Scuola Dottorale di Ateneo

Graduate School

Dottorato di ricerca

in Scienze del Linguaggio

Ciclo XXVI

Anno di discussione 2015

TOWARDS A THEORY OF DENOMINALS IN ENGLISH AND ROMANIAN

SETTORE SCIENTIFICO DISCIPLINARE DI AFFERENZA: L-LIN/01

Tesi di Dottorato di BLEOTU ADINA CAMELIA, matricola 955875

Coordinatore del Dottorato   **Tutore del Dottorando**

Prof. ALESSANDRA GIORGI   **Prof. ALESSANDRA GIORGI**

Acknowledgments

This thesis is the result of four years of work, mainly spent at Università Ca' Foscari, in Venice. During these four years, I had an amazing time both professionally and personally: I had the chance to meet or even work with wonderful teachers, as well as spend great time with incredible colleagues who became my friends, work as a tutor and travel abroad at various conferences and for research purposes.

First and foremost, I would like to express my gratitude to my supervisor, Professor Alessandra Giorgi, who guided me in my study of Linguistics, giving me constant advice, suggestions, and, at the same time, emotional support. Apart from being an amazing teacher, she has also been like a mother to me. She has done everything in her power to help me during these four years, and it is thanks to her that I did not feel as a foreigner in Italy. Apart from her constant support in my thesis, I had the chance to work as a tutor of linguistics for her course, and I was thus given the opportunity to practice my teaching skills and learn a lot of new things, an opportunity for which I am extremely grateful and which I am sure will help me a lot in the future.

I would also like to thank Professor Guglielmo Cinque and Professor Giuliana Giusti, for being so kind as to receive me whenever I had questions related to my thesis, and giving me suggestions that were very helpful. I also had a chance to work as a tutor of English Language for Giuliana Giusti, and she helped me organize my lessons with extreme kindness.

I have benefited a lot from the suggestions of Professor Alexandra Cornilescu, from the University of Bucharest, who helped me with much needed bibliography, and pointed out to certain aspects I had neglected. Her contribution is much more important though. Professor Alexandra Cornilescu was one of the teachers who instilled in me the passion for linguistics, and made me choose this path. I had the chance to attend her courses both during the BA and the MA of Linguistics, and her enthusiasm and love for language science always amazed me and the other students. Larisa Avram is another teacher I am deeply grateful to, I wrote my BA and MA thesis under her surveillance, and her observations helped me shape my mind, and determined me to choose Linguistics for the future. Another thanks goes to Mihaela Dogaru, a teacher very close to my heart. Apart from attending her classes during the MA, I also had the wonderful opportunity of working with her before, when preparing myself for the Faculty of Foreign Languages. She made me fall in love with the English language, and I am most grateful to her for this.

Towards a Theory of Denominals in English and Romanian

Introduction

The aim of this thesis is to test the explanatory power of novel approaches to denominal verbs such as *to dance, to shelve the books, to hammer the metal* a.o in English, and *a dansa* (to dance)*, a adăposti* (to shelter) or *a ciomăgi un om* (to club a person) in Romanian. Rather than adopting an incorporation or conflation account (Hale & Keyser 1998, 2002), which considers denominals to be derived either via movement of noun roots into v (incorporation) or via merge (conflation), the thesis investigates to what extent the same phenomena can be captured by a phrasal spell-out approach according to which a single item can spell out a syntactic structure encompassing several nodes (Starke 2009, 20111), as well as by a spanning approach according to which an item can spell out a span, i.e. a sequence of heads in a single (extended) projection (Brody 2000, Adger 2006, 2010, Svenonius 2010, Bye & Svenonius 2010, Ramchand 2014). Starting from the intuition that a verb phrase like *shelve the books* may be paraprased as and may even be derived from something like *put the books on the shelves,* the thesis tries to expore various analyses making use of silent items, or making no use of them whatsoever both in the nanosyntactic framework and in the spanning framework. The thesis will also look at the distributed morphology framework (Halle & Marantz 1993, 1994, Harley & Noyer 1999, Borer 2005, Arad 2003, 2005), according to which lexical items spell out terminal nodes, and fusion can account for mismatches. The conclusions seem to suggest that a DM model and a spanning model with no silent items seem to capture denominality in a more economic and elegant fashion than nanosyntax.

According to the nanosyntactic framework, currently in development at the University of Tromsø (Starke 2009, 2011; Pantcheva 2011), one lexical item can lexicalize multiple terminals[1]. In Distributed Morphology, the mismatch between the number of morphemes constituting a given expression, and the number of terminals in its underlying syntax is accounted for through the operation of Fusion taking place after syntax and before spell-out. In nanosyntax, however, Phrasal Spell-Out accounts for a postsyntactic lexicon, given that lexical items can target phrasal nodes. Such an account can very coherently explain why *mice* is selected over **mouses,* or *ate* is selected over **eated*, through the Phrasal Spell-Out Principle and the Biggest Wins Principle (Starke 2009), according to which the lexical item corresponding to the biggest subtree wins. Also, it can account for idioms, since an item such as *kick the bucket* can be stored in the lexicon on its own, and it can be associated with a meaning that is different from its composite meaning.

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[1] The nanosyntactic framework actually aims at making use only of Phrasal Spell-Out, while avoiding terminal spell-out completely.

The basic issue at stake is whether one should allow for a *dance* item to spell out the whole verb or not (this could result in a single verbal item in the lexicon, or two: a verbal item and a nominal item)- the other view would result in the lexicon storing a single *dance* nominal item, and would derive the verbal item via lexicalization by inheritance. This discussion becomes even clearer if one takes a look at a verb like *dansa* in Romanian: one can assume there is a *dansa* item in the lexicon (in a similar way to the suppletive form *ate*, for instance), this would result in obligatorily having two items *dans/ dans* in Romanian (unlike English, where it is possible to have one single (verbal) *dance* item lexicalizing both the verb and the noun), or one can assume *dansa* is simply the lexicalization of *dans* and *–a* (but *dansa* is not stored in the lexicon). The second variant is incompatible with silent items.

If, on the other hand, one assumes there is a verbal denominal spelling out the whole structure (stored in the lexicon), then Phrasal Spell-Out can account for denominal verbs in the following way: a single item (*dance, shelve, hammer*) can be argued to spell out a large syntactic structure corresponding to *v dance* (*DO dance*)*, v ON shelf* (*PUT ON shelf*)*, v WITH hammer (HIT WITH hammer*); silent items are possible, even though they are not necessary.

By combining Ramchand (2008b)'s analysis of verbs with Pantcheva's (2011) analysis of prepositions, a possible representation for a verb like *shelve* could be:

(1)   initP= *shelve*

    'x'   initP

        init   procP

            'y'   procP

                proc   GoalP(= *ON?*)[2]

                      Goal   PlaceP (= *ON?)*

                            Place   N
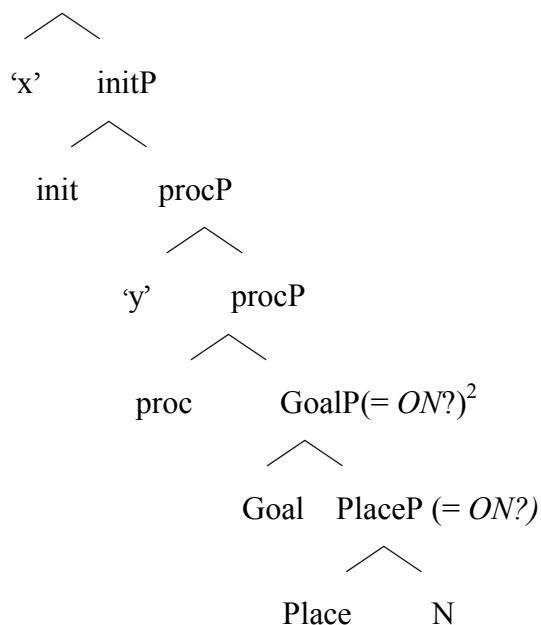
                                    shelf   (the lexicalization goes bottom-up, right-left)

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[2] I put the question mark near the preposition so as to indicate there is a debate over using silent prepositions in the representation.

where *shelve* spells out resP (<GoalP, PlaceP>), procP and initP. The issue here would be if one needs to resort to silent elements or not (do we need a silent verb (*PUT*), do we need a silent preposition (*ON*), do we need both a silent verb and a silent preposition (*PUT, ON*), or do we in fact need no silent element at all?). The issue is highly problematic. Postulating silent items has the advantage of feeding the structure with meaning not captured by the trees. To take a very simple example, both *in* and *on* can be <Goal, Place> prepositions, and they occur in the paraphrases of denominal verbs (*to corral the horses* 'to put the horses in the corral', *to shelve the books* 'to put the books on the shelf'). How do we know that *shelving books* does not mean putting books in a shelf and *corraling horses* does not mean putting horses on the corral? In other words, if one does not postulate silent prepositions in the structure of these verbs, would it not be the case that the tree would allow for a looser meaning? The same question arises in the case of verbs: it is true that *PUT* is an< Init, Proc> verb, but so are many other verbs, even the verb *eat.* Why is it that we do not understand a verb such as *to shelve the books* as 'to eat the books on the shelf'? Would the meaning not become clearer if we postulated a silent verb *PUT*?

I will argue that silent items do indeed have the advantage of turning the representation more semantic. However, from a nanosyntactic point of view, they have the disadvantage of burdening the structure with lexical material, and involve resorting to lots of movement operations such that a new item may spell out again. Moreover, as very well pointed out by Mateu (2002), there is a difference between syntactic/ semantic meaning and conceptual meaning, and, even if it is desirable to capture the meaning syntactically as much as one can, there is no need to turn it too encyclopedic, given that the lexicon also stores the meaning of words, not just their structure. If one assumes two lexical entries, then there is no need for silent items. If, on the other hand, one assumes only one lexical entry (be it the verb or the noun), then the need to capture the difference in meaning between the two might make silent items tempting. However, syntactic projections might equally serve this purpose (at least partly).

In phrasal spell-out, silent verbs are also problematic from the point of view of the framework. Apart from going against the nanosyntactic idea of spelling out phrasal nodes by means of a single item (we now have silent items and another item, and they have to be overwritten by something else) , they are problematic for the system. In (2), one would basically need to say the ProcP can be spelled out by *PUT,* and then by *shelve,* or one would need to assume terminal spell-out is possible and consider *PUT* the lexicalization of Proc, and *shelve* the lexicalization of ProcP, but this would violate the nanosyntactic use of phrasal spell-out as a general lexicalization mechanism.

In other words, it seems to be the case that silent items complicate the analysis more than required. In the case of silent prepositions, for instance, movement of the N *shelve* is required so as to allow the *ON, IN* prepositions to lexicalize GoalP, PlaceP. While this has the advantage that one does not have to postulate an inexistent 'preposition' *shelve* which lexicalizes PlaceP or GoalP (which was present in the incorporation/ conflation account), a silent item phrasal spell-out account has the disadvantage of storing two items in the lexicon (a noun and a verb). Resorting to no silent items at all would imply that GoalP, PlaceP may be lexicalized by *shelve*, acting like a preposition, but it would also present the advantage of allowing the lexicon to store only the nominal item, while generating the verb syntactically. Hence, in spite of the semantic richness fed by silent items into the structure, I believe that a non-silent account is a much more preferable way of capturing the data. A similar preference for no silent items is supported by Romanian facts. Given that the the verb *adăposti* (shelter) is clearly made up of *adăpost* and the thematic vowel –*i*, the ideal solution would be to store the nominal item and the thematic vowel separately, and thus derive the verb.

I will also deal with verbs like *hammer* or *ciomăgi* (*club*) incorporating instruments whose adjunct status cannot be handled by an incorporation approach constrained by head movement. In fact, I shall show instrumentals pose a problem for the phrasal spell-out approach too, and I will try to solve this by arguing for a complement analysis as an alternative ('to use a hammer'), or a lexicalization of ProcP by *hammer* in a similar way to Haugen (2009), according to whom instrument verbs involve a different type of incorporation ('manner incorporation'), and they are simply inserted under v. I will also look at (pseudo)agentive verbs (like *spy, spiona* or *butcher, măcelări*), paraphrasable as 'to act like '. If one assumes it is not the case that agentive noun that is derived from the verb, pseudo-agentives can be accounted for in a phrasal spell-out account (they can be accounted for in an incorporation framework too, as a matter of fact).

Another issue that requires atention is the behaviour of denominals in combination with PathPs and complex resultatives within one language as well as crosslinguistically. One could argue that different items spell out different portions of the tree: while in *Lucy danced into the room,* for instance, *dance* spells out the verbal part, and *into the room* spells out Path and Place, in *Lucy entered the room* the Latinate verb *enter* spells out both the verbal part and the Path and the Place. In Romanian, on the other hand, one can only have *Lucia a dansat în cameră* (Lucia has danced in room), and there is no preposition corresponding to *into.* In this way, the contrast between satellite-framed languages like English which conflate Manner in the verb and lexicalize Path as a satellite (*Lucia danced into the room*) and verb-framed languages like Romanian which conflate the Path and lexicalize Manner outside the verb (*Lucia a intrat în cameră dansând* 'Lucia has entered in room

dancing') (Talmy 1985) becomes a matter of differences in what is spelled out and by which items. However, in the case of *Lucy danced into the room*, as well as in other cases, applying phrasal spell-out in the lexicon leads to a complicated series of movement operations in order to get the right result. Hence, the conclusion would be that, although phrasal spell-out can be adopted to a certain extent (in the formation of denominals like *to dance*, or *to shelve*), adopting the nanosyntactic way of organizing the lexicon (by means of subtrees) and considering the lexicon the result of a phrasal spell-out syntax gives rise to problems which should be avoided. In this particular case, one could argue that *dance* has a certain manner of motion feature which allows it to combine with *into*. While a phrasal spell-out approach manages to account for the formation of denominal verbs both in English and Romanian, I am not sure it can account for the way these denominals combine with various PathPs or resultatives, unless one departs from nanosyntax and assumes such phenomena take place in syntax. All in all, although the nanosyntactic framework is a possible way of accounting for denominals, the complications in the realm of movement which arise from the need to comply to phrasal spell-out shed doubt upon its viability. Moreover, the more complex the internal structure of the verb, the more difficult it becomes for nanosyntax to account for it. While nanosyntax manages to capture quite neatly the formation of verbs like *dance* or *corral*, it becomes a bit problematic when it has to account for a verb like *adăposti* in Romanian (*shelter+* thematic vowel), which DM captures by simply fusing the terminal nodes together.

For this reason, I also look at the spanning framework which mantains the idea that nodes can spell out together, while, at the same time, avoiding the very complex movement apparatus which is at work in nanosyntax. While in DM items spell out terminal nodes, and in nanosyntax, they spell out phrases, in spanning (Brody 2000, Adger 2006, 2010, Svenonius 2010, 2014, Bye & Svenonius 2010, Ramchand 2014, Merchant 2014), they spell out spans, i.e. complement sequences of heads in an extended projection. A very important innovation in the spanning framework is the elimination of redundant labels to the extent that XP bears the same label as its head, namely X. This telescopes into the structure of phrases, allowing for linearization to be read off the structure. In particular, according to Brody (2000), there is a direct linearization algorithm according to which specifiers are linearized to the left of their heads, and heads are linearized to the left of their complements. In this way, one can simply specify where a morpheme spells out by means of diacritic @ rather than resort to syntactic movement (Brody 2000, Ramchand 2014). Moreover, in order to indicate that a head forms a mirror word with the head(s) it selects, one can use another diacritic ∗ (Bye & Svenonius 2010, Ramchand 2014). The exact placing of the diacritic is a language-specific issue.

By resorting to this direct linearization mechanism, one can neatly explain the formation of denominals:

(2)   Init@$_*$

              /\\

     'x'   Proc$_*$

                 /\\

        'y'   Goal$_*$

                   /\\

          'y'   Place$_*$

                     /\\

            'y'   N
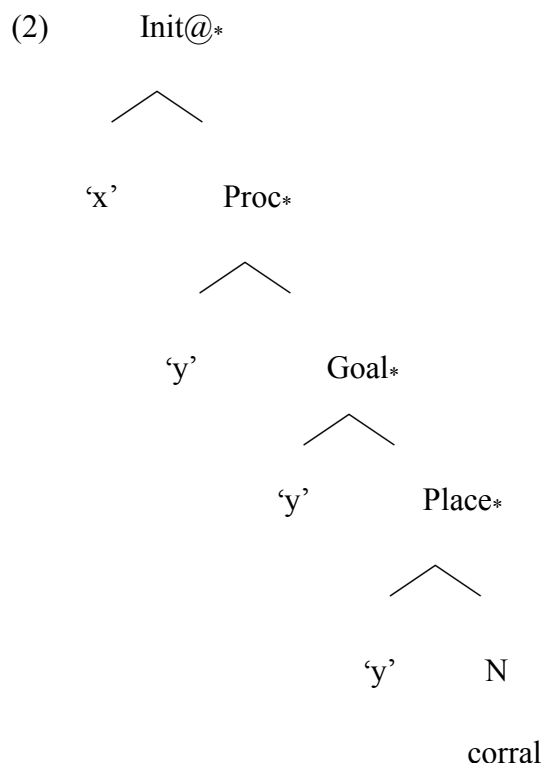
                   corral

Linearized as x [N Place Goal Proc Init] y

At L-Match (Lexical Match, the first step of Spell Out in spanning, involving syntactic categories- the second is Insert and it involves phonological information), the item that wins is *x [corral Ø Ø Ø Ø] y*, where x can be lexicalized by *Mary*, and y can be lexicalized by *the horses*.

Another option would be to resort to silent items. Using the representation in (3), one would have two variants at L-Match: one where N is *corral*, Place and Goal are fused together as IN, Proc and Init are fused together as PUT, and everything forms a morphological word together (*corral-IN-PUT*), or *(x) corral (y)* lexicalizing the whole tree. The second item wins. In contrast, *put the horses in the corral*, one would have the following representation:

(3)   Init@*

               'x'   Proc

                      'y'   Goal@*

                             'y'   Place

                                    'y'   D@

                                                N@
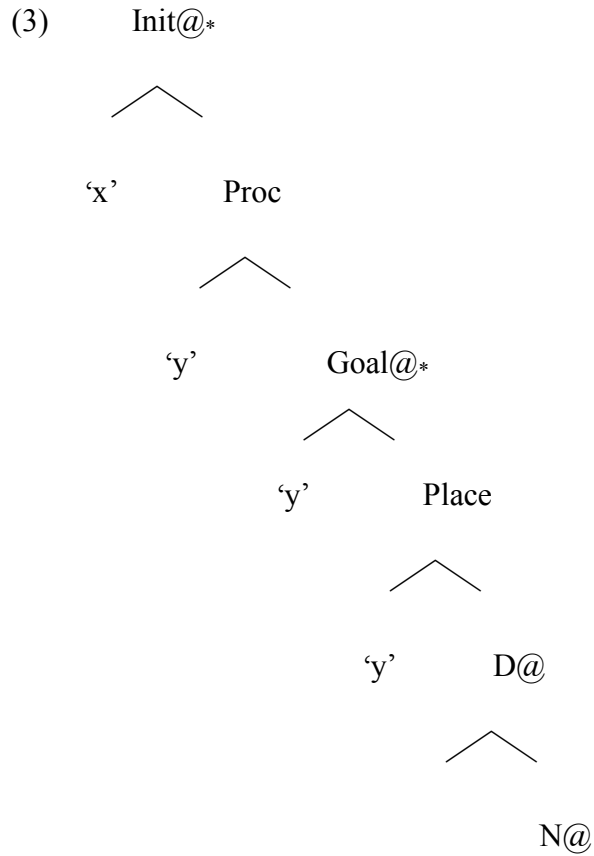
Linearized as: x [Proc-Init] y [Place-Goal] D N

In this case, what would result is *Mary put the books on the shelf.* The spanning account thus has different linearizations for *put the books on the shelf* and *shelve the books*, as well as for *put the horses in the corral* and *corral the horses*. There would be a way to create a *PUT-IN-corral* item if the diacritic * would be placed next to Init, Proc, Goal, Place and also, if one assumed underassociation of features (Ramchand 2008a): the lexicon would store only the verbal item *corral*, and this item would be able to lexicalize N as well.

(4) Init@*
                /\
          'x'   Proc*
                    /\
              'y'   Goal@*
                        /\
                  'y'   Place*
                            /\
                      'y'   N@
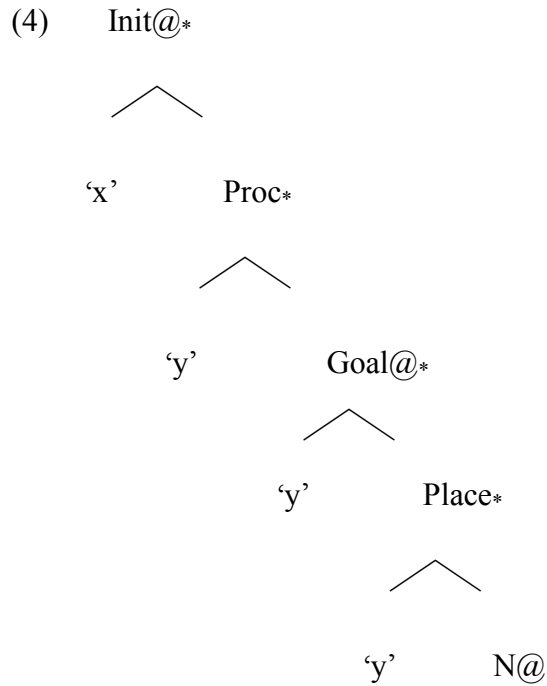
Linearized as x [Proc-Init¨–Place-Goal–N] y

However, such a view is highly problematic for Romanian, where the verb and the noun have different forms. Hence, I will opt for the spanning version without silent items. Even though it may be argued it is not so rich semantically, it has the very important advantage of allowing one to store only the nominal in the lexicon, while in the silent item version, both the nominal and the verb have to be stored. Such an account captures the formation of denominals better than nanosyntax. Throughout the thesis, I also look at theme verbs, pseudo-agentive verbs, instrument verbs, trying to offer an account where a single item spans over 'a span'. Moreover, I show that, while the nanosyntactic account has problems in accounting for *Lucy danced into the room*, the spanning account manages to do this-the representation would simply be that in (3).

The thesis is organized in 7 Chapters: in the first chapter, I try to clarify the concept of denominal verb, advocating for the view that denominals are derived from nominal roots/ bare nouns, and that, in the case of English, one cannot really tell if a verb is derived from a nominal root or a bare noun. This problem is further amplified by the nominal root having the same form as the bare noun, and the verb also having the same form. As for Romance, one could argue for a clear difference between a noun (*rană* 'wound') and a nominal root (*ran-*) from which it could be said a verb like *răni* ('wound') is derived. However, even this is debatable, as one could say the verb is derived from the noun, and there are phonological operations which affect the vowels. In Romanian, the difference between a noun and a denominal is very clear, as the verb presents an additional verbal

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suffix with respect to the noun/ nominal root. In Chapter 2, I examine the relationship between the properties of the root (boundedness) and the properties of the verb (telicity), trying to see whether they are related, and how Romanian behaves in this respect. The results from a research conducted on a database created by selecting all the denominal verbs from a bilingual dictionary may be interpreted as pointing towards the idea that verbs are not derived from nouns, but from categorized roots. Moreover, it seems to be the case that there is more to the telicity of the verb that the boundeness or unboundedness of the root from which it is derived. In Chapter 3, I present an overview of the literature on denominal verbs, from syntactic to semantic views, presenting the various approaches in the literature. In Chapter 4, I present distributed morphology, the nanosyntax framework and the spanning framework, trying to apply them to denominals in English and Romanian. In Chapter 5, I focus on verbs incorporating Themes, pseudo-agentive verbs, and verbs ambiguous between an unaccusative and an unergative reading, trying to account for their behaviour in the nanosyntactic and the spanning framework. In Chapter 6, I deal with location, locatum verbs, and the locative alternation, while in Chapter 7, I try to provide an account for instrumental verbs. The conclusion would be that the spanning framework accounts for denominals better than the nanosyntactic framework.

I have organized the chapters of this thesis depending upon the theta-role of the root noun from which the verb is derived, very much in the Hale & Keyser (2002) spirit. However, in doing so, I have not meant to imply that it is the case that these theta-roles actually exist in an ontological sense, or embrace a particular view concerning theta-roles. My move was rather meant to organize the data along the lines of capturing in new frameworks the classes of denominals the Hale & Keyser (2002) framework had already dealt with, and seeing how a phrasal spell-out account or a spanning account could represent these classes. In fact, there is a serious inconsistency at this point, given that I have organized the classes of denominals according to the theta-roles of the root nouns, but, at the same time, I have embraced a more or less Ramchandian (2008) view, arguing for a different labelling of roles (Initiator, Undergoer, Result, Path, Rheme), and for the possibility of a theta-role to be composite (Initiator, Undergoer, for instance, in the case of *dance*). In this sense, there is be no theta-role Agent, only <Initiator> or <Initiator,Undergoer> or <Initiator,Undergoer, Resultee>. The organization of denominals into thematic classes is, hence, to be taken simply as a means of coping with data already dealt with, making use of the traditional theta-role terminology in a loose sense, rather than a very strict point of view.

Chapter 1

What is a Denominal Verb?

1.   Clarifying the concept of denominal verb

Before embarking upon the analysis of denominal verbs, it is vital to clarify the concept of *denominal verb*: what the (phonetic, semantic and syntactic) relationship between the denominal verb and the corresponding noun is. Of course, the answer to this question might depend a great deal on the language we are looking at. If we look at a language such as English, where the denominal and the noun have the same form (*to dance-dance*), one is tempted to argue that a denominal derives from a a full noun, although, in this case, the inverse relation, that the noun be derived from the verb may be viewed as a possibility too. Moreover, it becomes very difficult to say what the difference between a nominal root and a bare noun would be. If, however, one looks at a language like Romanian, where the denominal verb differs from the noun (on the one hand, there are the verbal conjugation suffixes *–a, -ea, -e, -i, -î*, on the other hand, there are various vowel changes- *a dărui* 'to give' vs. *dar* 'gift', and both the noun and the verb have a common part- *a tăinui*, 'to conceal/ hide', *taină*, 'secret/ mystery', which might be interpreted as the root), one might be tempted to argue that the verb derives from an uncategorized root (just like the noun). Of course, derivation from a noun with additional (phonological) changes is equally possible. In this chapter, however, I do not focus on Romanian (I will go back to it in Chapter 2), but on English, partly because most of the literature revolving around the notion of denominal deals with English, partly because the arguments for English can easily be transfered to Romanian. Hence, although I sometimes make reference to Romanian, Italian, or Spanish, my aim in this chapter is to pin down the meaning of *denominal verb* with examples mainly from English.

I argue in favour of the view that denominal verbs in English are derived from a categorized root/ or bare noun[3], but not from an uncategorized root, or from an NP, a NumP, or a DP. The DP

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[3] Later on, in Chapter 2, I will tentatively propose a difference between a categorized root and a bare noun, suggesting that the root may be underspecified with respect to boundedness, while the bare noun is specified. However, there seem to be other differences. From a semantic point of view, according to Kiparsky (1982), while nouns denote the object at stake, roots do not, hence, while one can hammer with a shoe, one cannot chain with a rope. From a syntactic point of view, nouns would be derived from roots.

status of the root is excluded by the impossibility of a sentence such as *Minnie danced beautiful* with the meaning 'Minnie danced a beautiful dance', which should be possible if the incorporated *dance* were a DP. The NP status is excluded by the existence of verbs clearly derived from a root that may be interpreted as not denoting the object at stake (like *hammer*). Moreover, we are not dealing with a NumP, as there is a clear difference between the noun within the verb and the noun in the verbal paraphrase (*shelve* vs. *put the books on the shelves*), and a sentence such as *Linda shelved the books on one shelf* is grammatical, indicating that plurality is not encoded in the root/ bare noun the verb is derived from (the NumP is missing). Evidence that the root is not uncategorized but nominal comes from the semantic role of the root, and the existence of implicit creation verbs which can combine with pseudoresultatives modifying the root within the verb (like *Mary braided her hair tight*).

Various terms have been used in the literature (Clark & Clark 1979, Hale & Keyser 1993, 1998, 2002 a.o.), such as *denominal verb, noun-incorporating verb, verb derived from a noun*, all of which suggest that there is a relation between the verb and the corresponding noun; the last two terms even express the idea that the verb and the noun share a syntactic structure, while the first term *denominal* does not necessarily entail this. According to Clark & Clark (1979), for instance, the classification of verbs as denominals is based on the existence of paraphrases with nouns (*to foal= to bear a foal, to shelve books= to put books on the shelf* a.o.). For this reason, a verb such as *to laugh* (*The child laughed*) is not considered denominal by them, as it cannot be paraphrased using a noun. Hale & Keyser (2002), on the other hand, seem to decompose all verbs into (phonologically null light) verbs and nouns at the level of lexical syntax, which may be taken to mean that, according to them, at least, the existence of corresponding verb and noun paraphrases is not essential for considering a verb *denominal*. For them, a denominal verb is the result of the incorporation of a noun into a light verb, a verb endowed with meaning yet devoid of phonological form. A verb like *foal* is the result of the incorporation of the noun *foal* into a null light verb whose phonetically explicit correspondent would more or less be the verb *bear* in the paraphrase *to bear a foal*. However, irrespective of whether or not there is a phonetically explicit variant of the null light verb, the latter (the null verb) is present in the decomposition of the denominal.

There is an opposing view to the idea that denominals are derived from nouns, namely, that denominal verbs are derived from roots (e.g. Levinson 2007): a verb like *dance*, for instance, is taken to be derived from the root *dance*. The root-derived view of denominals splits into two versions: either it is assumed that *all* denominal verbs are derived from roots (as Levinson 2007 does), or it is assumed that *some* denominal verbs are derived from roots (Kiparsky 1982). According to Kiparsky

(1982), for instance, out of all the verbs in English which appear to be zero-derived from nouns, only some are actually derived from nouns, while others are underived, and only related to phonologically similar nouns in the lexicon. In other words, there is a very clear contrast between root-derived verbs, verbs which are derived directly from a category-neutral noun, and noun-derived verbs, verbs derived from a category-neutral root which has already combined with a categorizing head, as in the following representation:

(1)   V
      /\
     V   R

(2)   V
     /\
    V   n
       /\
      n   R
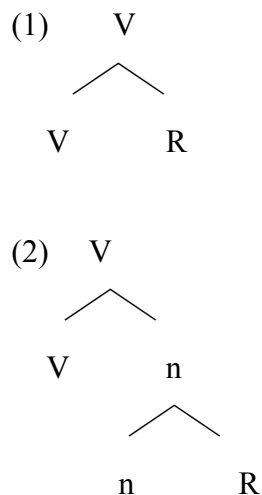
According to Kiparsky (1982), the verbs which are derived from nouns contain the meaning of the noun (3), while verbs which are not show a less strict meaning correspondence (4):

(3) a. She taped the picture to the wall with tap/ *pushpins.

     b. They chained the prisoner with a chain/ *rope.

  (4) a. He brushed his coat with his brush/ hand.

     b. I paddled the canoe with a paddle/ copy of the New York Times.

Kiparsky argues that the reason why verbs like *tape* and *chain* are not semantically compatible with instruments other than that named by the root of the verb is the fact that they are denominal, and, hence, the meaning of the noun which derives the verb must be included in the meaning of the verb. Verbs like *brush* and *paddle* are compatible with distinct instruments, on the other hand, which can be explained by the fact that, unlike the verbs *tape* and *chain,* they are not denominal, but one can argue that they derive from roots, adopting the perspective of Marantz (2002).

In analyzing denominals, there are many options available: taking derivation as a criterion, one could argue that denominals are non-derived, or that they are derived. If one opts for the second option (derivation), it seems to be the case that one could adopt one of the three views: (i) all denominals in English are derived from nouns (a view ascribed to Hale & Keyser 2002), (ii) all denominals in English are derived from roots, (iii) some denominals are derived from nouns, while some denominals are derived from roots. If one embraces (ii) or (iii), namely a root –derived view, one must be attentive to what one understands by *root*. As very well pointed out by Ramchand (2008: 11), two extremes are possible:

" (i) *The naked roots view*

The root contains no syntactically relevant information, not even category features.

(ii) *The well-dressed roots view*

The root may contain some syntactic information, ranging from category information to syntactic selectional information and degrees of argument structure information, depending on a particular theory. This information is mapped in a systematic way onto the syntactic representation which directly encodes it."

Further clarification of the notion of *root* is thus required.

2.   Denominal verbs are derived from roots. Evidence.

2.1 What is a Root

In what follows, I will linger a bit on the root-derivation proposal put forth by Levinson (2007), in the hope of sheding some light on the notion of *root*. According to Levinson (2007), it is not the case that the basis for denominal verbs is the noun, as argued in Hale & Keyser (1993), but, instead, there is an element of the type predicate of individuals which must be present, an element which is also present at the root of related nouns. In other words, both the noun and the corresponding denominal verb are derived from a common root. Following Marantz (1997), lexical categories are not primitives, but rather derived by combination of a lexical root element with functional material which performs *categorization*. But what exactly is a root? How can one define it? There are many definitions which can be given from various points of view.

From the point of view of *semantic lexical decomposition*, a root is that part of the word that excludes the more formal properties, i.e. it refers to the 'idiosyncratic' conceptual properties associated with a lexical item, a so-called *constant* (Levin and Rappaport Hovav 1995). According to Dowty (1995), verbal roots are states and all verbs are built from states: state verbs decompose as state (e.g. *love*), activities decompose as DO + state (e.g. *walk*), achievements decompose as BECOME + state (e.g. *cool* (intr)), while accomplishments decompose as CAUSE + BECOME + state (e.g. *cool* (tr))). States represent the building blocks of verbs, they are properties/ predicates of individuals. However, Dowty (1995) does not explain in what way verbal roots, i.e. states, are related to nominal forms.

While for Dowty (1995) verbal roots are states, according to Levin and Rappaport Hovav (1995), roots contribute stuff, state, manner, and instrument, and, according to Harley (2005), roots can be things, states, or events. The verb *foal* is derived from a root denoting a Thing (*bear a foal*), while the verb *hop* is derived from a root denoting an Event, and the deadjectival verb *clear* is derived from a root denoting a state (*clear*).

From the perspective of *syntactic lexical decomposition*, there are correspondences between semantic decomposition and parts of words. While Baker (1988) focuses on certain morphemes that affect the argument structure of the verbs they are part of, Hale & Keyser (1993, 2002) propose that even apparently simple verbs should be decomposed, and Halle & Marantz (1993) go even further, arguing that no verbs or nouns are simple elements. The verb, for instance, is the result of conflation of the functional verbal element 'little' *v* with a certain head in the complement of that *v*.

Consider the following quote from Levinson (2007):

"There are several logical possibilities for the relationship between these words [the denominal verb and the corresponding noun/ root], if we assume a storage component, the lexicon (assuming for simplicity that no operation takes place in the lexicon) and a computational component which combines elements stored in the lexicon (i.e., syntax):

1. braid$_V$ and braid$_N$ are primitive lexical items and are related by homophony: Both are listed independently in the lexicon

2. braid$_V$ and braid$_N$ are both derived and related by homophony: Neither is listed in the lexicon, nor are they derived from the same lexical element.

3. braid$_V$ is denominal: Braid$_N$ is primitive and listed in the lexicon. Braid$_N$ is derived syntactically.

4. braid$_N$ is deverbal: Braid$_V$ is primitive and listed in the lexicon. Braid$_N$ is derived syntactically.

5. **braid$_V$ and braid$_N$ are both derived from an identical item:** Neither is listed

in the lexicon, but they are derived from the same lexical element." (Levinson 2007: 2-3)

Levinson (2007) argues for hypothesis 5, suggesting that both the noun and the denominal verb are in fact derived from an identical element, a root element which lacks category specifications (Marantz 1997).

Given their neutrality to syntactic category, only semantics can constrain the possibility of certain roots to combine with certain functional categories. Levinson's proposal (2007) is in the spirit of Marantz's (1997) view: words are built from roots, but these roots do not bear categories like 'verb' or 'noun'. For example, although the verb *grow* and the noun *growth* are both derived from the root √grow, and the words are formally related, neither is derived from the other. The roots are identified by their phonological signature and are semantically related to one conceptual domain. Evidence in favour of the existence of roots comes from Hebrew (Arad 2005), where roots are consonant clusters which cannot be pronounced on their own. Instead, they have an associated meaning and pronounciation that is found in all words derived from them. Arad (2003), for instance, shows that one can form many words in Hebrew starting from a common root √sgr (*sagar* ʿclose', *hisgir* ʿextradite', *histager* ʿcocoon oneself', *seger* ʿclosure', *sograyim* ʿparentheses', *misgeret* ʿframe'). However, none of the formed words has the same form as the root, and the various words do not have any word form in common. It is, hence, clear that √sgr is not specified for category (verb or noun). Arad (2003) draws a very important distinction between verbs derived from roots and verbs derived from nouns. The verb *misgeret*, for instance, is derived from the noun *misger* (with the meaning 'frame'), which is, in its turn, derived from the root √sgr. Given this, its meaning is the same as that of the noun it is derived from, namely, 'to frame'. On the other hand, the verb *sagar* is root-derived, and its meaning is that of the root, namely ʿclose'. According to Arad (2003), the verb *misgeret* could never have the same meaning as *sagar,* and this is a consequence of a locality constraint on roots (Marantz 2000), according to which roots are assigned an interpretation inside the first category-assigning head. Hebrew thus brings strong evidence in favour of the idea that denominals are derived from naked roots[4].

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[4] Of course, root-derivation could be a language-specific fact of Hebrew, and English and other languages could be argued to behave differently: maybe Hebrew is particular in its root derivation, while English makes no use of such process. However, as has been previously seen in examples (3) and (4) from Kiparsky (1982), there seems to exist evidence from English instrumental denominals in favour of the fact that there is a clear distinction between root-derived and noun-derived verbs.

Arad (2003) suggests that the Hebrew root-derivation/ noun-derivation distinction should be extended to English. Starting from Kiparsky's (1982) examples with instrumentals that are root-derived (*tape)* and instrumentals that are noun-derived (*hammer)*, she gives further examples with location and locatum verbs exhibiting a similar behaviour:

(5) a. John shelved the books on the mantelpiece.
   b. *John boxed the apples in the bag.
(6) a. She powdered her face with crushed chalk.
   b. *She sugared her tea with jam. (Arad 2003: 761)

While *box* cannot take an adjunct expressing a location different from a box, which suggests that it is a noun-derived verb, *shelve* can take an adjunct expressing a location different from a shelf, which suggests that it is a root-derived verb. As far as locatum verbs are concerned, while *sugar* cannot take an adjunct different from *sugar*, a verb like *powder* can, which suggests that *sugar* is a noun-derived verb while *powder* is a root-derived verb.

Further evidence in favour of the root-derivation/ noun-derivation divide among denominals comes from the phonological realm, more exactly, from stress-assignment. As noted before (Myers 1984), similar stress between denominal verbs and nouns indicates a tight semantic relation (*cóntact* $_{N,V}$, *dócument* $_{N,V}$), while stress difference indicates a different meaning *(récord* $_N$/ *recórd* $_V$, *óbjec*t $_N$/ *objéct* $_V$).

A different take on the root-derived verbs in English could be to argue that, in fact, they are noun-derived, but the noun they are derived from is not the noun visible phonologically. The verb *hammer,* for instance, is not derived from the noun *hammer,* but from a Classifier Noun (OBJECT) + KIND or TYPE selecting the noun *hammer.* This would also explain the lax meaning of the verb *to hammer.* In a Kaynean fashion (2003), the verb *to hammer* might be interpreted as incorporating *OBJECT TYPE hammer*, thus combining very well with the PP *with a shoe,* since the shoe is an object that can be used as a hammer. On the other hand, in a sentence like **John boxed the apples in a bag*, the verb does not incorporate *OBJECT TYPE box*, only *box,* from which one can derive the ungrammaticality of the sentence above. The contrast between *to hammer* and *to box* can perhaps also receive conceptual support: while it is easy to think of a shoe being used as a hammer, it is harder to think of a bag used as a box given the fact that, even if they are both containers, the box and the bag are quite different. Moreover, putting something in a bag is less complex than boxing something (which implies putting the apples in the box, then closing the box). Such an approach

could be taken to indicate that all the denominal verbs in English are actually derived from bare nouns or nominal roots and not from uncategorized roots, it is just that some also have a classifier/ silent item before them. The situation, of course, may be different in Hebrew. Nevertheless, such a solution shows that even the alleged evidence in favour of the root-derived/ noun-derived verbs divide can actually receive an analysis that leads to a different conclusion.

2.2 Role of the Root

Levinson (2007) also argues that just like Hebrew, English does make use of a root-derivation process in the formation of denominals (although for her all denominals are derived from roots). The root contributes meaning to the verb, each denominal verb carries inside its structure a noun with a certain meaning, possibly a thematic role, if a verbal structure is assumed as a 'd-structure' of the denominal:

(7) a. Linda blanketed the bed. (Locatum)
    b. Brad caged the monkey. (Location).
    c. Donna summered in Venice. (Duration)
    d. Lewis butchered the cow. (Agent)
    e. Sophie loves Travis. (Experiencer)
    f. Matthew powdered the aspirin. (Goal)
    g. Matthew worded the sentence. (Source)
    h. John hammered the metal. (Instrument)

Nevertheless, I will argue that it is not clear in what way Levinson's argument supports the idea that verbs are derived from naked roots. The semantic role of the element from which the verb is derived could easily be an argument in favour of the idea that the verb is derived from a noun, even more so than of the idea that the verb is derived from a root, given that theta-roles are ascribed to nominals. It would, therefore, be more adequate to argue that semantic roles bring evidence in favour of the fact that there is a nominal element at the core of the verb, be it a noun or root. Of course, if it is a root, then it must be a nominal root.

2.3 Implicit Creation Verbs

The main piece of evidence brought by Levinson (2007) in favour of the idea that denominals are root-derived is represented by the behaviour of pseudo-resultatives such as *tight* in combination with implicit creation verbs such as *braid* (*Lucy braided her hair tight*). Interestingly, such pseudo-resultatives seem to make reference to an element that is within the verb, which is the root, argues Levinson (2007), and therefore implicit creation verbs point to root-derivation as the source for denominal verbs.

Implicit creation verbs represent a particular class of verbs entailing the creation of an implicit object. While, in a verb like *draw*, for instance, the created element is explicit (*Mary drew a circle*), and it is present as the direct object of the verb, the result of the drawing process, in an implicit creation verb, the created element is an implicit object present within the verb:

(8) a. Mary braided her hair.
   b. She tied her shoelaces.
   c. Mary piled the cushions.
   d. She chopped the parsley.
   e. She sliced the bread. (Levinson 2007: 17)

Although these verbs do not form a class in Levin's (1993) verb classification, they form a grammatically relevant class: "the role of the root and the functional elements it combines with are relevant to determining linguistic contrasts between the semantic and syntactic characteristics of this class of verbs versus other classes." (Levinson 2007:18).

On the basis of these verbs, Levinson (2007) motivates the semantic lexical decomposition of verbs into roots and functional material. A lot of evidence comes from pseudo-resultative modifiers. Consider sentences (9) and (10):

(9) Mary braided her hair tight.
(10) Susan hammered the metal flat.

It can easily be seen that, while a resultative predicate such as *flat* in (10) modifies the direct object of the verb, the final predicate *tight* in (9) does not, i.e., while the metal becomes flat as a result of Susan's hammering it, Mary's hair does not become tight as a result of her braiding it. Rather, it is

the braid which is created that is tight. The same result-oriented interpretation which is, however, not directed at the direct object of the verb, is at stake in the examples in (11):

(11) a. Mary braided her hair tight.

b. Mary tied her shoelaces tight.

c. Mary piled the cushions high.

d. Mary chopped the parsley fine.

e. Mary sliced the bread thin.

 f. Mary ground the coffe beans fine.

Such pseudo-resultatives differ from other secondary predicates like object depictives (12) and canonical resultatives (13), given that the entailments triggered by such predicates are distinct:

(12) Object Depictive

i. Mary cooked the meat$_i$ raw$_i$. ->

ii. The meat was raw.

(13) Resultative

i. Mary cooked the meat$_i$ black$_i$. ->

ii. The meat is black.

While the object depictive modifies the direct object such that the property it denotes must hold of that object during the event (the meat must be raw when the cooking event begins), and the resultative modifies the state of the object at the end of the event (the meat is black at the end of the cooking event), the   following entailments do not hold of the sentences with pseudo-resultatives (Levinson 2007: 34):

(14) a. Mary braided her hair **tight**. DOES NOT->   Mary's hair is tight.

b. Mary tied her shoelaces **tigh**t. DOES NOT->   Her shoelaces are tight.

c. Mary piled the cushions **high**. DOES NOT-> The cushions are high.

d. Mary chopped the parsley **fine**. DOES NOT-> The parsley is fine.

e. Mary sliced the bread **thin**. DOES NOT->   The bread is thin.

f. Mary ground the coffee beans **fine**. DOES NOT-> The coffee beans are fine.

In many cases the adjective cannot even modify the direct object:

(15) a.? Her hair was tight./ ? her tight hair.

b. ? The cushions were high./ ? the high cushions.

c. ? The parsley was fine./ ? the fine parsley.

d. ? The bread was thin./ ? the thin bread.

e. ? The coffee beans were fine./ ? fine coffee beans.

Pseudo-resultatives do not seem to modify the predicate of individuals denoted by the object DP, but neither are they predicates of events:

(16) Linda decorated the room **beautifully**. DOES NOT -> The decorating event was beautiful.

(17) She braided her hair tight. DOES NOT -> The braiding event was tight.

Interestingly, as one could note in (16), pseudo-resultatives can be expressed either by adjectives or by adverbs. (16), in fact, entails that a beautiful decoration was created:

(18) a. They decorated the room beautifully. => beautiful decoration

b. She dressed elegantly. => elegant dress

c. They loaded the cart heavily. => heavy load

d. She wrapped the gift nicely. => nice wrapping

It seems to be the case that the pseudo-resultative predicate does not semantically modify the direct object or the verb (the event), but rather the root:

(19) a. Mary braided her hair tight. => A tight braid was created.

b. Mary tied her shoelaces tight. => A tight *tying* was created.

c. Mary piled the cushions high. => A high pile was created.

d. Mary chopped the parsley fine. => Fine *pieces* were created.

e. Mary sliced the bread thin. => A thin slice was created.

 f. Mary ground the coffee beans fine. => Fine coffee grounds were created. (Levinson 2007: 43)

Moreover, one can notice that the sentences in Romanian corresponding to (19a) or (19e), for instance, contain a pseudo-resultative that bears no number features or whose number features are not in agreement with the noun in the corresponding paraphrase. In a sentence such as *Maria și-a împletit părul strâns* ('Maria reflexive clitic-has in-braided hair-the tight')-corresponding to (19a), *strâns* has no number agreement with the plural form *plete* ('braids'). In *Maria a feliat pâinea subțire* ('Maria has sliced bread-the thin.')- corresponding to (19e), *subțire* ('thin') has no number agreeement with the plural form *felii* ('slices') occuring in the verbal paraphrase (*a tăia în felii* 'to cut in slices'). This again reinforces the idea that denominals are derived from roots, and the number projection is not part of the root; there can be no agreement with something that is missing. Of course, this counterargument can easily be demolished by arguing that the pseudoresultative is an adverb here, and it can bear no agreement feature, which means its lack of agreement is no evidence for the root-derivation of denominals.

Starting from the semantic similarity of sentences such as:

(20) Linda braided her hair.

and

(21) Linda made her hair into a braid.

Levinson (2007) proposes that the verb *braid* is to be analyzed syntactically in a similar fashion to the phrase in (21), where *her hair* is a Theme, and *a braid* is a Goal. A sentence such as *Linda braided her hair tight* receives the syntactic representation in (22):

(22) PP
```
(22) PP
      /\
   DP    PP
 her hair  /\
        TO    PP
            /\
          IN    √P
               /\
              √    AP
            √tie   tight
```
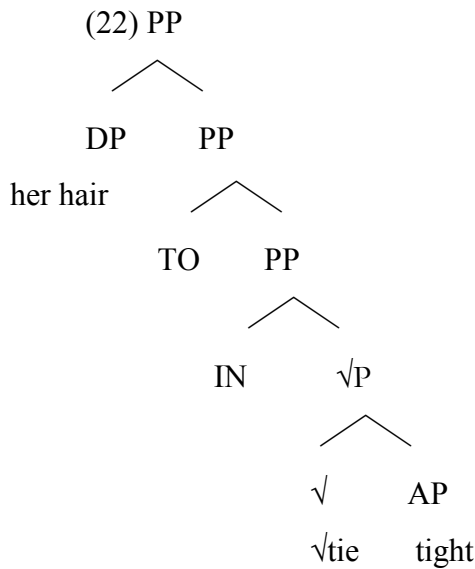
This fares well with empirical facts such as the fact that in Finnish pseudo-resultative adjectives bear a particular case morphology[5], while pseudo-resultative adverbs do not. Also, pseudo-resultatives behave differently from resultatives in terms of case[6].

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[5]As argued in Levinson (2007: 70), in Finnish pseudo-resultative predicates which are adjectives bear an overt locative, illative case marker:

    (i)   Mari leti-tt-i   hiuksensa   tiuka-**an**

            Mari braid-CAUS-PAST hair-ACC.POSS tight-ILL

            ˊMari braided her hair tight.ˈ

unlike the pseudo-resultative predicates with adverb morphology (the *–sti* suffix):

    (ii)   Mari leti-tt-i   hiuksensa   tiuka-**sti**

            Mari braid-CAUS-PAST hair-ACC.POSS tight-ADV

            ˊMari braided her hair tight.ˈ

[6] While resultatives in Finnish are marked with translative case, as in (i), pseudo-resultatives cannot be marked with this case in Finnish:

    (i)   Mari joi teekannu-n tyhjä-ksi.

            Mari drank teapot-ACC empty-TRANSL

            ˊMari drank the teapot empty.ˈ (Levinson 2007: 78)

    (ii)   *Mari leti-tt-i   hiuksensa tiuka-ksi.

            Mari braid-CAUS-PAST hair-ACC. POSS tight-TRANS (Levinson 2007:80)

Further evidence in favour of the existence of denominal verbs having an internal complex structures comes from adverbials acting over l-syntactic structures. A very interesting case of internal verbal modification is represented by internal verbal quantification (Bosque and P.J. Masullo 1998):

(23) a. Sangrar *mucho* (lit.: 'Bleed a lot')
     b. Viajar *mucho* (lit.: 'Travel a lot').

In order to explain the scope of *mucho* ('a lot'), one is forced to decompose the word *sangrar* ('to bleed'), which means that *sangrar* has internal complex structure.

Bosque and Masullo (1998) argue that there is degree modification inside the word, namely, the adverb *mucho* quantifies over the noun from which the verb is derived:

(24) $[_{VP} [_{VP} V \text{ sangr}\textbf{ar}_j [_{QP} [_{Q^0} e_{i,j}] [N_j]]] \text{ mucho}_i]$

A similar piece of evidence comes from Italian (examples given by Alessandra Giorgi):

(25) a. Ho   mangiato   molto.
     Have-Pres,1sg eaten-Past Prt.   lot
     'I have eaten a lot.'
   b. Ho   riso   molto.
     Have- Pres,1sg laughed-Past Prt lot.
     'I have laughed a lot.'
  c. Ho   corso   molto.
     Have-Pres, 1sg run-Past Prt. lot.
     'I have run a lot.'
  d. Ho   pianto   molto.
     Have- Pres,1sg cried-Past Prt lot.
     'I have cried a lot.'

While in (25b) the quantifier *molto* modifies the duration, in (25a) the quantifier *molto* modifies the object. *Ho mangiato molto* does not refer to eating for a long period of time, but to eating a great quantity of food. Interestingly, since *mangiare* is a transitive verb, the interpretation associated with *Ho mangiato molto*, where the direct object is absent seems to suggest that the internal argument of

the verb *(food)* has been semantically incorporated into the verb. Since there is no noun morphologically related to the verb *mangiare* in Italian, one possible assumption is that there must be a root inside the verb that the quantifier modifies. The same situation is to be found in (25d), where the quantifier modifies the internal root of the verb *piangere* (*Ho pianto molte lacrime= I cried a lot of tears*). In contrast, in (25c) the quantifier is ambiguous: it can either be interpreted as modifying the duration (with *Ho corso molto* meaning *Ho corso molto tempo* (I ran for a long period of time)), or as modifying the distance, i.e. the object (*Ho corso una lunga distanza* (I ran a long distance)).

Pseudo-resultatives modifying implicit creation verbs and quantifiers modifying a verb internally may be thought to bring evidence in favour of the existence of an element (within the verb) from which the denominal is derived. However, it is not clear why this element could not be a noun which is not part of the verb. Given that when one says *Ho mangiato molto* (I ate a lot), the meaning is *Ho mangiato molto CIBO* (I ate a lot (of) FOOD), it might simply be the case that there is a silent noun that gets incorporated. In fact, many of the examples above can be reinterpreted in ways that allow one to say that the modifier does not modify the root inside the verb, but rather a silent noun. Even in the case of *Sangrar mucho*, it is not clear that the adverb modifies the root within the verb. It could very well be the case that the modifiers affect a silent noun (SANGUE).

An interesting argument in favour of the naked root as the base of derivation for the denominal could come from adverbial pseudo-resultatives. If one adopts the structure in (22), then an adverbial pseudo-resultative would pose problems if one assumed that the root is a nominal, as adverbs do not modify nouns. Taking a look at some of Geuder (2000)'s examples, it can be seen that in some cases at least it is not the case that the pseudo-resultative is an adjective, or it can be either an adjective or an adverb (as in Finnish), but it must be an adverb instead as in (26), (27):

(26)   a. They decorated the room beautifully.

b. *They decorated the room beautiful.

(27)   a. She dressed elegantly.

b. *She dressed elegant.

The presence of adverb morphology on these modifiers is problematic for the status of the root. At the same time, it might point to the impossibility of the lexical category noun at the core of denominal verbs. However, as very clearly put by Levinson (2007: 74),

"while, cross-linguistically, predicates with adjectival morphology do not modify adverbs, there is no implication in the other direction, that predicates with adverb morphology necessarily *do* modify verbs."

In conclusion, I will argue that Levinson (2007) brings extremely interesting arguments in favour of a derivation analysis for denominals. However, although she uses them to support a (naked) root analysis, her arguments can easily be used to support a categorial root analysis or a noun-derivation/ incorporation analysis. The main point is that denominals have to be decomposed: semantic factors, the behavior of pseudo-resultatives in the case of implicit creation verbs, internally-modifying quantifiers, all support the idea that denominals are derived, they are complex forms and they need to be dealt with as such.

2.4. The Issue of Proper Nouns

A very interesting issue to discuss in the root-derivation/ noun-derivation debate, representing a possible counterargument to the idea that denominals are derived from roots could be the fact that there are denominals derived from proper names. Proper names represent a problem because, from a syntactic point of view, they have a DP status rather than an NP or an N status[7]. From a semantic point of view, it has been argued that they have reference, but no sense, which leads to the question where the sense of the denominal verbs comes from.

There are many denominal verbs based on proper names: agent verbs based on people's names (*diddle, dun, finagle, fudge, lynch, pander, philander*), recipient verbs from names of people who met defeat or death (*boycott*), verbs from place names (*charleston, meander, saunter, shanghai*), instrument verbs based on company names (*hoover, scotchtape, xerox*). Also, proper nouns are a great source of innovations: *to Shylock some euros from the sum raised; the wind Bernoullis around the building* (speeds up according to Bernoulli's Law); *you're in danger of being Hieronymous Bosched* (put in a nightmare setting); *the perils of Don Juaning* a.o., and they can be easily created:

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[7] In the lexical-syntactic theory proposed by Hale & Keyser (1993, 2002), denominals result from the incorporation of bare nouns into null light verbs, not from the incorporation of DPs into null light verbs. If this were the case, we would probably expect things such as *adance (dance<- do a dance), *alaugh (laugh<-give a laugh), *theshelf (shelve the books <- put the books on the shelf), *asaddle (saddle the horse <- provide the horse with a saddle)* a.o. Moreover, from a theoretical point of view, incorporation of DPs is not possible, as the D acts as a barrier between the noun and the verb.

to Valentino the woman, to Bonny and Clyde one's way through the West, to Ajax the sink. (Clark & Clark 1979: 783)[8].

A verb like *Houdini'd* in *My sister Houdini'd her way out of the locked closet* is not denotational but contextual; it is a case of shifting sense and denotation, as its interpretation depends on the context and on the cooperation between the speaker and listener:

"For Sam to tell Helen *My sister Houdini'd her way out of the locked closet,* he must believe that they mutually know that Houdini was an escape artist. [...] If Sam believed that Helen didn't know about Houdini's escape artistry (even though everyone else did), he couldn't have used *Houdini* cooperatively on that occasion with the sense 'escape by trickery'. Yet if he believed she knew about Houdini's manner of death and his investigations of fake mediums (even though most other people didn't), he could have expected her to understand *Joe got Houdini'd in the stomach yesterday* ('hit hard without warning') and *I would love to Houdini those ESP experiments* ('expose as fraudulent by careful analysis')" (Clark & Clark 1979: 784).

According to Clark & Clark (1979), common denominal verbs and innovative denominal verbs should receive two different semantic accounts. Innovative expressions such as *Houdini* are neither purely denotational (endowed with fixed sense and denotation e.g. *man*), neither indexical or deictic (endowed with fixed sense and denotation, but a shifting reference e.g. *he*), but they are contextuals, they have a shifting sense and denotation[9]. It is irrelevant whether one says that the innovative denominal is derived from the proper name or if one says there is a common name *Houdini* that the proper name is recategorized as. What matters is that *Houdini* is a contextual and it requires a different semantics.

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[8] There are such verbs in Romanian too (*a boicota* 'to boycott', *a xeroxa* 'to xerox' a.o), many borrowed. Moreover, one can easily produce verbs from proper names: *Nu mai Van-Gogh-ui pereții* ('Neg more Van-Gogh-imperative wall-masc, pl', *Stop Van-Gogh-ing the walls*), by which one can understand many things: that the interlocutor is asked to stop painting like Van Gogh, or to stop hanging Van Gogh paintings or imitations on the walls.

[9] Of course, innovative denominals can equally be formed from common nouns. If John and Mary are talking about a common friend of theirs, who usually throws cherries at people, John might say to Mary something of the type *Barbara cherried Mary again today.* The same thing is true for Romanian: *Barbara a cireșit-o pe Maria din nou azi* ('Barbara has cherried-cl. Prep Maria again today'). However, a very productive means of forming denominals is with the help of the reflexive *se*. In a sentence such as *Maria s-a monruit toată ziua pe lângă Ion* ('Maria refl. SE- have-Prt Tense 3rd sg monroe-Past Prt all day near John.'), *a se monrui* is used with the meaning 'to behave like Marylin Monroe (in a sexy, seductive way'.

On the other hand, there are many denominals that have become part of language, and that are derived from proper names, such as the verb *to xerox,* derived from the name of a company, or *to lynch,* derived from the name of a Judge Lynch. In such cases, the denominals have become part of history observing a canonical use, namely, they were used to refer to the action most relevant/ known/ typical for that person/ institution etc. In fact, even in the creation of innovatives from proper names, the typical use plays an essential part: the verb is used to refer to an action that was/ is characteristic of a person, not just random.

Hence, proper nouns do not represent a problem for derivation theories of denominals because they are not used as proper nouns: they are either used as common nouns (common uses), or as contextuals.

2.5 The Issue of Paraphrases

A similar problem for theories of derivation is represented by paraphrases, more exactly, to what extent a derivation analysis can truly capture the meaning of a denominal:

"For many common denominal verbs, derivations lead to problems. First, the noun origins of many verbs have been completely lost. First, the noun origins of many verbs have been completely lost. How many people go back to Captain Boycott, Judge Lynch, and writing slates on hearing *boycott the store, lynch the prisoner,* and *slate the event*? These verbs have become opaque idioms. Second, even the more transparent verbs have interpretations that, strictly speaking, don't contain the parent noun. If *land* and *park* truly mean 'put onto land' and 'put into a park', how could one land on a lake and park in a garage? Third, denominal verbs usually have semantic idiosyncrasies. Why should *land the plane* mean 'put down' and *ground the plane* 'keep down', instead of the reverse? That is, most common denominal verbs seem to be full or partial idioms. Their meanings have become fully or partially specialized, and are not fully predictable by an across-the board process of derivation (see also Bolinger 1975, 1976, 1977, Chomsky 1970, Downing 1977)" (Clark & Clark 1979: 781).

According to Clark & Clark (1979), paraphrases are not the source of the derivation of denominal verbs:

"For each main category there is a general paraphrase that roughly fits most of its members. The paraphrases themselves are then classified on the basis of the case role that the parent noun plays in them; we have labeled most of the categories with the names for the case roles given by Fillmore 1968, 1971. These paraphrases, however, are no more than heuristic devices, enabling us to group verbs with similar origins. They do not (and, as we shall see, cannot) capture all the content of each verb. Most of the well-established verbs are specialized in ways not capturable in general paraphrases. More importantly, these paraphrases are not intended to represent the sources from which the verbs are derived, either now or historically. [...] In brief, the paraphrases are not themselves intended to carry any theoretical significance." (Clark & Clark 1979)

In fact, looking at their lengthy, and very useful classification of verbs, one can easily notice the presence of extremely many different verbs in the paraphrases used. Taking a look at instrument verbs, for instance, Clark & Clark (1979) mention nine verbs which can occur in the paraphrases: *go (boat, bicycle, bike), fasten (nail, wire), clean (mop the floor, rake the grass), hit (hammer the nail into the board, stone the witch), cut, stab (knife the man, scythe the grass), destroy (bomb the village, grenade the bunker), catch (snare the rabbit, hook the fish), block (shield the child, barricade the road), follow (track the criminal, trail the deer).* If one were to take paraphrases as the source of deriving denominals, would this mean that one would need so many light verbs? Moreover, the problem is not just with the presumed light verbs, but with the prepositions as well: *on (blanket the bed, uniform the guards), not-on/ / out/ off (skin the rabbit, feather the goose, shell the peanuts, shuck the corn), in (spice the food, salt the food), not-in/ out/ away (pit the cherries, core the apple), at, to (drug the man, horse the soldiers), around (fence the yard, frame the picture), along (tree the avenue, gutter the street), over (bridge the street, span the river), through (tunnel the mountain), with (hammer the wall).* Does this mean so many null prepositions will be needed in the D-structure of the derivation of denominals? Paraphrases obviously represent a serious problem if they are to be seen as a source for deriving denominals, because they would presume postulating a lot of null material. Moreover, it is not even that clear that a denominal verb only has one paraphrase. *To leash the dog*, for instance, can be paraphrased either as 'to put a leash on the dog' (hence, a Locatum verb), or as 'to restrain the dog with a leash' (hence, an Instrument Verb). It is very difficult to say what the correct paraphrase would be in this case.

In conclusion, paraphrases are to be seen as a useful device helping one group verbs, but not as the source of denominals. Hale & Keyser (1993, 2002) adopt a slightly different perspective.

Although a paraphrase is not the meaning of the denominal for them, it does represent the lexical-syntactic source for that verb nevertheless. They resort, however, to more generic verbs which are absent from the structure at a phonological level (*DO, PUT, PROVIDE*). One could even attempt to reduce light verbs to primitive predicates (Levin & Rappaport Hovav 1988): ACT, BE, BECOME, CAUSE, thus reducing them to a limited set (*PUT*= CAUSE smth TO BE in a certain place, *PROVIDE*= CAUSE sb TO HAVE smth). Even *BECOME* could be decomposed as COME TO BE. In this way, one could only resort to a small number of light verbs instead of burdening the lexicon with a large number of silent light verbs which might actually not be so light..

Moreover, another problematic issue related to paraphrases is the status of the noun. If one views paraphrases as a precise syntactic representation rather than a useful tool, then one is tempted to think that denominal verbs are derived from nouns. If *to shelve the books* is paraphrased as *to put the books on the shelves*, then one might argue that the verb comes from the plural form *shelves.* However, this plural form would be a NumP, which would further complicate the structure, and one might also expect the phonological realization of the verb to show the presence of the plural (*to shelves*). Also, if plurality information were encoded within the verb, one would expect the ungrammaticality of *I shelved the books on one big shelf* or *Jill calved one cute calf.* These sentences are, however, grammatical, which clearly suggests that the denominal incorporates a bare noun, and not a Num. Interestingly, there is no verb **oneshelve* (*I oneshelved the books*) meaning 'to put on one shelf', just as there is no verb **twoshelve* 'to put on two shelves'.

In conclusion, various types of evidence (verbs apparently derived from roots, implicit creation verbs occuring with pseudoresultatives, verbs apparently derived from proper nouns, certain aspects related to the transition from a paraphrase to a verb a.o.) support the idea that denominals verbs in English are actually derived from a nominal root or bare noun rather than an uncategorized root or a phrase bigger than N.

Chapter 2

(Un)boundedness Effects of the Nominal Root in Noun-Incorporating Verbs. Insight from Romanian.

1.   Aims

While in the previous chapter I focused on showing that denominals in English are derived from bare nouns or categorized roots rather than uncategorized roots, the aim of this chapter is to test whether the presence of a nominal root/ bare noun within the verb has certain effects upon the verb type. In other words, if it is indeed the case that a denominal verb is derived from a bare noun/ nominal root, does this affect the verb? Parallels between count nouns and telic verbs have been drawn in the literature (Smith 1997) sustaining the idea that count nouns are to mass nouns what telic verbs are to atelic verbs. However, an interesting question would be if the connection goes even deeper. Do the +/- count, +/- concrete features of the bare noun/ nominal root from which the verb is derived percolate to the verbal domain and affect the aspect of the verb? According to Harley (2005), this is the situation in the case of English denominals, namely, the boundedness of the root and the boundedness of the verb are related.

In what follows, I look at this correlation in English showing with counterexamples that it is problematic, and then I try to see if Harley's (2005) hypothesis applies to Romanian. With this aim in mind, I look at all the noun-incorporating verbs from a Romanian-Norwegian dictionary (Halvorsen 2007), and classify them in terms of: (i) the nature of the incorporated nominal root: concrete vs. abstract, count vs. mass, type of theta-role (only if the nominal root is concrete), (ii) the aspectual nature of the verb: telic vs. atelic. The choice of the dictionary was dictated by the need to create a manageable database of denominal verbs, and, following Gillian Ramchand's suggestion, I opted for a bilingual dictionary from which I could easily select my data rather than a professional and lengthy dictionary of Romanian. The results show that the correlation between the properties of the nominal root and of the verb does not seem to be as tight as suggested by Harley (2005). This is a very important finding as it points out to two possibilities: (a) either denominal verbs are derived from a non-categorized root, and so, features such as +/- count, +/- concrete features can have no effect upon the (a)telicity of the verb for the simple reason that they are not there, or (b) denominal verbs are derived from a categorized root/ a nominal root/ bare noun, but, for some reason, the +/-

concrete features and the +/- count features do not have an effect[10], or have an effect to a certain extent, but there are other elements which affect the telicity of a denominal verb (such as what the internal verbal component of the denominal is- causative or processual). Given the conclusions I reached in the first chapter, I dismiss the first option. I embrace instead the second version, arguing that denominals are derived from a specified root, namely, a denominal root, but, unlike the noun which is either [+count] or [-count], the nominal root may be underspecified with respect to the [+/- count] features. This affects telicity to a great extent, the correlation between the the nominal root and the denominal is still there, but it alone cannot determine the telicity of the verb.

2.   Theoretical Background

The idea that I will try to test against a significant set of data from Romanian is that in the case of denominal verbs, there is a correlation between the (un)boundedness of the nominal root and the (a)telicity of the verb incorporating the nominal root.

Before presenting this idea in detail, it is necessary to clarify what Harley (2005) understands by *boundedness*. Starting from Jackendoff (1991), Harley (2005) argues that an expression is bounded if no subparts of what is denoted by the expression can be named with the same expression, and unbounded if subparts can be named in the same way. In the case of *apple,* for instance, *an apple* is bounded since no subparts of an apple can be called *an apple.* In contrast, *water* is unbounded as the subparts of water can also be called *water*. Harley's (2005) claim is that a verb incorporating a bounded noun is telic, while a verb incorporating an unbounded noun is atelic.

This idea is explicityly present in Hale and Keyser (1998, 2002). However, it is an idea that is easily inferable given the fact that the position of the nominal that forms the Root of the denominal verb prior to incorporation is identical to the position of certain unincorporated measuring-out arguments, and it is known that unincorporated measuring-out arguments affect the Aktionstart of VP predicates (Harley 2005). In the same way, since roots may differ in inherent countness and massness, we expect that different denominal verbs will have different Aktionsart properties.

According to Harley (2005), denominal verbs in English of both the location/locatum variety and the unergative variety are 'measured-out' by the incorporated nominal Root. This supports Hale and Keyser's (2002) l-syntactic approach, since it seems to be the case that identical structures in

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[10] One possibility would be to argue that the +/- count features must be checked against a NumP (which is absent in bare (singular) nouns/ nominal roots) (C. Dobrovie-Sorin, Tonia Bleam & M. Espinal 2006).

overt syntax and l-syntax show parallel semantic effects. A clear example in this sense is the verb *to foal,* which has the same aspectual behavior as *to bear a foal*:

(1)a. The mare foaled in 2 hours/#for 2 hours.

    b.The mare bore a foal in 2 hours/#for 2 hours.

The verb *to foal* exemplifies the behavior of a verb incorporating a Root which represents a bounded/delimited Thing. In contrast, a verb like *drool* incorporating a mass noun exhibits the behaviour of an atelic verb:

(2) a. The mare drooled # in two hours / for two hours.

    b. The mare made drool # in two hours / for two hours.

According to Harley, there are three types of incorporating verbs: (i) verbs incorporating Things, (ii) verbs incorporating Events, and (iii) verbs incorporating States. Each class can be further divided according to whether the Root is bounded or unbounded. Consider the table in (3) exemplifying possible roots:

(3)

	no complement		complement	
	bounded	unbounded	bounded	unbounded
Event	*hop*	*sleep*	*kick*	*push*
Thing	*foal*	*drool*	*N/A?*	*N/A?*
State	*flat*	*rough*	*clear*	*??*

(Harley 2005:19)

Verbs incorporating Things can either have bounded roots like *foal (to bear a foal),* or unbounded roots like *drool, sweat, bleed.* As the l-syntax analysis predicts, argues Harley, the unergative verbs which result from incorporating a mass noun from object position are atelic:

(4)   The man bled for 2 hours/#in 2 hours.

Verbs incorporating Events can have bounded roots, like *hop* or *kick*, or unbounded roots, like *sleep* or *push.* The bounded roots give rise to punctual actions which can be repeated (semelfactives), while the unbounded roots give rise to activity reading:

(5)   Semelfactives
  Sue hopped #for 5 minutes/#in 5 minutes.

(6)   Activities
   Sue slept for 5 hours /#in 5 hours.

As for verbs incorporating States, most of them involve adjectives. They can be telic or atelic depending upon the bounded or unbounded nature of the root:

(7)   Jill flattened the surface.

(8)   Bill lengthened the rope for 5 minutes.

Apart from denominal unergative verbs, there are also Location and Locatum verbs, where by Locatum one understands 'displaced Theme':

(9) **Location**: bag, bank, bottle, box, cage, can, corral, crate, floor (opponent), garage, jail, kennel, package, pasture, pen, photograph, pocket, pot, shelve, ship (the oars), shoulder, tree
(10) **Locatum**: bandage, bar, bell, blindfold, bread, butter, clothe, curtain, dress, fund, gas, grease, harness, hook, house, ink, oil, paint, pepper, powder, saddle, salt, seed, shoe, spice, water, word

According to Hale & Keyser (2002), Location and Locatum verbs have the same source, the same l-syntactic representation, a prepositional SC predicate denoting a change in the relative positions of the Inner Subject and some other entity, the Location/ Locatum argument.

(11) a. Bill put the snake in the bag.
     b. Bill bagged the snake.
 (12) a. Bill smeared the wall with paint.

b. Bill painted the wall.

The abstract preposition, according to H&K, is a 'relational element' which establishes a meaningful link between the DP and the vP; it is a a P of 'central coincidence' in the Locatum example, and a P of 'terminal coincidence' in the Location example.

When the incorporated Root is a bounded Thing, as in (13a), the location/locatum verb must be telic. When it is an unbounded Thing, however, as in (13b) below, the verb may be atelic:

(13) a. John saddled the horse #for 5 minutes.
b. Susan watered the garden for an hour.

However, there is one set of verbs which does not seem to comply to the transfer of telicity idea, namely, activity verbs named after the instrument used to accomplish them, illustrated in (14):

(14)   a. John hammered the metal for 5 minutes/in 5 minutes.
b. Sue brushed the dog for 5 minutes/in 5 minutes.
c. Jill raked the leaves for an hour/in an hour.

In this case, the boundedness of the nominal Root here (*brush, hammer, rake*) has no effect on the potential atelicity of the vP.

According to Harley (2005), therefore, it is only in the case of Instrument-incorporating verbs that there is no effect of the boundedness of the root upon the boundedness of the event. Harley (2005) solves this problems by treating instrument-incorporation as a case of *manner-incorporation*, in which case the instrument simply undergoes *lexical insertion*.

However, I would like to claim that, although Harley's generalization is very appealing from a theoretical point of view, this does not make it correct. It is a generalization revealing certain tendencies in English but counterexamples can be found. The verb *to milk*, for example, can be both telic and atelic although it incorporates a mass noun:

(15)   a. I milked the cow in 5 minutes, and then went home. (telic)
b. I like milking cows minutes in a row/ for hours.   (atelic)

Another verb, the verb *to sing* is an activity in its most frequent use, but it can also be used as a telic verb[11]:

(16) a. The lady sang a gorgeous jazzy song for 5 minutes.

b. ?? The lady sang her part in 5 minutes, and then went home to her husband.

The same thing happens with the verb *to dream:*

(17) a. The puppy dreamt for one hour.

b.The puppy dreamt his whole life in one night.

However, when it is used like in (17b), it has a slightly different meaning ('imagine', 'picture in one's mind').

There are also verbs like *to eat, to write, to read,* in which there does not seem to be any visible nominal root. These verbs can be either telic or atelic:

(18) a. Lydia ate pizza for 10 minutes.

b. Lydia ate the delicious pizza in 10 minutes.

(19) a. Martin wrote a letter in an hour.

b. Martin wrote a letter for an hour.

It might be argued that this is a not proper counterexample because these verbs are not denominal. However, according to Hale & Keyser (2002), even in this case one could postulate a null nominal root.

A serious problem is raised by Location verbs where Harley suggests that the boundedness of the Location incorporated into the verb affects the telicity of the verb; however, the Location is far away from the verb in the representation proposed by Hale & Keyser (2002), being separated by the verb by means of a preposition (V selecting a PP, P selects N). Hence, no effect upon the verb is expected. Nevertheless, given the fact that Locations generally represent bounded Things, according to Harley's proposal, one would expect the Location verb to be telic.

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[11] It is not that clear whether the verb *to sing* actually contains the noun *song*, or whether it is the case rather that the noun *song* is derived from the verb.

Moreover, Locatum verbs should be telic or atelic depending upon the bounded/ unbounded nature of the incorporated verbs, but a verb like *to oil* can be telic, although the incorporated noun is mass.

As one can see, Harley's proposal seems to face various problems in English. I will argue that such problems are primarily due to the fact that telicity is a composite effect of various factors (the verb, the direct object, the presence or absence of various resultative phrases a.o.). This is very clear when one looks at the contrast between *John and Mary danced tango for two days* versus *John and Mary danced a beautiful tango in 5 minutes*: while there is an atelic reading in the first, there is a telic reading in the second. However, one notices a serious problem if one tries to follow Harley's (2005) logic and correlate the root *dance* with the verb *dance*: is the verb *dance* atelic since it derives from an unbounded root *dance*? Or is the verb *dance* telic as it derives from a root that is bounded (*dance* can be counted (*a dance*))? This problem has also been noted by Levinson (2007), according to whom it is not clear that a root should be either bounded or unbounded, and there are cases when the root is underspecified. The author considers that a good test for determining the (un)boundedness of a root is the cooccurence with *much* (for unbounded roots)/ *many* (for bounded roots). This test shows that, although nominal, *water,* for instance, is an underspecificied root (*much water, many waters*), as it can occur with both quantifiers. Also, it would predict the possibility of the verb *water* to occur both with *in*-phrases and *for*-phrases[12]. It would also predict root underspecificity for *dance.*

A quite different situation occurs in the case of *smile.* While it is certainly odd (if not impossible) to say *There was much smile on his face,* it is perfectly possible to say *One could admire many smiles on his face*. This would suggest that that the root *smile* is bounded, which would give rise to a telic verb according to Harley's theory. However, the verb *to smile* can occur in a sentence such as *The little girl smiled for hours*, thus giving rise to an atelic reading.

Moreover, there is a great difference between *The girl smiles nice smiles* and *The girl smiled a/ that nice smile/ the nice smile we all love.* A direct object preceded by a determiner or demonstrative seems to behave differently from a direct object that is a bare plural, given that it induces a telic reading (Borer 2004). Sometimes, the presence of a resultative can induce a telic reading (*Lucy danced her feet sore*) (Ramchand 2008b).

Taking these aspects into account, I will argue that the boundedness or unboundedness of the root does affect the telicity or atelicity of the verb. However, it is not just the nature of the root that

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[12] Of course, another view is also possible, namely, that roots are specified only for one value, and then recategorized: *water,* for instance, would perhaps be specified as unbounded but it would recategorize as bounded in certain contexts.

determines (a)telicity. Telicity is determined by several factors: the type of root, the null light verb the root combines with (if one assumes such a theory), the type of complement the verb takes a. o. There have been two main views upon telicity: a syntactic view, according to which there is a syntactic telicity parameter, saying that telicity is encoded in a syntactic structure (in an AspP (Ramchand 1997, 2002) or an ASPQ (('quantity aspect', in Borer 2004), or [telic] (in Kratzer 2004))) and a semantic view, according to which telicity cannot be captured syntactically (Krikfka 1986, Dowty 1991). According to the syntactic telicity parameter, in Germanic languages, telicity is given by the morphosyntax of the DP that functions as a direct object (a certain quantifier, article or the Accusative case), which forces agreement with a functional head. In Slavic languages, on the other hand, telicity is assigned by the perfective/ imperfective morphology of the main lexical verb which then binds the DP that is a DO in its specifier (Filip 2004:1). If one adopts the semantic viewpoint on telicity (Link 1983, 1987; Bach 1981, 1986), however, telicity is given by the semantic type of the verb: inherently telic verbs denote (sets of) verbs, while processes and states are atelic. While not clearly adhering to any of the views above, I will simply say that telicity is a result of many factors: both the semantic type of the verb and the type of DP the verb combines with.

In what follows, I will try and test Harley's hypothesis that (un)bounded roots result in (a)telic readings in noun-incorporating verbs in Romanian.

3. Methodology

So as to see whether there is an effect of the boundedness of the root upon the boundedness of the verb, I decided to search for all the noun-incorporating verbs in a Romanian-Norwegian dictionary (Halvorsen 2007). I created a database made of 281 verbs which I classified according to the following criteria: (i) whether the nominal root is concrete or abstract, (ii) whether the nominal root is count or mass, (iii) whether the denominal verb is telic, atelic or even both, and (iv) what theta-role the nominal root bears (only in case it is a concrete nominal root). I have indicated the theta-role only for concrete nouns, as it would have been very difficult, if not impossible to pin down the theta-role of an abstract nominal root.

I included all the verbs which seemed to incorporate nominal roots in a table (Annex 1). Sometimes, however, it is the nouns that are derived from the verb through backformation, and not the verbs that are formed from the nominal root. Hence, I also established the origin of the nominal root/ bare noun visible in the form of the verb and came up with 42 cases of backformation in which the noun is derived from the verb via backformation: 1) 'anunța' (backformation)<fr. *annoncer*, lat.

annuntiare, 'announce', 2) 'astâmpăra', 'calm down', 3) 'blestema', 'curse', 4) 'boicota', 'boycott', 5) 'colinda', 'carol', 6) 'cugeta', 'think', 7) 'cutremura', 'shudder', 8) 'deranja', 'bother', 9) 'dobândi', 'earn', 10) 'dovedi', 'prove', 11) 'hârjoni', 'play', 12) 'hodorogi', 'grow old', 13) 'izbândi', 'suceed', 14) 'legăna', 'cradle, lull', 15) 'leşina', 'faint', 16) 'licări', 'gleam/ flicker', 17) 'lipsi', 'miss', 18) 'mirosi', 'smell', 19) 'năvăli', 'raid over/ storm in', 20) 'ocărî', 'chide', 21) 'odihni', 'rest', 22) 'oglindi', 'mirror', 23) 'osândi', 'damn'/ 'sentence', 24) 'păzi' , 'guard', 25) 'pârî', 'tell off/ tell on/ spill the beans', 26) 'pedepsi', 'punish', 27)'plictisi', 'bore', 28) 'pofti', 'yearn for', 'invite', 29) 'porunci', 'order', 30) '(se) prăpădi', 'destroy', 'die', 31) 'prigoni', 'persecute', 32) 'răsplăti', 'reward', 33) 'săpa', 'dig', 34) 'schimba', 'change', 35) 'simţi', 'feel', 36) 'strănuta', 'sneeze', 37) 'stropi', 'splash/ splatter', 38) 'şuiera', 'hiss'/ 'whistle', 39) 'tihni', 'ease', 40) 'trânti', 'slam', 41) 'tremura', 'slam'/ 'tremble', 42) 'văita', 'complain'. Given the fact that these verbs are not cases of noun-incorporation, I leave them aside in the analysis, dealing with 239 verbs. I have not gone into the issue of which verbs/ nouns are borrowed from French, or other languages, given that this would have been a very burdensome process; moreover, it might very well be the case that only the verb was borrowed, and the noun was derived from it in Romanian, or only the noun was borrowed, and the verb was derived from it in Romanian-although dictionaries point to the origin of the noun/ verb[13], it is very hard, if not impossible to determine if both were truly borrowed or just one verb. In any case, even if the verb was borrowed, a similar derivation process took place in the language from which it was borrowed, hence, it still makes perfect sense to speak about denominals.

The purpose of this research is to provide a solution to the following issues: (i) whether there is any correlation between a count nominal root and the telicity of the denominal verb, i.e. how many count nominal roots result in telic verbs?, how many mass nominal roots result in atelic verbs?, (ii) whether there is a correlation between the concrete nature of the root and the telicity of the noun-incorporating verb, (iii) whether there is any correlation between the theta-properties of the root (if any) and the telicity/ Aktionstart of the denominal verb.

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[13] I have used the http://dexonline.ro/ engine, which is a research engine using the best dictionaries of the Romanian language.

