Complementizer projection (see Cornilescu 2003 for a survey of the literature). The same point is made by Avram (2003), for Romanian gerund clauses. What Avram and further Alboiu (2007) demonstrate is that there is no evidence of an independent Tense projection in Romanian gerund clauses. Gerunds appeared to be simple Aspect phrases.

Even if a clause is a CP, it does not follow that it has a complete functional domain, i.e. it does not follow that all functional projections (MP, TP, AP) are all projected as independent phrases. A good example illustrating this situation is that of the Romanian supine. As agreed on by many researchers (Diaconescu 200?, Soare 2002, Cornilescu & Cosma 2012, in press), supine clauses can be categorized as CPs and it is conceivable that the prepositional complementizer *de* is the same as that which used to introduce infinitives. However, there is plenty of evidence that the functional structure of the supine is incomplete (see Soare 2002, Giurgea and Soare 2010a,b, Cornilescu & Cosma 2013), in particular it clearly does not contain an independent Tense projection since the supine clause cannot accommodate auxiliaries and object clitics, both of which are considered to be indicative of a T projection (Roberts 2011, among others). The supine sharply contrasts with the infinitive complement which allows for both clitics and auxiliaries:

- (5) a. ideea de a cumpăra cărțile/ ideea de a le cumpăra
 idea-the of to buy.INF books-the idea-the of to them buy.INF
 b. dorința de cumpărat cărțile / *dorința de le cumpărat
 desire-the of buy.SUP books-the desire-the of them buy.SUP

Interestingly, Alboiu (2012) argues that gerunds should also be considered CPs, even if in her view the gerund clause does not contain either an independent Tense projection, or an overt complementizer. Her argument that gerunds are CPs is that, unlike infinitives and supines, they countenance pre-verbal subjects, which in Alboiu’s view represent topics (in SpecCP) in the left periphery of the gerund clause. The topic analysis is in agreement with the interpretation of the pre-verbal subject:

- (6) a. Păsările cântând, ne-am înveselit cu toții.
 birds-the singing REFL-have.1PL cheered-up all
 b. Au făcut tot ce au putut pentru a ajunge fratele lor președinte
 have.3PL done all that have.3PL could for to become brother-the their president
 / *pentru fratele lor a ajunge președinte.
 for brother-the their to become president

Under the view that gerunds lack TPs like supines, one must still account for the presence of clitics in the gerund clauses, as opposed to the supine clauses.

- (7) a. De (*le) cumpărat, le-am cumpărat
 of (them) buy.SUP them-have.1 bought
 b. Cumpărându-le ieftin, s-au bucurat foarte mult.
 buying-them cheap REFL-have.3PL gladdened very much

Adverbial clitics and Tense. A characteristic property of Romanian is the presence of aspectual clitic adverbs such as *mai*, *tot*, *si*. It has been shown by Dobrovie-Sorin 1994 (see also Gabriela Soare 2008) that these clitics, which presumably merge as adjuncts to the Aspect phrase, end up as adjoined to inflection, i.e., to the Tense projection. The possibility of licensing such clitics in non-finite clauses is likely to indicate the presence of a Tense projection. It is easy to notice that such clitic adverbs are

possible in affirmative infinitives and excluded in the supine and past participle clause; however, they are licensed in gerund clauses. This difference again is suggestive of the presence of a TP in the gerund clause:

- (8) a. Ideea de a {tot/ mai} cumpăra romane polițiste nu e buna.
idea-the of to over-and-over / again buy.INF novels criminal not is good
b. Dorința de (*mai/*tot) cumpărat cărți scumpe nu l-a părăsit.
desire-the of again/ over-and-over buy.SUP books expensive not him-has left
c. Tot cumpărând cărți scumpe, și-a cheltuit banii.
over-and-over buying books expensive REFL.DAT-has spent money-the
d. Mai venind o dată ai putea afla mai multe.
again coming once would.2SG can learn more much.FPL
'Coming again, you could learn more'

In French infinitives, the existence of a Tense projection is manifested by the allowance of clitics and negation, but it is not sure whether the verb itself raises to T.

The infinitive behaves like finite verbs with respect to clitic placement and the negation *ne*, but differs from them with respect to adverb placement, including the negation *pas*, which led Pollock (1989) to propose that the verb occupies a position lower than T:

- (9) a. Pourquoi les étudiants ne doivent-ils pas le lire?
b. Pourquoi les étudiants ne le lisent pas?
(10) a. L'embrasser souvent, sa femme, c'est bien.
b. Souvent l'embrasser, sa femme, c'est bien.

As the infinitival verb can be followed by adverbs (see (10)b), it has been concluded that it raises out of the VP, targeting an intermediate head between T and V/v (see Cinque 1999, Roberts 2010).

It should be stressed that the absence of an independent Tense phrase i.e., of an independent syntactic position for tense does not prevent Tense to be realized as a feature syncretic with Aspect as proposed in Alboiu (2012) or with the complementizer as proposed in Dobrovie-Sorin (1994). The tense feature may play a part in licensing the subject.

WP1.c. Reduced structures: restructuring and raising

Non-finite clauses do not have the same categorial properties in all the contexts of occurrence (see, for instance Sleeman 2007). From this point of view, it is relevant to distinguish between c-selected complement clauses and adjunct clauses. C-selected complements allow restructuring, show different restructuring strategies with the main clause.

French has restructuring in causative constructions, which have been examined by various studies (see Kayne 1975, Rouveret & Vergnaud 1980, Burzio 1983, 1986, Baker 1988, Bouvier 2000, a.o.). A recent account of the special properties of these constructions can be found in Roberts (2010), who proposes that in *faire-à* causatives the infinitive verb sits in a very low Inf position, below v, and this InfP raises to the specifier of a Voice head (which, in turn, is selected by *faire*). In any case, as the direct object is not licensed by the embedded verb, but by the matrix verb (see **J'ai fait Marie manger la pomme*), it is clear that infinitives in causative constructions are passive, as opposed to infinitives in other environments. In the *faire-par* construction, the marking of the external argument of the infinitive by *par* indicates a regular passive Voice.

The infinitive is passive not only in causative constructions, but also in reduced relatives and *tough*-constructions, as shown by previous work of members of the project (see Giurgea and Soare 2010, 2012). The passive/active ambiguity of French infinitives argued for by Giurgea & Soare 2010a-b can also be found in some French constructions with *se laisser*, which have a middle-flavor. A similar analysis is proposed for German *sich-lassen* middles by Pitteroff (2012).

- (11) Ce livre se laisse lire

For these constructions, one might investigate the possibility of having a reduced structure, which does not include Aspect nor defective Tense, but a mere VP with a passive interpretation. We intend to develop the investigation of Voice in infinitives, an issue which has been largely neglected in previous literature. We will investigate whether there is a correlation between voice and the position in which the infinitival verb raises, building on the idea that the restriction of passive infinitives to certain environments follows from the different functional structure that infinitives have in this environment (see Bouvier 2000 for a similar intuition).

We consider the possibility of a reduced structure for the infinitive complements of auxiliary and semi-auxiliary verbs. In French, these verbs are not restructuring (the infinitive bears clitics, negation), but there may be other syntactic properties correlated to the operator semantics of the semi-auxiliary verbs (these verbs are aspectual, temporal and modal operators). We will investigate whether an analysis of semi-auxiliaries as functional heads (as proposed in the cartographic framework, see Cinque 2001, 2004, Cardinaletti and Shlonsky 2004) is appropriate or not.

Infinitive complements of both languages (Romanian and French) allow subject to subject raising. Since raising implies case licensing of the subordinate subject in the main clause, it may be considered restructuring strategy. Romanian also allows for ECM constructions out of infinitive complements with epistemic verbs (for raising in Romanian see for instance the analysis in Pană-Dindelegan 1976). Both languages allow ECM with verbs of perception, though they use different types of complements: Romanian employs gerund complements, while French employs the infinitive.

- (12) a. Elle semble être partie
b. Ea pare a fi plecată
c. O consider a fi inteligentă.
(13) a. Je l'ai vu partir.
b. Am văzut-o plecând.

While older GB analysis claims that raising complements are smaller (i.e. IPs, not CPs) (see, for instance Chomsky 1986, Bošković 1997, among many), Gallego (2008) simply assumes that raising complements are defective CPs: the complementizer is ϕ -defective and cannot transmit any features to the Tense node. As a result, the Tense feature of the embedded subject remains active, triggering raising into the main clause.

Restructuring has also been discussed in detail in Cornilescu & Cosma (2007) following the line of analysis opened by Wurmbrand (2001, 2004), ter Beek (2008). Two distinct situations have been identified in the syntax of the supine. Case is assigned to the internal argument of supine verb by a functional head of the main clause (V-v for Acc case as in *studentii* in (15)), T for the Nom case as in the long passive in *acordurile* in (16)), but the internal argument remains in the supine clause. Its occurrence to the left of the supine complementizer *de* is impossible, as seen for *cărțile* in (14)b. This distinguishes restructuring from raising (see *cărțile* in (14)a), when the internal argument is not only licensed by a functional head of the main clause, but it must occur in the main clause, i.e. to the left of *de*.

- (14) a. Am considerat cărțile de publicat cât de curând posibil.
have.1SG considered books.DEF de publish.SUP how-much of soon possible
'I considered publishing the books as soon as possible'
b. *Am continuat cărțile de publicat
have.1SG continued books.DEF de publish.SUP

- (15) I-am terminat de examinat *pe studenți* abia după-masă.
 CL.M.3PL.ACC-have.1SG finished *de* examine.SUP OBJ students only after-lunch
 'I finished examining the students only after lunch.'
- (16) S-*au* încheiat de semnat *acordurile*.
 SE-have.3PL finished DE sign.SUP agreements.DEF
 'They have finished signing the agreements'
- b. *S-a încheiat de semnat *acordurile*
 SE-have.3PL finished DE sign.SUP agreements.DEF

From an interpretative perspective, these three types of supine clauses (non-restructuring, restructuring, raising) differ regarding the semantic range of the IA. Restructuring is a means of enlarging the range of available IA for the supine verb: internal arguments like pronouns or proper names which are not allowed in the non-restructuring supine (because they are clitic doubled) are admissible in supine raising clauses.

WP2. Semantic analysis of non-finite clauses (Laca (leader), Cornilescu, Dobrovie-Sorin, Caudal, Mari, postdoc)

We aim to analyze modality, tense and aspect in the non-finite domain, correlating interpretation to the syntactic structure proposed in WP.I, by developing a compositional account.

