THE SUFFIXATION OF DEFINITE ARTICLES IN BALKAN LANGUAGES

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INTRODUCTION: THE SYNTAX OF VERBAL AND NOMINAL INFLECTIONAL MORPHEMES

In a number of Balkan languages (Romanian, Bulgarian and Albanian) the definite article may be realized as a suffix on the noun or on a prenominal adjective. This phenomenon raises fundamental questions regarding the analysis of the functional category Det(erminer) and its relation to the lexical category N(oun), which are comparable to those regarding the relation between Tense[1] and Verbs, which is one of the domains in which generative studies have achieved noteworthy progress. Much less is known about the nominal domain. In order to formulate the questions raised by the suffixation of definite articles, let us start by enumerating the basic results concerning the relation between verbal inflectional elements and the V(erb) itself.

Chomsky (1955) has shown that English Aux(iliaries) do not form a constituent with the Verb (in other words English Auxiliaries are not some kind of clitics that directly attach to V itself) but rather they take a VP complement (at all levels of representation, V forms a complement with the direct object). This is clearly shown by the fact that Aux can be separated from V by the subject, Negation, and also the VP can be deleted, stranding the Aux:

(1) a **Has** John [$_{VP}$given you the money]?
b. No, he **has** not [$_{VP}$given me the money].
c. No, he **has** not [$_{VP}$ e][2]

Chomsky (1955) has also established that in English, verbal morphemes such as *-ed* (past tense inflection) or *-s* (3rd person sg present) are not directly generated on

[1] We will use 'Tense' instead of 'Infl(ection)' because it is more precise: 'Inflection' could be a general label for nominal and verbal functional categories, Determiner and Tense, respectively. Also, Infl has sometimes been used as a cover term for two functional categories, Tense and AGR. We do not assume that AGR is a functional category.

[2] Empty categories, i.e., syntactic constituents that have no overt realization (the syntactic counterpart of the 'zero morpheme' of structuralist morphology) are notated *e*.

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the verb. Rather, they are generated in the same position – call it Tense[3] – as Aux(iliaries). The fact that inflectional morphemes are not directly generated on the V is clearly shown by those configurations in which they show up separated from the verb:

(2) a. John **likes** milk.
a'. John doe**s** not **like** milk.
a". Doe**s** John **like** milk?
b. John **liked** your cake.
b'. John di**d** not **like** your cake.
b". Di**d** John **like** your cake?

The examples in (2)a'-a" and (2)b'-b" clearly show that the inflectional morphemes must be generated in a syntactic position distinct from that of the lexical verb itself. In order to account for the suffixation of inflectional morphemes on the verb, Chomsky (1955) proposed a rule of 'Affix Hopping', which lowers the inflectional morphemes onto V. This rule is blocked by *not*, as shown in (2)a',b'. The examples in (2)a",b" show furthermore that the inflectional morphemes can occupy a position that is even farther away from the V, being separated from the verb by the subject. The two positions available for inflectional morphemes in those configurations in which they cannot lower to V are exactly the same as those occupied by Auxiliaries (compare (2) and (1)). Hence, the analysis that inflectional morphemes and auxiliaries are generated in the same position, Tense.

Further progress in the syntactic analysis of verbal inflection was made by Emonds's (1978) contrastive analysis of English and French:

(3) a. John rarely/never/sometimes eats carrots.
b. *Jean rarement/jamais/parfois mange [des] carottes.
c. Jean mange rarement/jamais/parfois [des] carottes.

The contrast between English and French indicates a difference in the position of a certain class of adverbs relative to the verb. Given Chomsky's analysis in terms of Affix Hopping, (3)a indicates that adverbs (unlike Negation) allow Affix-Hopping onto V, which remains inside VP. The French word order in (3)b-c indicates that V raises out of VP; and assuming that movement is structure-preserving (i.e., it cannot create new positions, but instead can target only a position that is already in the base structure), V targets the position in which the inflectional morphemes are generated, i.e., Tense.

This sketchy presentation of the contrast between English and French points to the following theoretical generalizations:

[3] The label of this position changed from Aux (Chomsky 1955) to Infl (Chomsky 1981). For the reasons explained in footnote 1, we will use Tense here, which is however not completely adequate precisely because this position can host – in English at least – not only Tense morphemes but also auxiliaries.

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(4) a. Inflectional morphemes need not, viz. cannot be base-generated directly on lexical categories.
b. Verbal inflectional morphemes are generated in a designated syntactic position, Tense.
c. The position occupied by inflected/finite Vs varies cross-linguistically:
c'. in English, inflected (or uninflected) Vs appear in a low position, which is presumably inside the lexical projection of the verb, i.e., VP.
c". in French, inflected Vs appear in a high position, outside the VP, which can be identified as the same position in which DO+-s/-ed appear in English, i.e., Tense.

The difference between English and French stated in (4)c'-c" was analyzed as resulting from two different rules: Affix-Hopping on the one hand, which applies in English but not in French, which instead has a rule of V-to-Tense raising.

Coming back to the suffixation of the definite article, and assuming that definite articles are, on a par with verbal inflectional morphemes, necessarily generated in a syntactic position that is distinct from that of the noun, there are basically two options: N-to-Det Raising and Lowering of Det to N (Affix Hopping), parallel to V-to-Tense Raising and Affix Hopping. The first option was very largely adopted within the Principle and Parameters framework of the 80's and early 90's (e.g. Dobrovie-Sorin 1987, Grosu 1988, 1994, Delsing 1988, Taraldsen 1990, Giusti 1991, Longobardi 1996). A closer examination of the facts as well as recent developments in morpho-syntactic theory have cast doubt on this analysis (see Dimitrova-Vulchanova and Giusti 1998, Embick and Noyer 2001, Hankamer and Mikkelsen 2005), but no clear alternative analysis was proposed. Note that the suffixation of definite articles need not be a unified phenomenon across languages: some languages could rely on N-to-D raising, whereas others could resort to Det-Lowering. According to Embick and Noyer (2001), the two possibilities are indeed instantiated in Scandinavian languages and Bulgarian, respectively.

In what follows we will show that N-to-Det Raising is not supported by the empirical evidence supplied by Balkan languages.[4] We will instead argue in favor Def-Lowering (a rule pertaining to the PF component of the grammar), pursuing the line of research although not the details of the analysis proposed by Embick and Noyer (2001). Within the framework of Distributed Morphology (see Halle and Marantz 1993, Embick 1997, Embick and Noyer 2001), we will attempt to account for the intricate details of the placement of the definite article in three Balkan languages, namely Romanian, Albanian and Bulgarian. It will be shown that the phenomenon is not unitary: suffixal articles will be shown to be second position clitics in Bulgarian (analyzed in terms of Embick and Noyer's (2001) rule

[4]For arguments against Embick and Noyer's (2001) analysis of Scandinavian in terms of N-to-Det see Hankamer and Mikkelsen (2005).