4.   Data

4.1.   Denominal verbs without a prefix

Following Gillian Ramchand's suggestion, I classified the verbs according to the four criteria mentioned above: concrete vs. abstract root, count vs. abstract root, telic, atelic verb, and origin of the nominal root/ noun present in the verb (Annex 1). In the annex, I have marked the nominal root of the verb in bold, leaving the *a* marker of the long infinitive in Romanian (*to*) unbolded, as well as the verbal suffix indicating the verbal declension.

The test I have used in establishing the telicity of a verb is the *in*-phrase/ *for*-phrase test, according to which only telic verbs can appear with the *in-phrase (în-),* while taking the possibility of a verb to co-occurr with a *for*-phrase (*timp de)* to be an indicator of atelicity (Vendler 1967). Of course, this test has its limitations. As Dowty (1979) shows, the *for*-adverbial can easily coerce an accomplishment into an activity (*The girl read a book for 5 hours*), so it seems to be the case that the adverbial itself has an atelic function rather than indicating a verb that is inherently atelic. It is clearly ungrammatical only with verbs which express events with a clear result (**Mary broke the window for 5 minutes*) (Ramchand 2008b). Moreover, the *in*-adverbial does not seem to be such a reliable test either, as it can be used in a sentence such as *He hadn't worked in 6 months* (Xiao and McEnery 2004a, 2004b) and it can even have a telic function, turning an atelic verb into a telic one (*Mary danced in 5 minutes*). In spite of its problems and limitations, I take the *in*-test to be an indicator of telicity, and the *for*-adverbial as an indicator of atelicity, considering the *in*-test pretty accurate (with a few exceptions as the one previously mentioned), and excluding the odd *for*-cases.

I have not put down all the examples testing telicity, as it would have resulted in a huge enumeration, but I here list three significant examples for you to see how I performed the test of telicity for the denominals:

(20)   a accepta 'to accept'

Ursuleţul   a acceptat borcanul cu miere   în 2   secunde   / ??timp de 5 minute.

Bear-diminutive suffix-article M, sg. has accepted jar-the with honey in 2 seconds /??time of 5 minutes.

'The little bear accepted the jar of honey in 2 seconds/ ?? for 5 minutes.'

⇨ the verb is an achievement [+telic], [-durative]

(21)   a arbitra 'to arbitrate'

  Un român   a arbitrat   un meci de rugby în Atena *în 30 de minute/ timp de 30 de minute.

  A Romanian has arbitrated a game of rugby in Athens* in 30 minutes/ time of 30 minutes

  'A Romanian arbitrated a game of rugby in Athens *in 30 minutes/ for 30 minutes.'

  ⇨ atelic verb [-telic]

(22)   a bandaja

  Doctorul mi-a bandajat piciorul în 10 minute/ timp de 10 minute.

  Doctor-the cl-me-has bandaged leg-the in 10 minutes/ time of 10 minutes..

  'The doctor bandaged my leg in 10 minutes/ for 10 minutes. '

 => telic verb [+telic], atelic verb [-telic]

Although it is practically the case that the *for*-adverbial can be used with every verb, rendering clearly telic verbs (such as *to accept*) atelic, I have excluded the odd cases. (20) is possible with a *for*-adverbial on a reading where the bear keeps speaking, saying he wants the jar of honey on and on, but this is not the basic reading. In other words, any action can be iterated (accepting, for instance), depicting thus an atelic event, but this does not mean the action itself (accepting) is atelic.

The conclusions of the investigation (Annex 1) can be summed up as follows. As far as the count vs. abstract nominal root distinction is concerned, there are 171 verbs (out of 241 denominal verbs) containing roots that can only be count. Out of these, 93 are telic (e.g. *a răni* 'to hurt'), 30 are telic and atelic (e.g. *a povesti* 'to recount/ narrate/ tell'), and the rest are atelic (e.g. *a fremăta* 'to quiver'), as illustrated in (23):

(23)
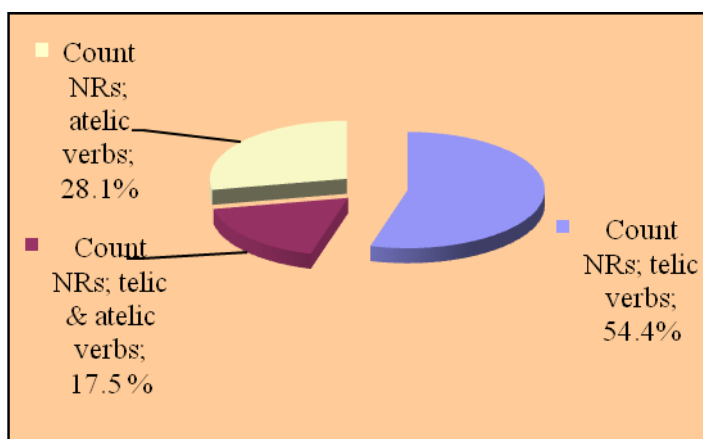
As far as mass nouns are concerned, there are about 44 verbs containing mass nominal roots. Out of these, 21 are atelic (e.g. *a huzuri* 'to wanton'), 5 are telic and atelic (e.g. *a tămâia*, 'to incense'), and 18 are telic:

(24)
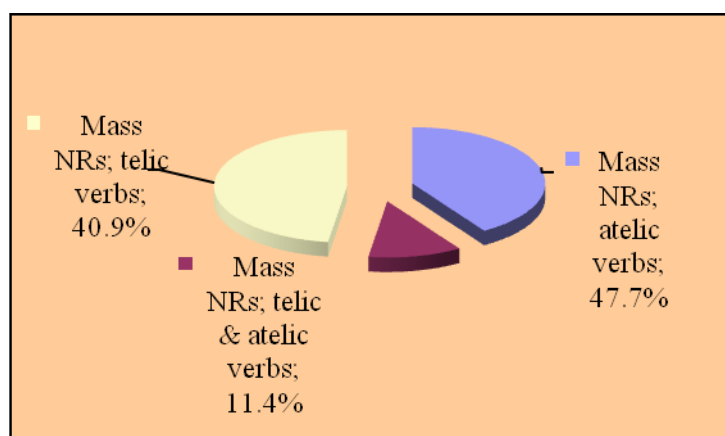
Contrary to Harley's suggestion, I found that many verbs incorporating mass nominal roots are actually telic: *a astâmpăra,* 'to calm sb down'*, a echilibra* 'to balance', *a (se) linişti* 'to calm', *a nelinişti* 'to disquiet/ worry', *a nenoroci,* 'to bring misfortune to sb', *a (se) ruşina* 'to abash/ shame', *a (se) oftica* 'to annoy/ piss off// to get pissed off', **a demisiona* 'to resign', *a lichida* 'to finish/ close', *a memoriza* 'to memorize', *a metaliza* 'to metalize'*, a se oţeli* 'to turn into steel', *a vrăji* 'to charm', *a oxigena* 'to oxigenate', *a tapeta* 'to wallpaper'. This indicates that the incorporation of a mass noun does not necessarily result in an atelic verb.

Moreover, there are a series of nominal roots that are underspecified with respect to the +/- count distinction: 8 atelic (e.g. *a critica* 'to criticize'), 10 telic or atelic (e.g. *a fotografia* 'to photograph', *a pudra* 'to powder'), and 8 telic (e.g. *a nelinişti* 'to disquiet').

(25)
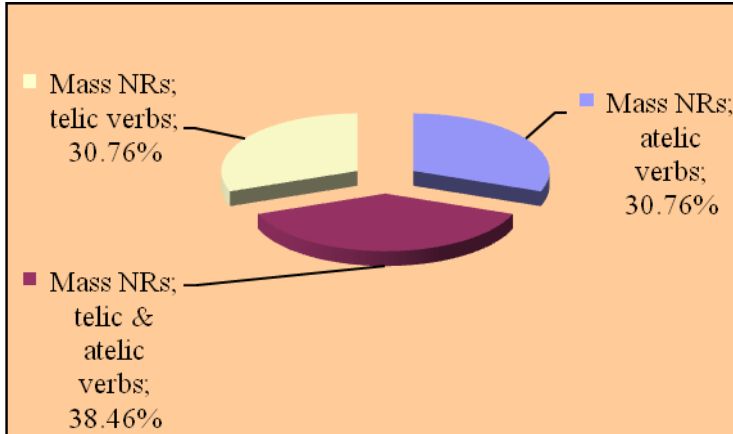
Interestingly, when a root is underspecified, i.e. it can be both count and uncount, it is often the case that the verb can be both telic and atelic. *A desena* ('to draw'), for instance, can be both telic and atelic, and its nominal root is underspecified with respect to boundeness.

As far as concrete nominal roots are concerned, there are 156 verbs containing concrete nouns. Out of these, 78 are telic (*a răni* 'to hurt'), 27 are telic and atelic (*a desena* 'to draw'), and the others are atelic (*a potcovi* 'to shoe'):

(26)
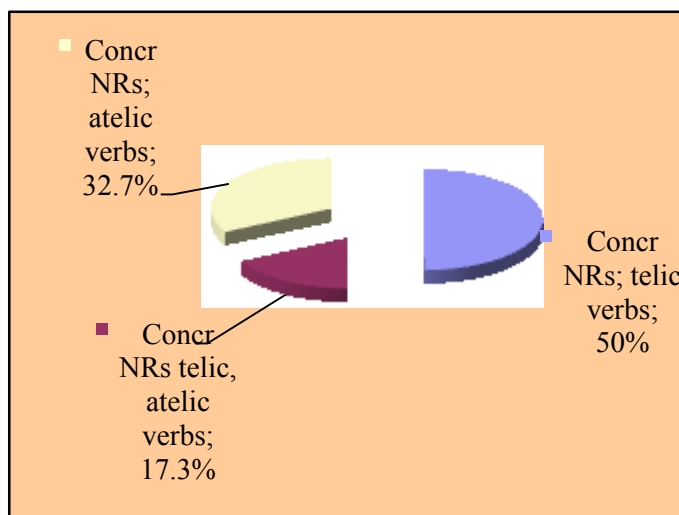
There are 75 verbs containing abstract nominal roots. Out of these, 38 are telic (*a nenoroci* 'to bring misfortune to sb'), 11 are telic and atelic (*a tăinui,* 'to conceal/ hide'), and 26 are atelic (*a regreta* 'to regret'):

(27)
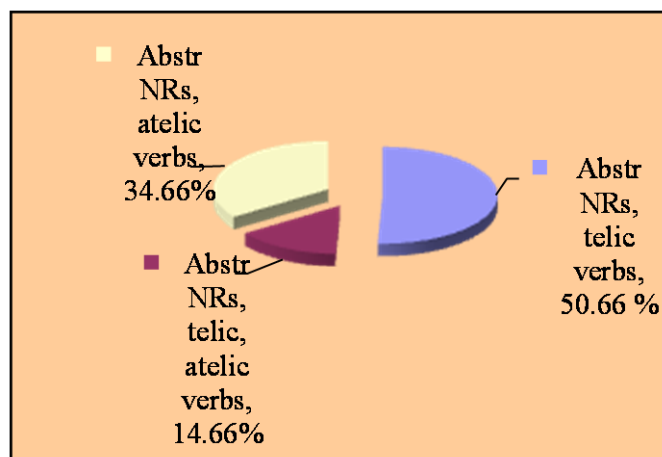
Hence, concrete and abstract nominal roots seem to behave more or less in the same way, giving rise to more telic verbs than atelic. It is not the case that concrete nominal roots generate telicity to a greater extent than abstract nominal roots.

As for the correlation between thematic roles and telicity/ Aktionstart, I have taken into account all the verbs that contain concrete nouns, and classified them with respect to the theta-role they play in the verbal paraphrase.

There is a number of 152 verbs containing concrete nouns that I have taken into account. Out of these, about 98 contain Themes, 10 contain Location, 11 contain Instruments, and 34 contain other thematic roles (8 contain the theta-role Endpoint (e.g. *a (se) ruina* 'to ruin (oneself)', 11 contain Pseudo-Agents, 10 seem to contain Manner (e.g. *a galopa* 'to gallop')-although it has been claimed that there is no Manner Incorporation in Romance languages, and, in other cases, it is hard to pin down the theta-role). Out of the 98 verbs containing Themes, 58 are telic, 20 can be telic or atelic, 20 are atelic. Out of the 10 verbs containing Location, 3 are telic (e.g. *a zări,* 'to see'), 5 are atelic (e.g. *a păşuna* 'to graze'), and 2 can be telic or atelic (*a fabrica* 'to fabricate', containing the noun *fabrică* 'factory'). Out of the 11 verbs containing Instruments, 6 are activities (e.g. *a peria* 'to brush'), 3 may be telic or atelic (the verb *a pistona* 'to push or extract liquid with a piston', which is actually an iterative, the verb *a claxona* 'to honk', which is an iterative, the verb *a mătura* 'to sweep'), and 2 are

telic (the verb *a unelti* ('to scheme'), which has a different meaning from the Instrument incorporated ('unealtă', 'tool'), the verb *a cârmi* 'to steer' (which might be interpreted as incorporating a Theme)). Out of the 11 verbs containing Pseudo-Agents, one is telic (*a măcelări* 'to butcher'), 8 are atelic (e.g. *a hoinări* 'to roam'), and two can be both telic and atelic (e.g. *a meşteri* 'to tinker'):

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(28)
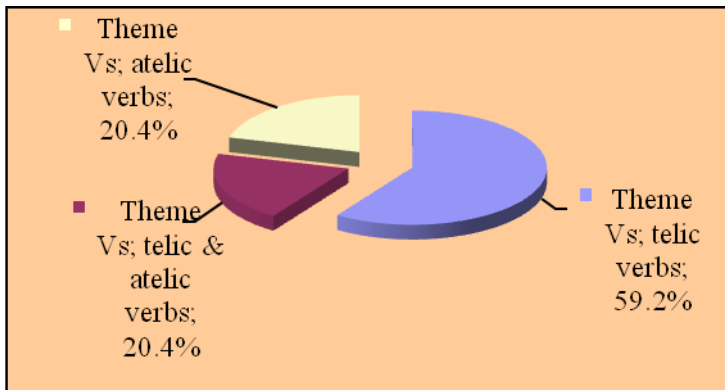
(29)
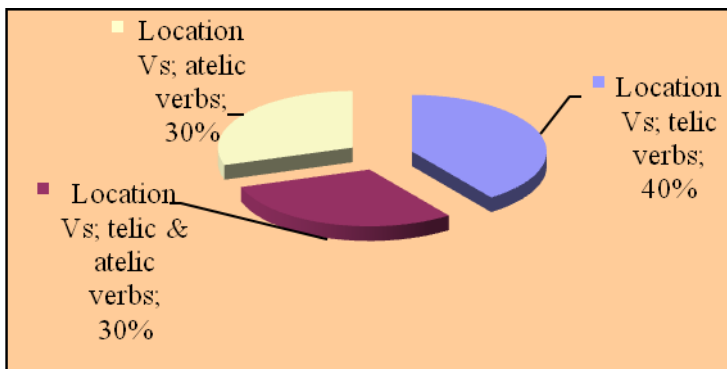
(30)
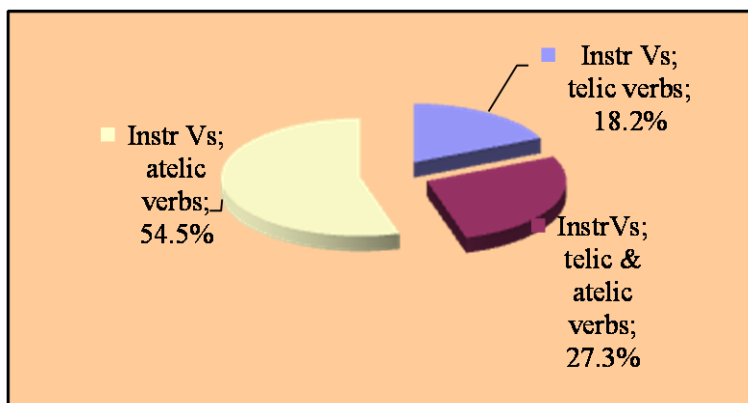
If one attempts to establish connections between the count nature of a nominal root, the thematic properties and telicity, the following remarks can be made:

(a)   Out of the the verbs that incorporate Themes and are telic, almost all incorporate count nominal roots. This may be taken to suggest a possible correlation between the boundedness of the incorporated count noun and the telicity of the verbs. Out of the verbs that incorporate Themes and are atelic, only a few verbs incorporate mass nominal roots. Therefore, there does not seem to be a transfer of non-boundedness from the mass root to the verb.

(b)   All Location verbs, be they telic or atelic, derive from count nominal roots. According to Harley, one would expect the incorporation of count nouns to give rise only to telic verbs. However, the existence of a verb like *a păşuna* (lit. 'to pasture', 'to graze'), an atelic verb, gives proof to the contrary.

(c)   All Instrument-incorporating verbs, which are mostly atelic, are the result of incorporating nominal roots that are count. Harley explains this by setting instrument verbs apart from the other incorporating verbs as a case of Manner Incorporation.

(d)   Pseudo-agentive verbs (verbs which apparently incorporate the Agent): *a arbitra* 'to arbitrate', *a găzdui* 'to shelter'**,** *a hoinări* 'to roam', *a spiona*, 'to spy/ shadow', *a meşteri* 'to tinker', **a slugări*, 'to slave around'/'to fetch and carry', *a guverna* 'to govern', *a *măcelări* 'to butcher', *a patrula* 'to patrol', *a (se) bărbieri* 'to shave (oneself)', *a urzica* ''nettle', meaning 'to irritate' (6 atelic, 3 telic-atelic, 3 telic) derive from count nominal roots.

(e)   Manner verbs, i.e. *a detalia* 'to elaborate', *a galopa* 'to gallop', *a pendula* 'to pendulate', *a pluti* 'to float', *a şerpui* 'to wriggle/ wind/ twist and turn', *a huzuri* 'to wanton', *a potopi* 'to flood/ submerge/ inundate', are atelic with one exception, the last verb. Apart from *a huzuri* 'to wanton', all verbs derive from count nominal roots.

Hence, after looking at such a vast array of verbs, I can say that no clear conclusion can be reached with respect to the correlation between the boundedness of the incorporated noun and the boundedness of the verb, or to the correlation between the concreteness of the incorporated noun or the thematic properties of the incorporated nominal root and the Aktionstart of the verb. The only claims I can make is that there seem to exist tendencies in Romanian: verbs incorporating nominal roots that are count tend to be telic, and verbs that incorporate nouns that are Instruments from a thematic point of view tend to be activities. These two claims are in line with Harley's observations. However, contrary to Harley's remarks, there are many verbs incorporating mass nominal roots which are telic. This suggests that telicity cannot solely be determined by the type of root. Either the

root has no effect whatsoever (but this would be strange given the parallelism with the sentence, where the noun taken as object by the verb does have an effect), or the root has an effect, but it is not only the root which determines telicity. In fact, if one looks attentively at the list of telic verbs derived from mass nominal roots (e.g. *a astâmpăra,* 'to calm sb down', *a echilibra* 'to balance', *a (se) linişti* 'to calm', *a nelinişti* 'to disquiet/ worry', *a nenoroci,* 'to bring misfortune to sb', *a (se) ruşina* 'to abash/ shame', *a (se) oftica* 'to annoy/ piss off// to get pissed off', **a demisiona* 'to resign', *a lichida* 'to finish/ close', *a memoriza* 'to memorize', *a metaliza* 'to metalize', *a se oţeli* 'to turn into steel', *a vrăji* 'to charm', *a oxigena* 'to oxigenate', *a tapeta* 'to wallpaper' a.o.), there is something striking about all these examples: all these verbs involve a CAUSE predicate in their lexical decomposition: *a nelinişti* 'to disquiet/ worry', for instance, means 'to CAUSE disquiet'. In fact, even the cases where we have a reflexive clitic *se*, there is often a causation meaning at stake (internal causation e.g. *a se linişti* 'to calm oneself'). Since a cause entails a result, it is clear that the nominal root involved need not be count for telicity to be the case. On the other hand, the lexical paraphrase/ decomposition of a telic verb such *a remarca* 'to remark', where the nominal root is count does not involve the verb CAUSE predicate, but MAKE 'to MAKE (a) remark'. Thus, it seems to be the case that telicity can be given by (at least) two configurations:

(31) (i) CAUSE BE/ BECOME NR (nominal root), where the NR can be [-count].
     (ii) DO/ MAKE NR [+count]

4. 2 Denominal verbs with the prefix *în- (in-)*

In the analysis of denominal verbs, I have set apart a group of verbs prefixed with *în- (in-)*, as they represent a particular set of verbs that are very frequent in Romanian. Unlike the cases discussed in 4.1, where the verbs differ from the nouns only by the verbal suffix at the end, marking the declension, in these cases, one comes across a prefix which is homonymous with the preposition *în*, i.e. *in.*

In the class of verbs prefixed with *în-*, one basically encounters two types of verbs: a thematic-type verb, where the noun indicates either the Location where a certain entity is placed, such as *a încarcera* (lit. 'to in-prison', i.e. *to incarcerate*), or a Theme, such as *a înnoda* (*to knot*, i.e. 'to make a knot'), or an Instrument, such as *a împuşca (*lit. 'to in-gun', i.e. *to kill with a gun*), and a degree achievement type of verb, like *a îmbunătăţi* (lit. 'to-quality', *to make something better*), where the noun indicates the final property that is achieved by something, or *a înflori* (lit. 'to-

53

flower', *to bloom*), where the noun indicates the final outcome. Typically, degree achievements incorporate adjectives (e.g. *a înroşi,* lit. 'to in-red', *to redden*), and are ambiguous between a telic and atelic behaviour (they can equally go with *in*-phrases and *for*-phrases[14], for example).

However, I have decided to leave aside the adjective-incorporating verbs, and focus on denominal verbs (114), given that this is the purpose of the current research. Nevertheless, I also listed the adjective-incorporating verbs in Annex 2 (although I did not classify them), considering that adjectives can also be used as a noun (so, in a sense, it could very well be argued that *înroşi* is a denominal derived from the noun *red* (COLOUR red), starting from a paraphrase of the type *a trece în roşu* (lit. 'to pass in (a state of) red').

The results I have arrived at are the following-there are 20 verbs incorporating mass nominal roots, out of which 11 are telic (*a împurpura* 'to purple'), 8 can be telic or atelic (*a înrăutăţi* 'to worsen'), and one is atelic (*a înseta* 'to thirst'):

(31)
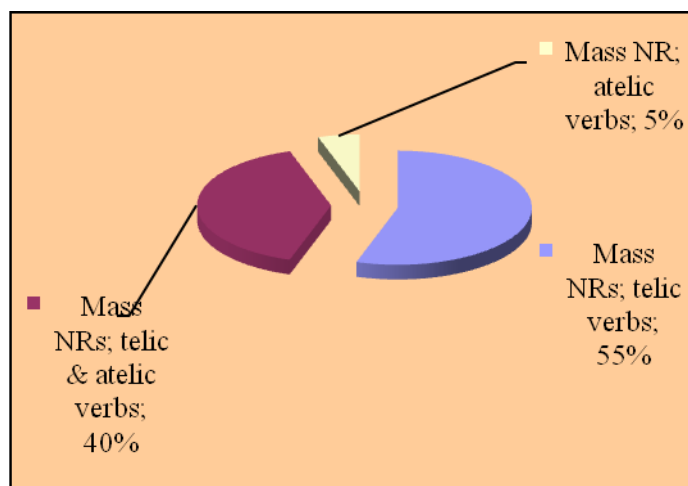
There are 84 verbs incorporating count nominal roots, out of which 52 are telic (*a înmâna* 'to hand in'), 24 can be telic and atelic (*a însemna* 'to note down'), and 2 are atelic (*a întrupa* 'to embody'):

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[14] The example given by Hay, Kennedy and Levin is the verb *cool* (i, ii) (cf. Dowty 1979):

      (i).The soup cooled for an hour.

       (ii) The soup cooled in an hour. (Hay, Kennedy and Levin 1999)

(32)
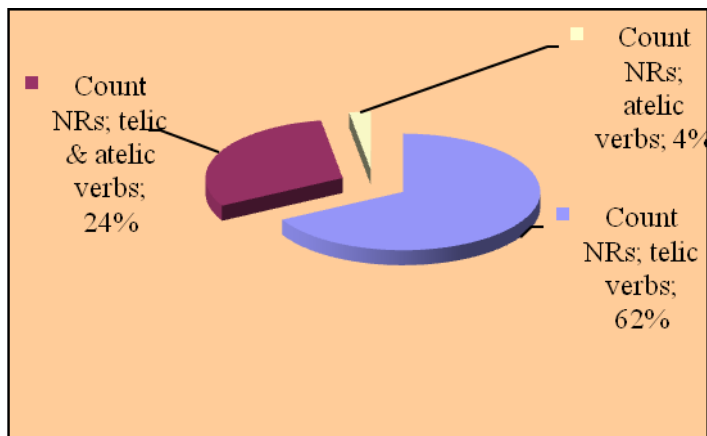
From a thematic point of view, there are opt verbs incorporating Endpoint (*a încetăţeni* 'to establish smth' (different meaning), *a (se) înceţoşa* 'in-mist', 'blur/ fog', *a îmbărbăta* 'to hearten', *a împietri* 'to paralyse' a.o.), and almost all are telic, with the exception of *a îmbărbăta* 'to hearten'.

There is one verb incorporating an Instrument, which, surprisingly, is telic (*a împuşca* 'to shoot').

There are 28 Location verbs, out of which 24 are telic (*a îngropa* 'to bury') and 4 atelic and atelic (*a înmagazina* 'to store'):

(33)
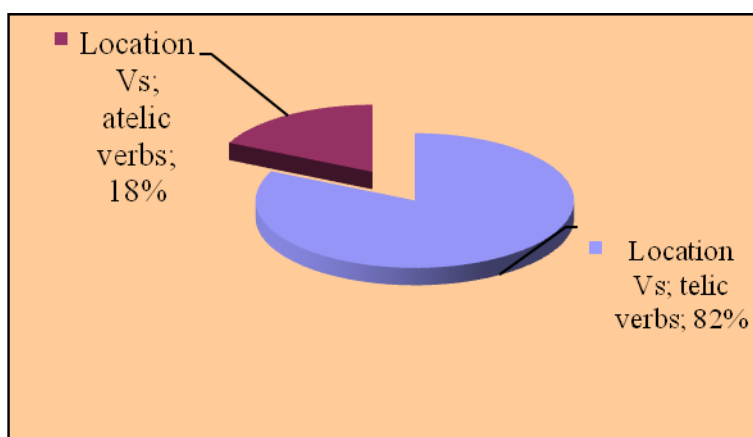
There are 30 Theme verbs, out of which 21 are telic (*a însămânţa* 'to inseminate'), and 9 can be telic or atelic (*a îmbrăţişa* 'to hug'):

(34)
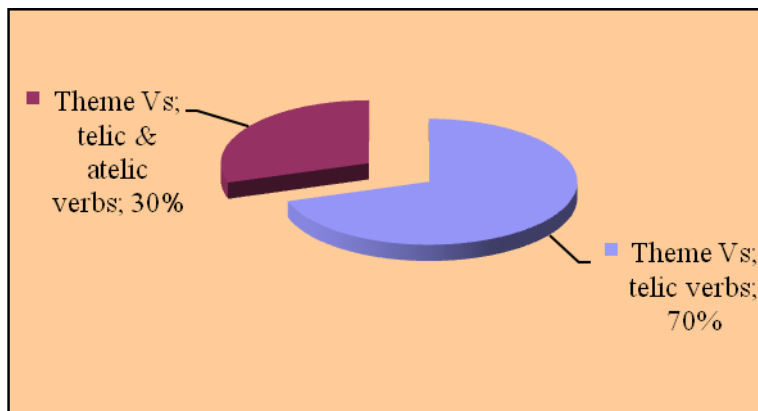
Apart from that, there are 8 Locatum verbs (*a împodobi* 'to adorn/ decorate', *a împânzi* 'in-fabric, 'to fill', *a îmbălsăma* 'to embalm', *a împăienjeni* 'to fill smth with a spider's web', *a înzăpezi* 'to become covered with snow', *a împovăra* 'to burden/ weigh down', *a înveşmânta* 'put clothes on', *a înnămoli* 'to cover in mud'), 5 of which are telic, while three can be telic or atelic.

There are 4 Manner verbs that are telic: *a împleti*, 'to braid, interlace', *a împerechea* 'to pair'/ 'to mate', *a îngenunchea* 'to kneel', *a îngrămădi* 'to heap'/ 'to put smth into heaps'.

If one tries to establish a correlation between telicity, thematic roles, and countness, one notices that, out of the 20 Theme-incorporating telic verbs, 10 incorporate count nouns, and 7 incorporate mass nouns: *însângera*, 'bleed', *învrăjbi* 'in-fight', 'to set by the ears', 'to play off against each other', *încredinţa*, 'to entrust', 'încuviinţa', 'to approve', *împurpura* , 'to turn smth purple', *învenina*, 'poison', *înzestra* 'endow'. The existence of telic Theme verbs that incorporate mass nouns shows that the correlation between massness and atelicity is not that strict. Interestingly, they all seem to involve a CAUSE predicate in their lexical decomposition.

As far as Location verbs are concerned, almost all are telic, and all of them are the result of the incorporation of a count noun, which might suggest that countness does have an effect upon telicity.

5. Conclusions

Although theoretically and intuitively appealing, Harley's idea that there is a strict correlation between the boundedness of the root and the boundedness of the verb does not seem to hold ground

in the case of Romanian denominal verbs. A careful analysis of the noun-incorporating verbs in a bilingual dictionary shows that, although there are certain tendencies in Romanian in some cases towards a correlation between the properties of the root, no generalizations can be drawn.

Notably, although incorporating count nouns does seem to result in telic verbs, incorporating mass nouns does not seem to have a clear atelic effect. This might be thought to pose a serious problem for a theory of incorporation, because, if the lexical-syntactic paraphrase of a verb and the noun-incorporating verb itself have different properties, this means that the theory of incorporation is not as explanatory as one would like it to be. Instead of adopting such a view, I would like to suggest that the paraphrases of noun-incorporating verbs and the verbs themselves have the same aspectual properties, and that the telicity of the verb does not depend only upon the mass/ count properties of the nominal root, but on the lexical-syntactic decomposition of the verb (which involves the nominal roots AND the predicates). A tentative proposal (which requires further testing) is that, if a causative predicate combines with a mass nominal root, the telicity of the ensuing verb comes from the CAUSE predicate. In contrast, if a root is count, it may very well combine with a DO predicate and still give rise to a telic reading, as the boundedness of the event will derive from the boundedness of the nominal root.

Chapter 3   An Overview of Various Approaches to Denominal Verbs.

In what follows, I will try to bring to your attention various approaches to denominals that have been put forth in the literature: semantic, syntactic, semantico-syntactic, in the attempt to present the problems encountered in the analysis of denominals and the solutions that have been proposed.

1.   Semantic Approaches to Denominal Verbs

From a semantic perspective, while Theme verbs such as *to dance* seem to pose no interesting problems, although, as we shall see later on, Theme verbs are actually problematic (and there are constraints on certain Themes, such as Patients: **I windowed in the whole house* (Rimell 2012)), location verbs (verbs incorporating Location such as *to shelve* 'to put the books on the shelf') and locatum verbs (verbs incorporating displaced Themes such as *to saddle* 'to provide the horse with a saddle') do. For one thing, they seem very similar, one might even think that an adequate paraphrase for the verb *to saddle* is, in fact, 'to put the saddle on the horse'. The only difference is that, while in *to shelve the books,* the books are the displaced element, in *to saddle the horse,* the displaced element is represented by the saddle. To capture this very important differences, semanticists have come up with various semantic templates.

According to Pinker (1989), for instance, location and locatum verbs are not so similar. Location verbs such as *pocket* are lexically associated to the semantic template, as illustrated in (1):

(1)   a. X CAUSE [y GO TO z]
               b. X CAUSE [y GO TO *pocket*]

Locatum verbs such as *butter*, however, are lexically derived by means of a lexical subordination process:

(2)   a. X CAUSE [Z GO TO STATE] BY MEANS OF [X CAUSE [Y GO TO Z]]
               b. X CAUSE [Z GO TO STATE] BY MEANS OF [X CAUSE [*butter* GO TO Z]]

According to Jackendoff (1990), location verbs and locatum verbs have similar lexical conceptual structures. There is a very important difference between these two classes of verbs,

namely, the incorporated argument is a Goal in locative verbs (hence, the Theme is associated to the Patient), but a Theme in locatum verbs (hence, the Goal is associated to the Patient)

(3)   a. CAUSE ([$_{THING}$ ∀], [$_{EVENT}$ GO ([([$_{THING}$ ∃], [$_{PATH}$ TO ([$_{PLACE}$ IN ([$_{THING}$

POCKET])])])])]   l-tier

  AFF ([$_{THING}$]$^∀$$_i$, [$_{THING}$]$^∃_j$)   Action-tier

(4)   b. CAUSE ([$_{THING}$ ∀], [$_{EVENT}$ INCH [BE [$_{THING}$ BUTTER], ([$_{PLACE}$ ON ([$_{THING}$

∃])])])]
l-tier

    AFF ([$_{THING}$]$^∀$$_i$, [$_{THING}$]$^∃_j$)   Action-tier

Labelle (2000), on the other hand, claims that, while in both locative and locatum verbs, the incorporated noun identifies the final state of the process affecting the DO noun, the difference between these verbs lies in the fact that locative verbs incorporate a locative relation *AT,* while locatum verbs incorporate a possessive relation *WITH.*

(5)   AFFECT <1, 2>
                  ⌃
CAUSE<1, e>   e<2>
                                    ⌃
            BE (2, AT/ WITH NOUN) INCH
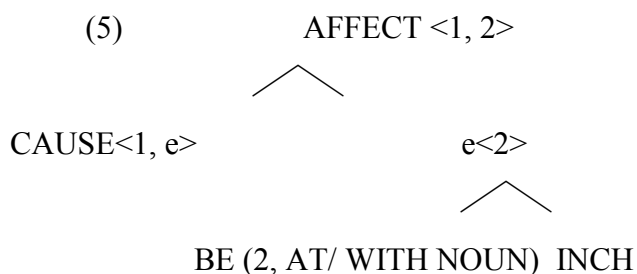
The difference, hence, would lie in the prepositions incorporated.

Semantic approaches to denominals are extremely interesting, as they represent an attempt to explicitate the meaning of verbs, although there is a large amount of conceptual material that is introduced and whose place, according to Mateu (2002), might not be at the level of semantic structure. However, semantic approaches obviously do not explain the formation of denominals. For this purpose, what is needed is a morphological, a syntactic or a semantico-syntactic account which renders the meaning syntactically.

2. Syntactic Approaches to Denominal Verbs

In syntactic approaches, denominal verbs are analyzed as syntactically derived from a verb and a noun through various operations (e. g. incorporation, conflation).

2. 1 Lexical Syntax. Hale & Keyser (1993, 2002)

According to Hale & Keyser (1993, 2002), denominal verbs are to be analyzed as derived from nouns within an L(exical)-syntactic framework, a framework which proposes that the proper representation of argument structure is a syntax. Each lexical head projects its category to a phrasal level (lexical argument structures), and determines within that projection a system of structural relations holding between the head, its categorial projections, and its arguments (specifier and complement). The basic idea is that the lexicon is derived syntactically, and argument structures have a syntactic derivation.

2. 1. 1. The Types of Verbs Analyzed

Hale & Keyser (1993, 2002) focus on denominal verbs: unergative verbs, the class of location and locatum verbs a.o., and argue that they are derived from nouns.

Unergative verbs (Perlmutter 1978, Pullum 1988) such as *laugh, sneeze, neigh, dance* a.o. have the following lexical syntactic representation:

(6)   V'
        /\
      V   NP
            |
            N
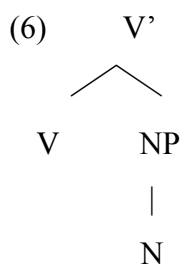
more or less the same structure as that projected by verbs such as *make* (as in *make trouble*), *have* (as in *have puppies*), and *do* (as in *do a jig*).

Following Baker (1988), Hale & Keyser (1993) argue that, in a verb like *laugh,* the head N of the NP governed by the V is moved and adjoined to the latter:

(7)   V'
```
        V'
       /  \
      V    NP
     / \    |
    Nᵢ  V   N
            |
            tᵢ
```

(7)   V'
     V   NP
  Nᵢ   V   N
        tᵢ
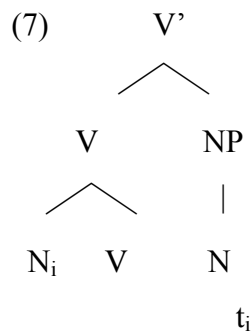
in accordance with the Head Movement Constraint (Travis 1984, Baker 1988):

(8) *The Head Movement Constraint*

    An X^0 may only move into the Y^0 that properly governs it.

Apart from these verbs, there is another more complex class of verbs represented by "location" verbs (such as *shelve* in *shelve the books, corral* in *corral the horses, box* in *box the apples*), and "locatum" verbs (such as *saddle* in *saddle the horse* or *hobble* in *hobble the mule*), verbs which are accounted for by resorting to incorporation, by which Hale & Keyser (1993, 2002) understand head movement.

    A location verb as in *She shelved the books* basically has the same lexical-syntactic representation as the verb *put* in the sentence *She put the books on the shelves* (Larson 1988). The D-structure representation of *She put the book on the shelves is*:

(9)   V'
      V   VP
   NP   V'
  the books
         V   PP
        put
           P   NP
          on   the shelf
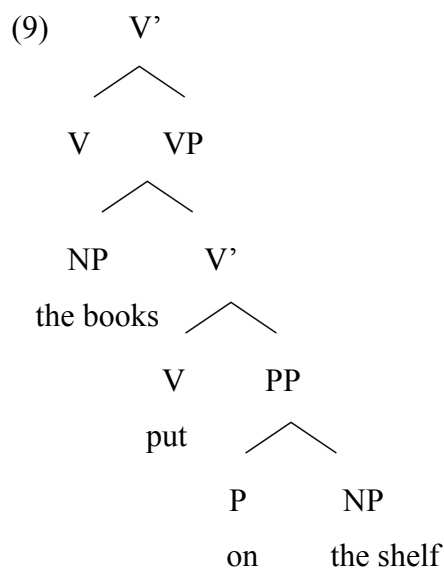
The verb *put* then moves to the V head in order to license the direct object:

(10)　　V'

```
        V'
       /  \
      V    VP
    putᵢ   /  \
         NP    V'
      the books / \
              V    PP
             tᵢ   /  \
                 P    NP
                on  the shelf
```
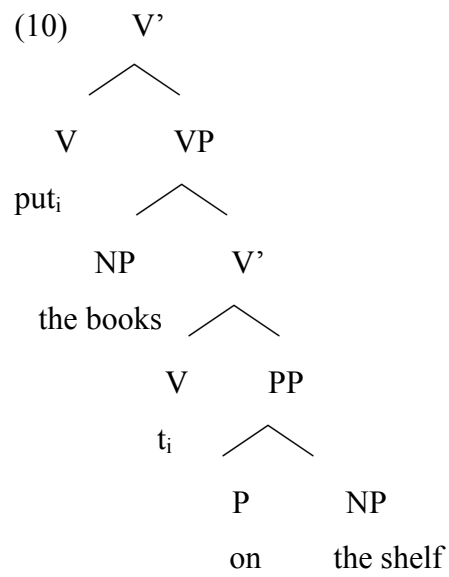
As for the verb *shelve,* its lexical syntactic representation is the following:

(11) V'

```
      V'
     /  \
    V    VP
        /  \
       NP   V'
   the books / \
            V    PP
                /  \
               P    NP
                    |
                    N
                  shelf
```
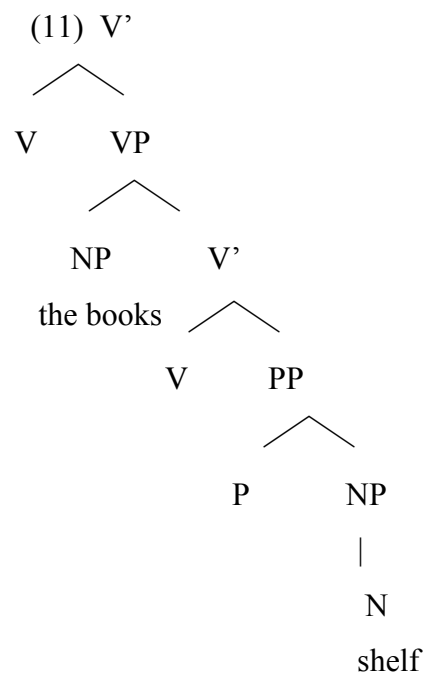
The resulting verb is derived through a series of movements:

(12)

```
              V'
           ╱     ╲
          V       VP
               ╱     ╲
             NP        V'
          the books  ╱   ╲
                    V      PP
                         ╱    ╲
                        P      NP
                      ╱  ╲      |
                     P    N      N
                   shelf_i      t_i
```
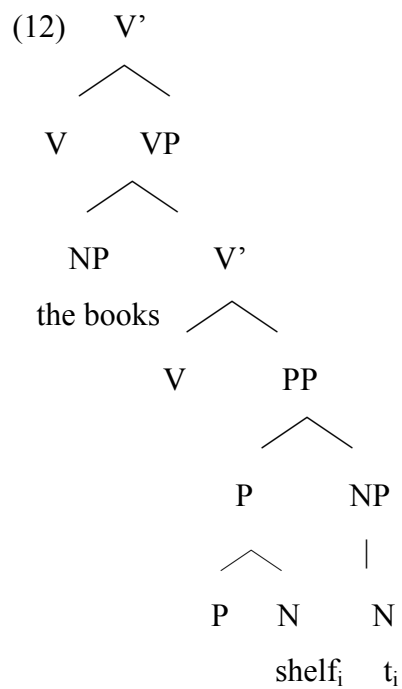
The N *shelf* moves to the prepositional head governing it, then then P+ N complex moves to the verbal head governing it, and then, the V+ [N+P] complex moves further up to the V head above:

(13)

```
              V'
           ╱     ╲
          V       VP
               ╱     ╲
             NP        V'
          the books  ╱   ╲
                    V      PP
                 ╱    ╲   ╱   ╲
                V    P_j P     NP
              ╱  ╲    t_j      |
             P    N            N
           shelf_i            t_i
```

(14)   V'

```
(14)       V'
          /  \
        V       VP
       / \     /  \
      V  V_k  NP    V'
        / \  the books / \
       V  P_j        V    PP
          / \       t_k   / \
         P   N_i        P    NP
         shelf         t_j    |
                               N
                               t_i
```
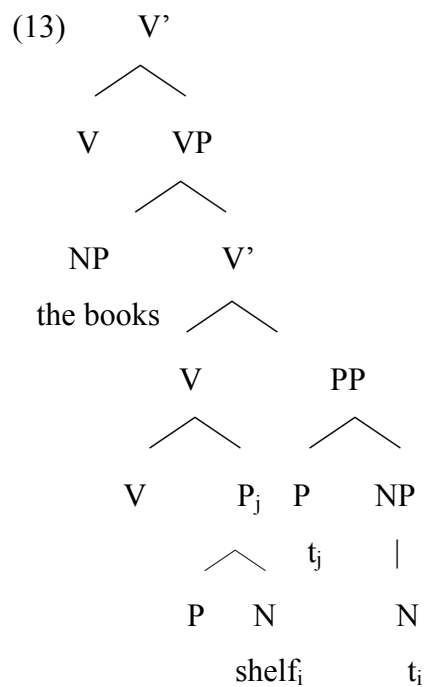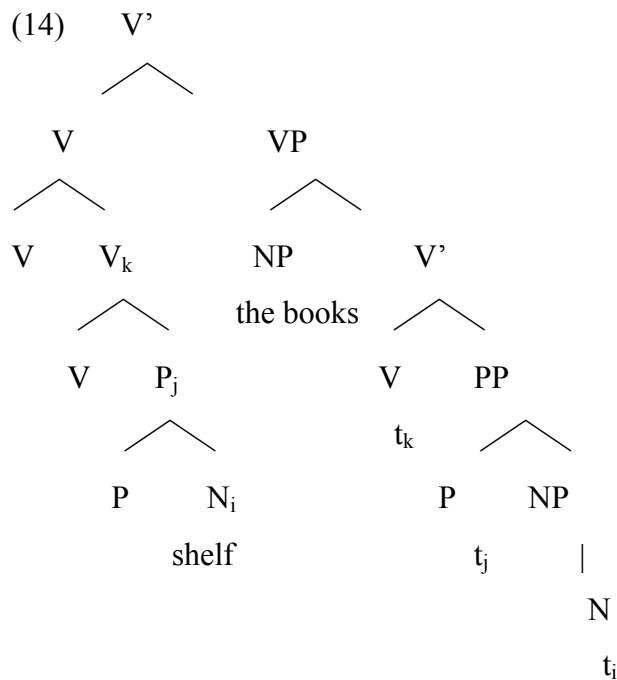
One can easily notice there is a significant difference between *put the books on the shelf* and *shelve the books,* namely, while in *put the books on the shelf,* both the verb *put* and the preposition *on* are overt phonologically, in the lexical syntactic representation of the verb *to shelve*, they are not, neither is the determiner *the* in *the shelf,* for that matter. The only overt element is the noun *shelf.*

Locatum verbs like *saddle* (in *saddle the horse*) receive a similar analysis as *provide the horse with a saddle,* with the difference that the only overt element in the lexical syntactic structure of the verb *saddle* is the noun *saddle.*

Although in these analyses Hale & Keyser (1993) seem to be suggesting that denominals are derived from nouns, in fact, they are not so consistent in their proposal. In Hale & Keyser (2002: 2), for example, a verb like *cough* is not represented as such. Instead, they argue that *cough* consists of two elements (a root and a verbal nucleus):

```
(15)     V
        / \
       V   R
           |
         cough
```
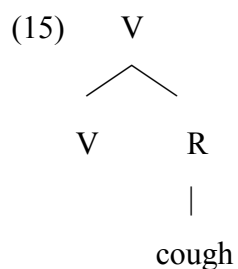
Similarly, the transitive verb *break* consists of a root and a verbal host as well. In a sentence like *The pot breaks,* the verb *break* takes a complement (a root), which contains the semantic and the phonological features associated with the dictionary entry *break*:

(16)

```
          V
        /   \
      DP      V
    the pot  /  \
           V     R
                break
```
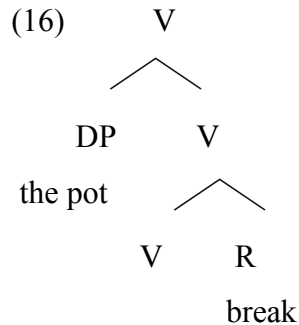
Unlike the root *cough,* which does not require a specifier, the root *break* requires a specifier, an essential feature of the root which accounts for the central syntactic feature of the verb (namely, the transitivity alternation: *The pot breaks / I broke the pot*)[15]. It is not verbs in and of themselves that project specifiers, but roots that require them or not. This explains why transitivization is possible with the verb *break*, but not possible with the verb *cough*. In (17), a verb is inserted, licensing (case-marking) the internal argument (specifier):

(17)

```
          V₁
        /    \
      V₁      V₂
            /    \
          DP       V₂
        the pot   /  \
                V₂    R
                      |
                    break
```

---
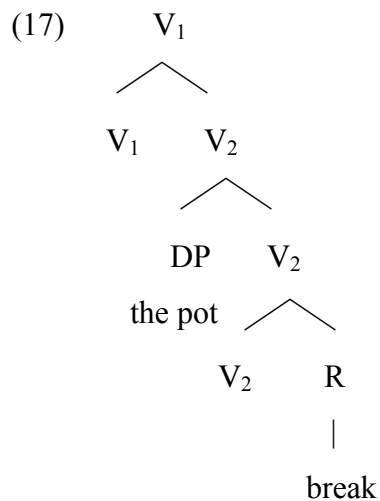
[15] In fact, Hale & Keyser (1993, 2002) try to account for causativization syntactically. According to them, for instance, all deadjectivals should enter the causative alternation (e.g. *I reddened the wall/ The wall reddened*), as adjectives are predicates, and predicates require a subject in their specifier, i.e. the root needs a specifier. However, this is not the case (*legalize,* for instance, does not). As far as denominals are concerned, syntax cannot really explain why *splash* and *smear* behave so differently with respect to the causative alternation (*Mud splashed on the wall*, **Mud smeared on the wall).*

In (18), however, the Merge between the verb and the root complex and another verbal nucleus is not possible, as there is no requirement for convergence, i.e. no internal argument (specifier) to be licensed by V_1:

(18)   *V_1

  V_1 V_2

       V_2 R
                      |
                   cough
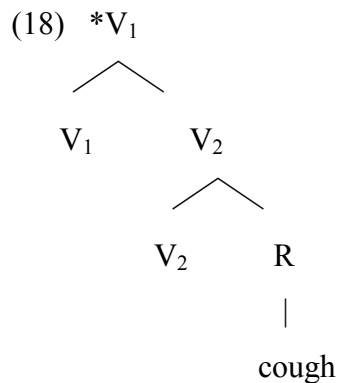
Interestingly, there is no paraphrase containing the noun corresponding to the verb *cough* as there is for *dance,* for instance (*do a dance*), just as there is no corresponding paraphrase for the verb *break*. In the lexical syntactic representation of these verbs, Hale & Keyser (2002) simply place a root in the complement of the verbal head, instead of a noun, but they do not explain whether this is meant to indicate that, if the verb cannot be paraphrased using a noun, this means it is not derived from a noun.

2. 1. 2. Incorporation versus Conflation

A very important concept discussed by Hale & Keyser (2002) is the concept of *incorporation*. Hale & Keyser (2002) start out by saying that denominal verbs are derived from nouns through the incorporation of nouns into verbs. However, later on in the book, Hale & Keyser (2002) resort to the concept of *conflation*, a concept which they put under careful scrutiny.

Incorporation is understood as the syntactic process conforming to the Head Movement Constraint and the Empty Category Principle, through which words are formed by attaching the head of a complement to the head of its syntactic governor (Baker 1988). Unlike the lexicalists (Mithun 1984, Di Sciullo and Williams 1987, Rosen 1989), for whom incorporation is simply a type of compounding (the noun and the verb form a word together), Baker (1988) proposed a syntactic view upon incorporation, according to which incorporation is movement of the noun under the verbal

head. Moreover, it is head-movement, a view which Hale & Keyser (2002) adopt themselves in the beginning of their work[16].

According to Hale & Keyser (2002), *conflation* is different from *incorporation.* Hale & Keyser (2002) argue that the difference is related to government, namely, while government is not sufficient to constrain conflation, it is implied by it:

(19) Linda corralled the calves.

(20) V
```
        V        P
                 N        P
                 calf
                          P        DP
                          in       the corral
```
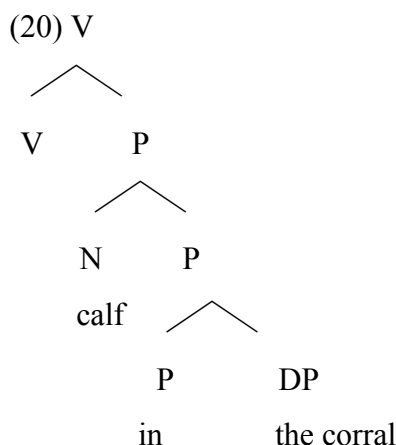
The impossibility of conflation in (20) derives from the fact that conflation stems from the specifier of the PP, not from the head of that projection. On the other hand, incorporation under government would allow this, as the bare noun *calf* is governed by V. However, this is not sufficient for conflation. According to Hale & Keyser (2002), unlike in the case of incorporation[17], there is a *strict complementation* requirement in the case of conflation:

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[16] There are syntactic alternatives to the head-movement approach to incorporation: (i) Massam's (2001) analysis of "pseudo-noun incorporation" in Niuean, according to whom the NP is simply merged to the V, (ii) Van Geenhoven's (1998, 2002) analysis of Greenlandic Eskimo- the noun root and the verb root are combined in the syntax to form a larger verb V', (iii) Koopman and Szabolcsi's (2000) "small NP movement analysis" of verb clusters in Hungarian and Dutch. However, as very nicely shown by Baker (2009), head-movement seems to fare much better than these analyses at explaining: (1) the fact that the head does not incorporate more than a noun, (2) the fact that only the theme/ direct object incorporates, (3) the semantic near-equivalence of sentences with and without NI, (4) the stranding of NP-internal material. According to Baker (2009), the syntactic head movement account seems to be the best theoretical account for NI in the Chilean language Mapudungun, for instance, while all the other accounts present shortcomings.

[17] Incorporation can take place from the specifier of the complement of an incorporating verb. Hale & Keyser (2002: 52) give an example from Hopi:
    (i) Itam tap-wari-k-na. (cf. Tapwarikna; Hopi Dictionary Project)
        1p   cottontail-run-K-NA
        'We flushed a cottontail rabbit.'

(21) *Strict complement*

A head X is the strict complement of a head Y iff Y is in a mutual c-command (i.e. , sister) relation with the maximal categorical projection of X.

The postulation of conflation manages to account for the impossibility of a sentence such as *He calved the corral.* While in a theory of incorporation this sentence would be perfectly possible, in a theory of conflation, it is not. Moreover, an incorporation account of denominal verbs cannot explain their compatibility with an overt DP in complement position:

(22) a. They are dancing a Sligo jig.

     b. They shelved the books on the windowsill. (Hale & Keyser 2002: 49).

Since movement would leave a trace, incorporation cannot explain how a DP can occupy a position already occupied by a trace, which is why Hale & Keyser (2002) end up rejecting an incorporation analysis of denominals, and try instead to generalize conflation as the process that best explains the formation of denominal (and deadjectival) verbs.

Conflation is argued to be a concomitant of Merge (Hale & Keyser 1998, 1999, 2002), and it is defined as such:

(23) *Conflation*

Conflation consists in the process of copying the p-signature of the complement into the p-signature of the head, where the latter is 'defective'. (Hale & Keyser 2002: 63).

It can involve one or two steps. In the case of the verb *laugh*, for instance, it involves only one step: copying the full phonological matrix of the noun *laugh* into the empty one corresponding to the verb. In the case of the verbs *shelf* or *saddle,* however, the conflation process involves two steps: first, the full phonological matrix of the noun {*shelf/ saddle*} is copied into the empty one corresponding to the preposition, secondly, the now saturated phonological matrix of the preposition is conflated onto the unsaturated matrix of the external verb.

A very important aspect is the lexical nature of conflation. As argued by Hale & Keyser (1999: 453), "conflation is a lexical matter in the sense that denominal verbs, and deadjectival verbs as well must be listed in the lexicon. Although their formation has a syntactic character, as we claim,

they constitute part of the lexical inventory of the language." This is often neglected by readers of Hale & Keyser (1999): even Levinson (2007) and Harley (2008), for instance, assume that denominal verbs are not listed in the lexicon for Hale & Keyser.

The l-syntactic approach of Hale & Keyser (2002) has received a great deal of criticism in the literature, which I will go into after presenting another syntactic proposal, namely, Ramchand's (2008).

2. 2 Ramchand's Proposal (2008)

Ramchand (2008b) puts forth another attempt to encode denominal verbs syntactically: she proposes a first phase syntax for verbs, trying to account for the behaviour of verbs in terms of purely syntactic or categorical features, and rejecting the existence of formal selectional features in the lexicon.

In the decomposition of verbal meaning, Ramchand introduces primitives such as initiator ('an entity whose properties/ behavior are responsible for the eventuality coming into existence' (Ramchand 2008b: 24)), undergoer ('argument that is interpreted as undergoing the change asserted by a dynamic verb' (Ramchand 2008b: 27), resultee ('direct argument related to a result state') (Ramchand 2008b: 33), path (the trajectory covered by the undergoer) and rheme (the object of stative verbs). These represent the basic semantic roles of verbs, accounting for secondary verb features such as 'causality and 'telicity'.

On the basis of these primitives, Ramchand distinguishes three subevents in the event-structure: (1) a causing subevent, (2) a process-denoting subevent, and (3) a subevent corresponding to the result state. There are three projections corresponding to these subevents: (i) an initiation phrase (initP), whose subject is the INITIATOR, (ii) a process phrase (procP), whose subject is an UNDERGOER, and (iii) a result phrase (resP), whose subject is the RESULTEE.

(24) *initP* (causing projection)

DP₃

subject of 'cause' *init* *procP* (process projection)

DP₂

subject of 'process' *proc* *resP* (result projection)

DP₁

subject of 'result' *res* XP
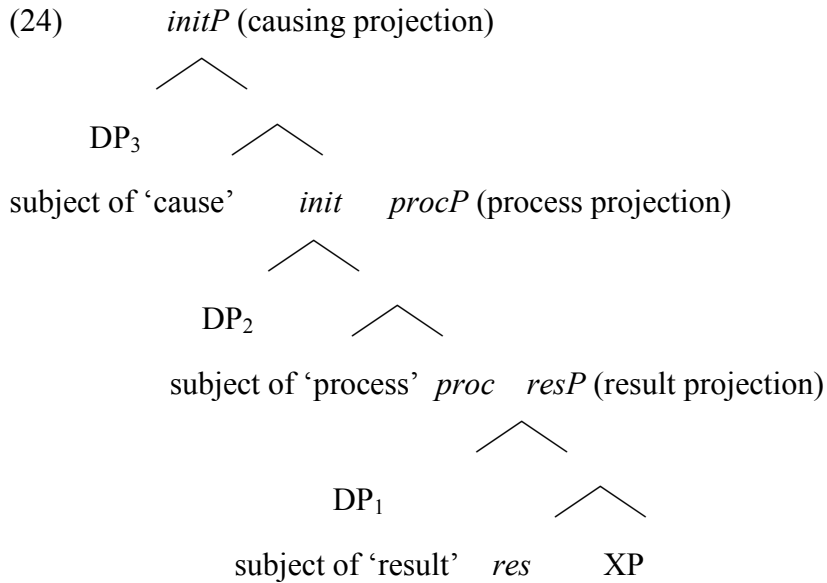
The procP may select the resP as its complement (though this is not obligatory), while the initP selects the procP. However, init may not select anything, it can be on its own (as it is in the case of stative verbs, according to Ramchand (2008b)[18]).

It is not the case that the subjects of the subevent projections have to be different: the same noun can appear as the subject of the resP, the procP, and the initP (as in *The man arrived late)*. Consequently, in Ramchand's system, nouns can have complex semantic roles, not only pure ones. While in sentences like *John opened the door* or *The ball rolled*, *John* is a pure role (Initiator), as well as *the ball* (Undergoer), in a sentence such as *The diamond sparkled, the diamond* has a combined semantic role, it is an undergoer-initiator (a subject of the procP, as well as a subject of the initP). In a similar way, in a sentence such as *Katherine broke the stick, the stick* is both a resultee (subject of the resP) and an undergoer (subject of the procP).

Another important fact is that a single verb may identify more than one subevent. For instance, in a sentence like *Ariel entered the room*, the verb *enter* identifies all subevents: the initiation subevent, the process subevent, and the result subevent, which gives it a punctual character.

First-phase syntax relates in systematic ways to verb types. Given the configurations available, the relevant verb classes are [*init, proc*] verbs (*push, eat, run*), [*init, proc, res*] verbs (*throw, enter, arrive, give*), [*proc*] verbs (*melt*), [*proc, res*] verbs (*break*), [*init, proc, N*] verbs (*dance*), [*init, proc, A*] verbs (*dry)*. Although bearing resemblance to many of the aktionstart

---

[18] In a sentence such as *Katherine fears nightmares*, *Katherine* is the holder of the state, while *nightmares* represents the Rheme, a DP taken as complement by init. Of course, a serious issue is why, given that it is in Spec, init, *Katherine* is considered a holder of a state rather than an Initiator. An answer could be the absence of a ProcP as complement of init.

classifications in the literature (Vendler 1967, Verkuyl 1993), the classification emerging is distinct, as the system makes a principled distinction between the event-building portion of the clause, and the temporal interpretational portion of the functional sequence: causational and predicational structures are built up, independent of tense. [init, proc] verbs, for example, do not only include activity verbs, but also accomplishments-those accomplishments which embody duration as well as boundedness (such as *eat an apple*). *resP* is not necessary for boundedness, boundedness can arise from bounded paths in the complement position of the *proc* head.

Ramchand (2008b) proposes a decomposition similar to the one of Hale & Keyser (1993), though more refined in that it makes a distinction between RHEMES of process (which further describe the process by expressing manner or path) and RHEMES of result (which further describe the final state of location). Unlike Hale & Keyser (1993), for whom the crucial distinction is between deadjectivals and denominals, or between location verbs and manner verbs, for Ramchand (2008b), the crucial distinction is between conflation into the *res* head and conflation into the *proc* head. Instead of null light verbs that may vary (as in Hale & Keyser (2002)), we encounter null elements heading projections with a specific meaning (cause, process, result).

According to her analysis, conflation verbs arise from rhematic material being incorporated from complement position into the head.

A verb like *dance,* which is covertly transitive in Hale & Keyser (1993), and where the nominal *dance,* the complement of the generalized *do* process, conflates into the verbal head:

(25) *initP*

'x'   *init   procP*

'x'   *proc   DP*
        do   dance
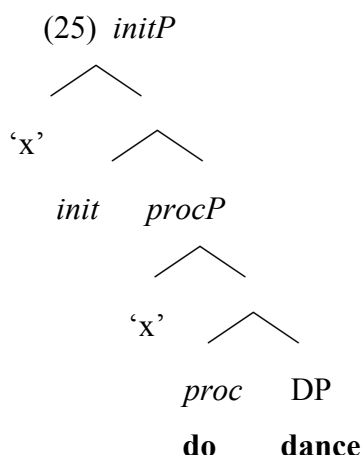
In addition, Ramchand (2008a) argues that one could account for the formation of *dance* by resorting to Underassociation[19], inserting the verbal *dance* under the nominal head and considering

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[19] In Ramchand's terms (2008: 27), Underassociation can be defined in the following way:

that the features [Init, Proc] are underassociated, and will get satisfied by means of Agree with the generic verb *do*. *Do* and the underspecified *dance* will thus unify their lexical entries. While this account works very well for English, where one can store only the verb in the lexicon, it does not work so well for languages where the verb has a different form from the noun, where one has to store the noun (as well).

In the case of location and locatum verbs, the nominal that gets incorporated, which Ramchand (2008b) names RHEME of result (as it describes the result state achieved by the undergoer), is within the rhematic material of the clause.

(26) *initP*

‘x’

   init *procP*

     ‘y’

       proc *resP*

          ‘y’

           res PP

              ‘y’ P’

                   P DP

                   on **shelf**

                   with **saddle**[20]
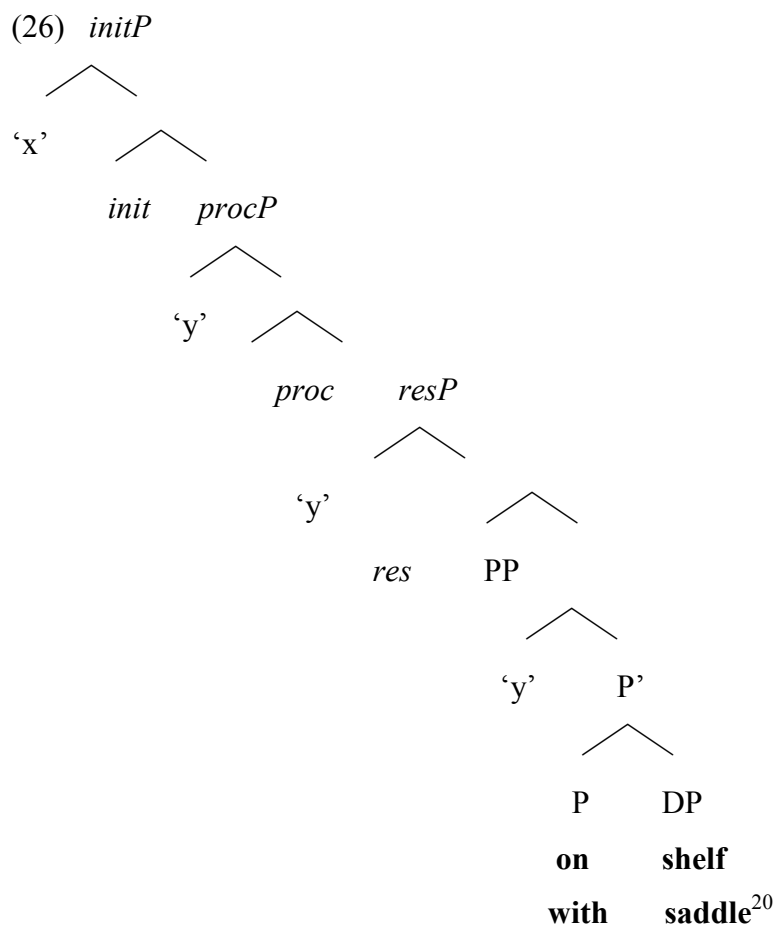
If a lexical item contains an underassociated category feature,

(i)   that feature must be independently identified within the phase and linked to the underassociated feature, by Agree;

(ii)   the two category features so linked must unify their lexical encyclopedic content

[20] I will later on go against this analysis, arguing that it is redundant in that it projects two results, in other words, the PP constitutes the resP, and there is no need for an additional projection.

In the case of deadjectival verbs, the AP rhematic complement of the *res* head undergoes incorporation:

(27)   *init*P

'x'

init   *proc*P

'y'

proc   AP

clean
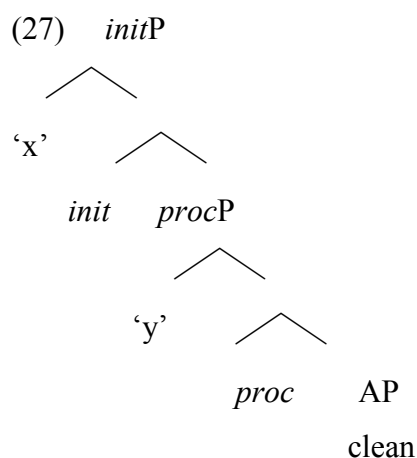
"As far as the connection to traditional aspectual classes goes, the following appears to be the case: 'activities' correspond to either [init, proc] or [proc] verbs, 'accomplishments' are [init, proc] verbs with incremental theme or PATH complements; 'achievements' are [init, proc, res] or [proc, res], semelfactives are verbs ambiguous between [proc] and [proc, res]; degree achievements are [+proc] verbs with a property-scale path. Deadjectival and denominal verbs exist because verbs in English can also come with an A or N category feature respectively, which they lexically encyclopedically identify in the functional sequence line determined by complementation." (Ramchand 2008b: 109).

For Ramchand (2008b), at least, it is thus not the case that all verbs are derived from nouns, denominals represent a special class of verbs, and they are marked as such [+N], [+A].

As for the causative alternation, Ramchand (2008b) accounts for it by positing a null init head in the structure:

(28)   *init*P
       /\
  Karena   /\
        init   *proc*P
     Øcause   /\
          the butter   /\
                proc   XP
                melt
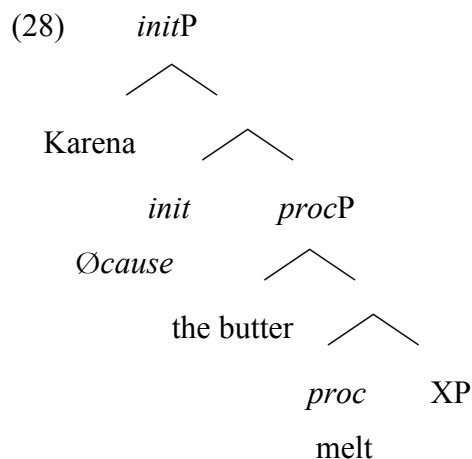
Ramchand's analysis can be considered a more fine-grained version of Hale & Keyser's (1993, 2002) account. While Hale & Keyser (2002) deal with Vs, Ramchand (2008b) looks deeper into their structure (init, proc, res), offering thus a more detailed analysis of verbs.

2. 3 Hale & Keyser (1993, 2002) Revisited. Criticism.

Syntactic approaches have received serious criticism in the literature, both theory-external and theory-internal.

2. 3. 1. Criticism from the Semantic Perspective.

From a theory-internal perspective, an extremely critical approach to dealing with denominals syntactically comes from semanticists, who argue that denominals cannot be decomposed syntactically at all. Mateu (2002) reviews some of their counterarguments, showing that many of the arguments brought against lexical syntax reflect in fact a misunderstanding of the theory proposed by Hale & Keyser (2002).

In his 1970 paper 'Three Reasons For Not Deriving *Kill* From *Cause to Die*', Fodor argues against the syntactic lexical decomposition of words.

The first argument he brings is exemplified by the following pair of sentences:

(29)   a. John caused Mary to die and it surprised me that he did so.

b. John caused Mary to die and it surprised me that she did so.

(30) a. John killed Mary and it surprised me that he did so.

b.*John killed Mary and it surprised me that she did so.

According to Fodor (1970), both (29b) and (30b) should be grammatical if 'cause to die' and 'Mary to die' were constituents in the deep structure, just as (29a) and (30a) are. 'Do so' should be able to refer anaphorically to either one of the two subevents (the causing one and the dying one). Since this is not the case, Fodor concludes that *kill* cannot be decomposed this way. A possible way out could be to say that the *do so* rule applies after lexicalization. However, in the case of *melt,* one must assume the reverse order of rules, given the fact that (31a) and (31b) are both grammatical:

(31) a. John melted the glass, and it surprised me that he did it.

b. John melted the glass, and it surprised me that it did.

Hence, it is either the case that these rules apply in a different order to account for different types of verbs, or simply, the verbs *kill* or *melt* cannot be decomposed this way.

The second argument brought by Fodor is related to the scope of time modifiers:

(32) a. Floyd caused the glass to melt on Sunday by heating it on Saturday.

b. *Floyd melted the glass on Sunday by heating it on Saturday.

(33) a. John caused Bill to die on Sunday by stabbing him on Saturday.

b. *John killed Bill on Sunday by stabbing him on Saturday.

The ungrammaticality of (32b) and (33b) is due to the fact that the verbs *melt* and *kill* lack internal structure.

The third reason for which *kill* cannot be decomposed as *cause to die* is related to the scope of instrumental and means adverbials:

(34) a. John caused Bill to die by swallowing his tongue.

b. John killed Bill by swallowing his tongue.

While (34a) is ambiguous between two readings: one in which Bill's death is caused by Bill swallowing his own tongue, and one in which Bills death is caused by John swallowing Bill's

tongue, (34b) is not ambiguous. If one assumes *predicate raising* and *lexicalization* applying to *(John caused (Bill die)) (by (Bill swallows Bill's tongue))*, one can derive (34a) but not (34b).

According to Fodor (1970), therefore, a verb like *kill* cannot be decomposed as *cause to die.* Although Pullum (1996) argues that Fodor's reasons for not positing extra abstract verb nodes have not been addressed by Hale & Keyser (1993), Mateu (2002) shows that this is not the case, in fact, and that, in a previous 1992 paper, Hale & Keyser (1992) explicitly address the anti-generative semantic critique of lexical decomposition:

"When we claim that the English verb *saddle* has underlying it a syntactic representation of the form depicted in (X), it is clear that we are accepting-to some extent, at least-a viewpoint represented in the Generative Semantics framework, as in the work of Lakoff (1971) and McCawley (1971), and others. The Generative Semantics program was motivated, in part, by a vision of the nature of lexical items which is essentially the same as ours. This is the idea that the notion 'possible lexical item' (…) is defined, or constrained, by certain principles of grammar which also determine the well-formedness of syntactic structures (…). And in the course of this discussion, we will address a 'problem' with this position, in the hopes that we can convince the reader that it is not a problem of grammar and can, therefore, safely be set aside here.

The problem we are referring to here is represented by the one which was so eloquently formulated by Fodor (1970) in his famous arguments against deriving *kill* from *cause to die.* His arguments, of course, had to do with the proposal that the simple verb *kill* was derived from a "deep structure" syntactic representation underlying *cause to die*-and the arguments seem correct, for the position he was criticizing. The arguments do not carry over the proposal we are entertaining here, however, since the verbs derived by incorporation in the lexicon are themselves input to d-structure. Thus, for example, the verbs *shelve* and *saddle*, and the like, are lexical items in the true sense, and, as such, each necessarily involves a *single* "event position" (cf. Higginbotham 1985) in its predicate argument structure. Consequently, arguments based on the observation that a complex sentence at d-structure involves multiple events are irrelevant to a proposal to the effect that a lexical item like *saddle* involves a system of relations like that embodied in (X)." (Hale & Keyser 1993: 118).

For this reason, although the scope test is a reliable diagnostic of clausal structure, it is not relevant for verbs like *saddle* or *shelve*. As argued by Mateu (2002: 68),

"the fact that *kill* can function as a *single* event with respect to its temporal reference does not imply that it cannot be decomposed into a complex argument structure."[21]

Jackendoff (1997) also brings some interesting counterarguments to lexical syntax, which Mateu (2002), however, shows, lack justification again. Jackendoff (1997), for instance, argues that *shelve* means more than 'put on a shelf', and that, since one cannot shelve a single pot or dish, there must be some aspects of the semantics of *shelve* that go beyond syntax. However, as very well put by Hale & Keyser (1993) themselves, the lexical syntactic representation is not the meaning of the verb:

"We do not intend to imply that a conflation like *shelve* "means" the same thing as its analytic paraphrase *put on a shelf* (cf. *put the sand on a shelf, shelve the sand*). We maintain simply that they share the same LRS representation" (Hale & Keyser 1993: 105, fn.7)

In addition, Jackendoff (1997) argues that Hale & Keyser do not address how the phonological form is realized as *shelve* rather than *shelf.* However, this is not at all a problem if different lexical entries are assumed for the noun *shelf* and the verb *to shelve.*

Thirdly, there are verbs for which no base can be established, for example, the verb *grow.* Although it has the same thematic roles as the verbs *widen* and *thin*, as can be seen especially from its similarity to the deadjectival *enlarge*, there is no adjective that can be said to be the base for this structure. Mateu (2002) argues that this is not a problem, since, as pointed out by Hale & Keyser (1993), lexical syntax deals with universal categories, and their realization as nouns, verbs, and so on, is a parametric matter (the verb *have,* for instance, might be the realization of the universal category P, not V).

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[21] However, *for*-adverbials behave the same with respect to the verb, and to its paraphrase. *Mary put the dog in the cage for an hour* is ambiguous between two readings, just as *Mary caged the dog for an hour* (Harley 2008):

(1) Mary put the dog in the cage/ caged the dog once, and left him there for an hour., or

(2) Mary put the dog in the cage/ caged the dog repeatedly for an hour (iteration).

Moreover, Jackendoff (1997) claims that *kill* has the same syntactic structure as *widen,* and this sends us back in the world of Generative Semantics. However, lexical syntax is not semantic structure, and the representations at l-syntax are highly different from the complex semantic ones.

Finally, Jackendoff (1997) says that Hale & Keyser's (1993) proposal violates the UTAH (Uniformity of Theta-Assignment Hypothesis), since it seems to be the case that the same noun can doubly fill the same role, as in *We shelved the books on the top shelf* (where the Location role seems to be doubly filled). In fact, Hale & Keyser (1997: 42) address this objection further on in their subsequent work, arguing that each denominal has an adverbial and a referential component, represented by the chain defined by head movement. In *We shelved the books on the top shelf*, the nominal component has entirely lost its referential character, an index-deletion process of the chain has taken place, and, hence, one can insert new lexical material.

2. 3. 2. Kiparsky's (1997) Criticism

An extremely important paper, expressing a series of counterarguments against Hale & Keyser (1993) is Kiparsky's (1997).

From a syntactic point of view, Hale & Keyser (2002)'s proposal has certain theory-internal deficits. The analysis does not explain facts such as: why exactly there are no verbs without internal arguments, why there are no stranded modifiers (35a), or why the incorporated N never saturates a Theta-role, i.e. why one can always add an expression that is identical to the one that is allegedly incorporated (35b):

(35) a. *We saddled her horse Western.

    b. We saddled her horse with a Western saddle.

This issue represents, in fact, Jackendoff's (1997) last counterargument against l-syntax, and, as we have seen, it does not represent a problem.

The major problematic issue faced by the theory of Hale & Keyser (2002) is lexical in nature rather than syntactic.

According to Hale & Keyser (2002), the reason for which verbs like *to bush* or *to house* do not have the meanings 'to put something on a bush' or 'to put something on a house' is the presence of purely syntactic principles which block denominal verbs. For instance, one cannot derive the verb *to bush* from a sentence such as *I gave the bush some fertilizer* because there is a syntactic principle

prohibiting the incorporation of indirect objects. In the same way, a sentence such as *The calf cowed* is not possible because there is a syntactic principle prohibiting the incorporation of subjects.

Nevertheless, Kiparsky (1997) argues, it is not clear why one could not have *I bushed some fertilize.* starting from *I put some fertilizer on the bush* or *I housed a coat of paint* starting from *I put a coat of paint on the house*, given that they are identical to the ones proposed by Hale & Keyser (2002) for location verbs like *shelve.* As these are clearly not the meanings of the verbs, they must be blocked somehow. However, one can easily see that they cannot be blocked by saying that the relation of "central coincidence" is not possible, since a relation of close contact is possible between a fertilizer and a bush, just as it is between a coat of paint and a house. Kiparsky's (1997) solution is to argue that there is an additional element of conceptual knowledge at work, which helps both speakers and listeners of English to reliably identify which of the two locative relations a given denominal expresses. This additional element is the general principle:

(36) If an action is named after a thing, it involves a canonical use of the thing. (Canonical Use Principle)

In the case of instrumental denominal verbs, for instance, this principle constrains the meaning to a large extent. *To tape,* for instance, cannot refer to ad-hoc uses of tape, such as using tape to strangle someone (*tape a person*)-although this verb could be used with this meaning in a certain circumstance, in which case it would count as an innovation:

(37) You will not believe what I heard on the radio. This guy got really angry with his wife, and he had a lot of tape with him. He took the tape in his hands, he strangled it around her neck. He taped her, and the poor woman died.

Instead, the verb *tape* is used in a canonical way to refer to activities such as fastening, binding, covering, supporting, recording or measuring with tape.

As far as locatum and location verbs are concerned, according to Kiparsky (1997), their meanings should be:

(38)   a. Locatum verbs: putting x in y is a canonical use of x.
        b. Location verbs: putting x in y is a canonical use of y.

"Therefore, the reason we do not "bush fertilizer" or "house paint" is that it is not a canonical use of bushes to put fertilizer on them, and it is not a canonical use of houses to put paint on them (whereas it is of course a canonical use of fertilizer to put it on bushes, and a canonical use of paint to put it on houses." (Kiparsky 1997: 9)

However, if an object has both canonical uses (to be put on something, and to have something put on it), then the denominal verb formed from it has both uses:

(39) a. *shelve* (1) "to provide something with shelves", (2) "to put something on shelves"

   b. *ice* (1) "to put ice on something" , (2) "to put something on ice"

   c. *string* (1) "put strings on", (2) "put on strings" (Kiparsky 1997: 10).

2. 3. 3. Harley's Response

Although Kiparsky (1997) brings the Canonical Use Constraint as an argument against Hale & Keyser (2002), Harley (2008) shows in what way the very principle used against can be adduced to support in fact the proposal of Hale & Keyser (2002). According to Harley (2008), CUC derives from the fact that what gets incorporated/ conflated is a bare noun, and bare nouns receive a canonical/ stereotypical interpretation.

If one takes a look at bare singular nouns in English, one can easily notice that their interpretation is stereotypical, generic. *John is going to school* does not mean John is going there to play cards, it means he is going there for education (Stvan 1998, 2009). If, however, the sentence *John is going to the school* is uttered, this might mean he is going there for a different purpose (to meet a friend, for instance). While English count nouns must occur with a determiner or in plural form (*I saw a dog/ dogs/ *dog*), mass nouns and bare singulars need have neither (*I like school*). However, while mass nouns allow quantification (*I ate some rice)*, bare singulars do not (**I did not spend time in much prison*).

The main idea would, hence, be that, in order to incorporate without violating the Head Movement Constraint (An X^0 may only move into a c-commanding head Y^0 if there is no closer intervening head Z^0 c-commanded by Y^0 and c-commanding X), the noun has to be bare:

(40) * VP

```
            VP
          /    \
        V⁰      PP
              /    \
            DP      P'
         ('the dog')  /  \
                    P⁰    DP
                        /    \
                      D⁰      NP
                      the      |
                              N⁰
                             cage
```

(41) VP

```
        VP
      /    \
    V⁰      PP
          /    \
        DP      P'
     ('the dog')  /  \
                P⁰    N⁰
                     cage
```
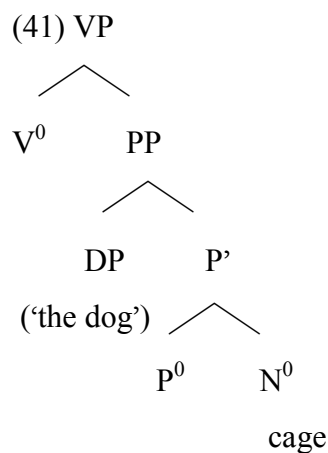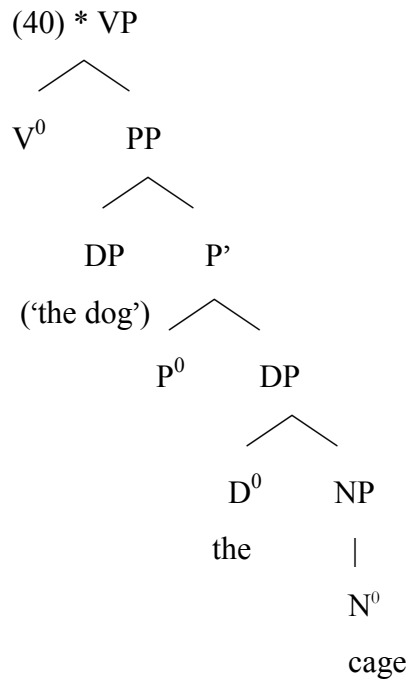
Being bare, it is subject to the CUC.

"The CUC is not something about 'incorporation'- the syntactic conflation of two roots into a single word- but something about interpreting bare Ns. It is correlated with syntactic incorporation, because incorporation is subject to HMC, so only bare Ns can incorporate." (Harley 2008: 34)

Hence, Hale & Keyser's (2002) line of analysis can be pursued further on, as Kiparsky's (1997) objection can be turned into a strong argument in favour of a lexical syntactic decomposition of denominals.

3. A Semantico-Syntactic Approach. Mateu (2002)

An extremely interesting approach blending lexical syntax with semantics belongs to Mateu (2002), who tries to refine the previous theory, making it more explanatory from a semantic point of view.

Mateu (2002) puts forth the hypothesis that there is a strong homomorphism between the relational syntax and the semantics of argument structure. According to him, meaning is a function of both non-syntactically transparent *conceptual content* and syntactically transparent *semantic construal*. Starting from this, Mateu (2002) tries to blend Hale & Keyser's (1998, 2002) syntactic theory with a semantic theory of argument structure, so as to avoid the disadvantages of a purely syntactocentric approach or a purely semanticocentric approach (as we find, for instance, in Jackendoff (1990)).

