

# THE DIRECTION OF AP ATTACHMENT IN ROMANIAN DPs\*

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Syntactic theory presents two distinct approaches to the syntactic position of adjuncts: the symmetric approach, where adjuncts can attach to the left or to the right of constituents; and the antisymmetric approach of Kayne (1994), where adjunction is only leftward. Here, I will present an empirical argument for the symmetric approach suggesting that, in Romanian, APs in the two postnominal positions indicated in (1) can be generated either to the left or to the right of the noun. By considering the linear order and semantic interpretation of postnominal adjectives, the present argument hinges on the fact that only symmetry predicts solely the attested pairings between order and interpretation. Conversely, antisymmetry can derive the attested readings by using remnant movement, but only at the cost of also deriving additional, unattested readings.

- (1) Indefinite Article N AP ComplP(NP) AP<sup>1</sup>

This paper will be organized as follows. First, I present the claims made by the two theories and the predictions that ensue. Then, I introduce the pertinent data and discuss the interpretations of APs and how they relate to scope interactions. In section 3 I present the derivations needed by the two theories to obtain the empirical word-order – interpretation pairings. Finally, I provide a brief conclusion.

## 1. Theoretical Considerations

The main distinction between antisymmetry and symmetry is the option for rightward adjunction. While both approaches permit adjuncts to the left, in a structure like (2a), only the symmetric approach can generate APs to the right as well, as in (2b).

- (2) a. [<sub>FP</sub> AP<sub>1</sub>[<sub>FP</sub> AP<sub>2</sub>[<sub>NP</sub> N ComplNP]]]  
b. [<sub>FP</sub> [<sub>FP</sub> [<sub>NP</sub> N ComplNP] AP<sub>1</sub>] AP<sub>2</sub>]

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<sup>1</sup> While Romanian has prenominal APs, I will not consider their distribution here. For some proposals of their distribution see Cornilescu (1992), Giusti (1995) and Ungureanu (2003).

### 1.1 Predictions on the Syntactic Positions of Postnominal APs

The two approaches differ in the way they generate/derive the syntactic positions of postnominal APs in [N ComplNP AP AP] sequences. Antisymmetry, which can only generate APs to the left, as in (2a), needs to posit leftward movement of the noun and its complement (henceforth ComplNP) or of a constituent including them. Conversely, symmetry simply generates the APs to the right of the noun and ComplNP, as in (2b).

There is no difference between the two approaches in deriving the surface order where the APs intervene between the noun and ComplNP, [N AP AP ComplNP]. Here, both theories must appeal to movement, if we assume that the noun and ComplNP are generated as sisters. For a structure like (2a) to ultimately derive the [N AP AP ComplNP] order, either the noun head moves (see Cinque 1994) or a remnant NP containing the noun only moves to the left of the APs to some functional head  $F^0$  or its specifier respectively.<sup>2</sup>

### 1.2 Predictions on the Interpretations of Postnominal APs

Let us now consider the interpretations of postnominal APs predicted by the two approaches. I will make two assumptions: (1) APs semantically compose with their sisters and (2) APs are interpreted in their underlying position as proposed by Sternfeld (2003). Under these assumptions, the two approaches to adjunction predict distinct correlations between the linear order and the scope of APs.

Under symmetry, the difference between the two postnominal APs lies in their being generated in distinct syntactic positions. APs that intervene between the noun and ComplNP are generated to the left of the noun and APs that follow the noun and ComplNP are generated to the right of these elements as in (2a) and (2b) respectively. Therefore, in a DP with the word order [N AP<sub>1</sub> AP<sub>2</sub> ComplNP] we expect the surface initial AP to scope over the surface second AP, since the linearly first AP is generated higher than the second one. Conversely, for a DP with the order [N ComplNP AP<sub>1</sub> AP<sub>2</sub>] symmetry predicts that the surface second AP will scope over the surface first AP, since here, it is the linearly second AP that is generated higher than the first one. Thus, symmetry predicts that each one of the two surface orders correlates with a distinct and unique interpretation.