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of Local dislocation); such an analysis is not adequate for Romanian and Albanian and we will propose instead a Def-Lowering rule that resembles Affix-Hopping in the sense that it is a structure-sensitive PF rule.

1. GENERAL ARGUMENTS FOR A MORPHOLOGICAL RULE

1.1. Lack of displacement effects

The main argument against deriving the suffixation of the definite article by raising of the N(oun) or the A(djective) to D(eterminer) is the lack of word order contrasts such as those which are used as diagnostics for V-to-Tense. Thus, adjectives have the same position relative to the noun whether the DP contains a definite article or not. (5) shows the distribution of most adjectives in Romanian, which are post-nominal in unmarked contexts and may precede the noun only under special conditions, (6) shows that adjectives that are only pre-nominal keep this position when the DP is definite; (7) shows the same lack of displacement effects in Bulgarian, a language with prenominal adjectives: the noun never passes before a prenominal adjective if the DP is definite, and the article attaches to the adjective:[5]

		Romanian
(5)	a. o fată frumoasă a girl beautiful	Standard order, restrictive modification
	b. fata frumoasă girl.the beautiful	
	c. o frumoasă fată a beautiful girl	Affective, non-restrictive
	d. frumoasa fată beautiful.the girl	Affective, non-restrictive
(6)	a. o fostă şcoală a former school	
	b.* o şcoală fostă a school former	
	c. fosta şcoală former.the school	
	d. *şcoala fostă school.the former	

[5] There appears to be an exception to the lack of word-order contrasts, which we will address in section 4.3. For the time being, it is important to notice that it involves a functional element (the demonstrative) and not adjuncts.

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(7) a. goljamo momce Bulgarian
big boy
b. *momce goljamo
boy big
c. goljamoto momce
big.the boy
d. *momceto goljamo
boy.the big

Compare the placement of adverbs and negation which led to the proposal of V-to-Tense in French (Emonds 1978, Pollock 1989):

(8) a. il (*souvent) vient (souvent) ici
he often comes often here
b. il est souvent venu ici
he is often come here
c. ça ne marche pas
it Neg goes not
d. ça peut ne pas marcher
it can Neg not go

The different distribution of finite and non-finite Vs in French with respect to adverbs can be described as indicating that finite Vs occupy (either by base-generation or by obligatory movement) the Tense position, whereas non-finite Vs are inside the VP. No comparable difference in distribution can be shown to exist in the nominal domain: Romanian and Albanian Ns occupy exactly the same position relative to Adjectives and other DP-internal constituents, regardless of whether they are suffixed with the definite article or not. And this seems to be a crosslinguistic generalization:

(9) Ns suffixed with a definite article do not occupy a position that is higher than that occupied by Ns governed by other Determiners (indefinite, demonstrative, cardinals, etc.).

1.2. Locality

A further indication that article suffixation is the result of a morphological rule rather than of a syntactic movement is the strict locality of the relation between the article and its host. For instance, in the Balkan languages, the definite article can attach to the noun only if the latter occupies the NP-initial position; assuming that definite NPs are governed by a D(eterminer), this generalization can be stated as saying that the definite article can attach to the noun only if the latter immediately follows the D position. If the article attaches to an adjective, at most degree words modifying the adjective may intervene between the D position and the adjectival host. If the D position is not followed by either N or AP, a strong form of the article is inserted in Romanian:

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(10) a. drumul lung Romanian
road.the long
b. *lung drumul
long road.the
c. (atât de) lungile drumuri
such of long.the roads
d. *două drumurile
two roads
e. cele două drumuri
the two roads

(11) a. rruga e gjatë Albanian
road.the Agr long
b. *e gjatë rruga
Agr long road
c. (tepër) e gjata rrugë
(extremely) Agr long.the road

1.3. Morphological rules and morphological support

A final remark is in order here, regarding the different status of Affix Hopping and V-to-T raising. The former rule is a 'morphological' rule, i.e., a rule that puts together two distinct morphemes. This analysis is well-motivated by the fact that *–s/-ed* appear either on lexical Vs or are 'morphologically supported' by DO-insertion in those contexts in which Affix Hopping is blocked. The existence of two clearly different syntactic positions in which *-s/-ed* can appear indicates that these Tense morphemes are generated in a syntactic position distinct from the V, and merged with it postsyntactically, at the interface with the Phonological component (PF) of the grammar. Note that there is no comparable alternation for finite verbs in French (or in Romance languages) or for nouns inflected for number, which indicates that V-to-Tense raising is not a morphological rule: it applies during the syntactic derivation, prior to the interface with the Phonological component.

Coming back to the distribution of definite articles in Balkan languages, it resembles the distribution of verbal morphemes in English insofar as a phenomenon comparable to DO-support can be observed : the example (9)e shows that the definite article is not always suffixal, but in certain contexts may appear as an independent word (rom. *cel*) in the D position. The alternation between a suffixal definite article and a strong form thus constitutes further evidence against a raising rule of N-to-D comparable to V-to-Tense and in favor of a morphological rule.

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1.4. Conclusion

We have so far shown that no empirical evidence comparable to that adduced in favor of V-to-T exists in favor of the hypothesis that the suffixation of the definite article in Balkan languages involves a rule of N-raising that would target the Det position. This does not mean, however, that Ns do not raise at all in Balkan languages. According to the analysis to be proposed in section 2 below, nouns do raise in Romanian and Albanian, but their target is the functional projection of Number, which is located in between Det and NP.

2. DEFINING D-LOWERING IN ROMANIAN AND ALBANIAN

In what follows we will propose that the suffixation of definite articles relies on a PF rule comparable to Affix Hopping, which lowers the definite article to Number, a functional projection to which Ns, as well as prenominal adjectives, raise.

2.1. Types of PF displacement rules

In an article dedicated to movement operations that apply after syntax, at the interface between syntax and Phonological Form (PF), Embick and Noyer (2001), analyze Affix Hopping as a structure-sensitive PF rule labeled *Lowering*.

Like all PF rules, *Lowering* affects X^0 elements and is local, but locality is defined in structural terms. Since the simplest type of structural locality involving X^0s is the relation between a head and the head of its complement, Lowering attaches a head to the head of its complement. Since *Lowering* is sensitive to syntactic structure, it must be assumed to apply at an early stage of the PF derivation, prior to Vocabulary Insertion, where some structural information is still available. Embick & Noyer distinguish this type of PF rule from those PF rules that apply to linearized sequences, i.e., to sequences that no longer have any structural information.

Local dislocation is a PF rule of this second type, which applies after Vocabulary Insertion, and does not make reference to structural notions such as XPs, heads or complements, but is sensitive only to linear adjacency and to the organization of X^0s into morpho-phonological words (m-words).[6] Local dislocation

[6] An m-word is defined as the highest segment of an X^0 not contained in another X^0. Although no good definition of 'words' exists, they are currently understood as being made up of sub-word constituents (bound morphemes and roots). The notion of 'm-word' is more general insofar as it covers not only the combinations root + affix, but also those formed by a clitic and its host (which in traditional grammar are sometimes analyzed as two independent words, not as two sub-words). See the foot-note 9 on the difference between "clitic" and "affix".

