DEVERBAL MODIFIERS OF THE NOUN IN GERMANIC AND ROMANCE: INTERPRETATION AND POSITION

Petra Sleeman*

Abstract: In this paper it is argued that deverbal modifiers of the noun are mixed categories that, both in Germanic and Romance, can have various interpretations, from purely verbal to purely adjectival, with several mixed interpretations in between. If prenominal and postnominal reduced relatives, which generally are deverbal modifiers, differ slightly in interpretation, the basis for a unitary analysis such as Cinque's (2010) analysis, merging both types within the functional projections of the noun, is lost. It is argued that only the semantically and syntactically richest deverbal modifiers, i.e. those projecting an argument that can move to the specifier of the relative clause, are necessarily in postnominal position. The less "verbal" types are merged in the functional projections of the noun. In Romance, noun movement, as in Cinque (1994), can make them surface in postnominal position.

Keywords: deverbal modifier, participle, adjectival position, *-ble* adjective, reduced relative

1. Introduction

Deverbal categories such as nominalizations, nominalized infinitives, gerunds, participles, and forms in *-ble* are so-called mixed categories. They are verbs used as nouns or as adjectives and they can present properties of their deverbal base and/or of their derived category. Whereas in an attempt to defend the Lexicalist Hypothesis (Chomsky 1970) the discussion focused on the opposite properties and uses of deverbal categories, either verbal or nominal/adjectival (e.g. Chomsky 1970, Wasow 1977; Grimshaw 1990; Levin and Rappaport 1992), more recent research, couched within the framework of Distributed Morphology (Halle and Marantz 1993, 1994; Marantz 1997 and 2001; Harley and Noyer, 1999; Embick and Noyer 2006), has shifted the attention to the mixed properties of deverbal categories (e.g. Borsley and Kornfilt 2000; Alexiadou 2001; Embick 2004), which posed a problem for analyses within the framework of the Lexicalist Hypothesis. This paper† is concerned with deverbal modifiers of the noun, more specifically with passive participles and *-ble* forms.

* ACLC, University of Amsterdam, p.sleeman@uva.nl.

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Besides the category, the mixed properties, and the internal structure of deverbal modifiers of the noun, another topic that has received a lot of attention in the literature is their position with respect to the noun in the syntactic structure and their semantic relation to the noun. Bolinger (1967) showed that, in English, simple participles can occur both in prenominal and postnominal position (*the stolen jewels* vs. *the jewels stolen*), but it was argued that postnominal participles have a stage-level interpretation, whereas prenominal participles have an individual-level interpretation. Higginbotham (1985) claimed that attributes were related to the noun in another way than predicates. Whereas the noun satisfies the theta-role assigned by the predicate as an argument in syntax (theta-marking), the theta-roles in the theta-grids of the noun and the attribute are associated to each other by means of theta-identification. Sproat and Shih (1988) made a distinction between indirect modifiers of the noun in English, viz. postnominal participles, on the one hand, and direct modifiers of the noun, viz. prenominal participles, on the other (see also Sadler and Arnold 1994). These indirect and direct modifiers correspond to predicates and attributes, distinguished, e.g. by Cinque (1994). Whereas Cinque analyzed predicates as (reduced) relative clauses right-adjoined to the noun phrase, attributes were generated in the specifier position of functional projections of the noun. Within his Antisymmetry framework, in which right-adjunction is forbidden, Kayne (1994) analyzed predicates, i.e. (reduced) relatives, as the complement of the determiner, the noun raising from within the relative clause to Spec,CP, which accounted for the postnominal position of the predicate in English. Prenominal participles were also analyzed as reduced relative clauses. This time it is the participle itself that moves to Spec,CP, which accounts for its prenominal position in English. In Kayne's analysis, the distinction between predicative and attributive deverbal modifiers is blurred. Both types of deverbal modifiers are reduced relatives, i.e. predicates, and are moved to Spec,CP. The prenominal position is the result of the deverbal modifier moving to Spec,CP, the postnominal position is the result of the noun moving to Spec,CP. A similar analysis was proposed by Larson and Marušič (2004). They argued 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, the modifier being raised (for reasons of Case-checking requirements on the modifier). In Cinque's (2010) analysis, prenominal and postnominal participles like *stolen* are also both analyzed as reduced relative clauses. In Cinque's analysis, full and reduced relative clauses are merged within the specifier position of the functional projections of the noun. Their prenominal or postnominal position at spell-out is the result of various movement operations.

Whereas in a language like English, deverbal modifiers can occur in prenominal and in postnominal position, in another German language, Dutch, they essentially occur in prenominal position. In a Romance language like French, they generally occur in postnominal position. This raises the question as to why

seemingly equivalent nouns and deverbal modifiers in these three languages exhibit different movement patterns.

In Sleeman (forthcoming), I argue against unitary analyses of reduced relatives, differences in position being the result of different movement patterns (see also Sleeman 2007). On the basis of Dutch and English, I claim instead that the position of the deverbal modifier of the noun is related to its internal syntactic structure. For the most verbal type, i.e. the deverbal modifier with the richest internal structure, I adopt Kayne's raising analysis of relative clauses with the noun raising to Spec,CP, which accounts for the postnominal position of the deverbal modifier. For the less "verbal" types, i.e. deverbal modifiers with less internal structure, I adopt Cinque's analysis. Being merged within the functional projections of the noun, the less "verbal" deverbal modifiers are in prenominal position at spell-out in Dutch and English. This distinction between prenominal and postnominal modifiers, recalls Cinque's (1994) distinction between predicates and attributes, or Higginbotham's distinction between theta-marking and theta-identification.