Under antisymmetry, all (postnominal) APs are generated to the left of the noun as in (2a). This syntactic structure predicts an interpretation where the AP generated leftmost will have widest scope and this is not what we find. In order to account for the empirical findings, I will show that antisymmetry must appeal to remnant movement that is similar to the movement it requires to obtain the surface order where APs follow ComplNP. However, by requiring remnant

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<sup>2</sup> APs that intervene between the noun and its complement can also be derived from the structure in (2b) with movement of ComplNP to the right, past the APs. I will show later that this derivation is not compatible with the interpretation attested for this word-order.

movement, antisymmetry allows for a wider number of order – scope correlations, if the constituents (adjectives, nouns and ComplNP) can move freely. Thus, although initially, the antisymmetric approach appears to be more restrictive in terms of the surface order – scope pairings it generates, the movement operations it requires result in predicting two distinct scope interpretations for each of the two word orders under investigation – that is, it generates all the logically possible pairings.

## 2. Two Empirical Generalizations

The next step in establishing the direction of AP attachment and in ultimately determining which of the two theories best accounts for the Romanian data is to determine the correlations that obtain between surface orders and scope interpretations for the DPs under investigation. I will show that when both APs precede ComplNP the interpretation is associated with a structure where the linearly first AP has scope over the linearly second AP and when both APs follow ComplNP the interpretation is compatible with a structure where the linearly second AP has scope over the AP preceding it. These findings are consistent with the predictions made by the symmetric approach to adjunction.

The DPs chosen to determine the scope relation between postnominal adjectives contain a picture noun that takes a complement and is modified by two APs as exemplified by the italicized DP in (3).<sup>3</sup> Here, the modified NP is *o poză a lui Madona* meaning ‘a picture of Madonna’ and the adjectives are *frecventă* meaning ‘frequent’/‘occurs often’ and *unică*. The adjective *unică* has two meanings in Romanian ‘only one of its kind’/‘singular’ or ‘only one’/‘a single’; here I only consider the second meaning.

- (3) ediți- a asta conține *o poză frecventă unică a Madonei*  
 issue-the this contains a picture frequent unique of Madonna  
 ‘this issue contains a frequent unique picture of Madonna’

Recall that, theoretically, there are two possible interpretations for DPs like the one in (3) each corresponding to a different scope relation: one where *frecventă* c-commands *unică* and a second where *unică* c-commands *frecventă*. To determine the direction of scope I used a truth value judgement test in which native speakers of Romanian were presented with the scenario given in (4) and two contexts (provided in the following subsection) each of which allows for only one of the two theoretically possible interpretations. The task was to monitor the truth values of the sentences containing the DPs under investigation within each of the two contexts. Ultimately, the scope direction was established

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<sup>3</sup> Often times morphemes that can be used either as adverbs or as adjectives in Romanian are only distinguishable in that adjectives exhibit agreement with the noun. In the singular, masculine and neuter, adjectives do not exhibit overt agreement with the noun. Thus, to ensure that the adjectives used in determining scope facts are indeed adjectives and not adverbs (modifying an adjective) I have only used feminine singular or plural nouns, since they do trigger overt agreement on the adjectives.

by pairing up the word-orders with the interpretations they received. The test and results are discussed next.

(4) Scenario: The editor of Paris Match Magazine has a total of 7 pictures of Madonna (the singer). Depending on the space allotted to Madonna related scandals he can include one or more pictures of her in a given issue.

## 2.1 APs that Precede the Complement of the Noun

First, I will establish the scope direction that obtains between modifying adjectives that intervene between the noun and its complement, as in the italicized DP in (3). I will start by introducing the first context in which the DPs are to be tested and then provide a step by step presentation of the theoretically possible interpretations and how they apply in each of the contexts.

Keeping in mind the scenario in (4), suppose that in the year 2001 the distribution of the 7 pictures of Madonna (available to the editor of Paris Match) is that listed in context 1, table 1.

Context 1: In the year 2001 the pictures of Madonna printed in Paris Match Magazine followed the distribution in table 1.