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reverses the linear order between adjacent morphemes inside an m-word, or between a morpheme and the following m-word.

The fact that Tense-to-V in English skips intervening adverbs and affects both members of a conjunct (as we will show in 2.3 below, see (18)a-c), indicates that it cannot be a rule of Local Dislocation, which can affect only adjacent elements. These properties are compatible with the rule of Lowering defined above. Because it applies at an early stage of the PF derivation, when some structural information is still present, Lowering rules, and in particular Tense-to-V, are sensitive to structural relations: Tense lowers to the head of its complement only if the latter is a VP that is adjacent to Tense. If the adjacency condition is not satisfied, DO-support applies instead of Tense-to-V Lowering. By contrast, typical local dislocation rules are not sensitive to structure, so that we expect a second position element to follow any m-word, regardless of its categorical label. Such is indeed the case for the enclitic conjunctions in languages such as Latin or Ancient Greek.[7] Note also that, precisely because Local Dislocation applies under adjacency regardless of syntactic labels, we do not expect any phenomenon comparable to DO-support to occur.

2.2. The article is not a second position clitic

Let us now come back to the suffixation of definite articles in Balkan languages. The data introduced in section 1 above indicate that this phenomenon cannot be analyzed as relying on N-to-Det raising, but instead must be assumed to involve a PF rule. Our next task then is to choose among the two types of PF rules described above.

The first option would be to analyze suffixal definite articles as 'second position clitics',[8] i.e., as relying on Local Dislocation: in most cases the definite

[7] See, for example, Latin *enim* "for, because":

(i) a. id enim vere est, quod...
it for true is that
b. fundamentum enim aliud nemo potest ponere
foundation for other nobody can lay
c. neque enim, iudices, iniuria metuebat
nor for judges insults he-feared
d. est enim hominum naturae
is for men's of-nature

[8] It should be observed that the label 'second position clitic' is inadequate insofar as this phenomenon, also known as 'Wackernagel's law', may affect not only clitics (see pronominal clitics in old Romance languages or modern Portuguese) but also affixes (see section 3). In other words, although the notions of 'affix' and 'clitic' may, at least within certain theoretical frameworks, be exclusive of each other, the notions of 'affix' and 'second position clitic' are compatible with each other (*contra* Ortmann and Popescu 2000). In section 3 below the Bulgarian definite article will be shown to be both an affix and a second position 'clitic'.

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article indeed attaches to the word immediately following the Det position. However, there are three notable exceptions to this generalization:[9]

(i) degree words may intervene between the D position and the adjective to which the article attaches (see ex. (10c)-(11c), repeated here):

(10) c. (atât de) lungile drumuri
such of long.the roads

(11) c. (tepër) e gjata rrugë
(extremely) Agr long.the road

(ii) in Romanian, some words block the suffixation and trigger the insertion of a strong form; this is the case of cardinals, as shown in (10)d-e. Typical second position clitics attach to the DP-initial word, whatever it is:

(10) d. * două drumurile
two roads
e. cele două drumuri
the two roads

(iii) in Romanian and Albanian, the article must attach to both members of a conjunct:

[9] The affixal nature of the article is related to the following properties: the article may fuse with the termination of the noun (i.e. determines readjustments of the noun's endings) (ex. (i)), may change its form depending on the last phoneme of the noun stem (ex. (ii)), and may vary according to the different inflectional classes of the noun (ex. (iii)):

(i) a. cas**ă** + -a → cas**a** Romanian
house the(sg.fem) house.the
b. vajz**ë** + -a → vajz**a** Albanian
girl the(sg.fem) → girl.the

(ii) mal 'mountain' + def.masc.sg. → mal**i**
gjak 'blood' + def.masc.sg. → gjak**u** (-*u* after velars)

(iii) a. om 'man' + def.masc.sg) → om**ul** Romanian
b. câine 'dog' + def. masc.sg. → câine**le**

Following Distributed Morphology, we do not consider that the inflectional character is incompatible with a second position clitic behaviour (see Embick and Noyer 2001). In this framework, the phonetic and morphological information in the lexical entries is accessed only after syntax, in a stage of the PF derivation called Vocabulary Insertion. At this stage, various morpho-phonological instructions may be associated to particular items – for example, in our case, rules which change the form of the article depending on the declensional type of the noun. If an X^0 undergoes, at Vocabulary Insertion, such operations, it may be called an inflectional affixal element; otherwise it will be called a "transparent" affix or a clitic. But the notions "clitic" and "affix" have no theoretical status, they do not play any role in the DM theory. No rules make explicit reference to the notions "clitic" and "affix": they only make reference to X^0-elements (and XPs, to a certain extent, v. infra 2.2.). The rule of the "second position" simply reverses the order between an X^0 and a following X^0 or XP. The further realization of such an X^0 in various degrees of contextual dependence (what we have called above "inflectional" or "independent") has no interference with this rule. Thus, we should only speak about a "second-position item (or morpheme)" and not about a "second-position clitic".

As evidence for this position, Embick and Noyer show that in the Bulgarian DP the second position rule can affect sequences formed by an affix and a clitic: possessive clitics appear only immediately after the suffixal article. The explanation for this behaviour is that they are clitics on D, and the whole D+Poss undergoes Local Dislocation.

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(12) a. frumosul şi mare*(le) oraş Romanian
beautiful.the and big.the city
b. directorul uzinei şi preşedinte*(le) consiliului de administraţie
director.the factory.the.G and president.the council.the.G of administration
'the manager of the factory and president of the boarding committee'

(13) i bukuri dhe i madhi qytet Albanian
Agr beautiful.the and Agr big.the city

The skipping of degree words illustrated in (10c)-(11c) constitutes evidence against a purely local, structure-insensitive rule, because it is difficult to say that degree words form one m-word with the adjective. This is clear if we compare D-affixation with a typical instance of local dislocation, the Latin enclitic conjunction *que* 'and'. Thus, this conjunction is placed after the adjacent word whatever it is, with the only exception of monosyllabic prepositions, which can be assumed to form an m-word with the following word:

(14) a. superque ea
above-and those
b. in earumque potestate
in their-and power

In the case of D-affixation, degree words are not restricted to monosyllables, they may also be quite heavy, even containing some complex structure: an adverb (neutral adjective) which triggers the insertion of *de* before the adjective, probably in a functional head Deg(ree).

