# PRENOMINAL AND POSTNOMINAL REDUCED RELATIVE CLAUSES: ARGUMENTS AGAINST UNITARY ANALYSES*

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**Abstract:** These last years, several analyses have been proposed in which prenominal and postnominal reduced relatives are merged in the same position. Kayne (1994) claims that both types of reduced relative clauses are the complement of the determiner. More recently, Cinque (2005) has proposed that both types are merged in the functional projections of the noun, at the left edge of the modifier system. In this paper, I argue against a unitary analysis of prenominal and postnominal participial reduced relatives.

## 1. Introduction

In this paper I present an analysis of participial reduced relative clauses, mainly in English and Dutch. Participial reduced relatives occur either at the right edge of the modifier system of the DP, as exemplified in the French example (1) or at the left edge of the modifier system, as exemplied in the Dutch example (2):

(1) La voiture américaine verte achetée par Paul
the car American green bought by Paul
'the green American car bought by Paul'

(2) De door Paul gekochte groene Amerikaanse auto
the by Paul bought green American car
'the green American car bought by Paul'

These last years, several analyses have been proposed in which prenominal and postnominal reduced relatives are merged in the same position. Kayne (1994) claims that both types of reduced relative clauses are the complement of the determiner. More recently, Cinque (2005) has proposed that both types are merged in the functional projections of the noun, at the left edge of the modifier system. In this paper, I argue against a unitary analysis of prenominal and postnominal participial reduced relatives.

Following Kratzer (1994), Embick (2004) distinguishes three types of participles in English: (postnominal) eventives, i.e. postnominal reduced relatives, (prenominal) resultatives and (prenominal) statives, which in his analysis in the framework of Distributed Morphology differ in their internal syntactic structure. In this paper, I identify prenominal reduced relatives as a fourth type of participle: prenominal eventives. I argue, in a syntactic approach to morphology, that the internal syntactic structure of both types of eventive participles is different, which is an argument against a unitary analysis of reduced relative clauses. I show that the different internal syntactic structure of both types of reduced relatives forces their merging either at the right edge or at the left edge of the modifier system of the noun.

The paper is organized as follows. In section 2, Kayne's (1994) and Cinque's (2005) unitary analyses of prenominal and postnominal reduced relatives are presented. In 3, I present arguments against both types of unitary analyses. In 4, I argue that prenominal and postnominal reduced relatives containing past participles differ from a semantic point of view – their degree of "verbalness" –, which is another argument against a unitary analysis. In 5, it is

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shown what this semantic difference means for their internal syntactic analysis, in a syntactic approach to morphology. As a consequence of the differences, a non-unitary analysis of reduced relatives is presented. Finally, in section 6, the results are summarized.

## 2. Unitary analyses of participles at the left and right edge

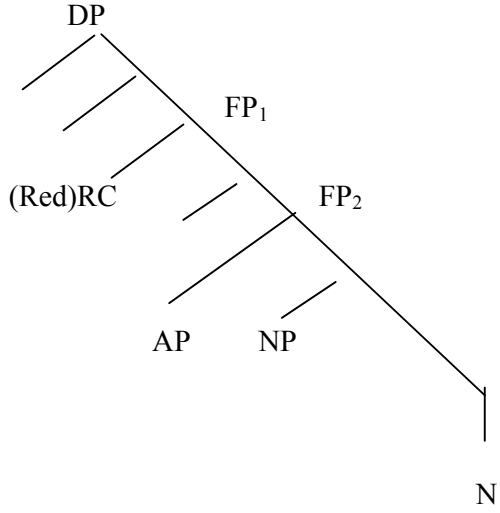
These last years, two different unitary analyses of prenominal and postnominal reduced relatives have been proposed.