Going against Jackendoff (1990, 1997), Mateu (2002) argues that reducing semantics to notions of conceptual content is wrong, as it implies ignoring the distinction between conceptual content and semantic construal. In other words, he claims that a preferable option to arguing that lexical arguments are associated to conceptual notions is to argue that they are associated to more abstract semantic notions:

(42) Ns correspond to non-relational elements (i.e., zs and ys in (1)). Vs correspond to eventive relations (i.e., x_1 in (1)), and both Adjs and Advs correspond to the x_2-y_2 complex (y_2 being conflated into x_2). In non-predicative contexts, Adjs typically modify non-relational elements, while Advs typically modify relational elements

a. transitive structure: $[_F z_1 [_F F [_{x1} x_1 [_{x2} x_2 y_2]]]]]$

b. unergative structure: $[_F z_1 [_F F [_{x1} x_1 y_1]]]$

c. unaccusative structure: $[_{x1} x_1 [_{x2} x_2 y_2]]]$

Jackendoff (1997: 34-35) is against Baker's (1988) UTAH (Uniformity of Theta-Assignment Hypothesis), according to which "identical thematic relationships are represented by identical structural relationships between those levels at the level of D-Structure" (Baker 1988: 46). Jackendoff (1997) argues that, since the DO can express so many thematic roles (Theme, Goal, Beneficiary, Experiencer), claiming that all of them would have different underlying syntactic relations would result in complicated and unnatural underlying structures. However, Mateu (2002:

42) shows that this is not the case if we assume that thematic roles are not derived from conceptual content but from argument structure encoding semantic construal.

On the other hand, Hale & Keyser's (1998) analysis has its problems, which Mateu (2000) tries to solve. One of the most important modifications is a different analysis of locative and locatum verbs.

According to Hale & Keyser (1998), both locative and locatum verbs are derived from the same lexical structure:

(43)

```
            V
          /   \
        V       P
              /   \
            N       P
        book/horse  / \
                   P   N
                  shelf/ saddle
```
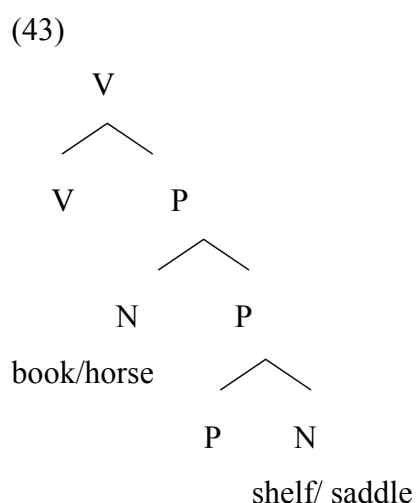
The only difference between locative verbs (e.g. the verb *to shelve*) and locatum verbs (e.g. the verb *to saddle*) resides in the semantic value of the preposition: namely, while the preposition conflated into the verb *shelve* expresses a 'terminal coincidence relation' (the coincidence between the endpoint of the theme's path and the place), the preposition conflated into the verb *saddle* expresses a 'central coincidence relation' (the coincidence between the center of the theme and the center of the place). Their meaning is in accordance with their analytic paraphrases (*John put the book onto the shelf*, *John provided the horse with a saddle*).

On the basis of empirical data from Catalan, Mateu (2002) argues that, in fact, Hale & Keyser (2002) are wrong in ascribing a different semantic value to the preposition in locative verbs and locatum verbs. Instead, Mateu (2002) proposes that the relation of terminal coincidence (e.g. the preposition *to*) is related to the aspectual notion of telicity, while the relation of central coincidence (e.g. the preposition *with*) is related to the aspectual notion of atelicity. According to him, both locative and locatum verbs contain a terminal coincidence relation at the level of argument structure, while the central coincidence relation defines atelic verbs (such as transitive *push* or instrumental

brush). A first hint at this could be the possibility to paraphrase locatum verbs as telic 'to put the saddle on the horse'.

Evidence in favour of analyzing locatum verbs as telic verbs containing a terminal coincidence relation comes from their behaviour. Locatum verbs do not combine with *for*-phrases in Catalan:

(44)   Ella ensella   el cavall *durant/ en cinc segons.   (Catalan)
          she (in)saddled the horse *for/in five seconds

and, when they do, it is because we are dealing with an atelic reading of a change of state verb that is not atelic per se:

(45) El Joan enfarina les mandonguilles durant/ en deu segons.
          Joan (in)floured the meatballs for/in ten seconds.

The displaced object is not a bounded object, but a mass noun *farina* 'flour', which can be put on the meatballs *ad infinitum*. According to Mateu (2002: 15), this explains the behaviour of locatum verbs with respect to Middle Formation and Secondary Predicate Tests:

(46) Aquestes mandonguilles s'enfarinen facilment.
          these   meatballs   SE (in)flour easily.
(47) Els pastissets, la Maria els enfarina calents.
          the cakes   Maria them (in)floured hot.

The locatum verb *enfariner* seems to behave like a change of state verb, occuring in Middle sentences, as well as in sentences containing secondary predicates. And its behaviour is similar to locative verbs:

(48) Aquests llibres grossos no s'encaixen facilment.
          these   books big   not SE (in)box easily.
(49)   El Joan encaixa [els llibres]$_i$ [drets]$_i$
          Joan (in)boxed [the books]$_i$ [straight]$_i$.

In other words,

(50) Both locative and locatum verbs are to be regarded as causative *change of state verbs,* whose telicity is determined by an abstract terminal coincidence relation[22].

Mateu (2002: 22) proposes an analysis that unifies locative and locatum verbs, ascribing the same semantic value to the preposition- the terminal coincidence relation:

(51)
```
              V
            /   \
          V       X
                /   \
              N       X
        books/ horse  /  \
                    X      N
                      shelve/saddle
```
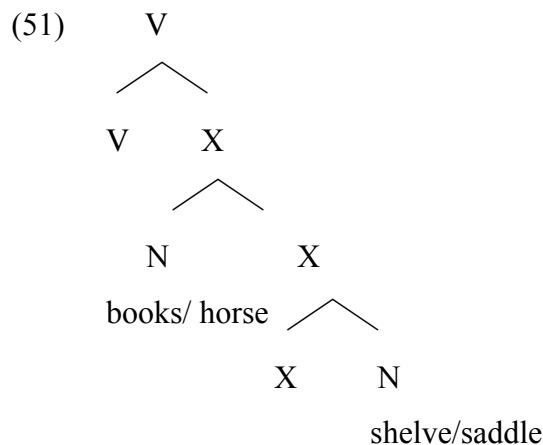
The verb selects a categorially unspecified X, corresponding to the birelational element expressing the terminal coincidence relation.

Another amendment is Hale & Keyser's analysis of the verb *break*: while Hale & Keyser (1998) propose that the transitive verb *break* is derived through the merge of the unaccusative structure corresponding to *break*:

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[22] Mateu (2002)'s claim is extremely interesting. However, it might not work for all location verbs, given that there are location verbs which seem to incorporate a preposition that does not express terminal coincidence. If one takes a verb such as *a se documenta* ('to refl. clitic document', *to document oneself* 'to search in documents'), which might be thought to be a locative, one notices 2 facts: the preposition has no terminal coincidence value, and the verb is not telic. *A zări* ('to see') , where one can notice te presence of the noun *zare* ('horizon') is another such verb.

(52)   V
        /\
       V V
          /\
         N V
            /\
           V N
              break
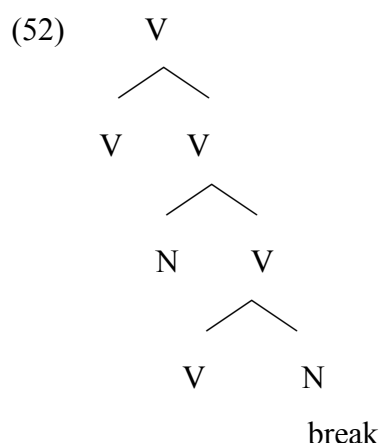
Mateu (2002: 23) argues that both the unaccusative *break* and the transitive *break* can be ascribed the same structure, where the V selects X, associated to the terminal coincidence relation:

(53) V
     /\
    V X
       /\
      N X
         /\
        X N
           break
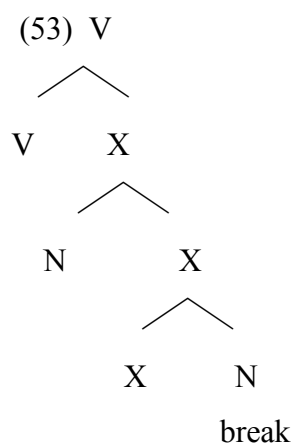
    This is because, unlike Hale & Keyser (1993, 2002) and in accordance with Kiparsky (1982), Mateu (2002) believes that the causative alternation cannot be explained syntactically, but semantically. In other words, it is not the case that the causative alternation has anything to do with the syntactic category of the elements at the root of the verbs, but rather with their meaning[23].Verbs

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[23] As very well put by Kiparsky (1997), Hale & Keyser's "syntactic account predicts that the transitivity alternations should go with the syntactic category of the incorporated element, whereas the semantic account predicts that the transitivity alternations should go with the semantics of the verb. The evidence here clearly favors the semantic account. On the one hand, denominal verbs do participate in the causative/ inchoative alternation if thwey denote events which can proceed on their own (*caramelize, short-circuit, carbonize, gasify, weather*). This is also true for location verbs, such as those denoting mechanical processes which are understood as capable of proceeding on their own (*reel, spool, stack, pile (up)*), and the positioning of self-propelled vehicles (*dock, berth, land*) or of persons (*bed, billet, lodge*). On the other hand, many deadjectival transitives do not participte in the causative alternation because they denote an event understood as requiring continuous causation by an Agent (*italicize, visualize, legalize).* " (Kiparsky 1997: 24)

that denote self-sustaining processes (such as *redden*, *splash* a.o.) enter the causative alternation (*Mary splashed paint on the wall/ Paint splashed on the wall*), while verbs that denote actions that require continuous action from the part of the Agent (such as *smear* or *legalize*) do not (*Mary smeared paint on the wall/ *Paint smeared on the wall).*

A very important modification brought by Mateu (2002) to the theory of Hale & Keyser (1998) is the non-primitive status of adjectives. Adjectives are argued to be the result of the conflation of a non-relational element *y* into a relational element *x*

According to Hale & Keyser (1998), there are four possible argument structure combinations:

(54) Head (*x*); complement (*y* of *x*), predicate (*x* of *z*)

a. x   b.   x   c. α   d. x

   x   y   z   x   z   α

                        x   y   α   x
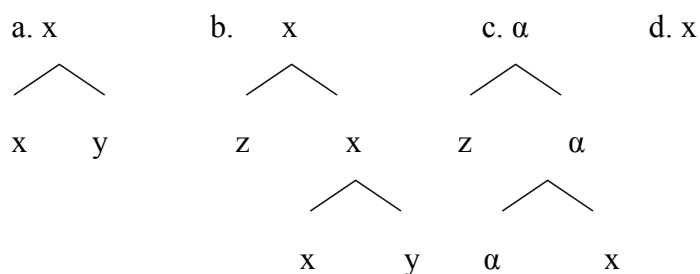
According to Mateu (2002), however, there are only 3 argument structure combinations:

(55) a. x   b.   x   c. x

   x   y   z   x

                  x   y
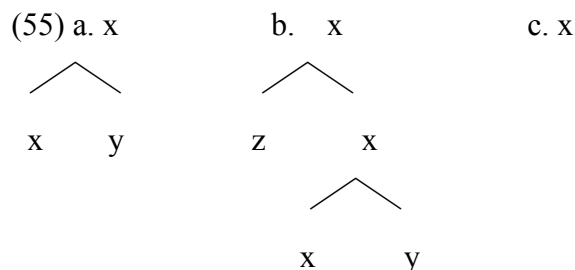
This is because, unlike Hale & Keyser (1998), who treat adjectives as primitive categories, Mateu (2002) treats adjectives as non-primitive, decomposing them into two primitive lexical syntactic elements. The adjective is derived through the conflation of a non-relational element *y* into a relational element *x,* a fact which accounts both for the relational or predicative character of the the A, which the A shares with P, and for the nominal properties, which the A shares with N. *[happy]* thus receives an analysis similar to *[in the room]* ($[_x$ x y$]]$)[24]. Reducing the argument types proposed

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[24] According to Mateu (2002), the decomposition of the adjective is motivated both conceptually as well as morphosyntactically. From a conceptual perspective, if one applies The 'Thematic Relations Hypothesis' (Gruber (1965), Jackendoff (1983, 1990)), according to which there is a parallelism between physical and abstract spatial domains,

by Hale & Keyser (1998) from four to three is welcome from a theoretical perspective, and it helps Mateu (2002: 29) build a theory according to which there is a strong homomorphism between the syntax and semantics of argument structure[25].

Mateu's (2002) theory blends Hale & Keyser's (1988) syntactic of the basic argument structure types and Mateu's (1999) semantic theory of argument structure, according to which certain meanings are associated with certain structures. The syntax of argument structure is associated to its corresponding semantics:

(56) a. The lexical head *x* in (55a) is to be associated to an *eventive relation*.

b. The lexical head *x* in (55b) is to be associated to a *non-eventive relation*.

c. The lexical head *x* in (55c) is to be associated to a *non-relational element.*

In the first case, if there is a non-derived external argument in the specifier of the Functional projection, the eventive relation will be a source relation; if, however, there is no external argument, the eventive relation will be transitional, and the specifier and complement are interpreted as Figure and Ground.

Starting from this, Mateu (2002) derives the verbal classes transitives, unergatives, unaccusatives:

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adjectives can easily be decomposed into prepositions and something else (OPEN= AT [PROPERTY OPEN]). From a morphosyntactic perspective, it is interesting that Romance languages lacking adjectival resultative constructions also lack prepositional ones.

[25] Eliminating adjectives as a primitive category is appealing, helping Mateu (2002) analyze deadjectivals in a similar way to denominals, and thus, refute Hale & Keyser's claim that causativization is related to the category of the element incorporate. However, appealing as it might seem, it is not so clear that it is on the right track. Although the examples given by Mateu (2002) suggest interchangeability between adjectives and prepositions selecting NPs (*The cat is happy*, *The cat is in the room*), as suggested by Alessandra Giorgi, adjectives and prepositions (selecting noun phrases) are not interchangeable in all contexts. Although it is perfectly grammatical to say *The cat seems happy,* it is ungrammatical to say *The cat seems in the room.* Such evidence may be taken to point to the idea that adjectives are, in fact, primitives, and that they cannot be decomposed as prepositions and NPs.

(57) *Transitive structure*

$$
\begin{array}{c}
F \\
\diagup\diagdown \\
z_1 \quad F \\
| \\
F \qquad x_1 \\
\diagup\diagdown \\
x_1 \quad x_2 \\
\diagup\diagdown \\
z_2 \quad x_2 \\
\diagup\diagdown \\
x_2 \quad y_2
\end{array}
$$

(58) *Unergative structure*

$$
\begin{array}{c}
F \\
\diagup\diagdown \\
z_1 \quad F \\
| \\
F \qquad x_1 \\
\diagup\diagdown \\
x_1 \quad y_1
\end{array}
$$

(59) *Unaccusative structure*

$$
\begin{array}{c}
x_1 \\
\diagup\diagdown \\
x_1 \quad x_2 \\
\diagup\diagdown \\
z_2 \quad x_2 \\
\diagup\diagdown \\
x_2 \quad y_2
\end{array}
$$
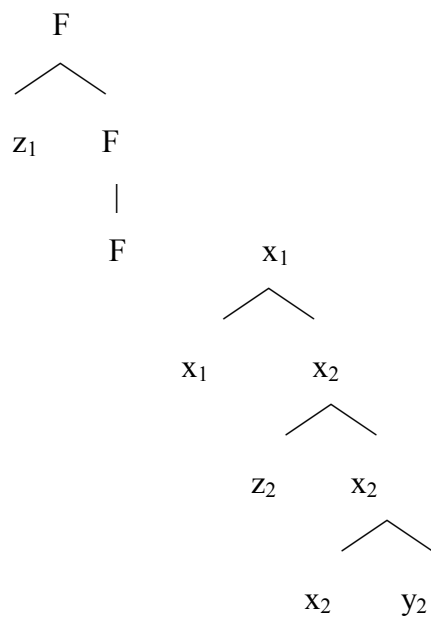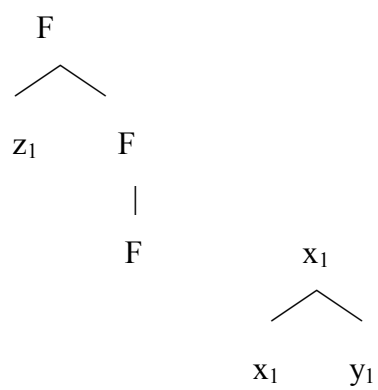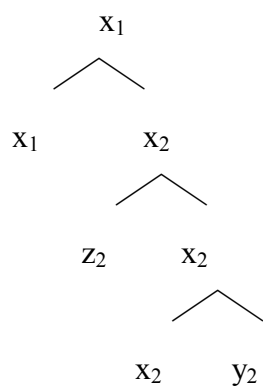
According to Mateu (2002), structural semantic properties like eventive (be it source or transitional), non-eventive, and non-relational are directly read off the argument structure configurations.

Heads are associated with non-configurational semantic properties, properties which are encoded as binary features:

(60) [+/-R]: positive/ negative semantic value associated to the source relation

[+/-T]: positive/ negative semantic value associated to the transitional relation

[+/- r]: positive/ negative semantic value associated to the non-eventive relation

Mateu (2002) gives the following examples of analyses:

(61) a. John sent Peter to prison. [$_F$ John [$_{x1}$ [+R]   [$_{x2}$ Peter [$_{x2}$ [+r] prison]]]]

b. John kept Peter in prison. [$_F$ John [$_{x1}$ [-R]   [$_{x2}$ Peter [$_{x2}$ [+r] prison]]]]

c. Peter went to prison. [$_{x1}$ [+T]   [$_{x2}$ Peter [$_{x2}$ [+r] prison]]]

d. Peter was in prison. [$_{x1}$ [- T]   [$_{x2}$ Peter [$_{x2}$ [-r] prison]]]

As far as location and locatum verbs are concerned, they receive the same analysis:

(62) a. John corraled the horse.

[$_F$ John [$_{X1}$ [+R] [x$_2$ horse [x$_2$ [+r] *CORRAL*]]]]

b. John saddled the horse.

[$_F$ John [$_{X1}$ [+R] [x$_2$ horse [x$_2$ [+r] *SADDLE*]]]][26]

As mentioned before, Mateu (2002) does not agree with Hale & Keyser's (2002) category-related account of the causative alternation. Instead, he ascribes the same representation to both the transitive variant and the intransitive one:

(63) a. [$_F$ John [$_{X1}$ [+R] [x$_2$ [x$_2$ glass [+r] *BREAK*]]]]

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[26] The fact that Mateu (2002) ascribes the same representation to location and locatum verbs is problematic. While Hale & Keyser's (1993, 2002) analysis captures an important semantic difference, namely, the fact that the Goal is represented by *shelf* in *shelve the books,* paraphrased as *put the books on the shelf*, but by *the horse* in *saddle the horse*, paraphrased as *provide the horse with a saddle,* Mateu's (2002) analysis fails to capture this.

b. [$_F$ PRO$_i$ [$_{X1}$ [+R] [x$_2$ [x$_2$ glass$_i$ [+r] *BREAK*]]]]

5. Conclusions

To conclude the presentation of the various analyses for denominals, I will look at the syntactic analyses which have been proposed comparatively. One can say that Hale & Keyser's (1993, 2002) syntactic analysis has been the starting point for other theories which tried to refine and solve the problematic issues of the lexical-syntactic account.

The semantic criticism Hale & Keyser's (1993, 2002) proposal has received can be dealt with, and some of the counterarguments (e.g. Kiparsky (1997)'s Canonical Use Principle) can be turned into arguments actually supporting the lexical-syntactic decomposition of denominals. This suggest that Hale & Keyser's (1993, 2002) proposal is on the right track. However, its major shortcoming is that it fails to capture the semantics of the verb: no semantic value whatsoever is specified for the null light verbs that incorporate (is there just one null light verb under the V or are there several null light verbs each associated with a different meaning, one corresponding to *put* for location verbs, another corresponding to *provide* for locatum verbs, and so on?). The same problem occurs in the case of prepositions (is there just one null preposition under the P head or are there several: a preposition corresponding to *on* for location verbs (expressing the terminal coincidence relation), another corresponding to *with* for locatum verbs (expressing the central coincidence relation)? The problem would be easily solved if there were just two prepositions. However, as noted by Clark & Clark (1979), there are so many prepositions that occur in the paraphrases of denominals.

Mateu's analysis (2002) is an attempt to capture the semantics syntactically. By resorting to binary features ([+/-R] –> agentivity, [+/-T]-> transition, [+/-r] ->telicity) for which syntactic heads are valued positively or negatively, Mateu (2002) manages to encode semantics in the syntax. While for Hale & Keyser (1993, 2002), the essential classes of verbs are Theme verbs, Location verbs, Locatum verbs a.o., for Mateu (2002), the essential verb classes are transitives, unergatives, unaccusatives. While Location and Locatum verbs are treated differently in Hale & Keyser (2002), according to Mateu (2002), they have the same representation, they are even valued the same with respect to the binary features that are at stake: [$_F$ John [$_{X1}$ [+R] [x$_2$ horse [x$_2$ [+r] *CORRAL*]]]], [$_F$ John [$_{X1}$ [+R] [x$_2$ horse [x$_2$ [+r] *SADDLE*]]]]. As far as Ramchand's analysis (2008) is concerned, it is similar to Mateu's (2002), trying to capture the semantics of the verb syntactically. However, what is dealt with by Mateu (2002) in terms of binary features is treated by Ramchand (2008b) by means of syntactic projections: the initP would correspond to the [+/-R] feature, the procP would

correspond to the [+/-T] feature, and the resP would correspond to the [+/- r] feature. What results from her analysis are a multitude of classes of verbs: [*init, proc*] verbs (*push, eat, run*), [*init, proc, res*] verbs (*throw, enter, arrive, give*), [*proc*] verbs (*melt*), [*proc, res*] verbs (*break*), [*init, proc, N*] verbs (*dance*), [*init, proc, A*] verbs (*dry),* similar to verb classifications in terms of Aktionstart. Just as in Hale & Keyser (1993, 2002), Location and Locatum verbs are treated alike, differing only in the preposition. As far as the causative alternation is concerned, while Hale & Keyser (1993, 2002) deal with it syntactically, relating the participation/ non-participation of a verb in the causative alternation to the category of the incorporated element, Mateu (2002) argues that the causative alternation can only be explained semantically, while Ramchand (2008b) simply projects an null initP in the causative variant, but she does not offer any explanationas to why this head should be present in the case of some verbs, and absent in some others.

(64)

Syntactic Analyses	Hale & Keyser (1993, 2002)	Mateu (2002)	Ramchand (2008b)
the relevant classes of verbs	theme verbs, location/ locatum verbs a.o.	transitives, unergatives, unaccusatives	[*init, proc*], [*init, proc, res*], [*proc*], [*proc, res*], [*init, proc, N*], [*init, proc, A*]
location verbs, locatum verbs	the same incorporation analysis, but different semantic values ascribed to the null prepositions that undergo incorporation (terminal coincidence, central coincidence)	the same semantico-syntactic analysis, the same semantic value ascribed to the null preposition that gets incorporated (terminal coincidence= telicity)	a similar first phase-syntax analysis, but different prepositions
causative alternation	syntactic explanation (the category of the incorporated element determines whether the verb enters the causative alternation or not)	semantic explanation (the causative alternation cannot be explained syntactically, the verbs that are forbidden to enter the causative alternation are those that need an Agent that continuously sustains the process)	syntactic analysis (a null initP in the transitive variant)

Another important matter is the issue of incorporation/ conflation. While Hale & Keyser (1993, 2002) start with an incorporation account only to abandon it later on in favour of a conflation account for *all* denominals, Mateu (2002) resorts to incorporation in some cases, and to conflation in others (verbs allowing complex resultatives in one of the frames of the locative alternation are the result of conflation). However, this is a matter I will come back to later on in Chapter 6.

Syntactic analyses such as the one I presented, however, do not discuss the issue of the verbal ending in the case of denominals. Studies focused on English do not need to discuss it, as the verb has the same form as the noun in English.While null/ silent items are convenient to postulate in English, the same postulation becomes rather incovenient for languages where the denominal has a different form from the noun. Although eschewed in the incorporation/ conflation literature, the transparent decompositionality of denominals into root and verbal suffix is an issue that definitely needs to be dealt with.

Chapter 4

Novel Approaches to Denominal Verbs. Phrasal Spell-Out vs. Spanning

1. The Mismatch Between Structure and Form in Syntactic Approaches

A serious problem in analyzing denominals has been capturing the mismatch between semantics (argument structure), syntax and form. In other words, how come a verb like *shelve the books* more or less means something like *put the books on the shelf/ shelve*?[27] Moreover, how come we have only one word *shelve* for so many terminals?

Syntactic approaches such as Baker's (1988) or Hale & Keyser's (1993, 2002) have tried to account for this by resorting to notions such as *incorporation* (Move) or *conflation* (Merge): the bare N incorporates/ conflates into the null bare P *on*, and the N-P complex thus created further incorporates/ conflates into the null light verb *put*. In Ramchand's (2008) first-phase syntax approach, for instance, there is something more at stake: namely, after conflating N, a verb like *dance* moves through several heads (*init, proc*). As for Mateu (2002), he also resorts to the notions *incorporation/ conflation* to explain denominals, and their behaviour with respect to complex resultatives (*John rubbed the fingerprints off the crystal ball*). Basically, Mateu's idea would be that it is not the resultative that gets added in the structure, but the verb *rub*. Instead of resorting to null light elements corresponding to precise lexical tems (such as Hale & Keyser 1993, 2002), Mateu (2002) posits the existence of null elements that are positively or negatively marked for a certain feature (e.g. prepositions that are telic or not). An essential aspect of Mateu's semantico-syntactic approach is marking semantic notions such as agentivity, telicity, and transition as features on the syntactic heads in the verbal structure. In this, he differs considerably from Ramchand (2008b), for instance, for whom agentivity is expressed as a feature which projects (an initP), and telicity is more or less expressed by a resP (*He shelved the books on three shelves*), although it can also be expressed by a PathP (*The woman danced into the room*). However, irrespective of their differences, syntactic approaches seem to embrace incorporation/ conflation as an explanatory tool for the mismatch between words and terminals.

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[27] Hale & Keyser (2002), as well as Mateu (2002), explain the fact that a verb like *shelve* means more than *put on shelf/ shelves*, that a lexical-syntactic structure corresponding to this paraphrase would merely indicate the semantic meaning, not the conceptual meaning, which is much richer than that.

2. Distributed Morphology (DM)

There is, however, a different perspective one can embrace, namely, the morphological approach. Distributed Morphology (DM) captures the mismatch between form and syntax, or, to put it in morphological terms, the mismatch between the number of morphemes constituting a given expression, and the number of terminals in its underlying syntax, by resorting to the operation of *Fusion* (Halle and Marantz 1993, 1994). When the number of terminals which need to be lexicalized exceeds the number of lexical entries which actually spell them out, DM resorts to *Fusion,* an operation that applies after syntax and precedes Spell-out, consisting in taking two sister nodes that have only grammatical features and no phonological content, and fusing them into a single terminal node which inherits the features of the original nodes. The idea is that a single morpheme can spell out a derived terminal node, and this operation can be repeated, there can be further fusion. Patcheva (2011: 102) gives the following example in Ordos:

(1)   [Scale, Goal, Place, AxPart, K] <-> *lüü*

where the morpheme *lüü* spells out several nodes, through the Fusion of K with AxPart, followed by Fusion with Place, followed by Fusion with Goal, and finally with Scale.[28]

Applied to denominal verbs, this would basically mean that a verb like *shelve*:

(2) [v,V, P, N[29]] <-> *shelve* ([Init, Proc, Goal, Place, N] <-> *shelve*)

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[28] However, as pointed out by Pantcheva (2011: 102), the operation of Fusion sometimes leads to a *Fusion paradox* (Chung 2007: fn. 22, Caha 2009, Radkevich 2009): on the one hand, Fusion precedes lexical insertion, on the other hand, it is triggered by the availability of an appropriate lexical item in the lexicon, which expresses the features of the fused nodes. Pantcheva (2011: 102) illustrates this with two Goal cases from Finnish: an Allative case, marked by the morphologically complex ending –*l-le*, and an Illative case, marked by the portmanteau suffix –*h(V)n*. While, in the case of the allative morpheme, the morpheme –*l* spells out the AxPart head, and the morpheme –*le* lexicalizes Place and Goal, in the Illative case, all three heads (AxPart, Place and Goal) are lexicalized by the same suffix. Fusion has to somehow "know" in advance that the lexicon contains an appropriate morpheme for the Illative phrase before it applies to AxPart, and that it does not in the case of the Allative case. This, however, represents a paradox, given the fact that one would not expect Fusion to know anything in advance given the fact that it precedes lexical insertion.

[29] According to underspecification approaches, languages have inventory of category-neutral roots (Pesetsky 1995). Through the merge of the root with category-specific functional structure, nouns, verbs and adjectives are created, the typing of the roots occurring in syntax (Halle & Marantz 1993, 1994, Borer 2005, Arad 2003, 2005). A proposal in the lines of DM is that of Levinson (2007), which I have tried to present in the beginning. As very nicely shown by Levinson (2007), the proposal may apply not only to Hebrew, where the DM manages to account very well for the data 9 nouns, verbs and adjectives can be created from the same root), but it can be extended to English as well, where it can easily

is the result of the Fusion of N with P, followed by the Fusion with V, further on with v. One can detail the P as a Goal-Place preposition (Pantcheva 2011), and the verb as an Init-Proc verb (Ramchand 2008b)[30].

In the case of a verb like *dansa* (dance) in Romanian, one could simply argue that N fuses with Proc, and the result fuses with Init, where N is *dans*, and Proc is *–a*.

Esentially, there are three core properties which distinguish Distributed Morphology from other morphological theories: Late Insertion (syntactic categories are purely abstract, having no phonological content, only after syntax are phonological expressions, called *Vocabulary Items*, inserted in a process called Spell-Out), Underspecification (phonological expressions need not be fully specified for the syntactic positions where they can be inserted), and Syntactic Hierarchical Structure All the Way Down (elements within syntax and within morphology enter into the same types of constituent structures) (Harley & Noyer 1999).

DM targets terminal nodes, various elements compete for the same position, and the element that wins is the one which has the greatest number of features matching the respective node, in accordance with the Subset Principle (Harley & Noyer 1999)[31].

In the case of denominals in Romanian, for instance, several thematic vowels (indicating the verbal declension) compete for the same position, and the choice is dictated phonologically, also historically.

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explain the behaviour of pseudo-resultatives in the vicinity of implicit creation verbs, as well as the behaviour of adverbials modifying verbs internally.

In particular, in the case of denominal verbs, one has to ponder over the issue whether a certain verb is derived from a root or a noun (which, in its turn, is derived from a root) (Arad 2003). Can one shelve books on a table, or can one shelve books only on a shelf? *Shelve* seems to be a true denominal, derived from a noun (N-Root). It would thus be more correct to argue for the DM representation <v, V, P, N, R>, and, even more in detail, <Init, Proc, Place, Goal, N, R>.

[30] Of course, one could argue that N fuses with the Goal-Place preposition, and Fusion takes place between the Goal preposition and the N, or that N first fuses with Place and then Place-N fuses with Goal. In the same way, one could argue either that the Init-Proc verb fuses with P-N, or that P-N first fuses with Proc and Proc-P-N then with InitP. The first option in each case seems to be supported by the existence of the paraphrase 'put the horses in the corral', where *put* is the Init-Proc, and *in* is a preposition selecting a nominal complement. The DM general procedure is bottom-up lexicalization, however.

[31] An alternative to DM would be to assume, along with the idea that lexical insertion is limited to terminal nodes, and that each feature corresponds to a terminal, that the Ordos morpheme *–lïïï* in (1), for instance, is inserted under one of the syntactic heads in its structure, and the others are spelled out by null morphemes-in the style of Kayne (2004, 2008). In such a case, however, the problem would be that the distribution of the null morphemes would have to be restricted to the cases when one of the heads is lexicalized by *–lïïï,* because, in other cases, the null morphemes do not occur.

Distributed Morphology offers a fairly explanatory account for denominals. In what follows, however, I will try to see to what extent one can offer an account of denominals in two relatively new frameworks (nanosyntax and spanning).

3. A Nanosyntactic Attempt

A possible solution to the mismatch between the number of morphemes and the number of syntactic terminals present in the structure is provided by the *nanosyntactic* framework, currently in development at the University of Tromsø (Starke 2009, 2011; Caha 2009; Pantcheva 2011). A fundamental tenet of nanosyntax is *Phrasal Spell-out,* i.e., lexical insertion can target phrasal nodes, an idea originating from generative semantics, first proposed by McCawley (1968). In what follows, I will try to see to what extent a *Phrasal Spell-Out* analysis of denominal verbs can account for the mismatch between multiple terminals and one single lexical item, *dance,* for instance, or *shelve.* After presenting some core ideas in nanosyntax, and two analyses (an analysis of verbs in first phase syntax (Ramchand 2008b), and an analysis of prepositions (Pantcheva 2011)), I propose various analyses, combining Ramchand's analysis with Pantcheva's syntactic decomposition of Path. Moreover, I will try to see if Phrasal Spell-Out can account for the behaviour of denominals in combination with PathPs (*She danced into the room*) and complex resultatives (*He rubbed his fingerprints off the crystal ball*). The idea would be that PP items spell out certain terminals in English, but other terminals in a language like Romanian, for instance, where the sentence *A dansat în cameră* ('Has danced in room.') does not convey the same meaning as *She danced into the room*, and one has to say *A intrat în cameră dansând* ('Has entered in room dancing.'). In the case I just mentioned, it could be argued that the preposition *into* spells out Path and Place, while the preposition *in* only spells-out Place. Although the Phrasal Spell-Out analysis might seem a viable account for the formation of denominals, but also for the behaviour of denominals in combination with PathPs and complex resultatives, the need to comply to phrasal spell-out as a general lexicalization procedure generates a cumbersome series of movements.

3. 1. Some Core Ideas in Nanosyntax

The terminology used, namely "nanosyntax", is indicative of an essential property of the nanosyntactic framework, namely, the syntactic terminals are very small, smaller than lexical items (either words or morphemes). The obvious consequence is that morphemes will span several

terminals, they will correspond to an entire subtree rather than corresponding to a terminal. Such an approach is particularily useful in accounting for the use of irregular verbal forms such as *flew* (the past tense of *fly*), or for irregular plurals such as *mice* (the plural of *mouse*): the irregular past form *flew* spans at least over V and T, while the irregular plural form *mice* spans at least over N and Number.

3.1.1 The Lexicon

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A very important feature of nanosyntax is the fact that the lexicon is post-syntactic, i.e. the lexicon is derived syntactically. The lexicon contains *subtrees*, by which nanosyntax means syntactic trees, paired with phonological and conceptual information. Lexical entries have the form <phonological information, syntactic tree, conceptual information >, and, thus, spellout becomes an operation matching the tree constructed by syntax to the (sub-)trees stored inside lexical entries.

An imaginary example could be the item *bu,* stored in the lexicon with the lexical entry *bu*:

(3)   *bu* ⇔ < /bu/, CP, on>

```
          /\
         C   BP
              /\
             B   A
```
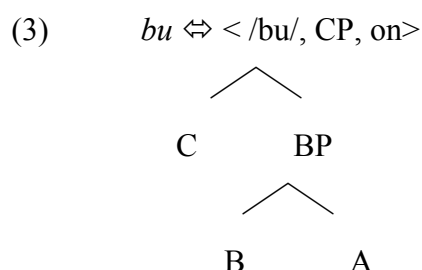
3.1 2 Principles

Nanosyntax adheres to important principles such as a. *Cyclic Exhaustive Lexicalization*, b. *Phrasal Spell-Out*, c. *The Superset Principle,* d. *Biggest Wins,* e. *The Elsewhere Principle (Minimise Junk)*, all of which actually derive from the possibility of Phrasal Spell-Out, as pointed out to me by Michal Starke.

   a. *Cyclic Exhaustive Lexicalization* (Pantcheva 2011: 115)

According to *Cyclic Exhaustive Lexicalization*:

(4)   Every feature must be lexicalized at the end of every cycle.

For instance, in the case of CP:

(5)   CP (Cycle 2)
         /\
      C   BP (Cycle 1)
            /\
          B   A
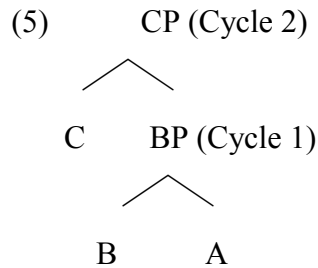
CP can be lexicalized by inheritance, it need not be lexicalized directly.

However, this principle does not seem to prohibit that some of the terminals be lexicalized by null elements, although null elements have been rejected by Pantcheva (2011) (see the discussion about silent elements on page 99). In fact, this is one possible approach in the analysis of denominals: a verb like *shelve* may be argued to win at Spell-Out over the items *PUT the books ON shelf,* which represent a lexicalization by inheritance of the terminals at stake. However, if one adopts this view, it is clear that one departs from the nanosyntactic framework. As very clearly pointed to me by Michal Starke, the nanosyntactic framework basically embraces the view that there is only phrasal spell-out, rejecting the idea of terminal spell-out. In fact, the only situation when items spell-out terminals is when the lexicon contains an element which does not project. Otherwise, phrasal spell-out is used. It is, hence, not a question of silent vs. non-silent, but of terminal vs. phrasal spell-out. Nanosyntax is esentially phrasal spell-out oriented. If one adopts an account of denominals which allows both terminal spell-out and phrasal spell-out, considering, for instance, that a silent element such as *PUT* is a case of terminal spell-out, while *shelve* is a case of phrasal spell-out, where *PUT* lexicalizes V, let's say, and *shelve* VP, then one seems to move towards allowing both terminal and phrasal spell-out. In nanosyntax, phrasal spell-out is not merely a tool used in certain situations, but a means of lexicalization used in all situations.

b. *Phrasal Spell-out*

It is a very important idea in nanosyntax originating from generative semantics, and it basically says that phrasal nodes can be spelled-out by a single lexical item:

(5) *Phrasal Spell-out*
Lexical insertion can target phrasal nodes.

This provides a very neat account for why an item like *ate* can lexicalize V and T. An important remark is in order here. As can be seen the formulation of the Phrasal Spell principle is very tentative, it does not say lexical insertion only targets phrasal nodes, and that a node has to be phrasal for it to allow lexical insertion. However, in practice, this is very much how the principle is applied in the nanosyntactic work, as indicated to me by Michal Starke. It is not an issue of possibility, but a general lexicalization procedure. Terminal spell-out is only allowed in cases where an item does not project

c. *Superset Principle*

According to nanosyntax, items are overspecified in the lexicon, while in Distributed Morphology (DM), they are underspecifed. In DM, Spell-Out observes the Subset Principle:

(6) *Subset Principle*

The phonological exponent of a Vocabulary Item is inserted into a position if the item mathches all or a subset of the features specified in that position. Insertion does not take place if the Vocabulary Item contains features not present in the morpheme. Where several Vocabulary Items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen (Halle 1997).

Unlike in DM, in nanosyntax, Spell-Out observes the Superset Principle:

(7) *Superset Principle*

A lexically stored tree matches a syntactic node iff the lexically stored tree contains the syntactic node.

The Superset Principle basically says that an item (tree) matches a node iff the item (tree) is identical to or bigger than the node. In this way, nanosyntax offers an elegant approach to syncretism (Starke 2002). The morpheme *–ed*, for instance, is syncretic between an active and a passive reading (*He fold-ed the sheets, The sheets were fold-ed*), where the passive is a "crippled" version of the active (e.g. lack of "vP" in the passive). The ActiveP is thus composed of the vP and the PassiveP, and the morpheme *–ed*, associated with an ActiveP tree, can spell out either the ActiveP (*He **fold-ed** the sheets*) and the PassiveP contained within it (*The sheets were **fold-ed***).

d. *Biggest Wins* (Starke 2009)

Another important principle in nanosyntax is *Biggest Wins* (Starke 2009), according to which:

(8) The lexical item corresponding to the biggest subtree wins. (Theorem)

The *Biggest Wins* Principle dictates that, if the irregular *Flew* spells out the entire tree [V past] with a single lexical item, and blocks the regular counterpart *flied. This suggests that direct lexicalization is preferable over lexicalization by inheritance.

e. The Elsewhere Principle-> *Minimise Junk* (Starke 2009)

Specific items wins over items that result (generically) from lexicalization by inheritance. In more theoretical terms, Starke (2009) formulates the so-called Minimise Junk Principle:

(9)   At each cycle, if several lexical items match the root node, the candidate with least unused nodes wins (follows from the elsewhere principle).

Nanosyntax is, hence, a theoretical framework with empirical succes in accounting for irregular plurals and past tense forms. It can nicely show why, in the competition between *mice* and *mouses,* the item that will win is *mice*. Nanosyntax is also empirically successful in accounting for idioms such as *kick the bucke*t: the entire constituent is simply stored in a lexical entry. *Bucket* has to be visible to the next computational cycle (*kick the bucket*), which means syntax must have access to prior lexical choices (Computational System=>Lexicon=> Computational System) (Starke 2011: 7).

3.1.3   Movement

Movement in nanosyntax happens because one has to create a configuration for spell-out:

(10)

a

b

c

d

*ed   kick
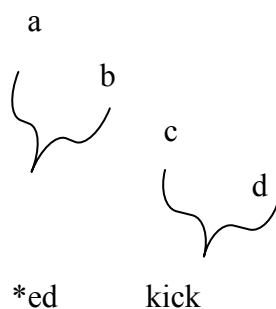
Since the tree cannot spell out (*-ed* cannot spell out over c, d, which are spelled out by *kick*), there is need for an evacuation movement for *kick*:

(11)

```
           /\
          /  \
        c      a
       /d      b
    kick       ed
```
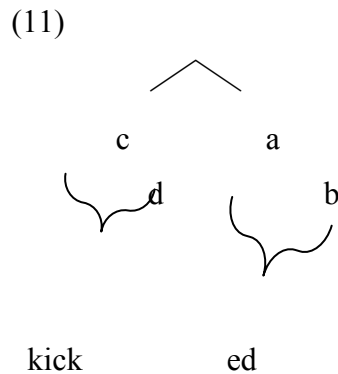
Given that The Superset Principle ignores traces, it is now possible for the tree to be spelled-out. In this case, the big tree is lexicalized by inheritance. However, as already noted before, direct lexicalization with movement is prefered over lexicalization by inheritance (*flew> *flied*).

3.2   Ramchand's Analysis (2008)

In my analysis, I will try to combine Ramchand (2008b)'s analysis of denominal verbs ¨with Pantcheva's more detailed analysis of PathPs. As mentioned in the previous chapter, Ramchand (2008b) proposes the following analyses for denominal verbs:

(12) *initP*

```
        initP
        /   \
      'x'    /\
           init  procP
                 /   \
               'x'    /\
                    proc   DP
                     do    dance
```

(13)   *initP*

         'x'

             init   *procP*

               'y'

                  proc *resP*

                       'y'

                          res   PP

                           'y'   P'

                               P   DP

on/ with shelf/ saddle
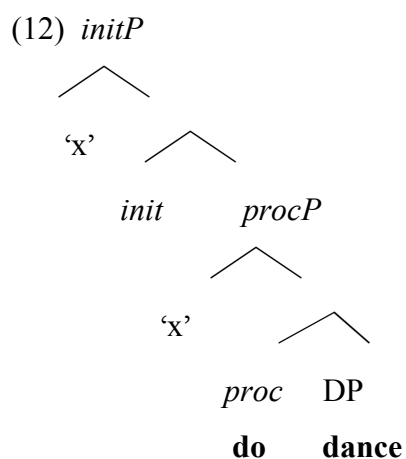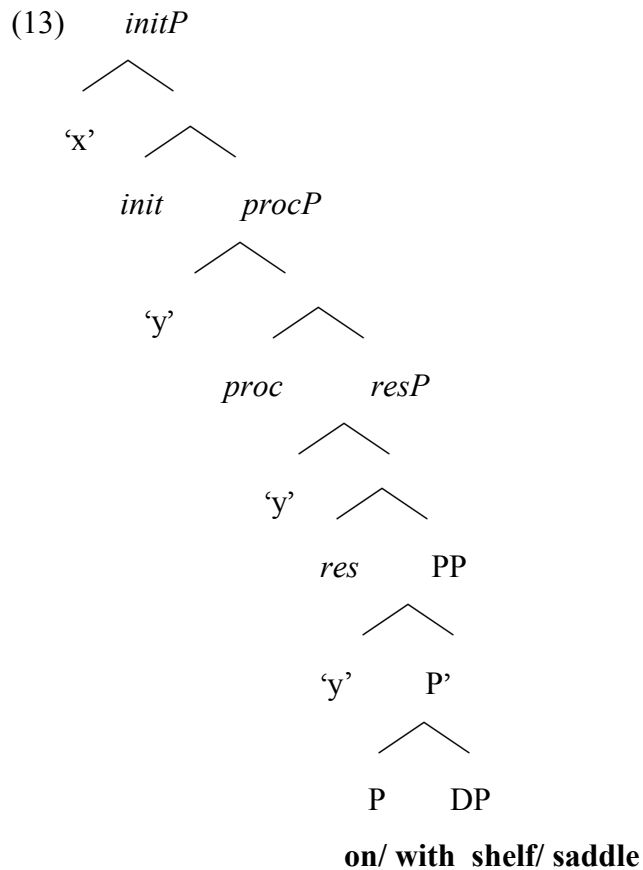
In analyzing Path phrases, Ramchand (2008b) uses Jackendoff (1983)'s distinction between PATH and PLACE. According to him, but not only, the P head must be decomposed into PATH and PLACE (van Riemsdijk and Huybregts 2002, Koopman 2000, van Riemsdijk 1990, Svenonius 2004b, Kracht 2002):

(14)   PathP

      Path   PlaceP

             Place   DP

                    Ground
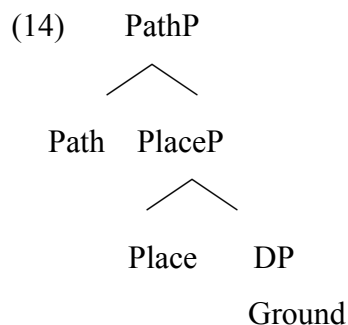
Such a proposal is in accordance both with semantics (Zwarts and Winter 2000), and with morphological facts: in languages where distinctive morphology is found, the place morpheme is always closer to the root than path morphology (Svenonius 2004b, Kracht 2002).

Ramchand (2008b) includes PathPs in her system, treating them as the complement of a *proc* head in the verbal decomposition:

(15)   a. Lisa danced to the supermarket.

                b. Lisa danced into the room.

                c. Lisa danced towards the monument.

                d. Lisa danced in the room.

When the PathP complement is bounded, the event is also bounded. ((15a) and (15b)). According to Ramchand (2008: 116-117), a sentence like (15b) (*Lisa danced into the room.*) receives the following analysis:

(16)   *initP*

        Lisa

          init   *procP*

            <Lisa>

              proc   PathP

              dance

                  Path   PlaceP

                  to

                      Place   DP
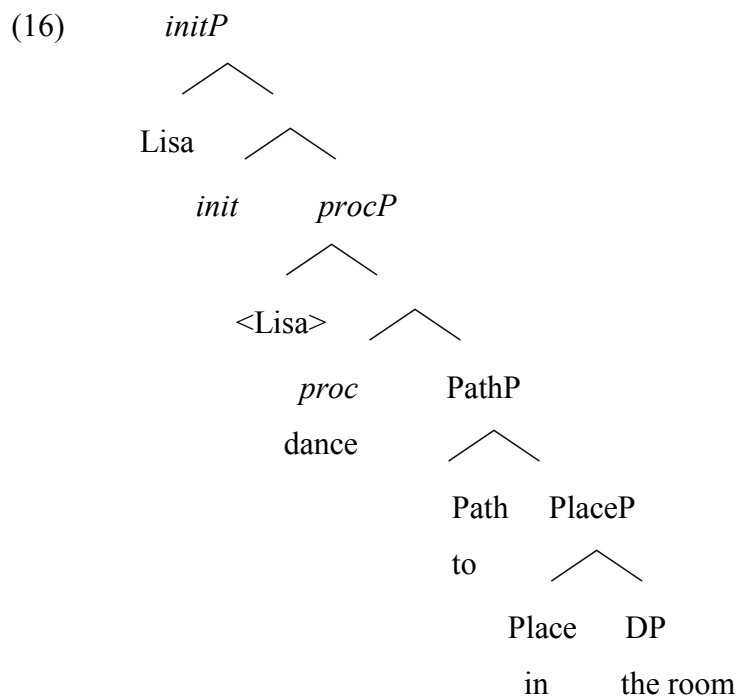
                      in   the room

while in the case of (15d) (*Lisa danced in the room*), the Proc does not select a PathP, but a PlaceP. The boundedness associated with the event comes from the (un)bounded value of the Path.

It is not always the case that the boundedness of the event derives from the boundedness of the Path. In other cases, the boundedness of the event may come from the presence of a resP within the structure of the verb. In a sentence like *Lisa jumped in the water*, for instance, a verb like *jump* does not contain an *initP*, but contains a *resP*:

(17) *procP*

```
procP
  /\
 /  \
proc  resP
      /\
     /  \
    res   PlaceP
  <jump>    /\
           /  \
        Place   DP
          in   the water
```
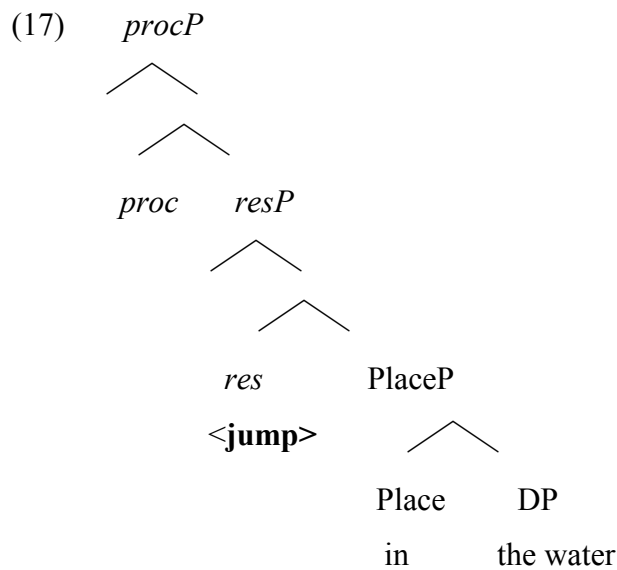
It is, thus, very important to tease apart the telicity indicated by the preposition (bounded Path) and the telicity indicated by the verb (resP).

3.3. Pantcheva's Analysis (2011) of spatial PPs

Unlike Ramchand (2008b), Pantcheva (2011) does not treat the PathP as a monolith. Instead, she splits the (transitional) PathP into several heads which are hierarchically ordered (Route, Source, Goal). Place indicates the spatial region, Goal indicates a transition to the spatial region, Source reverses the orientation of the GoalP in its complement position, while Route indicates a second transition in the SourceP. Pantcheva (2011) splits the PathP into several heads which are hierarchically ordered (Route, Source, Goal):

(18)   RouteP

        Route   SourceP

              Source   GoalP

                    Goal   PlaceP

                          Place   DP

                                  Ground
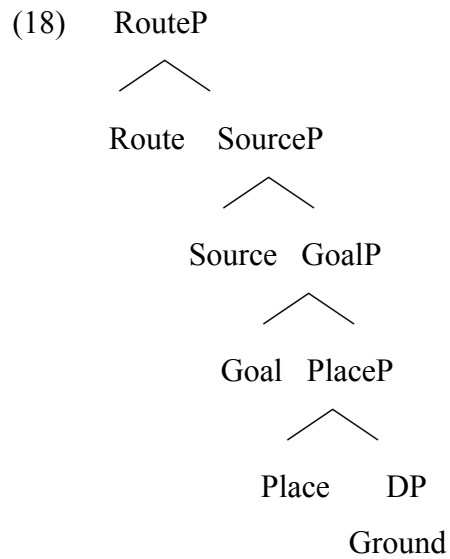
Locative constructions are formed by adding PlaceP to a DP:

(19)   Locative construction:

        PlaceP

     Place   DP
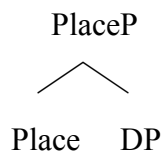
A Goal Path is built by adding the Goal head to a locative construction:

(20)   Goal Path:

     GoalP

   Goal   PlaceP

         Place   DP
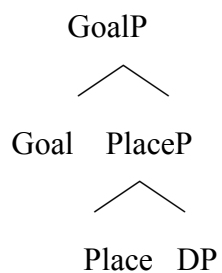
A Source Path is constructed by adding the Source head to a Goal structure:

(21)   Source Path

```
        Source Path
           /\
          SourceP
           /\
    Source  GoalP
            /\
      Goal   PlaceP
              /\
         Place  DP
```
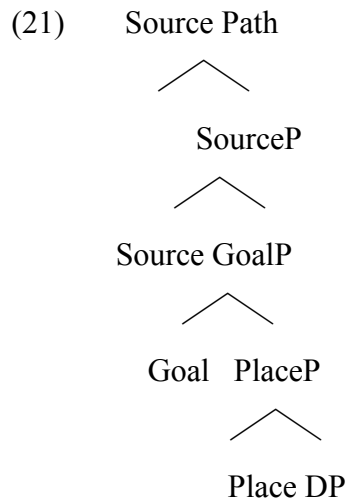
A Route Path takes the Source Path as its complement:

(22)   Route Path:

```
        Route Path:
           /\
          RouteP
           /\
     Route   SourceP
              /\
       Source   GoalP
               /\
          Goal   PlaceP
                 /\
            Place    DP
                  Ground
```
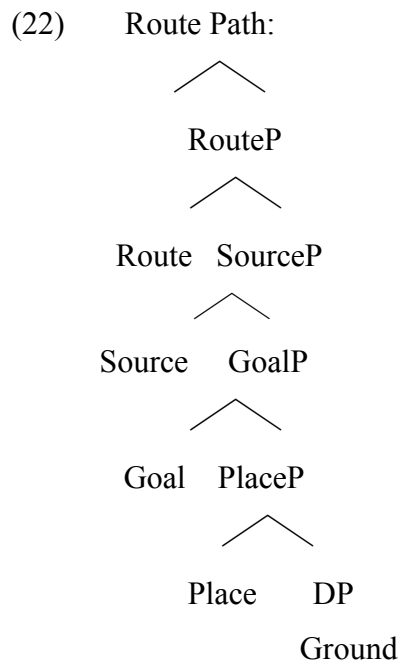
By resorting to a nanosyntactic analysis of prepositions, one can neatly explains various syncretisms.

In the case of the preposition *în* (in) in Romanian, for instance, Savu (2013) argues that it is syncretic between a GoalP and a PlaceP. While in a sentence such as *Copiii au venit în clasă.* ('Children-the have come in classroom.', *The children came in the classroom.*), *în* lexicalizes a GoalP (which contains a PlaceP within), in a sentence such as *Citesc în cameră.* ('Read in room', *I am reading in the room.*), *în* only lexicalizes PlaceP.

3.4 An Analysis of Denominal Verbs

In what follows, I will propose my own analysis of denominal verbs, in an attempt to combine Ramchand's analysis (2008) and Pantcheva's (2011). I will look at (a) unergatives, (b) location Vs, (c) locatum verbs, the verbs analyzed by Hale & Keyser (1998, 2002), and I will try to offer an analysis for them in the nanosyntactic framework.

3.4.1   The unergative dance

In Ramchand's analysis (2008), the unergative verb *dance* is analyzed as resulting from the incorporation of a noun into a Proc head:

(23)

initP
'x'   init   procP
                'x'   proc   DP
                                (dance)
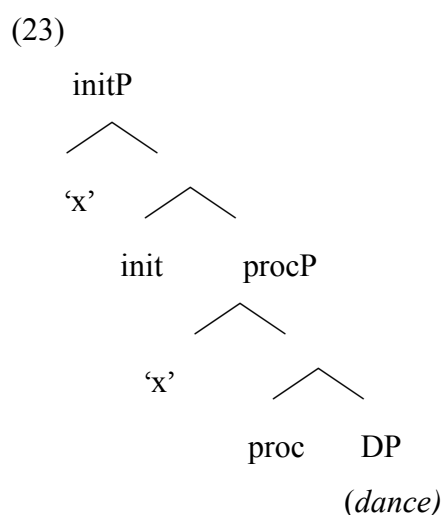
However, there are two problems with this analysis. On the one hand, the item incorporating in the Proc head is considered a DP, rather than a bare noun, and, as noted previously by critics of Hale & Keyser (1998, 2002), this poses a serious problem for an incorporation/ conflation account, as the determiner would stand in between the verb and the noun, acting as a syntactic barrier. It might not, though, pose a problem if one adopts a Phrasal Spell-Out account instead. Nevertheless, this is an issue which requires attention.

On the other hand, one can notice that the syntactic representation proposed by Ramchand (2008b) makes use of syntactic projections that include a head, a complement, and a specifier. Each verbal projection (*initP, procP, resP*), the last being absent in the syntactic configuration above, has

a Specifier, a position occupied by an item which can have composite semantic roles. In the *dance* example above, for instance, the subject of *initP* is both an Initiator and an Undergoer.

However, Pantcheva's nanosyntactic analysis of PathPs (2011) makes no use of Specifiers whatsoever. According to Starke (2001), there is no such thing as second merge in any theoretically relevant sense: every instance of merge has the properties of the first Merge, Specifiers are redundant (they express the same features as the head) and they are expletive (they map onto a semantically vacuous identity relationship). The idea that there are no specifiers does not seem to apply equally to the prepositional domain and the verbal domain. Even if we do away with the terminology of 'specifier', second merge seems to always be the case in the verbal domain, although not so in the prepositional domain. Moreover, the no need for specifier view seems to be contradicted by the compositional interpretation of a VP: a nominal in a specifier position will receive a certain interpretation depending upon the combination of V and a complement (*Mary ate an apple*, *John kicked the bucket*).

In what follows, I will try to see how the Spell-Out works for a denominal verb like *dance*. I will assume the following syntactic structure including a specifier position:

(24) initP

'x'

init   procP

'x'

proc   N (*dance*)
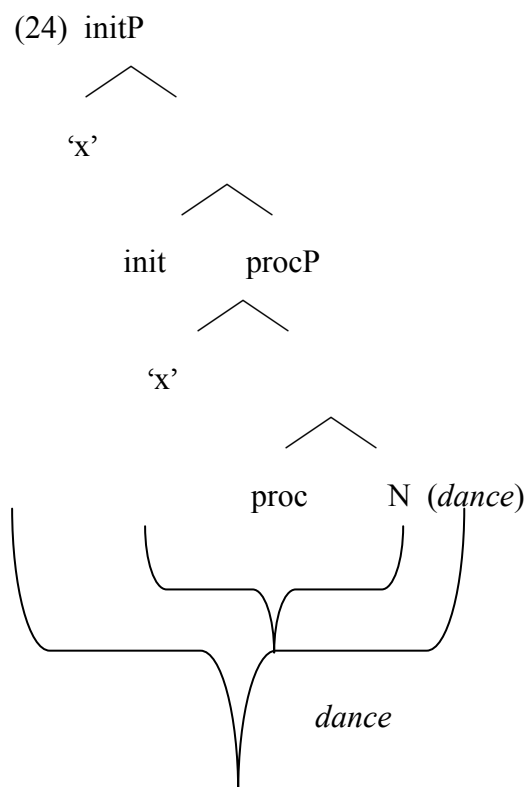
dance

The basic idea would be that, in this case, *dance* spells-out three terminals: [N], [Proc, N], [init [Proc, N]]. The question is if we are dealing with the same item *dance*. In other words, how

many items should the Lexicon store? Should it store two items *dance*: one spelling out N and the other spelling out [init [Proc, N]], hence, a nominal *dance₁,* and a denominal *dance₂*? Or should it store a single item *dance*, which can lexicalize both the noun and the verb?

One could postulate that there are two entries in the lexicon related to *dance*: one corresponding to the noun, one corresponding to the verb (they can have identical phonetic forms, as they do in English, but this need not be the case). On the other hand, it is very appealing to say that *dance* spells out both the N and the V, given that the noun and the verb have the same phonetic form. Please note, however, that there are verbs in English where there is a clear difference (*shelf/ shelve*), and there are corresponding verbs in Romance where the noun and the verb clearly have different phonetic forms (*dans/ dansa*), associated with different syntactic categories. If one looks closer, however, one notes that *dansa* is not a suppletive form, but it is clearly made up of the noun *dans* and an infinitival verbal suffix (a thematic vowel), in this case, a[32]. This points towards the conclusion that there would be only one item *dans* in the lexicon, the noun, and that the verb *dansa* is the result of the lexicalization of *dans* and *–a*. A similar thing could be assumed for *dance*. In the case of *shelf/ shelve*, one can assume there is a phonological change (*f>v*). Taking these considerations into account, this is more or less the road I would like to pursue.

First, however, I would like to make an important remark, namely, that, in a phrasal spell-out framework, if one adopts such a view where only the N *dans/ dance* is stored, and the verb is derived through lexicalization by inheritance of *dans + -a/ dance + Ø*, then one cannot resort to silent elements within the structure, because they would have to show up in the lexicalization by inheritance. Silent items are only compatible with a view where there is a verbal item in the lexicon, the verb *dance* overwriting the silent item+ N combination (*DO dance*). For this reason, I will first present a view where there is a verbal *dance* in the lexicon (either two items or one), and then come back to the view where only the noun is stored in the lexicon.

3.4. 1.1 A Verbal *Dance* in the Lexicon?

One can assume there are two *dance* items or just a verbal one. If one assumes a single item in the lexicon, the verbal item, then one will have *dance* lexicalizing N, ProcP, and InitP (according to the Superset Principle).

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[32] I will not go into the thematic vowel issue, because it is a very complicated issue. There are more candidates (*a,ea, e, i, i̭*), and the choice of the adequate thematic vowel is at least partly a question of phonology (the vowels and (ending) consonants present in the noun).

(25)

dance ⇔< /dans/,   InitP   ,   conceptual meaning >

```
              InitP
              /\
             /  \
           Init  ProcP
                 /\
                /  \
              Proc   N
```
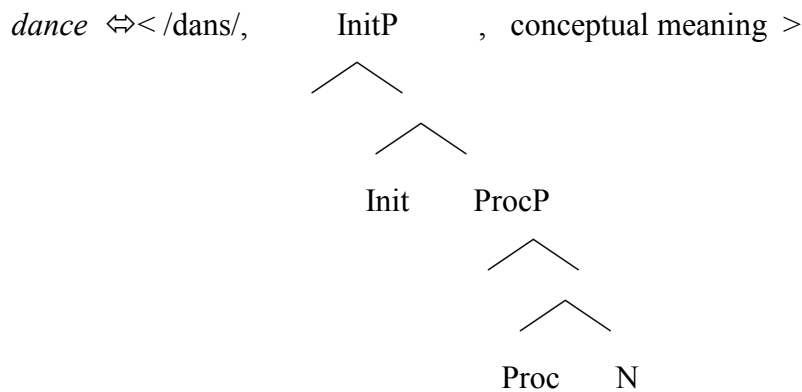
No silent items are possible, however. It is possible to store only the verb in English, unlike in Romanian where *dansa* is not an adequate lexicalization of N. Adopting such a view in English creates a clear contrast with Romanian, where one must obligatorily store the noun too.

If one assumes two lexical entries:

(26)   a. *dance₁* ⇔ /dans/, N,   conceptual meaning>

dance₂ ⇔< /dans/, InitP   ,   conceptual meaning >

```
              InitP
              /\
             /  \
           Init  ProcP
                 /\
                /  \
              Proc   N
```
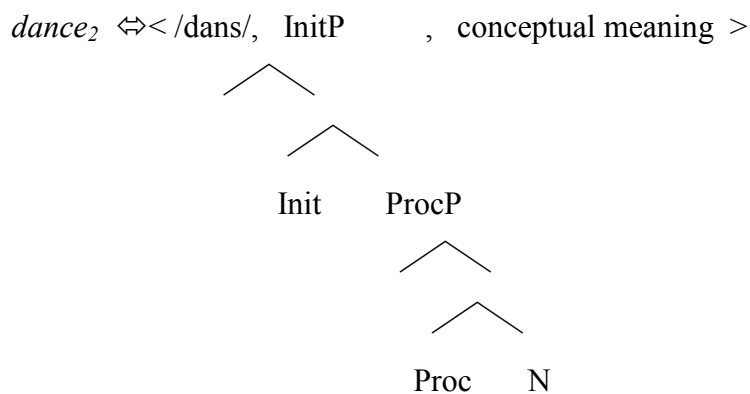
then several possibilities open up, including the silent items one.

The derivation proceeds as follows. The system starts the first cycle by merging Proc and N. After Proc and N are merged into ProcP, the structure is a target for lexicalization. Node N is inspected. *Dance₁* is inserted.

Next, the system inspects node Proc. The question is whether anything should be inserted under Proc or not. The Exhaustive Lexicalization Constraint says that every feature must be lexicalized at the end of every cycle, where a cycle ends with the formation of an XP. This ensures

the possibility of lexicalizing XP by inheritance in case there is no possibility to lexicalize it directly. However, there remains a problem: what does one do in those cases where XP can be lexicalized directly, but X is not lexicalized? I will argue that denominals exemplify precisely this situation. A verb like *dance* can lexicalize a null verb (Proc) and the noun *dance*, but it need not be the case that the verb be lexicalized, or if one adopts the view that the verb is lexicalized, it has to be lexicalized by an item that is silent. Hence, I would like to suggest tha there is no incompatibility between the idea that there are silent items and the idea of Phrasal Spell-Out. However, if silent elements lexicalize heads through terminal spell-out, this implies a departure from the nanosyntactic framework, which only allows phrasal spell-out. Thus, in order to remain in the nanosyntactic field, one would need to assume these silent elements are inserted through phrasal spell-out rather than terminal spell-out. Another option would be to embrace the view that there are no silent elements.

I will explore all three directions:

(i) there are no silent elements under the heads Proc, Init (3.4.1.1.1)

(ii) there are silent elements under the heads Proc, Init (lexicalizing heads) (3.4.1.1.2)

(iii) there are silent elements that lexicalize ProcP, InitP (lexicalizing phrases) (3.4.1.1.3)

3.4.1.1. 1 No Silent Elements

If one assumes the first variant (i), this means that nothing is inserted under Proc, but, instead, the whole ProcP is lexicalized as *dance.* Next, after init and Proc are merged together, nothing will be inserted under init, and *dance* will lexicalize the whole InitP. In other words, the lexicalization would go like this:

(27) Cycle 1

Inspect node N, insert *dance*$_1$

Cycle 2

a. Merge Proc and N

Proc   N
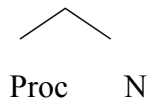
b. Inspect Proc, insert nothing under it

c. Lexicalize ProcP as *dance₂*: ProcP can be lexicalized in two ways: by inheritance or directly. Direct lexicalization is preferred over lexicalization by inheritance. However, in this case, *dance₂* is not a perfect match for *ProcP*, as it contains an additional *Init*, and, so, according to the Minimize Junk Condition, it is not the ideal solution.For lack of a better option, it is inserted.

d. Merge the Subject with ProcP, lexicalize the subject, the Subject moves further up in the tree, it leaves a trace, but traces are ignored by lexicalization. Lexicalize ProcP as *dance₂*.

Cycle 3

a. Merge Init and ProcP

Init   ProcP

Proc   N
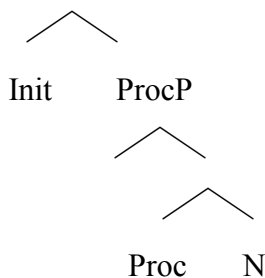
b. Inspect Init, insert nothing

c. Lexicalize InitP as *dance₂* through direct lexicalization: *dance₂* is a perfect match in this case

d. Merge the Subject with ProcP, move the subject further up, lexicalize InitP as *dance₂*

The only problem with this approach would be related to the absence of the item *dance* lexicalizing only the ProcP. Such an approach does not seem to explain why there is no syncretism to be found in real language between [Proc, N] and [init [Proc, N]], or between [N] and [Proc, N]. A possible solution would be to assume that *dance* as a ProcP is a lexicalization by inheritance, not a direct lexicalization. In addition, one could argue the verbal domain is more particular, in the sense that it never lexicalizes the middle, just the extremes (InitP, N, but not ProcP, in this case). Of course, the causative alternation (*The window broke*, *Miriam broke the window*) could be brought as a counterargument to the previous assertion, given that the verb seems to lexicalize ProcP in the first case and InitP, ProcP in the second. However, in this case, one way to counter this would be to say

that the verb can be a direct lexicalization of the ProcP (*The window broke*), whereas, in the *dance* case, it is not.

3.4. 1. 1.2 Silent elements lexicalizing heads

If one assumes the second variant (ii), namely, the one arguing that there are silent elements, one could argue that, in the case of the verb *dance,* there is a single silent element *DO* (*DO dance*) or there are two (*CAUSE DO*):

(28) $DO \Leftrightarrow </Ø/, \text{Proc}, \quad \text{conceptual meaning} >$

     $CAUSE \Leftrightarrow < /Ø/, \text{ Init, conceptual meaning}>$

If one assumes the silent item *DO* is inserted, the following step is the lexicalization of the ProcP. ProcP can be lexicalized in two ways, either by inheritance (as *DO dance$_1$*), or through direct lexicalization (as *dance$_2$*). In this case, however, the item *dance$_2$* contains some additional structure, so, according to the Minimize Junk Principle, it is not a perfect match for ProcP. At this point, the question would be which of the two is preferable (lexicalization by inheritance or direct lexicalization by means of an item that is an imperfect match)? If one chooses direct lexicalization, one encounters a serious problem, namely, *dance$_2$* can never be used solely as the Spell-Out of ProcP. The syncretism is between InitP and N, not between ProcP and N. If one chooses lexicalization by inheritance, the result of lexicalization is *DO dance$_1$*. At the next step, Init and ProcP are merged. Node Init is inspected, silent *CAUSE* is inserted. The following step is the lexicalization of InitP, which can be done in two ways: either through lexicalization by inheritance or direct lexicalization. Since, in this case, there is a perfect match, *dance$_2$* will be chosen. The result of the lexicalization is *dance$_2$.*

In the above lexicalization, specifiers have been ignored. The noun occupying the specifier position in ProcP moves out for spell-out reasons: first, it moves to Spec Init, and then it moves out of this position for spell-out reasons. Specifiers do not, hence, pose problems.

The big problem with this approach (silent items lexicalizing heads) is that the system allows for both terminal spell-out and phrasal spell-out, which goes against the nanosyntactic framework. If we accepted lexicalization of terminal heads here, why can't we do it all over? Moreover, postulating silent elements which lexicalize the heads of the projections InitP and ProcP (*CAUSE, DO*) is to

redundant, given that the causative meaning and the event meaning are already expressed by the projections (i.e. features which project).

Ramchand (2008b) offers an account in terms of underassociation: she argues that the verb *dance* can be used used to lexicalize the noun. It can be marked as having the features [init, proc] underassociated, and these features will have to combine with the [init, proc] information provided by the generic verb *DO* by means of Agree[33]. By lexicalizing heads, however, the account fails to be nanosyntactic, it is more in the spirit of DM with underassociation doing the work of fusion.

3.4.1.1. 3 Silent elements lexicalizing phrases

If one tries to get rid of the problem of the competition between terminal spell-out and phrasal spell-out, making the analysis more nanosyntactic by embracing the idea that (iii) silent items in fact lexicalize phrases, one gets the following order of operations:

(29) <u>Cycle 1</u>

Inspect node N, insert *dance*$_1$

<u>Cycle 2</u>

a. Merge Proc and N

Proc   N
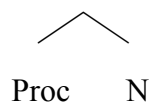
b. Inspect Proc, insert nothing under it
c. Move N
d. Lexicalize ProcP as *DO*

---

[33] While this account works very well for English, it will not do to say that *dansa* in Romanian can underassociate to lexicalize the N *dans*.

ProcP

Proc ‿ t
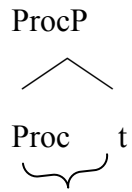
DO

e. Merge N and ProcP, Lexicalize ProcP as *dance*$_1$ DO by inheritance rather than directly, as *dance*$_1$ is not a perfect match (in this way, one captures the fact that there is no verb *dance*$_2$ which lexicalizes only ProcP)

f. Merge the Subject and ProcP, move it further up in the tree

Cycle 3

a. Merge Init and ProcP

Init   ProcP

Proc   N
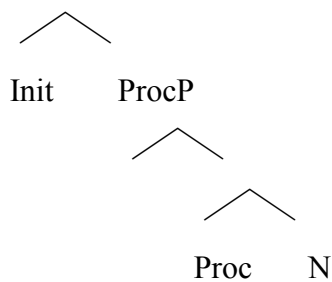
b. Inspect Init, insert nothing

c. Move ProcP, leave a trace behind

d.   Lexicalize InitP as CAUSE

e.   Lexicalize InitP as *dance*$_2$ through direct lexicalization: *dance*$_2$ is a perfect match in this case

initP

ProcP   initP

dance$_1$ DO CAUSE

dance$_2$
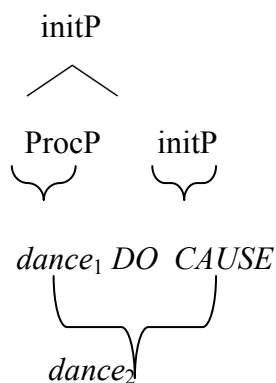
f. Merge the Subject with initP

Although possible, this analysis has the disadvantage of using redundant silent lexical items, basically duplicating the information expressed in the projections.

Out of the analyses presented so far, the one that is less problematic is (i), i.e. the one where there are no silent items. Whereas (ii) and (iii) can be considered redundant, (i) does not have this problem. Nevertheless, there is no actual item ProcP *dance*$_2$[34], which is problematic, as one would expect such a form to exist if one relies on the Superset Principle.

In any case, the account that seems to explain the formation of the denominal *dance* best is the one where there are no silent items.

3.4. 1. 2.One Item *Dance* (N) in the Lexicon

I will now try to see if it is possible to assume there is one single item *dance*, the N, and the verb results through the lexicalization by inheritance of InitP, ProcP and N.

(30)

InitP

Init   ProcP

Proc   N *dance/ dans*

---
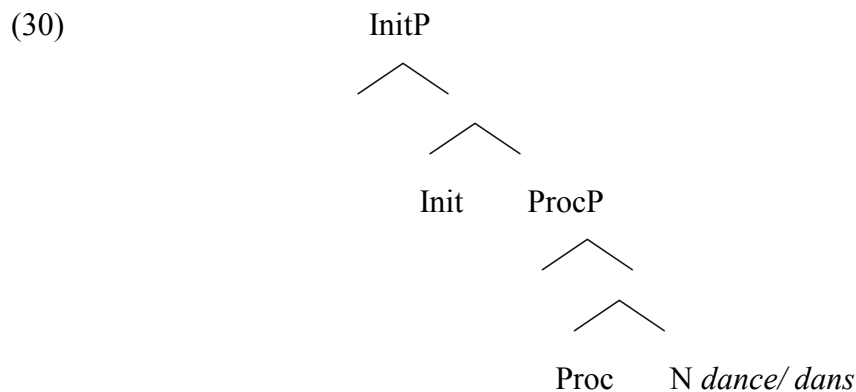
[34] It would be a serious problem if another item lexicalized ProcP, given the fact that there is an important constraint discussed in nanosyntax (Caha 2009, Pantcheva 2011), deriving from the Superset Principle, namely, the *ABA constraint, according to which, if an item A lexicalizes a certain tree, and the item B lexicalizes a tree including that tree, then it is not possible for A to span over a bigger tree including the tree spelled out by B. Bobaljik (2007) was the first to introduce this constraint by looking at the comparative and superlative adjective in English, and noticing that, if the comparative is not derived from the basic form, but is suppletive, the superlative will also be suppletive, and it will be derived from the comparative (*bad-worse-worst*). Of course, if one looks carefully, the sequence *ABA is not present in (i), (ii) or (iii). It is never the case that we find the sequence *dance$_1$ *dance$_2$ *dance$_1$.

In such a case, it seems, in the case of English, no problems ensue, as ProcP can lexicalize by inheritance as *dance*, and so can Init. In the case of Romanian, however, there is a problem, because one has to get from *dans* to *dansa*. A very important question would be where to place the thematic vowel indicating the verbal declension (*a-*). As previously mentioned, the thematic vowel is problematic as Kiparsky (1973), for instance, argues that, whatever its initial meaning, now it is semantically empty, whereas Grundt (1978) argues that it is an inflectional marker and its meaning is retrievable. In the case of nouns, it would be definiteness, just as in Sanskrit or Basque, while in the case of verbs, 'the theme vowel is unaccounted for. A simple explanation offers itself, namely, that the verb agreed with its subject noun not only in person and number but also in definiteness, although other explanations may be possible' (Grundt 1976: 32).

Considering the thematic vowel the lexicalization of ProcP would force N to move out of its position to the Specifier of ProcP, and then once again in the case of initP. Considering it to be the lexicalization of Proc would introduce terminal spell in a system which relies on phrasal spell-out. (Please note that in the case of N, *dance* lexicalizes N simply because N does not project.) Moreover, even if ProcP is argued to occur in almost all verbs, it is absent in the case of stative verbs, for instance (according to Ramchand (2008b)), so, in that case, it would be placed under Init, which would strangely suggest that this declension would carry semantic meaning (being processual in some cases, non processual in others). For these reasons, one may assume it is first necessary to combine N with the thematic vowel which carries verbiness information, and thus create an intermediary level:

(31)   a.   InitP
                       /\
                'x'   /\
                       Init   ProcP
                              /\
                       'x'   /\
                           Proc   /\
                               Thematic Vowel   N
                               -a   *dans*

b.

```
                          InitP
                         /\
                  'x'      /\
                        Init   ProcP –a?
                                /\
                            'x'    /\
                                 Proc    N
                                 -a      dans
```
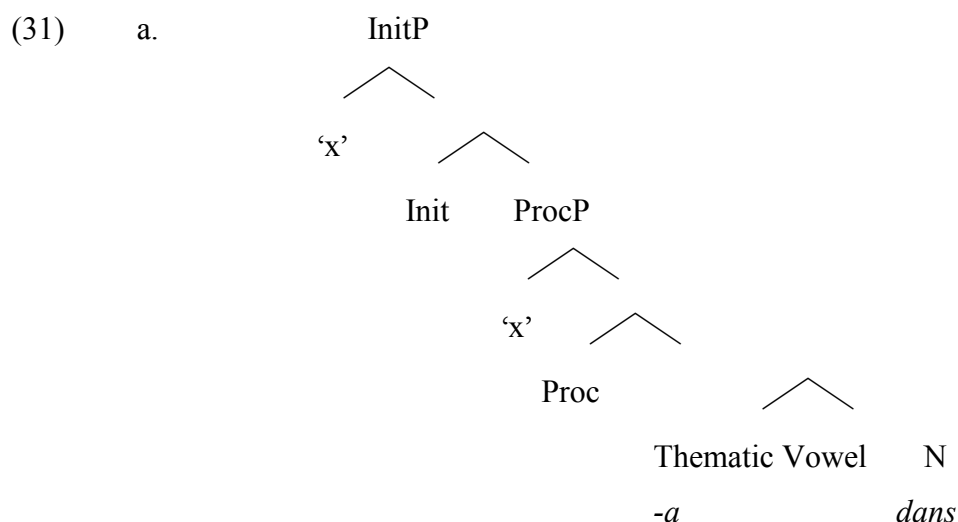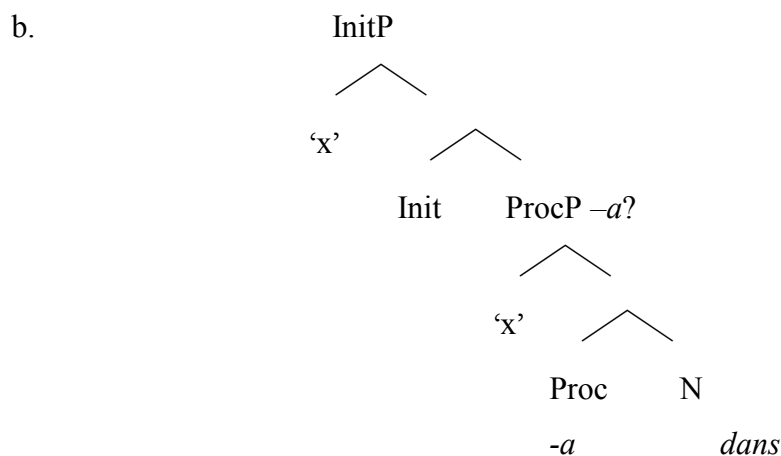
Dans will fuse with *–a*, resulting in *dansa*, which resembles the Fusion operation present in Distributed Morphology (DM), occurring between terminal heads. Unlike Init and Proc (which have specifiers and take complements), one could assume the thematic vowel and the N do not project. This would, of course, mean that the lexicon would store *dans* and *–a*, but not *dansa*.

In a different view (31b), the thematic vowel *–a* would simply lexicalize ProcP. This would mean N has to move, and then N and ProcP would be lexicalized together (but this would imply ProcP can lexicalize twice)/ fused.

One could put the thematic vowel under Proc, but then one would introduce terminal spell-out in a system relying on phrasal spell-out.The account would become very much in the spirit of distributed morphology DM, as one can easily assume Proc and N are fused together, giving rise to *dansa.*

Such a view would basically imply that the lexicon only stores nouns and thematic vowels which it combines so as to derive denominal verbs. It does this by means of a syntactic module which is able to generate the desired results.

I have, thus, presented several ways to try to account for the formation of denominals in a nanosyntactic framework. I have presented the various possibilities that open up depending upon the number of lexical items one assumes are present in the lexicon. Out of the accounts I presented, I find that the most explanatory are the account which considers that only the noun is stored as a lexical item (and the thematic vowel in Romanian), while the verb is the result of lexicalization of syntactic structure, or even the account which argues that only the verb is stored in the case of

English. While the 'only the noun is stored' account renders the analysis more DM-like, the other accounts are more in the spirit of nanosyntax. However, they have the serious disadvantage of storing as a single item an item which can be split into two in the case of Romanian (*dans-a*). Hence, I believe the 'only the noun is stored' account is the best option, at least for Romanian.