WP2.a. Aspect and Tense

Recent research on non-finite forms has stressed the importance of aspect for these types of clauses, basically because the morphemes that mark non-finite verbs actually express aspectual oppositions – thus, past participles are correlated to a [+perf] feature, infinitives and supines to a [-perf] feature. We hypothesize that since some of the non-finite clauses lack a TP, the temporal feature expressed by these complements heavily depends on their aspectual properties.

The importance of Aspect for the (aspectual) temporal interpretation of the clause can be seen in supine clauses, as shown in Cornilescu & Cosma (2013). The supine and the participle morpheme are homonymous contrasting in their aspectual [+/- perfective] interpretation. While the past participle has a perfective resultative interpretation, the supine is [-perfective]. Compare: *tema făcută* 'the homework done' / *tema de făcut* 'the homework to do'.

Since the supine is *aspectually imperfective*, when the supine clause –has independent– time reference, it is interpreted as future or generic present. This interpretation appears inside PP adjuncts (see (17)), complement/subject clauses (see (18)) and relative clauses (see (19)):

- (17) a. A plecat *la* cumpărat cărămizi.
 have.3SG gone to buy.SUP bricks
 'He/she went to buy bricks.'
- b. mașină de tocat carne
 machine *de* mince.SUP meat
 'machine for mincing meat'
- (18) E bine de spus adevărul
 is good *de* tell.SUP truth-the
 'It's good to tell the truth'
- (19) mere de cumpărat mâine
 apples *de* buy.SUP tomorrow
 'apples to be bought tomorrow'

The second, less frequent situation, is that, due to constraints imposed by the main verb, the supine clause is *tenseless*. This happens for instance with aspectual and implicative verbs (see

Cornilescu & Cosma 2013 for details), which select complement clauses without an independent temporal reference.

Just like the supine, the infinitive has an irrealis future interpretation when it has independent Tense. However, the manner in which this reading is derived is different. It is true that the infinitive stem is inherently imperfective (see Cornilescu 2000) but, in addition to the imperfectivity of the infinitive stem, an important contribution to the irrealis future interpretation is brought in Romanian by the inflectional mood particle *a*, which originates in a preposition that showed direction, similar to the English preposition *to*. The irrealis future interpretation accounts for the many cases where the infinitive alternates with the subjunctive and even the supine. In French, we intend to investigate whether a similar effect with the complementizer *à*, which has the same origin as Romanian infinitival *a* (the directional preposition *ad*).

As in other languages, the infinitive can also be tenseless, when selected by certain verbs. There are two classes of verbs which select tenseless infinitives: (i) aspectual, implicative and modal verbs, where Romanian allows a subjunctive paraphrase:

- (20) a. A încercat a spune un neadevăr
 has tried to tell a untruth
 b. A început a spune neadevăruri.
 has started to tell untruths

(ii) Epistemic verbs, in which case it is paraphrasable by an indicative.

- (21) Îl consider a fi cel mai prost student al meu.
 him consider.1SG to be the most bad student GEN my
 'I consider him to be my worse student'

The infinitive is less constrained than the gerund or the supine in the temporal relations it establishes with the main clause. This is because, as shown in Dobrovie-Sorin (1994), the infinitive may become perfective when its Aspect head is filled by the aspectual auxiliary *fi*. When the perfective auxiliary is present, the infinitive complement may express anteriority with respect to the main clause or to some other reference point:

- (22) Îl consider a fi fost cel mai prost student al meu.
 him consider.1SG to PERF been the most bad student GEN my
 'I consider him to be my worse student'

We will investigate the interactions between the two factors involved in the temporal interpretation of infinitives and supines: the inherent aspectual feature of these forms and the semantics of the main verb.

WP2.b. Modality

While the modal meanings expressed by the subjunctive, the infinitive and the supine are often equivalent, expressing a modality that has been described as *irrealis* (Quer 1998), or as *unrealized* (Hoekstra/ Hyams 1998), or as *non-assertive* (Quirk/Greenbaum/Leech 1972), these meanings are compositionally derived from different syntactic structures. We intend to explain how these meanings are derived. An interesting case in point is the Romanian supine, for which we intend to examine the hypothesis that the modal interpretation is derived from its imperfectivity.

The interpretation of the supine varies depending on the context: when selected, it has no independent modal meaning (it does not introduce a modal operator, but this operator comes from the selector), being equivalent to the subjunctive. When not selected, i.e., in reduced relatives contexts

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(see WP.III), the supine introduces a modal operator, expressing circumstantial and deontic modality – as can be seen from the fact that in paraphrasing the supine, some lexical modal verb is required. Compare:

- (23) Suntem dornici **de plecat/ (de) a pleca/ să plecăm.**
are eager *de* leave.SUP/ *de a* leave/ SUBJ leave.1PL
'We are eager to leave.'
(24) carte *de* citit până mâine
book *de* read.SUP until tomorrow
'a book which must be read by tomorrow'

Thus, Giurgea & Soare (2010:68) show that generally modal non-finite relatives in Romance (built in Romanian with the supine) and supine small clauses express *deontic necessity* (see (25)-(27)) or teleological potentiality (= something you can/should do to achieve a certain goal)(see (28)):

- (25) cărți *de* citit neapărat
books *de* read.SUP no-matter-what
'books to definitely read'
(26) Ce *e* *de* făcut?
what be.3SG DE do.SUP
'What's to be done?'
(27) *Am* *de* scris o lucrare.
have.1sg *de* write.SUP a paper
'I have to write a paper.'
(28) Ai adus ceva *de* citit pe drum?
have.2SG brought something *de* read.SUP on way
'Did you bring something to read on the way?'

On the connection between imperfectivity and irrealis, we will build on previous work pioneered by Dowty (1979), who argues that imperfective forms are modal, because they make reference to possible worlds for evaluation (see also Villalta 2008; Cipria/Roberts 2000 etc.):

- (29) Jack London was building a house at the time of his death.

According to Dowty, the event of building the house, which is incomplete in the real world, comes up to fulfillment in all of the „inertia worlds” determined by the context world. Inertia worlds are to be thought of as worlds which are exactly like the context world up to the time of the event, and in which the future course of events after this time develops in ways most compatible with the past course of events.

WP3. Non-finite constituents in relative clauses and *tough*- constructions (Soare (leader), postdoc)

WP3.a. Reduced relatives: infinitives, supines, participles

A less investigated area in the syntax of non-finite forms is the adnominal environment. Non-finite verbal projections can function either as complements of nouns or as intersective modifiers, interpreted as relative clauses.

Among non-finite nominal modifiers, the most straightforward distinction is between agreeing and non-agreeing adnominal verbal forms – the former are traditionally called participles, the latter belong to the class of infinitives (the Romanian supine can be considered a special type of infinitive):

- (30) a. question étudiée (fr.) : Participle (agreeing)
issue(F) studied.FSG

- a'. chestiune cercetată (rom.)
issue(F) studied.FSG
b. question à étudier (fr.) : Infinitival (non-agreeing)
issue to study.INF
b'. chestiune de cercetat (rom.)
issue of study.SUP

More important from a syntactic point of view is the distinction between full and reduced relatives. Bhatt (1999) (following Kjellmer 1975) has shown that English infinitival relatives are of two types: (i) full, which behave as finite relatives; (ii) reduced, which have a number of special properties: they can appear in predicative position, relativization is strictly local and it only involves the subject, which does not receive case from the relative clause, no complementizers or relative pronouns are permitted (see Bhatt 1999: 9-10, Embick 1997, Iatridou, Anagnostopoulou, & IZvorski 2001).

One important theoretical issue which needs further investigation is the syntactic analysis of reduced relatives. Previous research by members of the project (see Giurgea and Soare 2010a) has argued that, although relativization is standardly associated to A-bar movement, the movement involved in reduced relatives is rather A-movement (therefore, considering the term “reduced relative” somewhat misleading, the authors have proposed the term “participial”). This can be clearly seen if we compare passive participles in predicative and adnominal positions.

- (31) a. The car is washed by John
(fr.) La voiture est lavée par Jean
(rom.) Mașina e spălată de Ion
b. This is [the car washed by John]
(fr.) Celle-là est [la voiture lavée par Jean]
(rom.) Asta e [mașina spălată de Ion]

As A-movement is standardly assumed for (31)a, it must be concluded that the same process takes place in (31)b. In fact, three properties of reduced relatives – strict locality, the restriction to the subject and the fact that subject does not receive case from the relative clause – can be derived from the characterization of “reduced relativization” as A-movement (a process which only affects arguments with unvalued (unlicensed) case). Thus, an important conclusion emerges, which needs further theoretical elaboration: case licensing operations can combine with the operation turning a verbal projection into an adnominal modifier.

A central idea of minimalism (see Chomsky 2000, 2001, 2009) is that structural case licensing/assignment (which is involved in A-movement) is correlated with the existence of unvalued ϕ -features (i.e., ϕ -features whose value is established by agreement) on the case licenser. Under this view, we expect to find agreement in reduced relatives. But is there a one-to-one correlation? This issue has not been investigated for many languages yet. The studies on Romanian supine relatives (Soare 2002, Giurgea and Soare 2007a,b) have shown that agreement is not a precondition for A-movement: supine relatives have the properties of reduced relatives and nevertheless lack agreement. Giurgea and Soare (2010a,b) argue that the same holds for French and Italian infinitival relatives. Thus, for example, the possibility of appearing in predicative positions is found not only with agreeing forms (on which see (31)) but also with infinitival/supine forms:

- (32) a. La question est à étudier soigneusement (fr.) : Infinitival (non-agreeing)
the issue is to study.INF carefully
b. Chestiunea e de cercetat cu atenție (rom.)
issue.the is of study.SUP with attention
'The issue is to be carefully studied'

The following questions arise, which we intend to investigate in our project:

- (a) Are agreeing non-finite relatives always reduced? (A positive answer would support the proposed correlation between ϕ -features and A-movement)
(b) Are there systems in which non-finite relatives are always reduced? This appears to be the case in Romance, but further investigations are needed for the various Romance varieties.

(c) If the answer to (b) is yes: can the limitation of non-finite relatives to reduced relatives be related to other properties of the language? In other words, if Romance languages and English differ in this respect, can this difference be correlated with other properties of these languages?

Further issues to examine concerning the syntax of reduced relatives are:

(d) Whether the attributive use of reduced relatives requires a head-internal analysis of relative clauses or not. In the predicative use, as in (32)a, it is standardly assumed that the object raises out of the non-finite clause for case-licensing. If the same process takes place in the attributive use (ex. (32)b), we are led to conclude that (i) reduced relatives are derived by raising of the pivot (as proposed by Bhatt 1999, 2002, following the analysis of full relatives by Vergnaud 1974, Kayne 1994, Bianchi 1999) and (ii) this raising can be due not only to a peripheral feature such as +wh or +rel, but also by the need of case licensing (formalized as unvalued Case in recent minimalism).