(15) extraordinar de frumoasa prinţesă Romanian
extraordinary of beautiful.the princess

Moreover, in Albanian, the article may also skip cardinals:

(16) (të) dy rrugët
(the) two roads.the

Turning now to the data regarding coordination, the attachment of the definite article to the second conjunct cannot be analyzed as being due to Local Dislocation, since this rule applies only under adjacency, and the second conjunct is not adjacent to the Det position. Note that crucially, the gloss of (12)b indicates that this example need not be a case of DP-coordination (in which case two distinct entities would be referred to), but can also correspond to a coordination of two NPs embedded under the same D: only one entity is referred to by two different coordinated descriptions. Even under the latter interpretation, i.e., in configurations relying on NP-coordination, the suffixal article must be repeated, whereas a strong form of the article renders the repetition impossible, just like in English and in all the languages with "independent" definite articles:

(17) cei doi directori ai uzinei şi secretari ai consiliului de administraţie Romanian
the two directors of factory.the and secretary $Art_{genitive}$ council.the.G of administration
'The two managers of the factory and secretaries of the boarding committee'

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2.3. D-Lowering in Romanian and Albanian is Lowering to Num

All the properties in (i)-(iii) are shared by the classical instance of lowering, the English "Affix Hopping":

(18) a. He always smiles (intervening adverbs)
b. He doesn't smile (insertion of a strong form: "do-support")
c. He talks and eats at the same time (repetition on both conjuncts)[10]

Although Def-Lowering has so much in common with Affix-Hopping, it is nevertheless different from the latter by targeting not only the head of its complement, N, but also prenominal adjectives.[11] This is problematic if we want to maintain that Lowering must always target the head of the complement. However, the similarities are strong enough to invite us to pursue the analysis of D-suffixation in terms of Affix Hopping, or more precisely as a structure-sensitive PF rule of Lowering.

The problem pointed out above disappears if we assume the hypothesis stated below:

(19) Def-Lowering targets Num(ber).

This proposal corresponds to the 'Null Hypothesis' (i.e., it is not a stipulation, but instead follows from independent principles) if we assume (i) a strict definition of Lowering, according to which it can only target the head of its complement and (ii) the widely assumed hypothesis that there exists an intermediate functional projection, Num(ber)P, which intervenes between Det and the lexical projection NP itself. An intermediate Num projection between D and N has been postulated (see Ritter 1991, Rouveret 1991) on theoretical grounds: nouns can freely combine with either singular or plural morphology. If the lexicon is only a list of unpredictable information, the free combination of a head with a grammatical feature should be described as a syntactic process. In our case, Num and N should be distinct items selected from the lexicon and combined via the selectional requirement of Num. There are also distributional and semantic arguments in favor of NumP, as shown by Beyssade & Dobrovie-Sorin (2005), Dobrovie-Sorin, Bleam & Espinal (2005).

Empirical evidence in favor of (19) can be provided by recalling that the definite article cannot attach to any kind of prenominal constituent: prenominal adjectives can host the definite article (in both Romanian and Albanian), but

[10] This is not a case of IP-coordination. See the negative form:
(i) He doesn't talk and eat at the same time.
(ii) # He doesn't talk and doesn't eat at the same time.

[11] We dismiss the hypothesis proposed by Abney (1987) and assumed a.o., by Embick and Noyer (2001) according to which prenominal adjectives are heads taking NP-complements. This would introduce much redundancy in the selectional frames: except for the disputable case of pronouns, Ds require the presence of an N inside their complement, while As are always optional; the complement of D contains only one N which behaves as the "semantic" head of the projection, in Abney's own words, being s-selected by the items which c-select the DP, while adjectives are not limited in number and are not s-selected.

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cardinals cannot do so; in Romanian, cardinals trigger the insertion of a strong form of the article *cel*, similar to *do*-support in English, whereas in Albanian, cardinals are bypassed by Lowering, which attaches the definite article to the noun, and the insertion of a definiteness marker before the cardinal is optional:

(20) a. cele două fete Romanian
the two girls
b. (të) dy vajzat Albanian
(the) two girls.the

What distinguishes cardinals from prenominal adjectives is *the lack or defectiveness of φ-features*. Indeed, in both Romanian and Albanian, most cardinals are uninflected. In Romanian, leaving aside „one" which is not a true cardinal, only *doi* „two" and its compounds show φ-features, but of a defective type: the feminine has a peculiar ending *-ă*, and no oblique case ending is available:

(21) doi (m.pl), două (f.pl) vs. mulți (m.pl), multe (f.pl) Romanian
*dou-or (oblique plural) vs multor (obl.pl.)

Similar facts are encountered in Albanian, where only "three" has gender inflection (*tre* masc., *tri* fem.), while "two" used to have a gender contrast manifested only by vowel length (*dy* masc., *dy:* fem.), an opposition which in the present-day language tends to disappear.

We conclude that in Romanian and Albanian the following generalization holds:

(22) D lowers to a morpheme marked with full φ-features.

The question now is whether this empirical generalization can be explained as a consequence of the hypothesis in (19). The missing link is the assumption stated in (23), which can be viewed as the DP-counterpart of a generalization that is quite clear for the IP-domain, where φ-features attach to a functional head, namely Infl (or more precisely Tense), rather than to the lexical category V itself:

(23) φ-features attach to Num(ber).

Cardinals, on the other hand, are merged in an intermediate position, in between Det and NumP, and as such they can host neither φ-features nor the definite article. Moreover, at least in Romanian, the presence of cardinals leads to a violation of the sisterhood requirement on Det-Lowering to Num°, thus preventing Det-Lowering to either nouns or prenominal adjectives. Hence, the insertion of *cel*, a strong form of the definite article. In Albanian, since the article may skip cardinals, it appears that cardinals do not violate the sisterhood requirement. We may assume that they occupy SpecNum, while the noun occupies Num.

Let us now be more precise regarding the suffixation of the definite article on either N or prenominal adjectives. The first option is quite straightforward: postnominal adjectives are not attracted to Num°, hence the only possibility is for the definite article to attach to N, which is attracted to Num°. The suffixation of the definite article on prenominal adjectives is more problematic.

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(24) marele om de stat
great.the man of state ‘the great politician’

Why does the article, which according to the hypothesis in (19) lowers on Num, show up on prenominal adjectives rather than on N? In order to account for the observed facts we need to assume that Num does not always attract N, but its feature responsible for the attraction of N can also be satisfied by an adjective sitting in SpecNum. Therefore, in (24), N does not raise to Num. That prenominal adjectives should occupy a different position from other adjectives is expected given their special meanings. Thus, adjectives must fulfil special conditions in order to appear in the prenominal position: they are either regular scalar adjectives with a non-restrictive, affective reading (see ex. 5), or non-intersective “modalizing” adjectives of the type *former, alleged, mere*, or adjectives with determiner-like properties such as *singur* in the sense ‘only’.

We will not address here the issue whether prenominal As are base-generated in SpecNum (Bernstein 1993) or move to SpecNum from a lower position. The important fact is that the special restrictions which bear on them support the hypothesis that they occupy a special position.