Table 1: Context 1

January	3, 7, 5
February	3, 7
March	3, 7, 2
April	3, 7, 6
Mai	3, 7
June	3, 7
July	3, 7, 4
August	2
September	2
October	2
November	1
December	4

August-December are all issues that contain a **unique** (only one) picture of Madonna

Only picture **2** is **frequent** among the unique pictures

Given context 1, let us first presume that the DP in (3) has the interpretation where *frecventă* has scope over *unică*. According to this supposition, the constituent [*poză a Madonei*] ‘picture of Madonna’ is first restricted by the AP *unică* and then the constituent [*unică poză a Madonei*] ‘unique picture of Madonna’ is further restricted by the AP *frecventă*. Pictures of Madonna that are unique are those pictures that appear as the only picture of Madonna within a given issue. In context 1, pictures that satisfy this criterion are pictures Nr. 1, 2, and 4, which appear in the August through December issues. Now, let us further restrict the set of pictures of Madonna that are unique to a picture that is frequent. Among this set of pictures – only picture Nr. 2 is frequent. So, if frequent is taken to take scope over unique the interpretation predicted is that in (5). Note that picture Nr. 2 is not frequent as such, in the

overall distribution of the pictures, but only with respect to the set of pictures of Madonna that are single/unique (within an issue).

- (5) Interpretation for frequent c-commanding unique:  
A picture (of Madonna) that is frequent with respect to single/unique pictures of Madonna.

Let us now consider the interpretation the DP in (3) would obtain if *unică* were to c-command *frecventă*. Under this assumption, the constituent [*poză a Madonei*] ‘picture of Madonna’ is first restricted to the AP *frecventă* and then the constituent [*frecventă poză a Madonei*], ‘frequent picture of Madonna’, is further restricted to the AP *unică*. Looking at the distribution in context 1 the pictures of Madonna that are frequent (appear often) are pictures Nr. 3 and Nr. 7 in the issues from January through July. Now, let us attempt to further restrict the set of frequent pictures of Madonna to a unique one. That is, to a single picture of Madonna that is frequent with the intended interpretation in (6). Here, singleness of the picture is taken with respect to those pictures that are frequent.

- (6) Interpretation for unique c-commanding frequent:  
A picture (of Madonna) that is single/unique with respect to frequent pictures of Madonna.

Crucially, the distribution of pictures in context 1 is such that there is no picture that would correspond to a DP with the interpretation in (6), because pictures Nr. 3 and Nr. 7 are equally frequent and as such none of them can be said to be ‘a single frequent picture of Madonna’. That is, given context 1, the interpretation in (6) where *unică* c-commands *frecventă* is not possible.

When tested in context 1, the example in (3) was found to be true and the DP it contains was taken to refer to picture Nr. 2. Thus, the correlation between the interpretation and the surface order in the DP in (3) indicates that when APs intervene between the noun and its complement the direction of scope is from left to right, i.e. the AP that is linearly precedent is also hierarchically higher than the AP that is linearly in second position, corresponding to the partial syntactic structure in (7) (which in turn reflects the structure in (2a)).

- (7) [<sub>FP</sub> frecventă      [<sub>FP</sub> unică      [<sub>NP</sub> poză      a Madonei]]]  
frequent                      unique                      picture of Madonna

As mentioned, there is no picture in context 1 that can be associated with the interpretation in (6), where *unică* c-commands *frecventă*. In fact, for a DP where APs precede ComplNP to obtain this interpretation one must reverse the order of the two APs as in (8).

- (8) ediți- a asta conține o poză unică frecventă a Madonei  
issue-the this contains a picture unique frequent of Madonna  
‘this issue contains a unique frequent picture of Madonna’

- (9)  $[_{FP} \text{ unică } [_{FP} \text{ frecventă } [_{NP} \text{ poză a Madonei}]]]$   
 unique frequent picture of Madonna

If the findings thus far are correct and the direction of scope for APs that intervene between the noun and its complement is from left to right as indicated in the partial structure in (9), we expect that there is some context where the DP in (8) is true with the interpretation in (9), but false under the interpretation in (6). This context is provided below as context 2.

Context 2: In the year 2002 the pictures of Madonna printed in *Paris Match* Magazine followed the distribution in table 2.

Table 2: Context 2

January	7, 1, 3
February	7, 4
March	7, 3
April	7, 1
Mai	7, 5
June	7, 2
July	7, 5
August	1, 4
September	2
October	3
November	4
December	5

Pictures 1 - 5 & 7 appear a few times throughout the year

Picture 7 is the **only one** among these that is **frequent**

In light of context 2, assume first that the DP in (8) has the interpretation where *unică* scopes over *frecventă*. Here, pictures that appear a number of times throughout the year are pictures 1-5 and 7 (between January and August). If we restrict this set of pictures to a single/only one picture of Madonna that is frequent we find that picture to be picture Nr. 7, as it is the only picture of Madonna that has the interpretation in (6).