In Kayne (1994), prenominal modifiers such as prenominal participles are analyzed in the same way as postnominal participial modifiers. Kayne claims that both are reduced relative clauses and are the complement of the determiner, with the 'antecedent' noun raising from within the relative clause.[1] Kayne claims that the position of postnominal participles results from the fact that the noun is moved to Spec,CP. The position of prenominal participles results from the movement of the participle to Spec,CP:

(3) $[_{DP}$ the $[_{CP}$ book$_i$ t$_i$ sent t$_i$ to John]]
(4) $[_{DP}$ the $[_{CP}$ recently sent$_i$ book t$_i$]]

Just like Kayne, Cinque (2005) claims that prenominal and postnominal (reduced) relatives originate in the same position. But whereas in Kayne's analysis both types are relative clauses which are the complement of a determiner, with the noun originating in the relative clause, in Cinque's analysis both types are merged in the functional projections of the noun:

(5)




Cinque advances several arguments in favor of his analysis. First, there is a typological generalization concerning the basic relative order of N/Adj/RC: relative clauses and reduced relatives clauses (i.e. indirect modifiers, see Sproat & Shih 1988) always occur at the edge of the modifier system:[2]

[1] Larson and Marušič (2004) also suggest that the postnominal position of participles and adjectives found with indefinite pronouns (*everything stolen*) is the basic order and that the prenominal position (*every stolen thing*) is derived, and that the modifier is raised (for reasons of Case-checking requirements on the modifier).

[2] Cornilescu (2006) states that at least in Romanian, the order adj + reduced relative clause + noun is possible, and in fact obligatory, if the reduced relative clause scopes under an intensional modifier such as 'former', 'future' or 'simple', to get a kind-level interpretation:

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(6)a. RC Adj N  c. *Adj RC N  (also e. Adj N RC)
b. N Adj RC  d. *N RC Adj  (also f. RC N Adj)

Second, prenominal indirect modifiers have the same interpretation as postnominal reduced relatives, which is different from the interpretation of prenominal direct modifiers, i.e. adjectives not having a reduced relative clause source. In (7a), the indirect modifiers, i.e. the prenominal and postnominal reduced relatives (in capital letters) have a stage level interpretation ('that happen to be visible now'), whereas the direct modifier, the prenominal adjective following the prenominal reduced relative clause, has an individual level interpretation ('that are generally visible'). In (7b), the reduced relatives have a restrictive reading ('just the most unsuitable acts'), whereas the direct modifier has a non-restrictive reading ('his acts, all of which were unsuitable'). In (7c), the reduced relatives have an implicit relative reading ('that it was possible for her to interview'), whereas the direct modifier has a modal reading ('potential'):

(7) stage level > individual-level
a. Every (IN)VISIBLE visible star (= Every star (IN)VISIBLE)
restrictive > non-restrictive
b. His MOST UNSUITABLE unsuitable acts (= His insuitable acts MOST UNSUITABLE)
c. implicit relative reading > modal reading
She tried to interview every POSSIBLE possible candidate (= every possible candidate POSSIBLE)

The order of prenominal modifiers in English – with the indirect modifier, i.e. the reduced relative, preceding the direct one, i.e. the simple adjective, as in (8) – follows from the configuration in (5): there is no noun movement. Cinque claims that when the indirect modifier is "heavy", it raises to Spec,FocusP (9), followed by remnant movement of [$_{FP}$ direct modification AP NP] (10):

(8) [$_{FocP}$ [$_{DP}$ [$_{FP}$ every [POSSIBLE [possible [candidate]]]]]]
(9) [$_{FocP}$ POSSIBLE$_i$ [$_{DP}$ [$_{FP}$ every [t$_i$ [possible [candidate]]]]]]
(10) [$_{FP}$ every possible candidate$_i$ [$_{FocP}$ POSSIBLE [$_{DP}$ t$_i$]]]

For the Romance languages, such as Italian, Cinque assumes that something always happens. Indirect modification modifiers always follow the N (and direct modification APs, if any):

| | | | dir. mod. | indir. mod. | |
|---|---|---|---|---|---|
| (11) | Maria ha | intervistato ogni personaggio | politico | possibile della | sua città |
| | Mary has | interviewed every person | political | possible of-the | her city |

'Mary has interviewed every possible political person of her city.'

According to Cinque, this implies that [$_{FP}$ direct modification AP NP] raises around an indirect modification AP or a relative clause, merged prenominally (13). Since (most) direct modification APs also follow N, in Romance, this implies, in Cinque's view, that NP also raises around the direct modification AP internally to [$_{FP2}$ direct modification AP NP] (14).