(e) How can the attributive and predicative uses of reduced clauses be unified. A PredP analysis might be useful, in which case the predicative and attributive uses would reflect different flavors of Pred.

(f) The internal syntax of the infinitival forms functioning as reduced relatives, taking into account the A-movement analysis which has been proposed: notice that these forms have an introductory element (*de* in Romanian, *à* in French), standardly analyzed as a complementizer. However, if the object is not case-licensed in the non-finite clause, it is disputable whether these projections can be analyzed as CPs, because CPs define a domain for case-licensing the subject. There are at least two possible solutions to this problem, which we shall investigate: (i) the introductory element might represent a Mood head in the inflectional field (akin to Romanian *să*, analyzed as an inflectional M(ood) head by Cornilescu 1997, Avram 1999, Alboiu 2002, a.o.); (ii) adopting Rizzi's (1997) split CP, one might consider that projections only containing Fin (and no higher C head) are not necessarily case licensing domains, in which case the introductory elements may be analyzed as Fin heads.

WP3.b. The infinitive and the supine in *Tough*-constructions

Another special environment in which the French infinitive (introduced by *à*) and the Romanian supine appear is the *tough*-construction.

In spite of superficial similarities with the English construction, Romanian and probably also French *tough*-constructions involve a different type of movement, which is necessarily local:

- (33) a. ??Un livre difficile à convaincre tes enfants de lire sans mémoriser (Fr.)
 a book difficult to convince your children to read without memorize
 b. *O carte greu de convins pe elevi să (o) citească fără a reține (Rom.)
 a book difficult to convince OBJ pupils SUBJ it read without to memorize
 c. A book hard to convince your children to read without memorizing (Eng.)

Moreover, the forms which appear in Romance TCs are identical to those appearing in reduced relatives (Romanian supine, French *à*+infinitive; for French, see Kayne 1972, Sportiche 2002, 2006) and a periphrastic passive is not allowed.

Based on these facts, Soare (2002) proposed that the non-verbal forms in French and Romanian TCs are passive, so that *tough*-movement can be characterized as A-movement. For Romanian, supporting evidence is the possibility (at least for some speakers) of an agent-PP (see Giurgea and Soare 2010a,b for attested examples). This may indicate that TCs are another environment in which the French infinitive and the Romanian supine have a reduced functional structure, lacking active voice. However, French allows (dative or oblique) clitics in the infinitive in TCs, showing that the functional structure is not as reduced as in restructuring environments.

A second problem in the analysis of TCs is agreement. Romanian differs from French (and the other Romance languages) in that *tough*-adjectives do not agree with the subject/head-noun of the construction (see (34): the adjective appears in the masculine singular form, which is a default form – it is also used when the adjective is the predicate of a sentence without a nominal subject, see (35); moreover, this form is also used as an adverb):

- (34) a. teorie greu de înțeles
 theory(F) hard.MSG of understand.SUP
 b. Aceste teorii sunt greu de înțeles

- these theories(F) are hard.MSG of understand.SUP
 (35) E greu { să înțelegem teoria / de rezolvat atâtea probleme }
 is hard.MSG SBJV understand.1PL theory-the of solve.SUP so-many problems

There have been proposed three accounts for this phenomenon, all of which still leave some problems unsolved: (i) Based on the fact that the masculine singular form of most Romanian adjectives, including *tough*-adjectives, is also used as an adverb, Hill (2002), Soare (2002), Soare and Dobrovie-Sorin (2002), Giurgea and Soare (2010a,b) analyze the *tough*-adjective as an adverb occupying a specifier position in the extended projection of the verb (SpecMood in Giurgea & Soare 2010a,b); *greu de înțeles* would be equivalent to *difficultly intelligible*. This analysis is problematic because it assumes that in TCs the non-finite clause is no longer a complement of the adjective, in spite of the fact that *tough*-adjectives can take clausal arguments (see (2)); moreover, it cannot explain why we do not find TCs built with adverbs in languages where adverbs do have distinct morphology (constructions which would correspond to Fr. **livres facilement à lire* or Engl. **books easily to read* do not appear to be attested). (ii) Dye (2006), assuming that in non-agreeing TCs, like in agreeing TCs, the adjective is the predicate and the supine is its complement, proposes that the object passes through SpecAP in the agreeing TC, undergoing A-movement, whereas in the non-agreeing TC the object is a null operator undergoing A-bar movement inside the complement clause and the subject is base-generated in a SpecPrP above the AP and coindexed with the null operator. This analysis faces several problems: first, it is unclear how the external argument is thematically interpreted; Dye assumes that it is somehow linked (“by some notion of predication coindexation”) to the null operator in the adjective’s complement; but this interpretative property can only be contributed by the *tough*-adjective, which implies that the subject must be argumentally related to the adjective; but then we expect agreement, like for any external argument of an adjective. Moreover, it is assumed that a DP in SpecPr does not trigger agreement on a predicative adjective, although Pr(edicate)Phrases have been introduced precisely for hosting the base (thematic) position of the external argument of adjectives in general (see Bowers 1993, Baker 2003), and predicative adjectives in Romanian do agree, like in the other Romance languages. Finally, there is no evidence in favor of A-bar movement in non-agreeing TCs: unlike in English, long distance dependencies are totally ungrammatical (see (36)); moreover, as noticed by Giurgea and Soare (2007a,b) agent PPs are allowed (see (37)), which shows that the supine is passive and thus cannot assign case to an object null operator:

- (36) a. * Această carte e greu de convins copiii s(-o) citească
 this book is hard SUP convince.SUP children-the SUBJ(-CL.ACC) read.3PL
 b. This book is hard to convince children to read
 (37) cărți greu de înțeles de către copii
 books hard SUP understand.SUP by children

(iii) Giurgea and Soare (2007a,b) propose that in non-agreeing TCs, the clause is the subject of the adjective; analyzing subjects of non-finite predicates as SpecPred (following Bowers 1993, Baker 2003), the authors propose that the clause occupies SpecPred in non-agreeing TCs, whereas in agreeing TCs the object of the verb raises through SpecPred, thereby deriving agreement. But in this case, it is difficult to explain how *tough*-movement takes place. A higher Pred or relativizing head is needed above the PredP hosting the clause, but this kind of structure is not found anywhere else in the language and it is not clear how it can be obtained.

We aim at finding an account which overcomes all these drawbacks – either by refining one of the proposed analyses, or by developing a completely new one. In order to achieve this goal, we intend (i) to widen the empirical domain, investigating TCs in languages such as German, where agreement, as in Romanian, is not found on the adjective but, unlike in Romance, can appear on the non-finite form, and (ii) to consider applying new theoretical tools in the analysis of TCs.

Pursuing the idea that the non-finite forms used in TCs represent the same type of verbal projection as that found in reduced relatives, we intend to establish the exact functional structure of this projection, deciding on the status of the introductory elements (which may represent the Mood projection), on the presence or absence of T (which is probably correlated with the allowance of clitics) and on the type of v/Voice.

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Another issue to be addressed is why these specific non-finite forms are used in TCs, rather than others (French *à*+Inf., rather than *de*+Inf. or a bare infinitive, Rom. supine rather than the infinitive). For French, we may hypothesize that the modality contributed by *tough*- adjectives determines the choice of *à*, which has a prospective orientation. For Romanian, the explanation may be the nominal origin of the supine (see the use of nominalizations in TCs in Hebrew).

WP4. Functional Structure in Nominalizations (Soare (leader), postdoc, Caudal)

WP4.a. Aspect in Nominalizations

In previous work by members of the team (Soare 2008, Iordăchioaia & Soare 2008, 2009, Alexiadou, Iordăchioaia & Soare 2010), it has been proposed that the category of (grammatical) Aspect is relevant for the deverbal nominal system across languages. The comparative investigation of the Romanian infinitive and supine nominalizations has brought important support for this hypothesis. This type of research has also been extended to Slavic (Polish and Bulgarian), Germanic (English and German) and Spanish.

The hypothesis of the presence of Aspect needs more empirical foundation. More work needs to be done in this respect e.g. on Polish, which has overt aspectual marking in deverbal nominals, but also on Balkan languages (Bulgarian and Albanian).

It is also necessary to take into account the distinction between lexical and grammatical aspect in nominalizations, setting apart classes of deverbal nominals that involve (im)perfectivity from nominals that only convey (a)telicity. The investigation will include not only eventive nominals, but also agent and instrument nominals.

It is important to check if the diagnostics for the presence of grammatical Aspect in the nominal supine also hold for the verbal supine (or if, for this context, the relevant projection would be inner Aspect as proposed by Cornilescu & Cosma 2012). More investigation is thus to be done by comparing the two types of supine and by testing the behavior of the supine in verbal periphrases (see WP1).

WP4.b. Morphology and the Functional Structure of Nominalizations

An important factor that distinguishes between the different types of nominalizations is the nominalizing pattern. As discussed by Alexiadou et al (2010) – following an idea in Soare (2007), the crucial factor is the presence/absence of a nominalizing affix (n°); in Romanian, it has been proposed that such an affix is present in the infinitive nominal and absent in the supine nominal (which is morphologically identical to the past participle and the verbal supine). If this is true, we expect grammatical aspect to project in “*syntactic*” nominalizations, i.e. in nominalizations where the nominal category is contributed by the Determiner (cf. the English *verbal* gerund). A comparison of this type of nominalizations across languages is thus necessary to determine if this hypothesis is on the right track. For instance, it would be relevant to compare the behavior of the supine nominal to the one of the mixed *verbal* gerund, Turkish sentential nominalizations, and Italian and Spanish nominalized infinitives with a richer functional structure – e.g. in Italian *Infinito sostantivato* (Zucchi 1993):

(38) Il suo mormorare parole dolci

In this project, the comparative investigation of *sentential* nominalizations, or nominalizations with rich functional structure is meant to complete the picture of non-finiteness across languages, and to achieve a finer delimitation of verbal and nominal properties in non-finite forms (the “Nouniness squish” of Ross 1973). Note that the modal reading is absent in the supine nominal, which is expected if Mood is a higher functional head showing up in supine CPs and not in DPs. However, in some languages such as Turkish, sentential nominalizations allow a futurate reading. It can be concluded that the mixture of nominal and verbal properties is not the same in all nominalizations (Kornfilt & Whitman 2012; cf. also Ntelitheos 2012 on Malagassy nominalized CPs).

This investigation will be pursued in a parameter based account, based on the idea that more sentential nominalizations have a richer functional structure, including higher projections such as Tense, Agreement and Modality. Sentential nominalizations are known to exist in Australian

aboriginal languages. Therefore, Patrick Caudal’s expertise in Australian languages will be of great importance for the project.