In Romance, deverbal modifiers generally occur in postnominal position. A question that can be raised is then whether in Romance a distinction between more or less "verbal" deverbal modifiers can be made, expressed in English by the distinction between prenominal and postnominal deverbal modifiers. In this paper, I argue that in Romance, and more specifically in French, as well, different types of deverbal modifiers can be distinguished, related to their interpretation. I claim that, due to their different internal syntactic structure, deverbal modifiers in French can also be related to the noun as DP-internal predicates or as attributes.

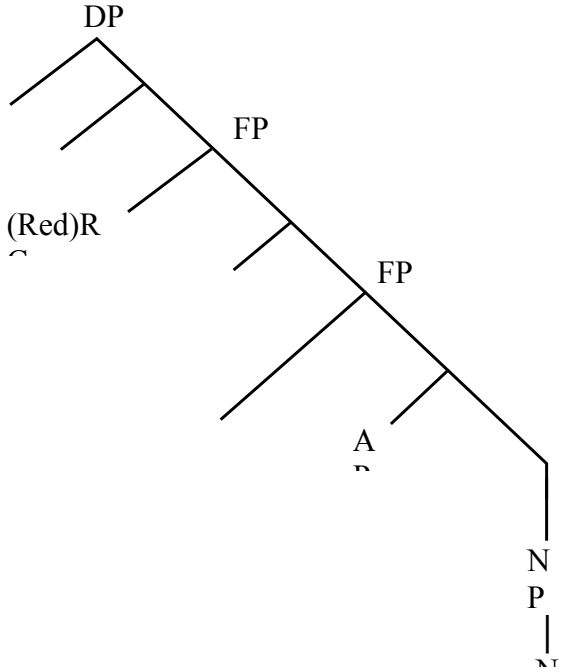
The paper is organized as follows. In section 2, I present Cinque's (2010) reduced relative analysis of deverbal modifiers of the noun. In section 3, on the basis of Dutch and English, I distinguish four types of deverbal modifiers of the noun, each with a different interpretation, and I relate the position to the internal structure related to the interpretation. I furthermore argue that, although in French deverbal modifiers generally occur in postnominal position, they can also be distinguished on the basis of their different internal structure, i.e. interpretation, and are also related either as DP-internal predicates or as DP-internal attributes to the noun. In section 4, I represent my non unitary analysis in a structure. In section 5, the results of the paper are summarized.

2. A unitary analysis of (reduced) relative clauses

In a unifying analysis of relative clauses, Cinque (2010) claims that both prenominal and postnominal deverbal modifiers in English are merged as reduced relatives within the functional projections of the noun, the postnominal position being the result of the movement of the NP and its direct modifiers to a specifier position dominating the reduced relative clause. For deverbal modifiers in

Romance, which are always postnominal, Cinque proposes the same analysis: they are merged as reduced relatives in a prenominal position, the postnominal position of the noun being the result of movement to a higher position of the NP:

(1)



One of the reasons for the unitary analysis of prenominal and postnominal reduced relatives is their interpretation (Larson 1998, 2000a and 2000b). First, both prenominal and postnominal reduced relatives in English 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').

stage level > individual-level
(2) Every (IN)VISIBLE visible star (= Every star (IN)VISIBLE)

Second, in (3), 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'):

restrictive > non-restrictive
(3) His MOST UNSUITABLE unsuitable acts (= His unsuitable acts MOST UNSUITABLE)

Third, in (4), 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'):

(4) 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 (5) – follows from the configuration in (1): there is no noun movement. When the indirect modifier is postnominal, its position is the result of the movement of the NP and its direct modifier(s) to a position dominating the reduced relative clause (6):[1]

(5) [the [[recently arrived] nice Greek vases]]
(6) [the [[nice Greek vases]$_i$ recently arrived t_i]]

For the Romance languages, such as Italian, Cinque (2010: ch. 6) assumes that there is always movement. Indirect modifiers always follow the N (and direct modification APs, if any):

		dir. mod.	indir. mod.
(7)	Maria intervistò ogni candidato	potenziale	possibile
	Maria interviewed every candidate	potential	possible

'Maria interviewed every potential candidate possible (that it was possible for her to interview).'

According to Cinque, this implies that [$_{FP}$ direct modification AP NP] raises around an indirect modification AP or a relative clause, merged prenominally (8b). 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] (8c).[2]

[1] Cinque takes this position to be the specifier of a merged (possibly covert) complementizer, as in Kayne (1999, 2000 and 2005). For the sake of simplicity, I will only indicate the movement operations and not the merge operations.

[2] For focalized constituents Cinque (2010: section 6.2) proposes that there is movement to Spec,FocusP, followed by remnant NP movement. I do not discuss this type of movement in this paper.

(8) a. $[_{DP}\,[_{FP}$ ogni [possibile [potenziale candidato]]]]
b. $[_{DP}\,[_{FP}$ ogni [potenziale candidato]$_i$ [possibile t_i]]]
c. $[_{DP}\,[_{FP}$ ogni [candidato$_j$ potenziale t_j] [possibile]]]

Although this type of derivation can account for the postnominal position of reduced relative clauses itself – the position is the result of NP movement to a dominating position – it cannot account for the variability of the movement of the NP. Why does the NP obligatorily move around a full relative clause (9a-b), for which Cinque also claims that it is merged within the functional projections of the noun, but not around a reduced relative clause in English (9c-d)?