(i) În fond, nu era decât un simplu proaspăt angajat muncitor.
'In fact, he was but a mere recently hired worker.'

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(12) [$_{DP}$ [$_{FP}$ ogni [possibile [politico personaggio] della sua città]]]
(13) [$_{DP}$ [$_{FP}$ ogni [politico personaggio]$_i$ [possibile $t_i$ della sua città]]]
(14) [$_{DP}$ [$_{FP}$ ogni [personaggio$_i$ politico $t_i$ ] [possibile della sua città]]]

Cinque shows that Italian, and Romance in general, may also have the (English) raising to Spec,FocP option (15), in which case the indirect modification AP does not only follow the NP with its direct modification APs, but also the N's complements (16-17):

(15) [$_{FocP}$ POSSIBILE$_i$ [$_{DP}$[$_{FP}$ ogni [$t_i$ [politico personaggio della sua città]]]]]
(16) [$_{FP}$ ogni politico personaggio della sua città$_i$ [$_{FocP}$ POSSIBILE [$_{DP}$ $t_i$]]]
(17) [$_{FP}$ ogni personaggio$_i$ politico $t_i$ della sua città$_i$ [$_{FocP}$ POSSIBILE]]

## 3. Arguments against a unitary analysis

One of the reasons for Sleeman and Verheugd (1998) to reject Kayne's (1994) unitary analysis of prenominal and postnominal reduced relatives is the seemingly arbitrary choice of the constituent moving to Spec,CP. Kayne states that Spec,CP has to be filled and that this is the reason for the movement of the participle in (4) to Spec,CP, resulting in its prenominal position. According to Kayne, movement of a participle followed by a complement or modifier is excluded by a head-final constraint. In this case, it is the NP that moves to Spec,CP, resulting in the postnominal position of the participle, as shown in (3). A problem with this analysis, however, is that movement of the participle to Spec,CP is not always forced. Instead of the participle, the noun can move to Spec,CP, even if movement of the participle would not violate a head-final constraint. Bolinger (1967) shows that simple participles can occur both in prenominal and postnominal position. This also holds for participles preceded by an adverb. In (18a-b) it is the participle that has moved to Spec,CP and in (18c-d) it is the noun:

(18) a. [$_{DP}$ the [$_{CP}$ stolen$_i$ [jewels $t_i$ ]]]
b. [$_{DP}$ the [$_{IP}$ recently received]$_i$ [$_{CP}$ books $t_i$ ]]]
c. [$_{DP}$ the [$_{CP}$ jewels$_i$ [ $t_i$ stolen]]]
d. [$_{DP}$ the [$_{CP}$ books$_i$ [ $t_i$ recently received]]]

On the basis of arguments such as these Sleeman and Verheugd (1998) assume, contra Kayne, that prenominal participles are merged in the functional projections of the noun.

With Cinque's analysis there are also several problems. First, "heavy" indirect modifiers in English do not always move to Spec,FocusP, as witnessed by the two positions possible for the indirect modifier – in capitals – in (7). Second, whereas in Kayne's analysis reduced relative clauses are the complement of a determiner, in Cinque's analysis they are simply specifiers within the functional domain dominating NP. Sleeman (2002a) argues that the restrictive dependency relation between *only* and the relative clause can be accounted for if it is assumed that the relative clause is the complement of *only*, as in Kayne's approach:

(19) a. The only book *(that I have read) is there.
b. [The [only [$_{CP}$ book$_i$ [$_{C°}$ that [ I have read $t_i$]]]]] is there.

This dependency cannot be accounted for in an analysis of the relative clause as a specifier. Third, in accordance with Kayne's analysis of relative clauses, Sleeman (2005) analyzes the extraction from the infinitival relative clause in (20), as extraction from a complement:

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(20) a. Which book$_i$ was he the first student to read $t_i$ ?
b. Which book$_j$ was he [$_{DP}$ the [first [$_{ForceP}$ $t_j$ [$_{FinP}$ student$_i$ to $t_i$ read $t_j$ ]]]]

However, in Cinque's analysis, the infinitival relative clause would be the specifier of a functional projection of NP, from which extraction seems to be blocked. Fourth, in Sleeman's (2005) view, the subjunctive in the relative clause in the French example (21) supports the analysis of the relative clause as a complement (of the adjective), as in Kayne's analysis of relative clauses. If relative clauses are analyzed as a complement, a more uniform account of the use of the subjunctive in subordinate clauses is possible. The subjunctive is only used in sentential complements. In Cinque's analysis the relative clause is a specifier:

(21) C'est le premier livre que nous ayons lu.
'It is the first book that we have (subj.) read.'