I would like to bring to your attention a serious problem related to the behaviour of the verb *dance* in combination with PPs (*The girl danced into the room*). If one tries to account for the possibility to combine a manner of motion verb like *dance* with a PP like *into the room* in a nanosyntactic fashion, a serious issue is why a verb like *dance* can combine with *into the room*. If this happens in the lexicon, then one 'solution' would be to argue that there is a *dance into* verb, which is extremely inelegant and burdensome:

(32)   * *dance into* ⇔< /dans/, InitP   ,   conceptual meaning >

```
                    ╱╲
                   ╱  ╲
                  ╱ ╱╲
                Init  ProcP
                       ╱╲
                      ╱ ╱╲
                    Proc  PathP
                           ╱╲
                          ╱ ╱╲
                        PlaceP
                         ╱╲
                        ╱ ╱╲
                      Place  DP
```
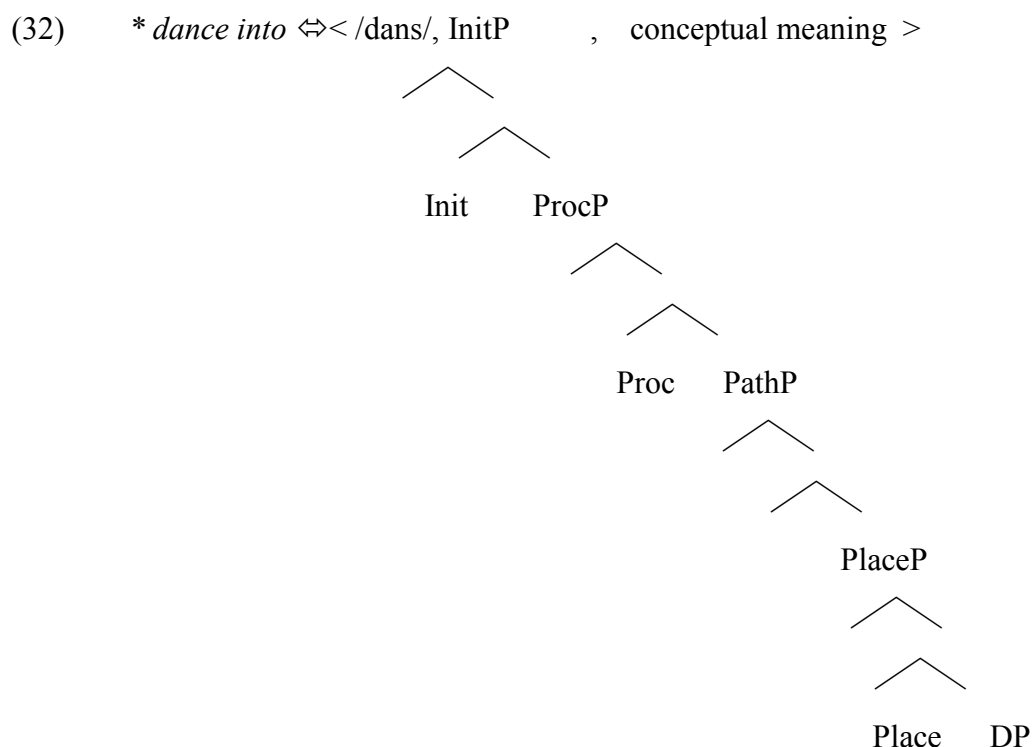
Storing *dance into* as an item is as anti-nanosyntactic as can be (not to mention counterintutive). In nanosyntax, the idea is that it is possible to lexicalize more than one phrase by means of a single item, not that one can treat two distinct items as one, although, in a sense, they are one item: *dance into* has different properties than *dance*, it is telic. Moreover, such a move is not at all economical, it would result in doubling all the motion verbs which can combine with PathPs. This is, of course, problematic, even more so as the corresponding verb in Romanian (*dansa*) does not display the same combinatorial option. A different take on the matter would be to argue that *dance into* is the

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lexicalization by inheritance of the trees corresponding to *dance* and *into,* but that it is not stored as such in the lexicon. This would mean that the combination of the verb *dance* with the PP *into the room* takes place in syntax. However, one does not capture why certain verbs combine with this GoalP and others do not. A possible solution could be to argue that there is a manner of motion feature [+manner of motion] allowing the verb to combine with PathPs. An interesting proposal is provided by Zubizaretta and Oh (2007), according to whom this behaviour is a syntactic phenomenon: the verb *dance* combines with a verb *GO* in syntax, and it is this combination that can take a PathP preposition.

As suggested by Professor Alexandra Cornilescu, the problem is to a certain extent similar to the behaviour of a verb like *eat.* In English, this verb can combine with a resultative (*to eat oneself sick*), while in Romanian, it cannot (**a se mânca bolnav* -to refl. clitic eat sick).[35] If one places syntax in the lexicon, eliminating syntax per se as a separate domain, one is either forced to assume a very burdensome lexicon, where there has to be a different item for every single combinatorial possibility, or to assume certain items simply combine with each other.

One can account for certain aspects by a syntax in the lexicon which results in the storage of the items (the verb *dance* could be such a case), and for other aspects by means of a syntax which does not have this result (*dance into the room*). In the case of *Mary danced into the room*, following Zubizaretta & Oh (2007), one option is that the verb *dance* combines with the verb *GO* by means of a Verb Compound Rule, and, together, they combine with *into the room*:

(33)   V
     /\
  V   PP
 /\
dance   GO   into the room
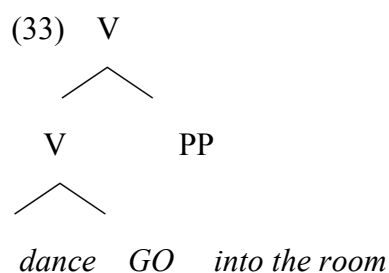
GO would be an [init, proc] verb, and the PP a [Path, Place] P. Unlike English, Romanian does not make use of the Compound Rule mentioned above (Drăgan 2002).

Another issue that needs attention is the cognate object issue (*dance a dance*). Again, a similar problem occurs. Positing a transitive verb *dance* would imply that all the denominals which

---

[35] The same thing is, in fact, true for the verb *dance* in combination with a (possibly reflexive) direct object and a resultative (*Jilly danced herself sick*), a combination not possible in Romanian.

can take cognate objects should be projected as transitives (the DP can be lexicalized or not, but it is there):

(34)   InitP

         Init   ProcP

                    Proc   N

                                DP
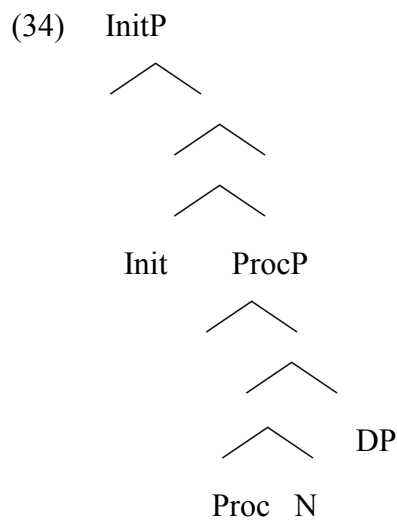
If one adopts, such a view, one reaches the conclusion that all verbs are transitive (which seems to be very much in line with the Hale & Keyser view of unergatives as transitives that incorporate the direct object).

3.4.1   The location verb *corral (the horses)*

I will assume a similar analysis in the case of location verbs such *corral*. If one starts from Ramchand's and Pantcheva's proposal, one might be tempted to assume that there is an <init, proc, res> verb that combines with a PP that is a <Path, Place> (35).

The basic phrasal spell-out idea would be that *corral* spells out many terminals: N and [init [proc [res [Goal [Place, N]]]], for sure, if not [Place, N], [Goal [Place, N]] , [res [Goal [Place, N]]], [proc [res [Goal [Place, N]]] as well (which are not to be found).

(35)　　* initP

　　'x'　initP

　　　　init　procP

　　　　　'y'　　procP

　　　　　　　proc　　resP

　　　　　　　　'y'　resP

　　　　　　　　　res　GoalP

　　　　　　　　　　Goal　PlaceP

　　　　　　　　　　　Place　N

　　　　　　　　　　　　corral

　　　　　　　　　　corral
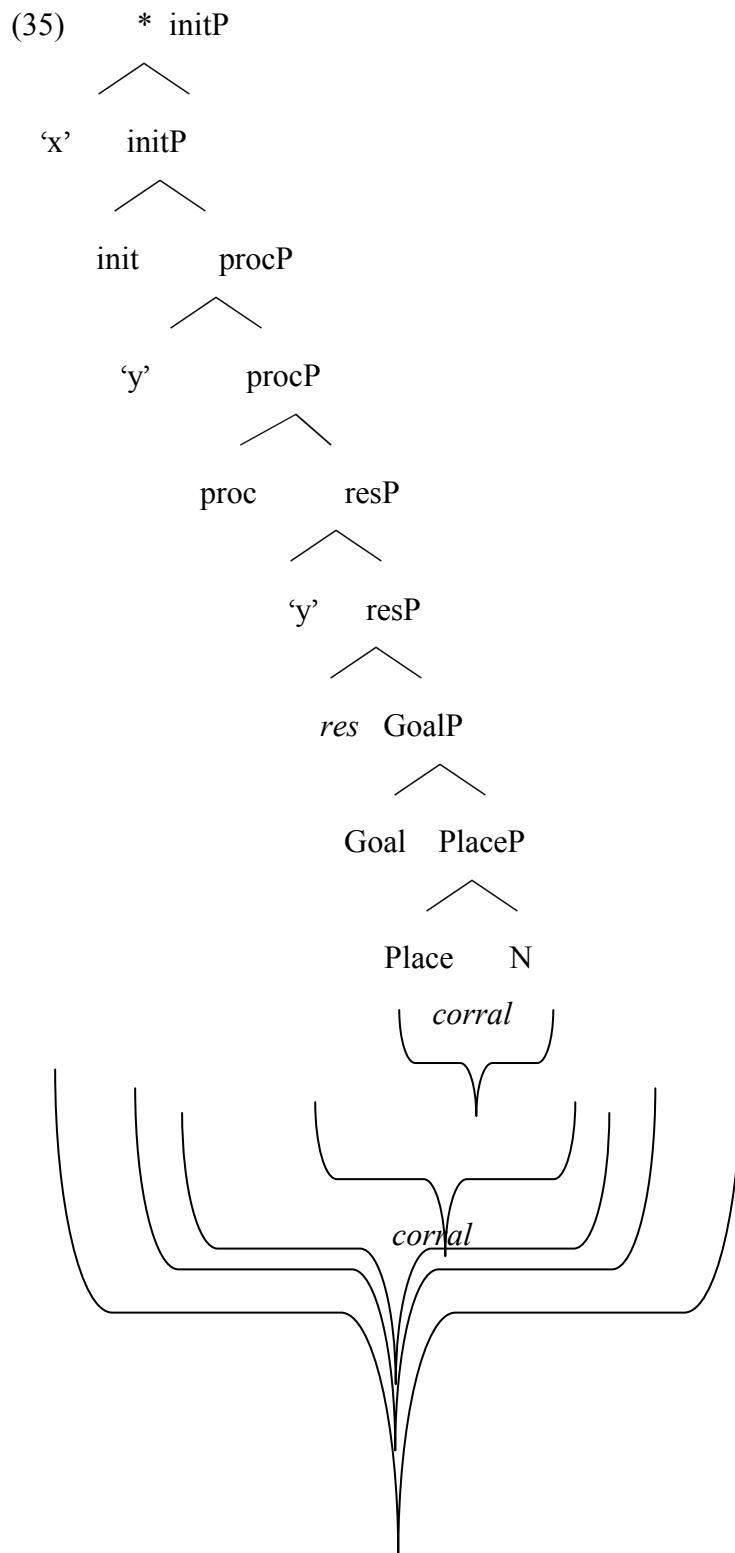
However, the representation in (35) is problematic, and the reason for this is quite obvious. It is not at all clear why there should be both a projection resP and a projection GoalP in the same tree.

Given the fact that projections have to be motivated, and the GoalP already indicates a result, there is no need for an additional projection resP, otherwise, the tree would be redundant. The incorporated GoalP is the resP of the verb. Hence, the structure I adopt is:

(36)

```
            initP
           /    \
        'x'    initP
              /    \
           init    procP
                  /    \
               'y'    procP
                     /    \
                  proc    GoalP
                         /    \
                      Goal   PlaceP
                            /    \
                        Place    N
```
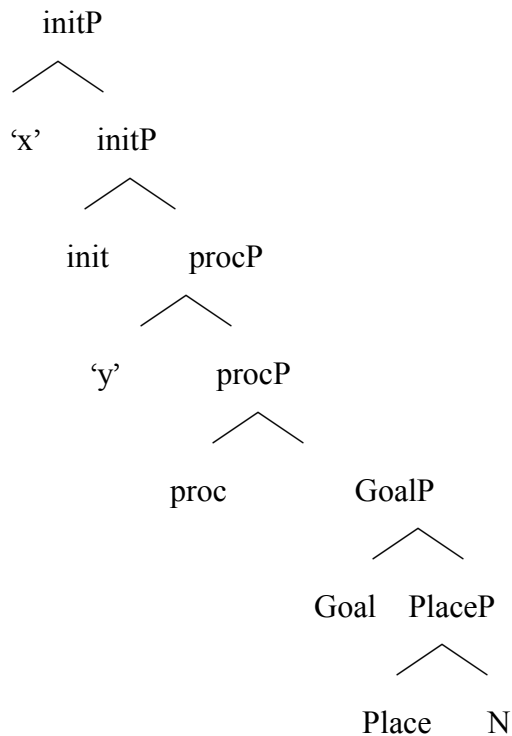
Just as in the case of *dance*, there are no real lexical correspondents for the syncretisms predicted by a theory which would lexicalize all the syntactic phrases contained within it as *corral*. In other words, a problem immediately ensues if one argues that P and N are lexicalized directly as *corral*. How come I can never say something like *She put the horses corral* meaning *She put the horses in the corral?* How come I never spell out P+N as *corral*? The same problem appears in the resP case, as well as in the ProcP. A solution is to say that *corral* is introduced later on, not as the lexicalization of P+N, hence that there are two lexical items in the lexicon. For this reason, it might seem useful to postulate silent prepositions which lexicalize phrases. Their presence could explain the absence of a preposition *corral*.

3.4.2.1 Silent Items

If one wants to use silent items, one must postulate both a verbal item *corral* and a nominal item *corral* in the lexicon:

(37) *corral*$_1$ ⇔ </koˈrəl/, N, conceptual meaning>

    corral$_2$ ⇔< / koˈrəl/, initP, conceptual meaning>

```
                    initP
                   /    \
              init      procP
                       /    \
                   procP
                  /    \
              proc      GoalP
                       /    \
                   GoalP
                  /    \
              Goal      PlaceP
                       /    \
                   Place      N
```
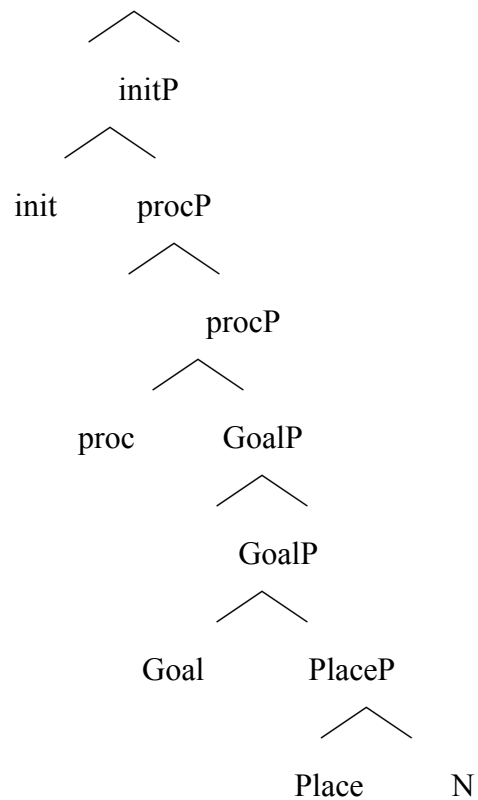
The lexicalization would go as follows:

(38)   <u>Cycle 1</u>

      Inspect Node N, insert *corral*

        <u>Cycle 2</u>

a.   Merge Place and N

```
              PlaceP
               ╱‾╲
          Place    N
```
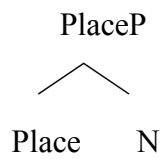
b.   Lexicalization round

i. Inspect node Place, insert nothing

ii.
```
       PlaceP
        ╱‾╲
    Place   N
```
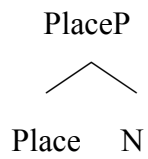

ii.   Inspect node PlaceP, insert null *IN* at node PlaceP, mark N for extraction


```
    PlaceP =>IN
        ╱‾╲
```
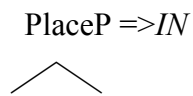

 Cycle 3

a.   Merge Goal and Place


```
    GoalP
     ╱‾╲
  Goal   PlaceP
           ╱‾╲
         N    PlaceP
                ╱‾╲
             Place    t
```
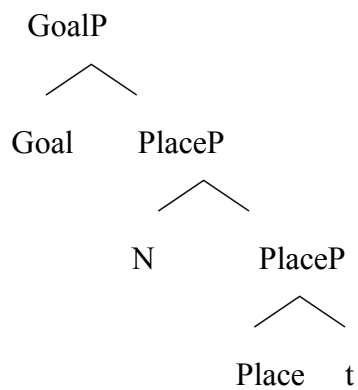
b. lexicalization round

Inspect Goal, insert nothing. Move N. Lexicalize GoalP as *IN*

Merge N. Lexicalize GoalP as *corral IN*.

Merge *the horses.*

```
        GoalP
        /\
      NP   GoalP
           /\
         N    GoalP
              /\
            Goal   PlaceP
                   /\
                 Place   t
```
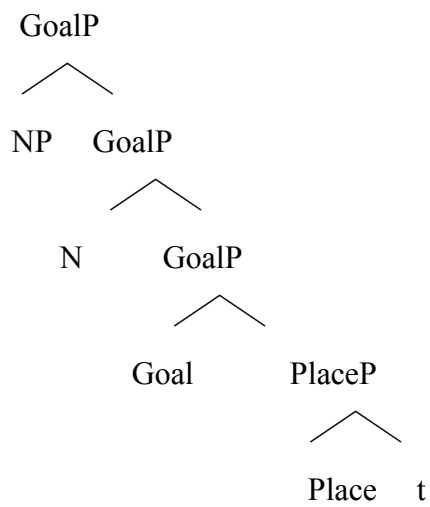
Cycle 4

i. Merge Proc and Goal

```
   procP
   /\
 proc   GoalP
```
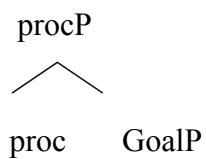
ii. Lexicalize procP as *corral*

iii. Merge y and procP, Lexicalize y (*the horses*), move it, procP is lexicalized as *corral*

Cycle 5

i. Merge init and proc.

```
   initP
   /\
 init   procP
        /\
```

ii. Lexicalize initP as *corral*

```
initP (corral)
       /\
init       procP (corral)
             /\
               procP (corral)
                  /\
               proc   GoalP
                       /\
                        PlaceP
                          /\
```
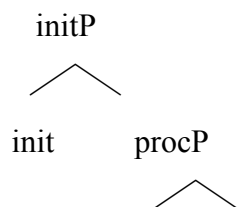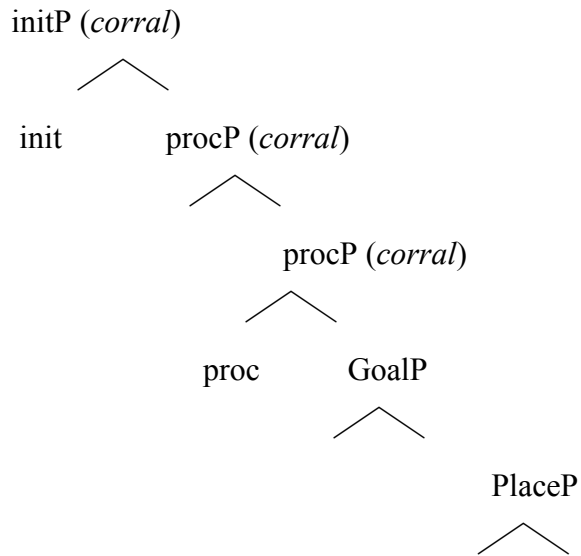
By resorting to a combination of Phrasal Spell-Out and silent elements such as the silent preposition *IN*, one can thus explain the formation of location verbs.

In the analysis above, I have tried to keep the representation as nanosyntactic as possible. As also mentioned in the case of the verb *to dance*, one could have very well resorted to silent verbs. If a silent verb such as *PUT* had been inserted as the terminal spell-out of the heads Proc or Init, this would have given rise to a mixed approach, where terminal spell-out and phrasal spell-out could both be used. In such a case, however, it becomes hard to establish whether a silent element like *IN* should be the terminal spell-out of the head Place, or the phrasal spell-out of PlaceP. In other words, if one assumes that both terminal spell-out and phrasal spell-out are possible, the immediate question would be: when do we choose terminal spell-out and when do we choose phrasal spell-out as the means of lexicalization?

(39)   initP
        /\
    'x'   initP
          /\
      init   procP
      PUT   /\
           'y'   procP
                 /\
             proc   GoalP
             PUT   /\
                  Goal   PlaceP
                  IN   /\
                      Place   N
                      IN   corral
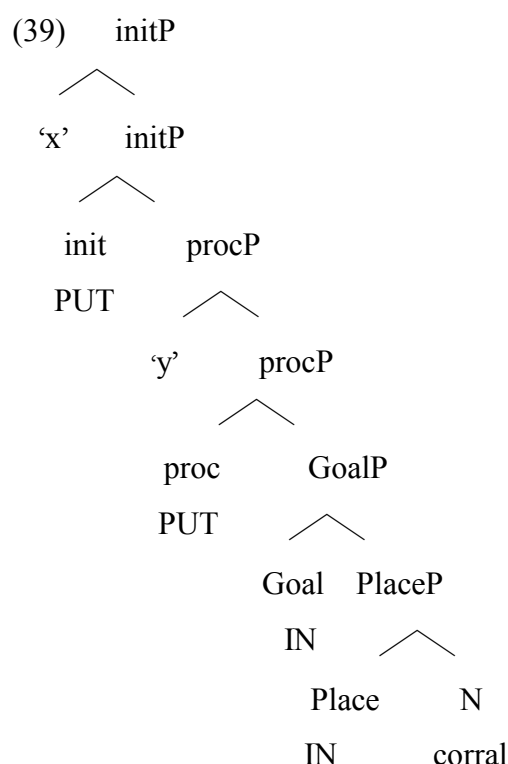
Another option would have been to consider the verb *PUT* as the direct lexicalization of ProcP and InitP. However, this gives rise to another problem, namely, the fact that InitP is once lexicalized by *PUT,* and later on, it must be lexicalized by *corral.*

Of course, one could make use of the verbs *CAUSE* and *DO* rather than resort to the verb PUT, and lexicalize them by means of terminal spell-out or phrasal spell-out. However, such a representation has the disadvantage of being redundant, in that it expresses lexically elements that are already present in the structure.

The representation making use only of the preposition *IN* resorts to less silent elements, it is not redundant, and it motivates the use of phrasal spell-out. However, according to me, it presents a serious disadvantage: by introducing silent items, it eliminates a great deal of the motivation for phrasal spell-out, namely, to lexicalize several nodes by one single item. Moreover, using two items in the lexicon when one could use only one is not economical. In other words, even if by postulating silent items, one gets rid of the problem of the absence of a *corral* preposition, greater problems are generated. For this reason, I believe an account not resorting to silent items is much better.

The only viable silent item version would be the underassociation account (Ramchand 2008b), arguing that the verb *corral* can be used to spell out the N *corral* if the features [init, proc, Goal, Place] of the verb unify with the information provided by the preposition *IN* and the

information provided by the *PUT* by means of Agree (I will assume it is possible for more than two items to share their features). *Corral* [init, proc, Goal, Place] will simply lexicalize N. While such a view is a viable solution (although not for Romanian, where the verb and the noun have a different form), it departs from nanosyntax by allowing lexicalization of terminal heads.

3.4.1.2 No Silent Items

It is possible and preferable to do without any silent items, and eliminate silent prepositions from the representation:

(40) initP
```
              initP
             ╱⟍
          'x'
         ╱⟍
     init      procP
              ╱⟍
           'y'
          ╱⟍
       proc      GoalP
                ╱⟍
             Goal    PlaceP
                    ╱⟍
                 Place      N
                          corral
```
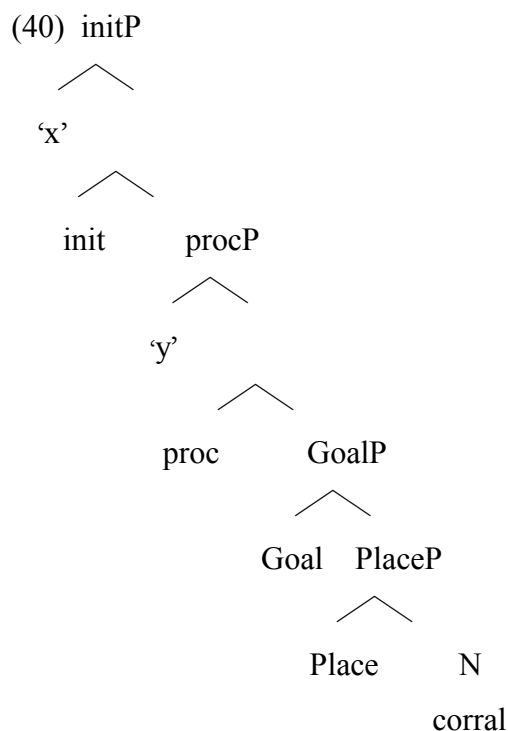
If one does not want to rely on any silent items whatsoever, then one can resort to either one of the these options: (i) storing just the verbal item, which would basically mean that a single item *corral* spells out N, PlaceP, GoalP, ProcP, InitP, but, for some reason, there is no actual PlaceP/ GoalP/ ProcP item *corral*, (ii) storing both the verbal item and the nominal item. N will be lexicalized as *corral₁* InitP will be lexicalized as *corral₂*. PlaceP, GoalP, ProcP will also be lexicalized as *corral₂*, but the language will not make use of a ProcP *corral* or a GoalP/ PlaceP *corral*, or (iii) storing only the nominal item, and lexicalizing everything by inheritance.

While the first option works for English, as the verb and the noun have the same form, it does not do to say that, in Romanian, for instance, the verb lexicalizes the noun, as the verb presents an additional thematic vowel indicating the verbal declension. Adopting (i) would create a clear contrast between English and Romanian (English would store the verb, while Romanian would be forced to store the noun (also)). (ii) is a possible way to go about it, but it presents the serious disadvantage of storing as a single item a decomposable item such as *adăposti* (shelter+ thematic vowel), for instance. (iii), on the other hand, would turn the analysis more DM, because, in order to account for the formation of the denominal, one would need to say that there is fusion between the noun and the thematic vowel. In the analysis of *dansa*, I arrgued that it might not be the best solution to place the thematic vowel in Proc. The same thing could be assumed here. However, fusing the N and the thematic vowel before PlaceP would lead to having something verby combine with a preposition:

(41)

```
           initP
          ╱    ╲
        'x'
       ╱   ╲
    init    procP
           ╱    ╲
         'y'
        ╱    ╲
     proc    GoalP
            ╱    ╲
         Goal   PlaceP
               ╱    ╲
            Place  ╱  ╲
     Thematic Vowel     N
```
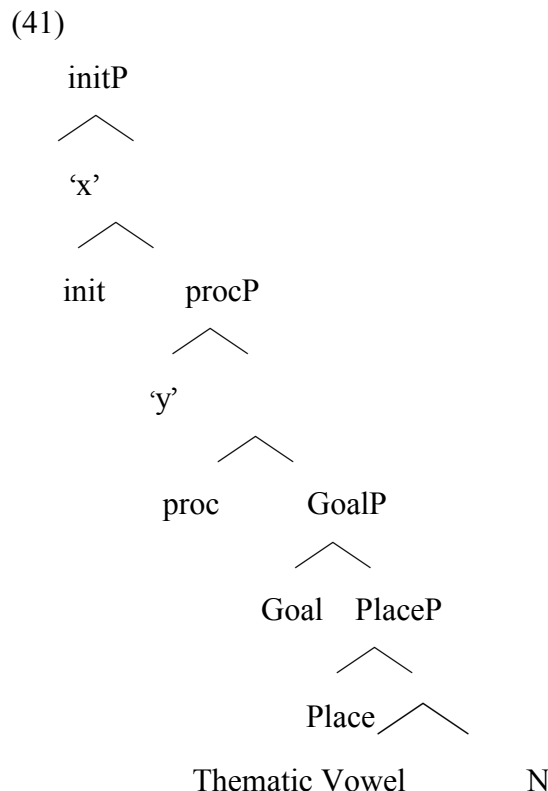
The thematic vowel could be placed above GoalP, before ProcP (42), or one might consider it the lexicalization of ProcP ((43)- although if one assumes this viewpoint, it must also be adopted in the case of *dansa*- as I have argued, it is not clear to me it has a processual meaning):

(42)

```
          initP
         /    \
        'x'
       /   \
     init   procP
           /    \
          'y'
         /    \
       proc   Them VowelP
             /      \
      Them Vowel    GoalP
                   /    \
                 Goal   PlaceP
                       /    \
                     Place   N
```

(43)

```
          initP
         /    \
        'x'
       /   \
     init   procP  thematic vowel
           /    \
          'y'
         /    \
       proc   GoalP
             /    \
           Goal   PlaceP
                 /    \
               Place   N
```
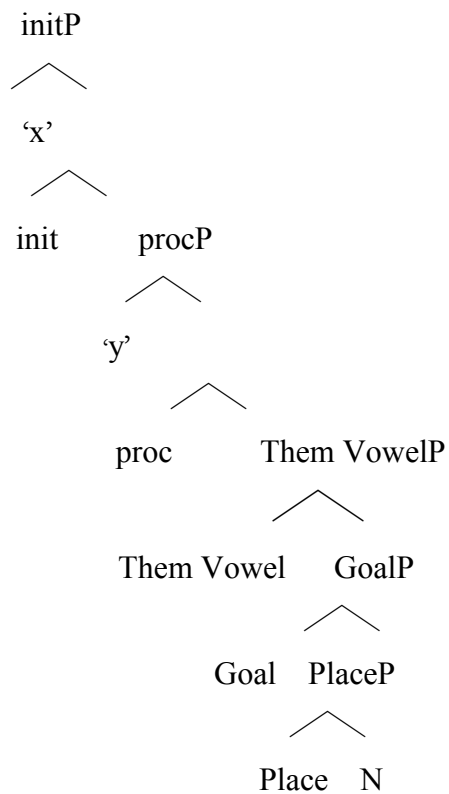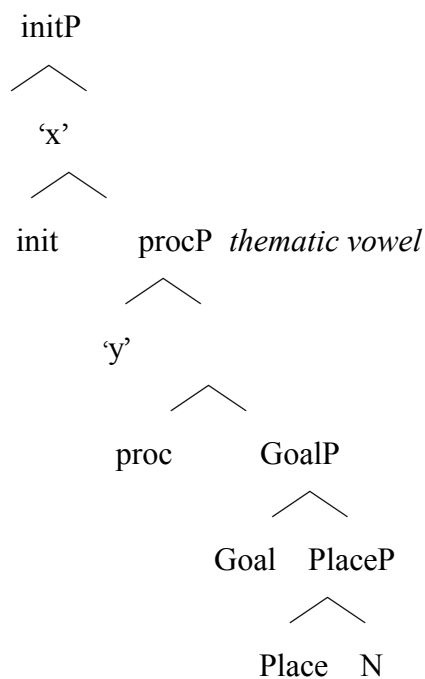
in which case one must necessarily assume there is either an operation of Fusion between ProcP and <GoalP, PlaceP, N> (if one assumes the thematic vowel is the lexicalization of ProcP), or that ProcP can lexicalize twice (once as the thematic vowel, once as the verb, given that, in order to lexicalize ProcP as the thematic vowel, GoalP must move out of its position), or that the thematic vowel is

inserted in a terminal node position (Proc), and ProcP is lexicalized by inheritance (this, however, introduces terminal spell-out in a framework which relies on phrasal spell-out).

While in a DM account, there would be fusion between the terminal nodes (N fuses with Place, then they fuse with Goal, then with Proc, realized as the thematic vowel, then with Init), in nanosyntax, one must resort to various operations/ technical tricks to achieve the desired result.

It seems to be the case that, as the structure of the verbs becomes more complex, nanosyntax becomes more inadequate, as it is forced to resort to operations or movements which make it less economical or elegant. A nanosyntactic analysis is not impossible, it is, however, costly from the point of view of the system. In contrast, DM would simply fuse the heads:

(44)

```
          initP
          /\
        'x'
         /\
     init    procP
             /\
           'y'
             /\
         proc      GoalP
      thematic vowel
                   /\
              Goal   PlaceP
                      /\
                  Place   N
```
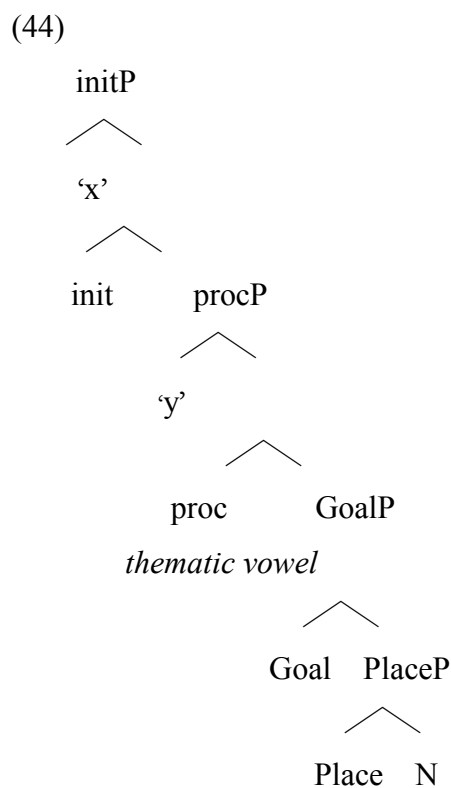
3.4.2   The locatum verb *saddle the horse*

I will now try to provide an analysis for locatum verbs such as *saddle the horse* 'to provide the horse with saddle'. However, the difference comes from the value of the preposition that is at stake.

As remarked by Hale & Keyser (1998, 2002), while *on* involves terminal coincidence, a preposition like *with* involves central coincidence.

Initially, the terms were used by Hale (1986) to capture the difference between dynamic (*The person ran to the hill*) and stative (*The person stood on the hill)*. Central coincidence is, however, different from stativity (*The horse ran along the river*), though most examples with central coincidence are stative. In a nutshell, terminal coincidence denotes a changing relation between figure and ground (the end of the trajectory of the figure coincides with the place), while central coincidence indicates a constant relation between figure and ground.

The preposition *with* has a wide range of interpretations: accompaniment (*a steak with a bottle of wine*), possession (*the man with a red moustache*), instrument (*cut it with a knife*), manner (*the children shouted with joy)*, and simultaneousness (*the pressure varies with the depth*)*,* all of which are summed up by Rapoport (2011) by the term *a locative relation of accompaniment*.

A different view is embraced by Svenonius (2007), however, according to whom *with* is a functional preposition, given that its meaning varies with the meaning of the verb (*We sprayed the dog with tomato juice*, *We left the dog with tomato juice, We advertised the dog with tomato juice).*

In what follows, I would like to suggest a possible analysis for *saddle the horse* starting from the idea that locatum verbs are more or less like *give* verbs (they either receive a change of location paraphrase (*put the saddle on the horse*) or a transfer of possession paraphrase (*provide the horse with a saddle)*). If this is indeed the case, this means that looking at the analysis of *give* constructions offers insight into the analysis of locatum verbs. Harley (2002) provides the following representations for *give* constructions:

(45) Harley's Analysis (2002: 34) for *give a letter to Mary*

```
                    vP
                   /  \
                   v'
                  /  \
               v       PP
             CAUSE    /  \
                    DP    P'
                 a letter /  \
                         P    PP
                       P_loc  to Mary
```
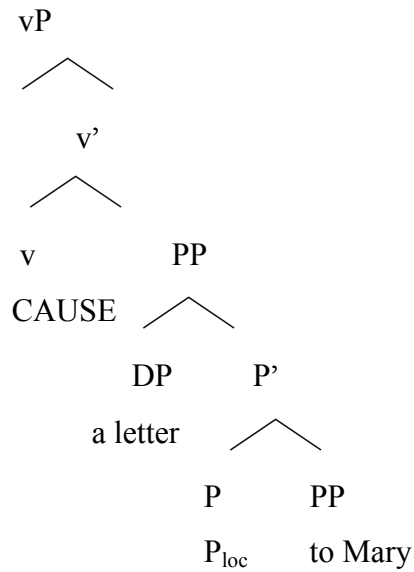
(46) Harley's Analysis (2002: 34) for *give Mary a letter*

```
                 vP
                /  \
                v'
               /  \
            v       PP
          CAUSE    /  \
                 DP    P'
                Mary  /  \
                     P    DP
                  P_have  a letter
```
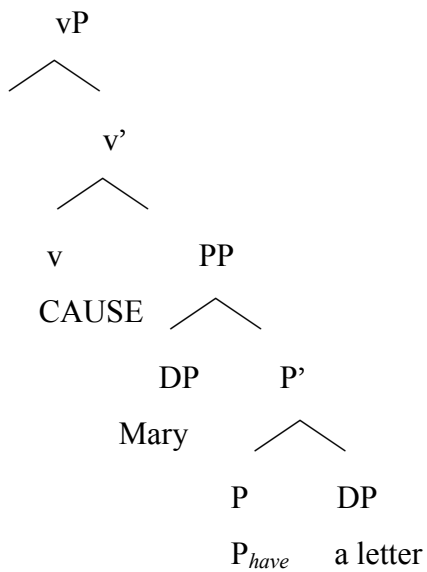
However, while these two representations correspond to two distinct constructions, in the case of *saddle the horse,* it is not clear which representation should be the adequate one (a transfer of location representation or a transfer of possession representation). Since *saddle the horse* seems to have both interpretations, choosing one analysis over the other would neglect a significant part of the meaning of the denominal.

Saddle a horse can be analyzed either as *put a saddle on a horse*:

(47) *put a saddle on the horse*

```
              initP
             /    \
          'x'      initP
                  /    \
               init     procP
                       /    \
                    'y'      procP
                            /    \
                         proc     GoalP
                                 /    \
                              'y'      /\
                                     Goal  PlaceP
                                          /    \
                                      Place     DP
                                              the horse
```
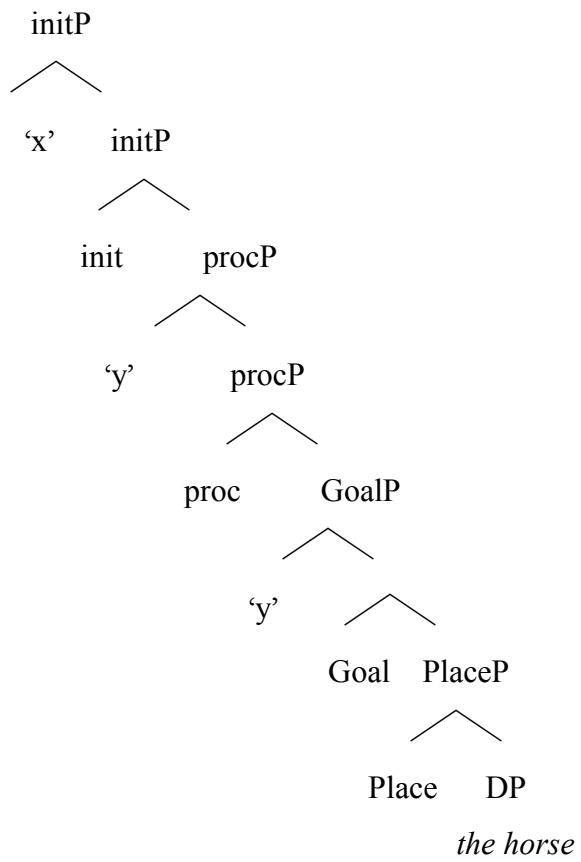
or as *provide the horse with a saddle*:

(48) *provide the horse with saddle*

```
              initP
             /\
          'x'   initP
               /\
            init   procP
                  /\
               'y'   procP
                    /\
                 proc   PosspP
                        /\
                     'y'   PosspP
                          /\
                      Possp   N
                             saddle
```

⇨ *saddle the horse*
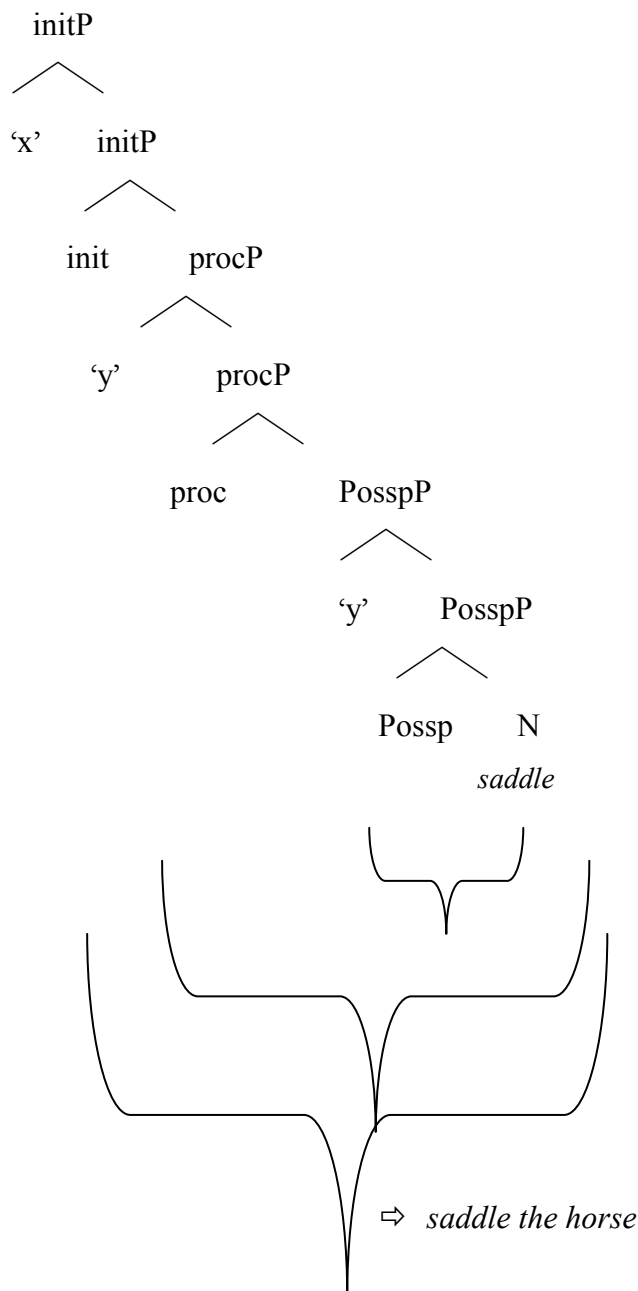
The first representation poses problems both for an incorporation/ conflation account, and for a Phrasal Spell-Out account: *saddle* appears in a Specifier position-[Spec, Possp], [Spec, Init] , and it is not clear in what way it can be spelled out together with the head by an item which lexicalizes both directly. Moreover, such a representation would treat *the horse* as the complement of a PlaceP, whereas *the horse* is a direct object of the verb. I will thus adopt the second representation, where the lexicalization is very similar to that of location verbs.

If one assumes there are two items *saddle* in the lexicon: one that is an N, one that is an InitP, represented as the tree in (48), then one can resort to silent items such as the silent preposition *WITH* spelling out PosspP, in a similar way to silent prepositions (*IN, ON*) spelling out GoalP in the case of location verbs. On the one hand, such a postulation explains the absence of a preposition having the same form as the root (*corral, *saddle). On the other hand, it feeds the structure with meaning in addition to the meaning indicated by the projections in the structure: the difference between *IN* and *ON*, for instance, is not captured syntactically (as both are GoalP, PlaceP). However, not postulating silent items in the case of verbs (taking the Init, Proc, (Res) structure to be pretty adequate for capturing the meaning), but postulating them in the case of prepositions might seem a bit ad-hoc.Why should one not postulate a silent item *PROVIDE?* As argued before, a viable solution for English (though not for Romanian, where the verb has a different form from the noun) would be underassociation (Ramchand 2008b), arguing that the verb *corral* can spell out N if its features [init, Proc, P] are underassociated. It will then unify with the content of *WITH* and the content of *PROVIDE*. However, such an analysis is allows for items to be inserted at the terminal nodes.

If one chooses to give up silent elements altogether, one could have two items in the lexicon: an element *corral₂* spelling out <Init, Proc, Goal, Place, N> and an element *saddle₂* spelling out <Init, Proc, Possp, N> (where Possp would be a preposition indicating possession, or one could use the feature P [+accompaniment]), apart from the items *corral₁* and *saddle₁* spelling out N:

(49)   initP

        'x'   initP *<=corral₂*

               init   procP

                   'y'   procP*<=corral₂*

                       proc   GoalP *<=corral₂*

                             Goal   PlaceP *<= corral₂*

                                  Place   N *<= corral₁*

(50)   initP
          ╱╲
    'x'   initP<= *saddle₂*
              ╱╲
          init   procP
                    ╱╲
              'y'   procP<= *saddle₂*
                        ╱╲
                  proc   PosspP
                            ╱╲
                      'y'   PosspP <= *saddle₂*
                                ╱╲
                          Possp   N
                                    saddle₁
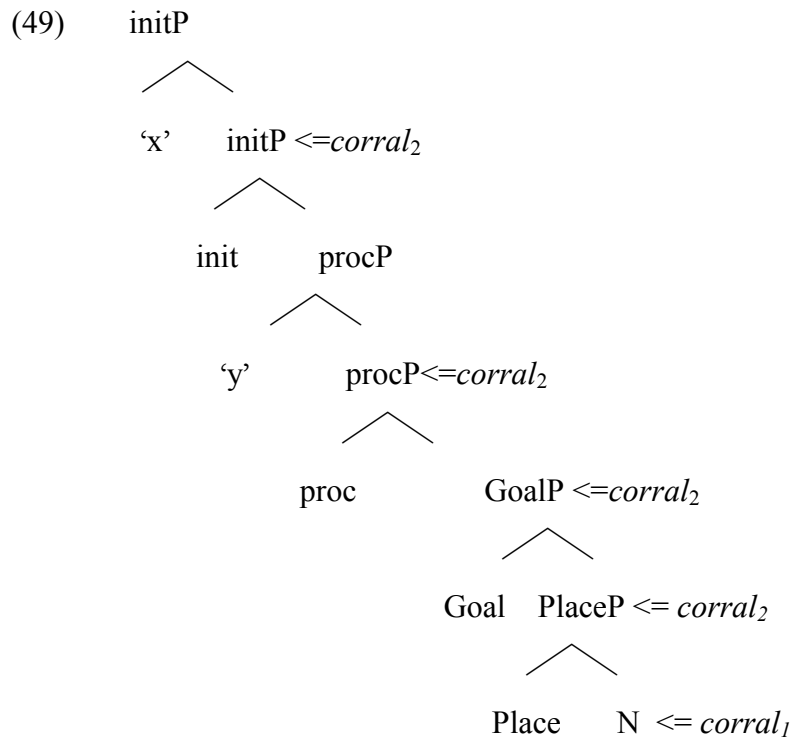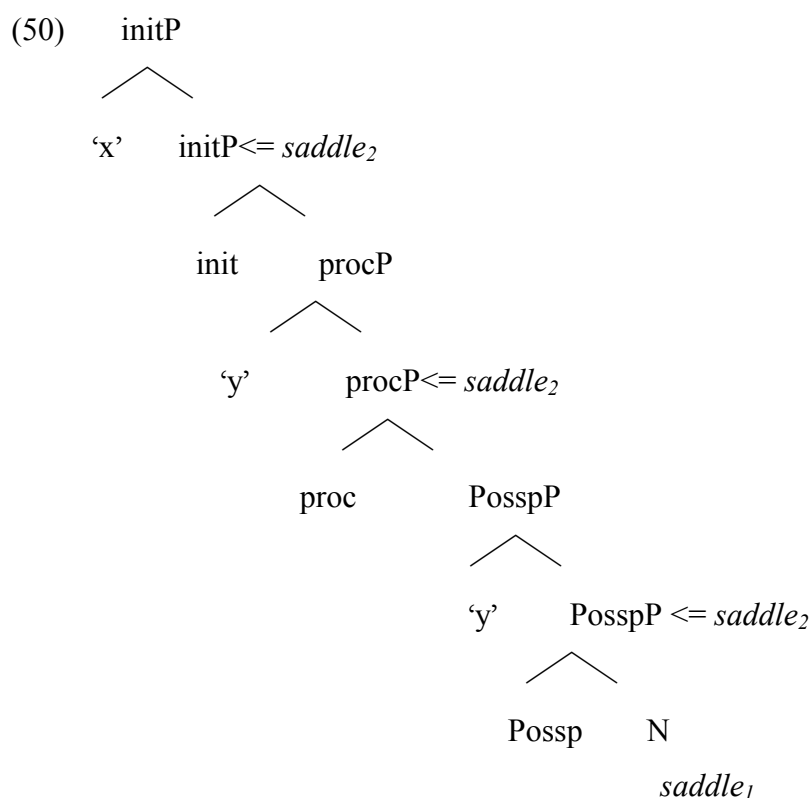
Such an option is possible, and, to a certain extent, preferable if one chooses a Phrasal Spell-Out approach. While such an account fails to capture subtle differences such as that between the preposition *ON* and the preposition *IN*, for instance, it has the advantage of not resorting to silent lexical material. However, unless it introduces the thematic vowel or a prefix in the structure, it fails to account for Romanian data. *Saddle₂* is not a suppletive form, neither is *înșeua (saddle)*.Storing them as suppletive forms is a problem.

Another option would be to store a single item, the verb *saddle*, which would spell out all the nodes below, including N. While this suits English, it does not work for Romanian, where one has to store the N also, given that the verb and the noun have different forms.

The third no silent item option would be to be to store only the noun (and the thematic vowel separately), and lexicalize the verb via inheritance. In the case of a verb such as *înșeua* (prefix-saddle-thematic vowel):

(51)   initP
```
              initP
            /\
        'x'   initP   în̦eua
              /\
          init   procP
                /\
            'y'   procP-a
                  /\
              proc   PosspP
                    /\
                'y'   PosspP în-
                      /\
                  Possp   N
                          ̦a
```
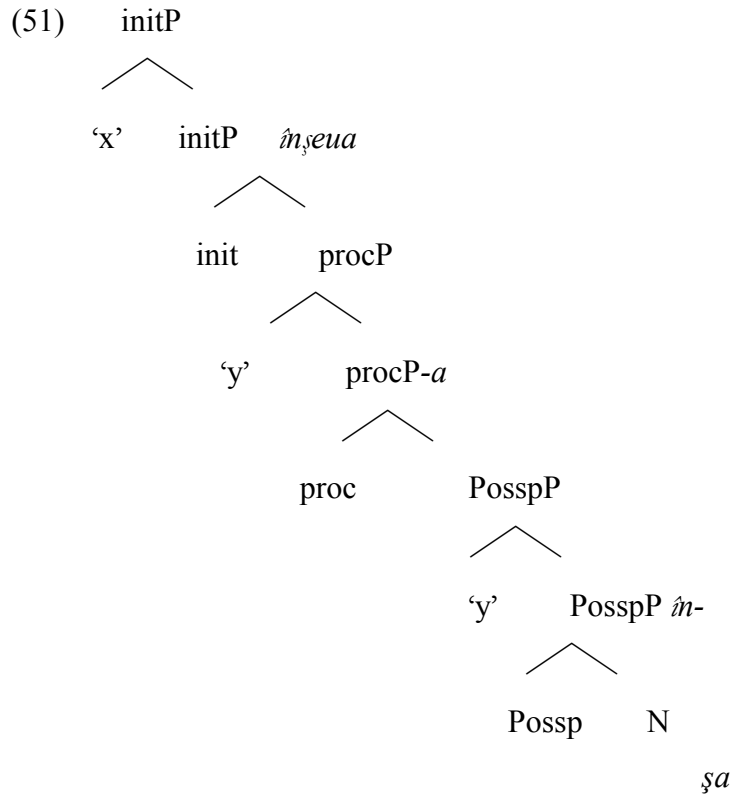
If one adopts a phrasal spell-out account, one is forced to say either that PosspP lexicalizes twice (once as the prefix *în-*, and for this to happen, N has to move, and once as *în̦a*), that there is fusion between PosspP and N, or that *în-* lexicalizes the head Possp, and thus introduce terminal spell-out in a system relying on phrasal spell-out, and PosspP lexicalizes via inheritance as *în̦a*. The same thing is true for procP: one can either claim that procP is lexicalized twice (once as *–a*, and for this to happen, PosspP must move out of its position, once as *în̦eua*), that there is fusion between procP and PosspP, or that *–a* is the lexicalization of proc, and ProcP is the lexicalization by inheritance of proc and Possp, but this would imply introducing terminal spell-out in the framework.

In DM, *în̦eua* is simply a case of fusion of terminal nodes (heads): N fuses with Possp, then the result fuses with proc, with init:

(52)   initP
```
             initP
            /\
          'x'    initP
                /\
             init    procP
                    /\
                 'y'    procP
                        /\
                     proc    PosspP
                      -a     /\
                          'y'    PosspP
                                 /\
                             Possp    N
                              în-      șa
```
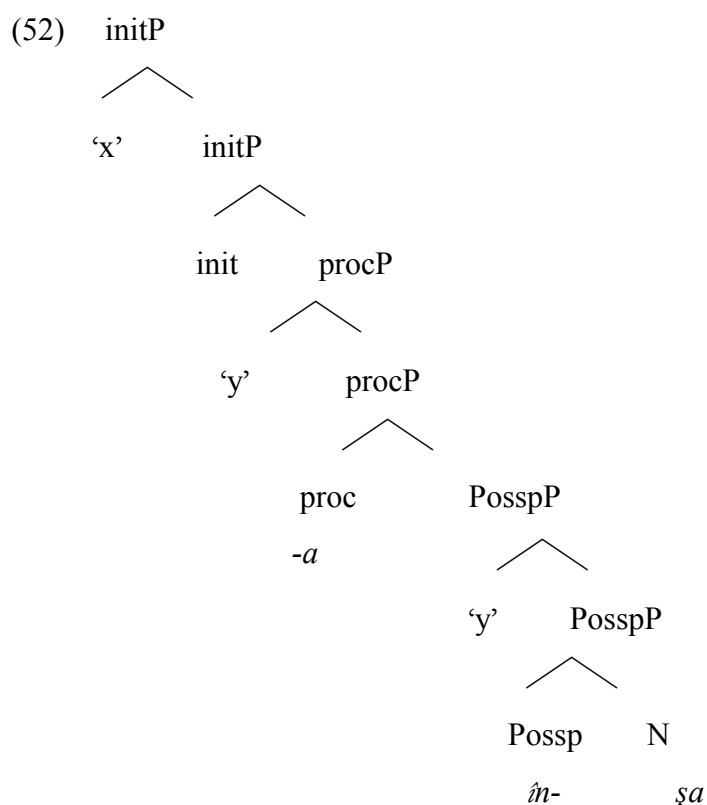
In conclusion, it seems to be the case that always taking the pains to lexicalize an XP never an X implies resorting to lots of movement. The nanosyntactic account is often forced to resort to movement or to principles/ operations that are not nanosyntactic (such as terminal spell-out, for instance). While the account has no problems for a verb with a simple internal structure like *dance*, it becomes increasingly more inadequate as the verbs become more complex. Please note that it is not the case that a nanosyntactic account is impossible, it is simply the case that the DM, for instance, can offer a much more economical analysis of the data.

4. The Issue of Complex Resultatives and PathPs. Verb-framed vs. Satellite-framed

In what follows, I want to test whether Phrasal Spell-Out can capture the behaviour of denominals with respect to complex resultatives or PathPs.

4.1. Complex Resultatives

As Mateu (2002) argues, unlike English, Romance does not allow complex resultatives (PP/AP) in locative structures:

(53) a. John rubbed the fingerprints off the crystal ball.

b. John rubbed the crystal ball clean of fingerprints.

c.*Juan frotó las huellas   de la bola de cristal. (Spanish)

Juan rubbed the fingerprints off the ball of crystal.

d.*Juan frotó la bola de cristal limpia de huellas. (Spanish)

Juan rubbed the ball of crystal clean of fingerprints.

e. Juan frotó la bola de cristal. (Spanish)

Juan rubbed the ball of crystal.

According to him, there is a *morphosyntactic* reason that prevents Romance from generating complex resultative constructions such as *John rubbed the crystal ball clean (of fingerprints)*, i.e. lexicalization of manner/ means and directionality/ result:

(54) *Lexicalization Patterns* (Talmy 1985, 1991)

a.   Germanic (e.g. English): conflation of V with Manner

b.   Romance languages (e.g. Spanish): conflation of V with Path/ Directionality

Complex resultatives in locative sentences only occur in satellite-framed languages (like English), where the Manner is conflated into the verb (*The little girl danced into the room*), and Path is stranded, but not in verb-framed languages, like Spanish, where the Path is conflated into the verb, and Manner is expressed as a satellite (Mateu 2000, 2002). In phrasal spell-out terms, this would translate as:

(55) *initP*

'x'

    init   *procP*

        'x'

           proc   SourceP

           rub

                   'y'

                        Source   RouteP

                                  Route   GoalP

           off   Goal   PlaceP

                                            Place   DP
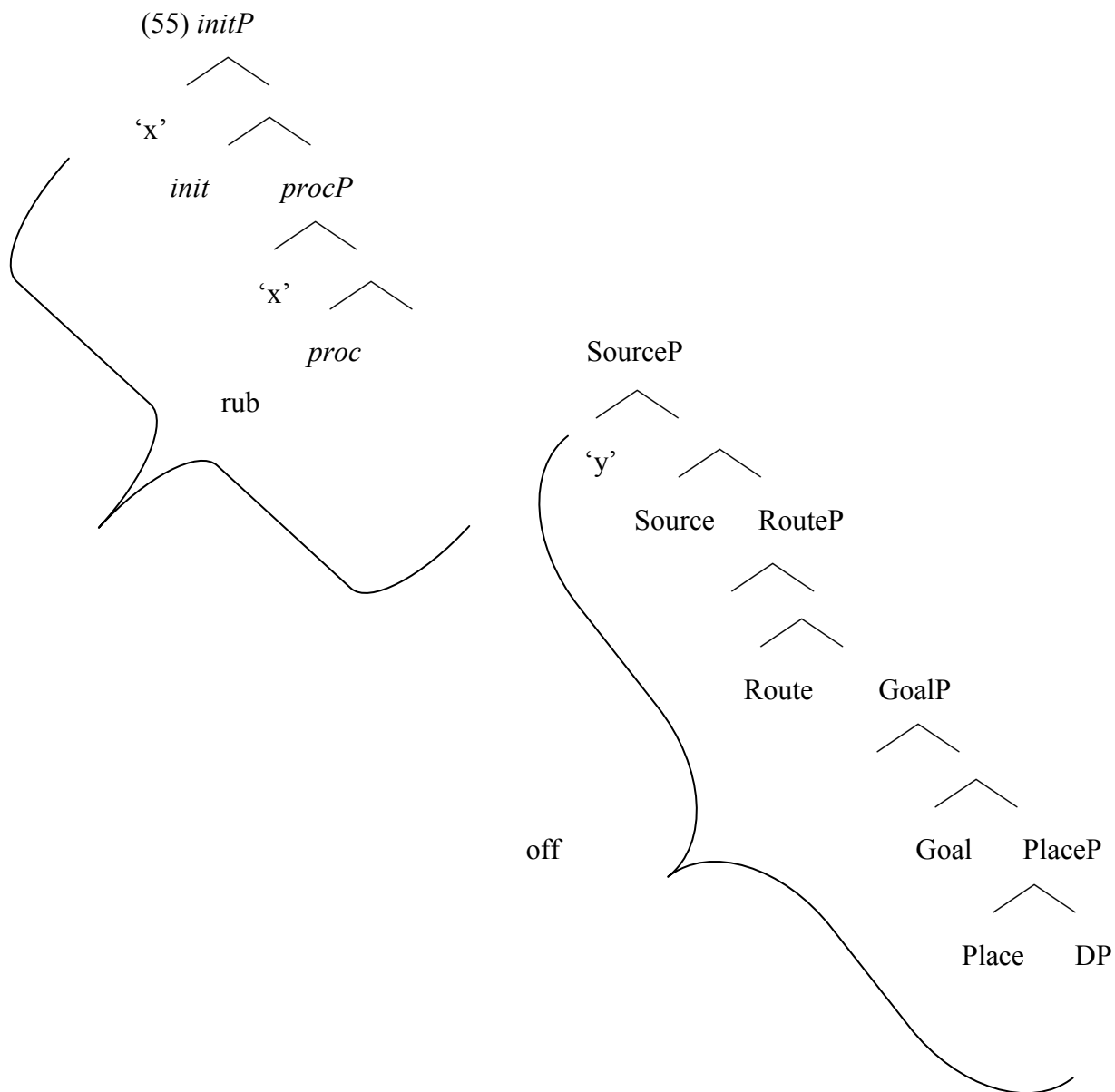
The problem here would be that nanosyntax stores items as trees, hence, this creates a problem for items selecting complex resultatives, as storing Vs+ complex resultatives as items would result in a very burdensome lexicon. In an attempt to comply to phrasal spell-out, one relies on a lot of movement operations (to lexicalize the resultative, one needs to move the DP, to lexicalize InitP, ProcP, one needs to move the whole resultative, and the right order is not even obtained). An alternative would be to argue the complex resultative combination is a syntax phenomenon, not a lexicon phenomenon. Phrasal Spell-Out can still be used as a lexicalization procedure, without

storage of trees in the lexicon being the case, but even in this case, the attempt appears to be too complicated. It seems to be the case that allowing for terminal spell-out would save one the trouble of a lot of movement, but then one would have a competition between terminal spell-out and phrasal spell-out, and it is not clear which to choose.

4.2 Path Ps

As for PathPs, the difference between *John danced into the room* and *Ion a dansat în cameră.* ('John has danced in room.') can be explained by different spell-out areas. While *into* spells out GoalP and PlaceP, *în* spells out PlaceP:

(56)

initP
- 'x'
- *init* *procP*
  - 'x'
  - *proc* GoalP
    - Goal PlaceP
      - Place DP
        - *the room*
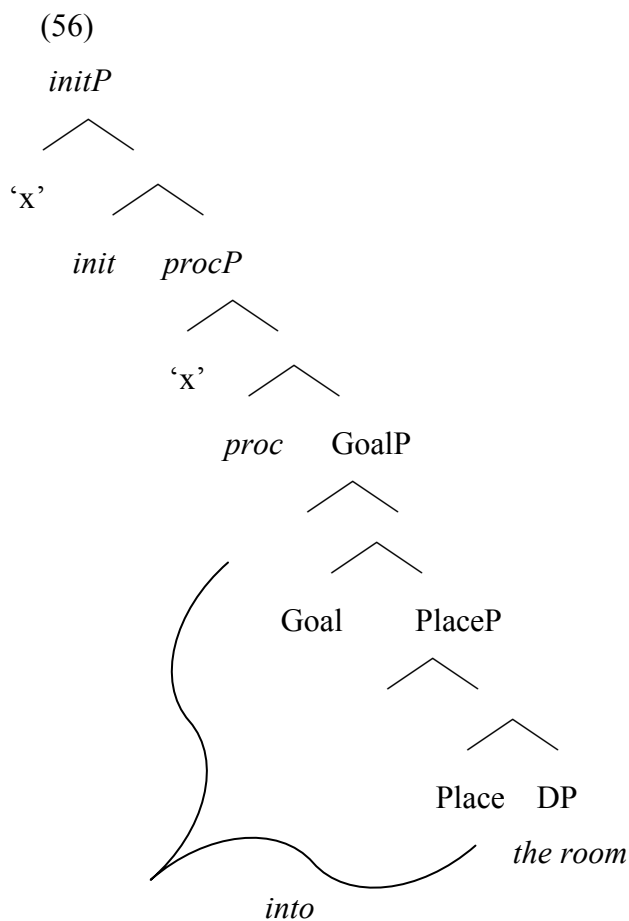
into

It is not the case that the Path (Goal) is conflated onto the verb, *into* simply spells out Goal and Place. However, not all verbs are like this. While *dance* does not contain Goal or Place, *enter*, for

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instance, does, as it it has a special internal structure[36]. The same burdensome lexicon/ syntax issue discussed for complex resultatives is the case for Vs+PathPs. Also, adopting a nanosyntactic view would lead to positing lots of movement to obtain the desired output (movement of the DP *the room* so as to allow for the lexicalization of PlaceP, and then GoalP, movement of the GoalP out of its position to allow for the lexicalization of ProcP, and then InitP and so on). In conclusion, it seems to be the case that embracing a phrasal spell-out account manages to capture the formation of denominals, while having problems in accounting for their behaviour. The bigger the lexical material one has to account for, the more problems for nanosyntax.

5. A Spanning Account of Denominals

5.1 Defining Spanning

Although one can account for denominal verbs in the nanosyntactic framework, using phrasal spell-out sometimes leads to a complicated series of movements which might be argued make the approach undesirable. A different way to tackle the formation of denominal verbs would be *spanning*, a version of Distributed Morphology where Spell-Out recognizes *spans* rather than terminal nodes like DM does or phrasal nodes like nanosyntax does. Following Svenonius (2012), I will assume a *span* can be defined as a complement sequence of heads in a single extended projection, where an extended projection (Grimshaw 2005) is made of a lexical head and its associated functional projections (D for N, T for V). Such a view suggests that linguists should shift their attention from X^0 as the essential element to something bigger, and attempts to redefine the word as a span, a syntactic complex (of an extended projection) (Svenonius 2014).

If, for instance, one takes a PP which contains a noun phrase DP_1 with a prenominal possessor DP_2:

---

[36] The verb-framed (conflating Path, expressing manner as a satellite)/ satellite-framed distinction (conflating Manner) has nothing to do with the expression of Manner, as in both Germanic and Romance, one can say *He entered the room dancing*, rather, it is related to the spelling out of Path and Place

(57)

```
                    PP
                   /\
                  /  \
              P        DP₁
                      /\
                     /  \
                 DP₂     D₁
                        /\
                       /  \
                   D₁      NumP
                          /\
                         /  \
                      Num    NP
```
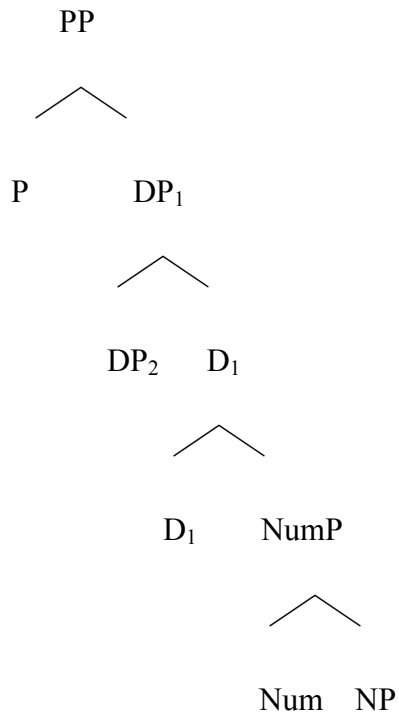
the spans in the main projection line would be:

(58)   P- D₁, P-D₁-Num, P-D₁-Num-N, D₁-Num, D₁-Num-N, Num-N

This becomes very clear in Brody's (2000) mirror theory representation, where phrase labels are considered redundant and eliminated, and complements are represented by means of right-sloping lines:

(59)   P
          \
           \
            D₁
            /\
           / \
        D₂   Num
                 \
                  \
                   N
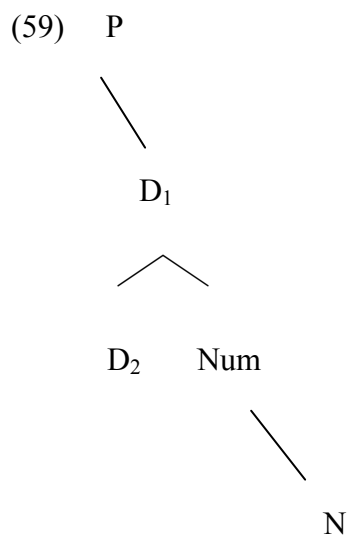
Another example would be:

(60) T
$$
\begin{array}{l}
\quad\text{T}\\
\qquad\diagdown\\
\qquad\quad\text{Asp}\\
\qquad\qquad\diagdown\\
\qquad\qquad\quad\text{v}\\
\qquad\qquad\qquad\diagdown\\
\qquad\qquad\qquad\quad\text{V}
\end{array}
$$
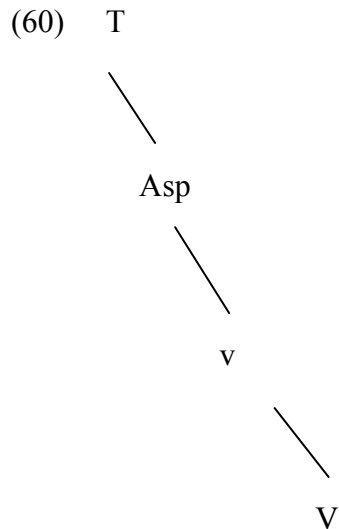
where one can detect the following spans:

(61) T-Asp, T-Asp-v, T-Asp-v-V, Asp-v-V, Asp-v, v-V

A morpheme can spell out one head (which is a trivial span), two heads or even more, on condition that the heads be in a complement relation with each other. In an incorporation theory, this was captured by head-movement. In spanning, however, head-movement thus becomes a matter of where in a span the word linearizes (Brody 2000).

5.2 Brody's Mirror Theory (2000)

An important innovation is Brody's direct linearization mechanism:

(62) *Word Mirror*: The syntactic relation 'X complement of Y' is identical to an inverse-order morphological relation 'X specifier of Y' (where the latter gives rise to the morphological strucure [X [Y] linearized from left to right)

According to Brody (2000), there are no intermediate projections. Moreover, the Brodyian system adopts the view that unnecessary labels should be eliminated. Given that it is always the head of a projection that selects another projection, it seems legit to argue that heads select heads, hence, there is no need for resorting to redundant labelling X/ XP if one can make use of one label only, X (*Telescope*). In this way, by means of *Telescope*, a structure such as:

(63) $[_{ZP}\,Q\,Z\,[_{YP}\,R\,Y\,[_{XP}\,S\,X...]]]$

becomes

(64)　　Z

```
        Z
       /\
      Q   Y
          /\
         R   X
              \
               S
```
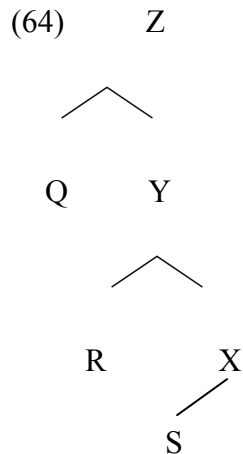
where Q, R, S are the specifiers of Z, Y, X respectively. Specifiers are linearized to the left of their heads, while heads are linearized to the left of their complements. The Brodyan approach is a direct linearization theory (DLT) where linearization is read off the structure. As shown by Ramchand (2014), this has a serious advantage over the Linear Correspondence Axiom (LCA) tradition (Kayne 1994 a.o). In the antisymmetrical approach, it is assumed that asymmetric c-command means precedence. According to Kayne (1994), this accounts for the empirical asymmetry between head-first and head-final structures (the absence of V second to last languages, the fact that when a modifier of a head occurs after the head, the order can reflect either the basic order or the inverse order, whereas when a modifier of a head occurs before a head, it reflects the basic order a.o.). The problem is that, in a language which looks head-final on the surface, one needs to first create the appropriate c-command structures before letting the LCA linearize it, and this is done by resorting to various movement operations, many of which are unmotivated. According to Brody (2000) and Ramchand (2014), a desirable alternative to word order movements (which seem to be less motivated than criterial feature checking movements) would be to argue that there is a specific linearization algorithm of the base structure.

Brody's theory is highly innovative as it allows one to state a language specific parameter concerning where a morpheme spells out rather than resort to syntactic movement. Head-movenemnt is basically eliminated. Specifiers are linearized to the left of heads, and heads to the left of complements. Brody's theory posits a morphosyntactic distinction between specifiers and complements:

(65)　　a. A specifier is a distinct word from H and linearly precedes H (where H is the head)

b. A complement is part of the same word as H; words are head-final.

Svenonius (2014: 7) exemplifies this by looking at the aspect-verb order:

(66)   a. Specifier word precedes head: *already go*

b.Complement stem precedes bound morpheme: *go-ne*

While, if the aspectual modifier is the specifier of the verb, we get the order [$_w$ aspect] [$_w$verb] (where the aspect and the verb each represent a word), if the aspectual modifier selects the verb as a complement, then the resulting order is [$_w$ verb-aspect] (where the verb and the aspectual modifier form a word together).

The location/ height of spell-out is indicated by Brody by means of the diacritic @. For instance, in the example in (67):

(67)   Z

Q   Y

R   X@

S
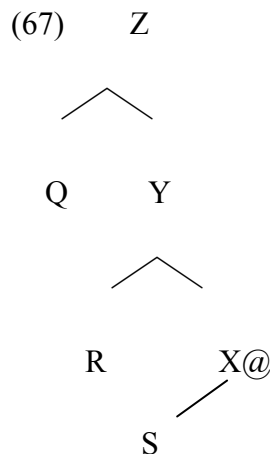
 the diacritic @ indicates that the morphological word [X [Y [Z]]] spells out in the X position of the tree, and the linearization would be *Q R S [X-Y-Z]*.

While Brody (2000) assumes each complementation structure contains at most one @ feature, Svenonius (2014) argues instead that it can contain more than one. Such would be the case of the phrase *the man*:

(68)   D@

  the

            N@

       man
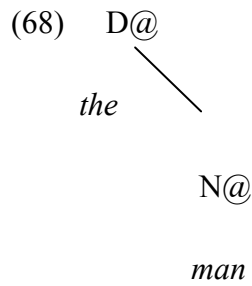
In addition, Ramchand (2014) makes use of a * diacritic to indicate certain language specific facts related to linearization, in particular, the fact that the head thus notated forms a word in the Brody-an sense with the head immediately below it. In Bangla, for instance, one would have something like:

(69)   Neg*

  P   Fin@

     Q   T*

        R   Asp*

           S   V@
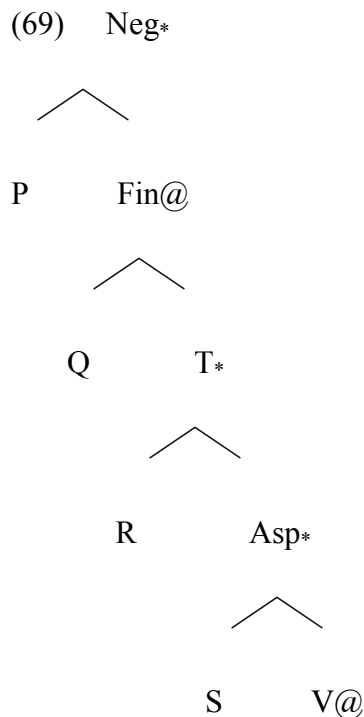
Linearized as: P Q [Fin-Neg] R S [V-Asp-T]

In the example above, Fin forms a mirror theoretic word with Neg, Asp forms a mirror theoretic word with T, and V forms a mirror theoretic word with Asp. These are language specific facts about morphological composition, and they need to be learned as such.

In opting for the use of the diacritic *, Ramchand goes against Brody's idea that phrases can select whether they are merged as specifiers or complements, and his treatment of specifierhood as independent of semantic differences.

The need for such a diacritic has also been noted by Svenonius (2014), who uses instead the feature w to mark word boundaries, or as Svenonius (2014: 11) puts it, "whatever it is that causes that point of the syntactic derivation to access the vocabulary list for lexical insertion.". Svenonius shows on the basis of an example from Brody (2002b) that using only @ fails to derive the observed word boundaries. In a language with variable order like Hungarian, the '@' feature will have variable realization, as it is the case in the following verbal complexes (head-initial or head-final):

(70)   a. Utalok kezdeni   jarni   uszni.

         hate.I begin.INF *go*.INF *swim*.INF

         'I hate to begin to go swimming (regularly)'

        b.Utalok uszni   jarni   kezdeni.

         hate.I swim.INF *go*.INF   *begin*.INF

         'I hate to begin to go swimming (regularly)'

While the head-initial structure can be accounted for by means of the diacritic @, the head-final structure is problematic:

(71)   I@

　　　utal-ok

　　'hate'　　　　V

　　　　　　INF@

　usz-ni jar-ni kezde-ni

'swim-INF go-INF begin-INF'   INCEP   (INCEPTIVE)

　　　　　　　　　　INF

　　　　　　　　　　　　VEN (VENITIVE)

　　　　　　　　　　　　　　　INF

　　　　　　　　　　　　　　　　　V
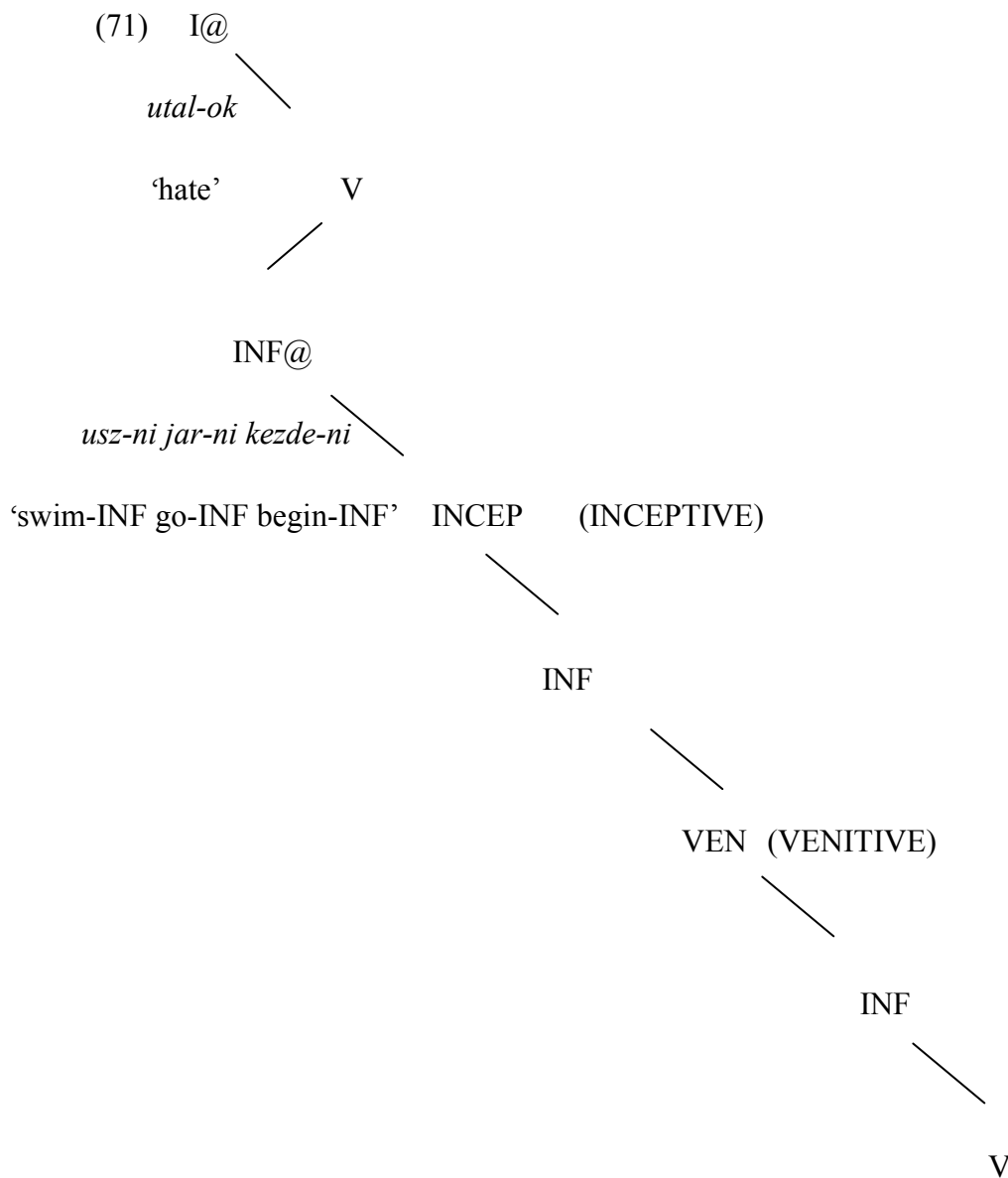
　　　　Brody (2002b) uses @ to indicate that the cluster is a single word, but the diacritic could have appeared lower without any difference. The problem is that this account fails to derive the word boundaries. For this reason, Svenonius (2014) introduces the feature w at word boundaries, indicating thus (cyclic) lexical access. Moreover, he places the @ feature lower in the head-final structure (on the basis of OV tendencies):

(72)   I@

     utal-ok

   'hate' -I   V

                  INF^w

                           INCEP   (INCEPTIVE)

                                          INF^w

                                                    VEN (VENITIVE)

                                                                INF^w

                                                                          V@

                                                       usz-ni jar-ni kezde-ni

                                                    'swim-INF go-INF begin-INF'
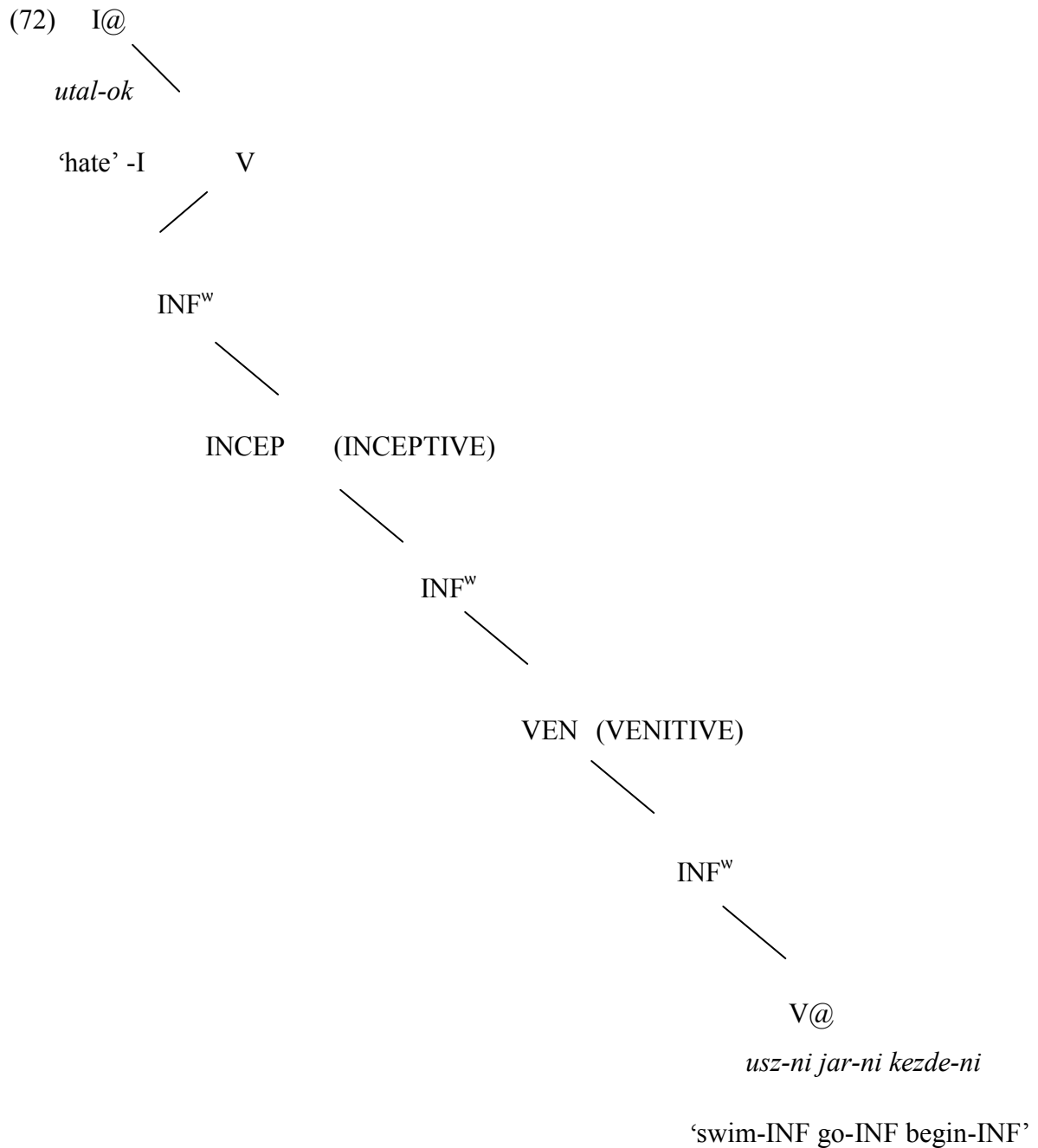
One clearly needs to resort to another diacritic to derive the right order. However, I personally find Ramchand's notation better, as the 'w' feature becomes insufficient if one deals with three heads in a row that form a w together. Instead, the * diacritic marks the fact that the head forms a word with the head immediately below.