We still need to understand how D appears on the φ-morpheme of A when the AP sits in SpecNumP (how is the surface string A-φ-D obtained). The simplest way to answer this question is that, just as in the case of N, Num is directly realized as the inflectional morpheme of the item which precedes it, which is either an attracted N or an A sitting in SpecNumP. The inflection on N and A when they occupy other positions would result from an agreement process which also takes place at PF[12] (their φ-morphemes are dissociated morphemes in the terms of Distributed Morphology, see Embick 1997):

(25) $[_{Num}\,[_{N}$om$][_{Num}$pl$]\,] \rightarrow$ oameni ‘men’
$[_{AP}\,[_{A}$mare$]][_{Num}$pl$] \rightarrow$ mari ‘great.pl’
$[_{Num}[_{N}$om$][_{Num}$sg$][_{D}$def$]] \rightarrow$ omul ‘the man’
$[_{AP}$ mare$]\,[[_{Num}$sg$][_{D}$def$]] \rightarrow$marele ‘the great’

2.4. Morphological support 1: the definite article with cardinals

In Romanian (and optionally in Albanian), a strong form of the article is inserted with cardinals, as shown in (20), repeated here:

(26) a. cele două fete — Romanian
the two girls
b. dy vajzat — Albanian

[12] This view is in accordance with current assumptions in the Distributed Morphology framework, according to which agreement facts which have no effects on syntax obtain at PF (Halle and Marantz 1993, Bobaljik 1995, 2005).

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two girls.the
c. të dy vajzat
the two girls

(26)b shows that in Albanian, contrary to Romanian, the article appears on the noun even when a cardinal intervenes between D and N. According to our hypothesis, this implies that D takes a NumP complement in this case, and N raises to Num when SpecNum is occupied by a cardinal. We must assume then that N raises to Num in this case because the cardinal sitting in SpecNum does not satisfy the attracting feature of Num, presumably because Num requires inflected elements (let's say, elements bearing an uninterpretable num feature valued by the Agreement with Num), and cardinals do not comply with this requirement (their lack of inflection would mean lack of the uninterpretable num feature). In Romanian, we will show that cardinals occupy an intermediate level between D and Num, so that the sisterhood requirement for lowering is violated and the suffixation is blocked.

The intervening effect of cardinals in Romanian resembles that of negation in Tense-to-V. Note however that – unlike Neg in English – cardinals may be phrasal, which suggests that they occupy a Spec position:

(27) a. (cele) [aproape zece] nave
(the) almost ten ships
b. (cei) [între cinci şi şapte] profesori
(the) between five and seven professors

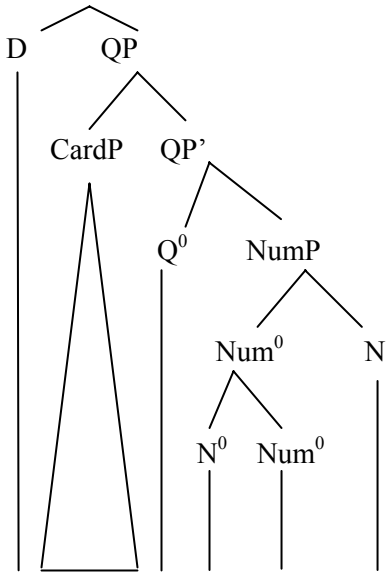
Should we then assume that cardinals sit in SpecNum? According to our hypothesis, in this case lowering should not be blocked, assuming that N occupies Num. So we have to assume that in Romanian cardinals do not occupy SpecNum, but the Spec of an intermediate position between D and Num, which we will called Q(uan)tityP. Fortunately, this proposal is supported by independent evidence. First, some cardinals trigger the insertion of *de* before the following noun (see (28) below). These cardinals have their own φ-features, so it is likely that the reason for this behaviour is that they have an N feature which absorbs Case and forces the following nominal to receive a case-marker in the form of a dummy preposition (*de* is the corresponding of engl. *of*). Except for the insertion of *de*, these cardinals have the same distribution as cardinals which don't insert *de*. Most importantly, the determiners which may precede these cardinals generally show agreement with the noun and not with the cardinal. Therefore we consider that these cardinals occupy the same position as the other cardinals.

(28) cei / aceşti douăzeci de băieţi
the(mpl)/these(mpl) two(fem)-tens of boys

In examples of this type, if the cardinal occupied SpecNum, there would be no position other than Num available for *de*. But the noun following *de* has plural morphology, so we need to say that Num is occupied by the plural morpheme. Thus, a different head is needed between D and Num, labelled Q(uantity) here:

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(29) DP



cei douăzeci de băiat -i ~~băiat~~ → cei douăzeci de băieți 'the twenty boys'

Further interesting evidence in favor of a QP projection that hosts cardinals is provided by the so-called "split DP topicalization" construction:

(30) a. A citit paisprezece cărți / douăzeci de cărți
has read fourteen books / two-tens of books
b. Cărți a citit paisprezece / douăzeci
books has read fourteen / two-tens

In examples of this type, the nominal complements of the cardinals appear in the left periphery. Since the dislocated constituent bears Number, it must be a projection of Num (30b), and since movement of intermediate projections (in this particular case, Num') is forbidden in the current minimalist theory, what is moved in (30)b should be an entire NumP. This means that cardinals cannot occupy SpecNumP: if they were in Spec,NumP they should be moved along with the rest of NumP. So a QP projection seems to be needed.

As for the optionality of the insertion of a preposed form in Albanian, illustrated in (26)b-c, a different explanation is needed. We argued above that the suffixation in these cases shows that cardinals do not introduce am additional projection between D and Num, but sit in SpecNum. Should we say, for the optional insertion of a preposed form (see (26)c), that cardinals may optionally introduce QP? This is not an elegant solution. We prefer a different answer: Albanian shows, to some extent, the phenomenon of definiteness agreement, which is well established in some Scandinavian languages (Norwegian and Swedish, but not Danish):

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(31) a. ata burra(t) Albanian
those men.the
b. de mennene Norwegian
those men.the

As shown by (31)a, definiteness agreement is optional. Since the preposed article is optional too, we could say that it is a definiteness agreement marker on the cardinal, and D always appears on N raised to Num. This is supported by the fact that the same marker optionally appears on cardinals in DPs headed by demonstratives:

(32) ata të dy
those the two

However, as we will show below, there is a case where this marker is really D: the case of cardinals followed by an empty noun.

2.5. Morphological support 2: the definite article with empty nouns

There is a second configuration in which Romanian resorts to *cel*-support, namely with empty nouns:

(33) a. cel mare Romanian
the big 'the big one'
b. cel de la fereastră
the of at window 'the one by the window'
c. cel care ştie
the who knows 'the one who knows'

In none of these environments does Albanian use a preposed form of the article. What we find instead is either (i) the definite article suffixed on adjectives (see (34)a) or (ii) a form identical to the distal demonstrative *ai, ajo* (see (34)b-c), which is used with empty Ns followed by PPs and relatives. The only case where a preposed article is used in a DP with an empty noun is the case of cardinals ((34)d):

(34) a. i madhi Albanian
Agr big.the 'the big one'
b. ai nga dritarja
that from window.the
c. ai që di
that(Dem) that(C) knows
d. Të dy arritën në Tiranë
the two arrived to Tirana

The contrast between Romanian and Albanian on the one hand, and on the other hand, within Albanian itself, the contrast between (34)a and (34)b-c, indicate that the overt realization of the definite article does not depend only on the presence of an empty N, but also on the type of configurations in which empty Ns appear. This is a very complex empirical domain, which is out of the scope of the present paper.