Next, consider the interpretation in (5), where *frecventă* has scope over *unică*, in light of context 2. Actually, there is no picture in context 2 that can be associated with this interpretation. Here, the pictures of Madonna that are unique/single (picture in an issue) are pictures 2-5 between September and December. However within this pool of single pictures of Madonna none of them can be said to be frequent as none of these pictures occurs more than once. Thus, in context 2, the interpretation in (5) is not possible. When tested in context 2, the example in (8) was found to be true and the DP it contains was taken to refer to picture Nr.7. Once again, this result is consistent with the hypothesis according to which the scope of APs that precede ComplNP exhibits left to right scope direction.

Crucially, in contexts 1 and 2 the sentences in (3) and (8) are in complementary distribution. That is, sentence (3) is true in context 1 but false in context 2 and sentence (8) is false in context 1 and true in context 2. These

findings show that there is no ambiguity with respect to the direction of scope and DPs (3) and (8) are each associated with one and only one interpretation.

To conclude this subsection, in DPs where APs intervene between the noun and its complement the AP that is linearly precedent also takes scope over the linearly following AP. Since the left to right direction of scope is the only one attested, it can be claimed that for the [N AP<sub>1</sub> AP<sub>2</sub> ComplNP] word order we have strict directionality of scope.

## 2.2 APs that Follow the Complement of the Noun

When APs follow ComplNP, as exemplified in (10), the direction of scope is opposite to that previously observed (for APs that intervene between the noun and its complement). Here, scope is from right to left, where the AP that is in second surface position has scope over the AP that surfaces in first position.

- (10) a. ?ediți- a asta conține o poză a Madonei frecventă unică  
 issue-the this contains a picture of Madonna frequent unique  
 ‘this edition contains a unique frequent picture of Madonna’
- b. ?ediți- a asta conține o poză a Madonei **unică frecventă**  
 issue- the this contains a picture of Madonna unique frequent  
 ‘this issue contains a frequent unique picture of Madonna’

To obtain the scope facts for [N ComplNP AP<sub>1</sub> AP<sub>2</sub>] sequences the same truth value judgement test as in the previous subsection was used – the sole difference consisting in the word order. Since there are no differences in methodology, I will simply report the results and dispense with the step by step account.

The DP in (10a), where *frecventă* surfaces before *unică*, is correlated with the interpretation in (6). That is, (10a) is false in context 1 but true in context 2. Conversely, the DP in (10b), where *unică* surfaces before *frecventă*, is correlated with the interpretation in (5). That is, (10b) is true in context 1 but false in context 2. Again, note that the truth values for the examples in (10) are in complementary distribution in contexts 1 and 2, indicating that each of the word orders is associated with only one interpretation and ambiguity is not attested. Thus, the scope facts for the DPs in (10) suggest that in DPs where the APs follow ComplNP the AP that is linearly in second position is hierarchically higher, c-commands, the AP that surfaces in first position as exemplified in the partial structure in (11) representing the DP in (10a).

- (11) [[[<sub>N'</sub> poză a Madonei]            frecventă <sub>NP</sub>]            unică <sub>NP</sub>]  
 picture of Madonna            frequent            unique

Two main generalizations emerge from the word-order – interpretation tests presented in this section. First, the same linear order of APs correlates with distinct scope interpretations depending on the position of the (two) APs relative

to ComplNP. Specifically, when APs precede ComplNP the interpretation is consistent with a left to right scope direction; conversely, when APs follow ComplNP the interpretation is consistent with a right to left direction of scope. Second, each word order correlates with only one scope interpretation, suggesting that each word order correlates with only one syntactic structure.

### 3. Theoretical Implications of the Empirical Observations

The empirical word-order scope pairings observed in the previous section are consistent with the symmetric theory of adjunction, which proposes that the APs under discussion here are base generated in their surface position and the scope facts fall out directly from this assumption. The specific predictions are that APs that intervene between the noun and its complement are generated to the left of the noun and as a result the AP that surfaces left most will also be structurally higher than the APs that follow it. Conversely, APs that surface to the right of the noun's complement are base generated there and therefore the right most surfacing AP will be hierarchically higher than the APs preceding it. Crucially, the symmetric account predicts that each one of the two word orders correlates with one and only one interpretation – the exact pairings that are attested.