WP5. Collection of data and building of a database + statistical interpretation of data (A. Dinu, L. Dinu)

We will collect our data in three steps:

1. by extracting informal Romanian examples from the internet – relevant examples as to the occurrence of the infinitive/supine.
2. by collecting experimental data with a questionnaire: grammaticality judgment tasks by adults and language acquisition data.
3. corpus studies (for Romanian and French) & statistical interpretation of the data

Meetings and workshops

2013	Summer	Project meeting	Bucharest
	autumn	Project meeting Workshop ‘The Syntax of non-finite clauses’	Paris
2014	spring	Project meeting	Sinaia
	autumn	Project meeting + Workshop ‘The Semantics of non-finite clauses’	Paris
2015	summer	Final meeting 2-days Conference Presentation of results	Bucharest

3.3. TASK SCHEDULE

The team structure is designed in such a way as to assure the proper realization of the project. It has a balanced proportion with respect to the project objectives: 5 linguists (Cornilescu, Avram, Dogaru, Tigau, Cotfas) and 2 computational linguists (Dinu L., Dinu A.) for the Romanian team and 5 linguists for the French team.

Work Plan

WP1: Description of the functional structure of non-finite complement clauses (Cornilescu (leader), Soare, Dobrovie-Sorin, Laca, Avram, postdoc, Tigău, Cotfas)

WP1.a. The categorial status of non-finite clauses and the status of the introductory elements

WP1.b. The presence of a Tense projection

WP1.c. Reduced structures: restructuring and raising

WP2. Semantic analysis of non-finite clauses (Laca (leader), Cornilescu, Dobrovie-Sorin, Caudal, Mari, postdoc)

WP2.a. Aspect and Tense

WP2.b. Modality

WP3. Non-finite constituents in relative clauses and *tough*- constructions (Soare (leader), postdoc)

WP3.a. Reduced relatives: infinitives, supines, participles

WP3.b. The infinitive and the supine in *Tough*-constructions

WP4. Functional Structure in Nominalizations (Soare (leader), postdoc, Caudal)

WP4.a. Aspect in Nominalizations

WP4.b. Morphology and the Functional Structure of Nominalizations**WP5. Collection of data and building of a database + statistical interpretation of data**

WP5a. extraction of data from the internet (Anca Dinu, Liviu Dinu, Elena Soare, Carmen Dobrovie-Sorin, postdoc)

WP5b. elicitation of data with questionnaires (Anca Dinu, Liviu Dinu, Elena Soare, Carmen Dobrovie-Sorin, postdoc)

WP5c: Statistical Interpretation of data (Anca Dinu, Liviu Dinu)

WP5d: building of database

WP6. Typological investigation (Dobrovie-Sorin (leader), Soare, postdoc)

WP7.a. Filling of gaps (Anca Dinu (leader), Liviu Dinu, postdoc)

WP7.b. Preparation for publication (Carmen Dobrovie-Sorin (leader), postdoc)

	Bucharest	Paris
2013-2014	Project meeting: kickoff (Bucharest)	
	WP1a-b-c	WP5a-b
	WP1a-b-c	WP4a-b
Results dissemination: Workshop 1 (Paris)		
2014-2015	WP2a-b	WP5a-b
	WP2a-b	WP3a-b
	Project meeting 2 (Sinaia)	
2015-2016	WP 5c: statistical interpretation of data	WP7a Filling of gaps
	WP 5d: building database	WP7b Preparation for Publication
	WP7: Filling of Gaps	
Final meeting: 2-days Conference, presentation of results		

4. DISSEMINATION AND EXPLOITATION OF RESULTS AND INTELLECTUAL PROPERTY

The work realized in the project (articles, conferences and database) will be published on a website under the responsibility of Anca Dinu, University of Bucharest.

The results of our work will be presented in major conferences in syntax and semantics : Colloque de Syntaxe et de Sémantique à Paris, Rencontres d'Automne de Linguistique Formelle (Paris 8), GLOW, Going Romance, Linguistic Symposium on Romance Languages, Mediterranean Syntax Meeting, and in the main international conferences in computational linguistics: COLing, Cicling, Lrec, Ranlp, EMNLP. Besides, we will make public our work by organizing two international workshops in our own project (years 2 and 3).

We intend to submit our work to referenced international journals (e.g. Natural Language and Linguistic Theory, Natural Language Semantics, Probus, Lingua, Journal of Linguistics, Recherches de Linguistique de Vincennes), and a final volume which will be proposed to OUP or Benjamins.

On the French side, the results will be made available on the HAL database. The main coordinator will solicit assistance from the "Cellule de valorisation" of Denis Diderot University for the Consortium Agreement for agreements on the intellectual property of the data, and to the International Office of the Denis Diderot University for the external guests.

6. SCIENTIFIC JUSTIFICATION OF REQUESTED RESOURCES

5.1. PARTNER 1: CNRS-LLF

- *Staff*

The typological investigation on Romance languages will be carried out by an experienced researcher (post-doc) supervised by C. Dobrovie-Sorin. Comparison and typology of Romance languages is one of the prominent themes of LLF (see AERES report 2013, and other research reports). Three Romance languages (other than French) are well represented inside LLF (Italian: Lucia Tovena, European Portuguese: Alain Rouveret, Romanian: Carmen Dobrovie-Sorin, Gabriela Bilbiie (associated post-doc)) and three of the other Romance languages (Brazilian Portuguese, Spanish, Catalan) are easily accessible to us due to ongoing cooperation programs conducted by C. Dobrovie-Sorin for the French part (CAPES-COFECUB Project on Bare NPs 2007-2012, Egide Project 2007-2010, external expert for an ongoing project UAB Barcelona directed by Maria Teresa Espinal). The task of the post-doc will be to carry out a theoretically-oriented typological research combined with a comparative crosslinguistic research (parameter-setting style) on non-finite structures in all Romance languages, by putting to the profit of this project the expertise of the researchers belonging to or collaborating with LLF. He/she will also investigate Sardinian and some of the Italian dialects. The aims will be: (i) to establish solid empirical generalizations, based on questionnaire-style work (resembling field work); (ii) experimentally test the insecure data. Experimental linguistics is also part of LLF's projects, due to a LABEX 10-year project, which has provided LLF with experienced staff (working under the supervision of Barbara Hemforth) and an experimental platform; (iii) formulate the generalizations in an explicit way, so that they can be NLT-implemented; (iv) work in collaboration with the NLT team in Bucarest.

The person will be hired at the beginning of the project and for the 3 years.

5.2 PARTNER 2: STRUCTURES FORMELLES DU LANGAGE

- *Staff*

The typological investigation on Balkan and Slavic languages will be carried out by an experienced researcher (post-doc) supervised by E. Soare. Comparison with both Balkan languages and Romance languages is an important component of the project, and the post-doc will be in charge with a theoretically-oriented typological research combined with a comparative crosslinguistic research (parameter-setting style) on non-finite structures in Balkan/Slavic languages. The aims will be: (i) to establish solid empirical generalizations, based on questionnaire-style work (resembling field work); (ii) experimentally test the insecure data. Experimental linguistics is also an important component of SFL, within a whole team "Language, Cognition and Development", and an experimental platform; (iii) formulate the generalizations in an explicit way, so that they can be implemented in data bases to be built during the project. The person will be hired at the beginning of the project and for the 3 years.

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Deverbal Nominalization with the Down Operator in Romanian

Chierchia (1984) employs the down operator (\wedge) as a nominalizer of predicative expressions. In Chierchia (1998), he mainly uses \wedge in the formation of kinds and mass nouns, and defines it as exclusively selecting (semantically) plural arguments. Following this discussion, an interesting question arises for deverbal nominalizations: are there nominalizations where \wedge itself acts as a nominal categorizer, similarly to a nominalizing suffix like *-tion* or *-ing* in English? If so, how does its kind semantics fare with the syntax and the event denotation of the nominalization? We will argue for such a case with respect to the nominal supine (NS) in Romanian, a nominalization of the past participle by means of the definite determiner that is incompatible with other determiners. Given that the definite determiner in Romanian, like in other Romance languages, lexically contributes \wedge with (nominal) kinds (see, e.g., Dobrovie-Sorin 2012), we argue that this is also the case in the NS, where \wedge builds event-kinds. This analysis explains two interesting properties of the NS: its pluractional effect (Iordăchioaia & Soare/IS 2008, 2011) and its incompatibility with factive contexts (Iscrulescu 2002).

The nominal supine (NS). The Romanian NS is a nominalization of the past participle whose special semantic and syntactic properties become obvious at a comparison with two related constructions: the infinitival nominalization (IN) in (2), and the verbal supine (VS) in (3). The latter is also a past participle form used in nominal contexts (as a complement of prepositions in verbal periphrases), but it lacks the definite article. First, NS has been argued to contribute a pluractional operator (PO), which makes it incompatible with a singular indefinite in (1), as it suggests multiple events of killing one journalist, unlike the IN in (2) and the VS in (3).

- (1) **uci-s-ul** jurnaliștilor/***unui** **jurnalist** de către mafia politică (NS)
kill-Sup-the journalists.the.Gen/a.Gen journalist by mafia political
- (2) **ucide-re-a** jurnaliștilor/**unui** **jurnalist** de către mafia politică (IN)
kill-Inf-the journalists.the.Gen/a.Gen journalist by mafia political
- (3) Mafia politică are de **ucis** jurnaliștii/**un** **jurnalist** (VS)
mafia political has of kill-Sup journalists.the/a journalist
'The political mafia has the journalists/a journalist to kill.'

Second, by comparison to the IN in (4a), the NS in (4b) lacks important nominal properties (adjectival modification, pluralization and flexibility w.r.t. determiners), which supports a syntactic analysis along the lines of (5b) (from IS 2008). Consequently, NS lacks the nominalizing layer nP and other nominal projections like NumberP that appear in the infinitival nominalization in (5a). This accounts for its lack of nominal properties, which are replaced by verbal-like properties contributed by AspectP.