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Let us simply observe that the contrast between (34)a and (34)b-c in Albanian is expected, given that similar contrasts appear even in those languages in which definite articles are strong forms (or maybe clitics, e.g. French or Italian):

(35) a. le rouge/le grand French
b. il rosso / il grande Italian
the red the big

(36) a. celui de Jean French
b. quello di Gianni Italian
that-one of G.
c. celui que j'ai écrit French
the-one that I have written
d. quello que ho scritto Italian
that-one that have.I written

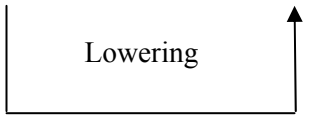
These examples indicate that empty Ns built with relative clauses and with PPs cannot be legitimated by definite articles, even if such articles have are not affixal. In other words, *ai* in Albanian, *celui* in French or *quello* in Italian probably are not mere Dets, but instead could be analyzed as fused forms, corresponding to [Det Num N].

Going back to the Romanian examples in (33)b-c, there are two possible analyses: (i) if we want to assume a unitary analysis of *cel* in all of its environments, we must say that in (33)b-c, *cel* sits under Det; which means that the Romanian examples in (33)b-c are structurally different from (34)b-c in Albanian and (35) in French and in Italian; (ii) if instead we assume the same structural analysis as in the other languages enumerated above, we are led to assume that *cel* is structurally ambiguous: it can either be a Det (in examples with cardinals) or correspond to a fused [Det Num N] constituent. We will leave the choice between these two options open here.

Let us finally consider the puzzling contrast between Albanian and Romanian regarding the configurations in which the empty N is built with an adjective: Albanian uses a definite article suffixed on the adjective, whereas Romanian must use the strong form *cel*. This difference can be described as follows. In both Romanian and Albanian, the application of Lowering yields an illegitimate configuration, because an empty N cannot host a lowered Det. Both languages are therefore forced to use last resort strategies, which are however different: Romanian will insert the strong form of the definite article under Det, whereas Albanian will allow Det to attach to the Adjective. The relevant rule is clearly distinct from Det-Lowering: as we have repeatedly stressed, Det-Lowering is a structure-sensitive PF rule, which applies prior to Vocabulary insertion, and as such it cannot be sensitive to whether N is overt or empty. This still allows us to say that the output of Lowering is illegitimate when N is empty, because the resulting sequence cannot be interpreted at PF. In Albanian, this configuration is rescued by a last resort PF rule which, precisely because it is meant to rescue an uninterpretable PF representation, is a late, post-Vocabulary insertion rule. The relevant structures are given below, where ≠ indicates that (37)a is illegitimate in both Albanian and Romanian, and (37)b and (37)c are the two last resort strategies:

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(37) a. ≠ [$_{D\ -}$] [[$_{Num}$ [$_{N}$e]+Num+def] [$_{NP}$ t_N Adj]



b.[$_{D}$ -] [[$_{Num}$ [$_{N}$e]+Num+def] [$_{NP}$ t_N Adj+ def] (see ex (34)a)



c. [$_{D}$ def] [[$_{Num}$ [$_{N}$e]+Num] [$_{NP}$ t_N Adj] (see ex (33)a)

It is only with cardinals that a preposed form of the article appears in Albanian ((34)d). This may be explained as follows: because D is not adjacent to Num+N, a "port-manteau" morpheme D+Num+N such as *ai* cannot be inserted. Moreover, the cardinal does not allow the dislocation depicted in (37)b. So the only option is the use of the strong form *të*. In the previous paragraph we have seen that the *të* marker which appears before the cardinals in definite DPs could be analyzed as a definiteness agreement marker, because it is optional in DPs with an overt N. We should then say that this is not always the case: when the cardinal is followed by an empty N, *të* represents the article.

2.6. Definite articles and proper names in Romanian

Our analysis of the suffixation of the definite article is supported by an interesting phenomenon concerning proper names in Romanian which, as far as we know, has been not only never explained before, but also hardly ever noticed. In Romanian, anthroponyms do not take the definite article in their standard (i.e. referential) use. However, like in other languages, proper names (PN) can be easily converted into common nouns (CNs) with various meanings, the simplest being "entity called PN" (other possibilities are "part/stage of N", "image / hypostasis of N", "object made by N"; see Gary Prieur 1994, Jonasson 1994). The conversion of PNs to CNs depends on the presence of determiners and/or plural morphology:

(38) a. un Mihai
a Mihai
b. acest Mihai
this Mihai
c. Eu cunosc doi Mihai.
I know two Mihai.

However, the definite determiner is special insofar as it is not always able to legitimate the conversion of anthroponyms to CNs. Let us first observe that a definite article cannot in and of itself trigger the conversion to CNs. This impossibility has a simple semantic explanation: because the definite article

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translates as the iota operator, which is associated to uniqueness, its presence or absence cannot affect the meaning of PNs: 'the only entity called PN'. The use of a definite article with PNs, which may be optional or obligatory in some languages (see Albanian, where proper names always have the definite article), is a purely syntactic option, which has no consequence for the interpretation. Compare the examples in (38)a-b. Because indefinite, as well as demonstrative determiners, are semantically defined as necessarily applying to a set of individuals, their use with PNs necessarily triggers the conversion of PNs to CNs: in (36)a-b, *Mihai* denotes 'the set of individuals (rather than the unique individual) that are named *Mihai'* A proper name can nevertheless be converted to a common noun and at the same time be governed by a definite determiner if it is modified by restrictive modifiers:

(39) a. Maria blondă
Mary(.the) blond 'the blond Mary'

The combination of *blondă* with *Maria*, translated as 'entity called *Maria*' yields a complex predicate attributed to the variable bound by the iota operator (corresponding to the definite article), so that the example in (39)a is interpreted as 'the only individual that is named Mary and is blond'. Note however that not all anthroponyms allow the configuration in (39)a:

(39) b. *Mihaiul blond/*Carmena blondă (intended meaning: 'the blond Mihai/Carmen')
Mihai.the blond/Carmen.the blond
c. *cel Mihai blond/*cea Carmen blondă
the Mihai blond the Carmen blond (intended meaning: "the blond Mihai/Carmen")

The contrast between (39)a *vs*. (39)b-c shows that only a subset of anthroponyms, namely the feminine ones ending in *-a*, can be converted to CNs governed by the definite article (see (39)a). For all the other anthroponyms, masculine as well as feminine, ending in a consonant, neither the proclitic article *cel* nor the suffixal article are allowed (see (39)b-c)[13].