Antisymmetry predicts that all APs are generated to the left of the noun. A direct result of this assumption is that, on the basis of base generation alone, the scope of APs should always follow a left to right direction, since precedence is taken to entail hierarchical dominance. However, in the case of Romanian APs that follow ComplNP the attested scope effect is distinct and in order to account for it antisymmetry is forced to posit movement. In what follows I will attempt to show that by opening up the possibility for what appears to be unconstrained (remnant) movement in these constructions antisymmetry gives rise to possible derivations that result in word-order – interpretation pairings that are unattested in Romanian. That is to say, antisymmetry overgenerates.<sup>4</sup>

As mentioned, both theories under consideration are equally suited to derive the empirical observations. To derive the left to right scope interpretation for the order [N AP AP ComplNP] both approaches to adjunction might assume a right branching structure with the N undergoing head movement to the left.<sup>5</sup>

The tree in (12) shows one of a number of possible derivations predicted by antisymmetry to obtain the attested DPs where adjectives follow ComplNP and the direction of scope is from right to left. This word-order – scope pairing forces antisymmetry to appeal to movement of one AP over the other, because strict left adjunction imposes that the AP that is hierarchically higher is base generated to the left of the AP that it c-commands. As a result, for these derivations it is crucial that the AP that ultimately surfaces second is base

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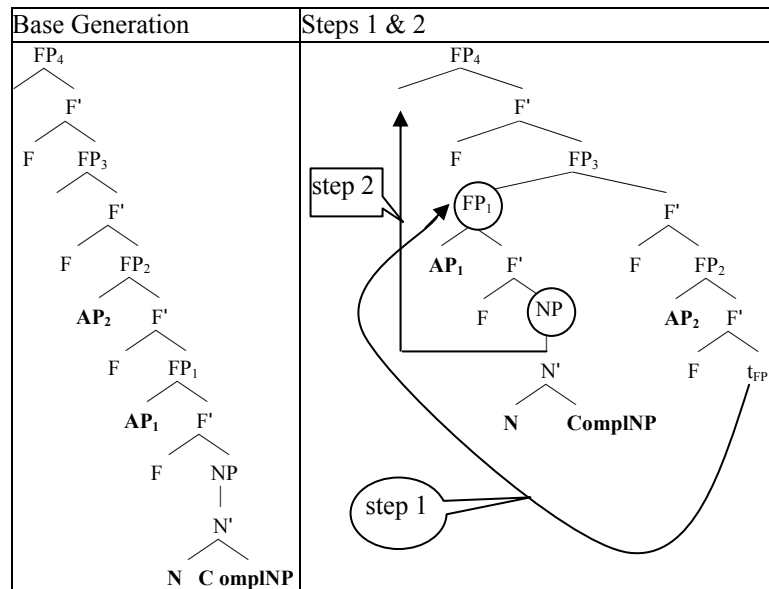
<sup>4</sup> So far, I was not able to find a constraint on remnant movement that would block only the unattested forms but allow for the attested ones.

<sup>5</sup> This N head movement hypothesis follows Cinque (1994). Alternatively, recent antisymmetric proposals by Cinque 2003 posit leftward movement of ComplNP followed by remnant movement of NP to derive the effect of head movement as proposed.



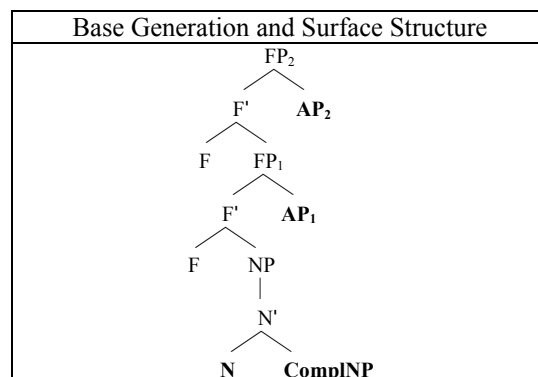
generated to the left, in a position preceding (and crucially hierarchically higher than) the AP that will surface first.