Fifth, Kester and Sleeman (2002) claim that in Spanish nominal ellipsis is licensed if the empty NP can enter into a Spec-Head relation with a filled functional head such as C° (22), D/P° (Kayne 1994), as in (23), or Agr°$_A$ (24) at some point of the derivation:

(22) el [$_{CP}$ *pro*$_i$ [$_{C°}$ que [$_{IP}$ nos regaló $t_i$ tu padre]]]
the that us gave your father
'the one your father gave us'
(23) el [$_{D/PP}$ *pro*$_i$ [$_{D/P°}$ de [$_{IP}$ Juan [ I $t_i$ ....]]]]
the of Juan
'Juan's'
(24) la [$_{CP}$ *pro*$_i$ [$_{IP}$ $t_i$ [$_{Agr_AP}$ $t_i$ [$_{Agr_A°}$ amarilla$_j$ [$_{AP}$ $t_i$ $t_j$]]]]
'the yellow (one)'

Such a Spec-Head relation is possible if the empty noun moves to a specifier position within the relative clause, which is the complement of the definite determiner, as in Kayne's analysis of relative clauses. In Cinque's analysis, however, the relative clause is in the specifier position of a functional projection of NP. The empty NP moves to a position dominating the functional projection containing the relative clause, which means that there cannot be a Spec-Head relation between the empty noun and a filled functional head. In Kester and Sleeman's analysis of Spanish nominal ellipsis, the Spec-Head relation between the empty noun and a filled functional head is crucial. In their view, this accounts for the difference in grammaticality between (22-24) and (25-26), in which *pro* does not enter in a Spec-Head relation with a filled functional head somewhere on its way to Spec,CP:[3]

(25) el libro que leyó Jaime y *el [$_{CP}$ [$_{PP}$ *pro*$_i$ [$_{P'}$ con el que $t_i$]] [C° [$_{IP}$ soñaste]]]
the book that read Jaime and the with the that you-dreamt
'the book Jaime read and the one you dreamt of'
(26) *el [$_{CP}$[ *pro*$_i$] [C° [$_{IP}$[$t_i$] [I° [$_{PP}$ $t_i$ [$_{P'}$ para Jaime]]]]]]
'the (one) for Jaime'

A final problem with Cinque's establishment of a relation between prenominal and postnominal indirect modifiers concerns their total semantic and syntactic identification.

[3] Notice that in (25) the whole PP with *pro* in its specifier position moves to Spec,CP.

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Embick (2004) distinguishes three types of participles in English: (postnominal) eventives, i.e. postnominal reduced relatives, (prenominal) resultatives and (prenominal) statives, which in his analysis in the framework of Distributed Morphology differ in their internal syntactic structure. In the next section, I identify prenominal reduced relatives, i.e. prenominal indirect modifiers, as a fourth type of participle, prenominal eventives, and argue that they are different from postnominal eventive participles, i.e. postnominal indirect modifiers, with respect to their degree of "verbalness".

## 4. Types of past participles

Embick (2004), building on Kratzer (1994), distinguishes three sorts of passives: besides eventive passives (*the door has been opened by John; the door opened by John*) he distinguishes two sorts of adjectival passives: resultatives, which denote the result of an event (*the door remained opened* (after having been opened by someone)) and statives, which do not express a result (*the door is closed*, cf. *the door is open* or *the door is black*).

One of the criteria Embick uses to distinguish resultatives from statives and verbal passives is *un*-prefixation. *Un*-prefixation is fully productive with resultatives, but not with statives (although there are some exceptions such as *unshaven* or *unhappy*) or eventive passives:

(27) a. The door remained unopened. (resultative)
b. *The door was unopen. (stative)
c. *The door has been unopened by John. (eventive)

Statives can occur after verbs of creation, such as *build*, *create*, *make* (28), and can serve as resultative secondary predicates (29), whereas resultatives and eventives cannot:

(28) This new ruler was built long/* lengthened.
(29) John kicked the door open/*opened.