Brody's Mirror Theory embraces a different view of words as lexicalization of spans. According to Merchant (2014), for instance, allomorphy can only be conditioned by a span. It is not the case that allomorphy is restricted to two neighbouring elements, nor is it the case that it is completely free from locality constraints. One of Merchant's examples is the behaviour of Negation

and Tense in English: <v, V, Neg, T> are argued to spelled out together (*don't*), supporting the idea that lexical items target spans.

A very important fact is that complementation in an extended projection (C-T-V or P-D-N) is closely related to wordhood. Specifiers represent distinct words and they trigger a different round of lexical access. Svenonius (2014) discusses adjectives, arguing that attributive adjectives in Norwegian are unaffected by phi-agreement, which cannot cross phase boundaries (DP, vP). Adjectives need to be lexicalized separately from the N, they do not represent phases and are not domains of syntactic opacity (as DPs or PPs) (e.g they form idioms *red herring*, while phases cannot form idioms).

Complementation between heads is essential for spanning. As we shall see, this lets us account very nicely for the complement restriction incorporation accounts resorted to so as to explain the formation of denominals (Hale& Keyser 2002). If specifiers are lexicalized separately, while complements are treated as heads selected by the previous head, this means one can explain why a word can only span over complements, and, more precisely, in the case of denominals, why the complement can incorporate, but not the specifier. There will be no need for incorporation, <N, V, v> will simply become visible to the lexicon, it will (possibly) spell out at v, and the result will be *dance*. In a similar way, *corral* will lexalize <N,P, V,v>.

5.3 Spell-Out

In the spanning model, spell-out consists of two steps: L-Match and Insert, an approach motivated by the strict separation of phonology and syntax (Svenonius 2010).

5.3.1 Match

The first step (L-Match) associates syntactic structures with the syntactic features in lexical entries. In each phase, the syntactic structure must be linked to lexical entries, which pair syntactic and phonological information, but L-match operates only on the syntactic features.

L-Match can associate more than one exponent with a node in the tree. In French, for instance, $D_{[+DEF, +F, -PL]}$ can be associated both with *le* <$D_{[+DEF, -PL]}$>, which is unspecified for gender, and with *la* <$D_{[+DEF, +F, -PL]}$>, which is specified for gender (Svenonius 2012). At this point, the spanning approach differs from Distributed Morphology: while in DM, the Elsewhere Principle applies, and the more fully specified alternative is chosen, blocking the other option, in spanning, it is assumed

that this principle does not operate in L-Match, and, instead, indeterminacy is tolerated (Adger 2006, 2010).

Allowing a pool of variants at this level can account for the fact that, in many cases, there is variation in the use of certain forms: it is the routinization of certain structures that makes certain forms more probable than others. Adger (2006: 2) discusses a case of variable agreement with plural NP subjects in Buckie, a little town in the North East of Scotland:

(73) a. Buckie boats were a'bonny graint.

   'Buckie boats were all nicely grained'

   b. The mothers were roaring at ye comin'in.

   'The mothers were shouting at you to come in.'

arguing that both variants are available at L-Match. Interestingly, the more frequent a verb is in the input, the more routinized its forms are. When a verb is frequent, there will be two ways to get the *–s* form: a linearization of the structure on a label by label basis, and a routinized suppletive form. When a verb is not frequent, on the other hand, the first option will be available. The system can thus capture the generalization that frequent verbs exhibit more variability in the forms than infrequent verbs.

According to Adger (2010), suppletive morphology should be handled by allowing both the suppletive form and the non-suppletive form in the pool of variants. For instance, the form *was* is simply listed as the vocabularization of [be V v T$_{[past]}$ C], but the form [be-Ø-Ø-ed-Ø] is also a possible vocabularization. In Distributed Morphology, blocking would rule out the regular past form of the verb *be*. In contrast, in the spanning framework, allowing variation, blocking is not a principle of grammar, but is simply a consequence of the the routinization of certain structures. Both *was* and *beed* exist in the pool of Variants; however, *beed* is very low in the Pool of Variants, and it will never be used.

L-Match is blind to phonology, however. It cannot solve cases of contextual allomorphy, such as the use of the English determiner *a /ə/* before consonants or *an /ən/* before vowels. Both options are assumed to be available as the output of L-Match, and, hence, they must be indistinguishable to the syntax: a way to handle this is to place them both in the same lexical entry *a, an* <D$_{[-DEF]}$> <=> {/ə/, /ən/}.

5.3.2 Insert

After L-Match, the syntactic features are no longer available, and only phonology is relevant.

There is a linearization algorithm which establishes the order in which the phonological units are concatenated on the basis of syntactic dependencies. In the case of unincorporated complements, dominance maps to precedence. Also, morphologically incorporated complements precede heads (Brody 2000).

In example (10), the structure in L-Match is converted in Insert to the structure on the right (Svenonius 2010: 6):

(74)   D$_{[DEF, F]}$ ɸ

le <D$_{[DEF]}$>   *la* <D$_{[DEF, F]}$ NP   => /lə/   /la/   w

                             école   /ekɔl/
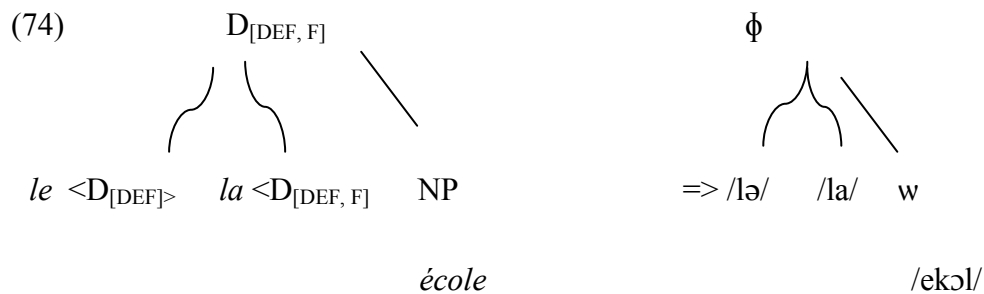
The straight lines indicate syntactic dependencies, while the curvy lines indicate lexical dependencies. *La* is chosen over *le* as *le* without is defective vowel violates a constraint that is low-ranked against deleting defective segments, while *la* without its defective vowel would violate a higher-ranked constraint against deleting fully specified segments. The choice for a particular item can thus be decided by an Optimality Theory (OT) phonological model (Bye and Svenonius 2010). Fusion is also a possibility at this level (*de+ le= du*).

5.4 Applying Spanning to Denominals

In what follows, I will try to provide an account for denominal verbs in a spanning framework (Brody 2000, Adger 2010, Svenonius 2010, 2014, Bye & Svenonius 2010, Ramchand 2014, Merchant 2014). I will use both the @ and the * diacritic, the @ diacritic to indicate the place/ height of spell-out, the * diacritic to indicate the formation of a morphological word with the head immediately below[37].

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[37] I have adopted this use of the diacritic from Ramchand (2014) to indicate the head immediately below. However, if one adopts a spanning version where there are no silent elements, it makes no difference for the current approach if one

In the case of the denominal verb *dance,* one can construct the following representation:

(75)   Init@∗

           ╱‾‾‾╲

   'x'   Proc∗

              ╱‾‾‾╲

      'x'   N
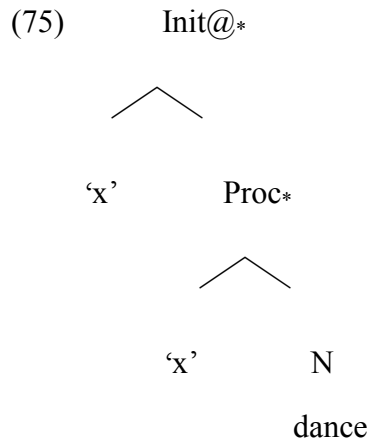
             dance

Linearized as x [N Proc Init] .

At L-Match, we get the item *x [dance-Ø-Ø]* if one assumes that the lexicon contains only the nominal item *dance*.

If there were two such items in the lexicon, then at L-Match there would be a competition between *x [dance-Ø-Ø]* and *x dance*, and the second would win.

If the lexicon only contained the verb *dance*, on the other hand, L-Match would give use the item *x dance*.

Of course, one could try to resort to silent items, constructing a representation where Proc is lexicalized as *DO,* and Init is lexicalized as *CAUSE*, for instance. One must take care how to lexicalize the tree, however. If one assumes a tree which lexicalizes in three places:

---

chooses this particular use of the diacritic, or the Bye & Svenonius (2010) use of this diacritic indicating all the heads below / Svenonius (2004)'suse of the *w* feature marking word boundaries.

(76)   Init@

        'x'   Proc@

              'x'   N@
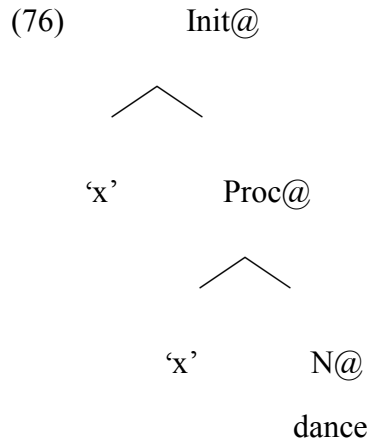
                   dance

Linearized as x Init Proc N

and is lexicalized as *John CAUSE DO dance,* then there will be no competition in this case with another verb *dance.* To create a competition with the verb *dance*, one would have to construct the following tree:

(77)   Init@*

        'x'   Proc*

              'x'   N
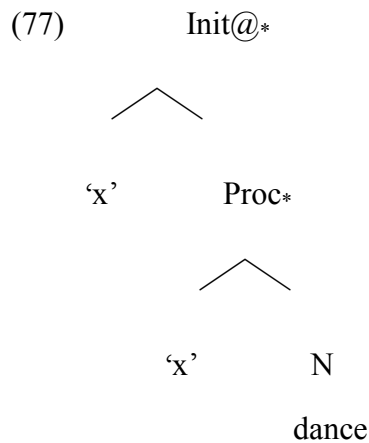
                 dance

Linearized as x [N Proc Init]

Leaving the x aside, at L-Match, there would be two variants: one where Init is *CAUSE*, Proc is *DO* (*dance-DO-CAUSE*), and N is *dance* (forming a morphological word together) and an item *dance*, and the one that would win is the second. If one assumes a silent item approach, the lexicon could contain two lexical entries: both a noun and a verb *dance*[38], or it could contain only the verb

---

[38] In the example above, I have assumed the order *dance-DO-CAUSE*, but it is equally possible to construct a representation that gives the order *CAUSE-DO-dance*:

dance having the features [init, proc, N], and it could be assumed that the features [init, proc] could underassociate (*dance* [init, proc] could be inserted under N).

However, for the sake of simplicity, to avoid redundancy (the silent items would only duplicate the information already expressed by the projections), and also, given the fact that the silent item approach does not cope well with the Romanian data, where the verb and the noun have the same form), I will adopt the version where no silent elements are inserted.

The same thing in (69) happens in Romanian:

(70)   Init@*

        ‘x’   Proc*

               ‘x’   N
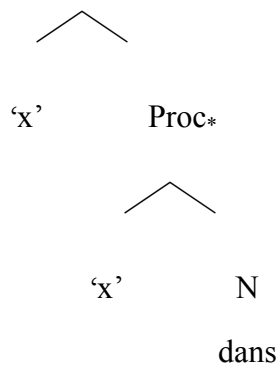
                       dans

Linearized as x [N Proc Init].

(i)   Init@*

       ‘x’   Proc@*

              ‘x’   N@
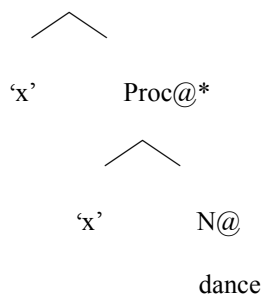
                      dance

Linearized as x Init-Proc- N

At L-Match, there will be a competition between *CAUSE-DO-dance* and *dance*, and *dance* will win.

At L-Match, we get *x [dans-Thematic Vowel-0]*, where x can be lexicalized by *Ion (John)*, for instance. There will be several candidates for the verbal declension (*-a, -ea, -e, -i,-î*). The choice of the thematic vowel is a matter I will not go into. It most certainly is conditioned phonologically, at least partly (by the consonants present in the root, the vowels in the root etc). If the choice were purely motivated phonologically, then one might assume L-Match will does make any choice in particular at this point, and they will all remain in the pool of variants until Insert (a phonological component of Spell-Out) will choose *–a* (on phonological grounds). If, however, the use of a particular declension has other explanation (historical), then the situation proves to be more complicated than that, and L-Match might already choose a particular form (the lexicon might contain a list of all the roots that a particular thematic vowel can combine with). As already argued before, I embrace this view.

As far as a structure such as *Laura danced into the room* is concerned, the structure we are are dealing with is:

(71)   Init@*
         / \
      'x'   Proc*
             / \
          'y'   N
                 / \
              Goal@*
              / \
           'y'   Place
                  / \
               'y'   D@
                      / \
                    N@
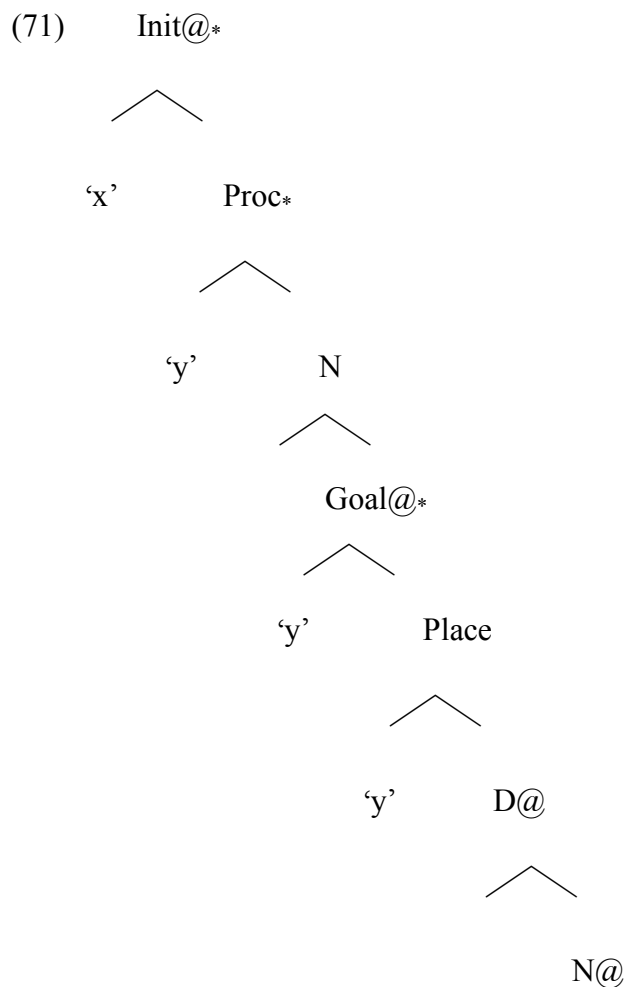
Linearized as: x [N Proc Init] [Place Goal] [D N] where N D spells out at D and N (as also assumed in Svenonius (2014))

Dance a dance could be be represented as:

(72)   a. Init@∗

```
          ⌃
    'x'       Proc∗
              ⌃
         'x'      N
                  ⌃
              D@
              ⌃
                  N@
```
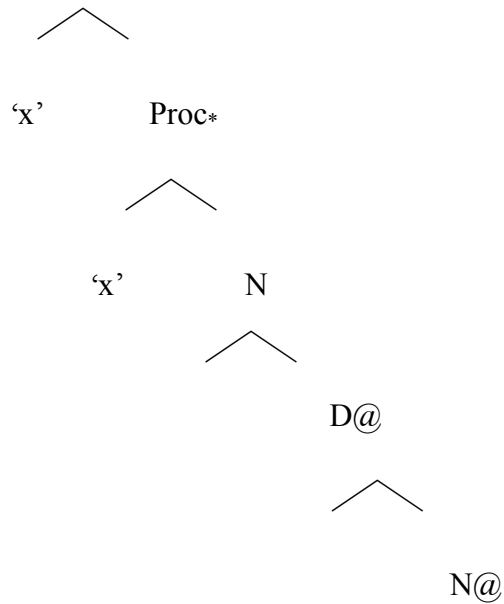
Linearized as: x [N Proc Init] [D N] where N D spells out both at D and at N (as also assumed in Svenonius (2014), for whom a span can spell-out in more than one place)

or

b.   Init@∗

```
        ⌃
   'x'      Proc∗
            ⌃
       'x'      D@
                ⌃
             N@
```
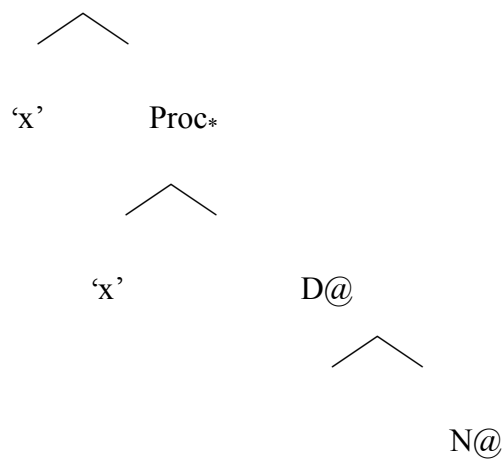
Linearized as: x [Proc Init] [D N]

In this case, at L-Match, we get *dance a dance*. One could assume either that there are two lexical entries in the lexicon (one for the noun, one for the verb), or that there there is only one lexical entry in the lexicon (*dance* having the features Proc, Init, and N). *Dance* could be assumed to lexicalize both [Init, Proc, N] and N.

In the case of the location verb *to corral (the horses)*, one can construct the following representation:

(73)   Init@∗

    'x'   Proc∗

          'y'   Goal∗

              'y'   Place∗

                   'y'   N
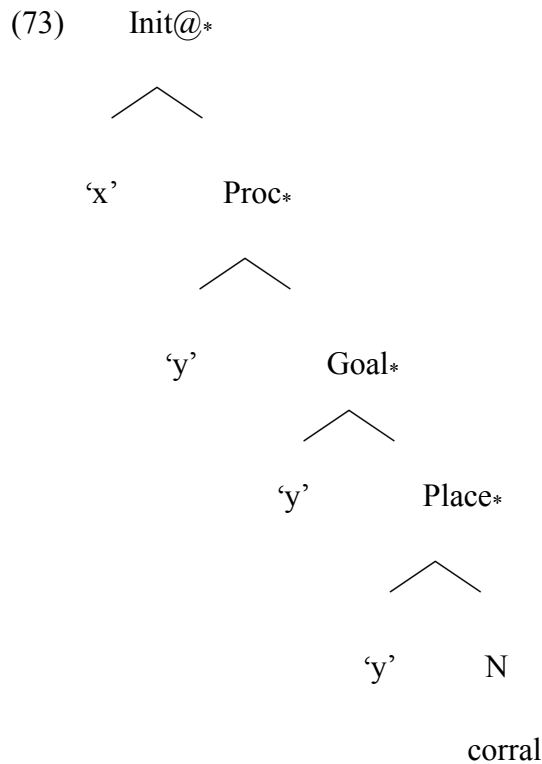
                       corral

Linearized as x [N Place Goal Proc Init] y

At L-Match, in case we assume the lexicon contains only the N *corral*, we get *x [corral Ø Ø Ø] y*, where x can be lexicalized by *John*, and y can be lexicalized by *the horses.*

In case we assume the lexicon contains both the N and the verb, we get competition between *x [corral Ø Ø Ø Ø] y* and *x corral y*, and the second item wins.

The same thing occurs in the case of location verbs in Romanian:

(74)   Init@*

```
         /\
       'x'   Proc*
              /\
            'y'   Goal*
                   /\
                 'y'   Place*
                        /\
                      'y'   N
```

adăpost

shelter
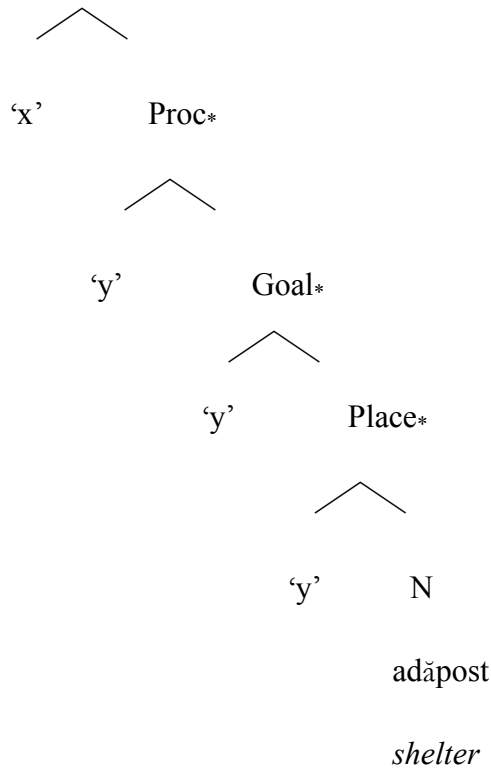
Linearized as x [N Place Goal Proc Init] y[39]

---

[39] If one wants to capture the paraphrase *PUT the horses IN (the) corral* as a succession of words, rather than as a single word (as it is in (i)), the following representation would be the case:

(i)   Init@*

```
       /\
     'x'   Proc
            /\
          'y'   Goal@*
                 /\
               'y'   Place
                      /\
                    'y'   N@
```
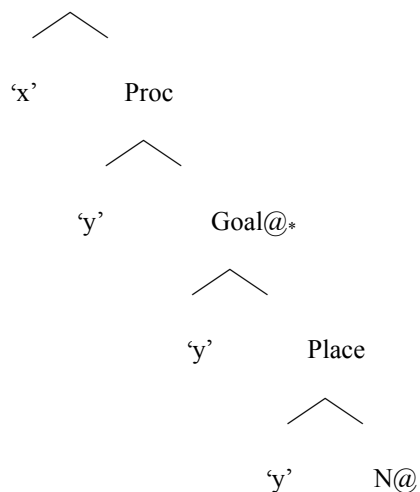
Linearized as: x [Proc-Init] y [Place-Goal] N

In this case, what would result is *John PUT the horses IN corral*. However, there is no way to lexicalize everything as *corral*. The spanning account thus has different linearizations for *PUT the horses IN corral* and *corral the horses*, and

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At L-Match, if one assumes the lexicon only contains N, we get *x [adăpost Ø Ø Thematic Vowel Ø] y*, where x can be lexicalized by *Ion (John)*, and y can be lexicalized by *copilul* 'child-Def. Art. M, sg.' (*the child*), for instance. There will be several candidates for the thematic vowel. The choice of the thematic vowel remains a matter to be solved. If its choice were purely phonologically conditioned, then they would all remain in the pool of variants until Insert chooses *–i*. However, it is more likely that it is chosen at L-Match (due to too many factors at stake: phonology, history).

If one assumes the lexicon contains both N and V, then there will be competition between *x [adăpost Ø Ø Thematic Vowel Ø] y* and *x adăposti y*, and the second item will win.

If one wants to resort to silent items, then one may have a verbal *corral* and a nominal *corral* in the lexicon, or one may have only a verbal *corral* and resort to underassociation. If one assumes the lexicon contains both N and V, then there would be two variants at L-Match: one making use of *PUT*, *IN*, and *corral*, spelled out together as a morphological word, or *corral* lexicalizing the whole tree. Out of the two variants, the second one wins. This silent item version has the disadvantage of the necessity of there being two items *corral* in the lexicon.

Embracing the view that the lexicon contains the silent items *PUT*, *IN*, but only the noun *corral*, on the other hand, is not able to generate the denominal.

Another silent item version would be to adopt underassociation (Ramchand 2008b), and argue that the lexicon contains the silent items *PUT, IN*, but that it contains a single item *corral*, namely, the verb *corral* having the features [init, proc, Goal, Place, N]. It could be assumed that the features [init, proc, Goal, Place] could underassociate (*corral* [init, proc, Goal, Place] would be inserted under N). In this case, the underassociated features of *corral* would unify with the information of *IN* and *PUT*. Such an account is feasible for English. However, it does not work for Romanian, where the verb and the noun have different forms.

In the case of locatum verbs such as *to butter (the bread)*:

---

there is no competition between the two. Moreover , it has a different linearization for *put the horses in the corral* (where *put* and *in* are not silent), as a determiner D *the* is also present in the structure.

(75)   Init@*

          ‘x’   Proc*

                ‘y’   Possp*

                      ‘y’   N
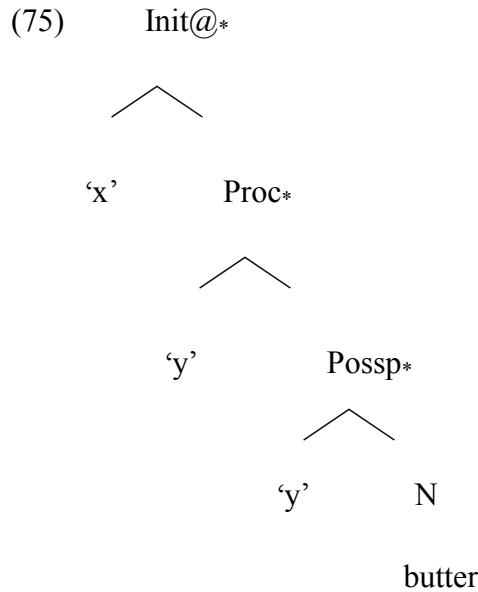
                            butter

Linearized as x [N Possp Proc Init] y

at L-Match, we get *x [butter Ø Ø Ø] y*, where x can be lexicalized by *John* (on the assumption that the lexicon stores only the noun). If one assumes the lexicon contains two items *butter,* then we will have a competition between *x [butter Ø Ø Ø] y* and *x butter* y, and the second item wins. The same thing can be assumed for Romanian, with the only difference that there is a thematic vowel.

A silent item version could also be embraced. If one assumes two items *butter* in the lexicon (together with *PROVIDE* and *WITH*), then there would be a competition at L-match between *butter-WITH-PROVIDE* and *butter,* and the second item would win. Such an account works for both English and Romanian. However, it has the disadvantage of storing two items in the lexicon. Moreover, it does not decompose the denominal verb in Romanian, but stores it as such, which is problematic for a transparent decomposable form. If, on the other hand, one assumes the lexicon only stores the verb, this account would work for English if one assumes the verb *butter* can underassociate (Ramchand (2008b)), and lexicalize the noun too (the features [init, proc, possp] could underassociate and unify their content with the information of *PROVIDE* and *WITH*). While this works well for English, it does not work for Romanian, where the noun and the denominal have different forms. As for a silent item approach where only the noun is stored, it fails to derive the denominal.

It thus seems to be the case that not resorting to silent items is better than resorting. Moreover, I personally find storing a single item in the lexicon preferable to storing two, for economy reasons. While this does not seem to make such a great difference for English, it does in

Romanian, where one would store the noun and the thematic vowel separately and generate the verb, rather than storing the verb as a whole. Such an account presents the great advantage of being both economical and elegant in capturing the transparent decomposability of denominals. The thematic vowel could possibly be stored as an item that selects a long list of verbs (that have certain properties).

By looking at the examples above, it seems to be the case that the spanning approach is more economical than the nanosyntactic framework in terms of movement (it basically eliminates head movement). At the same time, unlike DM, it allows for the spell-out of more than a terminal node .

Moreover, it can account for the combination of manner of motion verbs with PathPs (*Laura danced into the room*) or for the combination of denominal verbs (and not only) with complex resultatives:

(76)

```
            Init@*
            /\
        'x'     Proc
                /\
            'y'     Goal@*
                    /\
                'y'     Place
                        /\
                    'y'     D@
                            /\
                              N
```
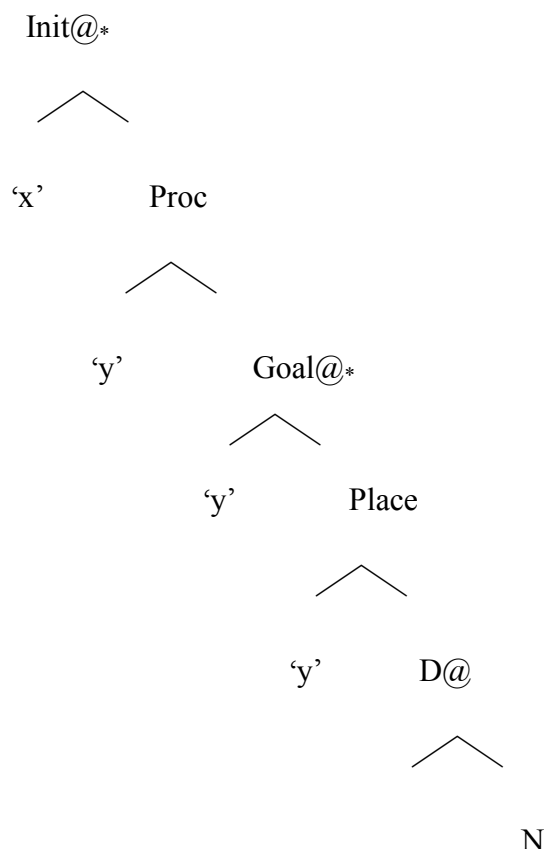
Linearized as: x [Proc-Init] y [Place-Goal] [N D] where N-D lexicalizes in D (John rubbed the fingerprints off the crystalball)

In conclusion, spanning seems to offer a more elegant account of the formation and behaviour of denominals in English and Romanian than nanosyntax, which relies on too much movement, often motivated solely by the need to lexicalize a certain structure.

Chapter 5

Verbs Incorporating Themes, PseudoAgentive Verbs and Verbs displaying an ambiguous behavior

The main aim of the current study is to test the viability of the nanosyntactic framework, DM and the spanning framework in accounting for verbs incorporating various Ns associated with various thematic roles both in English and in Romanian. In this chapter, I will mainly be looking at verbs incorporating Themes (which are generally considered to pose no problems-but I will show this is not exactly so), verbs incorporating Agents (which are highly problematic), and ambiguous verbs (such as weather verbs).

1. Theme Verbs

As far as verbs incorporating Themes are concerned, in English, we find verbs such as:

(1)   to dance, to party, to smile, to laugh a.o.

Some of the verbs incorporating Themes have corresponding verbs in Romanian, although not all of them:

(2)   a **dans**a, a petrece, a zâmbi, a râde a.o.

Out of the verbs listed above, only the verb *dance* is actually a denominal, Romanian being poorer than English in (Theme) denominals, as is the case with respect to all denominal verbs. However, Theme denominals do exist:

(3) a **dăr**ui 'to give', a **dăuna** 'to harm', a **fluier**a 'to whistle', a **fremă**ta 'to quiver', a **găur**i 'to hole', a **gât**ui 'to neck', a **glum**i 'to joke', a **gust**a 'to taste', a **imagin**a 'to imagine', a **jertf**i 'to sacrifice', a **lăcrima** 'to tear', a **mărgin**i 'to border' a.o. (examples taken from the database of denominals created on the basis of the Romanian-Norwegian dictionary (Halvorsen 2007))

Moreover, just like in the case of the other denominals, English and Romanian differ in that English uses the same form for the verb and the noun, while Romanian uses a different form for the verb, adding a declension suffix that renders the form verbal (*-a, -ea, -e, -i/-î*).

The incorporation/ conflation model, the Phrasal Spell-Out model, DM and the spanning model manage to account for the formation of Theme denominals generally speaking. However, although Theme verbs have been considered unproblematic in the incorporation account, there is a serious problem faced both by all the accounts, namely, a constraint on possible interpretations: intransitive denominals are not possible in case the source noun is interpreted as an incremental theme (**apple* < **eat apple*), a patient (**shirt*< **wear a shirt*), or the holder of a result state (**window*< **open window*) (Rimell 2012).

Incremental theme verbs represent verbs where the object of the verb measures out the event (Dowty 1991, Krifka 1992), and they include creation and consumption verbs. Nevertheless, although these verbs take an incremental theme, they do not incorporate it[40]:

(4)   a. *Linda appled all morning. (consumption verb, intended reading: 'ate apples')

b.*Danny housed last year. (creation verb, intended reading: 'built a house')

If one takes a look at a verb like *to foal,* for instance, the corresponding structure in the Hale & Keyser framework would be:

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[40] As argued by Harley (1999, 2005), there is an exception to this constraint on incremental themes, namely, verbs where the Theme is created by the subject in an inalienable way, i.e. out of the subject's own body: *Jill drooled*, but not *Jill caked.* The same contrast can be noticed in Romanian. While one can say *Găina a ouat* (Hen-the has egged. 'The hen has hatched eggs'), with the intended meaning 'to produce eggs', one cannnot say **Maria a ouat toată dimineaţa* (Maria has egged all morning) with the intended meaning 'to eat eggs'. Strangely, there is no verb *to egg* with the meaning 'to produce eggs' in English, although there is a verb *to egg* meaning 'to dip (food) in beaten egg before cooking' or 'to throw eggs at someone' (US). Although the theory predicts the possibility of a verb *to egg* with the meaning 'to produce eggs', the dictionary does not store this meaning. It is, thus, clear that sometimes the absence of a certain verb/ meaning from the language is not due to a semantic or syntactic constraint, but rather due to ad-hoc factors such as the blocking of a meaning by another meaning.

(5)　　　vP

```
          vP
         /  \
     Jenny    v'
             /  \
            v    √P
            ↑     |
            └─────┐
                  | √foal
```

Jenny foaled.
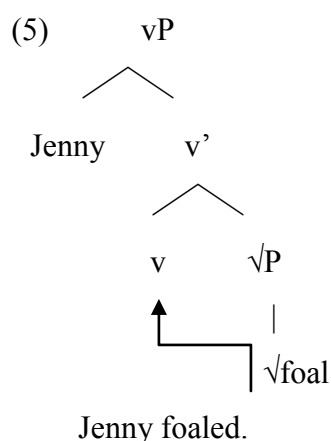
However, the same cannot be argued for a verb like *house,* which is impossible on the creation reading, yet, the incorporation theory of Hale & Keyser (1993) does not rule it out. Of course, as argued in Rimell (2012: 60), two types of arguments could be brought to explain this impossibility: one argument could be that there are restrictions on the meaning of the null verb (a type of argument absent in Hale & Keyser, where null verbs are underspecified), a second argument could be that there are restrictions on the root that can occur as the complement of the verb. If one assumes the same null light verb is present in the underlying structure of *foal* and *house* (the verb MAKE, for instance), then one should in principle be able to produce a verb such as *house,* with the meaning *to make a house*, a fact contradicted empirically:

(6)　　　*vP

```
          *vP
         /  \
     Jenny    v'
             /  \
            v    √P
            ↑     |
            └─────┐
                  | √house
```

*Jenny housed.
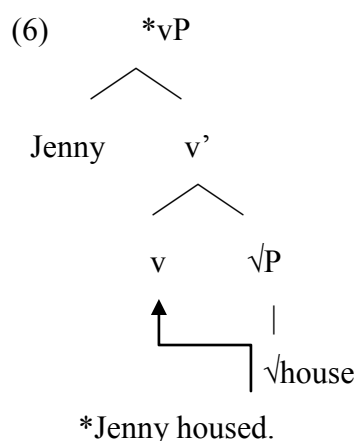
The only solution is, hence, either to assume a different light verb, perhaps, a more 'lexical' one, like *create (build a house)* or *consume (consume apples),* or to say that the problem lies in the type of root appearing as the complement. In Basque, for instance, there is an unergative made of an overt light verb *egin* (do) and a nominal complement (*negar egin* 'cry', *jolas egin* 'play'). However, for some reason, one does not find nominals denoting food, drinks, or 'book' or 'symphony' (Etxepare

2003; de Rijk /2008). This suggests that there are restrictions on the nominal in the formation of unergatives in Basque, and similar restrictions may be at work in the formation of denominals in English.

Apart from incremental theme verbs, patients (7a, b) and holders of a resultant state (7c) also resist incorporation:

(7)   a. * Mary shirted yesterday. (intended reading: 'Mary wore a shirt yesterday.')

        b. *Mary catted yesterday. (intended reading: 'Mary petted the cat yesterday.')

        c. *Linda windowed in the house. (intended reading: 'Linda opened the window in the house).

However, in certain contexts, these verbs can be used, and the listener can retrieve the meaning from the context:

(8)   a. John: Lucy keeps eating apples, she is disturbing everybody.

            Stacy: Oh, not again! She *appled* all day yesterday.

        b. ?Mary wants to wear a white shirt. But I wanted her to *shirt* a black shirt.

        c. *Window* my soul so I can feel the spring of your love, my dear! (poetic context)

These are not regular uses, though. The constraints on incremental themes, patients, and holders of a result state represent a problem both for an incorporation account, as well as for a phrasal spell-out account, as it is not clear why exactly it is not possible to spell out v and N in certain cases.

I will argue that the answer for this impossibility lies in a conceptual matter that is reflected in the syntax, namely, while one does a dance, and gives or shows a smile[41], hence, there is a more or less predictable action that is reflected in the verb in the underlying structure of the denominal, an action which could more or less be capture by MAKE/ DO, there are a lot of actions that may involve a cake, for instance: one may bake it, one may cut it, one may eat it, a.o, just as there are a

---

[41] A counterargument to this could be it is not true to say that the 'action' is predictable if we are dealing with a smile, for instance: one can ignore a smile, love a smile, fake a smile a.o. However, in all the cases above, the subject is involved in an 'action' that does not result in a smile. Hence, a better description of the empirical data would be to say that the action at stake corresponds to the verb MAKE.

lot of actions that may involve a cat: one may pet it, feed it, hit it, a.o., and there are a lot of actions that may involve a window: one may open it, close it, break it a.o. The action that involves the object/ entity denoted by the nominal is too unpredictable to be inferred from the context. Hence, although one may, of course, infer the meaning if the impossible denominal is uttered in a context that makes it clear (8), it will generally not do to say *I like to cake/ cat/ window.* The same is true for Romanian, where it is odd to say:

(9)   *Îmi place să prăjituresc/ pisicesc/ ferestruiesc.*
        DAT-1st sg.like CONJ cake/ cat/ window (verb 1st p.sg.. Conj.)
        'I like to cake/ cat/ window'.

but a verb like *a dansa* (*to dance)* is posssible.

Such a contrast can be captured if one assumes that, in (9), the noun cannot undergo incorporation because the verb in the underlying structure is not light, while, in the *a dansa* case, it is (DO). In *dansa,* it seems to be the case that the verb is derived from the noun (*dans- +-a)*, with the addition of an infinitival suffix. However, the situation is different in the case of the verb *zâmbi (smile)*, which has clearly not incorporated the noun *zâmbet (smile).* It may be either that the noun is derived from the verb, or both the verb and the noun are derived from the same common root *zâmb-.* Following this line of reasoning, one might assume that, even in the case of *dansa,* it is not the case that the verb is derived from the noun, but the noun simply has a form that is identical to the root *dans-.*

As presented in the previous chapter, the Phrasal Spell-Out proposal is:

(10)   initP
        ∧
    'x'
            ∧
        init   procP
                ∧
            'x'
                ∧
                proc   N (*dance*)
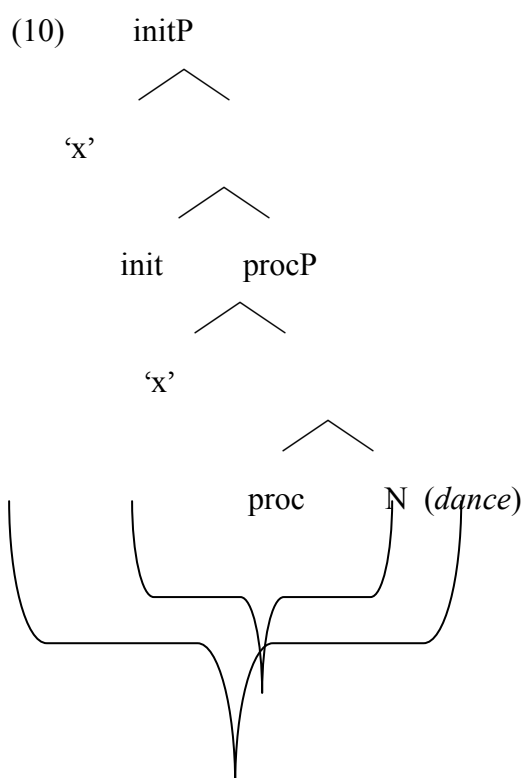
As argued in the previous chapter, a possible solution to handle the additional morphology in Romanian is to argue that there is a supplementary verbal suffix projection that renders the root verbal:

(11)   initP
         ⟋⟍
     'x'
              ⟋⟍
         init   procP
                 ⟋⟍
            'x'
                  ⟋⟍
               proc
                      ⟋⟍
                  Vsuff   N (*dans*)
                   -*a*
                              dansa

                      dansa
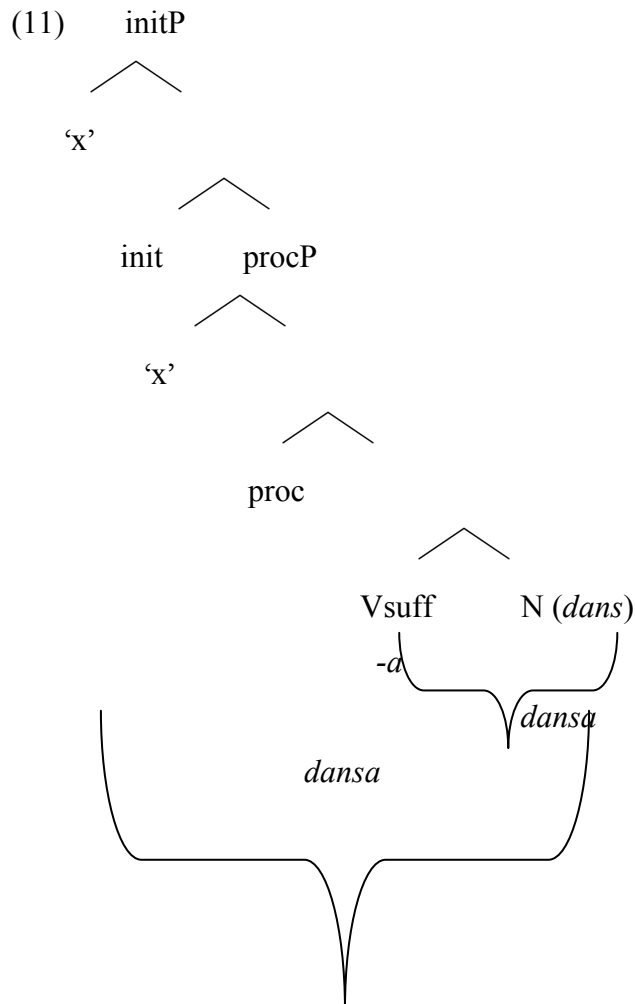
One might assume this verbal suffix projection is present in the English case as well, with the only exception that the realization of this suffix is null. Such an account seems able to capture the difference between English (which has poor morphology) and Romanian (which has rich morphology). -*A* can be argued to express verbiness.

Given that placing the thematic vowel in this position generates the weird result that something verby combines with a preposition in the case of a location verb like *corral*, one might assume a more appropriate Phrasal Spell-Out structure would be (12):

(12)   initP
          /\
    'x'
         /\
       init   procP
              /\
          'x'   /\
               proc   R (N)
                     dans
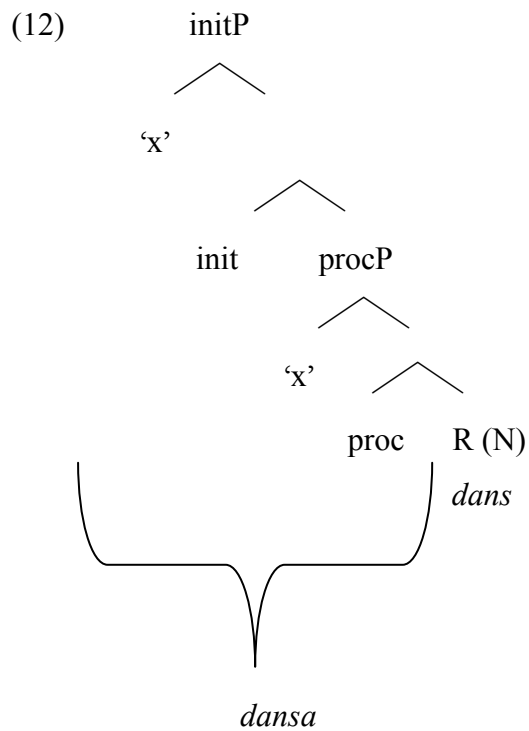
dansa

In a DM account, *dance* in English, as well as *dansa* in Romanian are the result of fusion of N with Proc, and then with Init ([Init, Proc, N]). The syntactic representation is the same as in (12), but there is fusion between (terminal) heads.

In a spanning account, *dance* in English, as well as *dansa* in Romanian would receive the following representation:

(13)   Init@$_*$
          /\
     'x'   Proc$_*$
              /\
          'x'   N
                 dance/ dans

Linearized as x [N Proc Init]
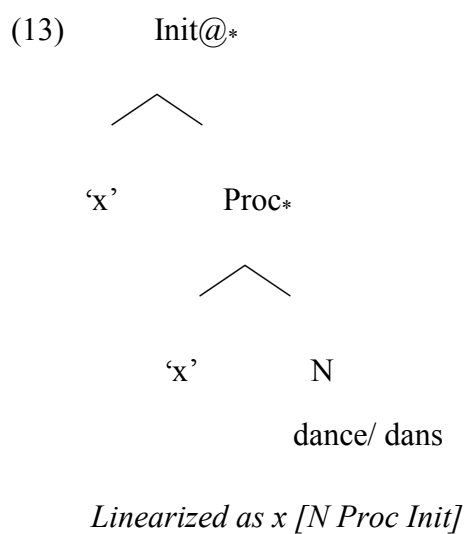
At L-Match, we get *x [dance Ø Ø]* in English and *x [dans Thematic Vowel Ø]*, where x can be lexicalized by *John/ Ion*.

Both the phrasal spell-out account, DM and the spanning account thus manage to account for the formation of Theme denominals.

2. Pseudoagentive Verbs

As far as verbs incorporating Agents/ Agent verbs[42] are concerned, however, the situation might seem slightly different: this is because Agent incorporation represents a serious problem for the previous analyses.

The most radical view is that subjects never incorporate: objects can incorporate while subjects cannot, this is the view proposed by Baker's syntactic account of NI (noun incorporation). However, as suggested by Haugen (2009), the radical view cannot be correct, and it needs to be amended with the Unaccusativity Hypothesis of Perlmutter (1978), according to which one needs to distinguish between 'surface subjects' that are, in fact deep objects, and true deep subjects. According to Haugen (2009: 258), 'surface subjects' that are deep objects can incorporate, while true deep subjects cannot, and this is because there is no downward head-movement (Travis's (1984) Head Movement Constraint). Haugen's (2009) view is that the incorporation of true deep subjects is impossible. Nevertheless, one can still find cases of real Agent 'Incorporation', such as:

(14)   a. Nahuatl ''Agent Incorporation''
             Mo-teuc-zomah
             REFL-lord-frown
             ''The lord frowned in anger.''   (Hill, 2003: 231, (76))
         b. Hopi ''Agent Incorporation''
             Posiw-yes-va.
             magpie-sit(PL)-INGR
         'The magpies alighted.' (Hill, 2003:231, (74))

which Haugen (2009) accounts for by simple N-V compounding, and not true incorporation.

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[42] I distinguish the term 'agent verb' from 'agentive verb'. While by 'agentive verb', I understand a verb which has an argument whose theta-role is that of Agent', an 'Agent verb' would be a verb which has incorporated an Agent noun.

Although the classical claim is that there are no verbs incorporating Agents, Clark & Clark (1979) show that, in fact, there are a number of verbs in English that (seem to) incorporate Agents. Such verbs can denote occupations (A) or special roles (B):

(15)

A.   OCCUPATIONS

(to) butcher the cow, jockey the horse, referee the game, umpire the match, nurse the patient, doctor the victim, nursemaid the baby, tutor the boys, valet the squire, pilot the ship, guard the jewels, shepherd the sheep, general the army, author the book

B.   SPECIAL ROLES:

monitor an exam, referee the game, champion the cause, partner the host, usher the people to their seats, escort the ambassador, squire his cousin, chaperone his daughter, mother the child, sire the child, father the child, husband someone, wife someone etc. (Clark & Clark 1979: 773-774)

The corresponding verbs in Romanian would be:

(15)

 A. OCCUPATIONS

a **măcelari** vaca ('to butcher cow-the', *to butcher the cow*), a călari calul (*to jockey the horse*), a **arbitra** jocul ('to referee game-the', *to referee the game*), a **arbitra** meciul ('to umpire match-the', *to umpire the match*), a îngriji pacientul ('to treat patient-the', *to treat/ nurse the patient*), a trata/ doftorici victima ('to treat victim-the', *to treat/ to doctor the victim*), a fi dădacă pentru bebe/ a **dădăci** bebele ('to be a nursemaid for baby/ to nursemaid the baby'), a medita băieţii, a da lecţii private băieţilor ('to meditate/ tutor boys-the', 'to give private lessons to boys-the'), a servi moşierul, a fi valet la cavaler ('to serve the squire', 'to be valet to squire', *to valet the squire*), a **pilota** nava ('to pilot ship-the', *to pilot the ship*), a păzi bijuteriile ('to guard jewels-the'), a **păstori** oile ('to shepherd sheep-the'), *a fi general de armată* ('to be general of army', *to general the army*), a scrie o carte ('to write a book', *to author a* book) a.o.

B.   SPECIAL ROLES

 a **monitoriza** un examen ('to monitor an exam'), a **arbitra** un joc ('to referee the game'), a susţine cauza ('to champion the cause'), partner the host, a însoţi oamenii la locurile lor ('to

usher the people to their seats'), a **escorta** ambasadorul ('to escort the ambassador'), a fi mamă copilului (to be mother child-Genitive 'to mother the child'), a fi tată copilului (to be father-GEN 'to father the child'), a găsi soţ pentru (to find husband for, 'to husband someone'), a se mărita, a deveni soţia cuiva ('to become someone's wife') etc.

According to Clark & Clark (1979), the sentence *John butchered the cow* more or less means *John did to the cow the act that one would normally expect [a butcher to do to a cow*]. Hence, although John may very well be a butcher, he need not be a butcher. The sentence:

(16)   John butchered the cow without being a butcher.

is a sentence that is not semantically odd at all. In the same way, the sentence:

(17)   Jim doctored the child without being a doctor.

is perfectly alright.

Jim may very well be a doctor, but this need not be the case. The verb thus denotes a temporary action that may very well count as an instantiation of a permanent occupation, but it may simply be an action that is similar to that performed on a daily basis by the person having this occupation.

On the other hand, it is semantically odd to assert something of the type:

(18)   Smith authored the book without being an author.

The difference between *butcher* and *nurse*, on the one hand, and a verb like *author*, on the other hand, might be along similar lines to the difference Kiparsky noted between true instrumentals (like *button*) and pseudo-instrumentals (like *hammer*): while the verbs *butcher* and *nurse* might be derived from roots, the verb *author* might be derived from the noun *author*. This would explain why, while it is possible to butcher without being a butcher and to nurse without being a nurse, it is not possible to author something without being an author. Along these lines, one might distinguish between pseudo-agentives and 'true' agentives.

The problem in these cases is how to account for the incorporation of the Agent, which is the subject, the specifier of vP.

One possible way out is to argue that, in fact, it is not the Specifier of the vP that gets incorporated: the subject is actually situated below the verb, it is c-commanded by the verb. *To butcher* means *to act like a butcher*, *to author* means *to be an author*, hence, in an incorporation account, the agentive noun that is incorporated does not have to undergo any dubious downward movement. As one can clearly see, even in the *to be an author* case, it is not the case that *author* is actually an Agent: although an Agent by meaning, it is in fact the predicate of a small clause whose subject is the real Agent (*Mary authored the book*).

Another way out is to say that it is wrong to argue that Agentive verbs derive from nouns. Looking at the morphology in Romanian, for instance, it might very well be the case that, rather than being derived from the noun *măcelar* ('butcher') through incorporation, a verb such as *a măcelări* ('to butcher') gives rise to the noun *măcelar* ('butcher') via regressive derivation. This is, in fact, the formation process indicated in many Romanian dictionaries that list this verb (http://dexonline.ro/). One could thus argue that the presence of Agentive verbs in a language is due to regressive derivation of those Agent nouns from verbs, and not of incorporation of Agents.

A way in which to allow for the 'incorporation' of the Agent, but not in the Hale & Keyser (2002) sense, is to resort to the notion of *Phrasal Spell-Out.* If one resorts to Phrasal Spell-Out, the specifier of v and the verb could be spelled out together through direct lexicalization by a so-called agentive verb. However, this is problematic. A first reason is the lack of consensus with the general view in the literature (Baker 1988, Hale & Keyser 1998, 2002), arguing that Agents never incorporate. A second reason is the meaning of the verb *to butcher the cow*, which is not that a butcher butchered the cow, but that someone acted like a butcher and killed the cow. The same situation occurs if we take *to nurse a child:* one does not have to be a nurse to nurse a child. In other words, although one can conceive two possible lexicalizations for *nurse*: (i) taking *nurse* as a Specifier of a verbal head (an init head, possibly) that is spelled out together with the verb (*nurse V*), or (ii) taking *nurse* as something dominated by the verb (*do like a nurse*) or as the Spec of a procP. , Given the lack of conformity with the literature, and also the manner meaning associated with verbs that seem agentive, I will adopt the second version (ii), and assume *nurse* is not the specifier of an initP.

One way to go about it is to adopt the view that *nurse* is the complement of Proc. In a nutshell, the lexicalization would go as follows:

(19)   <u>Cycle 1</u>

       Inspect Node N, insert *nurse*

       <u>Cycle 2</u>

   a. Merge Proc and N

```
        ProcP
         /\
     Proc   N
```
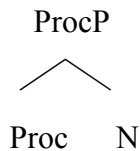
   b. lexicalization round
   c. Inspect Proc, insert nothing. ProcP is lexicalized as *nurse*
   d. Merge the DP *the child.*

  <u>Cycle 3</u>

   Merge Init and ProcP.

```
       InitP
        /\
    Init   ProcP
            /\
          DP   ProcP
```
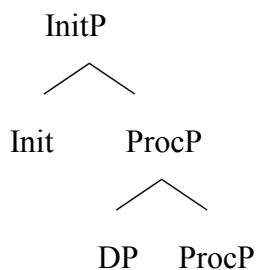
Lexicalize InitP as *nurse.* (I shall assume the specifier can be ignored)

Another way of handling pseudoagentive verbs is to argue that the nominal root *nurse* is included in a PP complement of Proc (*act **like/as nurse***). Given that most pseudoagentives can be paraphrased using 'to act like N', and 'like N' is an obligatory element required by 'act', such an analysis, just like the previous one seems to be on the right track:

(20)   InitP =*nurse*

```
                /\
              'x'
                   /\
                Init    ProcP =nurse
                          /\
                        'y'    /\
                            Proc    PP =LIKE/ AS
                                      /\
                                     P    N
                                         nurse
```
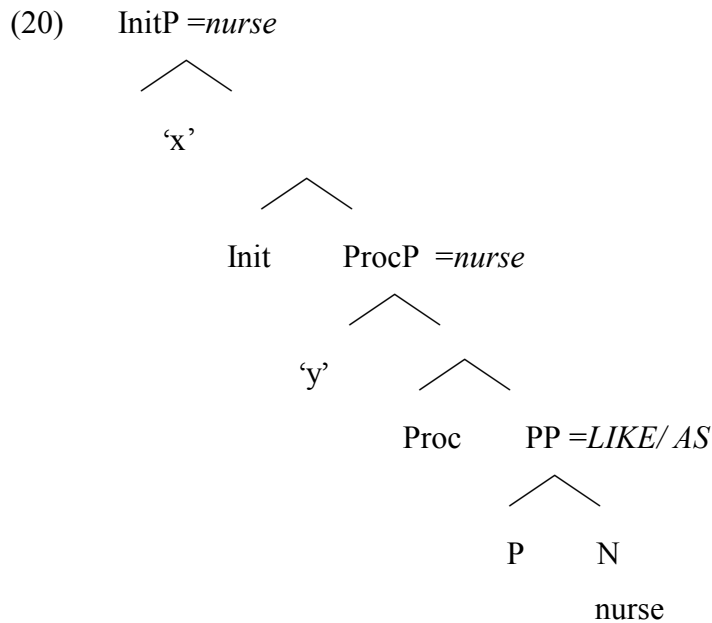
While such an analysis is appealing because it is semantically richer, it has the serious disadvantage that it forces the lexicon to store a nominal item *nurse* and a verbal item *nurse.* Moreover, postulating a Rather than arguing for a silent preposition *LIKE/ AS*, one could postulate the existence of a comparative preposition PCv (Pcomparative) projecting a PCvP, or a P endowed with a comparative feature [+comparative], and thus adopt the analysis in (20) without any silent items. In this way, the noun is stored, and the verb is lexicalized by inheritance, not directly.

In a DM account, one can assume the representation in (20) without any silent items, and argue that the verb *nurse* is the result of the fusion of N with P [+comparative], then with Proc, then with Init.

In a spanning account, the representation of a verb such as *nurse* would be:

(21)   Init@∗

```
                    ╱‾‾‾╲
               'x'        Proc∗
                         ╱‾‾‾╲
                   'y'         P∗
                              ╱‾‾‾╲
                        'y'         N

                                  nurse
```

Linearized as x [N P Proc Init] y
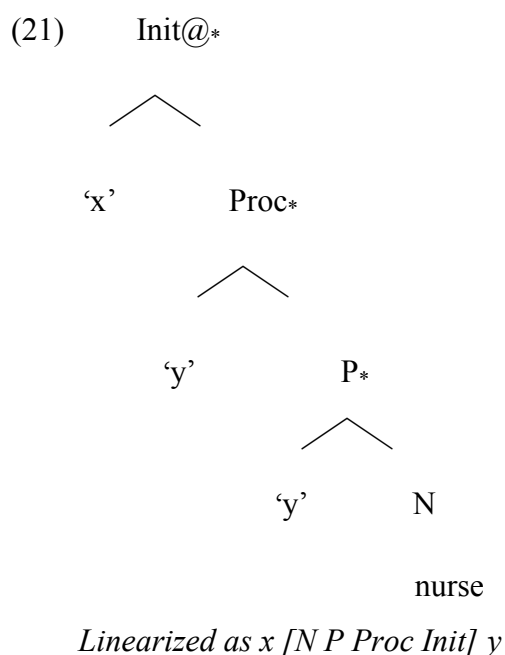
At L-Match, we get *x [nurse Ø Ø Ø] y*, where x can be lexicalized by *John*, and y can be lexicalized by *the child*, for instance. Of course, P can be considered a PCv (Comparative Preposition); in this way, the representation encodes more semantic inforrmation, or the preposition could be considered as having the feature [+comparative]. The same analysis is provided in the case of the pseudo-agentive verbs in Romanian, with the only difference that Proc is lexicalized as a thematic vowel in Romanian.

3. Weather Verbs

As for weather verbs (*to rain, to drizzle, to snow* a.o.), they represent a particular case, given the fact that it is not that clear what it is they incoporate: is it a Theme or an Agent? In solving it, I will look not only at Romanian and English, but at several languages. At first glance, weather verbs incorporate Themes (*It snows= It gives snow*), and, hence, behave like unaccusatives. The fact that they can enter the causative alternation (*God snowed on us heavily yesterday/ It snowed heavily yesterday*) supports their unaccusative nature, as the causative alternation is typical of unaccusatives, not unergatives. However, if one looks at the behaviour of weather verbs in other languages such as Italian, for instance, one notices that a verb like *piovere* can take both the auxiliary *avere* and the auxiliary *essere* in the past:

(22) a. Ha piovuto ieri.

    Has rained yesterday.

    'It rained yesterday.'

  b. È piovuto ieri.

    Has rained yesterday.

    'It rained yesterday.'[43]

This points to an unaccusative/ unergative ambiguity in the case of weather verbs, which is further supported by other crosslinguistic facts, such as the ability of weather verbs to take a subject that may not simply be an expletive, as in English (*It rains too often)* or in French (*Il pleut,* 'It rains'), but a demonstrative (23a), a personal pronoun (23b), or even a noun denoting the background or source of the weather phenomenon (23 c, d):

(23) a. *Das regnet ja nicht mehr!* (colloquial German)

    this rains particle no longer

    'It no longer rains.'

  b. *Hann er farinn adh rigna* (Icelandic)

    He is   started   to rain

    'Oh, sh*t, it's raining again!'

  c. *Tuo pilvi   sataa pian*. (Finnish)

    DEM cloud.NOM rain.3SG.PRES soon

    '(lit.) That cloud will soon be raining'.

  d. *Taivas salamo-i.* (Finnish)

    sky.NOM flash-3SG.PST

    'The sky was flashing/lightning.'

In Latin, for instance, one can find both impersonal weather verbs (*pluit*= 'it has rained', *tonuit*= 'it has thundered') and weather verbs that take as subjects nouns referring to gods (*Iove tonante*, *Iupiter pluvius*). The same thing can happen in contemporary Romanian (*Tună* 'Thunders', *Jupiter tună* 'Jupiter thunders'). An interesting view on weather verbs belongs to Meillet (1937: 133-

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[43] Benincà & Cinque (1992) argue that *tuonare,* 'thunder', *gelare,* 'freeze', for example, do not take the verb *essere* as an auxiliary, and, hence, it is not the case that all weather verbs display this kind of alternation.

134), who argues that weather verbs were initially personal, and the change from personal to impersonal can receive a religious explanation (the Indo-Europeans' belief in gods, the Christian belief in God). However, this view has not received wide acceptance in the literature: Ruwet (1991), for instance, argues that verbs without an explicit subject are not uncommon in Latin, and so, it is not the case that there was a change from personal to impersonal.

Regardless of the history of weather verbs, it seems to be the case that these verbs display ambiguity crosslinguistically, both within a single language (as one can clearly see in the case of Italian), and across languages. In Mandarin Chinese, for instance, there are no weather verbs, but weather expressions made up of the equivalent of the verb 'fall' and the noun 'rain':

(24) a. *Jintian xia yu.*　　(Mandarin Chinese)

　　 Today fall rain.

　　 'It is raining today.'

　 b. *Dongtian xia xue.*　　(Mandarin Chinese)

　　 Winter　fall snow.

　　 'It snows in the winter.'

Weather expressions can also be found in languages where there are weather verbs:

(25) a. *Hace viento.* (Spanish)

　　 Makes wind.

　　 'It's windy.'

　 b. Fa *freddo.* (Italian)

　　 Makes cold.

　　 'It is cold.'

　 c. *C'è un freddo bestiale fuori.* (Italian)

　　 Expl is a cold　terrible　　outside.

　　 'There is a terrible cold outside.'

Interestingly, even in the case of paraphrases, one can note that some are causative (23a, b), while others ar not, a fact which again seems to point towards the ambiguity of weather expressions.

Moreover, if one tests the unaccusativity of weather verbs using the tests proposed by Levin & Rappaport Hovav (1995), the results are not conclusive: weather verbs do not enter *there*-sentences,

just like non-prototypical unaccusatives and unergatives (26a), they do not occur in locative inversion constructions, just like unergatives (26b), they do not enter 'real' resultative constructions, just like unergatives (26c), they do not enter fake resultative constructions (with a reflexive), just like unaccusatives (26d), and their past participle cannot modify an NP, just like in the case of unergatives (26e):

(26) a. *There rained heavily yesterday.

b. *Outside snowed heavily.

c. *It drizzled wet.

d. *It drizzled itself wet.

e. *the snowed snow.

Taking these various types of evidence into account, it is clear that weather verbs are ambiguous between an agentive behaviour and a non-agentive behaviour. In a previous paper (Bleotu 2013), I argued in favour of a decomposition analysis of weather verbs: a verb like *rain*, for instance, could be decomposed either as FALL [RAIN] or as [CAUSE [FALL [RAIN]], depending on the context and the language[44]. I will more or less adopt the same view here. However, instead of adopting a conflation analysis in the Hale & Keyser style (2002), I will suggest one can embrace a phrasal-spell out analysis, a DM analysis or a spanning analysis.

Whether the decomposition of weather verbs is handled in a Hale & Keyser framework, or in another framework, it is important to note that a decomposition is at stake. There are several arguments in favour of this. Apart from the fact that there are no weather verbs in Chinese, only weather expressions made of the verb *fall* and a meteorological noun (*rain, snow*), and the fact that weather expressions are present even in languages that do have weather verbs, there is an interesting phenomenon in Finnish, which has received the name 'generalized p-encoding' (generalized precipitation encoding) (Erike, Kittilä & Kolehmainen 2010), namely, although the verb for raining,

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[44] Of course, the agentive/ non-agentive interpretation of the verb has consequences for the interpretation of the expletive (if it be the case that there is one). While Manente (2008), for instance, proposes that *il* and *pro* are always Causes (*Il pleut* 'It rains', *Il a plu.* 'It has rained'-please note that weather verbs in French only select *avoir* 'have'*)*, it could be argued , as I have in a previous paper (Bleotu 2013), that the expletive pronoun *it* acts as a Cause in the unergative cases and as a non-Cause in the unaccusative cases. One could thus support the idea that, depending upon the position it occupies in the l-structure (as a subject/ Specifier of 'FALL rain', or as a subject/ Specifier of 'CAUSE [FALL rain]'), the expletive has different semantic values/ theta roles (it is polysemous). Either way, it is very clear that weather *it* is not merely an expletive (Yoon 2003), a fact supported by the control between *it/ pro* and the PRO following it in "It sometimes rains after PRO snowing." (Chomsky 1981: 324).

sataa, initially meant *to fall*, now *sataa* can only mean 'to rain', and one must add arguments in order to refer to snowing or hailing:

(27)   a. Sataa (vet-tä).

rain.3SG.PRES (water-PART)

'It is raining.'

b. Sataa lun-ta.

rain.3SG.PRES. snow-PART

'It is snowing.'

c. Sataa   rake-i-ta.

rain.3SG.PRES   hail-PL-PART

'It is hailing.'

Given the fact that a motion verb is present in weather paraphrases, one can decompose weather verbs into (null) light motion verbs and weather nouns. At this point, it is necessary to make it clear what exactly one understands by (*null*) *light motion verb,* namely, a motion verb which has a more general meaning, and which is silent. The meaning is, hence, very different from what Cardinaletti & Giusti (2001) or Zubizarreta & Oh (2007) understand by *light motion verb.* According to Cardinaletti & Giusti (2001), light or semilexical motion verbs represent a closed class consisting of the most basic ones, such as *go, come, run,* and not   *walk, *fly, *rush.* In Southern Italian dialects, for instance, they are not silent, and they can be followed by infinitives and inflected verbs (28), while in American English (29), they are followed by long and short infinitives:

(28) a. Vaju a pigghiari   u pani. (infinitival construction)

go-1s to fetch-INF the bread

b. Vaju a pigghiu   u pani. (inflected construction)

go-1s to fetch-1s the bread.   (Marsalese, a Western Sicilian dialect)

(29) a. I go to buy bread.

b. I go <u>and</u> buy bread.

c. I go buy bread.   (American English)

Light motion verbs possess particular properties that distinguish them from heavy motion verbs, both functional properties, and lexical properties. While they behave like functional categories in that they appear in a fixed order (Motion V Lexical V), they take no arguments, and they are subject to various morphological restrictions, for example, in American English, only the indicative present and imperative forms are allowed (*Linda managed to go visit Laura every week.,   Go visit Laura tomorrow!*), they behave like lexical categories, in that they have semantic content, and they select a connecting element: *a* (Maralese)*, and* (American English)*, och* (Swedish)- which is typical of lexical verbs.

Zubizarreta & Oh (2007), on the other hand, focus on (heavy) motion verbs, and they argue that, in Germanic languages, in order to express a directed motion meaning, (manner) motion verbs combine with light motion verbs:

(30) a. Linda danced to the kitchen.
      b.The bottle floated to the beach.

By means of a Compound Rule (according to which one can merge two lexical categories of the same category type)*, dance* merges with a silent verb GO[45], and the resulting V combines with a directional PP, thus giving rise to a directed motion meaning. Moreover, the verb can sometimes merge with a silent verb *CAUSE,* thus giving rise to a cause-motion construction:

(31) John kicked the ball to left field.

However, unlike Cardinaletti & Giusti (2001) and Zubizarreta & Oh (2007), who focus on those light verbs (be they not null or null) which combine with heavy verb to yield a different meaning, I will suggest that it is possible to embrace a view more or less similar to Hale & Keyser's (2002)., and postulate light verb in the making of weather verbs (not later on in the derivation). The basic idea would be that, if the weather verb is used unaccusatively, then the light verb is FALL, while if the verb is used unergatively or transitively (*God snows on us to bring some purity to our lives.)*, the weather verb will be decomposed as [CAUSE [FALL weather noun]], thus making use of

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[45] Support in favour of this comes from sentences like *Go see a movie., Come talk to me about your paper.*, where the light verb is spelled out.

two light verbs. However, it may be the case that there are other light verbs which occur in weather contexts (COME, GIVE, MAKE):

(32)   a. *Vine furtună. (*Romanian), *Arriva la tempesta.*(Italian)

Come storm.

'The storm is coming.'

b. *Dă cu ninsoare*. (Romanian)

Gives with snow.

'It is snowing.'

c. *Hace frio.* (Spanish), *Fa freddo.* (Italian)

Makes cold.

'It is cold.'

A theoretically appealing move is to assume that these light verbs can be reduced to a limited number: BE, COME, ARRIVE= COME [TO BE AT X], X= PLACE, FALL=COME [TO BE *DOWN*], MAKE= CAUSE [TO BE], GIVE= CAUSE [X TO BE OF Y]. In this way, light verbs reduce to primitive predicates, namely, the predicates used in the lexical semantic representation of verbs (Levin & Rappaport Hovav 1988): ACT, BE, BECOME, CAUSE.

Starting from this idea, and assuming a Ramchandian point of view (2008) together with Phrasal Spell-Out, I would like to propose that a weather verb like *rain* can have a [proc] reading (FALL) and an [init, proc] reading (CAUSE, FALL):

(33)

a.   ProcP

                    Proc   N
                              rain

                         (FALL RAIN)

                    rain (V)

b.
```
                    initP
                   /    \
            N           initP
           God         /    \
                    init    ProcP
                           /    \
                        Proc    N
                               rain        (CAUSE FALL RAIN)
                      _____/
                              |
                          rain (v)
```
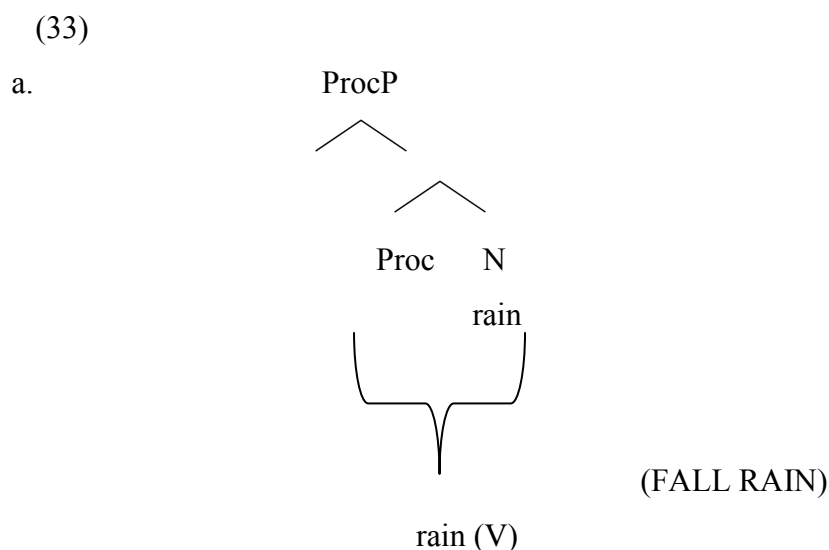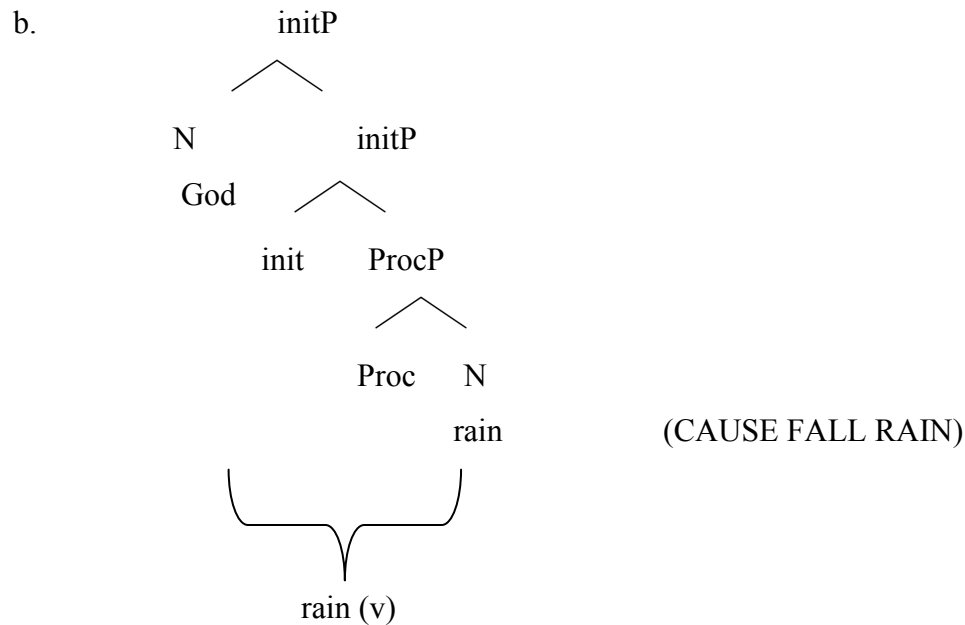
Such an analysis captures the agentive/ non-agentive ambiguity of weather verbs. However, given the fact that the causative and processual meaning are already encoded in the projections initP, procP, I will suggest silent elements are not needed. Moreover, postulating silent items would imply storing both a nominal item *rain* and a verbal item *rain*. Hence, I believe a better option is simply to give silent items up, and argue that the verb *rain* is the result of lexicalization by inheritance.

In DM, the syntactic representation would be the same as in (33), with the only difference that, instead of phrasal spell-out, there would be fusion of N with proc (and then with init), resulting in the verb *rain*.

(33b) illustrates the causative variant of the weather verb; however, it can also account for those contexts where weather verbs seem to display an unergative behaviour (such as *Ha nevicato* 'Has snowed' in Italian).

In a spanning version, the verb *rain* can enter the structures:

(34)   a. Proc@$_*$
```
               /    \
            'x'       N
                     rain
```

b.

Init@∗
   ⟨tree⟩

'x'   Proc∗

'x'   N

rain
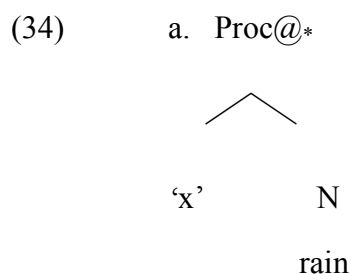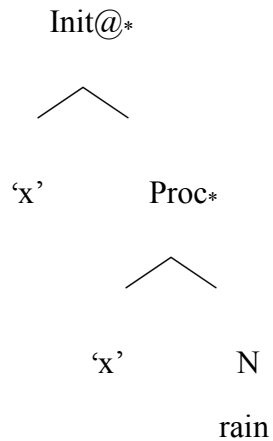
Linearized as x [N Proc Init].

Both the phrasal spell-out account and the spanning account manage to account for the ambiguity of weather verbs.

In conclusion, when the verbs have a simple internal structure, DM, the phrasal spell-out account and the spanning account are equally able to capture their formation. The question is if these accounts can be argued to have a comparable explanatory capacity when the denominals have a more complex internal structure.

Chapter 6

Location, Locatum verbs and the Locative Alternation in Romanian and English

1.   Aim

The aim of this chapter is to look into the structure of location verbs (verbs incorporating Location such as *to shelve* 'to put the books on the shelf') and locatum verbs (verbs incorporating displaced Themes such as *to saddle* 'to provide the horse with a saddle'), as well as a verb's ability to occur in two locative frames (a change of state frame: *They loaded the truck with hay*, and a change of location frame: *They loaded hay onto the truck*), labeled as 'the locative alternation' in Romanian, a Romance language, in opposition to English, a Germanic language, and try to see if one can offer a phrasal spell-out explanation, as well as a spanning explanation for the different behaviour of location and locatum verbs and for the differences between the locative alternation in different languages. A remark is in order here: location and locatum verbs do not enter the locative alternation in English generally. However, I have chosen to treat them together given the fact that location and locatum verbs may be interpreted as deriving from a frame similar to one of the frames of the locative alternation (*They put the books on the shelves => They shelved the books, They provided the horse with a saddle=> They saddled the horse*), with the exception that the PP is obligatory, while in *They loaded the truck with hay* or *They loaded hay onto the truck*, it is not[46]. While location verbs express the location in an explicit way, the verbs involved in the locative alternation are simply displacement verbs, and location is expressed by a distinct PP.

A striking fact about location and locatum verbs in English and Romanian is related to productivity: while English has many location verbs (*to shelve the books, to corral the horses* a. o.) and locatum verbs (*to saddle the horses, to butter the bread* a.o.), Romanian is not so rich. There are a few verbs such as *a adăposti* 'to shelter' (location verb), *a bandaja* 'to bandage', *a potcovi* 'to shoe' (locatum verbs). However, many of the location and locatum verbs we find are derived with the prefix *în-* (a *îmbarca* 'to ship' or a *împodobi* 'to adorn').

 In what follows, I will try to account for the behaviour of denominals (and their difference in productivity) in a phrasal spell-out account, as well as in a spanning account and a DM account. No matter what account we adopt (be it an incorporation (Baker 1988), a conflation account (Mateu

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[46] In fact, the differences might be greater than that, as I will show later on. While *put the books* is an <init, proc> (**He put the books*), *load hay* might be an <init, proc, res> (*He loaded hay*).

2000, Hale & Keyser 2002), or a first phase syntax approach (Ramchand 2008b)), one fact remains certain: denominals are less productive in Romanian than they are in English. This fact has not yet received an explanation in any account.

One might think that a possible way to go about it is to argue that a verb like *shelve the books* is more or less the same as *sweep the floor clean/ sweep the crumbs off the floor,* with a major significant difference: in the case of the verb *shelve the books*, the telic/ resultative component is expressed 'inherently'[47], through the 'incorporation' (head-to-head movement) of the Location *shelf*; in the case of *sweep the floor clean,* telic/ resultative component is expressed explicitly by means of a resultative adjective[48]. Interestingly, as argued by Mateu (2002), such resultatives only appear as a satellite around the verb in Germanic languages, but not in Romance, and this is a structural difference between Romance languages and Germanic languages. One could tentatively argue that results incorporate into the verb only in languages where they can be expressed as a satellite around the verb. Such a reasoning would lead to the expectation that there be no verbs which have incorporated a result in Romance (given that there are almost no resultatives in Romance). This is debatable, given the existence of verbs where the result seems to be incorporated (e.g. *înroşi* 'redden'-*red* here is an obligatory predicate, however). Thus, one has to distinguish between obligatory results, which appear as complements, and can undergo incorporation (e.g. *shelve the books*), and resultatives (e.g. *sweep the floor clean*). We have reached the conclusion that obligatory results can undergo incorporation both in English and Romanian, while resultatives can act as satellites around the verb in English, but not in Romanian. Mateu (2002) considers this a structural difference between languages, and ascribes to it explanatory power. Unfortunately, no such

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[47] 'Inherently' is just a term meant to convey the fact that the elements responsible for telicity are within the verb, rather than outside it.

[48] The basic difference between the verb *shelve* and the verb *sweep* in a conflation account is that the verb *shelve* is the result of lexico-syntactic *incorporation* (the Location incorporates into the P, and, further on, into V), while in *Tony swept the floor clean* or *Tony swept the crumbs off the floor*, there is conflation (the Manner is merged onto the verb, and there is no movement process). Apart from this, the literature claims that there is another important difference between *shelve* and *sweep*, namely, their behaviour with respect to the locative alternation: the verb *sweep,* a manner verb, enters the locative alternation, while the verb *shelve,* a result verb, does not (Levin 2006, 2011). I would like to counter this claim by bringing to attention sentences such as *Mary shelved the red shelf with books* and *Mary shelved the books on the red shelf*. If one resorts to cognate objects (modified by an adjective which enriches the sentence semantically), it seems to be the case that a 'result' verb like *shelve* can actually enter the locative alternation. The same is true for the verb *saddle*: *Jim saddled the horse with a blue saddle* and *Jim saddled a blue saddle on the horse*. Of course, one could claim they are here recategorized as 'manner'.

explanatory power can be ascribed to a generalization regarding the relation between resultatives appearing as satellites and the productivity of denominals.