[13] Notice that such restrictive modifiers can be used with PNs provided that a different construction is used, in which the modifier is suffixed with the definite article or preceded by *cel*:

(i) a. Maria cea blondă/blonda
Mary the blond/ blond.the
b. Mihai cel blond/blondul
M. the blond/blond.the
c. ei/noi cei blonzi/blonzii
they/we the blonds/blonds.the

In these examples, *cel* + Adj does not belong to the same minimal DP as the PN, but instead appears as a DP on its own, adjoined to the proper name itself, which is itself a full DP (as shown by (i)c). The fact that the postnominal modifier is a DP rather than an Adj is clearly indicated by the obligatory presence of a definite article, realized either as *cel/cea* or as a suffix. The examples (i)b-c become ungrammatical if the adjective is 'bare':

(ii) a. *Mihai blond
M. blond

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The obvious reason for the contrast in (39)a *vs* (39)b-c is morphological. Notice that while feminines in *-a* show the same endings as the definite declension of common nouns even in the standard ("referential") use, consonantal anthroponyms are uninflected for the oblique case, they use a proclitic marker *lui*, while for all other nouns (i.e., all common nouns and feminine proper names in *-a*), the realization of this case is inflectional (as an inflectional suffix):[14]

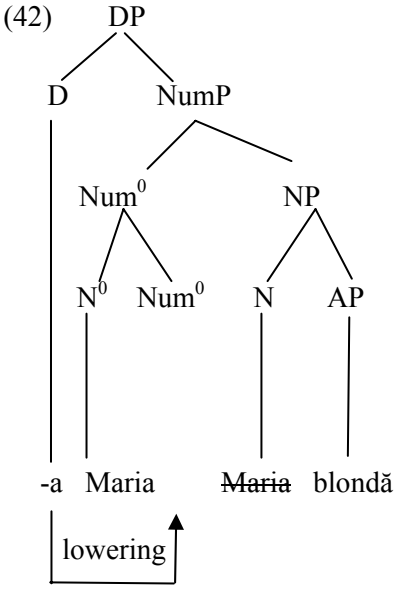
(40) direct: Mihai Maria
oblique: lui Mihai Mariei

Notice that in the standard (referential) use, *-a* does not represent the article, but is just a lexical peculiarity of the noun, as proven by the fact that it appears in contexts where the definite article is forbidden e.g., after a preposition in the absence of a further modifier:

(41) a. la Maria / *la Marie
at Mari-*a*
b. * la casa / la casă
at house.the at house

We propose that their morphological makeup allows nouns in *-a* to raise to Num, and the definite article, as well as the case inflection, may be attached to them by lowering:

(42)



b. *ei/noi blonzi
they/we blond

[14] Colloquial language tends to extend the proclitic marker to all proper names and also to definite DPs refering to persons. But what is important here is that the inflectional marking is *impossible* for anthroponyms ending in consonants, while it is *possible* for those ending in *-a*, even if it isn't obligatory any longer.

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In other words, all PNs are N-projections, but only feminine PNs ending in *-a* can count as inflected, and as such be analyzable as NumPs.

Turning now to PNs ending in consonants, nothing in their morphological form allows them to count as inflected, which makes it impossible for them to raise to Number. As a consequence, the Det-level of representation cannot be projected.

In conclusion, we can account for (39)b-c (the impossibility of either form of the definite article, suffixal as well as strong, with uninflected anthroponyms) if we adopt the following hypothesis:

(43) Definite D must extend a projection which contains at least the Num level.

3. BULGARIAN: THE ARTICLE IS A SECOND POSITION CLITIC

Apparently, definite suffixation in Bulgarian is very similar to that of Romanian and Albanian: like in these languages, nouns as well as prenominal adjectives may receive the article, and moreover prenominal adjectives in this case may also be preceded by degree modifiers:

(44) a. momceto
boy.the
b. goljamoto momce
big.the boy
c. mnogo goljamoto momce
very big.the boy

However, there are some significant differences, which suggest that D suffixation in Bulgarian is not a lowering rule, sensitive to structure. Thus, the article does not appear on both conjuncts, but only on the first one, and it may even attach to uninflected cardinals:

(45) a. novata i interesna kniga
new.the and interesting book
b. *novata i interesnata kniga
new.the and interesting.the book
c. *nova i interesnata kniga
new and interesting.the book

(46) pette knigi
five.the books

The simplest way to capture this difference between Romanian and Albanian, on one hand, and Bulgarian on the other is to say that in Bulgarian definite suffixation is not the result of lowering, but of a local dislocation at the m-word level, typical for the so-called “second position clitics” (the same analysis was proposed by Embick and Noyer 2001). In this case, for (44)c we will say that

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degree words may form a m-word with the adjective, as monosyllabic prepositions do in Latin (see (14)b).

4. SOME APPARENT PROBLEMS: ROMANIAN CONFIGURATIONS INVOLVING SpecDP

In this section we will analyze certain definite N-projections in Romanian which apparently do not comply with our rule of D-Lowering (rule (19)). We will show that these configurations do not consist of a definite D followed by a NumP or QP complement, but instead contain a definite full DP-constituent in SpecDP followed by either a lexical N occupying the Num° position (see DPs containing ordinal numbers or pre-nominal superlatives) or by a demonstrative under Det° (see demonstratives). Such a complex analysis is strongly supported by the fact that in all the relevant configurations, the prenominal constituents that we assume to sit in Spec, DP can occur in isolation, which clearly indicates that they are full DPs.

4.1. The superlative: a definite constituent in SpecDP

Romanian superlatives are formed with a strong definite article *cel* followed by *mai*, the adverbial that heads comparatives, followed by an adjective (see 47a). Relevant for our present concerns is the fact that in this case, Def-Lowering does not apply, as it normally does in configurations containing prenominal adjectives with adverbial modifiers (DegPs), including absolute superlatives (see 47b-c):

(47) a. **cea** mai frumoasă prințesă
the more beautiful princess "the most beautiful princess"
b. foarte frumoas**a** prințesă
very beautiful.**the** princess
c. prea frumoas**a** prințesă
extremely beautiful.**the** princess

In what follows we will show that the underlying structure of (47)a is crucially different from that of (47)b-c. Note first that the definite article together with the comparative forms the superlative (as shown by the translation). More importantly, the comparative phrase (which will be labeled DegP here) forms a constituent with the strong form of the definite article *cel* rather than with the lexical noun, as can be seen from the fact that *cel* must appear before the comparative when the latter follows the noun (48a) or when another determiner is present (48b):

(48) a. prințesa [cea mai frumoasă]
princess.the the more beautiful

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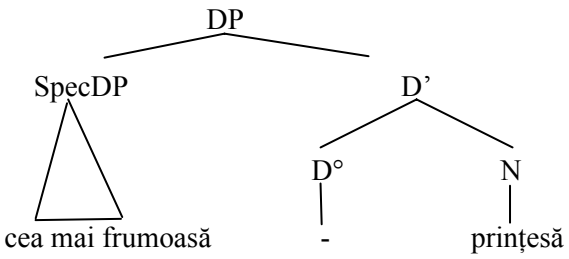
b. această [cea mai frumoasă] prințesă
this the more beautiful princess