In Embick's analysis, both statives and resultatives are "adjectival passives". Eventive passives are "verbal passives". Embick's analysis of adjectival passives differs from previous analyses such as Wasow's (1977), in that he does not assume that adjectival passives are derived in the Lexicon. He claims, on the other hand, that they are formed in the syntactic component, just like verbal passives. I will come back to his analysis later.

Only eventive passives can combine with a *by*-phrase (30-31) and can be used in postnominal position (32-33):

(30) The jewels have been stolen by John. (eventive)
(31) *The door remained unopened/open by John. (resultative/stative)
(32) They were only charged for the bottles opened. (eventive)
(33) *They were not charged for the bottles unopened/open. (resultative/stative).

In Embick's view, prenominal passives cannot be eventive. He states that it is standardly assumed in the literature that only "adjectives" are used prenominally and that eventive passive participles are therefore not possible in attributive position. The participle in (34) is thus a resultative and not an eventive participle, in Embick's view. Similarly, in (35) the participle is not an eventive participle, but denotes a result in Embick's view: the door is in an opened state, the opening having taken place recently. Embick notes that the *by*-phrase

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criterion cannot be used in this case to determine whether we are dealing with a resultative or an eventive participle, because in English modifiers with posthead material cannot be used prenominally (36):

(34) the carefully opened package
(35) the recently opened door
(36) *the opened by John door

Although in English a *by*-phrase cannot be used as a diagnostic to establish whether we are dealing with an eventive, a resultative or stative, if the passive participle is in prenominal attributive position, in Germanic languages with an SOV word order it can be used. In a language like Dutch, a prenominal passive can be preceded by a *by*-phrase:

(37) De door Jan geopende brief
the by John opened letter
'the letter opened by John'

This suggests that in (37) the prenominal passive denotes an event, contrary to what is assumed by Embick (for Japanese prenominal passives Ogihara (2004) also argues that they can be eventive (thanks to Alexandra Cornilescu for having pointed this out to me)). This is supported by the fact that a *by*-phrase cannot be combined with a passive participle prefixed by *–un*, which is also in Dutch productive with resultatives but not with eventives or statives:

(38) de (*door Jan) ongeopende brief
the by John unopened letter

In an SOV-language like Dutch, prenominal passives cannot only be combined with agents, but also with PP complements expressing other thematic roles. Again, the PP cannot be combined with a passive prefixed by *–un*, which suggests that in (39) it is combined with an eventive passive and not with a resultative passive in prenominal position:

(39) de aan hen (*on)verkochte producten
the to them (un)sold products

Embick also claims that (35), repeated as (40), expresses the result of an event that took place recently rather than the event itself. In my view, however, (40) simply expresses an event that took place recently and not the result. This is supported by the fact that a participle modified by *recently* cannot function as a predicate (with a copular verb):

(40) the recently opened door (eventive, ≠ resultative)
(41) a. *The door remained recently opened. (resultative)
b. *This document is recently copied. (resultative)

I claim that even when there is no adverb that indicates the moment the event took place, i.e. when the participle is modified by a manner adverb, as in (34), repeated as (42), or when the participle is bare (43), it can still denote an event:

(42) the carefully opened package (eventive or resultative)
(43) the closed door (resultative, stative, or eventive)

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The upshot of this discussion is that besides stative and resultative past participles two kinds of eventive past participles can be distinguished: prenominal and postnominal eventive past participles corresponding to Cinque's prenominal and postnominal indirect modifiers. Whereas in English the postnominal position is the canonical position for participles that are combined with a complement or a modifier such as *yesterday*, in Dutch past participles are marginely acceptable in postnominal position. Interestingly, in Dutch there is a morphological difference between participles used in prenominal or in postnominal position. Whereas prenominal adjectives can show adjectival agreement, postnominal participles do not:[4]