As far as resultatives or PathPs are concerned, I embrace Mateu's viewpoint. Regarding the lack of productivity of denominals in Romance, I will suggest a possible pseudo-explanation. If one does not resort to concepts such as *incorporation/ conflation*, the difference between a verb like *shelve the books* and a verb like *sweep the floor clean* is that *shelve* is an [init, proc, res] verb, where resP is represented by the PP *ON shelf*, while *sweep* is an [init, proc] verb, and the resP is spelled out by *clean* (Ramchand 2008b). In contrast with English, in Romanian, there is a tendency not to use a single item if lexicalization by inheritance is possible. Instead of using a verb corresponding to *shelve* in English, Romanian uses the periphrastic *pune/ aranja pe raft* ('put/ arrange on shelf'), and this is the general tendency in the case of denominal verbs. Moreover, resultatives generally cannot appear as satellites in Romanian: there is no phrase corresponding to *clean* in *sweep the floor clean* in Romanian, although one can say *Fata a măturat podeaua lună* ('Girl-Def Article fem.sg. has swept floor- Def Article fem.sg moon', *The girl swept the floor clean*), and also *Fata a măturat podeaua până a devenit curată* ('Girl- Def Article fem.sg has swept floor- Def Article fem.sg until has become clean-Fem, sg', *The girl swept the floor until it became clean*), where the result is expressed by means of a whole sentence. Thus, in a phrasal spell-out account, one could say English tends to use phrasal spell-out by a single item (*shelve, clean*), where Romanian uses more than one item (*pune/ aranja pe raft* 'put/ arrange on shelf', *până a devenit curată* 'until has become clean-Fem, sg'). In a spanning account, the difference between *sweep the floor clean* and *shelve* would lie in the fact that *shelve* spans over several terminals, and the nodes form a mirror word together (Brody 2000), whereas the sequence *sweep the floor clean* spells out in more than one place.

In addition, following Damonte (2005), I look at the locative alternation, and try to see the differences between the locative alternation in a language like Romanian and the locative alternation in a Germanic language. An important difference is constituted by the presence of complex resultatives in English (such as *off the crystal ball* in *John rubbed the fingerprints off the crystal ball,* or *clean of fingerprints* in *John rubbed the crystal ball clean of fingerprints*) versus the absence of such constructions in Romanian. Following Mateu (2002), I try to relate this to the verb-framed/ satellite-framed distinction (Talmy 1985, 1991), adopting the view that complex resultatives in locative sentences only occur in satellite-framed languages (like English), where the Manner is conflated into the verb, but not in verb-framed languages, where the Path is conflated into the verb.

Apart from the complex resultative difference, there is another significant difference as far as the locative alternation is concerned: while there are two frames for the locative alternation in

English (a frame with the preposition *with*: *He loaded the cart with sand*, and a frame with the preposition *onto*: *He loaded sand onto the cart*), it has been argued (Damonte 2005) that Romance displays an additional frame, making use of the preposition corresponding to *of* in English. A possible solution for this issue is to argue that, in fact, we are not dealing with an additional variant, but simply with a case where it looks like we are because there is a classifier consisting of an indefinite noun (Damonte 2005), or the adjective selecting the preposition is silent (Kayne 2003) e.g. *pieno di/ plin de* 'full of' (a view I adopted in a paper to be published). However, this view seems to be contradicted by the fact that complex resultatives are not possible in Romance, so complex resultatives headed by silent adjectives should not be either. A different take on this problem would be to assume there is indeed another framework, and suggest that Romance generally uses a frame such as *Ho caricato il camion di sabbia* (It, 'Have loaded DEF ART masc, sg of sand') when the noun denoting the quantity that is loaded is indefinite, and a frame such as *Ho caricato il camion con la sabbia* (It, 'Have loaded DEF. ART. masc, sg of DEF ART fem, sg sand') when the noun denoting the quantity that gets loaded is definite. I try to capture the two frames in the phrasal spell-out account and the spanning account: while the phrasal spell-out account would involve lots of movement, spanning proves to be much more economical. DM also offers a good alternative.

Another issue that needs to be looked into is represented by prefixed verbs in one of the frames of the locative alternation in Germanic and Romance. In German and Dutch, the locative alternation may present a basic variant and a prefixed variant (which has a different meaning). In an incorporation account, one could analyze the prefixed verb in German as the result of incorporation, with the prefixed variant being derived from the unprefixed one (Damonte 2005), or as the result of a conflation process, with the prefix acting as a satellite around the verb (Mateu 2000). In a phrasal spell-out account, however, the prefixed verbs are not formed via derivation, but spell-out of the phrases projected by V, P, and N. A verb such as *a înşeua* can be analyzed as spelling out InitP, ProcP (*-a*), PP [+accompaniment] feature lexicalized by the prefix *-în/* silent preposition projection *CU/ WITH* (depending upon the analysis one adopts), and the noun ('a DOTA calul CU şa', i.e. 'to PROVIDE horse-DEF ART masc, sg with saddle', the Hale & Keyser paraphrase, or 'a PUNE şaua PE cal', i.e. 'to PUT saddle-DEF ART fem, sg. ON horse'). While phrasal spell-out needs a lot of movement to account for this verb, DM and spanning are more adequate. I will assume the lexicon stores the verbal declension ending, the noun and the prefix separately in the lexicon, and that it does not store the verb. There will be more than one entry for the prefix *în-* given that the prefix *în-* spells out the subtrees of many prepositions which can lexicalize P (such as 'cu', i.e. 'with', 'în', i.e. 'in' for instance).

2.   Location Verbs

English has many location verbs (Hale & Keyser 2002: 18):

(1)   to bag, bank, bottle, box, cage, can, corral, crate, floor (opponent), garage, jail, package, pasture, pen, photograph[49], pocket, pot, shelve, ship (the oars), shoulder, tree

In Romanian, however, most of these verbs do not have a corresponding form (I bolded the ones that do): instead, there are combinations of verbs and nouns, such as 'a pune pe raft' ('to put on the shelf'/*to shelve*), 'a băga la închisoare' ('to put in jail'/*to jail*) , or 'a pune în cutie' (' to put in box'/*to box*). In (2), I listed the corresponding forms of the English verbs:

(2) *a pune în sac* (lit. to put in bag) 'to bag', ***a îndigui**/a depune la bancă* (lit. to put at bank), 'to bank', *a pune într-o sticlă* (lit. to put in a bottle), 'to bottle', *a pune într-o cutie* (lit. to put in a box), 'to box', *a băga într-o colivie* (lit. to put in a cage), 'to cage', *a pune în conservă* (lit. to put in can), 'to can', *a îngrădi/a înconjura*, 'to corral', *a pune într-un coş sau ladă* (lit. to put in a basket or a case/chest), 'to crate', *a pune la pământ* (lit. to put to earth), 'to floor', *a duce în garaj* (lit. to carry in garage), 'to garage', a *arunca pe cineva la închisoare* (lit. to throw on somebody to prison), 'to jail', ***a împacheta**,* 'to package', *a pune pe o păşune* (lit. to put on a pasture), 'to pasture', *a închide într-un ţarc* (lit. to close/ shut in a pen), 'to pen', ***a fotografia*** 'to photograph'', *a pune în buzunar* (lit. to put in pocket)[50], 'to pocket', *a pune în oală* (lit. to put in pot), 'to pot', *a pune pe rafturi* (lit. to put on shelves), 'to shelve', *a transporta pe vas* (lit. to transport on ship), 'to ship', *a pune pe umăr* (lit. to put on shoulder), 'to shoulder', *a face pe cineva să se urce în copac* (lit. to make on somebody CONJ climb in tree), 'to tree'

Of course, Romanian is not devoid of location verbs, such as *a adăposti* (to shelter), *a cataloga* (*to catalogue*), *a conserva* (*to can),* *a fabrica* (lit. to factory, *to fabricate*), *a păşuna* (lit. to field, *to*

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[49] It is not very clear to me why Hale & Keyser (2002) list the verb *to photograph* as a location verb. Perhaps it is because they ascribe to the verb a paraphrase of the type 'to put smth (a fragment of the world) in a photograph'.

[50] The verb *a buzunări* (lit. to pocket-verbal suffix) exists in Romanian. However, its meaning is not that of putting something in a pocket, but of taking/ stealing something from somebody else's pocket.

graze), *a se refugia* (lit. to reflexive clitic refuge, *to take refuge*), *a zări* (lit. to view, *to see*)[51]. Apart from these simple denominals, there are also prefixed location verbs such as *a îmbarca* (lit. to in-boat)*, a îmbăia* (lit. to in-bath), *a îmbălsăma* (lit. to in-balm)*, a îmbutelia* (lit. to in-gas tank), *a împacheta* (lit. to in-pack)*, a încarcera* (lit. to in-carcerate)*, a încazarma* (lit. to in-barrack), *a îngropa* (lit. to in-hole in the ground), *a înlănțui* (lit. to in-chains)*, a înmagazina* (lit. to in-store), *a înmâna* (lit. to in-hand), *a înrăma* (lit. to in-frame), *a înscăuna* (lit. to in-chair)[52]:

(3)   *Lavinia   a   împachetat   cadoul* (Romanian)

Lavinia   has   put-in-pack-Past Tense   gift-the.

'Lavinia has packed the gift', or like:

(4)   *Ion a   încarcerat prizonierii.*

John has   incarcerated prisoners-the

'John incarcerated the prisoners.'

In (3) and (4), there are two verbs prefixed with *în-*: *a împacheta*, which can be paraphrased a '*a pune în pachet*', lit. to put in package and *a încarcera*, which can be paraphrased as 'to put in prison', i.e. *to imprison*. Moreover, apart from prefixed location verbs, there is also another class of verbs derived with the prefix *în-*, namely, degree achievements such as *a înroşi* (lit. to in-red 'to redden'), which can be paraphrased as 'a face ceva să fie roşu', 'to make smth red'/ 'become red' if we have an active form, and as 'a deveni roşu', 'to turn red/ come to be red' if we have a reflexive form *a se înroşi* ('come to be red'). The fact that these verbs are derived with the prefix *în-* is not arbitrary: a degree achievement such as *a înroşi* ('to redden') is to a great extent very much like a location verb such as *a încarcera* ('to incarcerate'). Both types of verbs derived with the prefix *în-* reflect a similar change: while location verbs derived with *în-* express a change of location (*a încarcera* 'TO CAUSE [TO BE in prison]'), a degree achievement such as *a înroşi* ('TO CAUSE [TO BE red]') expresses a change of state (to pass into the state of being red).

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[51] The examples of denominal verbs are taken from the database of Romanian denominal verbs I have created by investigating a bilingual (Romanian-Norwegian) dictionary (Halvorsen 2007).

[52]The examples are again taken from the database of denominal verbs I have created by looking at a bilingual Romanian-Norwegian dictionary (Halvorsen 2007) .

3. Locatum Verbs

Another important class of verbs is the class of locatum verbs. 'Locatums' is the term used to refer to displaced Themes, and verbs incorporating nouns having the Locatum theta-role are called 'Locatum verbs'. The classic example is the verb *to saddle the horse*, which receives the paraphrase 'to provide the horse with a saddle', where the noun with the displaced Theme theta-role appears as a PP instead of as a direct object. There are many locatum verbs in English:

(5)   to bandage, bar, bell, blindfold, bread, butter, clothe, curtain, dress, fund, gas, grease, harness, hook, house, ink, oil, paint, paper, powder, saddle, salt, seed, shoe, spice, water, word (Hale & Keyser 2002: 18)

Some of these verbs (the bolded ones) are denominal in Romanian too. However, most of them do not have a corresponding form in Romanian:

(6)   ***a bandaja**,* 'to bandage', ***a bara**,* 'to bar', *a purta un clopoţel* (lit. to wear a bell), 'to bell', *a lega la ochi pe cineva* (lit. to tie to eyes on somebody), 'to blindfold', *a găti cu pesmet/pâine* (lit. to cook with biscuit/bread), 'to bread', *a îmbrăca,* 'to clothe', *a pune perdele la ferestre* (lit. to put curtains at windows), 'to clothe', *a îmbrăca/a decora*, 'to decorate', *a prepara*, 'to prepare'/ *a îmbrăca o rochie,* 'to dress', *a consolida/ a finanţa*, 'to fund', ***a gaza**, 'to gas', *a unge cu unsoare* (lit. to smear with grease), 'to oil', *a picta, **a vopsi**,* 'to paint', *a înhăma*, 'to harness', *a prinde în cârlig* (lit. to catch in hook), ***a găzdui*** (lit. to shelter), 'to shelter', ***a locui**,* 'to live', *a scrie cu cerneală* (lit. to write with ink), 'to ink', *a unge*, 'to oil', *a picta*, 'to paint', *a împacheta în hârtie* (lit. to wrap in paper)/*a pune pe hârtie* (lit. to put on paper), 'to paper', ***a pudra**,* 'to powder', *a înşeua* 'to saddle', ***a săra*** 'to salt', *a semăna* 'to sow', ***a potcovi**/a încălţa* 'to shoe', ***a condimenta*** 'to spice', *a uda* 'to water', *a exprima prin cuvinte/**a formula*** 'to express/formulate'

For instance, there is no verb in Romanian corresponding to the verb 'to butter the bread' in English. Instead, the language displays the periphrastic 'a unge pâinea cu unt…' ('to smear bread-the with butter'), where *butter* appears as a displaced Theme, or 'a pune unt pe pâine' ('to put/ spread butter on bread'), where *butter* is a Theme in a direct object position. Nevertheless, Romanian is not

devoid of Locatum denominal verbs such as *a bandaja* ('to bandage'), *a săra* ('to salt'), or verbs with prefixes such as *a înşeua* ('to saddle') or *a înhăma* ('to harness').

In the classical Hale & Keyser (1998, 2002) analysis, location and locatum verbs receive the following analysis:

(7)   V
```
              V         P
                      
        DP          P
      the books          P      N
      the horse    P
                         shelf
                         saddle
```
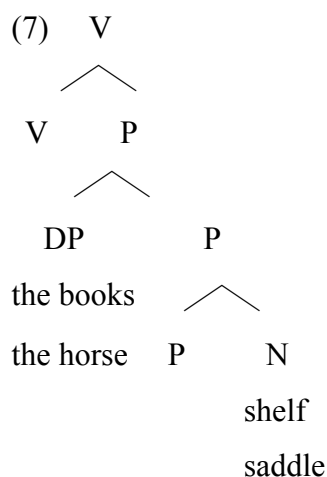
The lexico-syntactic analysis proposed by Hale & Keyser (1998, 2002) captures the intuition that a verb like *to shelve the books* is paraphrased as 'to put the books on the shelf', whereas a verb like *to saddle the horse* is paraphrased as 'to provide the horse with a saddle', with the significant difference that the verb and the preposition are silent, and the article is missing. The N *saddle* incorporates into the silent preposition *ON/ WITH*, forming a N+P comples, and this complex further incorporates into the silent V *PUT/ PROVIDE*. From a phonological point, the signature of the N+P complex is copied under V. Interestingly, given the fact that specifiers do not incorporate (according to Head-to-Head Movement Constraints), Hale & Keyser (2002) do not take the structure in (8) as the source for location and locatum verbs:

```
*(8)    V
        ╱╲
     V     P
           ╱╲
   N          P
 shelf        ╱╲
 saddle    P     N
          the books
          the horse
```
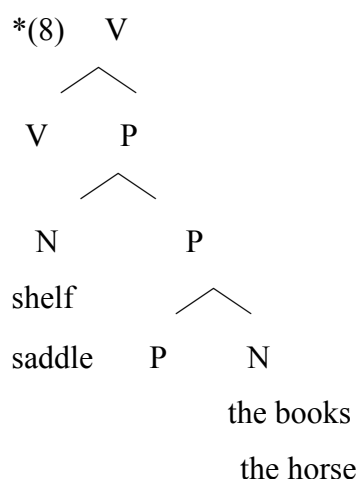
From a semantic point of view, *to shelve the books* expresses a terminal coincidence relation (there is a change in the location of the figure in relation to the place, as putting the books on the shelf results in the books being on the shelf). *To saddle the horse*, on the other hand, expresses the relation of central coincidence (the two elements coincide (more or less centrally) in space, as providing the horse with a saddle gets the saddle on the horse) (Hale & Keyser 1998, 2002)[53].

While in English, incorporation often takes place in (7)[54], in Romanian, this seldom happens. Incorporation in (9) as *a răftui or as *a şeua is not possible:

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[53] In fact, the terminal coincidence relation and the central coincidence relation might actually be more similar than it seems: even when one saddles the horse, it is not the case that the saddle undergoes no spatial change whatsoever: the saddle goes from the hands of the person saddling the horse on the horse. This also true about books: the books go from the hands of the person doing the shelving on the shelf. Such a reasoning points towards the idea that terminal coincidence might actually characterize both location and locatum verbs, in accordance with Mateu's (2000) point of view (for whom terminal coincidence is actually telicity), and against Hale & Keyser's (1998).

[54] It is, of course, debatable whether it is the case that incorporation often takes place in the structure in (7). If, for instance, we replace *shelf* with *bed*, we find that we cannot actually say *Mary bedded the books* with the meaning 'Mary put the books on the bed', nor can we say something like *Mary tabled the books* with the meaning 'Mary put the books on the table' if we replace *shelf* with *table*. From a conceptual point of view, such forms are prevented by Kiparsky's Canonical Use Constraint. If, at a certain point in the future, it became a habit to arrange books on the table or on the bed, perhaps *bed* or *table* could acquire this meaning. Moreover, the forms are lexically blocked by items already existing in the lexicon.

(9)   V
       /\
      V   P
          /\
      DP   P
     cărţile   /\
      calul   P   N
                  raft
                  şa
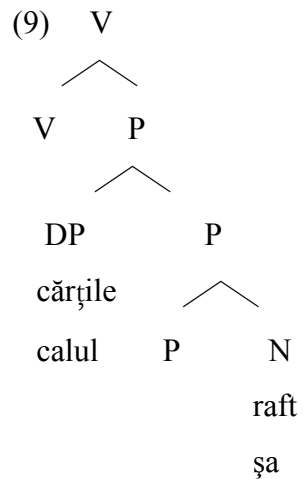
A înşeua ('to in-saddle') is, however, possible, just as *a pudra* ('to powder') in (10) is:

(10) V
     /\
    V   P
   DA   /\
  (give) DP   P
        fata   /\
       (girl) P   N
              CU   pudră
             (with) (powder)
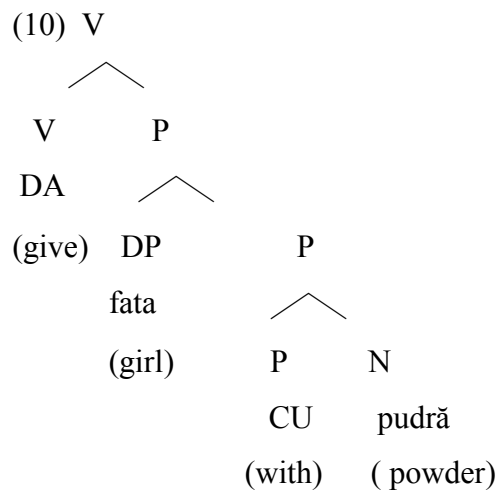
A încarcera in (11) is also possible, the N *carceră* incorporates into the preposition P, and N+P thus formed further incorporate into the silent V PUT:

(11)   V
      /\
     V   P
   PUNE /\
  (PUT) DP   P
       omul   /\
     (man-the) P   N
               în   carceră
               in   prison
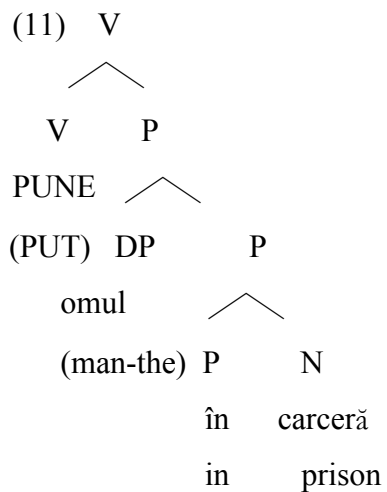
A different take on denominals is represented by the Phrasal Spell-Out account, according to which a single item spells out XPs:

(12)   V
         ╱╲
       V   P
           ╱╲
        DP   P   =Ø/CU
       fata
      (girl)   P   N
                    pudră   (DA CU PUDRĂ= give with powder)

              pudra (fata)

(l3)   V
      ╱╲
    V   P
        ╱╲
      DP   P= *Ø/ ÎN (N)/ în- (prefix)*
    omul
   (man-the) P   N
                carceră   (*PUNE ÎN carceră*= PUT IN prison)
                prison

      încarcera (omul) 'incarcerate man-DEF ART masc, sg'
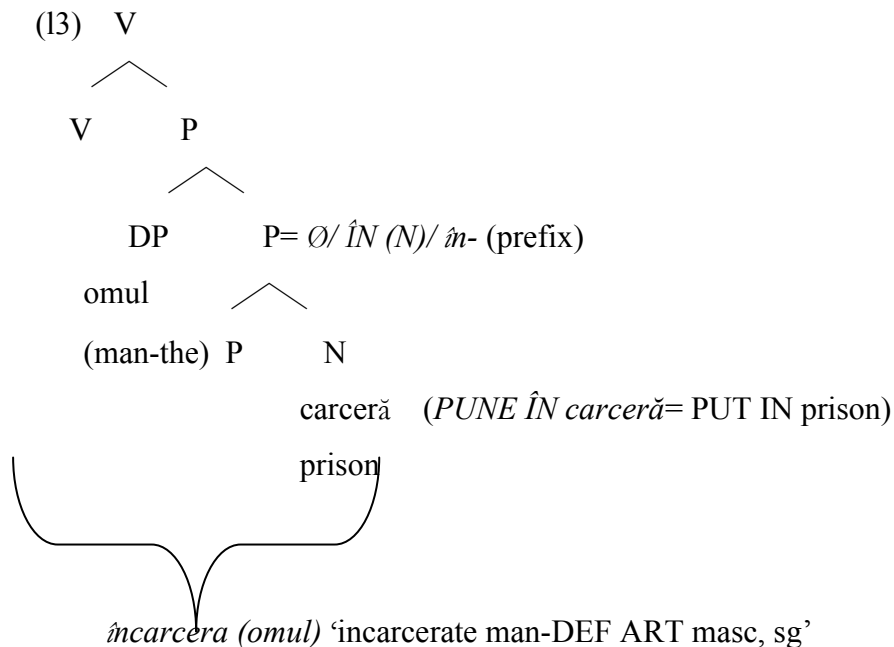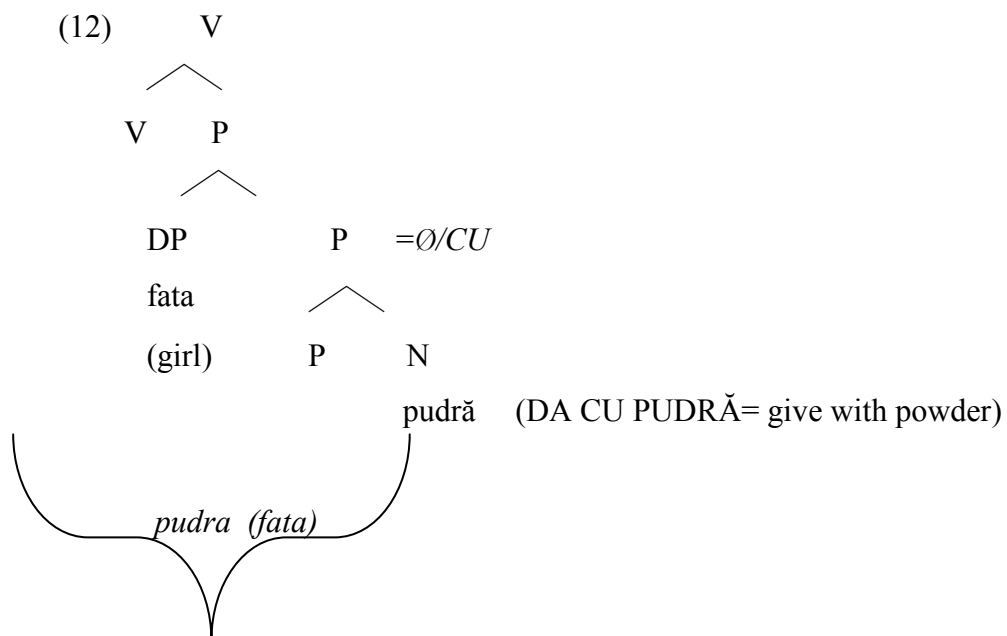
Such an account would explain why one can have a verb like *a înşeua* ('to saddle') without it being the case that the preposition *în (in)* is actually part of the lexical decomposition of the verb (*a înşeua* 'to saddle' cannot be paraphrased using the preposition *în*) .

Of course, this analysis can be further refined, by looking into the structure of the V (in (12) and (13)), representing it as an [init, proc] verb (Ramchand 2008b). Moreover, one can also look into the structure of the P, and see if it is a spatial preposition (a [Goal, Place] P) or a non-spatial preposition such as *with*. For instance, a refined version of (13) would be:

(14) initP

Init   procP

omul

man-DEF ART masc, sg   proc   GoalP= Ø/ÎN/în- (the prefix)

tᵢ

Goal   PlaceP= Ø/ ÎN /în- (the prefix)

tᵢ

Place   N

carceră
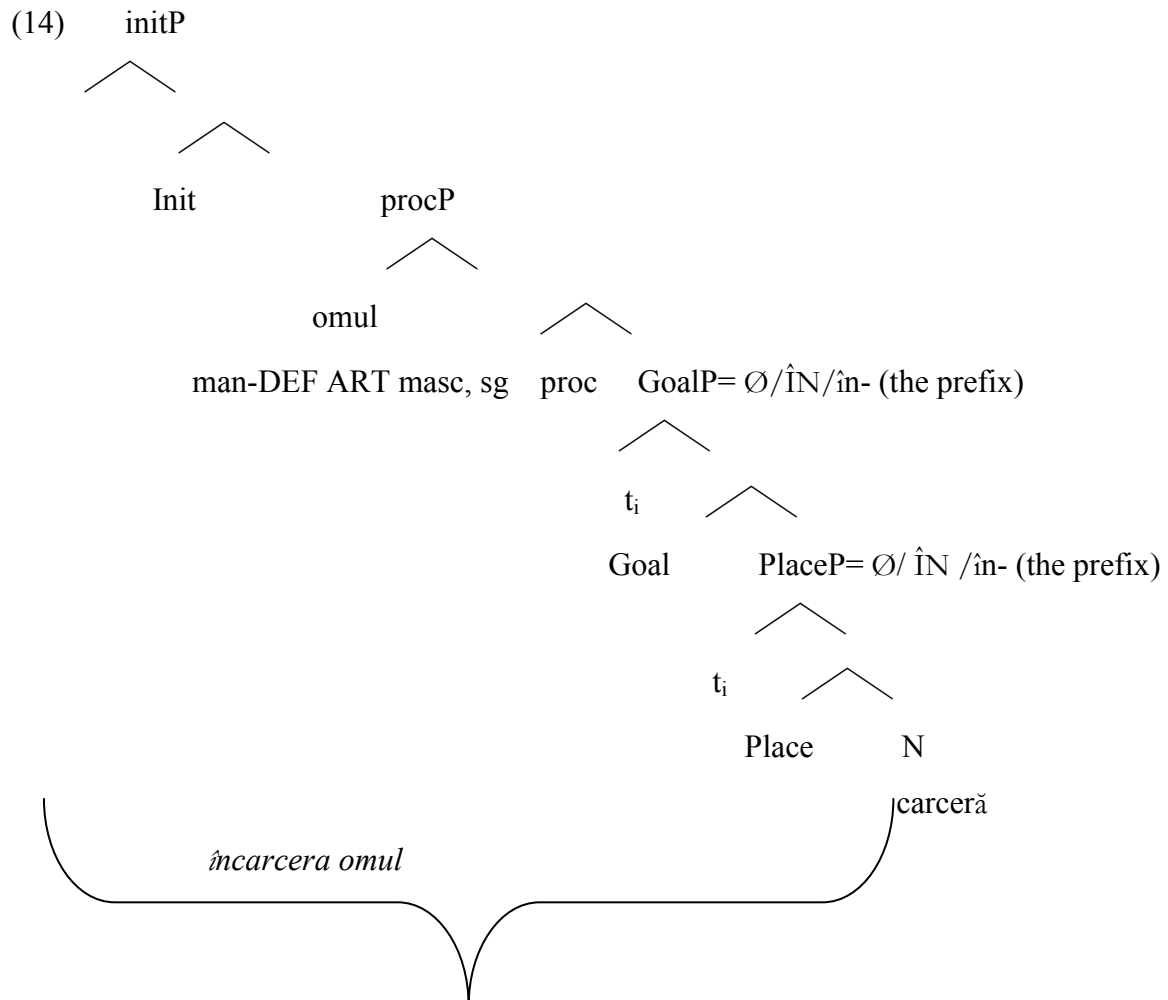
încarcera omul

As is obvious from the representation above, there are various options available: PlaceP and GoalP may be lexicalized either by a null preposition, a silent preposition *ÎN*, or the prefix *în-*. ProcP, and then InitP will be lexicalized as *încarcera*. Given the transparent decomposability of the verb in Romanian, I will assume the best variant is the one where the prefix *în-* lexicalizes PlaceP/ GoalP. While, due to the absence of additional verbal morphology, a silent item account is possible in English, such an account becomes inadequate when the verb has a different form from the noun. Storing the verb as an item fails to capture the decomposability of the verb, something which can be handled if one assumes the prefix, the noun and the thematic vowel are stored separately.

Location verbs and locatum verbs are not as productive in Romanian as they are in English. While in an incorporation account, the description of this fact would be that incorporation of nouns

in the formation of location and locatum verbs is more productive in English than in Romanian, in a phrasal spell-out account, it can be argued that English prefers direct lexicalization (*to shelve*) by a single item where Romanian prefers lexicalization by inheritance (*a pune pe raft* 'to put on shelf'). A possible reason for the choice of many items over one to express the same meaning in Romanian could be related to its rich verbal morphology. While so many English noun-incorporating verbs are identical to the nouns they incorporate (*corral- corral*, *butter-to butter* a.o.)- the context often says whether it is a verb or a noun (*I butter the bread every day, I would love some butter*), in Romanian, much more is needed to turn a noun into a verb. The short infinitive form contains the verb and a different suffix for each of the four declensions: *–a (a dansa* 'to dance'), *-ea (a vedea* 'to see')*, -e (a crede*, 'to believe'), *-i* or *–î* (*a urî* 'to hate') ,and, sometimes, the verb that would result would perhaps be rather difficult to pronounce (?*a şeua* 'to saddle')[55]. However, there is no clear reason why there is no verb *a pâini* ('to bread') or why there is no verb *a răftui* ('to shelve'), for instance. Such verbs should be perfectly possible lexical items in Romanian, and their absence is a gap in the lexicon which is not ruled out by structural reasons. Moreover, if one says something like (15) to another speaker of Romanian:

(15) Ai   răftuit   cărţile   alea   toată dimineaţa, ia   o pauză.

        Have-PRES. 2nd sg. shelve-Past Prt. book-FEM. pl. those-FEM. pl.   all-FEM. sg. morning, take a-FEM. sg. break.

    'You have been shelving those books all morning, take a break.'

the interlocutor will understand the meaning of the verb *a răftui,* even if this verb is not actually part of the actual vocabulary of Romanian.

    As far as the prefix *în-* is concerned, it is the most productive prefix in Romanian (Avram, Carabulea a.o. 1970): a great number of denominals are created with this prefix[56]. From an

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[55] Sometimes, the noun and the verb have different consonant endings (*văz* 'sight'*, a vedea* 'to see'). In this way, there is no homonymy between the first person singular, indicative present (*văd*), and the noun.

[56] There are other prefixes which create or attach to denominals in Romanian: *dez-*, a negative prefix, the opposite of *în-* (*a dezrădăcina* 'to unroot'), for instance, or *con-* (*a conlucra* 'to with-work', *to work with*) (Avram, Carabulea a.o. 1970). However, it goes beyond the scope of this thesis to deal with all the prefixes that can combine with verbs derived from nouns, and look into their structure. Nevertheless*, în-* is not the only prefix. Interestingly, the fact that the prefix and the preposition involved in the paraphrase have different phonological forms (e.g. *con-* vs. *cu* 'with') even in other cases

incorporation perspective, the prefix *în-* can be analyzed as an incorporated variant of a preposition (*în (in))*. However, such an account poses problems for those cases where the preposition incorporated appears to be different from *în*. As mentioned before, in the case of *a înșeua* 'to saddle', for instance, one might assume the presence of a silent preposition *CU* (WITH)- 'a dota calul cu șa' (*to provide the horse with a saddle*), or *PE* (ON) at most (although this is not the Hale & Keyser paraphrase)- 'a pune șaua pe cal' (*to put the saddle on the horse*), but not *în (in)*. It could be, of course, argued that the prefix *în-* is the incorporated version of any preposition that may appear in the paraphrase which receives a syntactic representation. In a phrasal spell-out account, the issue is solved in a similar way, with *înșeua* lexicalizing the N and the preposition, and then the verb and the N+P. I shall discuss prefixation in Romance later on, comparing it to prefixation in Germanic.

In a spanning account, a verb like *înșeua* would receive the following representation:

(16)   Init∗ Ø
            /\
      'x'   Proc∗ -a
                 /\
          'y'   Goal@ în-
                      /\
               'y'   Place∗ (în-)
                           /\
                    'y'   N@

                                șa
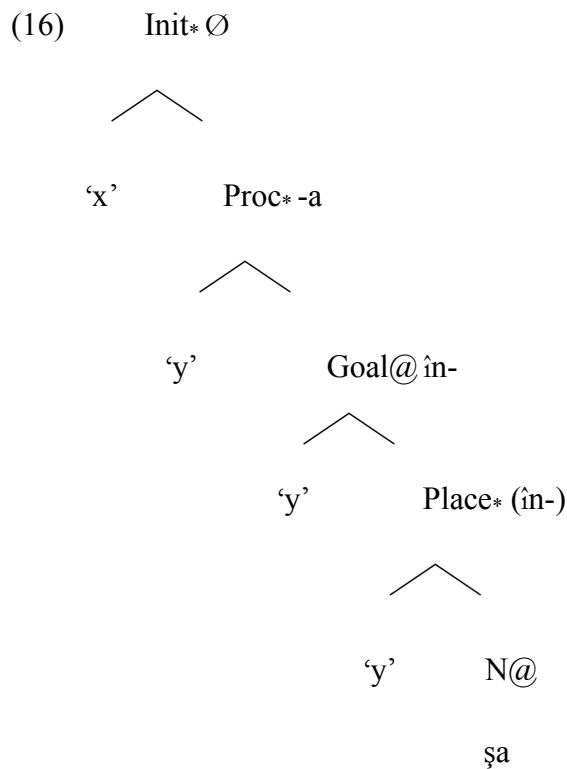
Linearized as x [Goal-Place-N- Proc- Init] y

The spanning account has the advantage of resorting to less movement that the nanosyntactic account.

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seems to support the idea that incorporation of the prepositions cannot account for the formation of these verbs, but one needs to incorporate the prefix.

. The question is if it is really the case that this item is created in this way, or rather one deals with parasynthetic derivation (Avram, Carabulea a.o. 1970), according to which the prefix *în-* and the suffix *a-* are added at the same time. Such a view cannot be captured by any of the accounts, as it requires a different build up of the structure and algorithm of linearization

I shall discuss prefixation in Romance later on, comparing it to prefixation in Germanic.

4.   The Locative Alternation

'The locative alternation' is the term used to refer to the fact that a verb may appear in two slightly different structures, one where the noun expressing Location is a PP, and one where it occupies a direct object position, as in the following example, taken from Hale & Keyser (2002: 43):

(17)   a. They loaded hay onto the truck.
           b. They loaded the truck with hay.

In the lexico-syntactic framework proposed by Hale & Keyser (2002: 43-44), a different representation is assigned to each of the two sentences:

(18)   a. V_1

V_1 V_2

DP V_2

the truck

V_2 P

load

P   DP

with   hay

b.V$_1$

```
        b.V₁
        /\
      V₁   V₂
           /\
         DP   V₂
         hay  /\
            V₂   P
           load  /\
               P    DP
              onto  the truck
```
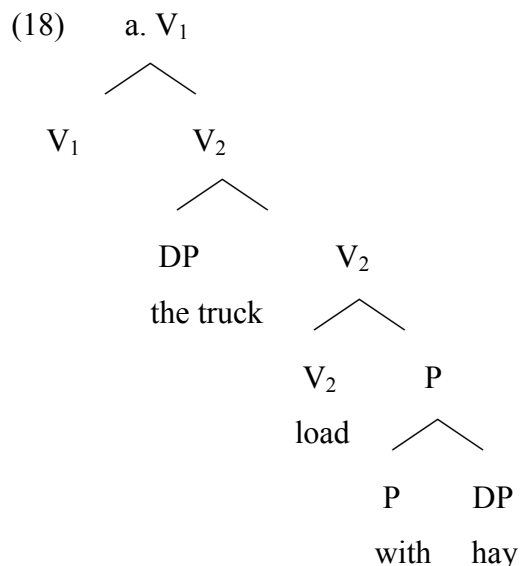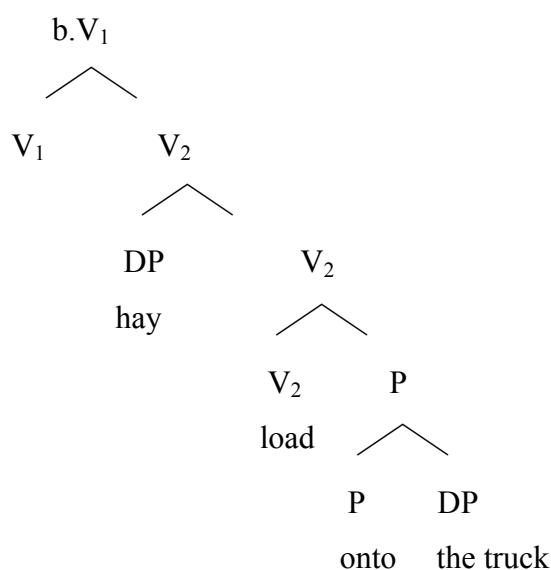
Even if both sentences refer to a loading event which involves hay and a truck, there is a difference in meaning: it has been argued (Damonte 2005) that, unlike (17a), (17b) entails that the truck is completely filled with hay, displaying thus a holistic effect[57].

However, if one tries to render the locative alternation in a first-phase syntax, [init, proc] replaces V$_1$/ V$_2$ (Ramchand 2008b), and a resultative component is added. Given the grammaticality of *John loaded the hay* or *John loaded the truck* (it can stand on it own and it has a resultative meaning), it might be assumed that ResP is actually part of the structure of *load* (although Levin (2006) argued only manner verbs alternate, which would mean *load* should be an [init, proc] rather than an [init, proc, res]). In this case, *with hay* and *onto the truck* are actually PPs taken as complements by the Res head, where ResP is lexicalized as *load* (after the PP moves). Moreover, such an analysis would account for the difference between *John put the books on the shelf* (where *put* is an [init, proc]) (as *John put the books* is not grammatical-interestingly, *shelve* is an [init, proc, res]) and *John loaded hay onto the truck* (where *load* is an [init, proc, res] and *John loaded hay all day* is possible).

If one adopts a phrasal spell-out account, the lexical items spell-out phrases rather than the being inserted at the terminals.

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[57] As indicated by an anonymous reviewer of a paper of mine (Bleotu in press), it may be wrong to suggest that the holistic effect occurs in one frame, whereas it does not occur in the other. If we say *They loaded trucks with hay*, replacing the definite form *the truck* with the bare plural *trucks*, we no longer get the holistic reading. Moreover, if we say *They loaded the hay onto trucks,* we get a holistic reading with reference to the hay: 'They loaded the whole quantity of hay onto trucks'. These empirical facts suggest that the holistic effect may be a consequence of a definite direct object rather than of a particular frame.

(19)

(a) InitP

/\   <= load

/\

Init   ProcP

/\   <= load

/\

Proc   resP

/\ <= load

the truck => DP   /\

res   PP

with hay

b.

InitP

/\   <= load

/\

Init   ProcP

/\   <= load

/\

Proc   resP

/\ <= load

hay => DP   /\

res   PP
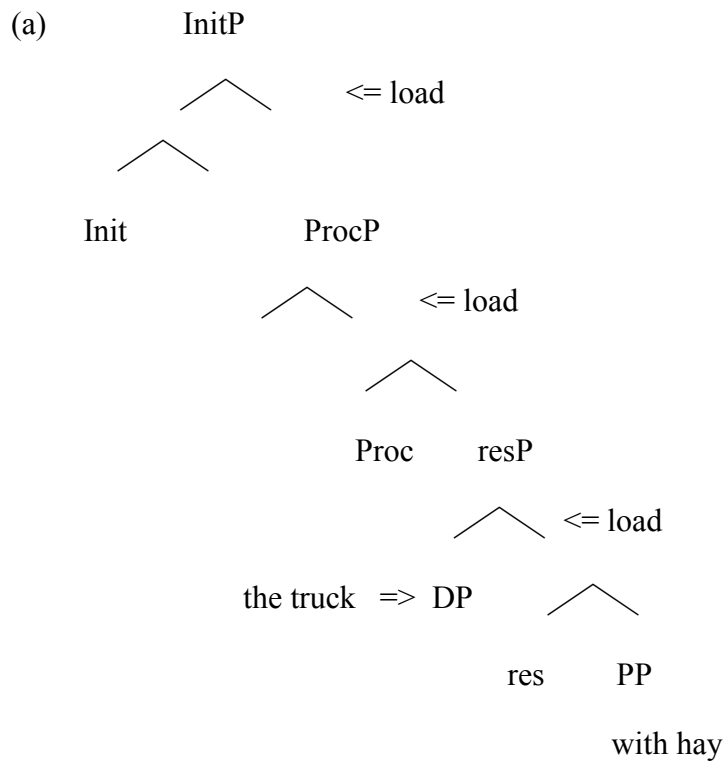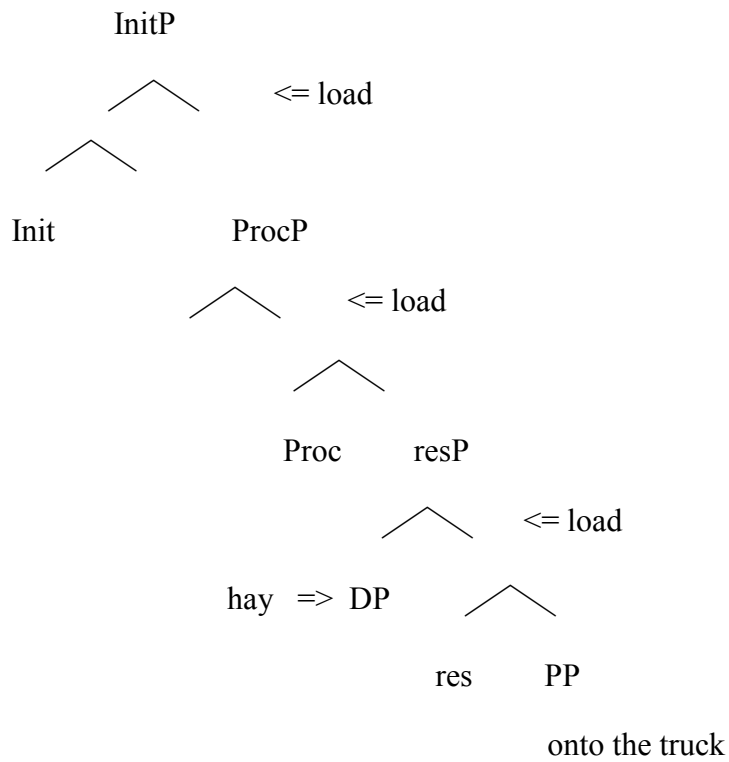
onto the truck

The problem with the phrasal spell-out account of the locative alternation is that it requires a lot of movement. To lexicalize resP as *load*, one has to move the PP *with hay/ onto the truck* out of its complement position adjoined to resP. To lexicalize ProcP as *load*, one has to move the PP again, and the same movement is required for the spell-out of InitP. In the end, so as reach the order *load the truck with hay/ load hay onto the truck*, one has to further move the verb *load* to another projection above. Hence, to achieve the right ordering, one has to resort to lots of movement operations, which can easily be avoided if one resorts to a normal terminal spell-out principle or even to spell-out of spans.

In the example above, for instance, if one adopts a spanning account, one manages to capture the locative alternation in a much more elegant and simpler way:

(20) a.   Init@$_*$ *load*

  'x' Proc$_*$

    'y' Res

      'y' P@ *with*

        'y' N@[58]

          hay
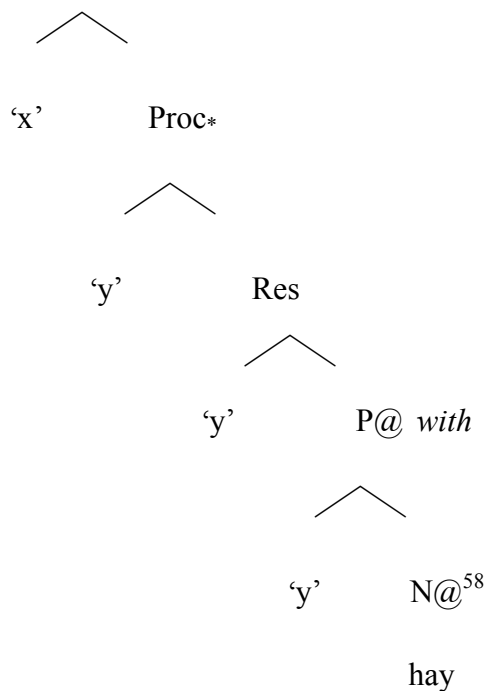
  Linearized as *x [Res Proc Init] y P*

 b.

---

[58] I have used the @ symbol twice. Placing it in P only would have lead to an N-P linearization with spell-out in P. It thus seems to be the case that the symbol @ is used sometimes to indicate head-movement and sometimes to just indicate where the span spells out.

```
                Init@*  load

              ╱‾‾‾‾‾‾╲
          'x'          Proc*

                      ╱‾‾‾‾‾╲
                 'y'          Res

                             ╱‾‾‾╲
                        'y'          P@ onto

                                    ╱‾‾‾╲
                               'y'          D@ the

                                           ╱‾‾‾╲
                                      N@ ⁵⁹truck
```
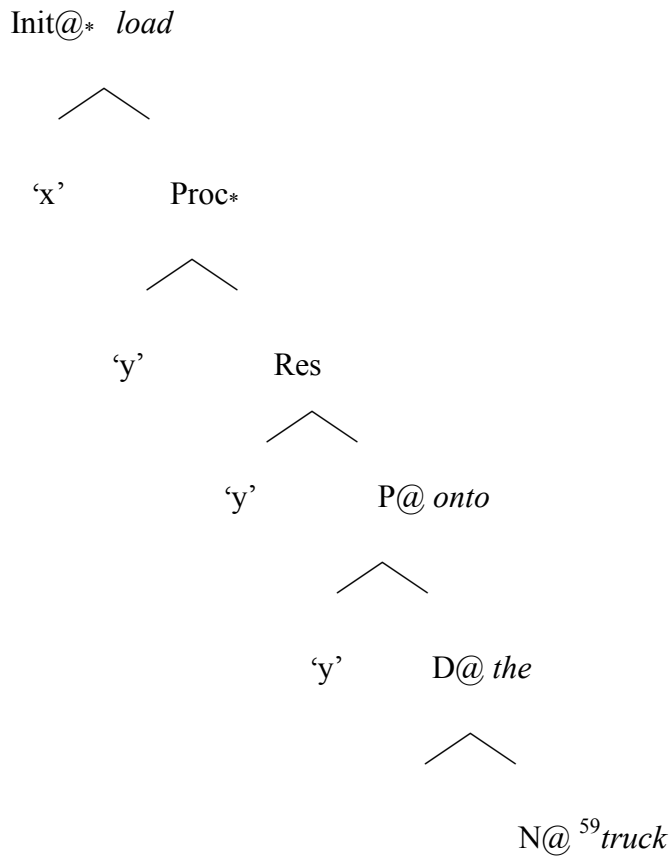
Linearized as *x [Res Proc Init] y P D N*

In the representations above, I have assumed Init, Proc and Res lexicalize together as one morphological word. The P *onto* can be further analysed as Goal, Place:

(21)

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[59] I have used the symbol @ three times in the P-D-N span. I have doubts whether this is the correct way to go about it. However, placing it only in P would lead to an N D P linearization with the spell-out in P. Given that each head has a lexical counterpart (we are not dealing with a single morphological word), it is not clear to me how one could get the order *onto the truck.* (A possible solution would be to take D N to form a morphological word together by placing the * diacritic near D, thus the span would become P@-D@*-N). For this reason, I assumed each head spells out on its own.

Init@∗ *load*

      ⌃

'x'   Proc∗

        ⌃

'y'   Res

         ⌃

'y'   Goal@* *onto*

        ⌃

'y'   Place

       ⌃

D@ *the*

   ⌃

N@ [60]*truck*
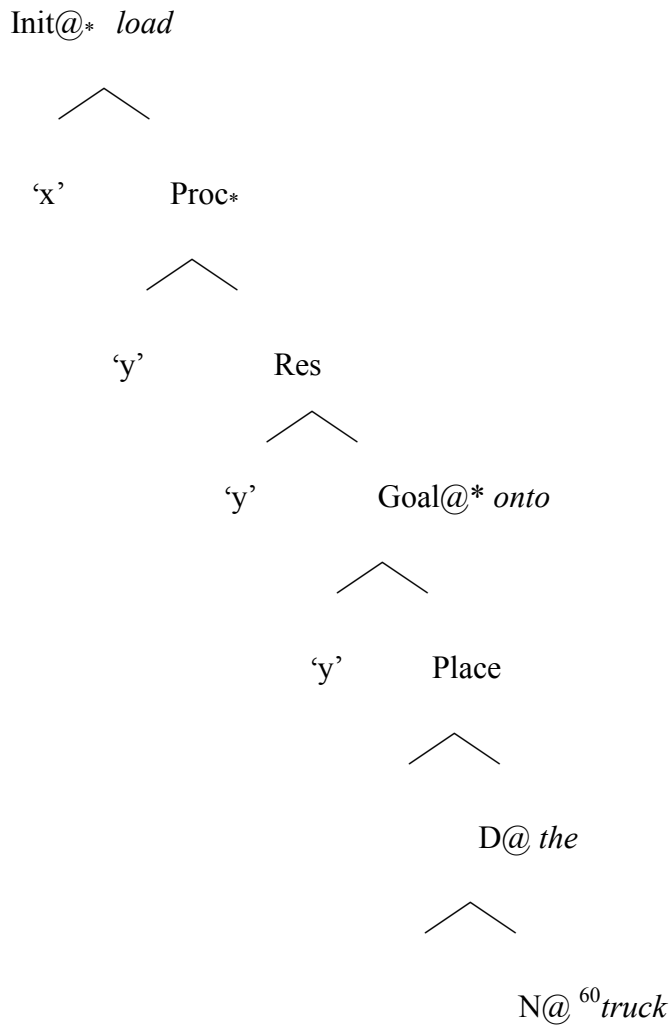
Linearized as *x [Res Proc Init] y [Goal Place] D N*

. It thus seems to be the case that spanning provides a better account of the locative alternation (although using the diacritic @ to mark the height of spell-out becomes a bit of an issue if there is a sequence which spells out in several places). While phrasal spell-out relies on too many movement operations, spanning is perfectly capable of accommodating the locative alternation structure.

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[60] I have used the symbol @ three times in the P-D-N span. I have doubts whether this is the correct way to go about it. However, placing it only in P would lead to an N D P linearization with the spell-out in P. Given that each head has a lexical counterpart (we are not dealing with a single morphological word), it is not clear to me how one could get the order *onto the truck*. (A possible solution would be to take D N to form a morphological word together by placing the ∗ diacritic near D, thus the span would become P@-D@∗-N). For this reason, I assumed each head spells out on its own.

4.1.   The Types of Verbs Entering the Locative Alternation in English

According to Levin (1993), there are two types of verbs which enter the locative alternation: (i) verbs of *placing* (spray, load), and (ii) verbs of *detaching* (clear), both alternating between two frames, which express a different meaning each:

(22)   a. Frame A: DPAgent V DPStuff PPLoc *change of location (COL)*
        b. Frame B: DPAgent V DPLoc PPStuff *change of state (COS)*

4.1.1.   Verbs of placing

In a short listing, some of the *placing* verbs (Levin 1993: 117) would be:

(23)   *to cram, to cultivate, to dab, to daub, to drape, to dust, to inject, to jam, to load, to wrap, to pack, to plaster, to prick, to pump, to rub, to spray, to sow, to smear, to smudge, to sprinkle, to splatter, to wash, to wrap*[61]

There are two types of *placing* verbs: *spray* verbs and *load* verbs. While, from a syntactic point of view, they behave in the same way, they differ in one important aspect: while a sentence such as *They sprayed blue paint on the truck* means the action was done on the outside of the truck, a sentence such as *They loaded blue paint on the truck* means the action resulted in something being placed inside the truck. In other words, *spray* verbs would be surface contact verbs, while *load* verbs would be inner contact verbs.

As for Romanian, the corresponding verbs in Romanian would be:

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[61] The exact list given by Levin 1993 (117) is:

(i) *brush, cram, crowd, cultivate, dab, daub, drape, drizzle, dust, hang, heap, inject, jam, load, mound, pack, pile, plant, plaster, prick, pump, rub, scatter, seed, settle, sew, shower, slather, smear, smudge, sow, spatter, splash, splatter, spray, spread, sprinkle, spritz, squirt, stack, stick, stock, strew, string, stuff, swab, vest, wash, wrap*

(24)   *a peria (to brush), a îndopa (to cram), a îngrămădi* (to crowd) (only COL), a îndesa (to cram), a încărca (to cram), a aglomera (to crowd), a cultiva (to cultivate), a tampona (to dab), a unge (to daub), a mâzgăli (to daub), a înveli (to drape), a şterge praful (to dust), a injecta (to inject), a înghesui (to jam), a încărca (load), a ambala* (to wrap) (only COL), a împacheta (pack) (only COL), a aplica un plasture pe ('to apply a plaster on', to plaster), a înţepa (to prick) (only COS), a pompa (to pump)* (only COL), a freca (to rub), a spraya (to spray), a însămânţa* (only COS), a semăna (to sow), a păta (to smear)*(only COS), a murdări* (to smudge) (only COS), a stropi (to sprinkle), a împrăştia (to splatter)* (only COL), a spăla (to wash), a acoperi (to wrap) (only COL)*

Sometimes, apart from the COL and COS frames, the verbs even allow a third frame, similar to COS, where, instead of the preposition *cu* 'with', the preposition *de* 'of' is used:

(25)   a. Matei a încărcat muzică pe ipod.

   Matei has loaded music on ipod.

   'Matei has loaded music on the ipod.'

   b. Matei a încărcat ipodul   cu muzică.

   Matei has loaded ipod-DEF ART masc, sg with music.

   'Matei has loaded the ipod with music.'

   c. ? Matei a încărcat ipodul   de muzică.[62]

   Matei has loaded ipod-DEF ART masc, sg   of music.

   'Matei has loaded the ipod with music.'

However, sometimes, a verb can only occur in a single frame, as is the case in (23):

(26)   a. Miruna a îngrămădit   pantalonii   în dulap.

   Miruna has crammed trousers-DEF ART masc, pl in closet.

   'Miruna crammed the trousers in the closet.'

   b. *Miruna   a îngrămădit dulapul   cu pantaloni.

   Miruna   has crammed closet-DEF ART n, sg with trousers.

---

[62] The question mark is meant to indicate that, while some native speakers found the sentence grammatical, others found it odd.

'Miruna crammed the trousers in the closet.'

4.1.2   Verbs of Removal

Apart from verbs of placing, there are <u>verbs of removal</u> such as *a șterge (to wipe), a curăța (to clean), a curăți (to clean)* a.o. Although these verbs generally accept both frames as in (27):

(27)   a. Marina a șters masa de praf.
   Marina has wiped table-the of dust.
   'Marina has wiped the table of dust.'
  b. Marina a șters praful de pe masă.
   Marina has wiped dust-the of on table.
   'Marina has wiped the dust of the table.'

this is not always the case, given that a verb like *a freca (*to rub), for instance, does not.
  Even in English, there are verbs that do not accept both frames. Some verbs of detaching only allow the change of location frame:

(28)   *Remove* verbs: abstract, cull, delete, discharge, dismiss, extract, subtract, etc.
  Banish verbs: banish, deport, evacuate, expel, etc.
  Steal verbs: abduct, extort, extract, grab, recover, withdraw, etc.

(29)   a. The thief stole the painting from the house.
  b. *The thief stole the house of the painting.

On the other hand, there are verbs that only allow the change of state frame, such as:

(30) *Cheat* verbs: absolve, burgle, cheat, cleanse, defraud, milk, purify, relieve, exonerate, etc.

(31) a. *The doctor cured pneumonia from Bob.
  b.   The doctor cured Bob of pneumonia.

Romanian also has verbs of detaching which only accept one frame: either the change of location frame (*a deleta* 'to delete', *a extrage* 'to extract', *a evacua* 'to evacuate', *a deporta* 'to deport', *a fura* 'to steal', *a recupera* 'to recover' a.o.), or the change of state frame (*a vindeca* 'to cure', *a mulge* 'to mik', *a înșela* 'to cheat' a.o.):

(32) a. Hoțul   a   furat tabloul   din casă.

         Thief-DEF ART masc, sg has stolen painting-DEF ART, neuter, sg from house.

         'The thief stole the painting from the house'.

      b. *Hoțul   a furat   casa   de tablou.

         'Thief-DEF ART masc, sg has stolen house-DEF ART fem, sg of painting'.

          *'The thief stole the house of the painting.'

(33) a. *Doctorul   a vindecat pneumonia   de la Bob.

         Doctor-DEF ART, masc, sg has cured pneumonia-DEF ART fem, sg from Bob.

         'The doctor cured pneumonia from Bob.'

(34) a. *Doctorul   l-a vindecat   pe   Bob de pneumonie.

         Doctor-DEF ART, masc, sg CL-has cured   ACC prep Bob of pneumonia.

         'The doctor cured Bob of pneumonia.'

The verbs entering the locative alternation focus on the Process (Demonte 1991: 64), not on the beginning (as in (35)) or the effect (as in (36)):

(35) a. Maria a   vărsat cafeaua   pe masă.

         Maria has spilled coffee-DEF ART fem, sg on table.

         'Maria spilled the coffee on the table.'

      b. *Maria a vărsat masa   cu cafea.

         Maria has spilled table-DEF ART, fem, sg with coffee.

         *'Maria spilled the table with coffee.'

(36) a. *Linda a umplut apa   în cană.

         Linda has filled water-DEF ART, fem, sg in cup.

         *'Linda filled the water in the cup.'

b. Linda a umplut cana cu apă.

Linda has filled cu-DEF ART, fem, sg with water.

'Linda filled the cup with water.'

In another formulation (Levin 2006, 2011), it is manner verbs that enter the Locative Alternation, and not result verbs[63]. Such a generalization, however, apparently fails to account for such cases as:

(37)   a. Meg shelved the books on the green shelf.

b. Meg shelved the green shelf with books.

c. Meg shelved the books on the table.

where the verb seems to be a result verb, and the locative alternation is possible nonetheless. As the verb *shelve* can be considered full from a semantic point of view ('to put the books on the shelf'), the only PP objects allowed in this particular case seem to be cognate objects, with a variation that allows for additional meaning (the adjective *green* modifying the noun *shelf*), or objects than can be viewed as substitutes for the typical object: in (37c), for instance, the table is used as a shelf. However, in this case, it could be argued that the verb *shelve* undergoes a process of semantic bleaching, being used more with the meaning 'put' (in a certain manner, as if on a shelf) rather than with its 'put on the shelf'/ result meaning.

4.2 Analyses of the Locative Alternation

As argued in Damonte (2005), the literature has analyzed the locative alternation along two major lines: (i) a derivational analysis, according to which the two frames are related derivationally (a transformational analysis (Hall 1965, Larson 1990), a lexicalist analysis (Brinkmann 1997), or a derivational analysis (Damonte 2005)) and (ii) a non-derivational analysis, which says that the two frames are not related derivationally (a lexical semantic approach (Rappaport & Levin 1988), a

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[63] The manner/ result distinction (Levin 2006, 2011) is very similar to the activity [-telic, +durative]/ accomplishment [+ telic, +durative] (and achievement [+telic, -durative]) distinction, given that activities generally denote manner, and telic verbs have a result. However, in the absence of more rigourous tools than semantic intuition to distinguish between manner and result verbs, the manner/ result distinction remains quite blurry. For instance, would a verb like *stab* qualify as a manner or as a result verb? Is *stab* a verb denoting a manner of killing (*The criminal stabs a person every day*) or is it a result verb (*The criminal stabbed the woman yesterday*), does it change value depending upon the context?

conceptual approach (Jackendoff 1990), a lexical-aspectual conceptual approach (Tenny 1994), a syntactic-aspectual approach (Mulder 1992), a syntactic approach based on event structure (Rosen 1996) or Munaro's 1994 syntactic approach).

From a semantic point of view, the two frames construe the same scene in different ways, which results in two distinct lexical conceptual structures:

(38)   a. [[x ACT] CAUSE [y BECOME P_{loc} z] [*LOAD*]$_{MANNER}$]

b. [[x ACT] CAUSE [z BECOME [   ]$_{STATE}$ WITH-RESPECT-TO y] [LOAD]$_{MANNER}$]
(Levin & Rappaport Hovav 1998: 260-261)

If one adopts a syntactic perspective, the difference between a non-derivational approach and a derivational one becomes clear. According to Mulder (1992), the verbs select a SC (small clause) in both the change of location frame (i) and the change of state frame (i): (a) Verb [$_{SC}$ NP$_{material}$ PP$_{locative}$] in (i), (b) Verb [$_{SC}$ NP$_{locative}$ A] (PP$_{material)}$ in (ii). According to Damonte (2005), however, the change of state variant ([AgrO the truck$_i$ [VP t$_i$ P$_j$-load [sand t$_j$ t$_i$]]]) is derived from the change of location variant ([VP load [SC/PP the sand [on the truck]]]) through a series of movements, which predicts the possibility of prefixation of locative verbs in German, for instance (the "path" prefixes *um-*, *hinter-*, *durch-* a.o.).

The same options are also available in the phrasal spell-out account, and the DM account. However, a non-derivational approach seems more in line with the idea that the two meanings are associated with two different frameworks, as I have assumed. Moreover, it is not possible in the spanning account, which eliminates head movement (in Brody's Mirror theoretic framework, the diacritic@ is used to indicate the height where a span spells out, and would be the correspondent of movement in an account that uses movement).

4.3 Differences between the Locative Alternation in English and Romanian

In what follows, I will take a look at the differences between the locative alternation in English and Romanian.

4.3.1 Resultatives

As argued in Mateu (2002) for Spanish, unlike English, Romance does not allow complex resultatives (PP/AP) in locative structures:

(39)   a. John rubbed the fingerprints off the crystal ball.

        b. John rubbed the crystal ball clean of fingerprints.

        c. *Juan frotó las huellas   de la bola de cristal. (Spanish)
           Juan rubbed the fingerprints off the ball of crystal.

        d. *Juan frotó la bola de cristal limpia de huellas. (Spanish)
           Juan rubbed the ball of crystal clean of fingerprints.

        e. Juan frotó la bola de cristal. (Spanish)
           Juan rubbed the ball of crystal.

Unfortunately, most of the attempts made in the literature to explain this difference have been rather descriptive than explanatory. Rappaport Hovav & Levin (1998: 114-123), for instance, resort to the notion of Template Augmentation to account for the elasticity of verb meaning:

(40) *Template Augmentation*

a.   [x ACT$_{<RUBBING>}$ on y]

b.   [x ACT$_{<RUBBING>}$ on y] CAUSE [BECOME [z <PLACE>]]]

According to Fong & Poulin (1998: 30), this is simply a state of affairs:

(41)   "The difference between French and English is that English allows template augmentation, but French does not."

This difference is translated by Mateu (2002) in *morphosyntactic* terms. According to him, the issue of the productivity of complex resultatives in Germanic vs. absence of productivity in Romance revolves around the different lexicalization of manner/ means and directionality/ result in these languages:

(42)   *Lexicalization Patterns* (Talmy 1985, 1991)

Germanic (e.g. English): conflation of V with Manner

Romance languages (e.g. Spanish): conflation of V with Path/ Directionality

According to Talmy (1985, 1991), Germanic languages are *satellite-framed languages*, they leave the Path stranded, as a satellite around the verb, but they conflate the Manner into the verb (e.g. *The little girl danced into the room.* and Romance languages, which are *verb-framed* languages, i.e. languages which conflate the Path into the verb (e.g. Spanish verbs such as *entrar* 'go into', *salir* 'go out', *subir* 'go up' etc.). In other words, Path can be expressed as a satellite only in satellite-framed languages like English (e.g. *John rubbed the fingerprints off the crystal ball*), where the Manner component is encoded into the verb (*rub*). In contrast, in a verb-framed language like Spanish, one can express the Manner as a satellite:

(43)   Juan quitó las huellas (de la bolla$_i$) (frotándola$_i$).

Juan got+ *out* the fingerprints from the ball-rubbing it.

'Juan rubbed the fingerprints off the ball'.

A crucial point in understanding the difference between complex resultatives in Germanic and Romance is, according to Mateu (2011), the difference between *incorporation* (which is head-movement and is instantiated through the syntactic operation of copy) and *conflation* (involves compounding/ merge (to a null light verb)). In this, he takes after Haugen (2009), according to whom verbs like *dance* (as in *The little girl danced*) or *shelve* (as in *Mary shelved the books*) are the result of incorporation: the phonological matrix of the nominal root is copied into the empty V, or into the null P, and then to the null one of V. However, in cases where there can be no source in the argument structure for nominal roots to originate before incorporating to the verbal position (as in *The factory horns sirened midday*), Haugen (2009) argues that conflation is at stake, namely, the root does not come from a complement position but is directly adjoined to the verbal head, and no process of copy is involved. Mateu (2011) keeps this distinction, and, in addition, he argues that it explain the presence of complex resultatives in Germanic languages versus the absence of complex resultatives in Romance.

According to Mateu (2000), a sentence like *John rubbed the fingerprints off the crystal ball* can be explained by resorting to the conflation of the subordinate verbal object encoded by *rub*. The preposition *off* cannot saturate the phonologically null matrix of the verb, hence, in order to meet Hale & Keyser's (1998) external condition that there should be no null matrices at PF, one can resort

to a generalized transformation which takes two transformations and fuses them into one, a device which has been rediscovered in Chomsky's (1995) Minimalist Program. In (44), a substitution takes place: an independent verbal l(exical) syntactic object (V_2, *[DO RUB]*) is conflated into the phonologically null matrix of the verb (V_1):

(44)   a. V_1

           V_1 P_1

        N P_1

    fingerprints

           P_1 P_2

          off_i

              P_2 N

              t_i ball

      b. V_2

        V_2 X

      rub_i t_i ((*RUB* (V_2)> *[DO RUB]*))

(45)

      V_1

    V_1 P_1

  V_2 V_1 N P_1

              fingerprints

  V_2 X P_1 P_2

  rub_i t_i off_i

                 P_2 N

                 t_i ball
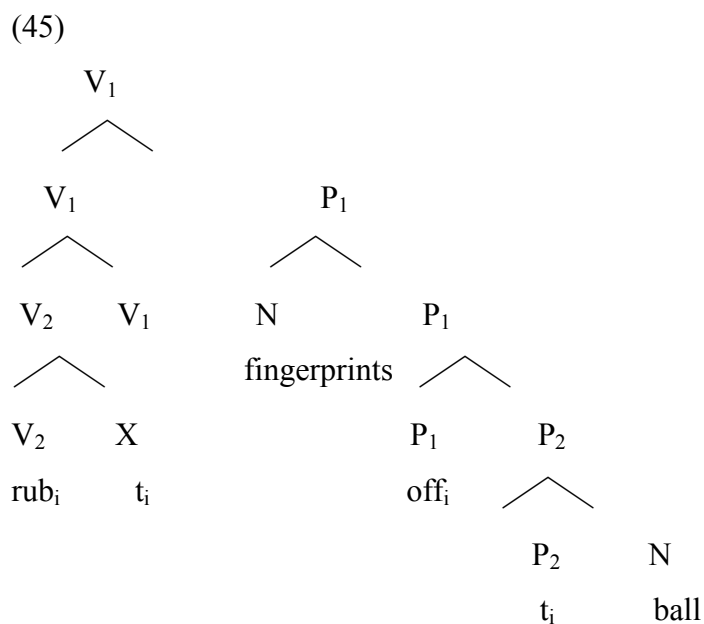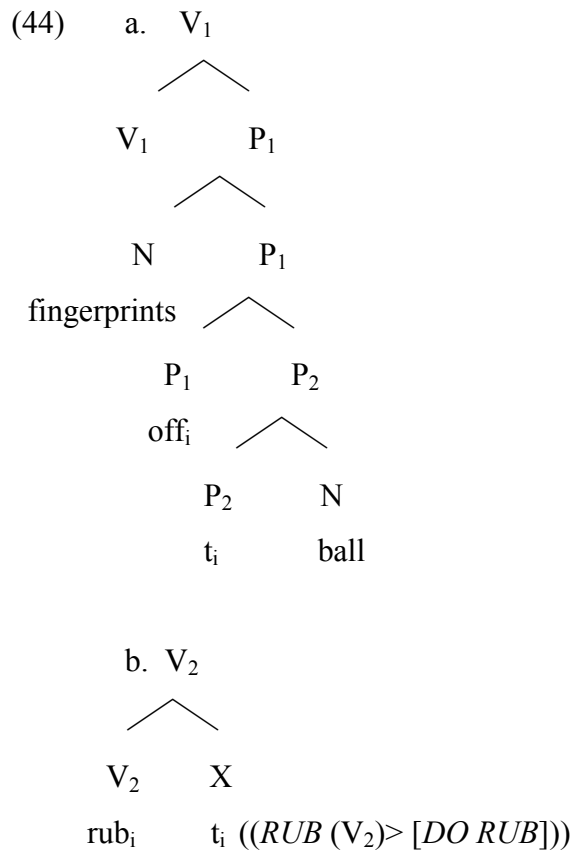
In Spanish, however, the directional/ Path element is lexically conflated into the causative verb e.g. *quitar* ('get out'):

(46)

```
              V
           /     \
          V       X₁
       quitarᵢ   /   \
               N      X₁
            huellas   /  \
                     X₁    P₂
                     tᵢ   /   \
                         P₂     N
                         de    bola
```
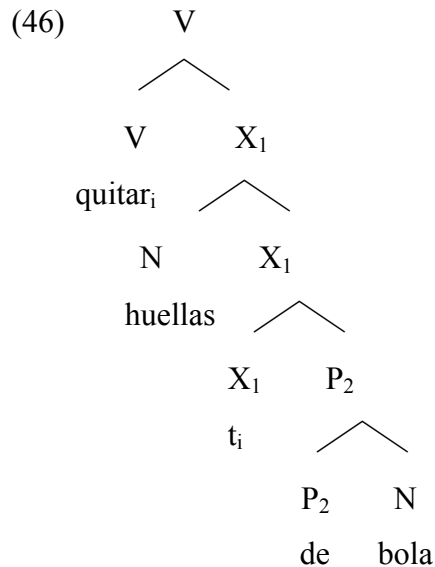
A similar analysis is ascribed to *to rub the ball*, which receives the paraphrase *to give the ball a rub*, 'to provide the ball with a rub', and is represented by X, a spatial relation of 'central coincidence' (Hale & Keyser 1993):

(47)

```
           V
         /   \
        V     X
      rubᵢ   /  \
            N    X
               /  \
              X    Y
              tᵢ   tᵢ
```
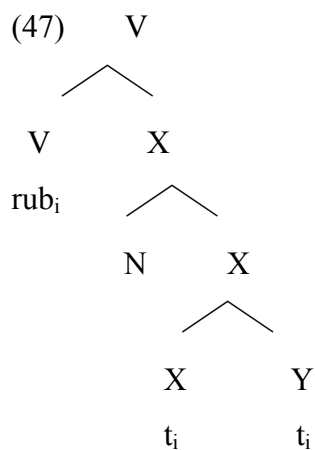
According to Mateu (2000), the distinction between *incorporation* and *conflation* can explain the difference between *John rubbed the ball,* where there is no resultative, and the verb is formed via incorporation, and *John rubbed the fingerprints off the crystal ball,* where there is a resultative, and we are dealing with conflation. In sentences where complex resultatives are present, a *[DO*

MANNER] verb is conflated into the phonologically null matrix of the verb. Given that complex resultatives only occur in satellite-framed languages, it seems to be the case that the distinction between *conflation* and *incorporation* can be related to the *satellite-framed/ verb-framed* distinction.

Complex PP/AP resultatives in locative sentences are impossible in Romanian too, just like in Spanish (48b):

(48)   a. ?Lucia a frecat urmele degetelor   de pe globul de cristal.

            Lucy has rubbed prints-the fingers-GEN of on ball of crystal.

            'Lucy rubbed the fingerprints off the crystal ball.'

        b. *Lucia a frecat   globul   de cristal curat de urmele degetelor.

            Lucy has rubbed the globe of crystal   clean of prints-the fingers-GEN.

            'Lucy rubbed the crystal ball clean of fingerprints.'

(48a) is, in fact, not ungrammatical in Romanian (three out of the four speakers I asked, in fact, considered the sentence grammatical)[64]. Also, the sentence becomes perfectly grammatical if, instead of *a freca,* one uses *a şterge,* 'to wipe', although (49b) is not:

(49)   a. Lucia a şters urmele   degetelor   de pe globul de cristal.

            Lucy has wiped prints-DEF ART, neuter, pl fingers-GEN   of on ball –DEF ART, neuter, sg of crystal.

            'Lucia wiped the fingerprints off the crystal ball.'[65]

        b. * Lucia a şters   globul   de cristal curat de urmele degetelor.

          Lucy has wiped the glove of crystal clean of prints-the fingers-GEN.

          'Lucy wiped the crystal ball clean of fingerprints.'

---

[64] This is also, because 'de pe globul de cristal' ('of on crystal ball', *off the crystal ball*) can be interpreted as an attribute modifying the NP 'urmele degetelor' ('prints-DEF. ART. neuter, plural, *the fingerprints*). Another interpretation is that of a PP adjunct expressing location, and modifying the verb. It is under these readings that the sentence counts as grammatical. It is unclear if the resultative reading can actually occur, and if so, if the sentence can be grammatical under this reading. My intuition is that it is not.

[65] The same remarks about 'a freca' (*to rub*) in footnote 16 are valid for 'a şterge' (*to wipe*).

In the case of *a șterge* (*to wipe),* it is not the Manner that gets conflated into the verb, but the Path (the path is lexically conflated into the causative verb):

(50)

```
                    V
                  /   \
                V       X₁
            șterge_i   /  \
                     N      X₁
                          /   \
                        X₁      P
                        t_i    /  \
                             P      N
```
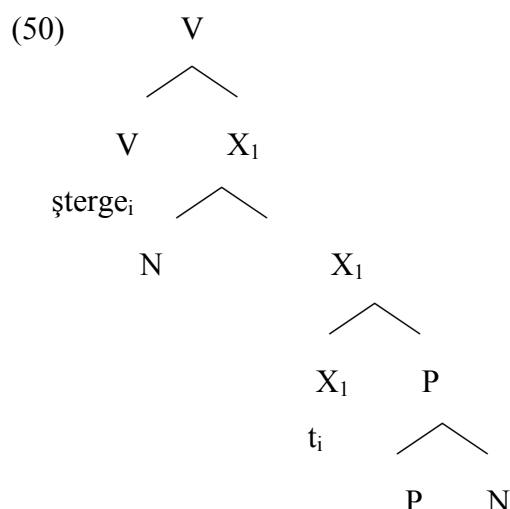
Mateu (2000: 18) notices a similar problem for Spanish, namely, that there appear to be counterexamples to the generalization that Romance languages do not allow template augmentation. It is possible, for instance, to say something like:

(51)   Juan barrió las migas   restantes del suelo.
         Juan swept the crumbs remaining from-the   floor.

The alternation *Juan barrió el suelo/ Juan barrió las migas restantes del suelo* is different from the English one *John rubbed the crystal ball / John rubbed the fingerprints off the crystal ball*[66], since the Location in (48) can be omitted (*Juan barrió las migas)*, while this is not possible in English (**Juan swept the crumbs.*) This is because *barrió* is interpreted as *quitó*, 'got out', therefore, as a Path verb, instead of a Manner verb, an interpretation which is not available in English, where Path is not conflated into the verb[67]. The same situation is found in Romanian, where one can say *Ion a măturat firimiturile (de pe podea)* ('John has swept crumbs-the (from of floor)', omitting the Location. This suggests that, at least in certain cases, verbs in Romance do allow complex

---

[66] Why is *restantes del suelo* interpretated as a resultatives rather than an attribute modifying *las migas*? This would dismiss such an example as a resultative altogether, and eliminate this exception to begin with.

[67] Given the fact that *barrió* expresses Path, but it also expresses Manner, how does one account for this dual value? Could it be that Manner is also conflated?

resultatives- when they lexically conflate Path, for example, the case of *a şterge* (to wipe), or they can be interpreted as conflating Path, the case of *a mătura* (to sweep).

However, it is generally not possible to have complex resultatives in locative sentences in Romance. (52b), the sentence in Romanian corresponding to the English sentence (52a) is not grammatical under the reading 'John loaded the cart until it was full of hay'[68]:

(52)　　a. Troy loaded the cart full of hay.

　　　　b. *Troy a încărcat carul plin cu fân.

　　　　Troy has loaded cart-the full with hay.

　　　　'Troy loaded the cart full of hay.'

Romanian does not seem to allow complex AP resultatives[69].

Although Mateu (2000, 2002, 2011) seems to provide a possible solution for the complex resultative issue, resorting to the distinction between conflation/ incorporation and verb-framed/ satellite-framed, there are issues which need clarification. One such issue is represented by simple resultatives. Mateu (2000) focuses on the behaviour of complex resultatives in locative structures but simple resultatives seem to pose a serious problem. Why are they possible in Romance? Mateu's answer to this is that, in fact, Romance only displays fake resultatives, adjectives that do not agree with the noun they apparently modify. (53), for instance:

---

[68] It is, however, grammatical under the reading 'Troy loaded the cart which is now full of hay yesterday'.

[69] Simple resultatives are, however, a different matter:

(i)　　　　A curăţat masa　　　　　　　　　lună.
　　　　　　Has wiped table-DEF ART fem, sg moon.
　　　　　　'He has wiped the table clean.'
(ii)　　　　Cartea　　　　　　　　　a ars scrum.
　　　　　　Book-DEF ART fem, sg　　has burnt ash.
　　　　　　'The book burnt to ashes.'

As argued by Farkas (2011a, b), in Romanian, adjectival resultatives (such as *Maria a vopsit gardul portocaliu* 'Maria has painted fence-DEF ART neuter, sg orange') are not found so often. Instead, there are resultatives expressed by means of predicate bare nouns as (i) *a curăţa lună* 'to wipe shiny as the moon', or (ii) *a arde scrum* 'to burn ash', or *a bate măr* 'to beat flat//beat as soft/red as an apple'. In Washio's (1997) terms, these resultatives qualify as weak resultatives, given that the meaning of the verb entails the meaning of the resultative. Hence, they would occur in those cases where the verb is the result of incorporation (Mateu 2011), and not conflation, as in *They ran the pavement thin*, where we can see a strong resultative (whose meaning is not entailed by the meaning of the verb).

(53)   Hachez-les menu. (*les* = the onions).

         Cut them fine (i.e., into fine pieces) (Washio 1997: 29)

clearly shows the adverbial nature of resultatives in Romance. The example (54) in Romanian is slightly problematic as the adjective seems to exhibit agreement in gender and person with the noun, and the result reading is clearly possible, even preferable[70]:

(54)   A vopsit masa roşie.

          Has painted table-DEF ART, fem sg red-fem, sg.

         'He painted the table red'.

Even here, an alternation with an adverb would be possible though (*roşu* instead of *roşie*). This remains a problem.

        If one tries to account for such an issue in a phrasal spell-out account, the issue of the presence vs. absence of complex resultatives in Germanic vs. Romance can be translated as the fact that Germanic languages allow the verb to spell-out the [init, proc] or [proc] part (Ramchand 2008b) and a complex AP or PP to spell-out the result (*Mary rubbed the crystal ball clean of fingerprints/ Mary rubbed the fingerprints off the crystal ball*), while Romance does not allow this. The only case when Romance permits this is when the PP is an argument of the verb:

(55)   Maria a pus cărţile pe raft.

         Maria has put book-DEF ART fem, pl on shelf

         'Maria put the books on the shelf.'

        Although Germanic can express the result by means of a PP too, it prefers to lexicalize the argument together with the verb and the preposition as a single item (*Mary shelved the books*).

        Going back to the complex resultatives issue, the fundamental question is why exactly Romanian lacks such constructions as *Mary rubbed the crystal ball clean of fingerprints/ Mary rubbed the fingerprints off the crystal ball*. A first possible answer could be because it lacks the constructions *clean of fingerprints* and *off the crystal ball*, so it would not be a question of Romanian

---

[70] The other possible reading would be 'He painted the red table' (not the green one), where it is possibly the resulting colour of the table be blue, for instance ('He painted the red table blue').

lacking resultatives, but lacking certain constructions which can be used as resultatives in English. There is no AP *curat de urme de degete* (lit. 'clean of prints of fingers') in Romanian. It is clear that this is not the solution when we think of a sentence such as *Troy loaded the cart full of hay*, and we realize that, even in this case, when there is a corresponding form in Romanian for *full of hay*, namely, *plin de fân*, there can be no sentence where this form is used as a resultative (see (49b)). The only possible way in which one can express the resultative meaning is by means of a subordinate clause:

(56)   Troy a încărcat carul   până a fost   plin   cu fân.
        Troy has loaded cart-DEF ART masc, sg until has been full-masc, sg with hay
        'Troy loaded the cart until it was full of hay'.

Although Mateu's solution offers an account for the absence of complex resultatives in Romance, by relating it to the fact that the verb cannot conflate Manner, only Path, it is not clear to me how Mateu can explain the presence of resultative subordinate clauses. In other words, why is it that a language that disallows complex resultatives allows resultative clauses? Resultative clauses are allowed in Germanic too:

(57)   Troy loaded the cart until it was full of hay.

However, the reduced version (*Troy loaded the cart full of hay*) is only possible in English, not in Romanian.