(9) a. the nice Greek vases that have recently arrived
b. *the that have recently arrived nice Greek vases
c. the nice Greek vases recently arrived
d. the recently arrived nice Greek vases

Therefore, Cinque proposes an analysis that is slightly more complicated. Before the NP movement step in the derivation, the reduced or full relative clause is attracted to a higher position.[3] This means that first the relative clause is attracted to a higher position and that, subsequently, the remnant NP is attracted to an even higher position[4]:

(10) a. [the [[recently arrived] nice Greek vases]]
b. [the [[recently arrived]$_i$ [t_i nice Greek vases]]]
c. [the [[t_i nice Greek vases]$_j$ [[recently arrived]$_i$ t_j]]]

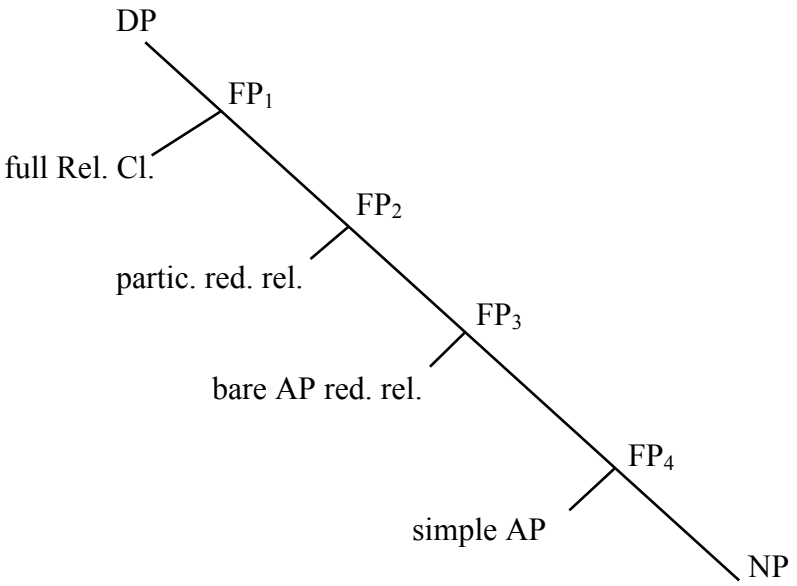
In this more sophisticated analysis, the (remnant) movement of the NP to a position dominating the relative clause depends on the prior movement of the relative clause itself. The relative clause only becomes postnominal (after remnant NP movement) if it is moved to a higher position. If it is not moved to a higher position, there is no (remnant) NP movement either, and the relative clause ends up in a prenominal position.

Since the final prenominal or postnominal position of the relative clause depends on its movement to a higher position, Cinque distinguishes prenominal and postnominal relative clauses on the basis of the force with which they are attracted to a higher position. More concretely, Cinque distinguishes three types

[3] Cinque calls this "extraposition", but it is movement to the left (followed by remnant movement), instead of rightward movement as in the case of the traditional type of extraposition.
[4] In both cases, the movement is caused by the merger of a (possibly covert) complementizer, see also fn. 1.

of relative clauses. For English, he makes a distinction between full relative clauses, participial reduced relatives (*the letters recently sent* or *the letters sent recently*) and bare AP reduced relatives, such as *-ble* adjectives or adjectives such as *present*. Full relative clauses are merged in a higher position than participial reduced relatives, which are merged in a higher position than bare AP reduced relatives (which are merged in a higher position than purely adjectival, i.e. direct, modifiers of the noun):

(11)



Full relative clauses in English obligatorily occur in postnominal position. This means that in this case the force of attraction is very high (12). Participial reduced relative clauses followed by a complement or adjunct also obligatorily occur in postnominal position, due to a ban on right recursion for phrases found on left branches (Emonds 1976). They are therefore also attracted with much force to a higher position (13). Participial reduced relatives not followed by a complement or adjunct optionally occur in postnominal position. This means that the force of attraction is variably high in this case (14-15). Only bare AP reduced relatives that arguably have an (invisible) right-branching structure, can occur in postnominal position (16). Truly bare AP reduced relatives cannot occur in postnominal position (unless they are stressed, see fn. 2), which means that the force of attraction is very low (17):

(12) the letters that I have sent to John
(13) the letters sent to John.

(14) the recently sent letters
(15) the letters recently sent
(16) a star visible
(17) *a colleague angry (just stepped in)

In English there seems therefore to be a relation between the internal structure of the relative clause (full – reduced – bare), i.e. its syntactic complexity (presenting (invisible) right recursion or not), and its position with respect to the noun. In Cinque's analysis, these differences are related to the force with which (reduced) relatives are attracted to the specifier of a functional projection dominating them (followed by remnant movement).

According to Cinque (ch. 5, fn. 13), in Romance, all three types of relative clauses obligatorily move to a higher position, followed by remnant NP movement (except for highly formal registers). This means that the force of attraction is equally high for the three types of relative clauses.

Cinque (ch. 5, fn. 8) observes that English is the only Germanic language in which restrictive postnominal bare adjectives are available (16), but he notices that this is a problem that still has to be understood. He observes furthermore that, in German, participial reduced relatives cannot occur in postnominal position, which is also a problem that still has to be understood:[5]

(18) a. Er is ein [sein Studium seit langem hassender] Student
he is a his study for a long time hating student
'He is a student who has been hating his study for a long time.'
b. *Er is ein Student [sein Studium seit langem hassend(er)]
he is a student his study for a long time hating

If only visibly or invisibly right-branching relatives are attracted to a higher position (followed by remnant movement), it could be assumed, however, that the non right-branching nature of German, which is an OV language, makes a postnominal position for bare AP reduced relatives or participial reduced participles impossible.

Summarizing Cinque's analysis, the prenominal or postnominal position of reduced and full relative clauses is related to the force with which they are attracted to a higher position (followed by remnant NP movement). All relative clauses move to a higher position in Romance. In English, full relative clauses and right-branching reduced relative clauses always move to a higher position

[5] Cinque observes, referring to Delsing (1993: 9) that in Scandinavian adjectives or participles can occur in postnominal position if they are followed by a complement or an adjunct or if they are part of a coordination.

(followed by remnant NP movement), whereas non right-branching reduced relative clauses apparently only optionally do so. In German, only full relative clauses move to a higher position.