- (4) a. {**o/acea bună**}/**buna** spălare/spalarea **bună** a rufelor (IN)
a/that good.F/good.F.the wash.Inf/wash.Inf.the good.F of laundry.Gen
b. {***un/*acel**}(***bunul**) spălat/spălatul **bine/*bun** al rufelor (NS)
a/that good.M/N.the wash.Sup/wash.Sup.the well/good.M/N of laundry.G
- (5) a. [DP -a [NumP -sg [nP -re [vp -a [RootP SPĂL (IN)
b. [DP -I [AspP -t [vp -a [RootP SPĂL (NS)

The definite determiner. The presence of pluractionality in the NS in (1) is very intriguing, especially since the morphologically almost identical VS form in (3) lacks this effect. The difference between the NS and the VS is the definite determiner. Yet, the morphological combination between the definite determiner and a past participle form doesn't necessarily result in pluractionality. Besides NS, Romanian also has so-called *nominalized participles* which denote participants in the eventuality and are morphologically identical to the NS:

- (6) **deținuțul** 'the detainee'; **urmărițul** 'the followed one'; **acuzățul** 'the accused one'
detain.PPrt.the follow.PPrt.the accuse.PPrt.the

The difference to the NS is that the nominalized participles in (6) behave like full nouns w.r.t. plural formation and other nominal properties in (4). This means that they receive a structure

containing nP and other nominal projections like the IN in (5a) and unlike the NS in (5b).

The proposal. We argue that one important source of the semantic difference between the two morphologically identical nominalizations in (1) and (6), which also associates with their different syntax, is that they employ different uses of the definite article: the down operator builds kinds in (1), and the iota operator has a referential denotation in (6). The Romanian definite determiner is knowingly ambiguous between the two readings, like in other Romance languages and unlike English *the*, which is only referential/iota (e.g., Dobrovie-Sorin 2012).

While the nominalized participles denoting participants in (6) combine with the referential iota operator, we explain the PO effect in (1) as the result of an interaction between two conflicting factors: the definite determiner in the NS is unambiguously \wedge and thus requires its argument to be cumulative/plural (Chierchia 1998). In the syntax, the argument AspP of \wedge is verbal and in principle this construction (the past participle alone) is compatible both with a quantized (telic, episodic, single event) and cumulative (atelic, generic, plural event) denotation. Cumulativity is not granted, given that this form can also denote a single event with the VS in (3) (vs. (1)). For \wedge to be semantically compatible with this verbal argument, a covert PO steps in, which binds only the plural events denoted by the vP (like in IS 2011) and ensures an unambiguously plural denotation for the output, which then qualifies as the right argument for \wedge . The result is that the NS always denotes event-kinds (Portner 1991) and is thus fully natural with kind-selecting predicates like in (7a). By contrast, the nominalized participle in (7b) is just as odd with kind predicates as its English counterpart, which is expected, if the definite determiner in this context is always an iota operator.

- (7) a. **Cititul** acestei reviste este foarte **răspândit** printre studenți.
'The reading of this magazine is very widespread among students.'
- b. **#Deținuțul** politic era foarte **răspândit** în România comunistă.
#The political detainee was very widespread in Communist Romania.

Referential readings of the NS as in (8a) can be obtained via Chierchia's rule for Derived Kind Predication (DKP), which provides existential closure over instances of the kind. (8a) receives the representation in (8b), where ι maps a kind onto instances of it.

- (8) a. **Cititul** acelei reviste a fost foarte **incitant**.
'The reading of that magazine was very exciting.'
- b. **exciting(\wedge reading)** => (via DKP) $\exists x[\iota\wedge$ reading(x) & exciting(x)]

Further support for the idea that referential readings of the NS are obtained via DKP (and not through iota) comes from the observed incompatibility of NS with factive predicates, by contrast to the IN in (9). According to Portner (1991), factive predicates block existential binding in their complement. The IN is fine, because its definite determiner is ambiguous, so it will denote the iota operator in this context and no existential binding is required in its case.

- (9) Maria **regretă/își amintește** *interpretarea/interpretatul* acelei melodii.
'Mary regrets/remembers the interpretation_{IN/NS} of that song.'

Another prediction of Chierchia's (1998) system is that the output of ι will have a mass denotation. Indeed, the referential NS in (10) is compatible with mass quantifiers and incompatible with discrete ones (see also its impossibility to pluralize reported in IS 2008).

- (10) (Prea) **mult/puțin/*un** spălat al rufelor astăzi m-a obosit.
'(Too) much/little/a washing of the laundry today made me tired.'

Chierchia. 1984. *Topics in the Syntax and Semantics of Infinitives and Gerunds*, PhD Thesis, UMass. **Chierchia. 1998.** Reference to kinds across languages. *NLS* 6: 339-405. **Dobrovie-Sorin. 2012.** Number as a feature. Cardinaletti et al, *Functional Heads*. OUP. **Iordăchioaia & Soare. 2008.** Two kinds of event plurals. Bonami & Cabredo Hofherr, *EISS7*. Paris. **Iordăchioaia & Soare. 2011.** A further insight into the syntax-semantics of pluractionality. *Proceedings of SALT 21*. **Iscrulescu. 2002.** The morpho-syntax of Romanian nominalizations. Research Paper. USC. **Portner. 1991.** Gerunds and types of events. *Proceedings of SALT 1*.

Non-categorical categories. Aspect, Voice, Pred and the category of Participles

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Abstract. This paper aims at circumscribing the range of structures that underlie participial constructions, with a particular emphasis on Romanian data. Participial constructions exhibit high flexibility, like for instance the participial stem labeled “supine” in Romanian grammars, which can be used in both nominal and verbal environments:

- (1) a. cărți de **citit** b. **cititul** cărților c. am **citit**
books of read.Sup read.Sup.the books.Gen have read
books intended for reading the reading of books I have read

The challenge to which these data raise to linguistic theory is to find the key property that would allow distinguishing a natural class of participles inside the larger class of nonfinite verbal forms. I will assume, in line with much recent work, that this common property should be their truncated character: participles are deprived of some verbal layers, they are lower verbal domains.

Taking this as a working definition, I will give the term ‘participle’ a wider use; for instance, I argue that a part of Romance infinitivals are participial constructions; apparently the same morphology can be used to cover different structures from language to language – defining morphology as the locus of variation. The main idea that I pursue is that participles are truncated clauses of different heights, and not categories of a special kind. In the view that I propose, having a theory of lexical categories is not an interesting goal in itself (contra Baker 2003-2005). I will rather show how the structural make-up of the different kinds of participles accounts for their overall behavior, and make them behave like nouns, verbs, or adjectives.

I will make a distinction between non-finite clauses that involve defective Tense, like infinitives and English Acc- Gerunds, which include a subject layer, and participial constructions that don’t include a subject layer (even when inflected). I focus on reduced participial domains and refer to non-finite tensed domains and participial nominalizations for comparative matters. I base my study mainly on Romance data (with key data from Romanian), and punctually refer to English for comparison.

1. Introduction

1.1. Grammatical indeterminacy

There is no agreement whatsoever among scholars and grammatical traditions with respect to the category of Participles in the language. Is it indeed a category to begin with? Does participial morphology have content, or is it just a sound form? If it does, how can it be characterized, what is its function? How does it differ from other non-finite forms, e.g. infinitives? Traditional grammarians have long hesitated whether to put them in the verbal, nominal, or adjectival paradigm. For instance, English grammars distinguish the gerund, which has both nominal and verbal properties, and the participle, which has only verbal properties. But a look at the range of the

distribution available for participials raises a problem to any classical theory of categorization; in terms of N/V features, one would be forced to acknowledge that all the combinations of features are available (Cornilescu, 2003), and that participles can be nouns, verbs, adjectives altogether.

Accordingly, the participial marker (for instance, *-ing* for the “present participle” and *-ed* for the “passive-past participle”) has been given different statuses by scholars across languages and frameworks. For English, it has been proposed that *-ed* is a derivational affix that creates adjectives (Borer 1990 but also traditional grammarians); the same is argued for Swedish participles by Lundquist 2008, to appear, who considers participles as being simply adjectives. It has been proposed that participial modifiers in some afroasiatic languages are nominal structures (cf. Doron and Reintges to appear), and the participial morphology is a nominalizing head. Other recent contributions treat for instance the gerundial morphology like a nominal inflection with defective properties (Baker 2005). Some participial constructions, in Romance for instance, have been considered to be reduced (e.g., relative) clauses (Kayne 1995). In syntactic approaches to word formation (e.g., Distributed Morphology – Marantz 1997, Embick 2000, Alexiadou et al), one have argued that (eventive) participles are realizations of AspP or lower root phrases.

Across languages, participles can have different interpretations, too: they can be active, passive, aspectually marked perfective, or imperfective, progressive; dynamic or stative. In terms of morphosyntactic properties, some participles can project a subject and assign it Accusative, or Genitive. Some can assign Accusative to their object, some cannot. Some allow clitics and sentential negation. Some can bear agreement markers. Some may give rise to modal readings. This diversity comes both from the internal make-up of the participle itself (e.g., if it is inflected for aspect or even tense) and the contribution of external material (an auxiliary, a determiner, etc).

Given their diversity and “flexibility”, participials can appear in a wide range of contexts: adnominal position (*a shining light, a fallen leaf*); nominalizations (*the shining of the sun*), periphrastic constructions (like the progressive or aspectual periphrases - *the sun is shining; I started reading this book*, etc). Other participial forms may appear as complements or adjuncts to the verb or to the whole clause (*I remember Mary’s performing the sonata; God willing, we will succeed*). Consider also, in Romance, past participles, which are employed in perfect (1a), passive (1b), reduced relatives (1c), and the absolute participial construction (1d):

- (2) a. j’ai lu le livre
b. le livre est lu
c. un livre lu
d. (une fois) le livre lu, elle est sortie se promener...

In front of such a wide range of uses, going from lexical constructs to sentential structures, and such a variety of readings, a guess that a theory of grammar can do is allow indeterminacy: participles are underspecified categories that can fill in different positions. Take for instance Latin Future Active Participle (FAP, 2a), Passive

Perfect Participle (PPP, 2(b,e)), Latin and Romanian Supine (2c-d, 3a), and Romanian Supine Nominalizations (3b), all realized by the same segment V-T/S, in combination with tense/mood/agreement markers, auxiliaries, or determiners.

(3) a. amaturus	b. amatus	c. amatum	Latin
‘about to love’	‘loved’	‘for loving’	
d. abiit piscatum	e. potus		
‘went fishing’	‘which has been drunk’ / ‘which has drunk’		

(4) a. cărți de citit	b. cititul	cărților	c. am citit	Romanian
books of read.Sup	read.Sup.the books.Gen		have read	
books intended for reading	the reading of books		I have read	

This is indeed the view of categorization that emerges from recent research in syntactic approaches to word formation (Distributed Morphology of Halle & Marantz, Marantz 1997 among others, or the Exo-skeletal approach of Borer 2001, 2005, to appear); in this study, I endorse a similar view. Participles are not adjectival nor nominal in themselves; they only get this kind of behavior while not getting the “typically” verbal behavior associated with the relevant functional projections like Tense. However, once this is accepted, the job of the linguist is only at the beginning; one have to elucidate in which way categories can be underspecified and how the contribution of the structure gives the expected result and accounts for their behavior. In the case of participles, there is quite little work that has been done in this direction.