(12) Antisymmetric derivation for [N ComplNP AP<sub>1</sub> AP<sub>2</sub>]



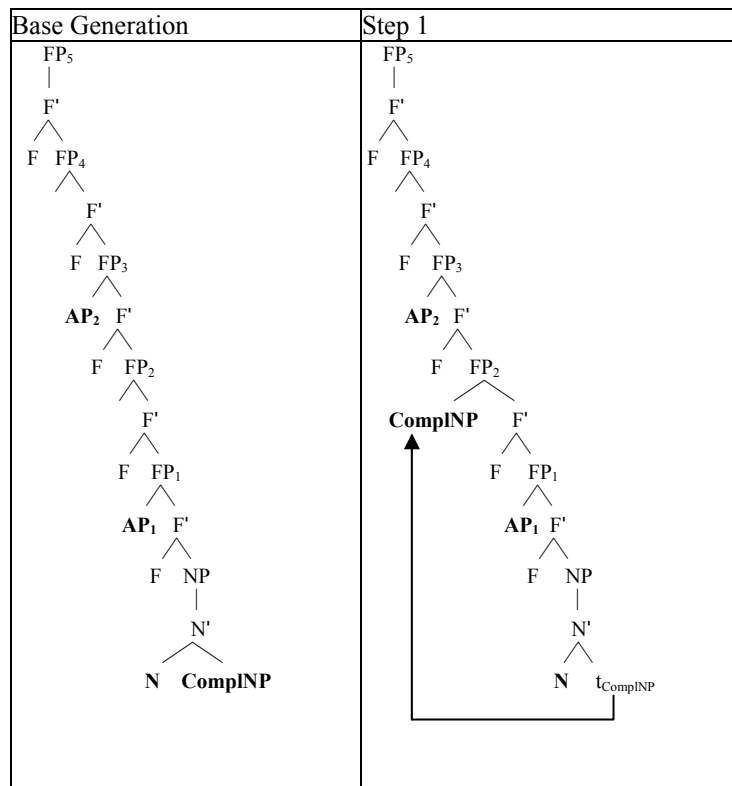
The same word-order – scope pairing derived in (12) is obtained under the symmetric account by simply base generating the APs in a position to the right of ComplNP as shown in (13). Here, the surface second AP is base generated to the right and higher than the linearly first AP, thus, the word order and the hierarchical structure reflected in the attested interpretation fall out from the base generation. No additional movement is necessary.

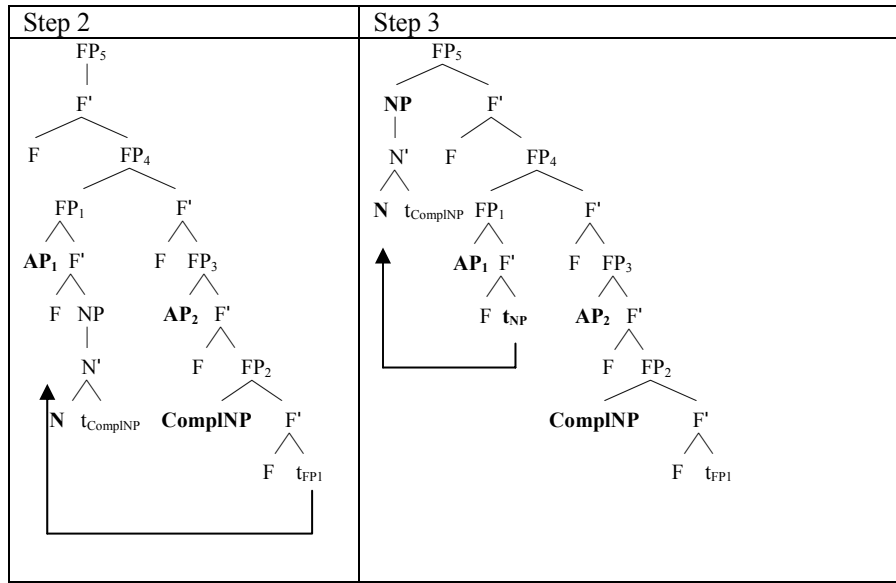
(13) Symmetric generation of [N ComplNP AP<sub>1</sub> AP<sub>2</sub>]