Cinque's analysis raises several questions. First, why should there be an internally syntactic difference between reduced relatives in prenominal and postnominal position in English (or Germanic in general)? Why should the postnominal reduced relatives in (19) be (invisibly) right-branching, but not the prenominal ones in (20)? There is no difference in interpretation that would justify this distinction:

(19) a. the jewels stolen
b. the letters recently sent
c. the stars visible
(20) a. the stolen jewels
b. the recently sent letters
c. the visible stars

Second, why are all relative clause types, including the participial and the bare AP relative clauses, in Romance obligatorily postnominal? Does this mean that they are always right branching, even if this is not visible? Does Romance not possess non right branching reduced relatives, as the prenominal ones in English?

If attraction does not depend on right branching, we still have to account for the apparent optionality in English, as exemplified in (19-20), or the differences in attraction between English, German, and Romance.

Cinque's unitary analysis of prenominal and postnominal reduced relatives in English is based on the argument that there is no difference in interpretation between the two types of indirect modifiers. The different position is related to the force with which the reduced relative is attracted to a higher position (followed by remnant movement), which might be related to a right-branching structure. In Sleeman (forthcoming) I argue, however, that there is a difference in interpretation between the prenominal and postnominal participles in (19)-(20), based on an analysis of deverbal modifiers in English and Dutch. In this paper, I show for a Romance language, viz. French, that deverbal modifiers, even if they are postnominal in this language, can present the same semantic differences as the prenominal and postnominal ones in English. If there is a difference in interpretation, this implies that Cinque's main argument for a unitary analysis of prenominal and postnominal reduced relatives in English cannot be used anymore. I will therefore not adopt Cinque's unitary analysis, and I will adopt another, non unitary, analysis.

In the next section, I argue, both for Germanic and Romance, that deverbal modifiers are polysemous.

3. Arguments against a unitary analysis

In the previous section we saw that in Cinque's (2010) analysis of modifiers of the noun in English, all modifiers of the noun, including full and reduced relative clauses, are merged in specifier positions of functional projections of the noun. The merger of full and reduced relative clauses in the specifier position of functional projections of the noun is the first problem with Cinque's analysis. In several papers I defend Kayne's (1994) raising analysis of relative clauses, in which relative clauses are the complement of a determiner, and not specifiers, as in Cinque's analysis. In Sleeman (2002), I argue that the restrictive dependency relation between *only* and a (postnominal) relative clause can be accounted for if it is assumed that the relative clause is the complement of *only*, as in Kayne's approach. In (21), the relative clause cannot be left out. A raising analysis of relative clauses can account for this: the relative clause is obligatorily selected, as a complement, by *only*, as in Kayne's raising analysis of relative clauses, and the noun moves to Spec,CP:

(21) 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.

Since, in Cinque's analysis, the (postnominal) relative clause would only be a specifier, the dependency relation with *only* cannot be accounted for. Furthermore, sentence (22) shows that infinitival relative clauses allow extraction from the relative clause. It is difficult to account for the extraction if the (postnominal) infinitival relative clause is a specifier, as in Cinque's analysis. Sleeman (2005) analyzes the extraction from the infinitival relative clause in (22) as extraction from a complement, in accordance with Kayne's analysis of relative clauses:

(22) Which book$_i$ was he the first student to read t$_i$?

A second problem with Cinque's analysis, noticed in the previous section, is that full relatives, reduced relatives containing a complement, and some bare AP reduced relatives such as *present*, *visible*, *alive* are attracted to the specifier position of a functional projection dominating them (followed by remnant movement), which results in their postnominal position. Participial reduced relatives preceded by an adverb, bare participles such as *stolen*, or bare AP reduced relatives optionally occur in postnominal position. This optionality is the second problem for Cinque's account. If the participles in (23) have the same force of attraction, why is the participle attracted to a higher position (followed by remnant movement) in (23a) but not in (23b)?

(23) a. the letters recently sent
b. the recently sent letters

A third problem for Cinque's analysis, also noticed in the previous section, is that in other Germanic languages, such as Dutch (24 and 26) or German, reduced relatives generally occur in prenominal position, whereas in English they can also occur in postnominal position (23, 25, 27):

(24) a. de onlangs verstuurde brief
b. *de brief onlangs verstuurd(e)
(25) a. the recently sent letter
b. the letter recently sent
(26) a. de zichtbare sterren
b. *de sterren zichtba(a)r(e)
(27) a. the visible stars
b. the stars visible

Cinque suggests that postnominal reduced relatives may be invisibly right branching, which would account for their attraction to a higher position (followed by remnant NP movement). Since Dutch is an SOV language and thus left branching, this might account for the fact that, in Dutch, reduced relatives generally occur in prenominal position. However, they can also, marginally, occur in postnominal position. Although in (28) the adjunct follows the bare AP reduced relative, which might account for its postnominal position, in (29) the adjunct precedes the bare AP reduced relative, which is unpredicted under Cinque's analysis of postnominal reduced relatives:

(28) de mensen aanwezig in dit gebouw
the people present in this building
(29) de mensen hier aanwezig
the people here present
'the people present here'

As observed in the previous section, a fourth problem for Cinque's analysis is that, in Romance, reduced relatives generally occur in postnominal position. According to Cinque this means that they possess a high force of attraction. They are all attracted to a higher position (followed by remnant movement). But why should there be this difference between Germanic and Romance? Why does English have two types of reduced relatives (with a different force of attraction),

why is the force of attraction in German and Dutch generally weak, but why is the force of attraction in Romance always strong?

In section 3.1, I argue, on the basis of Dutch and English, that the difference in position of reduced relatives is not related to their force of attraction, but to a difference in interpretation. In section 3.2, I argue that French reduced relatives have the same interpretations as Dutch and English reduced relatives. I give another account for the postnominal position of some of the types of reduced relatives in Romance.