In what follows, I will try to circumscribe the range of structures that underlie participial constructions. Among the diversity that comes out from the above sketch, what is the key property that could help us distinguish a natural class of participles inside the larger class of nonfinite verbal forms that also includes infinitives and gerunds? I will assume, in line with much recent work, that this common property should be their truncated character: participles are deprived of some verbal layers, they are lower verbal domains.

Taking this as a working definition, I will give the term ‘participle’ a wider use; for instance, I argue that a part of Romance infinitivals are participial constructions; apparently the same morphology can be used to cover different structures from language to language – defining morphology as the locus of variation. The main idea that I pursue here, in line with the main contemporary syntactic accounts of word formation, is that participles are truncated clauses of different heights, and not categories of a special kind. In the view that I propose, having a theory of lexical categories is not an interesting goal in itself (contra Baker 2003-2005). I will rather try to show how the structural make-up of the different kinds of participles accounts for their overall behavior, and make them behave like nouns, verbs, or adjectives.

I will make a distinction between non-finite clauses that involve defective Tense, like infinitives and English Acc- Gerunds, which include a subject layer, and participial constructions that don’t include a subject layer (even when inflected). Here, I focus on reduced participial domains and refer to non-finite tensed domains

and participial nominalizations for comparative matters. I base my study mainly on Romance data (with key data from Romanian), and punctually refer to other languages like English, Slavic or Greek for comparison.

1.2. Some thoughts on categorization

In Baker’s 2003 work on lexical categories, participles only get a footnote containing exactly these two alternatives. In his terms, verbs are defined by the property of projecting a specifier, while nouns are categories that have a referential index (adjectives being defined in a negative way). By the Reference-Predication Constraint (RPC), a category cannot have both properties. Hence, adjectives are given a negative definition, and participles are not addressed. In line with Baker’s framework, Lundquist (to appear) take participles to actually be adjectives.

Some critiques may be opposed to such a view

[...]

One may say, in turn, that participles are verbs that do not behave in the canonical way – verbs that lack – or rather do not get – a part of the specific verbal behavior. One of their most salient properties is that they lack finite inflection; and another is that they are defective in licensing their arguments. Whether they ‘lose’ or ‘do not get’ the full verbal behavior is a matter of how one considers grammar architecture. Frameworks in which the verb is defined as a lexical category have trouble in defining them, because they would have to say that they are not verbs but either nouns or adjectives.

An idea that has been put forward recently (e.g. Baker 2005) is to identify this type of defective morphology in participles/gerunds by a special kind of (nominal) inflection. These nominal inflectional layers Ger, Ptp, would have the function of sticking together a higher functional layer (the D or the auxiliary layer) and the bare VP. Similarly, Doron and Reintges (to appear) consider that the participial morphology involves nominal features. However, being nominal doesn’t mean being a DP, in this case, and one would like to understand what exactly is meant by having nominal features in comparison to a fully nominal construction.

Another idea is that the role of this morphology is just to (re)categorize and introduce an extra specifier in the structure; a recent idea by Alexiadou et al (to appear) is that they are specific voice heads, parallel to the nominal affixes like *-ation*, considered as nominal voice heads. Whatever status they would be assigned, the important – and still not done – part of the job is to see what restrictions they are subject to, and how exactly they assemble the high and the low domains in the clausal structure.

Finally, it is also suggested that the category of participles is simply Pred (cf. Lundquist 2008 & to appear). This layer has been introduced by Bowers () and also used by Baker (2003) to introduce predication (e.g. the possibility of having a specifier) into categories that do not have it ‘naturally’.

In constructionist approaches, word formation starts with uncategorial roots (Marantz 1997 and subsequent work in Distributed Morphology DM), or Listemes

(Borer 2005), and categorization takes place through grammatical layers. In this view, which is the one I adopt here, defining participles amounts to defining domains that have only a part of the grammatical layers specific to a clause. They do not “lose” anything; they simply have a truncated architecture. This is in line with much work in recent syntactic accounts of word formation.

For instance, in the Minimalist Framework, Alcazar Estela (2007) proposes a unifying analysis of absolute participials and participial modifiers (reduced relatives) in terms of phase complement *vP/CP*; in the same vein are analyzed nominal-participial clauses in Malagassy by Ntelitheos (2012). One may aim at a unifying analysis of all participial constructions (absolute, modifiers, nominalized and periphrastic) along the same lines.

There is still much work to be done, however, in order to allow for a complete treatment of participial behavior, which supposes different mixtures of properties. The question that I mentioned in the beginning of this introduction is if, and how they categorize. In syntactic approaches, this looks like an uninteresting question. According to Borer, an LP – or a lexical domain – is categorized when meeting relevant functional layers. In the full clause, the relevant layer is TP – the intermediate layers being supposedly uncategorial. But we need to know more about that intermediate area, the contribution of the different levels that compose it, and how they interact in determining the event structure of these reduced domains. If Tense is without doubt what gives the fully verbal behavior, what can we say about, e.g. grammatical Aspect and Voice? Why Tense and not personal inflection? Etc. The area between T and V still largely remains an unknown land. On the way of studying and defining participial domains, I will discuss these alternatives and their shortcomings, while trying to make sense of their intuitions.

1.3. Goals of this study

What I want to do here is finding criteria and clear properties that would contribute to distinguishing a natural class of participles across languages. I will start by an overview and classification of non-finite forms that may appear e.g. in English and Romance languages, and establish as a working definition that participles are truncated clauses, as opposed to infinitives (and some gerunds) which are full clauses (but of course non-tensed). I will then show in which particular way participial clauses may be truncated, by carefully comparing the structure of reduced participial relatives, some participial periphrases, and participial nominalizations.

2. A typology of non-finite forms

2.1. In search for diagnostic properties

Nonfinite forms often have nominal origins, i.e. they are verbal nouns (i.e. verbal roots with nominal declension) which later acquired verbal properties. One could see the whole range of non-finite forms as being ‘participial’, inasmuch they are verbal up to a certain point but not fully so.

A whole chapter of grammar of the nonfinite forms should deal with nonfinite complementation. Indo-european languages use this tool, basically, in order to express relations between events in an economic way. Introducing another related event in the sentence can indeed be done through a domain whose tense features are defective and/or dependent. In this, non-finite verbal forms and nominalizations are situated on a scale. In fact, nominalizations are practical because they offer a synthetic way of introducing an event as an argument in another event structure. We can see indeed that there is an area in the grammar of languages where forms can evolve from nominal to verbal and the other way around: English infinitive originally was a verbal noun with nominal declension, which developed its Dative declension mark into a T-like element. Latin... etc.

But putting aside diachronic matters, nonfinite forms in modern English and Romance languages are a link between the verbal and the nominal domain. They may function in combination with a determiner (English nominal gerunds), or with auxiliaries (the English progressive); it is a common place in grammars to talk about their “double” (triple, or quadruple) nature. In order to see if terms like participles may define a natural class in grammar, one should search for some common properties and criteria.

One candidate for a common, diagnostic property in participles (present or past-passive, etc), is the lack of rich tense and person agreement morphology that licenses overt nominative subjects. Another one is their open structure – in order to form a constituent, they need to combine with a functional layer (a *D*, a light verb, etc); otherwise they attach as modifiers to a maximal projection, and presumably include some operator layers allowing them to do so. In view of this, one may also define participles as inherently modifier constructions; without any added material (no Complementizer layer), they are able to be adjoined to another domain. This defines a special kind of predication which does not make use of overt, typically clausal/verbal functional material. One might suspect that these three properties are related in some specific way, and the task of the present study is providing a theory of participles that makes this connection more precise.

2.2. Un-tensed clauses with subjects vs. reduced participial clauses

In this section, I will sketch a classification of non-finite clauses. I will distinguish between complete clauses with internal subjects and reduced clauses that lack an internal subject (the subject is added in an outer domain).

English has two types of non-finite clauses: gerund clauses (“Acc-ing” gerunds, cf. Abney 1989) and infinitival clauses. Traditional English grammars (cf. Huddleston & Pullum), reserve the term of gerund to verbal/clausal uses of the *-ing* form, and the term of (present) participle to its adjectival uses (and talk about gerund-participle in reference to the form itself). Of course, what is meant by verbal or adjectival here is typical distribution of verbs or adjectives; the *-ing* form still has verbal properties in adjectival contexts (for instance, it can have complements, as we

will see in a moment). They can't still be distinguished in terms of defining non-finite clausal domains, which they both do.

-ing forms are non-finite TPs [DP/t V-ing] which take a position inside another DP or clausal domain. In the first case, they are reduced relatives with subject gaps (4a); in the second case, they contain a non-nominative subject (4b) and can be either adjoined to a sentence, or in a complement position (4c-d). Acc-ing Gerunds can include auxiliary layers (4c) and license Accusative objects (4c-d, 5a-b).

- (5) a. a jumping cow / a cow jumping in the fields
 b. God/Him willing, we will succeed
 c. I am aware of him having made such a good point.
 d. She argued against buying a television set.

- (6) a. a man singing the Marseillaise
 b. (With) him singing the Marseillaise, we can't hear each other.

This first (essentially distributional) distinction that can be drawn inside verbal gerunds in English correlates, however, to an important difference in terms of structure. In (4a), the gerund is predicated about a DP to which it is adjoined, and the internal mechanism of this predication is supposedly comparable to the one in a subject-gap relative clause. In (4b), the gerundial clause licenses a subject, and is a complete clause. The first type of construction is similar to another participial relative based on the past/passive participle: *a wounded man*. The *-ing* form is a subject-gap reduced relative, the *-ed* form is an object-gap reduced relative (present vs. past participle in the traditional grammar).

This distribution is of course found in other languages, for instance in Romance - French (6-7). (6a-b) illustrate a present-participial, subject-gap reduced relative, while in (6c) we have a 'gerund' clause expressing Cause. In (7), we have reduced past-participial clauses.

- (7) a. un homme vivant en France
 b. une femme vivant en France¹
 c. Vivant en France, elle connaît toute la fine gastronomie

- (8) un homme blessé, une femme mariée...

The same distinctions hold in Romanian (8-10).

- (9) o femeie trăind singură
 (10) trăind singură, are adesea dificultăți
 (11) o femeie căsătorită

We note, in addition, that Romance past participles can also appear in an absolute construction, adjoined to the main clause:

- (12) a. une fois mariés, ils ont vécu heureux pour toujours
 b. o dată căsătorită, o femeie nu mai are griji
 c. cognosciuta Maria, hai cominciato ad apprezzare la mare

¹ Since Romance has gender, it provides another test for distinguishing reduced participial relatives from Adjectives built on the present participle stem (cf. *une femme vivante* 'a living.F.sg woman' / **une femme vivante en France* 'a woman living.F.sg in France'). Cf. below section xxxx.