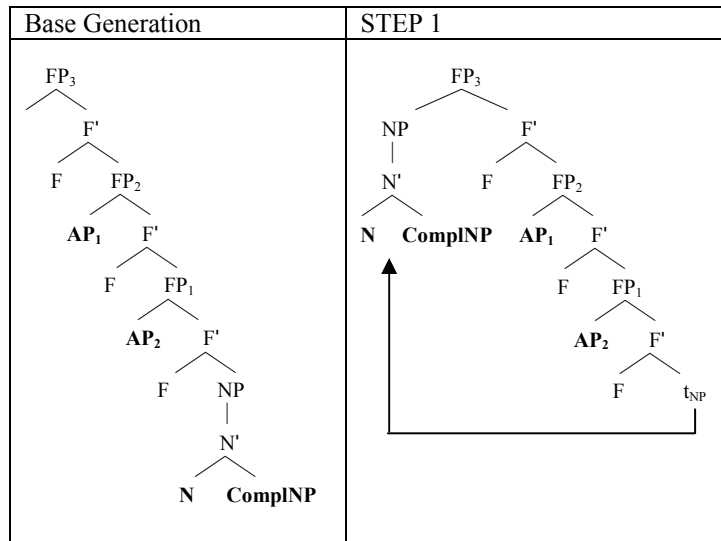
So far we saw that the attested word-order – scope pairings can be obtained by both theories equally well (while possibly more elegantly so under the symmetric account). The symmetric theory base generates the postnominal APs either to the left or to the right of ComplNP, while the antisymmetric account generates the APs always to the left of the noun and derives the position of APs that follow ComplNP and their corresponding interpretation by movement (including remnant movement). Crucially, the implementation of the very same type of movements that antisymmetry necessitates to derive attested forms as in (12) results in predicting word-order – scope combinations that are not attested in Romanian. Specifically, as established in section 2, in DPs where the adjectives intervene between the noun and ComplNP an interpretation with a right to left scope direction is not available; and in the case of APs that follow ComplNP a left to right scope interpretation is not attested. However, these word-order – scope correlations are readily available under the antisymmetric theory as exemplified by the derivations in (14) and (15) below.

(14) Unattested antisymmetric derivations: [N AP<sub>1</sub> AP<sub>2</sub> ComplNP]





(15) Unattested antisymmetric derivations: [N ComplNP AP<sub>1</sub> AP<sub>2</sub> ]



#### 4. Conclusion

In this paper I argued that APs that surface postnominally in Romanian are syntactically generated to the left or to the right of the noun, an account that is consistent with the symmetric approach to syntactic adjunction. Specifically, I showed that the symmetric theory makes two predictions about the pairings of particular surface orders with particular interpretations. APs that intervene between the noun and its complement obtain an interpretation that reflects a left to right scope direction and APs that follow ComplNP receive an interpretation that is consistent with a right to left scope direction. These two predictions appear to be borne out. I also attempted to show that the antisymmetric approach makes wrong prediction, by generating impossible interpretations derived with the same type of movements it necessitates to obtain the attested interpretations. These findings suggest that the symmetric approach is the more desirable theory, as it accounts for all and only the attested distribution patterns of postnominal APs in Romanian.

#### References

- Cornilescu, Alexandra. 1992. Remarks on the Determiner System of Rumanian: the Demonstratives 'AL' and 'CEL'. *Probus* 4:189-260.
- Cinque, Guglielmo. 1994. On the Evidence for Partial N-Movement in the Romance DP. In *Paths Towards Universal Grammar*, eds. Guglielmo Cinque, Jan Koster, Jean-Yves Pollock, Luigi Rizzi and Raffaella Zanuttini, 85-110. Washington, DC: Georgetown University Press.
- Cinque, Guglielmo. 2003. The dual source of Adjectives and XP-vs.N-raising in the Romance DP. Paper presented at the CASTL Kick-off Conference, Tromsø, October 2 – 4 .
- Giusti, Giuliana. 1995. Heads and Modifiers among Determiners: Evidence from Romanian. In *Advances in Roumanian Linguistics*, eds. Guglielmo Cinque and Giuliana Giusti, 103-125. Amsterdam: John Benjamins.
- Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, Ma: MIT Press.
- Sternefeld, Wolfgang. 2003. Semantic vs. syntactic reconstruction. Ms., University of Tuebingen.
- Ungureanu, Mona-Luiza. 2003. On DP structure in Romanian. In *McGill Working papers in Linguistics* 18:103-146.