3.1 Dutch and English

In Sleeman (2007 and forthcoming), I claim, on the basis of Dutch and English, that the prenominal or postnominal position of deverbal modifiers, more specifically passive participles, is related to their semantic properties. I distinguish four types of participles. Besides two types of adjectival participles (statives *a learnèd scholar* and resultatives *the unopened package*), which in English are always prenominal, and postnominal verbal participles, i.e. the three types commonly distinguished in the literature (Kratzer 1994, Embick 2004), I distinguish a fourth type, viz. prenominal verbal participles. One of the arguments in favor of the eventive nature of prenominal reduced relatives in English and Dutch is their possible combination with adverbs such as *recently*, with agents (in Dutch), or with other complements (in Dutch). I assume that even bare prenominal participles (in English and Dutch) can have an eventive interpretation (see also Cinque 2010, section 5.4). Notice that Dutch is an SOV language, so that complements and adjuncts can occur to the left of the head. In English, an SVO language, they generally occur to the right of the head. The right recursion restriction discussed in the previous section obviates the merger of participles followed by complements or adjuncts in prenominal position:

(30) recently opened restaurants
(31) de door Paul gestuurde brief
the by Paul sent letter
'the letter sent by Paul'
(32) de aan hen verkochte producten
the to them sold products
'the products sold to them'
(33) the closed door

In my view, the four types of participles can be represented on a scale ranging from a purely verbal type to a purely adjectival type, with two intermediate types. Statives are the endpoint of the adjectival side of the scale, postnominal

participles are the endpoint of the verbal side. Resultatives and prenominal eventive participles are situated in between: resultatives on the adjectival side and prenominal eventive participles on the verbal side. The representation on the scale in (34) shows that prenominal eventive participles might fill an open position in a symmetric system with two "adjectival" positions and two "verbal" positions. This means that there is a semantic difference between prenominal and postnominal eventive participles: prenominal participles are less "verbal", i.e. more property-like, than postnominal participles:

(34) verbal ⟵ ⟶ adjectival
postnominal eventive prenominal eventive resultative stative

In Sleeman (forthcoming), I argue that other deverbal modifiers of the noun than passive participles are also polysemous, and have the semantic characteristics of the types represented on the scale in (34). The postnominal, i.e. most "verbal", interpretation and the prenominal, i.e. more property-like, interpretation of *-ble* forms, are illustrated by the English example (35) and the Dutch examples (36):

(35) a disease transmittable by feces of cats
(36) a. een ziekte overdraagbaar door uitwerpselen van katten
a disease transmittable by feces of cats
b. een (gemakkelijk) overdraagbare ziekte
'a (easily) transmittable disease'
c. een door muggen overdraagbare ziekte
a by mosquitos transmittable disease
'a disease transmittable by mosquitos'

If there is a semantic difference between prenominal and postnominal reduced relatives, the prenominal ones being less "verbal", i.e. more property-like, than the postnominal ones, the main argument for a unitary analysis of relative clauses is lost. Within a Distributed Morphology-like approach, I claim in Sleeman (forthcoming) that the four types differ in their internal syntactic structure, which becomes less and less rich. In Sleeman (forthcoming), I adopt a raising analysis (Kayne 1994) / theta marking analysis (Higginbotham 1987) for the most verbal types (passive participles and *-ble* forms alike). Within a Distributed Morphology approach I analyze the most "verbal" deverbal modifier as projecting an argument that raises to the specifier position of the reduced relative clause, which is the complement of the determiner. This accounts for the postnominal position of the reduced relative clause. For the less verbal and for the adjectival types, I adopt a non-raising/theta identification analysis (Higginbotham 1987): they do not project an argument that can rise to the specifier position of a

relative clause. They are merged in the functional projections of the noun (Cinque 1994, Cinque 2010). This accounts for their prenominal position. They vary with respect to their internal syntactic structure. The most adjectival type has the poorest internal syntactic structure.

In the next subsection, I argue that the semantic distinctions presented in (34) are also present in Romance, and more concretely, in French reduced relatives.

3.2 French

In Romance, reduced relatives generally occur in postnominal position. I claim, however, on the basis of French, that they can also have the four interpretations represented on the scale in (34), one of which is associated to prenominal reduced relatives in English and Dutch.

We saw that, in English, participles modified by the adverb 'recently' can occur in prenominal or postnominal position (25). I assume that in both cases the participle has an eventive interpretation, although the prenominal participle has an interpretation that goes more in the direction of a property. In French, participles generally occur in postnominal position. An adverb such as 'recently', which indicates that the participle has an eventive interpretation, can occur to the right or to the left of the postnominal participle. If 'recently' occurs to the right of the participle, I follow Sleeman and Verheugd (1998) in assuming that the participle is the most verbal type represented on the scale in (34). If 'recently' occurs to the left of the participle, I assume that the participle is the less eventive type represented on the scale in (34), corresponding to prenominal eventive participles in English and Dutch:

(37) a. une invention importée récemment
an invention imported recently
'a recently imported invention'
b. une fille récemment embellie
a girl recently embellished
'a girl that has recently become more beautiful'

I assume that participles modified by other 'recently'-type adverbs to their left also have the less "verbal", i.e. more property-like, interpretation represented on the scale in (34):

(38) a. un président nouvellement élu
a president newly chosen
'a recently chosen president'
b. des robes fraîchement repassées

ART.IND.PL. dresses freshly ironed
'recently ironed dresses'

French participles can also have the two adjectival interpretations represented on the scale in (34), but since adjectival participals are not reduced relatives, they are not important for the argumentation of this paper. In (39), the participle, used in a copula construction, is resultative. In (40), the participle has a stative interpretation:

(39) les rues sont nettoyées
the streets are cleaned
'the streets are clean (after having been cleaned)'