A relevant goal for a study of participles is to establish the structure of these parallel participial constructions, and how they differ, on the one side from their complete clausal counterparts, and on the other side from fully nominal constructions. I will shortly address the problem of reduced relatives in section xxx.

The second type of construction (the gerund clause) is a non-finite TP, with a special semantics that allows it expressing the cause, etc; there is a constraint on the non-finite tense that has to be correlated to the one of the main event. One may call it a gerund for morphological reasons (Huddleston & Pullum have the term gerund-participle), but its essential property is that it is a full clause with an inner subject.

A similar distinction can be drawn inside infinitives. These are non-finite TPs taking argument positions (including complement position of prepositions) – subordinate clauses, or adjunct positions (infinitival relatives, prepositional adjuncts, e.g. *in order to* + infinitive). TP projections that may or may not include an overt subject, but that always have a specified subject (an empty subject PRO or an overt Accusative-marked full DP). Infinitival relatives can be either subject or object-gap; it has been argued that only the latter are "reduced" relative clauses in English (see Bhatt 1999, Iatridou et al (2000)).

Romance generally have infinitives in argument positions (e.g. complement of modal or aspectual verbs), or in a relative position (*livre à lire*). The latter are in fact (participial) reduced relatives (cf. Giurgea & Soare 2010a-b) with modal readings and passive structure – they are always object-gap.

Romanian still has infinitive clauses in subject positions, but has lost infinitival complement clauses (with one, but still marked as archaic exception, of the bare infinitive in the complement position of *can*). It also has gerundial adjuncts expressing cause or manner, including an overt (sometimes postverbal) subject. Crucially for this study on participles, it has a participial stem that is used not only in contexts traditionally called "past-passive participle", but also in positions that the infinitive can take in other languages (non-finite relatives, periphrastic constructions). A participial form is thus used in contexts where a reduced non-finite form is needed.

This is but an argument in the direction undertaken in this study. Participial constructions, disregarding their morphology, are reduced structures in the sense that they always lack a part of the full clausal spin; all of them lack full Tense marking and person marking; some only lack a subject (and consequently have an outer subject, possibly introduced by a Pred head); others lack Aspectual, Voice layers. And in the end, the participle can be only a root; in this case one may derive any category by adding either overt, or zero-derivational morphology. For instance, on a bare present-participle stem like *marrant* in French, one can derive an adjective *marrant* which will have agreement markers as any adjective.

Each language has a particular range of non-finite morphology, and makes a particular use of it; that is to say, morphology makes the languages look different, and an infinitive form might be used... as a participle. In this study, I concentrate on

reduced structures and only approach non-finite domains including subjects for comparative matters.

2.3. Making the definition work

Let me see now how the working definition of an outer subject applies in the different non-finite domains. It is first trivially fulfilled by nominalized participial forms, in which a subject is licensed in the DP domain. Such are sentential nominalizations ('big' nominalizations that include much of the clausal spin)²;

English Poss Gerunds: nominalized non-finite TPs with a Poss subject – taking argument positions; accept auxiliaries; license Acc objects. The highest nominalization – mixed in terms of Chomsky (1970). Nevertheless – DPs³.

(Nominalized) infinitivals in argument positions with implicit arguments and/or Poss subjects (cf. nominalized Italian or Spanish infinitives) are like Poss-ing.

Another "big", near-clausal nominalization is the Romanian Supine Nominal. It does not include a Nom/Acc subject, but only a genitive (= Poss-ing), but does not assign case to the object (the Determiner assigns it Genitive).

Both English and Romance have "Past" participles, which are tenseless, lower AspP (auxiliary-less) domains, Voice layers and vP with different flavours. Active voice or outer Aspect only in interaction with higher functional domains.

...

One crucial property that distinguishes participles from full verbs (meaning, a verb in a fully tensed clause) is the relationship to the external argument of the base verb. In some participial constructions, the external argument is not projected in the expected position, hence the participle can be defined by the property of not having a specifier. In Baker's (2003) terms, such a participle is not a verb (see his Reference-Predication Constraint, RPC) – or is a derived category (Baker 2005), a view that I share in this study⁴. Doron & Reintges (to appear) also consider that the participial morphology is nominal (i.e. contains nominal features introduced in the syntax).

Other participles may project the external argument but do not assign it the prototypical subject case. This is a property that has to be related to the combination of specific inflectional or clausal layers and not to some lexical property (or alternatively a change in argument structure).

² Note that I don't include here derived nominals like *-ation* which have a nominalizer, but only take into account nominalized structures based on clausal layers ("converted" from participles in absence of an n-layer). This makes, I believe, an important distinction among nominalizations: the absence of an n layer is responsible for the possibility of including a high clausal structure (see Soare, to appear).

³ *-ing* of Gerunds are not included for study, as they are fully nominal structures, and the *-ing* affix is a nominalizer – cf. above. See Borer (2005), Alexiadou et al (2010), Soare (to appear) for details.

⁴ Except that I don't have a definition of lexical categories and I don't endorse Baker's RPC, a constraint that would be redundant in the framework I am building. See above.

To illustrate, take for instance 'past/passive' *-ed* participles. In a passive structure, for instance, one standardly assumes that the participle does not realize the external argument in the canonical Specifier position, which is not a thematic position anymore.

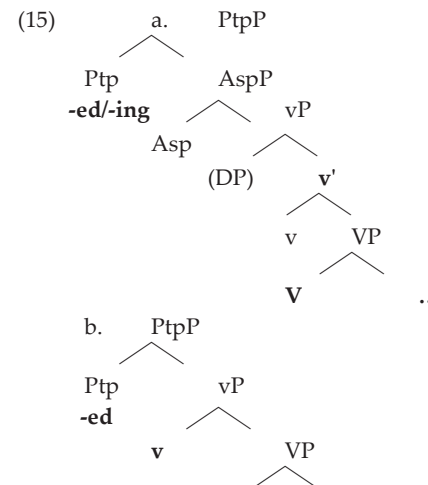
- (13) a. John *(has) eaten an apple
 b. The apple is eaten by John
 c. an apple eaten by John

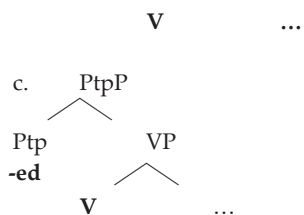
Accordingly, it has been proposed that participles in perfect and passive constructions have the same structure, i.e. the lower VP layer (Hoekstra, Roberts). In other languages (in connection with other properties like auxiliary selection), the participle is bigger, e.g. in Bulgarian which also allows subject participial relatives (cf. Iatridou et al).

'Poss-Gerunds, on the other hand, do include an external argument position, but do not case-mark the subject DP in the canonical way – hence the subject is licensed in the nominal layer by a Possessive Determiner. Again, the subject is not in its canonical clausal position.

- (14) John's eating an apple (surprised everyone).

The truncated character of participials may be seen as one key property distinguishing participials from other types of clauses (including infinitival). They are more or less reduced structures. I assume that a participial may involve one of the three structures in (14); the presence of the external argument is accounted for by the inclusion of a classical specifier-projecting vP.





Depending on the content/type of the categories involved (more precisely, Asp and v) these structures allow for active, passive, agentive, causative, perfective or imperfective, and stative participles. It is clear that *-ing* forms are ‘bigger’ and that *-ed* forms are ‘smaller’, but there are languages in which the *-ed* forms are underspecified and can be big or small – this is a matter of variation in the functional vocabulary that the languages allow for.

However, this is but a very general frame. First, the layer Ptp is just a shortcut. It is just to accommodate a morphological marking but does not have content, nor does it introduce the event, or categorial information. One could replace it by Ger according to the morphological shape of the affix, or simply omit it. Nothing in what I have to say hinges on the identity of this layer; in turn, the semantic features attached to the layers above (Asp, v) are important; they are spelled out by *-ing* or *-ed* forms according to the range of affixal forms existing in the language. Participial morphology is but the pronunciation of different truncated structures.

These structures will, of course, appear in different positions in the sentence, and be selected by auxiliaries, Determiners, or Pred heads. Depending on the structure that embeds the participle, agreement may be involved, for instance in a passive or an adnominal structure – cf. *le livre/ la lettre est lu(e)* ‘the book/letter is read’, *le livre/ la lettre lu(e)* ‘the read book/letter’. When the participle has a more clausal structure, the presence of clausal edges of the complementizer type, like in the Romanian supine (cf. below) will block agreement. When it is selected by an upper layer, it can have all the clausal properties attributed to infinitivals. In this respect, another difference among non-finite domains is passivization and the presence of auxiliaries. In the English verbal gerunds, both are available, as well as in the infinitive; they are not available in past participles, which is again accountable in terms of structure:

- (16) a. Having received the book...
 b. The book being received...
- (17) a. *the had received book, *the been received book

The truncated status is not the only characteristics of participles. To distinguish e.g. gerund modifiers from infinitival modifiers, in addition, one would have to consider the former as having an inherent modifier status, that could be put in terms of being selected by a silent Pred head, allowing these constructions to be plugged in a modifier position of another domain, e.g. the clause, a DP, etc. Infinitivals do not

include this layer and hence they need extra overt material (e.g. a non-finite complementizer, a preposition, a particle) to be inserted in such positions. One could either consider that Pred is internal or external to the participle; but if one choose to consider it external, participles should include a property that makes them selectable by a Pred head, and infinitives would lack this property.

Note finally that the structure in (14) is not automatically attributed to all the segments that would include *-ed* or *-ing* endings; I assume the standard idea from various syntactic approaches according to which affixation (participial or nominal) can take place above a complex structure as the three illustrated in (14) above or to a simple root – see Embick (2004), Alexiadou et al (to appear) among many others. With this general background, we can look now at the case study of the Romanian “supine”.

3. Underspecified Participles in Romanian

3.1. Data

As already pointed out here, languages vary as to the range of non-finite constructions they allow for. In Romance and English, basically two types of participles are present, the past/passive participle (*-é-u-i* in French, *-ed* in English, thematic vowel + *-to/-do* in Italian and Spanish), and the so-called present participle or gerund (*-ing* in English, *-ant/ente* in Romance). The first type of participle has a reduced structure and “participates” in perfect and passive voice formation; it exhibits a well-known ambiguity between ‘verbal-eventive’ and ‘adjectival’, studied at length in the literature.