At this point, it becomes clear that Romanian is clearly more periphrastic than English. Where English uses one item (*to shelve*), Romanian uses three (*a pune pe raft* 'to put on shelf'). Where English may use AP or PP complex resultatives (*Troy loaded the cart full of hay*), Romanian has to use subordinate clauses. In fact, the issue might revolve around the possibility to reduce a resultative subordinate (*until it was full of hay*) to a complex resultative (*full of hay*)[71], which seems to be possible in English, but not in Romanian:

---

[71] I have used the word 'reduce', assuming that the resultative subordinate would somehow be primary, and the complex resultative were a secondary/ short form. It is not clear whether this is exactly so, however: the subordinate clause and the complex resultative could simply be totally unrelated different ways to express the same meaning.

(58)   initP
        /\
           <= load
          /\
      init procP
            /\
         DP   <= load
       the cart /\
              proc   ResP
                    /\   <= load
                 DP   /\
               the cart Res   CP
                          until it was full of hay/ full of hay
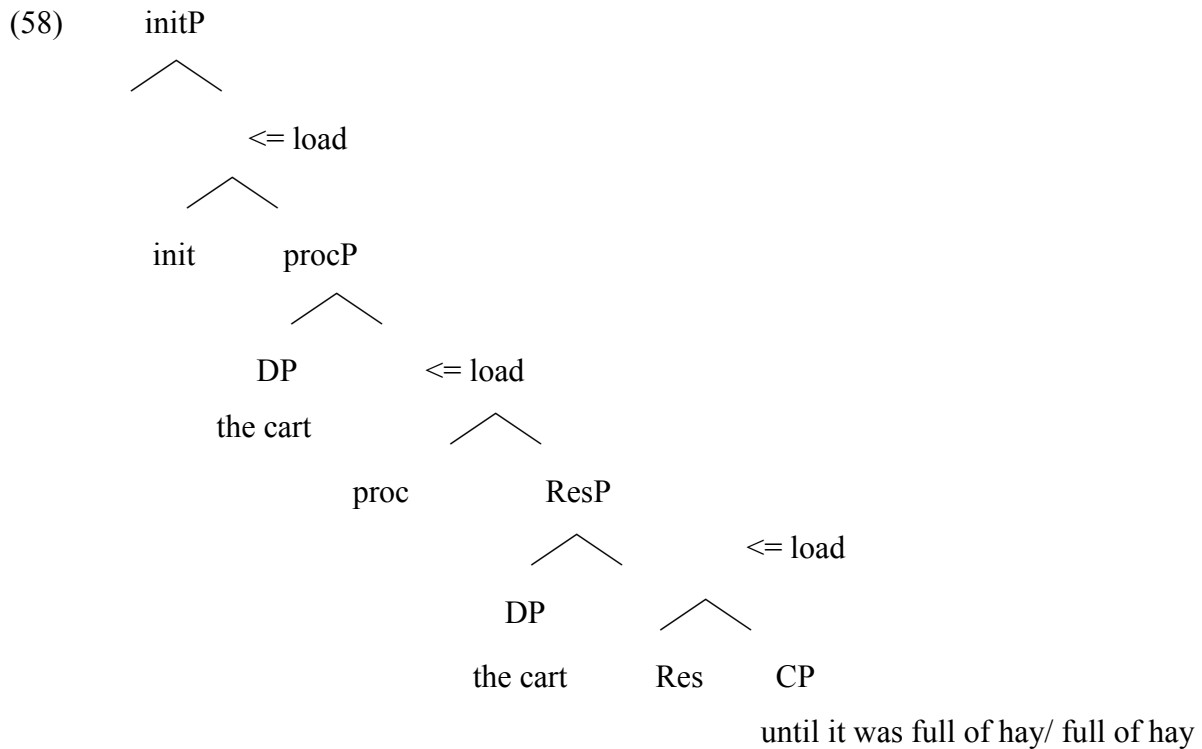
The problem with phrasal spell-out is that it relies on too many movement operations. To allow the lexicalization of ResP, the CP has to move out of its position. To allow the lexicalization of procP, the CP has to move out of its position (adjunct of ResP). The same thing is true in the case of InitP. Moreover, other movements would be required to generate the correct order (the movements mentioned above were only for the sake of lexicalization). This makes phrasal spell-out unsuitable for capturing the locative alternation. As one can clearly see, while a phrasal spell-out is able to capture the formation of denominals such as *dance*, it becomes gradually more inadequate as the structure it has to account for becomes more complex (*shelve* or *load the cart until it was full of hay*). A spanning account, on the other hand, does not present this disadvantage:

(59)

Init@∗ *load*
```
        /\
     'x'   Proc∗
            /\
         'y'   Res
                /\
             'y'   A@ *full*
                    /\
                 'y'   P@ *of*
                        /\
                       N@ ^72
```
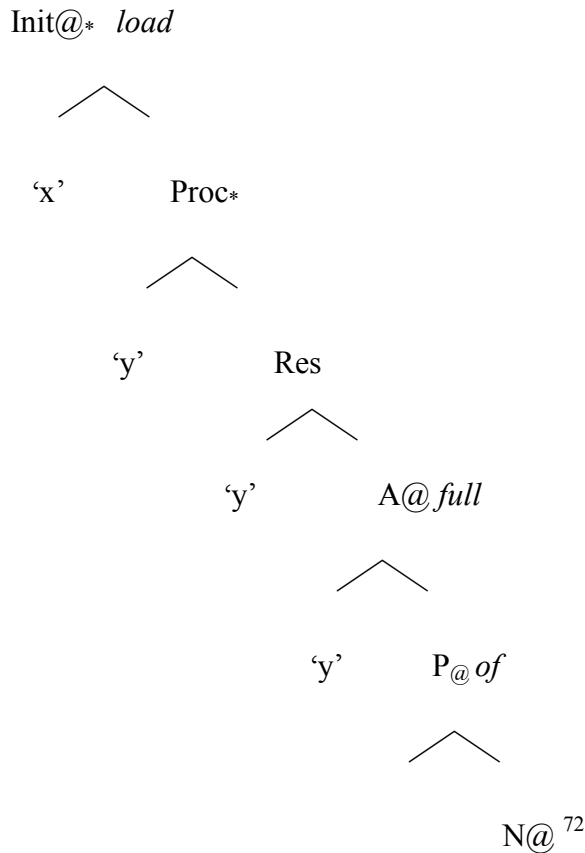
Linearized as *x [Res Proc Init] y A P N*

In Romanian, the ResP can only be spelled out by a resultative subordinate clause, not by a complex resultative expressed by an AP or a PP. I would like to suggest that the reason for this impossibility is related to an independent factor, namely, positing an AP resultative would induce an ambiguity at the level of interpretation, leading the hearer to understand *plin de fân* (full-masc, sg of hay) as an attribute of *carul* (cart-DEF ART masc, sg), due to the fact that the position of the adjective in Romanian is generally postnominal. Such an interpretation is also possible in English;

---

[72] I have used the symbol @ three times in the A-P-N sequence. I have doubts whether this is the correct way to go about it. However, placing it only in A would lead to an N P A linearization with the spell-out in A. For this reason, I assumed each head spells out on its own. Moreover, I am not sure whether A-P-N could be considered a span, given that it is not an extended projection. However, it is a complement sequence where each head has to spell on its own. An alternative would be to argue it is not the case that *full* selects *of*: *full* would then appear in the Specifier of *of*.

however, it is favoured in Romanian because of the agreement between the adjective and the noun, and, hence, it is avoided.

Although I agree with Mateu (2001) in his way of tackling the resultative gap in Romance:

"There is no principled way to account for this <<gap>> in terms of semantic and/ or aspectual operations available in English but not in Romance. Rather, [...] the parametric issue involved in the resultative construction must be related to one empirical fact: the morphological properties associated with the lexical-syntactic element corresponding to the directional relation are not the same in English as in Romance. " (Mateu 2001: 71)

I believe that the noun-adjective ordering does play a great role in the absence of the complex adjective as a resultative in Romance, given that a postnominal adjective in a sentence such as *Ho caricato il camion pieno di sabbia* (I loaded the truck full of sand) would trigger an attributive/ predicative reading, while in English, both the attributive and the resultative reading are available (although the preference is for the resultative one).

4.3.2   The *of*-variant in Romance?

According to Damonte (2005), there is another significant difference between locative alternation in English and locative alternation in Romance languages, namely, the presence of an *of*-variant in the Romance case, absent in the English variant (60). Damonte discusses the case of Italian (62):

(60)   a. I loaded the sand on the truck.
         b. I loaded the truck with sand.

(61)   *I loaded the truck of sand.
(62)   a. Ho   caricato la sabbia sul camion.
            have-1sg loaded the sand   on-the truck
             'I have loaded the sand on the truck.'
          b. Ho   caricato il camion con la sabbia.
            have-1sg loaded the truck with the sand
             'I have loaded the truck with sand.'
          c. Ho   caricato il camion di sabbia.

have-1sg loaded the truck of sand.

'I have loaded the truck with sand.'

The *with-* phrase and the *of*-phrase in Romance behave differently[73], the most significant difference being that the *with-* phrase usually selects definites, while the *of*-variant selects indefinites or plural bare nouns:

---

[73] Mateu (2000) considers the with-*phrase* an adjunct, since it can be omitted (i), while *Ho caricato sul camion* (Have-1sg loaded on the truck) is ungrammatical, and it shows cleftting of the PP(ii); this is not possible in the variant with the preposition (iii):

(i) a. Ho caricato il camion.
    have-1sg loaded the truck
    'I have loaded the truck'
  b. I loaded the truck.
(ii) a. Ho caricato il camion e l'ho fatto con la sabbia.
    have-1sg loaded the truck and it-have-1sg done with the sand
    'I loaded the truck and I did it with sand'.
  b. I loaded the truck and I did it with sand.
(iii) a.* Ho caricato la sabbia e l'ho fatto sul camion.
    have-1sg loaded the sand and it-have-1sg done on-the truck
  b.*I loaded the sand and I did it on the truck.

Moreover, the *with*-phrase seems incompatible with an instrumental adjunct, as pointed out by Mateu (2000: 33), while such an adjunct is possible in the basic variant, which seems to indicate that the *with*-phrase is an instrumental adjunct itself:

(iv) a.* Ho caricato il camion con la sabbia con la gru.
    have-1sg loaded the truck with the sand with the crane
    'I have loaded the truck with the sand withthe crane'
  b.* I have loaded the truck with sand with the crane.
(v) a. Ho caricato la sabbia sul camion con la gru.
    have-1sg loaded the sand on-the truck with the crane
    'I have loaded the sand on the truck with the crane'
  b. I loaded the sand on the truck with a crane.

Damonte (2005) shows that the tests used are not so reliable (clefting, or the possibility to co-occur with an instrumental adjunct). The *of*-phrase cannot be clefted:

(vi) * Ho caricato il camion e l'ho fatto di sabbia
    have-1sg loaded the truck and it-have-1sg done of sand
    'I have loaded the truck and did it with sand',

which suggests that cleftting might not be such a good test. Also, an instrumental adjunct cannot be coordinated with the *with*-phrase (although it might be argued that the reason for the ungrammaticality is the incompatible semantics of the PPs):

(vii) a.* Ho caricato il camion con la sabbia e con la gru

(63) a. Ho caricato il camion di sabbia/tubi

     have-1sg loaded the truck of sand/tubes

     'I have loaded the truck with sand/tubes'

  b.* Ho caricato il camion della sabbia.

     have-1sg loaded the truck of-the sand

     'I have loaded the truck of the sand'

This makes Damonte (2005) argue in favour of two different analyses for the phrases. Starting from a structure where the verb *load* can license an empty preposition ([VP load [SC sand P the truck]]), what we get is a structure where the preposition incorporates into the verb. In the case of the *with*-phrase, after the incorporation of the preposition, the locative moves to [Spec, AgrO], the verb moves out of the VP to check its features, the Theme argument moves to [Spec, KP], the case projection selected by *with*:

(64)   [PP with [KP sand ... [AgrOP truck ..., and

then the preposition *with* attracts in its specifier the maximal projection immediately below KP.

In the case of the *of*-phrase, Damonte (2005) assumes there is an abstract noun, a kind noun, a classifier that incorporates onto the verb, leaving behind the referring noun:

(65)   [VP NOUN$_i$-P$_j$-caricare [SC [DP t$_i$ sabbia] t$_j$ camion]

However, the Romanian variant of (65c) is not really used by Romanian speakers:

(66)   a. Am încărcat nisip în camion.

       have-1 sg loaded sand on truck.

---

     have-1sg loaded the truck with the sand and with the crane
     'I have loaded the truck with sand and with the crane'
   b.*I have loaded the truck with sand and with the crane.

In consequence, Damonte considers it has argument properties, and treats it accordingly. As for the *of*-phrase, he places the Theme in [Spec, SC/PP].

'I loaded sand on the truck.'

b. Am încărcat camionul cu nisip.

   have-1 sg loaded truck-DEF. ART. neuter, sg. with sand.

   'I loaded the truck with sand.'

c. ?Am încărcat   camionul   de nisip.

   have-1sg loaded truck-DEF. ART. neuter, sg. of sand.

   'I loaded the truck with sand.'

This is confirmed by looking at other examples in Romanian (*a stropi* 'to sprinkle', *a unge* 'to grease' a.o.), all of which are considered odd by the speakers I have asked, althought not ungrammatical. For this reason, I will consider the framework a possibility in Romanian too.

There are two ways to handle the issue of the additional *of*-framework in Romanice: one is to argue that there is no such thing as a third framework in the locative alternation, and that, for instance, the preposition *di* is actually selected by a silent adjective, as I have suggested in a previous paper (Bleotu in press), another one is to argue that there is a third framework, and, moreover, it is used to render a particular meaning (such an approach is to a great extent similar to Damonte's (2005)).

I will first present the analysis I put forth in a previous paper (Bleotu in press), namely, that, in the *of*- variant in Romance, there is a silent adjective- *pieno* (full) in Italian, for instance, which explains the presence of the preposition *di*:

(67)

```
                V
              /   \
            V       X₁
      [Caricar +PIENOᵢ]ⱼ  /   \
                        N       X₁
                    il camion  /   \
                             X₁      A
                       [Caricar+ PIENOᵢ]ⱼ   /   \
                             tⱼ              A
                                          /   \
                                        A       P
                                      PIENO    /   \
                                             P
                                           /   \
                                         P      N
                                        di   sabbia
```
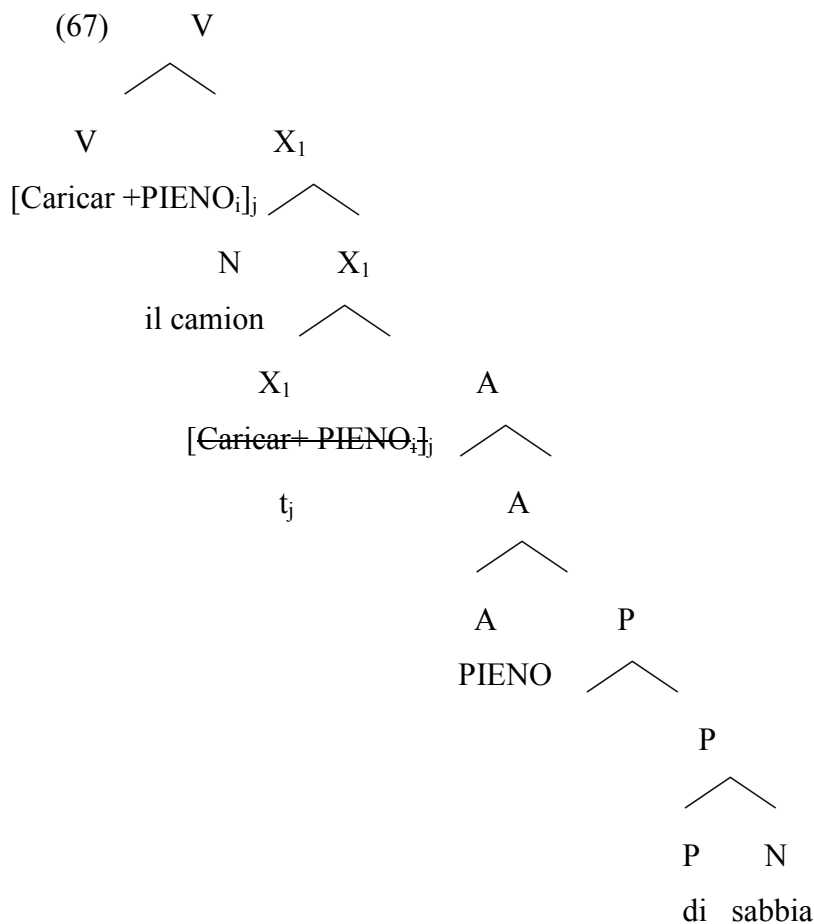
In the representation above, the adjective *PIENO* (FULL), a head, gets incorporated into the verb[74]. Another possibility would be to place the adjective in the Spec of the Prepositional SC, and, then, following Damonte (2004), assume that incorporation of a Specifier c-commanded by the head is possible.

The same phenomenon takes place in Romanian:

---

[74] Another possibility would be to place the adjective in the Spec of the Prepositional SC, and, then, following Damonte (2004), assume that incorporation of a Specifier c-commanded by the head is possible.

(69) ? V

```
           ? V
          /  \
         V     X₁
 [încărca +plini]ⱼ  /\
                   N    X₁
               camionul  /\
                       X₁      A
                 [î̶n̶c̶ă̶r̶c̶a̶+̶ ̶p̶l̶i̶n̶ᵢ̶]̶ⱼ  /\
                       tⱼ        A
                               /\
                              A    P
                            PLIN   /\
                                  P
                                 /\
                                P   N
                              de  nisip
```
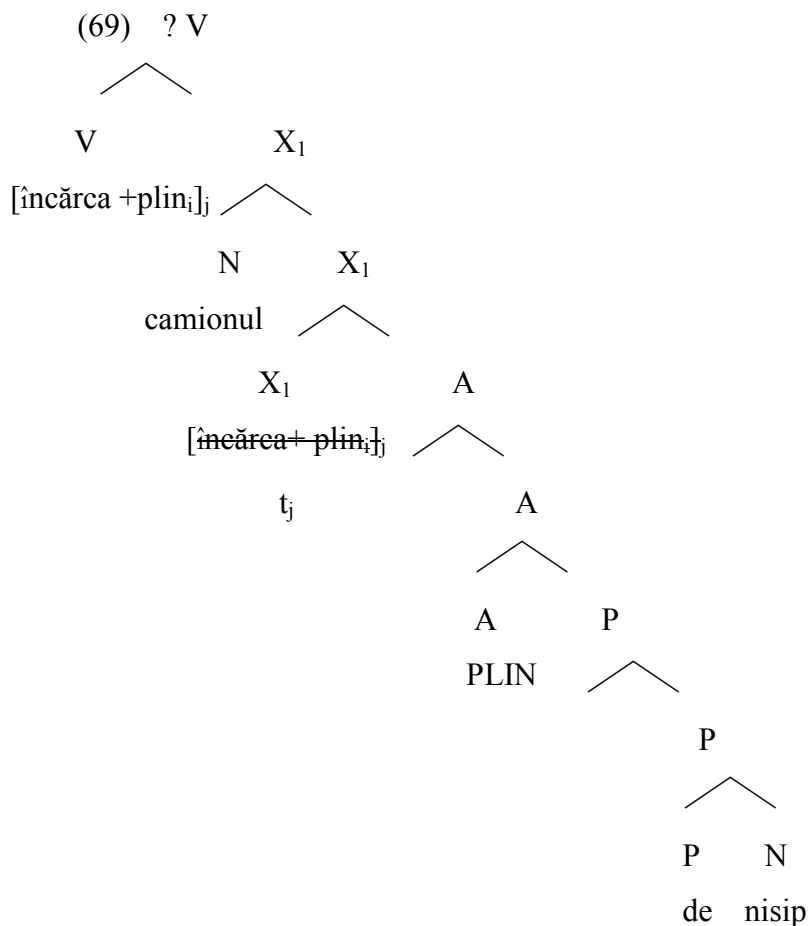
although the resulting sentences are rather odd.

In Bleotu (in press), I argue that, while, in Italian (and possibly Romanian), the adjective is silent and must undergo incorporation, in English, the adjective in a complex adjectival resultative in a locative sentence must be spelled out, and it cannot undergo incorporation into the verb. In English, 'He loaded the cart full of hay' is a grammatical sentence, while 'He loaded the cart of hay' is not. This suggests that *full* is prevented from being incorporated into the conflated verb *load*:

(70)

```
                V₁
               /  \
          V₁          N
         /  \        /  \
      V₂    V₁      N
     /  \           /  \
   V₂    X        N        A
  loadᵢ   tᵢ    the cart   /\
                          A
                         /  \
                        A      P
                       full    /\
                              P
                             /  \
                            P      N
                           of     |
                                  N
                                  |
                                  N
                                 hay
```
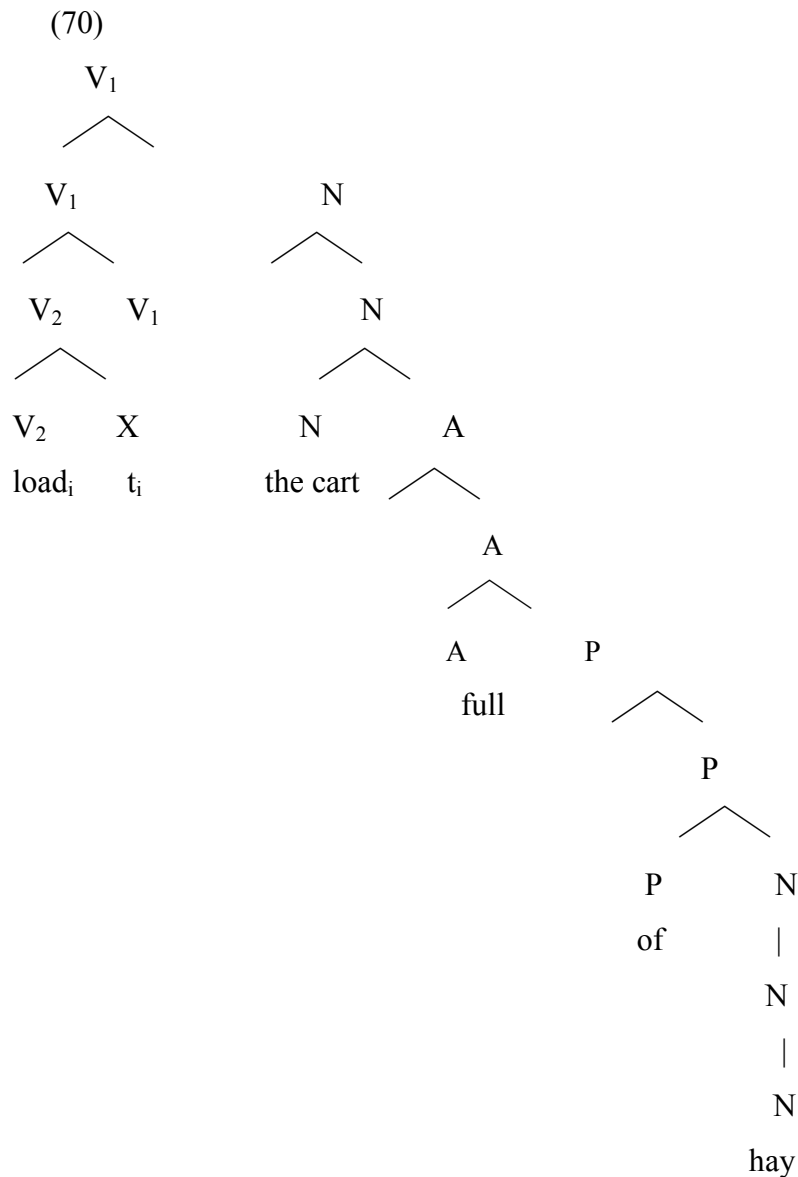
Starting from the idea of a silent adjective, which was proposed before (Constantinescu 2007, Dumitrescu & Dogaru 2007) for certain constructions[75], in Bleotu (in press), I argue in favour of

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[75]According to Constantinescu (2007) and Dumitrescu & Dogaru (2007), there are certain constructions in Romanian such as *ce*-exclamatives (*what*-exclamatives), inside which it can be argued that silent adjectives occur:

(i) a. Ce MANY NUMBER de băieţi!
        What MANY NUMBER of boys
        'What a great number of boys!'
     b.Ce MUCH AMOUNT de vin!
        What MUCH AMOUNT of wine
        'What a great amount of wine!'

One may justify MANY and MUCH by looking at constructions involving the overt counterparts of NUMBER and AMOUNT. If *număr,* for instance, were modified by *ce* alone, then the reading would not necessarily be that of a 'large

postulating a silent adjective PIENO/ PLIN (MAXIMUM AMOUNT) whose presence could account for the selection of the preposition *di/ de*:

---

number', but rather a qualitative interpretation. Also, the semantic equivalence between *ce*-exclamatives and (iib) seems to support this analysis:

(ii) a. Ce număr de băieți!
      What number of boy-PL
     'What a number of boys!' (large, small etc.)
    b.Ce mulți NUMBER băieți!
     what many-PL NUMBER boy-PL
     'How many boys!'

The analysis is inspired by Kayne's proposal of silent elements. Kayne (2002) analyses English degree quantifiers (*many, few, much, little*) as adjectives that select NUMBER and AMOUNT whenever they appear to modify overt count and mass nouns, respectively, since the presence of the two singular silent nouns can account for the odd behaviour of these quantifiers – NUMBER, for instance, explains the co-occurrence of the singular indefinite article and of the quantifier every with plural overt nouns:

(iii)   a. a few NUMBER students
           b. every few NUMBER days

Postulating an unpronounced NUMBER is supported by the fact that *few* can also modify its overt counterpart (iv). A similar pattern may be identified in Romanian *what*-exclamatives for nouns, where overt number replaces an otherwise silent classifier head (iv), (v) :

(iv) John has too few a number of books. (Kayne 2003, 1)

(v) Ce număr mare de băieți (sunt) la petrecere!

     what number large of boy-PL are-3PL at party

   'What a large number of boys at the party!'

 (vi) Ce de băieți (sunt) la petrecere!
    'How many boys there are at the party!'

    While (vi) can be explained by means of a silent noun NUMBER: 'Ce NUMBER de băieți sunt la petrecere!', the *de*-less construction may be viewed as containing TYPE / KIND:

(vii)   Ce TYPE băieți sunt la petrecere!

Although Kayne (2002) only makes use of silent nouns in his analyses, Constantinescu (2007) and Dumitrescu & Dogaru (2010) clearly show that, in examples such as (vi), postulating only the silent nouns AMOUNT and NUMBER will not do, since one needs to show that we are dealing with a large number, not just a regular number, or a small number.

(71)   a. Ho caricato il camion   di sabbia.

      Have loaded DEF. ART. Neuter sg. truck of sand.

      'I loaded the truck with sand.'

   b. Ho caricato il camion PIENO di sabbia.

    Have loaded the truck full of sand.

    'I loaded the truck with sand.'

(72) a. ? Am încărcat camionul   de nisip.

    Have loaded truck-DEF. ART. masc., sg. of sand.

    'I loaded loaded the truck with sand.'

   b.? Am încărcat camionul   PLIN de nisip.

    Have loaded truck- DEF. ART. masc., sg. full of sand.

    'I loaded the truck with sand.'

Italian does not allow the phonetic expression of PIENO so as not to allow another reading instead of the resultative one, namely, an attributive/ predicative one, in which the adjective PIENO is interpreted as telling us something about the truck, and not about the result of the loading event.

(73) a. Ho caricato il camion pieno.

    Have loaded truck- full.

    'I loaded the full truck.'

   b.Ho caricato il camion pieno di sabbia.

    Have loaded the truck full of sand.

    'I loaded the truck full of sand/ which was full of sand.'

(74) a. Am încărcat camionul plin.

    Have loaded truck-DEF. ART. neuter, sg. full.

    'I loaded the full truck.'

   b.Am încărcat camionul plin de nisip.

    Have loaded truck-DEF. ART. neuter, sg. full of sand.

    'I loaded the truck full of sand/ which was full of sand.'

The only reading allowed for the examples (73 a, b) in Italian and the examples (74 a, b) in Romanian is the attributive/ predicative one, while in English, the situation is different. (75a) (where

we have the simple adjective *full*) only allows the resultative reading, (75b) (where we have the complex adjective *full of*) is ambiguous between the two, with the resultative reading as the preferred one (given that the attributive one (loading a truck that is already loaded does not make so much sense)[76]. In contrast, in (75c), only one reading is allowed, namely, the attributive one:

 (75) a. I loaded the truck full.

   b. I loaded the truck full of sand.

   c. I loaded the full truck.

 Anaylzing the examples in (73), (74), (75), we notice that, if the order of the adjective with respect to the noun is A-N in general (English), then the reading for the adjective in the locative sentence is resultative (*the truck... full, the truck ...full of sand*)[77]. If, on the other hand, the order of the adjective with respect to the noun is generally N-A (Italian, Romanian), then the reading for the adjective in the locative sentence is attributive/ predicative. In other words, if the adjective PLIN/ PIENO were not silent in locative sentences supposed to convey a resultative meaning, there would be confusion at the level of interpretation given the regular positioning of the adjective after the noun in Romanian and Italian: the interlocutor would ascribe it an attributive/ predicative interpretation rather than a resultative one.

 In Bleotu (in press), I embraced the view that, in Romance, the silent adjective gets incorporated, while, in English, the adjective is situated lower within a small clause, and it cannot incorporate because of the barrier created by the direct object[78].

 However, there is a major problem with this approach, namely, the existence of a complex resultative headed by a silent adjective in Romance seems to be seriously undermined by the fact that complex resultatives headed by non-silent adjectives are absent in Romance. Hence, a different way to tackle the issue would be to simply assume there is another frame in the locative alternation in

---

[76] However, if the sentence is understood in the context 'See the truck full of sand over there? I loaded the truck full of sand/ it.', then the sentence is not so odd.

[77] Both the simple adjective *full* and the complex adjective *full of* are adjectives that can be considered reduced small clauses (Cinque 1994).

[78] Of course, one can easily create a corresponding phrasal spell-out analysis of the locative sentence containing resultative headed by a silent adjective (see the representations in (58) and (59)).

Romance, where the preposition is selected by the verb. The tree in (69) will simply lack the A projection.

In what follows, I will try to phrasal spell-out account, the syntactic tree for the *of*-frame would look like this:

(76)

```
            initP
           /    \
              <= caricare, încărca (load)
             /    \
          init       procP
                    /    \
                  DP       <= caricare, încărca (load)
                 /   \
              proc      resP
                       /   \  <= caricare, încărca (load)
                     DP       /  \
                            res    PP
                                   di sabbia    (if one assumes *load* is a
```
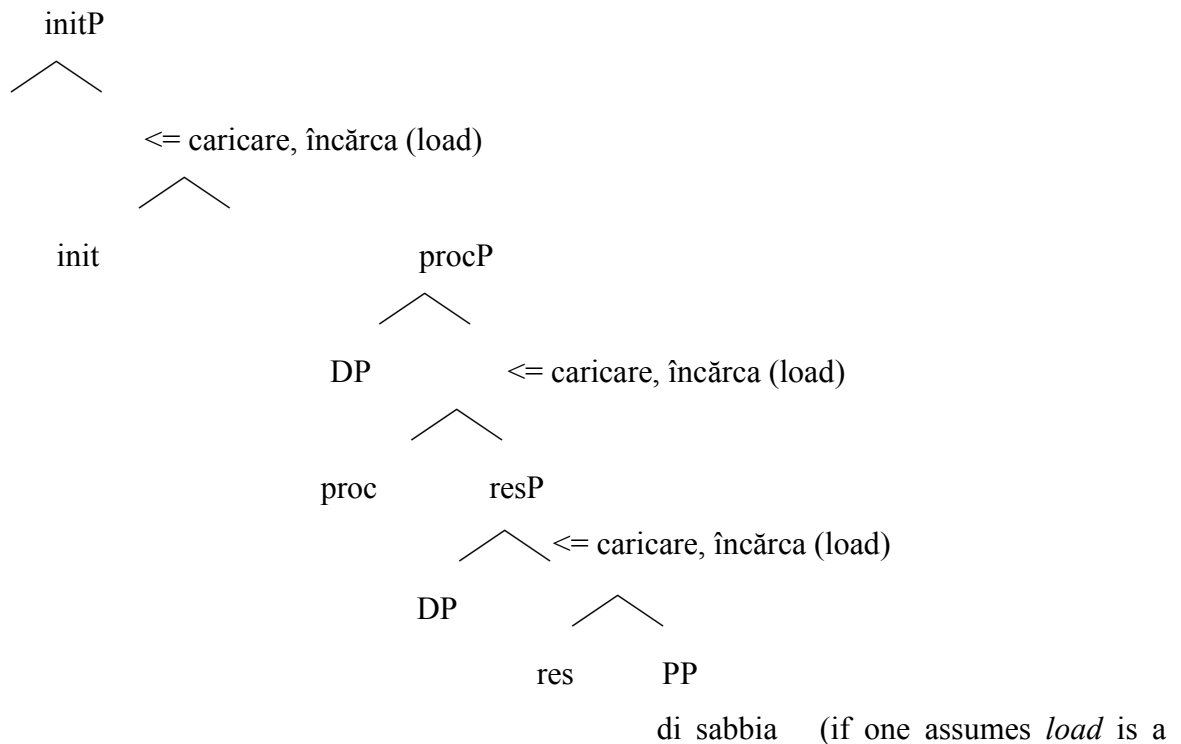
result verb)

The movement of the the PP out of its position is required to allow the phrasal spell-out of ProcP: it moves to the next Specifier, and Specifiers can be ignored by phrasal spell-out.

The basic difference between the *di*-frame and the *con*-frame lies in the fact that the two prepositions usually select different kinds of nominals (indefinites vs. definites), and, hence, they have acquired special values to express these meanings in Italian:

(77)

```
         initP
         /\
        /  \
      init  procP
            /\
           /  \
          DP   \
              /\
             /  \
           proc  resP
                 /\
                /  \
               DP   \
                    /\
                   /  \
                 res   PP
                       con la sabbia   (if one assumes *load* is a
```

result verb)

In English, however, *with* can select both definites and indefinites alike. Adopting such an account presents the advantage of supporting the idea that the third framework in the locative alternation in Romance has a specific use. Moreover, it does not require postulating additional null material, or come in contradiction with Romance facts (such as the absence of complex resultatives in Romance). In spite of this, embracing the nanosyntactic way of storing trees in the lexicon has the disadvantage of relying on too many movement operations. DM would simply fuse [init, proc, res]. Spanning is also much simpler and more elegant than nanosyntax:

(78)

Init@* *load*

    'x'   Proc*

        'y'   Res

           'y'   P@* *con*

              'y'   D@ *la*

                     N@ [79]*sabbia*
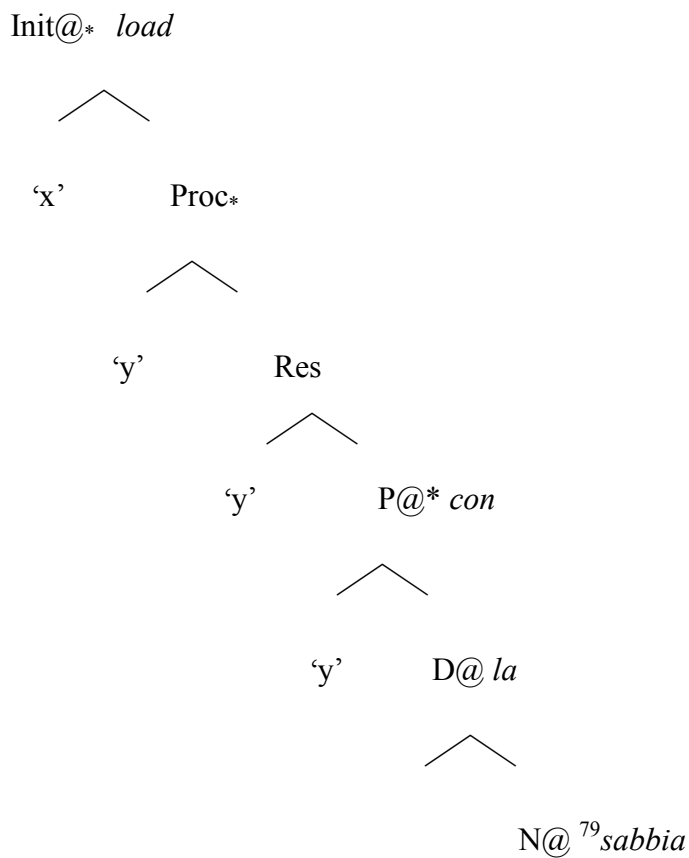
Linearized as *x [Res Proc Init] y [Goal Place] D N*

4.3.3 The Prefix in Locative Alternation

Another significant issue in discussing the locative alternation in Germanic and Romance is represented by prefixation. Except for English, all Germanic languages display a clear connection

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[79] I have used the symbol @ three times in the P-D-N span. I have doubts whether this is the correct way to go about it. However, placing it only in P would lead to an N D P linearization with the spell-out in P. Given that each head has a lexical counterpart (we are not dealing with a single morphological word), it is not clear to me how one could get the order *con la sabbia.* (A possible solution would be to take D N to form a morphological word together by placing the * diacritic near D, thus the span would become P@-D@*-N). For this reason, I assumed each head spells out on its own.

between prefixation and the derived variant of the locative alternation. In German, for example, the verb has no prefix in the basic variant, but it has one in the derived variant:

(79)   a. Ich lud Heu auf den Lastwagen

            I loaded hay on the truck

            'I loaded hay on the truck'

        b. Ich belud den Lastwagen mit Heu

            I loaded the truck with hay

            'I loaded the truck with hay'

The preposition in the basic variant alternates with the prefix in the derived variant[80], and the incorporation analysis captures this fact, as the prefix *be-* is generated as a preposition but it incorporates into the verb. According to Damonte (2005), promoting the Locative argument to object implies incorporating the locative preposition onto the verb:

(80) [AgrO the truck$_i$ [VP t$_i$ P$_j$-load [sand t$_j$ t$_i$]]]

In addition, Damonte (2005) establishes a correlation between *locative* prefixes and the variants of the locative alternation:

(81)   i. Spray/load verbs are prefixed, either overtly or covertly, in the variants where the
        location argument is the direct object.

            ii. All overtly prefixed "verbs of putting" (Levin 1993: 111) do not alternate and only
have the option of realizing the location argument as direct object of the verb.

---

[80] This is not always the case, though. As indicated by a reviewer of Bleotu (in press), some verbs show locative alternation without marking, e.g. 'gießen':

    a.   Er gießt   die Blumen.
          He water-PRES. DEF-ART flower-pl
          'He waters   the flowers'.

    b.   Er gießt Wasser auf die Blumen.
          He water-PRES. water DEF-ART flower-pl
          'He pours water onto the flowers.'

Romanian has many denominal verbs derived with the prefix *în-* (*a încărca* 'to load', *a îndopa* 'to stuff', *a îngrămădi* 'to cram', *a îmbarca* 'to embark', *a îngropa* 'to bury', *a îmbutelia* 'to bottle', *a împacheta* 'to pack', *a încarcera* 'to imprison', *a încazarma*, 'to barrack', *a înveli* 'to cover' a.o.) but they behave in different ways: some accept both frames (*a încărca* 'to load'), others only accept the change of location frame (*a îngrămădi* 'to cram'), others do not even enter the locative alternation (*a îngropa*), as they are result verbs.

It seems that a generalization such as (79), according to which prefixed verbs of putting do not alternate fails to account for a verb like *a încărca* 'to load', which allows both frames. Moreover, there is no unprefixed variant of *a încărca* 'to load', *a cărca*, although the verb does alternate. It also fails to account for verb which takes the Theme as a direct object, but not the Location (such as *a îmbutelia* 'to bottle').

The prefix *în-*, which is a highly productive prefix in Romanian, was derived from Latin (just as the preposition *în*) from words such as the lat. *infrangere>* rom. *înfrânge* (*defeat*), or the lat. *incepere>* rom. *începe* (*begin*) (Avram, Carabulea a.o. 1970). According to Avram, Carabulea a.o. (1970: 137-138), the prefix *în-* can have many values: (i) a transformation, the transition from a state into another, for instance, acquiring the property denoted by the root (*îndulci* 'sweeten'), or a property similar to that denoted by the root (*îmbujora*), or even to turn into the object denoted by the root (*îmbrânzi* 'turn into cheese'), (ii) acquiring the object denoted by the root (*îmburuiena* 'become full of weeds', *înzăpezi* 'become full of snow'), (iii) the realization of an action with the help of the object denoted by the root (*înhăma* 'saddle'), (iv) the resemblance with the object denoted by the root (*îmberbeca* 'strike like a ram'), (v) interiority (*înnopta* 'spend the night'), (vi) indicating a change (*împudra* 'powder'). In thematic terms, (ii) would correspond to verbs incorporating the Theme, (iii) would correspond to verbs incorporating the Instrument, (iv) to verbs incorporating the Manner. (i) and (vi) are more or less the same, while (i) entails that the object occurring as DO becomes sweet, (vi) does not entail that the object occurring as DO becomes powder, but full of powder. There is also a locative value which seems to escape the authors' classification (*încarcera* 'imprison').

In an incorporation account, verbs of 'putting' prefixed with *în-* in Romanian are analyzed as resulting from a process of incorporation (the P incorporates into V, then, the P and V incorporate further on into V):

(82)

```
        V
       / \
      V   P
    PUNE  / \
   (PUT) DP   P
        / \
  (man-the) P   N
           în   pachet
           in   pack
```
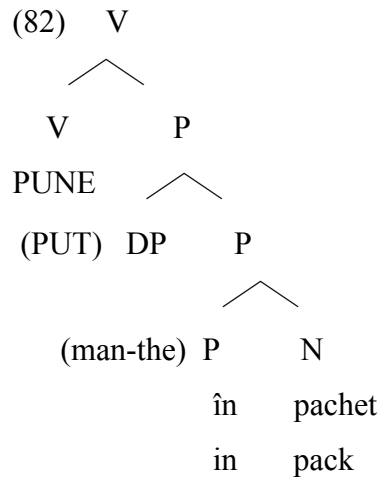
In a similar way, in German, the prefix *be-* may be analyzed as a satellite around the verb, regardless of the morphological unity of the two (Mateu 2002):

(83)

```
              V₁
             /  \
           V₁        P₁
          /  \      /  \
        V₂   V₁    N      P₁
       /  \      Lastwagen  / \
      V₂   X              P₁    P₂
     ludᵢ   tᵢ            beᵢ   / \
                              P₂    N
                              tᵢ    Heu
```
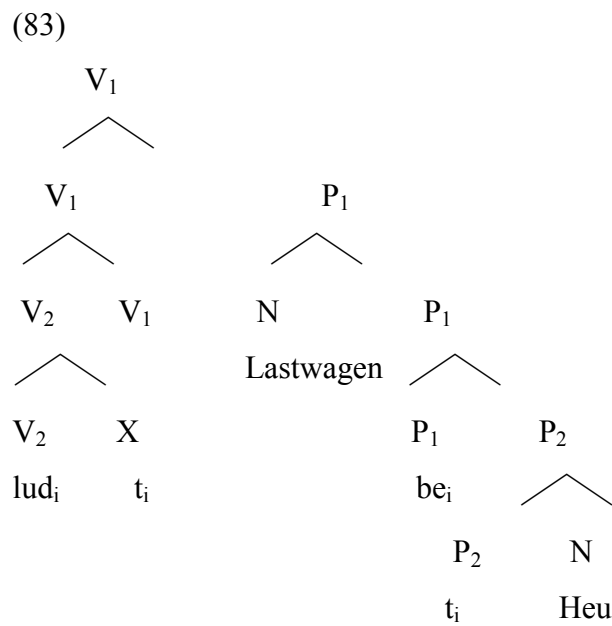
In a phrasal spell-out account, one could say that verbs of putting prefixed with *în-* are the phrasal spell-out of the null verb, the prefix *în-* and the nominal root:

(84) initP = *împacheta*

```
                                 împacheta
                               /\
                              /  \
                             /\
                            /  \
                   Init      ProcP= împacheta
                            /\
                           /  \
                          /\
                         /  \
                  Proc   GoalP= în
                        /\
                       /  \
                      /\
                     /  \
               Goal   PlaceP= în
                     /\
                    /  \
                   /\
                  /  \
            Place    N= pachet
```
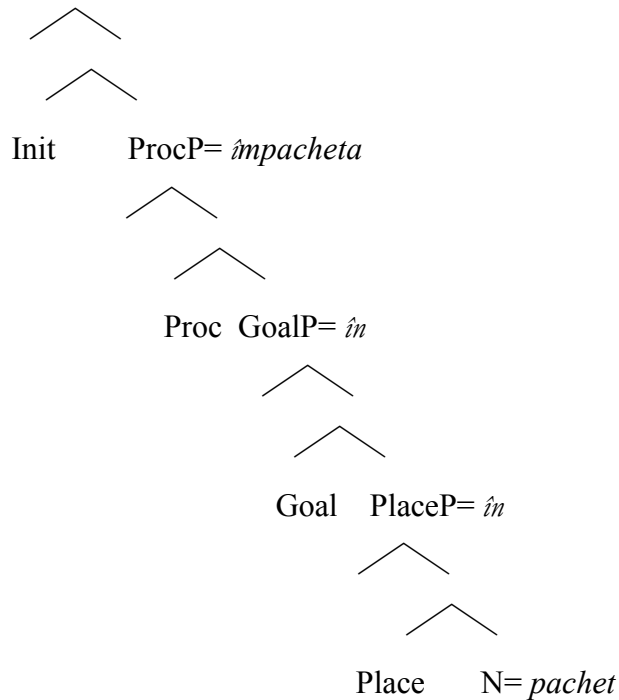
The important issue would be what exactly the prefix *be* in German and the prefix *în* lexicalize (GoalP, or a PP such as *WITH* in the case of *a împudra* 'to powder'). While the *be-* prefix in the locative alternation seems to have a spatial meaning, the prefix *în-* seems to lexicalize not only location. The thematic vowel could be placed in ProcP, but this would mean ProcP has to lexicalize twice (once as the thematic vowel, once as the verb after GoalP has moved), or it could be placed under Proc, but this would introduce terminal spell-out in a system relying on phrasal spell-out. On the other hand, not placing any thematic vowel would lead to obligatorily storing both the noun and the verb. Since the thematic vowel has not been stored, one might be tempted to not store the prefix as well:

(85) initP = *împacheta*

```
                  /\
                 /  \
                /\
               /  \
          Init     ProcP
                    /\
                   /  \
                  /\
                 /  \
             Proc    GoalP
                      /\
                     /  \
                    /\
                   /  \
                Goal    PlaceP
                         /\
                        /  \
                       /\
                      /  \
                  Place    N= pachet
```
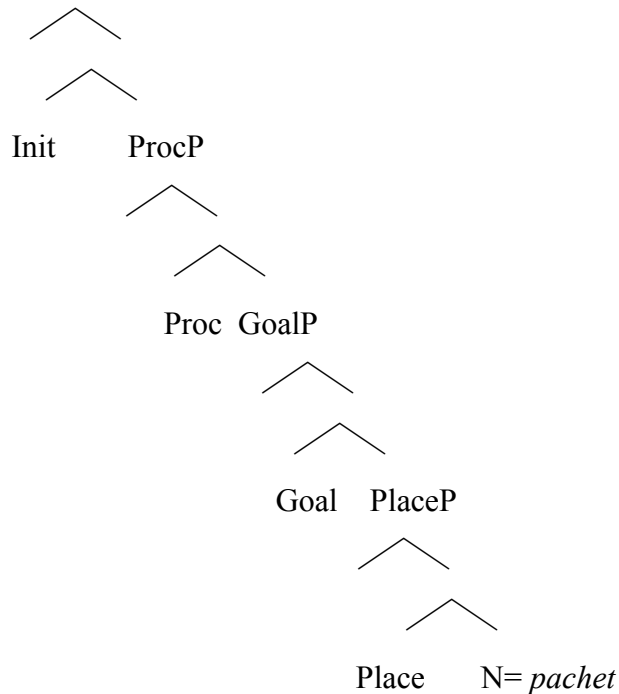
The lexicon would contain the item *pachet* which is an N and *împacheta* storing the big tree in (85), but there is no actual word *împacheta* spelling out ProcP, GoalP, and PlaceP, a fact which could be explained by the particular structure of verbs. Such an analysis is undermined, however, by the intuitive decomposition of *împacheta*, thus leading us back to (84) as a more adequate analysis. However, the disadvantage of this account would be the fact that it needs a lot of movement operations (the movement of N, of GoalP etc.).

DM offers a much simpler account:

(86)

initP = *împacheta*

Init   ProcP

            Proc GoalP

          -a

                    Goal   PlaceP

                              Place   N= *pachet*

                              în
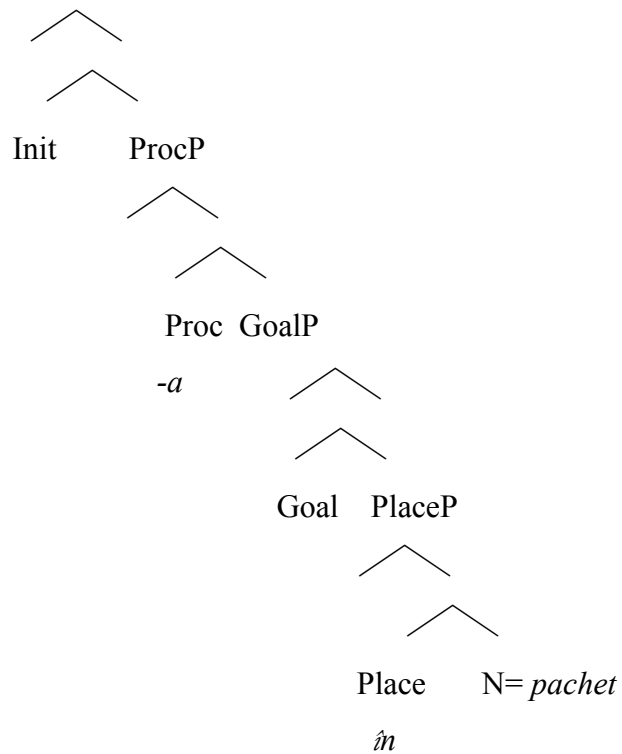
According to DM, N fuses with Place, then with Goal, then with Proc, then with Init. In a spanning version, a verb such as *împacheta* would receive the following representation:

(87)

Init$_*$

    'x'   Proc$_*$ *-a*

             'y'   Goal@$_*$-*în*

                  'y'   Place$_*$

                        'y'   N@   *pachet*
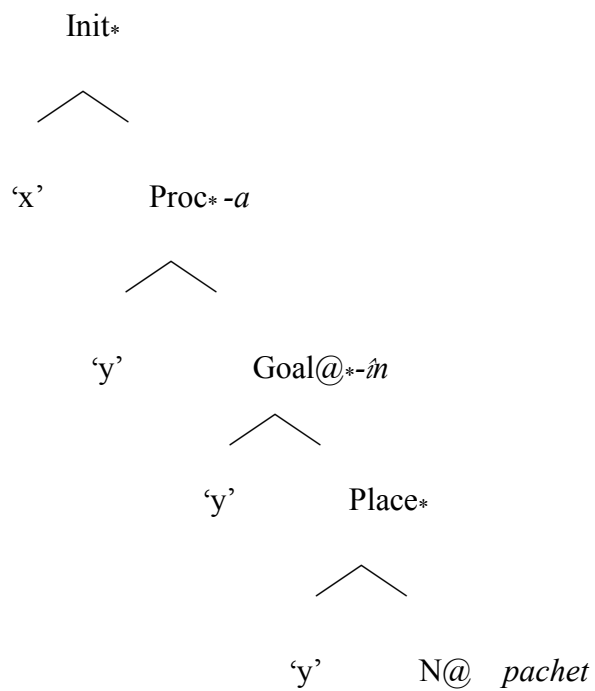
Linearizes as x [Goal-Place–N-Init-Proc] y

I will assume we are dealing with a span which spells out in two places: Goal, and N, but that Init, Proc, Goal, Place, N form a morphological word together. Although y should spell out before the span, I will assume it spells out lower.

At L-Match, we get (*x*)*în-pachet- Thematic Vowel (y)*, possibly *x în-pachet- a y* already if the thematic vowel is introduced at L-Match, as I believe it is. At Insert, /n/ will assimilate in the presence of /p/ and will become bilabial, thus giving rise to *împacheta*. The spanning framework offers thus a perfectly possible account of verbs prefixed with *în-*.

None of the accounts capture the idea present in traditional grammars (Avram, Carabulea et al 1970) according to which such verbs are created through parasynthetic derivation, hence, the prefix and the suffix are added at the same time. Adopting such a view would require the implementation of a different build up of the structure and a mechanism of linearization. I will leave this for further research.

Interestingly, there are cases when, even in Romance, we encounter a non-prefixed variant, and a prefixed variant in the locative alternation, as argued by Munaro (1994) for Italian:

(88) a. spargere sale sul tavolo

     spread salt on-the table

    b.cospargere il tavolo di sale

     CO-spread the table of salt

This suggests that, at least in certain cases, Italian is satellite-framed rather than verb-framed. Nevertheless, the alternation is not a systematic as in Germanic languages, where it is very productive. English, on the other hand, represents an exception to the rule. Even though there are many verbs containing the prefix *en-* (*endanger* "put sb in danger", *enslave* "turn sb into a slave", *enchain* "put in chains", *encage* a.o.), they generally only enter one framework, taking a DO, being hence more similar to the Romanian verbs than the Germanic ones.

5   Conclusion

In conclusion, there are less verbs displaying locative alternation in Romanian than in English, and there are less location and locatum verbs in Romanian than in English. The locative alternation in Germanic languages and the locative alternation in Romanian behave differently, from the point of view of resultatives, the frames allowed, and prefixation, differences which can be explained by resorting to the satellite-framed/ verb-framed distinction (Mateu 2000). Spanning seems to be a better way of accounting for location verbs, locatum verbs, as well as the locative alternation.

Chapter 7

On Instrument Verbs

In this chapter, I will be dealing with verbs incorporating instruments, with a main focus on English, but, also, a look at Romanian, I will discuss various approaches to instrument verbs, and deal with phenomena such as the status of instruments (adjuncts?), the lack of productivity of instrument denominals in Romanian vs. their productivity in English a.o. . I will also try to offer an account of instrument incorporating verbs in a phrasal spell-out framework, a DM framework, and a spanning framework.

1.   Instrument Verbs. Definition and Examples

Instrument verbs are verbs incorporating nouns that have the instrument theta-role in their underlying argument structure. A verb like *to hammer*, for instance, qualifies as an instrument verb, and, in an incorporation account, it is assumed that the null light verb *HIT* incorporates the instrument *WITH A hammer*. However, it is not always that easy to pin down an instrument theta-role for the incorporated noun: according to Clark & Clark (1979: 778), for instance, in the case of the verb *to net the fish*, one could argue for either one of the two interpretations: either the noun *net* is interpreted as indicating a location (*Bob netted the fish*= 'Bob caused the fish to be in a net') or as indicating an instrument (*Bob netted the fish=* 'Bob caused the fish to be captive by doing the act one would normally expect to do to the fish with a net'). In a nutshell, the problem would be whether a sentence such as *Bob netted the fish* should be assumed to have an argument structure parallel to the paraphrase 'Bob caught the fish with a net' (Instrument) or to 'Bob caught the fish in a net' (Location).[81]

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[81] Clark & Clark (1979: 778-779) provide some differences which distinguish between instrument verbs and location or locatum verbs. A first difference is represented by the fact that location and locatum verbs have resultant states which involve the noun incorporated in the verb, while instrument verbs have resultant states for which the noun incorporated is merely an instrument. Even if there is a result at stake in a sentence such as *Bessie hammered the metal flat*, the noun *hammer* is merely an instrument that helps reach this result, while in a sentence such as *Ben plastered the wall*, the result is that the plaster is on the wall. A second difference between instrument verbs and location and locatum verbs is morphological, namely, while the prefixes *de-* and *dis-* can be used with location verbs to form antonyms (Marchand 1969: 134-5) (*defrost, disarm, deplane*), they cannot be used with instrument verbs, where *un-* is used instead. In this way, one can easily explain the contrast between a verb like *debutton* and a verb like *unbotton:* while *debutton* means to

1.1. Instrument Verbs in English

Nevertheless, Clark & Clark (1979) provide an extensive list of verbs incorporating instruments in English, listing under the label *instrument verbs* A. *go* verbs, B. *fasten* verbs C. *clean* verbs, D. *hit* verbs, E. *cut, stab* verbs, F. *destroy* verbs G. *catch* verbs H. *block* verbs I. *follow* verbs J. verbs incorporating MUSICAL INSTRUMENTS K. KITCHEN UTENSILS L. PLACES M. BODY PARTS N. SIMPLE TOOLS O. COMPLEX TOOLS P. MISCELLANEOUS. In what follows, I will provide a reduced list of the list provided by Clark & Clark (1979):

(1)   A. *Go* verbs: bicycle, bike, cycle, boat, canoe, helicopter

  B. *Fasten* verbs: NAILS- nail, bolt, screw, wire, GLUES- paste, cement, glue, tape, RESTRAINERS- handcuff, chain, fetter, LOCKS- latch, padlock, bar, lock, CLOTHING PARTS- buckle his bed, hook her dress, zip the dress, button the shirt, LINES- cable, anchor

C. *Clean* verbs: IMPLEMENTS- mope the floor, rake the grass, filter the wine, CLOTHS- sponge the window clean, towel himself dry, CLEANSERS- shampoo his hair

D. *Hit* verbs: hammer the nail into the board, club the man over the head, bat the ball, stone the witch, whip the prisoner

E. *Cut, stab* verbs: knife the man, bayonet the enemy, drill the hole, saw the plank, harpoon the whale

F. *Destroy* verbs: bomb the village, shell the fort, gas the soldiers

G. *Catch* verbs: trap the gopher, snare the rabbit, rope the calf, net the fish

H. *Block* verbs: shield the child, block the road, barricade the road, dam the river

I. *Follow* verbs: shadow the suspect, track the criminal, trail the deer

---

take the buttons off*, unbotton* means to unfasten the buttons, reversing the order in which they were fastened. Apart from these differences, another one taken from Watt (1973) is mentioned, namely, the possibility of anaphoric *do it* to refer back to a part of the meaning of the verb, in the case of instrument verbs, but not location verbs. In a sentence such as *John wanted to NAIL the boards together, but Jim made him do it with TAPE, do it* can anaphorically refer to the *fasten* part of the verb *nail,* while the same thing is not possible with a location verb such as *bottle.* While I believe the first two differences are relevant in distinguishing between instrument verbs and location/ locatum verbs, the third difference mentioned above may not actually hold. The sentence *John wanted to button the shirt, but Jim made him do it with a zipper.* is not grammatical, providing a counterexample to the anaphoricity of *do it* with respect to a part of instrument verbs.

J. MUSICAL INSTRUMENTS: pipe the tune, fiddle the tune, whistle the tune

K. KITCHEN UTENSILS: fork the pickle, sieve the flour

L. PLACES: greenhouse the seedlings, nursery the tomatoes, market the goods[82]

M. BODY PARTS: eyeball the data, mouth the words, finger the material, thumb the pages

N. SIMPLE TOOLS: shovel the dirt, pitchfork the hay into the wagon, comb her hair, pen the reply, fan the fire

O. COMPLEX TOOLS: catapult the rock into the fortress, mill the grain, pump the water, Xerox the article, print the newspaper

P. MISCELLANEOUS: smoke the fish, steam the vegetables, X-ray the bone

There is a serious problem with the list above, namely, it is heterogeneous, it lists under the label 'instrument verbs' verbs that are not classified according to a single criterion, rather, they are classified according to at least two criteria: the verb that appears in the paraphrases (A-I), the type of entity denoted by the noun that appears in the paraphrase as the instrument (J-P). While in the case of location and locatum verbs, the verb appearing in the paraphrase more or less stays the same (*put*), and it is the preposition that differs (*in (jail the prisoner), on (beach the boats), at (dock the boat)*), in the case of instrument verbs, it is the verb that varies (*go, fasten, clean, hit, cut, stab, destroy, catch, block, follow*). This represents a problem if one tries to establish an underlying argument structure for the verb, which more or less resembles the paraphrases, because too many different null light verbs need to be postulated.

1.2. Instrument Verbs in Romanian

Just like in the case of agentive verbs and location and locatum verbs, instrument verbs are much less frequent in Romanian. Out of the instrument verbs present in the list, there are only a few corresponding instrument verbs in Romanian, which have been marked in bold:

(2) A. *A MERGE (GO)* verbs: a merge cu bicicleta (to go with bicycle-the, to *bicycle*), a merge cu bicla (to go with bike-the, *to bike*), a merge cu bicicleta (*to cycle*), a merge cu barca (to go with

---

[82] It is not clear to me why verbs incorporating PLACES are listed under verbs incorporating INSTRUMENTS. Perhaps the authors' reasoning was that a verb like *to greenhouse the seedlings* is paraphrased as *to grow the seedlings by putting them in a greenhouse.* However, a possible paraphrase could be *to grow the seedlings in a greenhouse,* with the Place as a Location.

boat-the, *to boat*), a merge cu canoe (to go with canoe, *to canoe*), a merge cu elicopterul (to go with helicopter-the, *to helicopter*)

B. *A LEGA, A FIXA (FASTEN)* verbs: NAILS- a bate în cuie (to set in nails, *to nail*), a zăvorî (*to bolt*), **a înşuruba** (to prefix-screw, *to screw*), a lega cu sârmă (to fasten with wire, *to wire*), GLUES- a lipi (to paste), **a cimenta** (*to cement*), **a încleia** (to prefix-glue, *to glue*), a lipi cu bandă (to fasten with tape, *to tape*), RESTRAINERS- **a încătuşa** (to prefix-handcuff, *to handcuff*), a lega cu cătuşe (to fasten with handcuffs, *to handcuff*), **a înlănţui** (to prefix-chain, *to chain*), a pune în fiare (to put in fetters, *to fetter*), LOCKS- **a zăvorî** (*to latch*), a închide cu lacătul (to fasten with padlock, *to padlock*), a închide cu bare (to close with bars), **a bara** (*to bar*), a încuia (*to lock*), CLOTHING PARTS- a lega cu o cataramă (to fasten with a buckle, *to buckle* (his bed)), a prinde cu un cârlig (to fasten with a hook, *to hook* (her dress)), a închide cu fermoarul (to close with zipper-the, *to zip* (the dress)), a încheia cu nasturi (to fasten with buttons, *to button* (the shirt)), LINES- **a telegrafia** (*to cable*), **a ancora** (*to anchor)*

C. *Curăţi* (*Clean*) verbs: IMPLEMENTS- a curăţi cu mopul podeaua (to clean with mope- the floor-the, *to mope (the floor)*), **a grebla** (*to rake (the grass)*), **a filtra** vinul (to filter (the wine)), CLOTHS- a curăţa cu buretele *(*to clean with sponge-the, *to sponge* (the window)), a (se) curăţa cu prosopul (to refl. clit. clean with towel-the, *to towel himself*), CLEANSERS- **a**-şi **şampona** părul (to-clit. shampoo hair-the, *to shampoo his hair*)

D. *Lovi* (*Hit)* verbs: a bate cuiul cu ciocanul în scândură (to hit nail-the with hammer-the in board, *to hammer the nail into the board*), **a ciomăgi** bărbatul deasupra capului (to club the man over the head), a lovi cu bastonul (to hit with bat-the, *to bat (the ball)*), a lovi cu pietre (to hit with stones, *to stone* (the witch)), **a biciui** prizonierul (*to whip the prisoner*)

E. *Tăia, Înjunghia* (*Cut, stab*) verbs: a băga cuţitul în bărbat (to shove knife-the in man, *to knife the man*), a lovi în duşman cu baioneta (to hit in enemy with bayonet-the, *to bayonet the enemy*), **a sfredeli** gaura (to drill the hole), a tăia scândura cu ferăstrăul (to cut plank with saw, *to saw the plank*), a vâna balena cu harponul (to hunt whale-the with harpoon-the, *to harpoon the whale*)

F. *Distruge* (*Destroy)* verbs: a bombarda satul (*to bomb the village*), a bombarda fortăreaţa (*to shell the fort*), **a gaza** soldaţii (*to gas the soldiers*)

G. *Prinde (Catch)* verbs: a prinde în capcană popândăul (to catch in trap gopher-the, *to trap the gopher*), a prinde iepurele în capcană (to catch rabbit-the in nare, *to snare the rabbit*), a lega

vițelul cu sfoara (to tie calf-the with rope, *to rope the calf*), a prinde în plasă peştele (to catch in net fish-the, 'to net the fish')

H. *Bloca (Block)* verbs: a proteja/ apăra cu scutul ('to protect/ defend with shield-the', *to shield the child*), a bloca drumul (*to block the road*), a **baricada** drumul (*to barricade the road*), a **dig**ui râul (*to dam the river)*

I. *Urmări (Follow)* verbs: a urmări suspectul (*to shadow the suspect*), a urmări criminalul (*to track the criminal*), a urmări căprioara (*to trail the deer*)

J. INSTRUMENTE MUZICALE (MUSICAL INSTRUMENTS): a cânta o melodie din fluier/ flaut (to play a song from pipe, *to pipe the tune*), a cânta o melodie la vioară (to play a song at fiddle, *to fiddle the tune*), **a fluiera** melodia (*to whistle the tune*) or a cânta o melodie la fluier ('to play a song at whistle', *to whistle a song*)

K. USTENSILE DE BUCĂTĂRIE (KITCHEN UTENSILS): a străpunge murătura cu furculiţa (to pierce pickle-the with fork, *to fork the pickle*), a trece făina prin sită (to pass flour-the through sieve, *to sieve the flour*)

L. PLACES: a creşte răsadurile în seră (to grow seedlings-the in greenhouse, *to greenhouse the seedlings*, a cultiva roşiile în seră (to cultivate tomatoes-the in nursery, *to nursery the tomatoes*), a vinde bunurile pe piaţă (to sell goods-the on market, *to market the goods*)

M. BODY PARTS: a se uita cu mare atenţie la date (to refl. clit-look with great attention at data, *to eyeball the data*), a pronunţa cuvintele cu emfază (to pronounce words-the with emphasis, *to mouth the words*), a răsfoi materialul (*to finger the material)*, a răsfoi paginile (*to thumb the pages*)

N. SIMPLE TOOLS: a lua mizeria cu lopata (to take dirt-the with shovel, *to shovel the dirt*), a pune fânul cu furca în căruţă (to put hay-the with pitchfork in wagon, *to pitchfork the hay into the wagon*), a-şi pieptăna părul (to-refl comb hair-the, *to comb her hair*), a scrie replica cu pixul (to write reply-the with pen, *to pen the reply*), a aţâţa focul (*to fan the fire*)

O. COMPLEX TOOLS: **a catapulta** piatra în fortăreaţă (to catapult the rock into the fortress), a trece grâul prin moară (to pass grain-the through mill, *to mill the grain*), **a pompa** apa (*to pump the water*), **a xeroxa** articolul (*to Xerox the article*), **a printa** ziarul (*to print the newspaper*)

P. MISCELLANEOUS: **a afuma** peştele (*to smoke the fish*), a găti în abur legumele (to cook in steam vegetables-the, *to steam the vegetables*), **a radiografia** osul (*to X-ray the bone*)

In the database I created on the basis of a bilingual dictionary (Halvorsen 2004), there were not many instrument verbs *a peria* 'to brush', *a pistona* 'to push or extract liquid with a piston', which is actually an iterative, *a claxona* 'to honk', *a mătura* 'to sweep', *a cârmi* 'to steer'

While English has a considerable number of instrument verbs, Romanian prefers paraphrases to the use of a single instrumental. In what follows, I will try to account for this difference in productivity by resorting to phrasal spell-ou and spanning.

2. Previous Accounts of Instrument Verbs

A problem with incorporation accounts is that they do not predict instrument verbs, as the only transitive verbs predicted by Hale & Keyser's framework are transitive change of state verbs that take a PP complement (Rimell 2012: 38), and instruments are not PP complements, but PP adjuncts. Incorporating instruments into the verb would violate Travis's Head Movement Constraint (1984)[83]. At this point, one needs to discuss the issue whether instrument PPs are really adjuncts. In fact, this matter is not that clear, as there are two conflicting opinions in the literature. According to Levin & Rappaport (1988) and Jackendoff (1990), instruments are adjuncts (and locata are arguments), while for Koenig, Mauner, Bienvenue & Conklin (2008), they may be arguments or adjuncts depending on the properties of the verb.

The main point in favour of the argumenthood of instruments is semantic. According to Schutze (1996), instruments are arguments because their interpretation may depend on the verb:

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[83] Actually, even though it may seem crystal clear that the underlying argument structure for an instrument verb like *hammer* is *hit with a hammer*, it is not exactly so. What makes one assume a PP adjunct status for the instrument of the denominal verbs? Although Hale & Keyser (1997, 1998, 2002) classify denominals according to the theta-role of the noun that gets incorporated into the verb, the question still remains what the syntactic position of this noun is in the underlying argument structure. Given the fact that there is no one-to-one correspondence between theta-roles and syntactic positions, it is clear that there can be more than one syntactic function associated with the instrument theta-role, so why would one choose one syntactic position over the other? If we take a verb like *to knife the man,* for instance, why would one choose the underlying structure *to cut the man with a knife* rather than *the knife cut the man*? A possible solution could lie in the fact that *the knife* might be interpreted as an outer Specifier, which cannot be incorporated into the verb. However, if one takes *the knife* as an inner specifier, what prevents it from being considered the underlying argument of *knife the man?* An answer to this might be that the inner specifier position is in fact derived from the PP adjunct one, so one chooses the primitive structure. However, I would rather leave the question open, and simply point to the fact that it is not that clear from which syntactic position they move.

(3) a. I cut the bread *with a knife.* -> knife is causal intermediary

   b. I ate the icecream *with a spoon.* -> spoon is facilitating

However, this is not always the case, and the instrument may very well have completely different interpretations with the same verb:

(4) a. Bernie painted the ceiling *with a roller*.

 b. Bernie painted the ceiling *with a ladder.*

 c. Bernie painted the ceiling *with only his left hand.*

Moreover, if one tries to see how instruments behave with respect to various complement/ adjunct tests, the conclusion seems to point towards the adjunct status of instruments. As shown by Rissman (2011), instruments (e. g. Jenny stuffed the cabbage *with a spoon*) behave like adjuncts, and locata (e.g. Jenny stuffed the cabbage *with rice*) behave like arguments. There are semantic diagnostics in favour of this conclusion, as well as syntactic diagnostics. Insofar as semantic goes, arguments appear with a restricted range of heads. (*a man/ dog/ scarecrow with grey hair* vs. *a member/ *dog/ *scarecrow of Parliament*). While instruments can appear with any non-stative verb (*The man likes to walk with a cane, The woman blinded me with knowledge)*, locata can appear with only a small set of "putting verbs" (*I sprinkled the cake with coconut* , but **I placed the table with glasses*, **I broke the floor with glass*). Another semantic reason is the fact that locata are always entailed by the verb (*Jim loaded the truck* (with Z)), while instruments are not (*Mary put on her shoes*) (Koenig et al. 2008). Moreover, while the spatial relation between the locatum and the location is dependent on the locatum verb *(I filled the cooler with ice),* the instrument relation is not (*Mary painted the ceiling with a roller/ with a ladder).* As far as syntax is concerned, there are several diagnostics that suggests locata are arguments and instruments are adjuncts: the double *with* diagnostic, and adverb placement. Instruments cannot occur internally when there are two *with*-PPs (**He loaded the cart with a bucket with apples*), and they can be separated from the verb by an adverb, unlike locata (*She loaded the wagon quickly with a pitchfork*). In conclusion, instruments seem to behave like adjuncts rather than arguments.

However, the question still remains whether instruments that are expressed by means of a null preposition and a bare noun/ root also qualify as adjuncts, or whether they have a different status (a complement status). In other words, if in the sentence *Mary hit the metal with a hammer*, *with a hammer* is an adjunct, does this mean that, in the underlying structure *Mary HIT the metal WITH hammer, WITH hammer* is also an adjunct or not? Although embracing the view that it is an adjunct

would lead to a homogeneous analysis, there is actually no PP *WITH hammer*. I will come back to this matter when I give the analysis.

Given that instruments are considered adjuncts, and adjuncts violate the Head Movement Constraint in an incorporation account, Harley (2005) tries to offer a solution for this problem by resorting to the concept of *manner incorporation*, by which she understands the insertion of means and manner nominals directly into the position of *v*:

(5) a. *Sue was hammering the metal.*

    b. *vP*

```
              vP
            /    \
          DP      v'
                 /  \
               v     √P
           (hammering)  /  \
                 √      DP
                      the metal
```
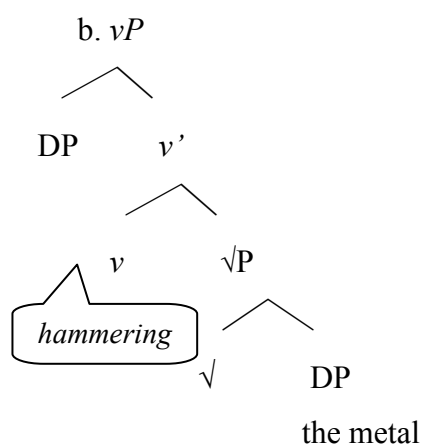
Rimell (2012: 38) argues that the manner incorporation indicated by the thought balloon seems to be a rather ad-hoc operation, and that it is not explanatory; it is a mere stipulation of an insertion process, for lack of a better explanation. However, the insertion of lexical material into *v* may not be that absurd after all. In fact, one could even argue that insertion of lexical material into v could be the general procedure, and there is no need for incorporation or conflation in the Hale & Keyser sense in order to account for denominal verbs.

Another issue that has received attention is the contrast between true instrumentals and pseudo-instrumentals (Kiparsky 1982, 1997, Arad 2003). While a true instrument-incorporating verb like *chain* implies the specific use of the incorporated instrument, a pseudo-instrumental verb like *hammer* is generic, denoting the most typical instrument used for that activity. One can distinguish between the two by testing whether they can take a PP denoting an instrument that is different from the one incorporated in the verb: while true denominals cannot combine with such a PP, as can easily be seen in (6):

(6) a. #They chained the prisoner with a rope.
    b. #Jim   buttoned up his pants with a zipper.

pseudo-instrumental verbs cannot:

(7) a. He hammered the desk with his shoe.

    b. He brushed his coat with his hand.   (Kiparsky 1997: 15)

    If we look at the corresponding Romanian sentences, we notice that instrumentals seem to display a similar behaviour in Romanian:

(8) a. #Au înlănţuit prizonierul   cu o sfoară.

    Have pref-chained prisoner with a rope.

    'They chained the prisoner with a rope.'

   b. #Jim s-a încheiat la nasturii de la pantaloni cu un fermoar.

     Jim refl-has closed at buttons of at trousers with a zipper.

    'Jim buttoned up his pants with a zipper.'

(9) a. A ciocănit în birou cu pantoful său.

     Has hammered in desk with shoe his.

    'He hammered the desk with his shoe.'

   b. Şi-a periat paltonul cu mâna.

     Refl 3rd sg.-has brushed with hand.

    'He brushed his coat with his hand.'

Apart from *button up,* for which there is no corresponding verb, as one can see in (8b), the other verbs have corresponding verbs in Romanian, and these corresponding verbs seem to display the same difference displayed by true instrumentals/ pseudoinstrumentals in English. While the hand can be used as a brush, and the shoe can be used as a hammer, a rope cannot be used as chain, neither can a zipper be used as buttons.

Arad (2003: 757) captures the difference between pseudo-instrumentals and true instrumentals by arguing that pseudo-instrumental verbs are derived from roots (just like the corresponding nouns), while true instrumentals are derived from nouns (which, in their turn, are derived from roots):

(10) a. V   b. N

    V   √hammer   N   √hammer

(11) a. N   b.   V

    N   √tape   V   N

                               N   √tape
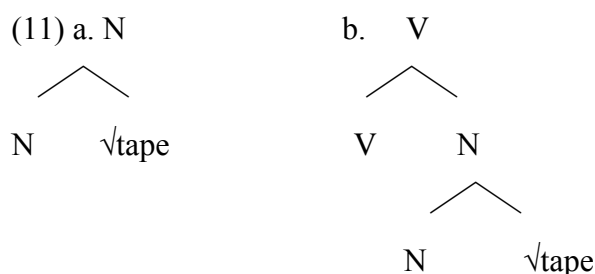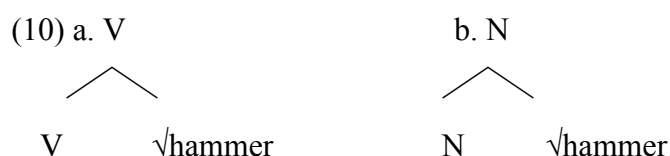
Although the solution proposed by Arad (2003) is very appealing, I would like to suggest another take on the difference between true instrumentals and pseudo-instrumentals, namely, to say that, actually, the difference between the two types of verbs does not lie in a class being root-derived and a class being noun-derived. While it is very hard to think of buttons being used as a zipper, it is fairly simple to think of shoes being used as a hammer. It is, hence, not a question of noun vs. root, but simply a question of whether or not it is possible to use a certain item as something else or not, hemce, it might be a question of Classifier vs. non-Classifier.

3.   A Phrasal Spell-Out Account of Instrument Verbs

In what follows, I will try to offer a phrasal spell-out account of instrument verbs. I will assume, for instance, that the verb *hammer* is the result of the phrasal spell-out of something like *DO WITH hammer*, where the instrument is spelled out together with the preposition and the null verb. However, I will not use a silent verb *DO*, assuming it is already expressed by means of the processual projection, and postulating it would be redundant.

In Ramchand (2008: 126-127), an instrumental verb like *hammer* is analyzed as an [*initP, procP*] verb, as the author makes a clear distinction between a sentence like *Karena hammered the metal flat* and a sentence like *Karena hammered the metal*. Although in *Karena hammered the metal flat,* it is clear that the base verb already licenses an argument in the UNDERGOER position, it seems to be the case that the adjectival resultative licenses and identifies a resP in the structure. Hence, *the metal* becomes a RESULTEE-UNDERGOER. This is not the case in a sentence such as *Karena hammered*

the metal. Thus, there seems to be a very clear-cut difference between the structure corresponding to *Karena hammered the metal*:

(12)   *initP*

        Karena

              init   *procP*

              hammer

                    the metal

                        proc   **<the metal>**

                        <hammer>

and the structure corresponding to *Karena hammered the metal flat:*

(13)   *initP*

        Karena

             init   *procP*

             hammer

               the metal

                  proc   *resP*

              <hammer>

                 <the metal>

                        res   AP
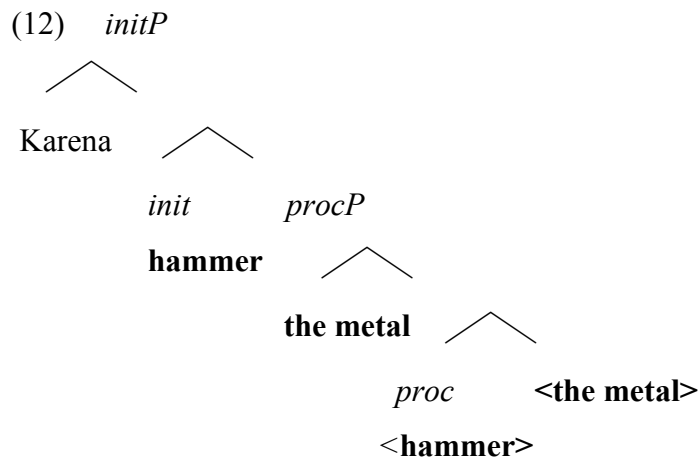
                             flat
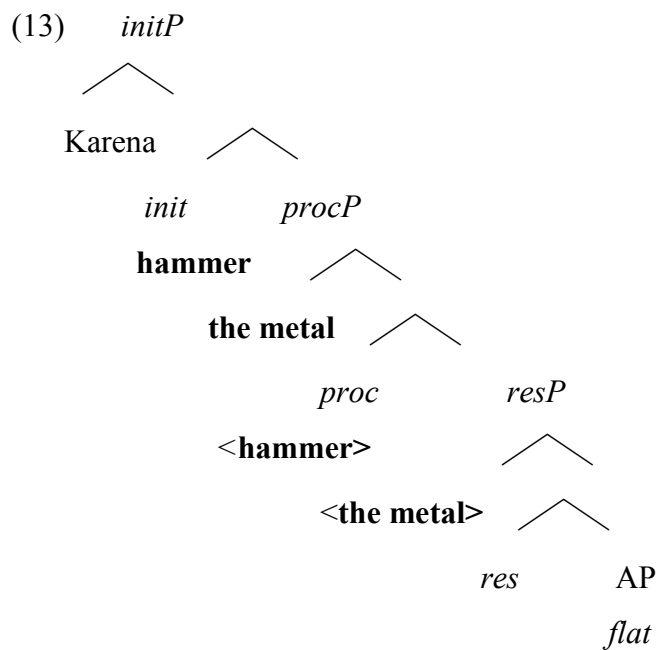
In the analysis I present here, I will be dealing with the first structure, and attempt to refine it, so as to capture the fact that the verb *hammer* is an instrument verb:

(14) *initP*

```
         initP
        /    \
      'x'     \
             /  \
          init   procP
                /    \
              'y'     \
                     /   \
                  proc    PP⁸⁴= WITH
                         /    \
                       'y'     P'
                              /  \
                             P    N
                              hammer
```

(14) *initP* — PP⁸⁴= **WITH**, P', P, N, **hammer**, *proc*, 'y', *init*, 'x', *procP*
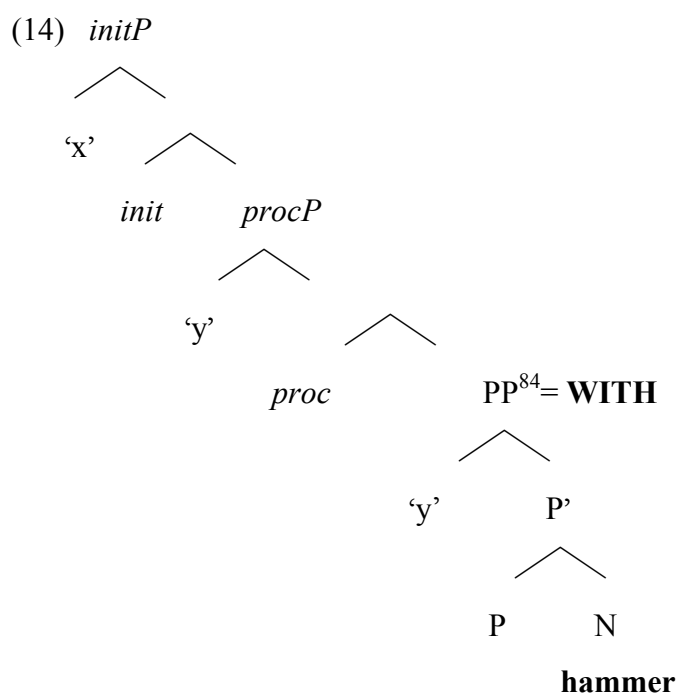
The verb *hammer* spells out the entire structure.