(40) une fille très étonnée
a girl very astonished
'a very astonished girl'

For *-ble* forms, I follow Leeman (1992), who distinguishes "verbal" and "adjectival" forms ending in *-ble*. In "verbal" *-ble* forms, the verbal base is still semantically transparent (41), in "adjectival" *-ble* forms, the verbal base is semantically not transparent anymore (42):

(41) un appareil transportable par une seule personne
'an engin transportable/that can be transported by one person'

(42) une femme aimable
a woman love-able
'a friendly woman', ≠ 'a woman that can be loved'

Leeman shows that negative "verbal" *-ble* forms are less verbal than positive "verbal" *-ble* forms. The combination with a *by*-phrase is, for instance, less acceptable:

(43) ?une dette impayable par les pays pauvres
a debt unpayable by the countries poor
'a debt unpayable by poor countries'

Forms that are even less "verbal" are those combined with *pour* 'for' instead of *par* 'by' (44). Although Leeman considers these forms to be "verbal", they rather pattern with resultative participles, which indicate a state that is the result of an event. The combination with the *for*-phrase shows that they are stative, while the presence of the adverb 'easily' underlines the event:

(44) des personnages facilement identifiables pour les enfants

ART.IND.PL. characters easily identifiable for the children
'characters easily identifiable for children'

I have distinguished two types of eventive participles and *-ble* forms in French, a more "verbal" (37a, 41) and a less "verbal" type (37b, 43). This distinction is also supported by the fact that the less "verbal" type can more easily be used in prenominal position than the most verbal type, supporting the idea that it is more "adjectival". Leeman shows that negative "verbal" *-ble* forms can more easily be used in prenominal position than positive "verbal" *-ble* forms:

(45) une incorrigible bavarde
'an incorrigible gossip'
(46) *une pardonnable faute
'a forgivable error'

The same holds for passive participles. Whereas a "verbal" participle such as *aimé* 'loved' cannot easily occur in prenominal position, this becomes possible if it is modified by an adverb such as *très* 'very', making it less verbal/more adjectival[6]:

(47) *l'aimé président
'the (be)loved president'
(48) le très aimé président
'the much beloved president'

Generally, *très* modifies adjectives. However, it can also modify participles, more specifically participles of psych verbs, which easily get a stative interpretation, as in (40), see. e.g. Fabb (1984), Brekke (1988), Bennis and Wehrmann (1990), Gaatone (1981 and 2008). The constructions in which *très* can be used, may, however, clearly have a verbal interpretation:

(49) Luc a très apprécié ce discours.
Luc has very appreciated that speech
'Luc has very much appreciated that speech.'
(50) Je me suis très amusé.
I me am very amused
'I have had much fun.'
(51) Il a été très influencé par le blues.
'He has been very much influenced by the blues.'

[6] Thanks to Danièle van de Velde for pointing this out to me.

I take the participle in (48) to have a passive meaning, just as in (51): 'the president is adored a lot (by the people of his country)'. However, the interpretation also goes in the direction of a property. The participle is the less "verbal" type of the ones represented on the scale (34), corresponding to the prenominal eventive type in English and Dutch. I propose that, since it is slightly property-like, it can be used in prenominal position in French.[7]

I have argued that French passive participles and *-ble* forms have interpretations comparable to those identified for German and Dutch participles and *-ble* forms, which are represented on the scale in (34). Although, in French, past participles and *-ble* forms generally occur in postnominal position, three of the types illustrated in (37-44) have interpretations corresponding to the interpretations of prenominal deverbal modifiers in English and Dutch. Only one of the types corresponds to postnominal deverbal modifiers in English (and, more marginally, Dutch).

For the most verbal, i.e. postnominal, types in Dutch and English (passive participles and *–ble* forms alike), I have adopted a raising/theta marking analysis. For the less verbal type and for the adjectival types, I have adopted a non-raising/theta identification analysis. I do the same for French, although in French all types generally surface in postnominal position. For the most verbal type (37a and 41) I adopt a raising analysis, which accounts for its postnominal position. The other three types are merged in the functional projections of the noun. Their postnominal position is the result of the noun/NP movement operation that has been proposed by various linguists (Valois 1991, Bernstein 1993, Cinque 1994) in order to account for the postnominal position of adjectives in Romance.

In the next section, I present a structure representing the analysis proposed in this section.

4. The position of reduced relatives in Germanic and Romance

In the previous section, I proposed that the most "verbal" deverbal modifiers in Germanic and Romance are the complement of D with the noun moving to the specifier position of the relative clause, as in Kayne's (1994) raising analysis of reduced relatives. Cinque (1994) calls them predicates. I proposed furthermore

[7] Cinque (2010: ch. 5) proposes something similar for English *very much*. He analyses the prenominal participial construction in (i) as a reduced relative clause. Cinque reports that some (New Zealand) English speakers accept *very much* before an adjective, as in (ii):