In Romanian, the participial stem can be used in a wider range of syntactic contexts (as illustrated above): (i) as a perfect-passive participle, showing up in perfect and passive constructions with *have* and *be* respectively (17-18); (ii) in nominal contexts with a determiner (19a-b); (iii) in adjectival position (20) – giving also rise to nominalization (21); (iv) with a functional particle *de* in verbal periphrases (22) and in the adnominal position as reduced relatives (23) (v) with different lexical prepositions marking especially goal or source (24).

- (18) am citit ‘(I) have read’, am mâncat ‘(I) have eaten’, am alergat ‘(I) have ran’
 (19) poemul este citit ‘the poem is read’, marul este mâncat ‘the apple is eaten’
 (20) a. cititul poemului ‘the reading of the poem’
 b. mâncatul merelor ‘the eating of the apples’
 (21) un copil iubit ‘a loved child’, un mar mâncat ‘an eaten apple’
 (22) iubitul meu ‘my (be)loved = my love’
 (23) am de citit ‘I have to read = I’ve got reading to do’
 (24) carte de citit ‘book to read’
 (25) a merge la pescuit ‘go fishing’

Note that I do not attribute any semantics to the participial stem in itself; however, I think we need a theory that accounts for all these uses and for the homonymy as

well. The traditional grammar groups together the ‘past participle’ uses in (17), (18) and (20)–(19) being a nominalized past participle, and the ‘supine’ uses in (18) – nominal and (22-24) – verbal. This wide use of a participial stem cuts across the nominal/verbal distinction, and the verbal/adjectival distinction. Here, I will concentrate on the first distinction, trying to see how category is contributed and/or changed from V to N. I will show that on the basis of the three structural patterns in (14), one can propose an account for both the nominal and the verbal contexts in which this form may appear.

3.2. Romanian nominal supine and “canonical” verbal properties

I first describe the nominal supine structures and show that they involve a large part of the verbal/clausal spin, as they have canonical verbal properties like grammatical aspect and agentive Voice.

The supine nominal illustrated in (19) above and starting from (25) below cumulates some peculiar properties. It can only have eventive readings (cf. Cornilescu 2001, Iordachioaia & Soare 2008 among others), as opposed to other nominals across languages that are ambiguous between eventive and referential readings (cf. *the building of the cathedral during a century vs. an impressive building*). From this point of view, it can be considered more verbal than ‘perfect’ nominalizations Vendler’s sense (hence the difference with –ation nominals or the nominalized infinitive in Romanian). A hallmark of this imperfect nominal status is the realization of the subject which does not affect the eventive meaning:

- (26) a. cântatul acestor cântece (mi-a trezit sentimente patriotice)
sing.Sup.the these.Gen songs.Gen (me-has stirred feelings patriotic)
‘singing these songs (stirred me patriotic feelings)’
b. cântatul lui Ion la micul dejun (mi-a dat dureri de cap)
sing.Sup.Gen Gen John at breakfast (me-has given headache)
‘John’s singing at breakfast (gave me headache)’
(27) a. cântatul lui Ion timp de ore în sir pentru a-si enerva soacra
b. cântarea Mariei *pentru a-si enerva soacra / a fost apreciata de toti

The supine allows resultant state modification (as shown in 27, cf. Iordachioaia 2008) and verifies tests for the presence of a Voice level, i.e. agent modifiers in (28):

- (28) umflatul cauciucurilor de către tata (cu pompa)
pump-up-Sup-the tires-Gen by father (with the pump)
‘the pumping up of the tires (with the pump) by the father’
(29) a. demolatul intenționat al clădirilor vechi
demolish.Sup.the intentionally of buildings old
‘intentionally demolishing old buildings’
b. condusul mașinii beat

drive.Sup.the car.Gen drunk
‘driving the car drunk’

It does not allow impersonals (29a), nor pure inchoatives (29b), no reflexive readings (29c):

- (30) a. *plouatul
raining.Sup.the ‘the raining’
b. *ruginitul fierului, *putrezitul frunzelor
rust.Sup.the iron.Gen, rot.Sup.the leaves.Gen
‘the rusting of the iron, the rotting of the leaves’
c. anunțatul oaspeților (#the guests announced themselves)
announce.Sup.the guests.Gen
‘the announcing of guests’

The Romanian supine nominalization conveys imperfective Aspect (cf. Iordachioaia & Soare 2009, Alexiadou, Iordachioaia & Soare 2010). The supine maps [+b] events into [-b] events, and thus introduces aspect shift, which indicates the presence of an outer Aspect layer.

- (31) a. **Sositul** lui Ion cu întârziere **timp de 2 ani** i-a adus
concedierea.
arrive.Sup.the John.Gen with delay time of 2 years him-has brought firing
‘John’s arriving late for two years brought about his being fired.’
(32) b. **Muncitul** lui Ion *(**până** la miezul nopții) o îngrijorează pe soția
lui.
work.Sup.the John.Gen until at middle night.Gen her worries Acc wife his
‘John’s (habit of) working till midnight worries his wife.’

The fact that both inner and outer-aspectual modifiers are allowed attests for aspectual shift indicating an outer aspect projection.

- (33) Traversatul râului de către Ion în cinci minute timp de doi ani a surprins pe
toti
cross.Sup.D river.Gen by part John in five minutes time of two years has
surprised of all
‘John’s crossing the river in five minutes for two years surprised everybody’

In light of these and much more data, Iordachioaia & Soare 2009, Alexiadou, Iordachioaia & Soare 2010 proposed that the semantics of the supine contains a pluractional aspectual operator (PO) which correlates with its [-b] property, the aspect shift it introduces, and the semantic effects it triggers, standardly associated with POs. Romanian supine is odd with one-time events, but becomes fine when the cardinality of a plural object matches with the event plurality introduced by the

supine, as shown in (33). Other indications in favour of a pluractional semantics are frequency adjuncts like ‘at once’, impossible with supine (see Laca (2006) for Spanish *andar* periphrases) – cf. (34); modifiers like ‘when’-clauses allowed by the supine (35). For more details and a complete analysis, see Iordachioaia & Soare (2009), Alexiadou et al (2010).

- (34) a. *ucisul jurnalistului/ unui jurnalist
 kill-Sup-the journalist-the-Gen/ a-Gen journalist
 b. ucisul jurnaliștilor
 kill-Sup-the journalists-the-Gen
- (35) ??cititul unui roman de 300 de pagini dintr-o dată
 read-Sup-the a novel-Gen of 300 pages at once
- (36) fumatul lui Ion de câte ori iese în pauză
 smoke-Sup-the John-Gen whenever he takes a break

As a conclusion, one can say that the Romanian supine nominal has verbal properties, that includes an imperfective AspP and a agentive vP projection, embedded under a D head that conveys the nominal status. Its lack of nominal properties (Gender, Number and adjectival modification, cf. Iordachioaia & Soare 2009 a-b) confirms this analysis. The supine nominal is a nominalization of a (+active, +aspectually marked) participial clause; it includes the whole structure in (14a) but obviously no Tense layer. However, the pluractional properties make it more verbal and comparable to the mixed Poss-Gerund⁵: hence, the Asp layer that it involves materializes grammatical aspect and not Aktionsart. The nominal supine combines the property of projecting the external argument (that is assigned case in the DP projection) and the property of being imperfective.

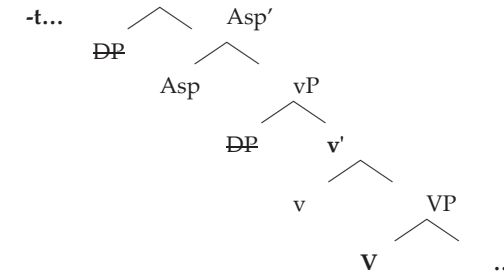
Elaborating on a structure like (14a), I assume, in line with recent work, would account for the verbal properties of the supine nominal, and would give a result like in (36) below. The participial phrase contains a specifier-projecting vP, an (imperfective) outer aspectual node that hosts but does not case-mark the external argument, which is therefore assigned Genitive by D.

- (37)
-
- ```

graph TD
 DP --> D
 DP --> PtpP
 D --> l["-l"]
 PtpP --> Ptp
 PtpP --> AspP

```

<sup>5</sup> See Alexiadou et al (2010) and Soare (to appear) for closer comparison: both the supine and the Possing Gerund are characterized by (imperfective) aspect, the projection of a subject (but licensed by D in Romanian, hence Genitive), the compatibility with adverbial modifiers; they only differ in the case marking of arguments and the availability of an auxiliary.



This type of structure directly captures the fact that the supine may lexicalize the external argument of the verb base. Note that the supine (PtpP, for concreteness) projection does not contain a tense layer, and hence cannot license its subject. The external argument is projected inside the supine but has to move out to the DP layer to be assigned case<sup>6</sup>.

Let me stress again that theories like Baker’s in which participles are nominal or adjectival (or have nominal inflection preventing them for projecting a specifier) are in difficulty in front of this kind of data. First, this type of derived nominal must involve a specifier-projecting category (v, for instance), because it allows the projection of an external argument. If we would want to say that it is contributed by the D-layer, we would miss its argumental status and would have to say that it is introduced like a by-phrase, which would be impossible to say in the case of unergatives. Second, this kind of approach also has to deal with the “nominal” inflection and the “adjectival” distribution and the combinations thereof. This ‘elsewhere’ theory of participles is simply not a theory.

I assume that constructionist approaches to word formation better account for the variety of uses to which a participial stem can correspond. In particular, it can account for the fact that the Romanian participial stem can spell-out a near-clausal structure with imperfective aspect and active reading<sup>7</sup>. Hence, Romanian shares with Slavic but also with Latin, the property of having an imperfective and active

participles.

<sup>6</sup> With unergative and transitive bases, this is straightforward. With unaccusative bases (and achievement predicates), it imposes the iterative-habitual reading but also the unergativization of the VP. I assume that the two phenomena are somehow related (Guéron & Hoekstra 1989), and see Soare, forthcoming for details.

<sup>7</sup> It is assumed here that the active reading is the result of an outer AspP selecting a specifier-projecting vP and an active Voice (that we might add to the structure on top of vP). A similar intuition is developed in Alexiadou et al (to appear), according to which Voice contains active/passive morphology and alternates with *-ation* nominal Voice; there, Voice also participates in categorization. In a certain way, I develop a similar intuition by assuming that *-ation* and the participial construction with different Voice flavors alternate in the structure of derived nominals (cf. Soare to appear on nominalizations that include or not the n layer). In Doron (2010) the property of turning the external argument into an actor is actually the result of a Voice head, in the intensive template in the Hebrew verbal system. The supine may remind of this *intensive* pattern; but as it provide positive evidence for the presence of a pluractional operator, I take this rather to be the contribution of an aspectual head.