A fundamental question is whether the lexicon contains only one *hammer* item or two? Is it the case that *hammer* spells out both the N node and the entire tree, or is it the case that we are dealing with two different items: *hammer*₁, and *hammer*₂?

3.1 Two Items *Hammer* in the Lexicon

If one assumes that there are two items *hammer* (*hammer₁* and *hammer₂*), one lexicalizing N, the other lexicalizing the whole InitP tree, one can assume silent items or not. If one assumes the existence of a silent preposition such as *WITH*, then a possible lexicalization could be:

(15)   Cycle 1

        Inspect Node N, insert *hammer*

      Cycle 2

(i)   Merge P and N.

(ii)   Lexicalize PP as ***WITH*** (Move N).

---

⁸⁴ In this analysis, I treated the PP as complement of Proc, considering that the PP is obligatory in the formation of the denominal *hammer*.

PP= ***WITH***

```
        /\
       P    N
```
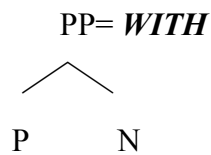
Inspect node PP, mark N for extraction, insert silent *WITH* at node PP.

(iii)   Lexicalize   PP as *hammer WITH*

<u>Cycle 3</u>

(i)Inspect node Proc, Insert nothing

(ii)Merge ProcP and PP

    ProcP

```
    /‾‾‾\
 Proc    PP
```
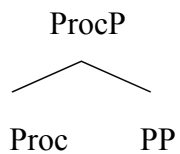
(iii)   Lexicalize ProcP directly as *hammer*.

(iv)   Merge y

(v)Lexicalize ProcP

<u>Cycle 4</u>

(i) Merge Init and ProcP

(ii) Insert nothing under Init.

(iii)   Lexicalize InitP directly as *hammer*.

  InitP <= *HAMMER*

```
   /‾‾‾\
 Init   ProcP
```
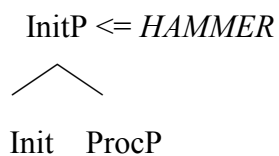
(iv)   Merge x

(v) Lexicalize the whole InitP by inheritance.

In the case of instrument verbs in Romanian, a verb like *a peria* (to comb) receives the same representation. Even though the paraphrase of a verb such as *to hammer* is 'to hit with a hammer', and the paraphrase of a verb such as *a peria* is 'a da cu peria' (*to give with brush*), hence, two different verbs appear in the paraphrase, the differences at the level of paraphrases do not affect the representation of these verbs inasmuch as to result in different structures:

(16)   *initP*
         /\
     'x'   /\
         init   *procP*
                  /\
              'y'   /\
                 proc   PP[85]= **CU (WITH)**
                            /\
                         'y'   P'
                               /\
                             P   N
                               perie
                               brush
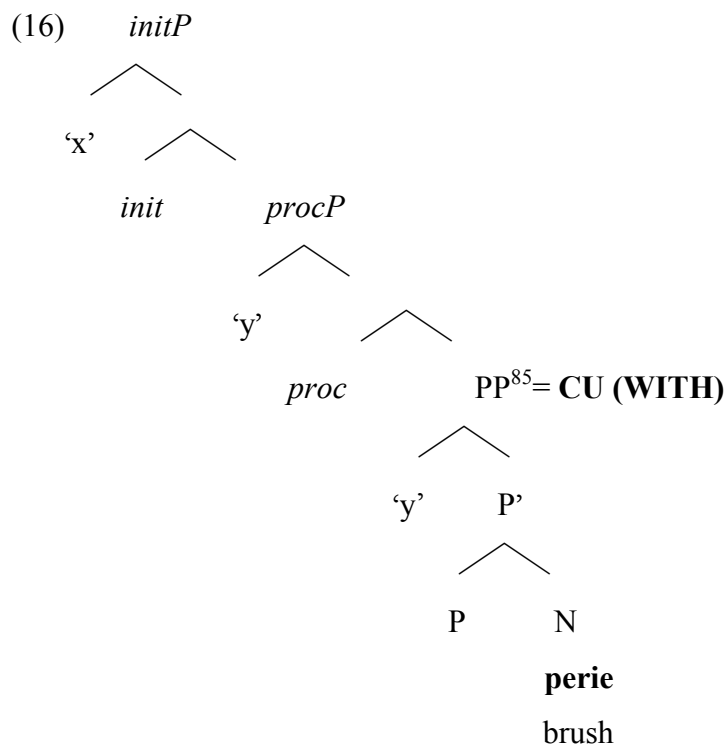
In a sense, postulating a silent preposition *WITH*, while not postulating a silent verb *HIT* might seem a bit ad-hoc. One could, of course, try to do that. However, such a move will result in the whole PP having to move to an adjunct position of procP so as to allow the lexicalization of procP as *HIT* through Phrasal Spell-Out, and then procP would again lexicalize as *hammer*:

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[85] While an adjunct analysis would offer a homogeneous account, a complement analysis of the PP *with hammer* marks a clear difference between the PPs in the structure leading to a denominal (complements) and the PPs in the lexical paraphrase (adjuncts).

(17) *procP*

```
        procP
       /\
     PP    procP
hammer WITH   /\
           'y'    /\
                proc   t_PP
                HIT
```
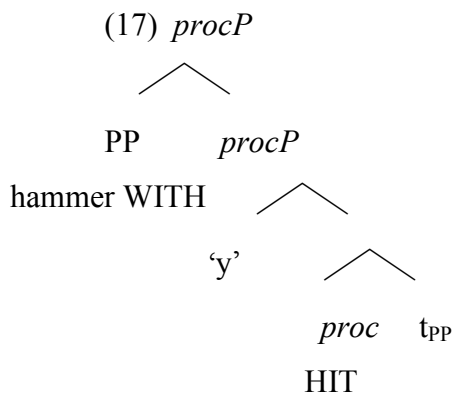
On the other hand, one could simply not use silent items at all, which would result in a structure of the following type:

(18) *initP*

```
       initP
      /\
   'x'   /\
       init   procP
             /\
          'y'    /\
               proc   PP
                     /\
                  'y'    P'
                        /\
                       P    N
                          hammer
```
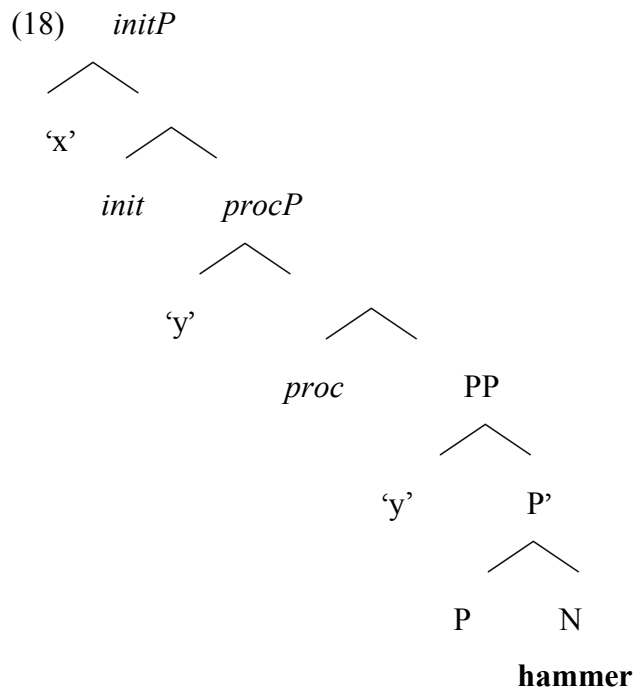
If one assumes two lexical entries, this would simply mean that *hammer₁* lexicalizes N, while *hammer₂* lexicalizes the whole structure. To render the structure more semantically rich, one could further postulate that the P in the structure is a certain type of P (AccompanimentP/ InstrumentP) or that it has an accompaniment value [+accompaniment], which would basically be the equivalent of postulating a silent item *WITH* in the silent item account.

3.2 Only One Lexical Item *Hammer*

Of course, there is no need to postulate two lexical items *hammer*. One could very well postulate a single lexical entry for *hammer*.

If one postulates a nominal lexical entry for *hammer*, arguing that the lexicon only contains the nominal root, then the verb will be derived via lexicalization by inheritance. No silent items are possible.

If one postulates that the lexicon only contains the verb [init, proc, N], then it would be possible to argue that *hammer* lexicalizes both the N and the verb for English. If one adopts Phrasal Spell-Out, postulating silent items such as *DO* or *WITH* would complicate the analysis (because, in order to lexicalize PP as *WITH* one would need to move N, and to lexicalize ProcP as DO, one would need to move the whole PP). Hence, a non-silent item analysis would be preferable. If no silent items are introduced, then *hammer* simply lexicalizes the whole tree. Moreover, no movement is needed. Also, in my opinion, storing one single lexical entry is preferable to storing two. While arguing that 'only the verb is stored' account works well for English, it cannot be applied to Romanian, where the verb has a different form from the noun. However, the 'only the N is stored' account works well both for English and Romanian (in Romanian, of course, the thematic vowel has to be stored too).

The representation I proposed needs to be further refined in several respects.

The first problematic issue is the status of *WITH hammer*. In the analysis above, I represented it as a complement of Proc. Nevertheless, given the previous considerations regarding the adjunct status of *with a hammer*, it might be argued that an adjunct analysis might be more adequate:

(19)

```
                initP
               /    \
            'x'      \
                 /    \
              init    procP
                     /    \
                  'y'      \
                       /         \
                    procP        PP=WITH
                      |          /     \
                    proc      'y'      P'
                                      /   \
                                     P     N
                                     hammer
```
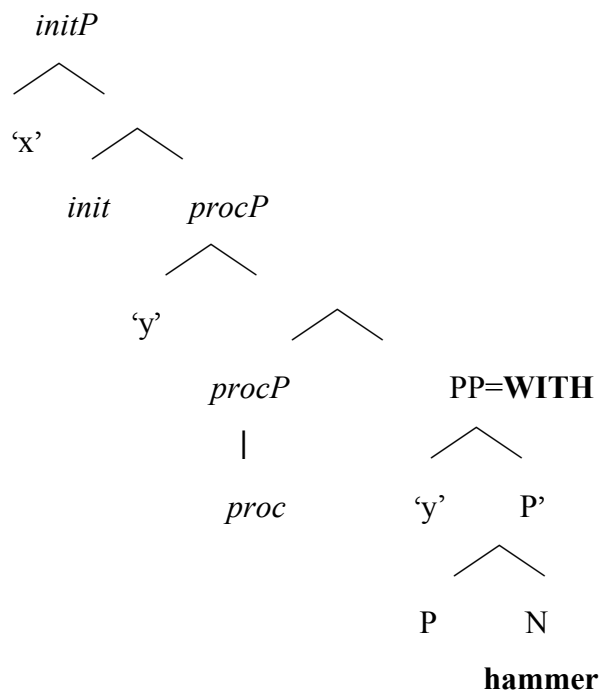
If one assumes a silent preposition *WITH*, then the PP is lexicalized a *hammer WITH*, while ProcP should be lexicalized as *hammer*. In this case, procP would have to be lexicalized twice: once before merging with PP (possibly as *HIT* or as a null verb), and then one more time after merging with PP (*hammer*). In fact, the same problematic issue is encountered when the PP is projected as the complement of Proc, in case one assumes silent items, because the silent item infomation has to be overwritten by lexical information. Hence, it is better to give up silent items if one assumes phrasal spell-out:

(20) *initP*

```
              initP
             /    \
          'x'      \
                  /  \
               init   procP
                     /    \
                  'y'      \
                          /  \
                      procP    PP
                        |     /  \
                      proc  'y'   P'
                                 /  \
                                P    N
                              hammer
```
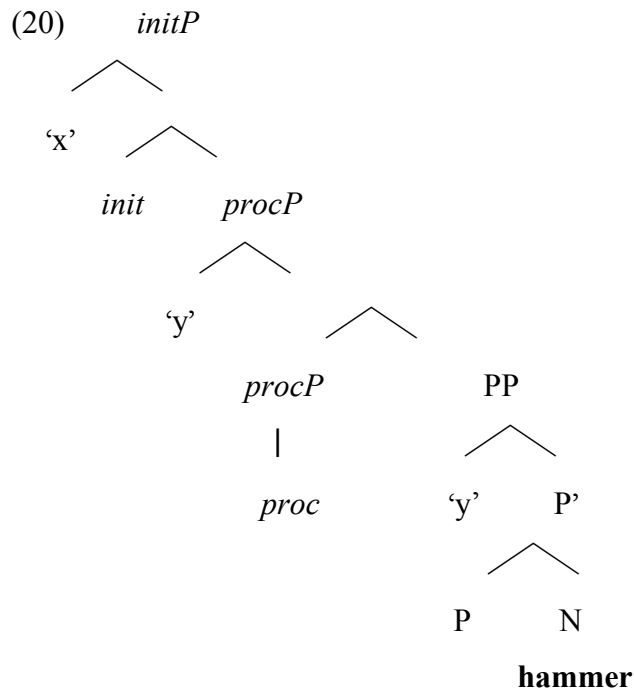
While adopting silent items would lead us to having to lexicalize ProcP twice, not adopting them leads to other problems. While PP can be argued to be lexicalized as *hammer*, in the case of procP, one would be forced to say either that procP gets lexicalized as *hammer* before merging with the PP,or that procP is empty. The first solution has the flavour of Haugen's (2005) mere insertion of instrumentals under v, but has the great disadvantage that it makes the further merge with a PP somewhat superfluous. On the other hand, the second option leaves procP unlexicalized, which represents a problem for an account embracing an exhaustive lexicalization constraint. One must either relax this constraint or simply admit that adjunct problem encountered in the incorporation/ conflation accounts proves to be a problem for a phrasal spell-out account too, and that a PP complement analysis with no silent items might be a better way of coping with instrumentals. In addition, one could even argue that a verb like *hammer* might very well be paraphrased as 'use a hammer', and represent *hammer* as in (21):

(21) *initP*

```
       initP
      /    \
    'x'     \
           /  \
        init   procP
              /    \
            'y'      \
                   /   \
                 proc    N
                       hammer
```
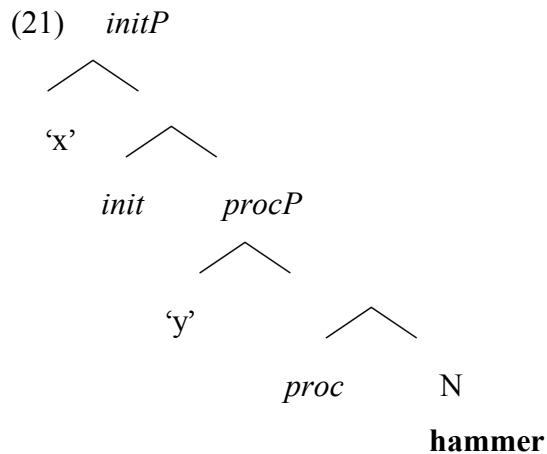
Another issue that needs to be looked into is the difference between pseudo-instrumentals such as *to hammer* and true instrumentals such as *to chain*. To capture the difference between pseudo-instrumentals such as *to hammer* and true instrumentals such as *to chain*, one might argue that in *hammer*, what gets spelled out together with the prepositions is not actually the nominal root (NR)/ the N *hammer* but an OBJECT TYPE *hammer*, or a Classifier selecting *hammer*. In this way, one could embrace the view that a more elastic meaning for the verb (allowing *hammer* to combine with a PP such as *with a shoe*) does not necessarily mean that the verb is root-derived from a nominal root identical in form and meaning to the noun. The differences in the internal structure of the PPs help distinguish between the two types of instrumentals, as this classifier would not be present in the *chain* case, which counts as a true instrumental (22):

(22) a. ClassP

```
        ClassP
       /    \
      /      \
   Class    N/ NR
           hammer
```

b. N/ NR

chain
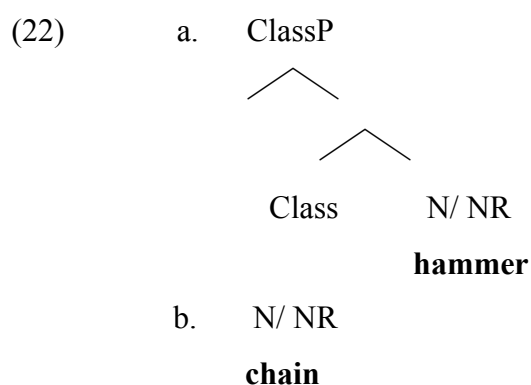
The same analysis is applied to Romanian.

Moreover, one needs to account for the difference between English and Romanian in what concerns the verbal ending. Given that Romanian verbs present a verbal ending (*peria*), one solution

would be to further complicate the structure with a verbal suffix projection inbetween proc and PP or proc and N (depending upon the analysis adopted) so as to render clear the idea that there is verbal morphology at stake[86]. However, such an analysis would present the disadvantage of postulating a projection whose presence might seem not motivated (in other words, what exactly does the verbal suffix *a-* express? verbiness?), and would result in double lexicalization of the suffixal projection. Another option would be simply to lexicalize ProcP as the suffix. In this case, however, Phrasal spell-out would lead to ProcP being lexicalized twice: once as the suffix, and once as the verb (after the PP has moved as an adjunct of ProcP):

(23) *initP*

   'x'

     init *procP*-**i**

       'y'

         proc   PP

            'y' P'

               P N

               ciomag

               (club)
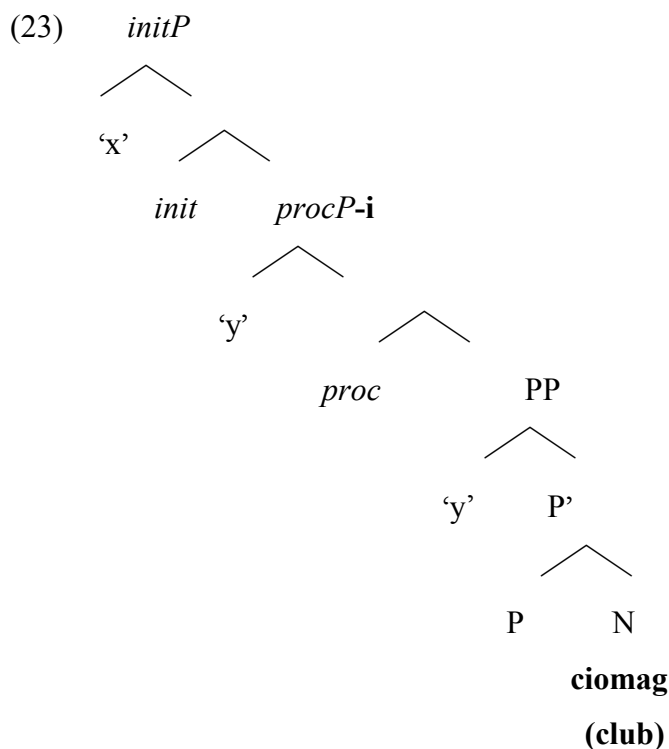
A DM account seems much better fitted to account for the data in Romanian, as it does not need to resort to movement operations:

---

[86] In English, it can be assumed that such a projection is either missing completely or it is lexicalized by a null morpheme.

(24)

```
        initP
        /\
     'x'  /\
       init  procP
            /\
          'y'  /\
             proc   PP
             -i    /\
                 'y'   P'
                      /\
                     P    N
                       ciomag
                       (club)
```
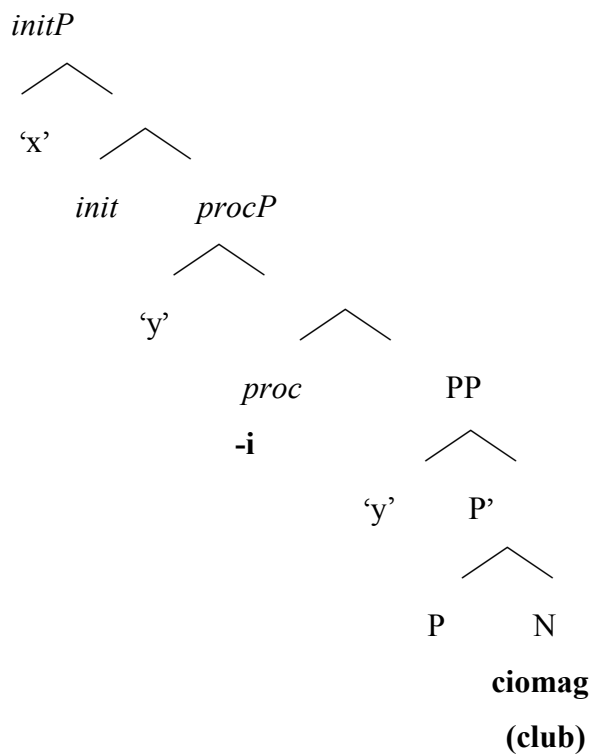
Instead, it simply fuses the heads: N fuses with P, then with Proc, then with Init, thus giving rise to *ciomăgi*:

(25)

```
        initP
        /\
     'x'  /\
       init  procP
            /\
          'y'  /\
             proc   PP
             -i    /\
                 'y'   P'
                      /\
                     P    N
                       ciomag
                       (club)
```
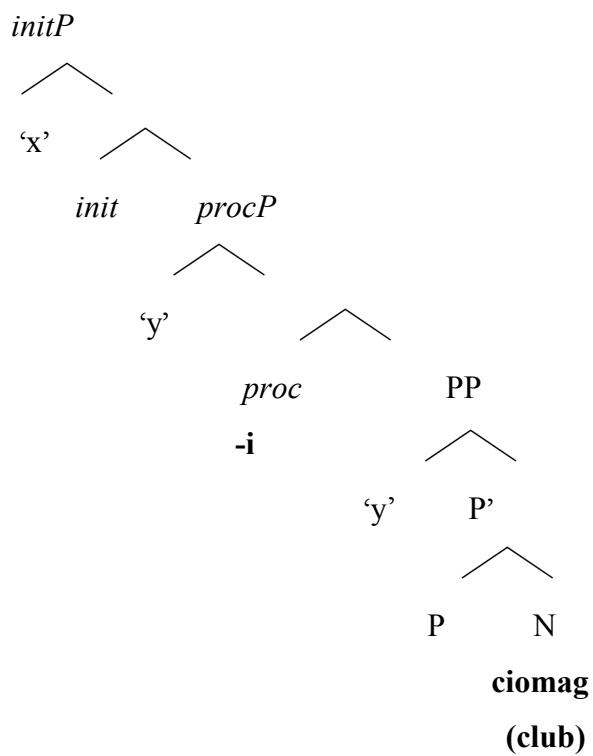
In the case of English, the account presented above works very well. However, one could offer a different account for English, assuming only the verb is stored in the lexicon and features can underassociate (Ramchand 2008a). If one embraces such an account, one can render the representation semantically richer by postulating silent items, and assume the [init, proc, P] features of *chain* underassociate. The underassociated features of *chain* will unify with the information in P and in proc and init:

(26)

```
              initP
             /    \
          'x'      /\
               init   procP
               HIT    /  \
                   'y'     /\
                       proc   PP
                      <HIT>   /  \
                           'y'    P'
                                 /  \
                                P    N
                              WITH   chain [Init, Proc, P]
```
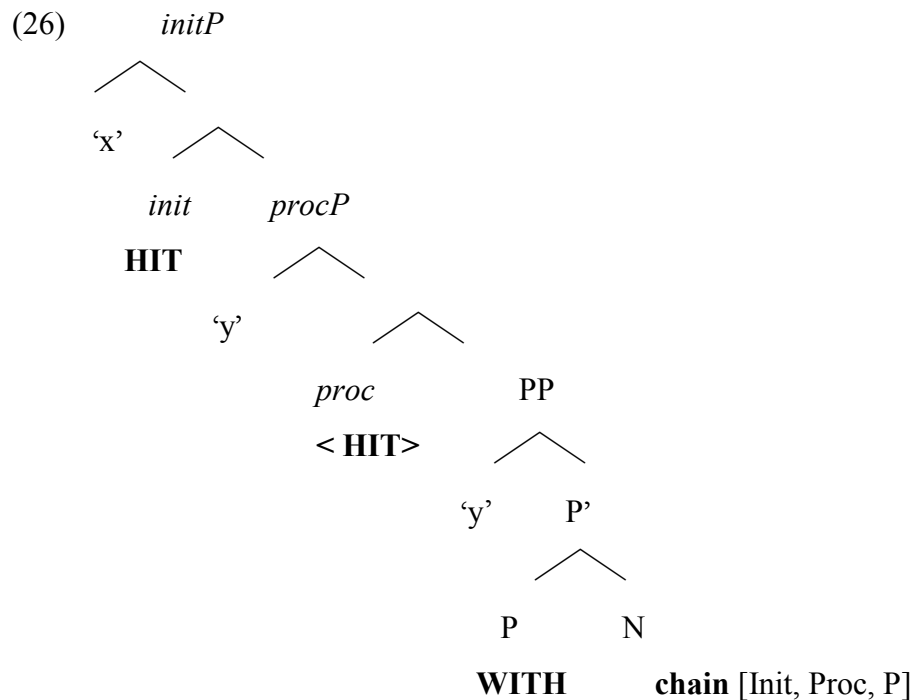
Such an account is, however, not possible in Romanian, where the verb and the noun have a different form.

4. A Spanning Account

In a spanning framework, one can provide following representation:

(27)   Init@*

'x'   Proc* *Thematic Vowel*

'y'   P*

'y'   N

hammer

ciomag (club)
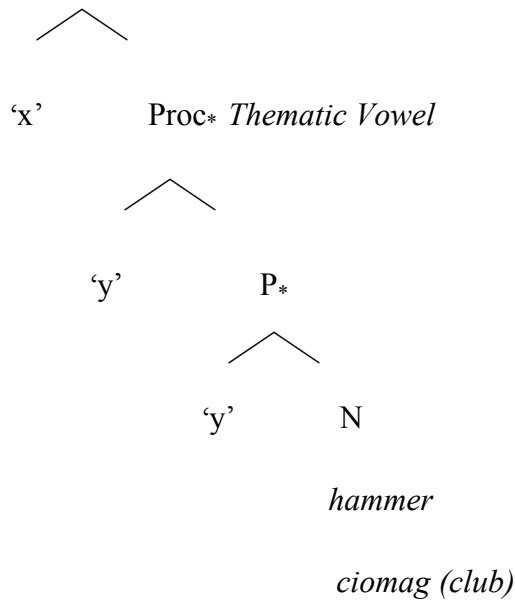
Linearized as x [N P Proc Init] y

If one assumes the lexicon only contains one item (the noun), at L-Match, we get *x [hammer Ø Ø Ø] y/ x [ciomag Ø Thematic Vowel Ø] y*. As argued previously, I am not sure whether the Thematic Vowel is chosen at this point, or later on at Insert, but I embrace the view that it is chosen at L-Match.

If one assumes the lexicon contains two items (the verb and the noun), then there will be a competition between *[hammer Ø Ø Ø]* and *hammer*, or between *[ciomag Ø Thematic Vowel Ø]* and *ciomăgi*, and the second item will win.

I believe the first option is preferable, given that storing only one item *hammer* is better than storing two.

Of course, one could also try to give an analysis in terms of silent items:

(27)   Init@∗

      'x'   Proc∗ *HIT*

           'y'   P∗ *WITH*

               'y'   N
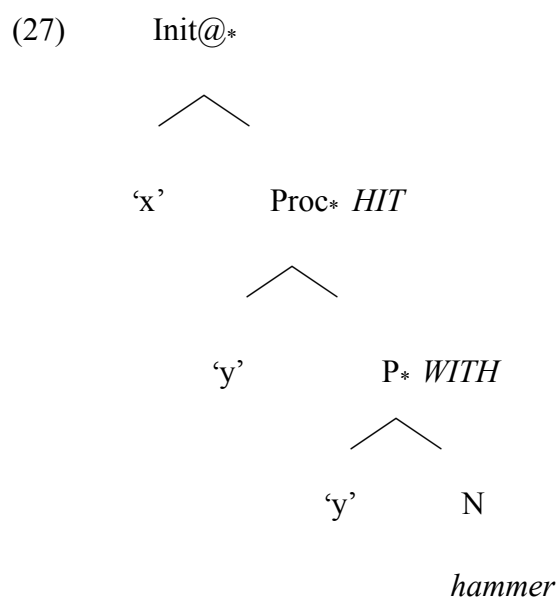
                   hammer

Linearized as x [N P Proc Init] y

If one assumes two lexical entries for *hammer* ([N] and [Init, Proc, P, N]), at L-Match, we get a competition between *[hammer-WITH-HIT[87]]* and *hammer*. If, on the other hand, one assumes underassociation, this means one can assume there is only one item *hammer*, the verbal one. This item can be inserted in the N position, and the features [Init, Proc, P] can underassociate:

(28)   Init@∗

      'x'   Proc∗ *HIT*

           'y'   P∗ *WITH*

               'y'   N
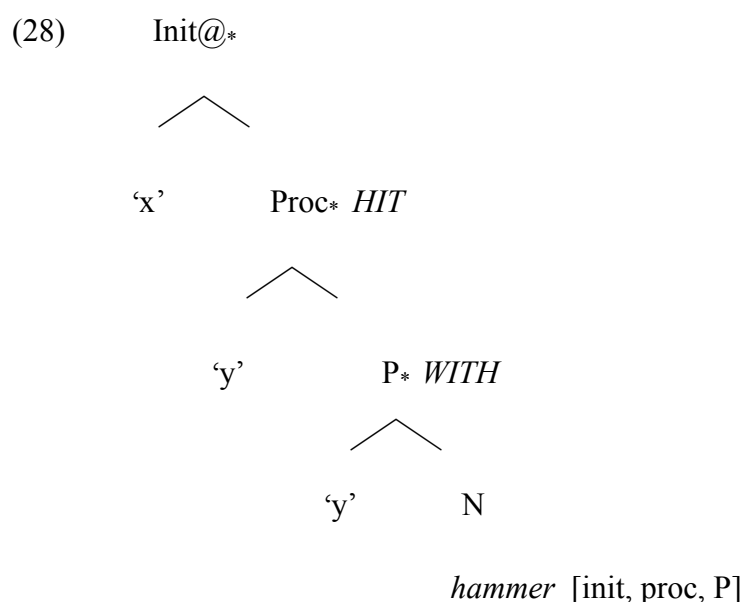
                  hammer [init, proc, P]

The underassociated [init, proc, P] features of *hammer* will have to unify with the information about P provided by *WITH* and the information about process and initiation provided by *HIT/ DO*.

---

[87] Here, we would actually have *hammer-WITH-HIT-HIT*.

While this underassociation account works for English, it cannot be applied to Romanian, where the verb and the noun have different forms. For this reason, I believe the no silent item spanning account is a much better option.

The problem with this representation is that it treats P as a complement of Proc, while its paraphrase 'do with a hammer' seems to indicate an adjunct status. I will assume a complement status for P, however (spans represent a complement sequence of heads). Moreover, I will even argue that another possibility would be to assume there is no P (*hammer* would be paraphrasable as *use a hammer*):

(29)   Init@$_*$

         ⌃

'x'   Proc$_*$

           ⌃

    'y'   N

             hammer
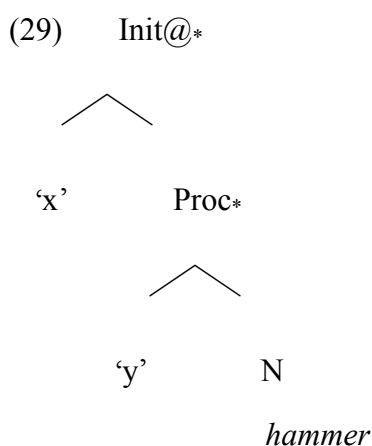
Linearized as x [N Proc Init] y

In conclusion, the spanning account with no silent items seems to provide the best account of instrumental verbs. While nanosyntax resorts to too many movement operations, DM and spanning have the advantage of being more economical and elegant. On the basis of the differences between languages, one can provide homogeneous accounts for English and Romanian (where the lexicon stores only the noun in both languages, for instance), or different accounts (where the lexicon stores only the verb in English, but only the noun ad the thematic vowel in Romanian, or both the noun and the verb).

Conclusion

In this thesis, I have tried to analyze denominal verbs in two novel frameworks, namely, a Phrasal Spell-Out Approach, according to which a single item may spell out phrasal nodes, and a Spanning Approach, according to which an item spells out a span, i.e. a complement sequence of heads in a mirror theoretic framework. I have looked at various classes of denominals in English and Romanian, trying to capture the differences between languages. The most important difference is that the noun and the denominal verb generally have the same form in English (*dance-to dance, corral-to corral, butter-to butter* a.o.), while this is not the case in Romanian (*dans- a dansa*), where the verb presents an additional suffix which has a different form depending upon the conjugation at stake. I have shown that, if one desires to create a more homogeneous analysis for denominals in English and Romanian, one can claim that there is only one item in the lexicon in both languages (a noun), and that the verb is generated syntactically. On the other hand, if one wishes to create a contrast between languages, one can claim that English stores only the verb, while Romanian stores the thematic vowel and the noun, but does not store the verb, or both the noun and the verb. I personally find the homogeneous view more appealing, as an account that accomodates more languages is preferable to one that does not.

English and Romanian denominals do not differ only in that Romanian has a verbal ending for the verbs, there are other differences as well: the prefixation with *în-* of so many denominals in Romanian, in contrast with English (but not with other Germanic languages), the absence of complex resultatives in the presence of locative denominals in Romanian (but their presence in English) a. o. From a productivity stand, Romanian is poorer in denominal verbs than English: while Romanian more often than not chooses periphrastic means of expressing a verb-noun meaning (for instance, *a aranja pe raft* 'to put on shelf'), English chooses a single item (*to shelve*).

Throughout the thesis, I have evaluated the explanatory power of the phrasal spell-out approach, the DM approach and the spanning approach with respect to the behaviour of denominals. I have looked at Theme denominals (*to dance*), pseudo-Agentive denominals (*to spy*), ambiguous verbs (such as weather verbs), location verbs (*to shelve*), locatum verbs (*to butter*), instrument verbs (*to hammer*), in other words, the major classes of denominals that Hale & Keyser (2002) have dealt with and some very important problematic cases (pseudoagentives and instrument verbs), and I have come to the conclusion that the spanning approach provides a much more elegant and economical account than nanosyntax.

Annex 1

Unprefixed Denominals	Abstract (A)/ Concrete (C)	Count (N)/ Uncount (not N)	Telic / Atelic	Origin	Thematic role of the noun
a **accent**ua 'emphasize'	A	not N	telic	fr. *accent,* lat. *accentus.*	
a **accept**a 'accept'	A	not N	telic	germ. *Akzept*, lat. *acceptus*	
a **acces**a 'access'	C	not N	telic	fr. *accès***,** lat. *accessus*	Theme
a **accident**a 'wound in an accident'	C	N	telic	fr. *accident*, lat. *accidens, -ntis*	Theme
a **achiziţi**ona, 'to acquire'	C	N	telic	fr. *acquisition***,** lat. *acquisitio, -onis*	Theme
a **adăpost**i 'to shelter'	C	N	state	lat. *ad appos(i)tum* sau *ad depos(i)tum*	Theme/ Location
a **anunţ**a 'to announce'	A	N	telic	'anunţa' (backformation)<fr. *annoncer*, lat. *annuntiare*	
a **arbitr**a 'to **arbitr**ate'	C	N	atelic	fr. a*rbitre*<lat. *arbiter*	(Pseudo-Agent)
a **argument**a 'to argue'	A	N	atelic	fr. *argument***,** lat. *argumentum*	
a **astâmpăr**a 'to calm somebody down'	C	not N	telic	< 'astâmpăra' (backformation)< lat. *ex-temperare*.	
a **avans**a 'to advance'	A	not N	telic	fr. a*vance*	
a se **aventur**a 'to venture'	A	N	telic	fr. *aventure*	
a (se) **balans**a, 'to **balance'**	C	M	atelic	balansa' (backformation)- DEX '98 (1998) , or fr. *balance*-DN (1986)	
a (se) **balon**a 'to bloat'	C	N	telic	fr. *ballon*	Endpoint
a **bandaj**a 'to **bandage'**	C	N	telic	fr. *bandage*	Theme/ Locatum
a (se) **bărbier**i 'to shave (oneself)'	C	N	telic, atelic	ngr. *barbéris*	Pseudo-Agent
a **bici**ui 'to **whip'**	C	N	atelic	sl. *biči*	Instrument
a **blestem**a 'to **curse'**	A	N	telic, atelic	*blestema* (backformation)	
a **boicot**a 'to **boycott'**	A	N	telic, atelic	*boicota* (backformation)-DEX '98 (1998), or fr. *boycott*	
a **captur**a 'to **capture'**	C	N	telic	fr. *capture***,** lat. *captura*	Theme
a **catalog**a 'to **catalogue'**	C	N	telic, atelic	fr. *catalogue,* lat. *catalogus*	Location
a **cârm**i 'to **steer'**	C	N	telic	sl. *kruma*	Instrument
a **chicot**i 'to **giggle/ chuckle'**	C	N	atelic - iterative	bulg., sb. *kikot*	Theme/ Manner
a **chin**ui 'to **torment'**	C/ A	N	atelic	magh. *kin*	Theme
a **chiul**i 'to play truant'	C	N	telic	fr. *[tirer au] cul*	

a **cinst**i 'to **honour'**	A	Not N	atelic	sl. *čĩştĩ*	
a **ciomăg**i 'to **club'**	C	N	atelic	tc. *çomak*	Instrument
a **claxon**a 'to **honk'**	C	N	atelic-semelfactive	fr. *klaxon*	Instrument
a **colind**a 'to **carol'**	C	N	atelic	*colinda* (backformation)	Theme
a **condiment**a 'to **spice'**	C	N	telic, atelic	fr.*condiment*, lat. *condimentum*	Theme/ Locatum
*a **confecți**ona 'to **manufacture'**	C	N	telic, atelic	fr. *confection*, lat. *confectio, -onis*	Theme
a **(se) conserva** 'to **conserve'**	C	N	state, telic, atelic	fr. *conserve*	Location
*a **copil**ări 'to live one's childhood'	A	Not N	atelic	*copil* + suf. -*ărie, copilări< copilărie*+ suf. -*ări*	
a **critica** 'to **critic**ize'	A	Not N, N	atelic	fr. *critique*, lat. *criticus*	
a **cuget**a 'to meditate'	A	Not N	atelic	*cugeta* (backformation)	
a **cumul**a 'to sum'	A	Not N	atelic	fr. *cumul*	
a **cununa** 'to wed'	C	N	telic	lat. *corona*	Theme
a **curenta** 'to fry up'	C	N	telic	fr. *courant*	Theme
a **(se) cutremura** 'to shudder'	C	N	telic, atelic	*cutremura* (backformation)	
a **cuvânta** 'to speak'	C	N	telic, atelic	lat. *conventus*	Theme
a **dansa** 'to dance'	C	N, not N	atelic, (telic)	fr. *danse*	Theme
a **dăr**ui 'to give'	C	N	telic, atelic	sl. *darú*	Theme
a **dăuna** 'to **harm'**	C/ A	N	atelic -state	lat. *damnum*	Theme
a **decret**a 'to **decree'**	C	N	telic	fr. *décret*, lat. *decretum*	Theme
a **defect**a 'to spoil'	C	N	telic	lat. *defectus,* germ. *Defekt*	Theme
a **delir**a 'to rave'	C	N, not N	atelic	fr. *délire*	Theme
*a **demisi**ona 'to resign'	A	Not N, N	telic	fr. *démission*	Theme
a **deranj**a 'to disturb, bother'	A	Not N	state	<*deranja* (backformation)	
a **desen**a 'to draw'	C	N	atelic, telic	fr. *dessin*	Theme
a **detali**a 'to elaborate'	C	N	atelic	it. *dettaglio*, fr. *détail*	Manner?
a **diagnostica** 'to diagnose'	C?	N	telic	*fr. diagnostic*	Theme
a **disciplin**a 'to discipline'	A	Not N	telic, atelic	fr. *discipline*, lat. *disciplina*	
a **dobând**i 'to acquire'		Not N?	telic	<*dobândi* (backformation)	
a **(se) documenta** 'to **document'**	C	N	atelic	fr. *document*	Location
a **doved**i 'to prove'	A	N	telic	*dovedi (*backformation)	
a **dușmăn**i 'to hate'	A?	Not N	atelic -state?	tc. *düşman*	Theme

a **echilibr**a 'to **balance'**	A	Not N	telic	fr. *équilibre,* lat. *aequilibrium*	
*a **economi**si 'to save'	C	Not N in the context, N	atelic	fr.*économie*	Theme
a **etalon**a 'to calibrate'	A	N	atelic, telic	fr. *étalon*	
a **examin**a 'to **exam**ine'	A	N	atelic, telic	fr., lat. *examen*	Theme
a **exil**a 'to **exile'**	A	not N	telic	fr. *exil,* lat. *exsilium*	
a (se) **extaz**ia 'to en**rapture'**	A	not N, N	telic, atelic	fr. *extase*	
a **fabric**a 'to fabricate'	C	N	telic, atelic	fr. *fabrique,* rus. *fabrika,* germ. *Fabrik*	Location
a **faliment**a 'to bankrupt'	C	Not N in the context, N	telic	germ. *Falliment,* it. *fallimento*	Endpoint
a **fisur**a 'to **crack'**	C	N	telic	fr. *fissure,* lat. *fissura*	Theme
a **fluier**a 'to **whistle'**	C	N	atelic	alb. *floere*	Instrument
a **folos**i 'to **use'**	C/ A	not N, (N)	atelic	ngr. *ófelos*	Theme
a **formul**a 'to **formula**te'	A	N	telic	fr. *formule,* lat. *formula*	
a **fotografi**a 'to **photograph'**	C	N, not N	telic, atelic	fr. *photographie*	Theme
a **fragment**a 'to **fragment'**	C	N	telic	fr. *fragment,* lat. *fragmentum*	Goal/ Endpoint
a **frân**a 'to **brake'**	C	N	telic	fr. *frein*	Theme
a **fremăt**a 'to **quiver'**	C	N	atelic	lat. *fremitus*	Theme
a **furnic**a 'to **tingle'**	C	N	atelic	lat. *formica*	Manner
a **fuzion**a 'to **fuse'**	C	not N	telic	fr. *fusion,* lat. *fusio*	Theme
a **galop**a 'to **gallop'**	C	not N	atelic	fr. *galop,* it. *galoppo*	Manner
a **găur**i 'to **hole'**	C	N	telic	lat. *gavula (< cavus).*	Theme
a **găzd**ui 'to **shelter'**	C	N	atelic	magh. *gazda*	Pseudo-Agent
a (se) **gând**i 'to think'	A	N	atelic	magh. *gond*	
a **gât**ui 'to **neck**/ choke'	C	N	telic	magh. *gát*	Theme
a **gestion**a 'to manage'	A	not N	atelic	fr. *gestion,* lat. *gestio, ~onis*	Theme
a **glum**i 'to **joke'**	C	N	atelic	sl. *glumŭ,* bg. *gluma*	Theme
a **gust**a 'to **taste'**	C	not N in the context, N	atelic	lat. *gustus*	Theme
a **guvern**a 'to **govern'**	C	N	atelic -state	it. *governo,* fr. *gouverne(ment)*	Pseudo-Agent
a (se) **hârjon**i 'to play'	C	N	atelic	<*hârjoni* (backformation)	
a se **hodorog**i 'to grow old'	C	N	telic	<*hodorogi* (backformation)	
a **hohot**i 'to **laugh'**	C	N	atelic, iterati	rus. *hohot*	

			ve		
a **hoinăr**i 'to **roam'**	C	N	atelic	*hoină* (= *oină*) + suf. *-ar*	Pseudo-Agent
a **huzur**i 'to **wanton'**	C	not N	atelic	tc. *hŭzur*	Manner
a se ***iluzi**ona ('illusion-+suffix') 'to delude'	A	N	atelic	fr. *illusion,* lat. *illusio, -onis*	
a **imagin**a ('image+suffix')'to **imag**ine'	C	N	atelic	lat. *imago, -inis*	Theme
a ***impresi**ona, 'to impress'	A	N	state	fr. *impression,* lat. *impressio, -onis*	
a ***impuls**iona 'to impel'	A	N	telic	lat. *impulsus*	
a **incendi**a 'to **burn'**	C	N	telic	lat. *incendium,* cf. it. *incendio,* fr. *incendie*	Theme
a **influenţ**a 'to **influence'**	A	not N, N	atelic-state	fr. *influence*	
a **(se) interes**a 'to **concern'**	A	N	atelic	it.*interesse*, rus. *interes*, germ. *Interesse*	
a ***ironi**za 'to run a saw on/ to taunt'	A	not N, N	atelic	fr. *ironie*, lat.*ironia*	
a **izbând**i 'to succeed'	A	N	telic	< *izbândi* (backformation)	
a **jef**ui 'to **rip** off/ rob'	C	N	telic	pol. *žak.*	Theme
a se **jel**ui 'to **moan'**	A	not N	atelic	sl. *žalĩ*	Theme
a (se) **jertf**i 'to **sacrifice** (oneself)'	C/A	N	telic	sl. *žrŭtyva*	Theme
a **jind**ui 'to yearn (for)'	A	not N	atelic	<*jindui* (backformation)	
a (se) **juc**a 'to **play'**	C	N	atelic	lat. *jocus*	Theme
a se **lament**a 'to **lament'**	C	not N	atelic		
a **lăcrim**a 'to **tear**/ weep'	C	N	atelic	lat. *lacrima*	Theme
a se **lec**ui 'to **cure'**	C	N	telic	sl. *lĕkŭ*	Theme
a **legăn**a 'to **cradle/ lull'**	C	N	atelic	< *legăna* (backformation)	
a ***lene**vi 'to **laze'**	A	not N	atelic	sl. *lĕnĩ*	
a **leşin**a 'to faint'	C	N	telic	< *leşina* (backformation)	
a **licăr**i 'to **gleam/ flicker'**	C	N	atelic-iterative	<*licări (*backformation)	
a **licenţ**ia (?) 'to **sack** sb'	C	N? (a different meaning)	telic	fr.*licence,* lat. *licentia*	Theme?
a **lichid**a (?) 'finish an activity'	C	not N, N	telic	fr.*liquide,* lat. *liquidus*	?
a **(se) linişt**i 'to **calm'**	A	not N	telic	*lin* + suf. *-işte,* lin< lat. *lenus*	Theme
a **lips**i 'to miss'	A	N	atelic-state?	<*lipsi* (backformation)	
a **loc**ui 'to live'	C	N	atelic-state	lat. *locus*	Theme/ Location?
*a **magnet**iza 'to **magnet**ize'	C	N	telic	ngr. *maghnítis,* germ. *Magnet.*	?

a **manevr**a 'to **handle**'	C	N	atelic	fr. *manœuvre*	Theme
a se **manifest**a 'to **manifest**'	A	N	atelic	lat. *manifestum*, fr. *manifeste*	
a ***martir**iza 'to **martyr**ize'	C	N	telic	fr. *martyr*	Theme
a **masacr**a 'to **massacre**'	C	N	telic	fr. *massacre*	Theme
a ***măcelăr**i 'to **butcher**'	C	N	telic	lat. *macellarius*	Pseudo-Agent
a **mărgin**i 'to **border/ edge**'	C	N	telic	lat. *margo, -inis*	Theme
a **măsur**a 'to **measure**'	C	N	atelic	lat. *mensura*	Theme?
a **mătur**a 'to **sweep**'	C	N	atelic, (telic)		Instrument
a **mân**ui 'to **handle**'	C	N	atelic	lat. *manus*	Instrument
a ***memor**iza 'to memorize'	A	not N	telic?	lat., it. *memoria*, fr. *mémoire*.	Theme?
a **menţion**a 'to **mention**'	A	N	telic?	fr. *mention*, lat. *mentio, -onis*.	
a **merit**a 'to deserve'	A	N	atelic	fr. *mérite*	
a **meşter**i 'to tinker'	C	N	atelic, (telic)	magh. *mester*	Pseudo-Agent
a **meşteşug**i 'to craft smth'	A??/C?	N	atelic, (telic)	magh. *mesterség*	Pseudo-Agent
*a se **metal**iza 'to **metal**ize'	C	not N in context, N	telic	fr. *metaliser*	Endpoint
a se **metamorfoz**a 'to **metamorphose**'	A	N	telic	fr. *métamorphose*	
a mijloci 'to mediate/ intercede'	A	not N	atelic	lat. *medius locus*	
a **miros**i 'to **smell**'	C	not N, N	atelic, (telic)	*mirosi* (backformation).	Theme
a **model**a 'to **model**'	A?	N	atelic, telic	fr. *modèle*, it. *modello*	
a **(se) mohor**î 'to become sad'	C	not N	telic		Endpoint
a **motiv**a 'to motivate'	A		telic	fr. *motif*, it. *motivo*, germ. *Motiv*.	
a **multipl**ica 'to multiplicate'	C	N	telic	fr. *multiple*, lat. *multiplus*.	Theme
a **munc**i 'to **work**'	C	not N, N	atelic, telic?	sl. *monka*	Theme
a **murmur**a 'to **mutter**'	C	not N, N	atelic	lat. *murmur*, fr. *murmure*	Theme??
a ***muşama**liza '**to blanket/ whitewash/ cover** up'	C	N	telic	tc. *muşamba*	Location
a **naufrag**ia 'to **shipwreck**'	C	N	telic	lat. *naufragium*, it. *naufragio*	Theme
a **năpăst**ui 'to **scourge**'	C	N	telic	sl. *napastĩ*.	Theme
a **năvăl**i 'to **raid** over/ **storm** in'	C	not N	telic	*năvăli* (backformation).	
a **necăj**i 'to bother/	A	N, not N	telic,	sl. *nakazŭ*.	

grieve/ pester'			atelic		
a **nelinişt**i 'to **disquiet/ worry'**	A	not N, N	telic	*ne- + linişte*	
a **nenoroc**i 'to bring misfortune to sb'	A	not N	telic	*ne- + noroc*	
a **nuanţ**a 'to **touch, nuance'**	C/ A	N	telic	fr. *nuance*	Theme
a **num**i 'to **name'**	C	N	telic	lat. *nomen*.	Theme
*a **ocazi**ona 'to **occasion'**	A	N	telic	fr. *occasion*, germ. *Okasion*, lat. *occasio, -onis*	Theme
a **ocăr**î 'to blackguard/ chide'	A	not N	telic, atelic	*ocărî* (backformation).	
a **ocol**i 'to avoid'	A	N	telic	bg., rus. *okol*.	
a se **odihn**i '**rest'**	A	not N	atelic	*odihni* (backformation)	
a **odrăsl**i 'to **bud'**	C	N	telic	sl. *otraslŭ, odraslŭ*.	Theme
a **ofens**a '**to affront/ insult/ offend'**	A	N	telic	fr. *offense*	
a (se) **oftic**a 'to annoy/ piss off// to get pissed off',	A	not N in context, N	telic	ngr. *óhtikas*	
a **oglind**i 'to **mirror'**	C	N	atelic	*oglindi* (backformation)	
a **omagi**a 'to do/ pay homage to'	A	N	telic	it. *omaggio*	
a **osând**i 'to damn/ **sentence'**	A	N	telic	*osândi* (backformation).	
a (se) **oţel**i 'to **steel'**	C	not N	telic	sl. *ocelu*	Goal/ Endpoint
a **ou**a 'to lay eggs/ egg'	C	N	telic, atelic	lat. *ovum*	Theme
a **oxigen**a 'to **oxygen**ate'	C	not N	telic	fr. *oxygène*	Theme
a **parchet**a 'to **inlay'**	C	N, not N	telic, atelic	fr. *parquet*	Theme/ Locatum
a **parlament**a 'to **parley'**	C	not N, N (?)	atelic	fr. *parlement*	Manner
a se **pasion**a 'to become passionate about'	A	not N, N (diff meaning)	atelic	fr. *passion*, lat. *passio, -onis*, germ. *Passion*	
a **patron**a 'to patronize'	C	N	atelic	lat. *patronus*, germ. *Patron* fr. *patron*	Pseudo-Agent
a **patrul**a 'to **patrol'**	C	N	telic	germ. *Patrulle*	Pseudo-Agent
a **păcăt**ui 'to **sin'**	A	N, not N	telic, atelic	Lat. *peccatum*	Theme
a **păgub**i 'to injure'	C	N	telic	sl. *paguba*	Theme
a **păr**ui 'to **scuffle'**	C	not N	atelic	lat. *pirus*	Theme
a **păşun**a 'to graze'	C	N	atelic	lat. *pastio, -onis*	Location
a **(se) păt**a 'to **blemish/ blot'**	C	N	telic		Theme
a **păz**i 'to **guard'**	A	not N	atelic	*păzi* (backformation).	
a **până**i 'to **lurk'**	A	not N	atelic	sl. *ponditi*	
a **pâr**î 'to tell off/ tell on/ spill the beans'	A	not N	atelic	*pârî* (backformation)	
a **pedeps**i 'punish'	A	N	telic	*pedepsi* (backformation)	
a **pendul**a 'pendulate'	C	N	atelic	fr. *pendule*, lat. *pendulus*	Manner

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a **peri**a 'to **brush**'	C	N	atelic	sl. *perije*	Instrument
a **pietr**ui 'to **cobble**/ grave'	C	N	atelic, telic	Lat. *petra*	Theme/ Locatum
a **piston**a 'to push or extract liquid with a piston'	C	N	iterative	fr. *piston*	Instrument
a **pivot**a 'to **pivot**'	C	N	atelic	fr. *pivot*	Location
a **plăt**i 'to pay'	C	N	telic	sl. *plata*	Theme
a **(se) plictis**i 'to bore/ get bored with'	A	not N	atelic	*plictisi* (backformation).	
a **(se) plocon**i 'to **bribe**'	C	N	telic	sl. p*oklonŭ*	Theme
a **plut**i 'to float'	C	N	atelic	scr. *plut*	Manner
a **poft**i 'to invite/ **lust**'	A	N	atelic	*pofti* (backformation)	Theme
*a **polen**iza 'to pollinate'	C	N	telic	fr., lat. *pollen,* germ. *Pollen*	Theme
*a **portret**iza 'to make a portrait of'	C	N	telic?	fr. *portrait*	Theme
a **porunc**i 'to order'	A	N	telic	*porunci* (backformation)	
a **potcov**i 'to **shoe**'	C	N	telic	bg. *podkova,* scr. *potkova*	Theme/ Locatum
a **potop**i 'to **flood**/ submerge/ inundate'	C	N	telic	sl. *potopŭ*	Manner
a **povest**i 'to recount/ narrate/ tell'	C	N	atelic, telic	sl. *povestĩ*	Theme
a **(se) prăf**ui 'to cover with dust'	C	not N	telic	sl. *prachŭ*	Theme/ Locatum
a **(se) prăpăd**i ' to gnaw'	C	N	telic	*prăpădi* (backformation)	
a ??**(se) prăvăl**i '**to lurch**'	C	N	telic	bg. *preval,* rom. *prăvăli*	Location
a **prefix**a 'to **prefix**'	C	N	telic	fr. *préfixe,* lat. *praefixus*	Theme/ Locatum
a **premi**a 'to **award**'	C	N	telic	lat. *praemium*	Theme
a **(se) preoț**i 'go into the church'	C	N	telic	lat. *presbiterum*	Goal?/ Endpoint?
a **pricin**ui 'to cause'	A	N	telic?	bg. *prična*	
a **prigon**i 'to persecute'	A	N	telic	*prigoni* (backformation).	
a **primejd**ui 'to endanger/ imperil/jeopardize'	A	N	telic	sl. *prěmeždije*	
a **profit**a 'to **profit**'	A	N	telic?	fr. *profit,* germ. *Profit*	Theme
a **progres**a 'to **progress**'	A	N?	telic? degree ach.	fr. *progrès,* lat. *progressus*	
a **program**a 'to **program**'	C	N	atelic, telic	fr. *programme*	Theme
a **pudr**a 'to **powder**'	C	not N, N	atelic, telic	fr. *poudre*	Theme/ Locatum
a **punct**a 'to **tick** off/ **punch**/ **point**'	C	N	telic	lat. *punctum*	Theme
a **răn**i 'to **hurt**'	C	N	telic	sl. *rana*	Theme
a **răsplăt**i 'to **reward**'	C	N	telic	*răsplăti* (backformation).	Theme
a **recompens**a 'to **recompense**/gratify'	C/A?	N	telic	fr. *récompense*	Theme

a **reform**a 'to **reform**'	C	N	telic	fr. *réforme*, germ. *reform*	Theme
a **se refugi**a 'to **refuge**'	C	N	telic	fr. *refuge,* lat. *refugium*	Location
a **refuz**a 'to refuse'	A	N	telic-punctual	fr. *refus*	
a **regres**a 'to **regress**'	A	not N, N?	degree ach ((a)telic)	lat. *regressus*, it. *regresso*, germ. *Regress*	
a **regret**a 'to **regret**'	A	N	atelic-state	fr. *regret*	
a **remarc**a 'to **remark**'	A	N	telic	fr. *remarque*	
a **respect**a 'to **respect**'	A	not N	atelic-state	fr. *respect*, lat. *respectus*	
a se **revanş**a 'to retaliate/ **revenge**'	A	N	telic	fr. *revanche*	
*a **revoluţi**ona 'to **revolution**ize'	A	N	telic	fr. *révolution*, lat. *revolutio, -onis*, germ. *Revolution*	
a (**se**) **rot**i 'to **twirl/ wheel/ swivel/ whirl**'	C	N	atelic, telic	Lat. *rota*	?Theme
a se **ruga** 'to pray'	C	N	atelic	lat. *rogare*	Theme
a **ruga** 'to ask'	C	N	telic	lat. *rogare*	Theme
a (se) **ruina** 'ruin'	C	N	telic	fr. *ruine*, lat. *ruina*	Endpoint?
a (se) **ruşin**a 'abash// shame'	A	not N	telic	lat. *roseus*	
a **salut**a 'to **salute**'	C	N	telic	fr. *salut*, lat. *salus, -utis*, it. *Saluto*	Theme
a **sancţion**a 'to **sanction**'	A?	N	telic	fr. *sanction*, lat. *sanctio, -onis*	Theme
a **săp**a 'to **spade**/ burrow/ dig'	C	N	atelic	*săpa* (backformation), lat. *sappa*	Instrument
a **săr**a 'to **salt**'	C	not N	telic	Lat. *sal, salis*	Theme/ Locatum
a **sânge**ra 'to bleed'	C	not N	degree ach((a)telic)	Lat. *sanguis*	Theme
a **schimba,** 'to **change**'	A	N	telic	*schimba* (backformation).	
a **secţion**a, 'to **section**'	A	N	telic	fr. *section*, lat. *sectio, -onis*	
a **semnal**a, 'to **signal**'	C	N	telic, or iterative	fr. *signal* (după *semn*).	Theme
a **sfăt**ui, 'to **advise**'	A	N	telic	sl. *sŭvětŭ*	
a **sil**i 'to **coerce/ force**'	A	not N	telic	sl. *sila*	
*a **simbol**iza, 'to **symbol**ize'	A?	not N	atelic-state	lat. *symbolum*, fr. *simbole*, germ. *Symbol*	Theme?
a **simţ**i, 'to feel'	C	N	atelic-state	*simţi* (backformation)	Theme
a (**se**) **sincroni**za 'to synchronize'	A	not N	atelic	fr. *synchronie*	
*a **slug**ări, 'to **slave** around'/'to fetch and	C	N	atelic	sl. *sluga*	Pseudo-Agent

carry'					
a **spiona**, 'to **spy/ shadow**'	A??	N	atelic	germ. *Spion*, it. *spione*. Cf. fr. *espion*	Pseudo-Agent
a **spori**, 'to **increase**'	A	N	telic, degree ach?	sl. *sporŭ*, bg. *spor*	
a **sprijin**i, 'to **support**'	A	not N	state	sl. *sŭprenženŭ*	
*a **standardize**, 'to **standard**ize'	A	N	telic	fr., engl. *standard*	
a **strănut**a, 'to **sneeze**'	C	N	telic, iterative	*strănuta* (backformation)	
a **strop**i, 'to **splash/ splatter/ sprinkle**'	C	N	iterative	*stropi* (regresive derivation)	
a **sufl**a, 'to **blow**'	C	N	atelic	fr. *souffle*	Theme
a **sufix**a, 'to **suffix**'	C	N	telic	fr. *suffixe*	Theme/ Locatum
a **şerp**ui, 'to **wriggle/** wind/ twist and turn'	C	N	atelic	lat. pop. s*erpes, -is* (= *serpens, -ntis*).	Manner?
a **şcol**i, 'to **educate**'	C	N	telic	bg., scr., rus. *škola*, pol. *skola*	Location
a **şopt**i, 'to **whisper**'	C	N	atelic	*şopti* (backformation)	
a **şuier**a, 'to **hiss/ whistle**'	C	N	atelic	*şuiera* (backformation)	
a **tapet**a, 'to **wallpaper**'	C	N, not N	telic	it. *tappeto*, germ. *Tapete*	Theme/ Locatum
a **tăin**ui, 'to conceal/ hide'	A	N	atelic, telic	sl. *Tajna*	
a **tămâi**a, **'to incense'**	C	not N	atelic, telic	*tămâie*	Theme/ Locatum
a **tâlc**ui, 'to find the meaning of…'	A	N	telic	sl. *tlŭkŭ*	
a **tândăl**i, 'to **laze**'	A	not N	atelic		
a **tihn**i, 'to **ease**'	A	not N	atelic - state?	*tihni* (backformation)	
a **trafic**a, 'to **traffic**'	C	not N	atelic	fr. *trafic*	Theme
a **transfer**a, 'to **transfer**'	A	N	telic	fr. *transfert*	
a **transplant**a, 'to **transplant**'	C	N	telic	fr. *transplant*	Theme
a **transport**a 'to **transport**'	A?	not N, N	atelic, telic	fr. *transport*	
a **trânt**i 'to **slam'**	C	N	telic	*trânti* (backformation).	
a **tremur**a 'to tremble'	C	N	atelic - iterative	*tremura* (backformation).	
a **ţint**i 'to **target**'	C	N	telic	sl. *centa* „ban, monedă".	Theme
a **umbr**i 'to **shadow**'	C	N, not N	telic	Lat. *umbra*	Theme
a **unelt**i, 'to **scheme**'	C	N	telic		Instrument, 'tool'- but the verb has a totally different meaning

a **ur**î 'to **hate**'	A	not N	atelic (state)	*urî* (backformation). Lat. *horrire* (= horrere, horrescere).	
a **urin**a 'to urinate'	C	not N	atelic, telic	fr. *urine*, lat. *urina*	Theme
a **urm**a 'to follow'	C	N	atelic	lat. **orma*	
a **urzica** 'to **sting/bite**'	C	N	telic	lat. *urdica* (= *urtica*).	Manner? Cause?
a se **vapor**iza 'to vaporize'	C	N	telic		Endpoint?
a se **văit**a 'to complain'	C	N	atelic	*văita* (backformation)	Theme
a **vâsl**i 'to **oar**'	C	N	atelic	sl. *veslo*	Instrument
a **(se) vici**a 'to vitiate'	A	N	telic	fr. *vice*, lat. *vitium*	
a **viol**a 'to violate'	C?	N	telic	fr. *viol*	Theme
a **vis**a 'to **dream'**	C	N	atelic	Lat. *visum*	Theme
a **viscol**i 'be a blizzard'	C	N	atelic		?
a **vizit**a ' to **visit**'	C	N	atelic	fr. *visite*	Theme
a **vlăg**ui 'to exhaust'	A	not N	telic	sl. *vlaga*	
a **vrăj**i 'to **charm**'	C	N	telic	sl. *vraža*	Theme
a **zăbov**i 'to **linger**'	A	not N	state	sl. *zabava*	
a **zăr**i 'to see'	C	N	telic	sl. *zarja*	Location
a **zid**i 'to build'	C	N	telic, atelic	sl. *zidŭ*.	Theme
a **(se) zvon**i 'to rumor/be rumored'	C	N	atelic	sl. *zvonŭ*	Theme

N.B. I have used * in front of denominals derived with a suffix.

I have used question marks where I was unsure about how to classify the verb.

Annex 2

În-prefixed denominals	concrete vs. abstract	mass vs. count	thematic role if concrete noun	telic vs. atelic
a îm**barc**a 'in-ship' 'to put sth on ship'	C	N	Location	telic
a îm**băi**a ' in-bath' 'to put …in bath'	C	N	Location	telic, atelic
a îm**bălsăm**a 'in-balm'= to embalm	C	N	Locatum	telic
a îm**bărbăt**a 'in-man'= to hearten 'to put manness in..'	C	N	Goal	telic/ atelic
a îm**bătrân**i (cu A) 'in-old'= to age 'to become old'				degree achievement
a îm**bogăţ**i (cu A) 'in-rich'= to enrich 'to become rich'				degree achievement
a îm**bolnăv**i (cu A) 'in-ill'= to get ill 'to become ill'				telic
a îm**brăţ**işa 'in-arm'= to embrace/ hug 'to give a hug', 'put your arms around smb'	C	N	Theme	Telic
a îm**bunătăţ**i=upgrade,'become better', 'make smth better', 'put goodness into…',	A	mass		degree achievement
a îm**buteli**a 'in-gas tank' =bottle 'put smth into a bottle' o 'put smth into a gas tank'	C	N	Location	telic
a îm**pachet**a 'in-pack'= pack 'put smth in a pack'	C	N	Location	telic, atelic
a îm**păc**a 'in-peace'= to bring peace among, to bring sb to peace...	A	mass	Theme, Endpoint	telic
a îm**pădur**i 'in-forest'=to forest, to make a forest out of smth, to plant a forest	C	N	Theme	telic
a îm**păienjen**i 'in-spider' 'to fill smth with a spider's web'	C	N	Locatum	telic
a îm**pământen**i 'in-earth'= 'to put smth in the ground', 'to establish smth'	C	N	Location	telic
a îm**pătur**i 'in-blanket'= to fold 'put smth as if in a blanket'	C	N	Location? Manner?	telic
a îm**pânz**i 'in-fabric'= 'to fill'	C	mass	Locatum	telic, atelic
a îm**pereche**a 'in-pair'= mate 'to put smth in pairs'	C	N	Manner	telic
a îm**piedic**a 'in-…'=trip/ stumble	C	N	Theme	telic
a îm**pietr**i 'in-stone'= paralyse 'to turn (smth) into stone'	C	N	Goal/Endpoint	telic

a îm**plet**i 'in-braid'=braid/ interlace	C	N	Manner	telic
a îm**plini** (cu A) 'in-full'= fulfill 'to become full'				telic
a îm**podob**i 'in-decoration'= adorn/ decorate 'to put decorations', 'to fill smth with decorations'	C	N	Locatum	telic, atelic
a îm**povăr**a 'in-burden'= burden/ weigh down 'put weight on…', 'charge smth with weight…'	C	N	Locatum	telic
a îm**prăşti**a 'in-catapult'= disperse, diffuse	C	N	?	telic, atelic?
a se îm**prieten**i 'in-friend'= befriend 'become sb's friend' 'friend'	C	N	Theme?	telic, atelic
a se îm**primăvăr**a 'in-spring'= become spring	C	N	Theme?	telic
a îm**proprietăr**i 'in-owner'= give a property to someone, make an owner out of sb	C	N	Theme?	telic
a împrospăta (cu A) 'in-fresh'= freshen 'make smth fresh;'				
a îm**purpur**a (cu N) 'in-purple'= to make smth purple	C	mass	Theme?	telic
a îm**puşc**a 'in-gun'= shoot 'to kill sb with a gun' Instrument	C	N	Instrument	telic
a (se) în**arm**a 'in-arm' =arm	C	N	Theme	telic
a în**ăcri** (cu A) 'in-sour'= turn sour				degree achievement
a în**ălbi** (cu A) 'in-white'= whiten 'become white'				degree achievement
a în**cadr**a 'in-frame'= frame/ situate 'put into a frame'	C	N	Location	telic
a în**carcer**a 'in-prison'= incarcerate	C	N	Location	telic
a în**cas**a 'in-cash register'= cash in	C	N	Location	telic
a în**castr**a 'in-castrum'= embed	C	N	Location	telic
a în**cazarm**a 'in-barrack'= barrack 'to put smth into a barrack'	C	N	Location	telic
a în**călzi** (A) 'in-warm' = warm/ heat up 'to make smth warm'				degree achievement
a în**cetăţen**i 'in-citizen'='establish'	C	N	Endpoint?	telic
(se) a în**ceţ**oşa 'in-mist'= blurry/ fog 'to become mist(y)' (adjective)	C	mass	Endpoint?	degree achievement
a în**coron**a 'in-crown'= crown 'put a crown…'	C	N	Theme, Locatum	telic
a în**corp**ora 'in-body'=embed/ insert/ mix				
a în**credinţ**a 'in-faith' = entrust 'to put your faith in'	C	mass?	Theme	telic
a în**cremen**i 'in-firestone/ gunflint'= 'transfix'	C	not N	? Endpoint	telic

a în**cunoştinţ**a 'in-acquaintance' = cause sb to be informed	A	not N		telic
a în**cunun**a 'in-wreathe'= wreathe 'put a wreath on…'	C	N	Theme	telic
a în**curaj**a 'in-courage'= spirit/ bloster/ cheer 'to put courage into…', 'to turn sb more courageous'	A	mass		telic, atelic
a în**cuviinţ**a 'in-acceptance'= acquiesce/ comply	A	not N	?	telic?
a în**datora** (A) 'in-duty'= oblige				
a în**doctrin**a 'in-doctrine'= indoctrinate 'to put doctrine **in**to…'	A	N	?	telic/ atelic?
a în**drăgi** (A) 'in-dear'= love 'to be **in** love'				
a se în**drăgost**i 'in-love'= to fall *in* love with	A	mass		telic
a în**dreptăţ**i 'in-justice'= entitle/ justify 'a da dreptate cuiva'/ 'to give justice to'	A	mass		telic
a în**drum**a 'in-road'= coach 'a lua pe cineva pe un drum'/ 'to take sb on a road'	C	N	Location/Path	telic
a în**durer**a= 'in-pain' pain 'to become in pain', 'to be overcome with pain'/ 'to affect/ hurt'	C/A	N	Theme	telic
a în**făpt**ui 'in-deed'= carry out 'to put **in**to deed'	A	N	?	telic
a în**făş**a 'in-….'= swaddle 'to put **in** a …'	C	N?	Location	telic
a în**fiinţ**a 'in-being'= start/ establish ' a da fiinţă'/ 'to give birth to' 'to put life into…'.	C?	N	Goal	telic
??a (se) a în**flăcăr**a 'in-flame'= 'to set aflame…', 'to set smth in flames'??	C	N	Location?	atelic
a în**flor**i 'in-flower(s)'=bloom 'to become in bloom'	C	N	Theme??	telic
a (se) în**fome**ta 'in-hunger'= starve 'to become hungry'	C	mass	?	degree achievement
a se în**frig**ura=chill 'to turn cold'	C	N?	Endpoint	telic?
a (se) în**frumuseţ**a 'in-beauty'=beautify, to make sb/ smth beautiful	A	N	Endpoint?	degree achievement (telic, atelic)
a în**frunt**a 'in-front'= to confront	C	N	Theme?	telic
a în**frunz**i (pref. +*leaf*) 'in-leaf(s)'= waste	C	N	? Endpoint	telic, atelic
a în**fund**a 'in-bottom'= to dish	C	N	Location	telic
a în**genunch**ea 'in-knees'= kneel	C	N	Manner?	telic, atelic?
a în**grămăd**i 'in-heap(s)= heap 'to put smth into heaps'	C	N	Manner?	telic
a (se) în**grăşa** (A) 'in-fat'= fatten				degree

				achievement?
a îngreuna (A) 'in-heavy'= weight/ clog				degree achievement?
a îngrijora 'in-worry'= worry 'to become worried'	A	N		atelic
a îngropa 'in-hole'= bury 'to put smth/ sb in the ground'	C	N	Location	telic
a (se) îngrozi 'in-terror'= terrify 'to put terror into…'	A	mass		telic, atelic
a înhăma 'in-harness'= harness 'to put smth in harness'	C	N	Location	telic
a înhuma 'in-dirt'= inter	C	mass	Location?	telic
a înlăcrima 'in-tear'= weep 'to become in tears','a vărsa lacrimi', i.e.'to shed tears'??	C	N	Theme	telic
a înlănţui 'in-chain'= fetter 'to put sb in fetters'	C	N	Location	telic
a înlocui 'in-place'=replace 'put smth in sb's place'	C	N	Location	telic?/ atelic
a înmagazina 'in-store' store 'put smth in a store'	C	N	Location	telic?
a înmărmuri 'in-marble' =amaze	C	mass	?	telic
a înmâna 'in-hand'= hand in, 'a da a în mână', i.e. 'to give in hand'	C	N	Location	telic
a (se) înnămoli 'in-mud'= get stuck with 'put sb in the mud', 'cover sb with/ in mud'	C	not N	Locatum/ Location (?)	telic?
a înnebuni (A) 'in-mad'= run amock/ drive sb insane				degree achievement,or just telic?
a înnegri (A) 'in-black'= blacken 'turn black'				degree achievement,or just telic?
a se înnegura 'in-dark'= darken 'become dark'	C	N	?	degree ach? or telic?
a înnoda 'in-knot'= knot 'make a knot'	C	N	Theme	telic
a înnoi (A)= furbish up 'become new'				telic
a se înnopta 'in-night'= get dark 'become night'	C	N	Endpint?	degree ach
?? a se înrădăcina 'in-root'=to strike roots 'to put roots in….'	C	N	Theme	telic
a (se) înrăi (A) 'in-evil'= become evil				degree ach/ or telic?
a înrăma 'in-frame'= frame 'put in a frame'	C	N	Location	telic
a înrăutăţi 'in-evil'= worsen	A	not N	?	degree ach
a înregistra 'in-register'=register	C	N	Location	telic

a înrobi 'in-slave'= enslave 'to turn smb into a slave'	A?	not N	?	telic
a se înrudi=ally 'to be a relative of'	C	N		state?
a însămânța 'in-seed'= inseminate 'to put a seed in…'	C	N	Theme	telic
a se însănătoşi 'in-health'= get better/recover one's health (adjective)				degree ach
a însărcina 'in-charge'=charge with 'to give sb a charge'	C	N	Theme	telic
a însângera 'in-blood' = bleed	C	mass	Theme	degree ach?
a înscăuna 'in-chair'=enthrone 'to put sb in a chair'	C	N	Location	telic
a înscena 'in-scene'=set up/ frame	C	N	Location	telic?
a însemna 'in-mark'=mark off/ note down	C	N	Theme	telic, atelic?
a se însera 'in-evening'= dusk 'to turn dark'	C	N	Theme	degree ach
a înseta 'in-thirst'= thirst 'to have thirst for..'	A/ C?	not N	Theme?	atelic
se a însingura (A) 'in-lonely' 'to become lonely'				
a se însori 'in-sun'= become sunny	C	N	Endpoint	degree ach
a însoţi 'in-husband' =accompany 'to be sb's company'	C	N	Theme?	atelic
a se înstrăina 'in-stranger'= alienate 'to become a stranger'/ 'to turn sb into…'	A (is it really a noun?)	N	?	degree ach
a înstruna 'in-string' =to attune 'to adjust strings'	C	N	Theme	telic
a(se) însufleţi 'in-soul'= animate 'put soul into…'	A	N		degree ach?
a însuma 'in-sum'=summarize 'make a sum of'	C	N	Theme	telic
a înştiinţa 'in-science'=notify 'to give notice of'	A	not N?	?	telic
a înşuruba 'in-screw'?= screw	C	N	Theme?	telic?
a întemeia= found/ establish 'to set a foundation'	A	N		telic
a întovărăşi 'in-company'= accompany 'to be sb's company'	C	N	?	atelic
a întrona 'in-throne'= throne 'to put sb on the throne'	C	N	Location	telic
a întrupa 'in-body'=embody	C	N	Theme?	atelic
a înţepa 'in-sting'= sting/ prick 'to put a sting into…'	C	N	Theme	telic
(se) învăpăia 'in-flame'= flame 'to set on fire'	C	N		telic? atelic? degree ach?
a învechi (A) 'in-old' 'to become old'				degree ach
a se învecina 'in-neighbour'= neighbor 'to become smb's neighbour'	C/A?	N		atelic
a înveli 'in-veil'= wrap 'to put smth in wraps'	C	N	Location	telic, atelic

a în**venin**a 'in-poison'= poison 'to put poison in'	C	mass	Theme	telic
a înverzi (A) 'in-green'= make smth green				degree ach? telic?
a înveseli (A) 'in-cheerful'= cheer up, make smth cheerful				degree ach?
a (se) în**veşmânt**a 'in-clothes'=apparel 'put clothes on…'	C	N	Locatum	telic
a învinovăţi (A) 'in-guilty'= blame 'to throw blame on…'				telic
a (se) în**volbur**a 'in-churn'= eddy, swirl	C	Mass	Endpoint?	telic/ atelic
a în**vrăjb**i 'in-fight'' = set by the ears, play off against each other	C	mass	Theme	telic
a se învrednici (A)				
a în**zăpez**i 'in-snow'= 'to become covered with snow'	C	N	Locatum	telic
a înzdrăveni (A) 'in-strong'= strengthen				degree ach?
a în**zestr**a 'in-dowry'= endow 'bring dowry to..'	C	mass	Theme/Locatum	telic
a în**zorzon**a 'in-jewellery'= gild the lily 'to give smb jewellery'	C	N	Theme/ Locatum	atelic

N. B. I have used question marks where I found it difficult to decide whether a verb is telic/ atelic, whether a noun is concrete or abstract, count or uncount, whether we are dealing with a particular thematic role or not.

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Estratto per riassunto della tesi di dottorato

Studente: Bleotu Adina Camelia   matricola: 955875

Dottorato: Scienze del Linguaggio

Ciclo: XXVI

Titolo della tesi : Towards a Theory of Denominal Verbs in English and Romanian

Abstract:

The aim of this thesis is two-fold. On the one hand, it has a descriptive purpose, as it strives to capture the differences between denominal verbs in English and Romanian from a descriptive point of view by looking at significant data: a database of English denominal verbs created by Clark & Clark (1979), a database of Romanian denominal verbs created by the author of this thesis on the basis of a bilingual dictionary (Halvorsen 2007). An essential difference is the fact that, while English denominals have the same form as the bare noun they derive from (*dance-dance*, *butter-butter*, *corral-corral*, *hammer-hammer*), Romanian denominals have a different form: while the noun has the form *dans*, the verb is *dansa*, with an additional suffix indicating the declension. Moreover, denominals are very productive in English, whereas they are not in Romanian: there is no correspondent for the verb *to shelve*, for instance; instead, Romanian uses the periphrastic *a pune pe raft* 'to put on shelf'.

On the other hand, the thesis has a theoretical purpose. It aims at clarifying the notion of *denominal verb,* at presenting the analyses that have been proposed as accounts of denominals in the literature (Hale & Keyser 1998, 2002, Mateu 200, 2002, Ramchand 2008b a.o.), but it also aims at testing novel approaches. One such approach is the nanosyntactic framework (Starke 2001, 2009, Caha 2009, Pancheva 2011), according to which lexical items may target phrasal nodes. I have embraced Ramchand's (2008) analysis of verbs along the tripartition InitiationP, ProcessP, resultP, together with Svenonius's (2007) and Pantcheva's (2011) nanosyntactic decomposition of spatial prepositions (as RouteP>SourceP>GoalP>PlaceP>N). Thus, an item such as the denominal *corral (the horses)*, paraphrased as 'put the horses in the corral' may be argued to spell out InitP, ProcP, GoalP, PlaceP, N, an item such as the verb *dance*, paraphrased as 'do a dance' may be argued to spell out InitP, ProcP, N, whereas pseudoagentive verbs like *spy* spell out InitP, ProcP, PP, N, as also indicated by the paraphrase 'act like a spy'. As for instrument verbs such as *hammer*, it may be

argued they spell out InitP, ProcP, PP, N, if one thinks of a paraphrase such as 'hit with a hammer', or even InitP, ProcP, N, if one embraces a 'use a hammer' paraphrase. A similar proposal is adopted for Romanian denominals. In the various analyses I provided throughout the thesis, I sometimes tried to make use of silent items such as the silent prepositions *IN*, *ON* or the silent preposition *WITH*, but ended up embracing the view that an account with no silent items is better.

The Phrasal Spell-Out account is an option for explaining the formation of denominals. However, it has its problems and limits. Essentially, it is too burdensome as it resorts to a lot of movement operations to allow the lexicalization of XPs.

In contrast, I have tried to propose a spanning account of denominals, considering that lexical insertion targets spans rather than terminal heads (as Distributed Morphology does) or phrases (as nanosyntax does). Following Svenonius (2012, 2014), one can define a *span* as a complement sequence of heads in an extended projection, a very simple example being the lexicalization of the span <v,V, Neg, T> as *don't* in English. I have claimed that a similar account can be provided for theme denominals such as denominals *dance/ dansa*, location denominals such as *corral/ adăposti* ('shelter') a.o.

Spanning is an extremely innovative model which claims that there should be an elimination of redundant labels (Brody 2000). Given that heads select phrases, and phrases are projections of heads, it is legit to assert that heads in fact select heads, and one can equate X with XP, using the same label, moreover dismissing intermediate projections. According to Brody's (2000) Mirror Theory:

(1) *Word Mirror*: The syntactic relation 'X complement of Y' is identical to an inverse-order morphological relation 'X specifier of Y' (where the latter gives rise to the morphological strucure [X [Y] linearized from left to right)

Mirror Theory provides a direct linearization mechanism which eliminates head-movement from the system, linearizing specifiers to the left of heads (*already go*) and heads to the left of complements (*go-ne*). Instead of resorting to head movement, one can now simply say that a spans spells out at a certain height, which is indicated by Brody (2000) by means of the diacritic @. In addition, to indicate that a certain head forms a word with the head below, Ramchand (2014) makes use of the diacritic *.

The spanning framework can provide an elegant account of denominals in English and Romanian, as one can assume a single word lexicalizes a span, a complement sequence involving N, V and v <N, V, v>. Starting from Ramchand's analysis of verbs (2008), in the case of the denominal verb *dance*, one can construct the following representation:

(2) Init@*

```
         /\
      'x'  Proc*
            /\
         'x'  N
             dance
```
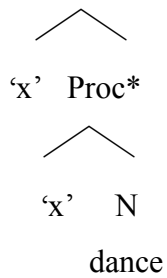
Linearized as x [N Proc Init]

At L-Match (lexical match), this structure gives rise to the item *<dance -Ø-Ø>*. A similar analysis is applied to Romanian, with the only difference that denominals in Romanian have a different form than the nouns, exhibiting an additional thematic vowel. L-Match will give us *<dans-a-Ø>*.

Unlike nanosyntax and more in the spirit of DM, the spanning model provides an economical analysis of denominals, constituting a viable alternative to incorporation/ conflation accounts (Hale & Keyser 2002, Mateu 2002) which resorts to movement.