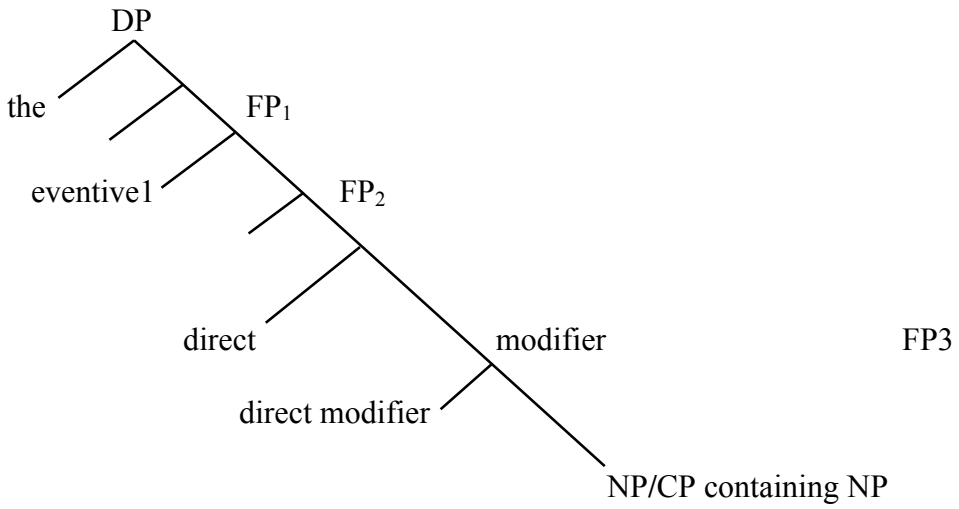
(i) a very much respected scholar

(ii) a very (*? much) influential philosophy

The fact that 'very much' can be combined with an adjective, suggests that the reduced relative in (i) is the less eventive type on the scale in (34).

that the less "verbal" eventive deverbal modifiers are merged within the functional projections dominated by DP, as in Cinque's (2010) analysis of reduced relatives. Cinque (1994) calls modifiers in this position attributes.[8] In N-initial languages such as the Romance languages, the postnominal position of the direct (resultative or stative) and eventive 1 modifiers results from NP-movement, as in Cinque's roll-up mechanism (cf. also Laenzlinger 2005).[9]

(52)



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

5. Conclusions

In this paper, I have argued that deverbal modifiers of the noun in Germanic and Romance are mixed categories that can have various interpretations, from purely verbal to purely adjectival, with several mixed interpretations in between. I have argued furthermore that since prenominal and postnominal relatives, which generally are deverbal modifiers, slightly differ in interpretation, the basis for a

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

[9] It might be assumed, as in Cinque (1994), that the reason for NP-movement to a higher functional projection in Romance is morphological in nature, e.g. attraction by a strong number feature.

unitary analysis, merging both types within the functional projections of the noun, is lost. I have analyzed the most "verbal" type as a predicate, projecting an argument that raises to the specifier position of a relative clause. I have analyzed the less "verbal" type and the adjectival types of deverbal modifiers as attributes, merged within the functional projections of the noun. Analyzed in this way, the postnominal position of reduced relatives in Germanic, especially English, and in Romance is not the result of the attraction of the reduced relative clause to a higher position, followed by remnant NP movement.

At the beginning of section 3, I presented several problems for Cinque's unitary analysis. In the analysis that I have proposed here, these problems are solved. First, postnominal reduced relative clauses (in English) are in complement position and not in specifier position. Second, there is no optionality with respect to attraction. A reduced relative such as *recently sent* is in postnominal position if it projects an argument that moves to the specifier of the reduced relative clause, and in prenominal position if it does not do so. Third, it does not have to be assumed that postnominal reduced relatives are (invisibly) right-branching. Fourth, in Cinque's analysis, reduced relatives in Romance are always attracted to a higher position, since they are always postnominal. This creates a difference between Germanic and Romance that should be accounted for. In my analysis, there is no difference between Germanic and Romance reduced relative clauses. The most "verbal" type is the complement of the determiner, and the other types are merged within the functional projections of the noun. There is, however, a difference between Germanic and Romance with respect to noun movement, which is an independent operation that is also present in Cinque's analysis, and which accounts for the postnominal position of direct modifiers in Romance. In my analysis, it also accounts for the postnominal position of the less "verbal" reduced relative types in Romance.

Finally, we have seen in section 2 that, as observed by Cinque (ch. 5, fn. 8), English is the only Germanic language in which restrictive postnominal bare adjectives are available, which is a problem that, according to Cinque, still has to be understood. Furthermore, in German and also in Dutch, participial reduced relatives only marginally occur in postnominal position, which, according to Cinque, is also a problem that still has to be understood. I propose that since German and Dutch are SOV languages they exploit the prenominal position, which is a more economical option, because, in my analysis, the internal structure of the prenominal reduced relative is simpler than the structure of postnominal reduced relatives. Since English is an SVO language it has to make use of the

postnominal position. Since this position is needed anyway, it is also used for restrictive postnominal bare adjectives.

References

Alexiadou, A. 2001. *Functional Structure in Nominals. Nominalization and Ergativity*. Amsterdam/Philadelphia: John Benjamins.

Bennis, H., Wehrmann, P. 1990. On the categorial status of present participles. In R. Bok-Bennema and P. Coopmans (eds.), *Linguistics in the Netherlands 1990*, 1-11. Dordrecht: Foris.

Bernstein, J. 1993. Topics in the Syntax of Nominal Structure across Romance. PhD dissertation, City University of New York.

Bolinger, D. 1967. Adjectives in English: Attribution and predication. *Lingua* 18: 1-34.

Borsley, R. D., Kornfilt, J. 2000. Mixed extended projections. In R. D. Borsley (ed.), *The Nature and Function of Syntactic Categories*, 101-131. New York: Academic Press.

Bouchard, D. 1998. The distribution and interpretation of adjectives in French: A consequence of Bare Phrase Structure. *Probus* 10: 139-183.

Brekke, M. 1988. The experiencer constraint. *Linguistic Inquiry* 19: 169-180.

Chomsky, N. 1970. Remarks on nominalisation. In R. Jacobs and P. Rosenbaum (eds.), *Readings in English Transformational Grammar*, 184-221. Waltham, MA: Blaisdell.

Cinque, G. 1994. Evidence for partial N-movement in the Romance DP. In G. Cinque, J. Koster, J.-Y. Pollock, L. Rizzi, and R. Zanuttini (eds.), *Paths towards Universal Grammar: Studies in Honor of Richard S. Kayne*, 85-110. Washington, DC: Georgetown University Press.