(44) De omzet van bij amazon.com gekochte boeken bedroeg 1 miljoen euro.
the turnover of at amazon.com bought books amounted-to 1 million euros
'The turnover of books bought at amazon.com amounted to 1 million euros.'
(45) De omzet van boeken gekocht bij amazon.com bedroeg 1 miljoen euro.
the turnover of books bought at amazon.com amounted-to 1 million euros

This suggests that postnominal participles are simply a reduced form of full relatives and that the participle is purely verbal, just as in (46):

(46) boeken die gekocht zijn bij amazon.com
books that bought are at amazon.com
'books that have been bought at amazon.com'

Prenominal participles can show adjectival agreement even if they are eventive. This means that they can have both adjectival and verbal properties.

The conclusion of this section is that four types of participles can be distinguished. I claim that these four types can be represented on a scale going from purely verbal to purely adjectival. Postnominal participles are the endpoint of the verbal side of the scale, statives are the endpoint of the adjectival side. Prenominal eventive participles and resultatives are in between: prenominal eventive participles on the verbal side and resultatives on the adjectival side. This means that there is a semantic difference between prenominal and postnominal eventive participles: prenominal participles are less 'verbal' than postnominal participles:

(47) verbal ←==========→ adjectival
postnominal prenominal eventive resultative stative

In the next section I discuss how the distinction between the four types of past participles can formally be represented.

## 5. The syntactic representation of participles

In this section an account is proposed for the data within a specific syntactic approach, viz. the framework of Distributed Morphology, which was first described in Halle and Marantz (1993) and was subsequently elaborated in work by Marantz and others (Halle and Marantz 1994, Marantz 1997, Harley and Noyer 1999, Embick and Noyer 2006). I argue that a

[4] This is in line with the distinction between prenominal and postnominal adjectives in German, as observed by Cinque (1994):
(i) eine grosse Katze
(ii) eine Katze so gross

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syntactic approach to morphology such as Distributed Morphology is a both conceptually and empirically better means to account for the syntactic and semantic properties of prenominal eventive passives than a lexicalist approach. In the spirit of Kratzer (1994), Embick (2004) and Alexiadou (2001), I assume that the syntactic and semantic distinction between the four types of passives is the result of a difference in their functional architecture, all types dominating a categoryless root.

As for the difference between the postverbal, purely verbal, participles, and the three types of prenominal participles distinguished in the previous section, I claim that the difference in position is due to the projection of a complete clausal structure in the case of postnominal participles in English and the non-projection of a complete clausal structure in the case of prenominal participles:

(i) Postnominal passive participles are clausal complements of D, with the noun raising to their specifier position (Kayne 1994):[5]

- projection of a complete clausal structure including *v*P, AspP (perfectivity) (Alexiadou 2001) and CP
- (at least) a direct internal argument is licensed
- "antecedent" noun (= direct internal argument) raises to Spec,CP
- *v* contains an event feature
- *v* does not assign accusative Case
- *v* does not introduce an external argument
- *v* is the locus of agentivity

(48) $[_{DP}$ the $[_{CP}$ $[book]_i$ $[_{AspP}$ $[_{vP}$ [sent [ $t_i$ to John by Mary]]]]]]

Prenominal eventive participles are not clausal complements of D, because they lack a direct argument that is "externalized" and moves to Spec,CP. I take the loss of the internal argument to be a deficiency of *v*. Since there is no argument that has to be "externalized", the participle does not have to be dominated by a complete clausal structure. Although AspP is arguably present, I assume that there is no CP.

(ii) Prenominal eventive passive participles are merged in the specifier of functional projections dominated by DP:

- no complete clausal structure: only *v*P and AspP (perfectivity)
- *v* does not license a direct internal argument
- *v* contains an event feature
- *v* does not introduce an external argument
- *v* is the locus of agentivity (the agent can be expressed in a *by*-phrase in SOV languages)

(49) $[_{DP}$ the $[_{AspP}$ recently $[_{vP}$ [ sent [ book]]]]]

[5] In this paper I do not distinguish between *v*P and VoiceP, following Alexiadou (2001). However, it could also be possible to distinguish *v*P from VoiceP, the latter licensing e.g. agent-PPs (Alexiadou and Anagnostopoulou 2007) and the former expressing eventivity. Furthermore it is possible to spread the various functions of *v* (licensing of agents, instruments, accusatives and datives) over several distinct functional projections that form the edge of the *v*P-phase (Svenonius, to appear).