Cinque, G. 2010. *The Syntax of Adjectives. A Comparative Study*. Cambridge, MA: MIT Press.

Delsing, L.-O. 1993. On attributive adjectives in Scandinavian and other languages. *Studia Linguistica* 47 (2): 105-125.

Embick, D. 2004. On the structure of resultative participles in English. *Linguistic Inquiry* 35: 355-392.

Embick, D., Noyer, R. 2006. Distributed Morphology and the syntax/morphology interface. In G. Ramchand and C. Reiss (eds.), *Oxford Handbook of Linguistic Interfaces*, 289-324. Oxford: Oxford University Press.

Emonds, J. 1976. *A Transformational Approach to English Syntax: Root, Structure-Preserving and Local Transformations*. New York: Academic Press.

Fabb, N. 1984. Syntactic Affixation. PhD dissertation, MIT.

Gaatone, D. 1981. Observations sur l'opposition très – beaucoup. *Revue de Linguistique Romane* 45: 74-95.

Gaatone, D. 2008. Un ensemble hétéroclite: les adverbes de degré en français. In J. Durand, B. Habert, and B. Laks (eds.), *Congrès Mondial de Linguistique Française (CMLF) 08, 9-12 juillet Paris*, 2495-2504. Paris: EDP Sciences.

Grimshaw, J. 1990. *Argument Structure*. Cambridge, MA: MIT Press.

Halle, M., Marantz, A. 1993. Distributed Morphology and the pieces of inflection. In K. Hale and S. J. Keyser (eds.), *The View from Building 20,* 111-176. Cambridge, MA: MIT Press.

Halle, M., Marantz, A. 1994. Some key features of Distributed Morphology. *MIT Working Papers in Linguistics* 21: 275-288.

Harley, H., Noyer, R. 1999. Distributed Morphology. *Glot International* 4 (4): 3-9.

Higginbotham, J. 1985. On semantics. *Linguistic Inquiry* 16: 547-594.

Kayne, R. 1994. *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.

Kayne, R. 1999. Prepositional complementizers as attractors. *Probus* 11: 39-73.

Kayne, R. 2000. A note on prepositions, complementizers, and word order universals. In R. S. Kayne (ed.), *Parameters and Universals*, 314-326. New York: Oxford University Press.

Kayne R. 2005. Some notes on comparative syntax, with special reference to English and French. In G. Cinque and R. S. Kayne (eds.), *The Oxford Handbook of Comparative Syntax*, 3-69. New York: Oxford University Press.

Kratzer, A. 1994. The event argument and the semantics of voice. Ms., University of Massachusetts, Amherst.

Laenzlinger, C. 2005. French adjective ordering: Perspectives on DP-internal movement types. *Lingua* 115: 645-689.

Larson, R. 1998. Events and modification in nominals. In D. Strolovitch and A. Lawson (eds.), *Proceedings from Semantics and Linguistic Theory (SALT) VIII*, 145-168. Cornell University, Ithaca, NY: CLC Publications.

Larson, R. 2000a. ACD in AP?. Paper presented at the 19th West Coast Conference on Formal Linguistics, Los Angeles <http://semlab5.sbs.sunysb.edu/~rlarson/wccfl19.pdf>.

Larson, R. 2000b. Temporal modification in nominals. Hand-out of a paper presented at the International Round Table "The Syntax of Tense and Aspect", Paris, 15-18 November 2000.

Larson, R., Marušič, F. 2004. On indefinite pronoun structures with APs: Reply to Kishimoto. *Linguistic Inquiry* 35: 268-287.

Leeman, D. 1992. Deux classes d'adjectifs en *-ble*. *Langue Française* 96: 45-63.

Levin, B., Rappaport, M. 1992. The formation of adjectival passives. *Linguistic Inquiry* 17: 623-661.

Marantz, A. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. In A. Dimitriadis, L. Siegel, C. Surek-Clark and A. Williams (eds.), *University of Pennsylvania Working Papers in Linguistics* 4 (2): 201-225.

Marantz, A., 2001. Words. Hand-out of a paper presented at the 20th West Coast Conference on Formal Linguistics, University of Southern California, 25 February 2001.

Sadler, L., Arnold, D. 1994. Prenominal adjectives and the phrasal/lexical distinction. *Linguistics* 30, 187-226.

Sleeman, P., 2002. Restrictive dependencies and Antisymmetry Theory. *Rivista di Grammatica Generativa* 27: 123-137.

Sleeman, P., 2005. The com(p)-position of DP-internal infinitival clauses. In L. Brugè, G. Giusti, N. Munaro, W. Schweikert and G. Turano (eds.), *Contributions to the Thirtieth Incontro di Grammatica Generativa*, 333-349. Venice: Cafoscarina.

Sleeman, P. 2007. Prenominal and postnominal reduced relative clauses: Arguments against unitary analyses. *Bucharest Working Papers in Linguistics* IX (1): 5-16.

Sleeman, P. forthcoming. Verbal and adjectival participles: internal structure and position. *Lingua.*

Sleeman, P., Verheugd, E. 1998. How reduced are reduced relatives?. In R. Kager and R. van Bezooijen (eds.), *Linguistics in the Netherlands* 1998, 187-199. Amsterdam/Philadelphia: John Benjamins.

Sproat, R., Shih, C. 1988. Prenominal adjectival ordering in English and Mandarin. In J. Blevins and J. Carter (eds.), *Proceedings of the Eighteenth Annual Meeting of North Eastern Linguistic Society*, vol. 2, 465-489. University of Massachusetts: GLSA.

Valois, D. 1991. The internal syntax of DP. PhD dissertation, University of California, Los Angeles.

Wasow, T. 1977. Transformations and the lexicon. In P. Culicover, T. Wasow, and A. Akmajian (eds.), *Formal Syntax*, 327-360. New York: Academic Press.