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I assume that in the case of resultative participles *v* is not agentive and dominates the semantic primitive 'become', which Embick calls 'Fient' (for 'fientive') and which is a feature denoting a transition event that moves towards a state. Furthermore, *v* does not license any internal argument:

(iii) resultative (prenominal) participles

- no complete clausal structure: only *v*P (dominating the feature 'become') and AspP (state)
- *v* does not license any internal argument
- *v* contains an event feature
- *v* is not agentive
- *v* dominates the semantic primitive 'become'

(50) [$_{DP}$ the [$_{AspP}$ [$_{vP}$ carefully [$_{v}$ 'become' [ closed [ door]]]]]]

In the case of stative participles, neither an event nor the result of an event is expressed, which suggests that there is no *v*P at all. I assume that the lexical root is dominated by Asp, which expresses a state:

(iv) stative (prenominal) participles

- no *v*P, but only AspP (state)

(51) [$_{AspP}$ [astonished]]

I have argued that the difference between postnominal passive participles and prenominal eventive participles, i.e. Cinque's indirect modifiers, results from the fact that postnominal passive participles have a direct internal argument that is "externalized" and moves to the specifier position of a functional projection within the left periphery of a clause, serving as an "antecedent" for the relative clause, in a raising analysis such as Kayne's (1994). Cinque (1994) calls them predicates. Prenominal passive participles lack such an internal argument due to a deficiency of *v*. They are merged within the functional projections dominated by DP, as in Cinque's (2005) analysis of reduced relatives. Cinque (1994) calls them attributes.[6] Sleeman (2002b) claims that the distinction in agreement with the noun between prenominal and postnominal modifiers in Dutch (44-45) is a consequence of their analysis as attributes or predicates.

Postnominal participles occur at the right edge of the modifier system of the noun, because of NP-movement to Spec,CP, the complement of the determiner. As for the prenominal participles, the semantically richest prenominal modifier, i.e. the prenominal modifier with the richest internal syntactic structure – the eventive prenominal modifier – is merged at the left edge of the modifier system within the functional projections of the noun.

(52) the recently damaged unopened / original package (eventive1 – direct modifier)

In N-initial languages such as French (see ex. 1) or Italian (see ex. 11), the postnominal position of the direct (resultative or stative) and eventive 1 modifiers results from NP-movement, as in Cinque's roll-up mechanism (see ex. 12-14), see also Laenzlinger (2005).

[6] For the distinction between DP-internal predicates and attributes see also Bouchard (1998).

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## 6. Conclusion

In this paper it has been argued that prenominal and postnominal reduced relatives are not merged in the same position, either as the complement of the determiner as in Kayne's (1994) analysis, or within the functional projections of NP, as in Cinque's (2005) analysis. It has been argued that postnominal reduced relatives are the complement of the determiner and that after raising of the noun they end up at the right edge of the DP. I have claimed that prenominal reduced relatives are eventive, just like postnominal reduced relatives, but that *v* does not license an argument raising to Spec,CP. I have suggested that because of their relatively rich internal syntactic structure they are merged at the left edge of the functional projections dominating NP. In this way, I have argued against a unitary analysis of prenominal and postnominal reduced relatives as either predicates or as attributes, but have analyzed the postnominal ones as predicates and the prenominal ones as attributes, defending Cinque's (1994) analysis.

I have argued that deverbal modifiers are (at least virtually) polysemic, and can in principle have four readings, ranging from a purely verbal one to a purely stative, i.e. adjectival, one, with two intermediary readings. The polysemic character of deverbal modifiers, allowing four readings, supports the syntactic distinction between prenominal and postnominal reduced relatives.

The polysemous character of deverbal modifiers has partially been related to a polysemous character of *v*: *v* has various different properties, but can be defective in one or more of these. In future research, it will have to be investigated whether, in a cartographic approach, the various functions of *v* can be spread over different functional projections at the edge of the *v*P phase.

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