We can thus conclude that (47)a has the bracketing (49)a, in which the complement of D contains only the comparative (DegP), not the lexical noun. Compare the bracketing of (47)b-c, given in (49)b:

(49) a. [[$_{Det}$cea] [$_{DegP}$mai frumoasă]] [$_{N}$prințesă]
b. [$_{Det}$ -a] [[$_{DegP}$foarte frumoasă] [$_{N}$prințesă]]

The structural analysis sketched in (49)a is clearly not complete, since Det is too low to govern the N-projection. Let us then assume that prenominal superlatives occupy the SpecDP position, and the Det position itself is empty:

(50)



Because the superlative itself has a definite feature, the empty D° is marked as +def, via Spec-Head agreement. Hence, the definite interpretation of the overall DP.

Our proposal explains why an overt definite article on the head noun is obligatory whenever the superlative is postnominal (compare 47a to 48a): a postnominal superlative does not sit in Spec, and therefore an empty Det cannot be legitimated; hence, it must be overtly realized.

We can now be more precise regarding the internal make-up of superlatives, i.e., of the sequence *cea mai frumoasă* '*cea* more beautiful' meaning 'the most beautiful'. Note that besides the pre- and post-nominal positions shown in (47)a and (48)a, this form can also appear in isolation:

(51) Acestea sunt candidatele noastre. Cea mai frumoasă va concura pentru Miss World.
these are candidates.the our the most beautiful will compete for Miss World

Quite obviously, superlatives that occur in isolation are to be analyzed as containing an empty N:

(52) [[$_{Det}$cea] [[$_{N\text{-}Num}$e] [$_{DegP}$mai frumoasă]]

The same analysis can be assumed for postnominal superlatives: they are full DPs adjoined to another full DP, the definite N:

(53) [[$_{D}$-a] [[$_{Num}$prințesă][$_{NP}$ [$_{N}$~~prințesă~~] [$_{DP}$ cea mai frumoasă]]]]

We are left with prenominal superlatives. If we want to assume a unified analysis, we are led to conclude that they are also full DPs containing en empty N. This is in fact a welcome result: under a constrained theory, Spec positions, and in

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particular SpecDPs, should only host full DP projections. Although the Spec, DP position does not seem to be activated in Romance languages (note however that French superlatives could well turn out to be similar to Romanian superlatives), it is crucial for the analysis of English Saxon genitives (*'John's student'*) and of Greek DPs (Alexiadou 2001).

Let us finally observe that the structure of superlatives proposed here does not characterize all the languages that express the superlative using a definite determiner plus the comparative. For instance, among Romance languages, French behaves like Romanian, but Italian does not. In Italian, it suffices to embed a comparative inside a definite DP to yield the superlative meaning. The repetition of the article before a postnominal superlative is forbidden:

(54) a. la principessa (*la) più bella Italian
the princess (the) more beautiful "the most beautiful princess"
b. la princesse la plus belle French
the princess the more beautiful "the most beautiful princess"

Albanian has the same type of superlative construction as Italian. Therefore, we expect that it will not show the peculiar behaviour with regard to the article suffixation that we encountered in Romanian. This prediction is confirmed: the definite article attaches to a comparative exactly like it does with other adjectives:

(55) a. vajza më e bukur
girl.the more Agr beautiful
b. më e bukura vajzë
more Agr beautiful.the girl.

4.2. Other definite phrases in SpecDP: ordinals, prenominal genitives

Romanian ordinals and genitives are both built with another special form of the definite determiner, *al*. *Al*-phrases are remarkably parallel to superlatives by exhibiting the following structural properties: (a) they can constitute definite DPs on their own (ex. 56); (b) when they follow the noun, they require a determiner on the noun (ex. 57); (c) when they precede the noun, no determiner is needed and nevertheless the maximal N-projection receives a definite interpretation (ex. 58):

(56) a. Al doilea e aşteptat mâine
Art(m.sg.) second is expected tomorrow
b. Al Mariei mi-a plăcut mai mult
Art(m.sg.) Mary.G me-has liked more much
'I liked Mary's better'

(57) a. clasa a doua
class.the Art second

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b. ruda (simpatică a) Mariei[15]
relative.the likable Art Mary.G

(58) a. a doua clasă
Art second class
b. a cărui rudă[16]
Art whose relative

The examples (56)-(57) suggest that *al* in (58) may be analyzed not as the definite determiner of the overall N-projection, but as forming a constituent with the ordinal/genitive, a fact that is parallel to superlatives, in which *cel* forms a constituent with the DegP. The free-standing *al*-phrases (see (56)) are full DPs that contain an empty N°, an analysis that also seems plausible for the examples in (57), where the *al*-phrases are postnominal. We conclude that in the examples in (58), *al*-phrases can also be analyzed as full DPs (containing an empty N) sitting in Spec,DP, in which case the Det position can remain empty.

4.3. Demonstratives

In this section we will examine DPs headed by demonstratives, which are problematic insofar as they seem to display displacement effects, which might be taken to constitute evidence in favor of the rule of raising N-to-D, which we have dismissed in section 1 above.

Romanian demonstratives have two forms, a shorter one, which appears only DP-initially, in a DP containing an overt noun, and another one, extended by an element *-a*, which either heads a DP without an overt N or immediately follows the definite noun:

(59) a. acest copac, această carte, aceşti copaci
this tree (masc) this book (fem) these trees
b. copacul acesta, cartea aceasta, copacii aceştia
tree.the this book.the this trees.the these
c. acesta, aceasta, aceştia
this-one(masc) this-one(fem) these(masc)

The paradigm in (59)a-c resembles superlatives and *al*-phrases insofar as the long form of the demonstrative may appear both in postnominal position (see (59)b) and in isolation (see (59)c).

There is, however, a property that distinguishes demonstratives from superlatives and *al*-phrases: a postnominal demonstrative is necessarily adjacent to the definite noun. This is shown by the examples in (60), where *acest* intervenes

[15] In the case of genitives, *al* is deleted (at PF) when immediately following the definite D (see Dobrovie-Sorin and Giurgea 2006).

[16] Genitives are allowed in prenominal position in standard speech only if they are wh-phrases, while ordinals are not restricted.

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between N and 'low' modifiers, i.e., those modifiers that are closest to N, viz. adjacent to N, with the sole exception of demonstratives (and possessive adjectives or pronouns):

(60) a. energia (aceasta) cinetică (*aceasta)
energy.the this kinetic this
b. forța (aceasta) navală (*aceasta)
force.the this naval this
c. pasta (aceea) de dinți (*aceea)
paste.the that of teeth that 'that tooth-paste'
d. fața (aceasta) de masă (*aceasta)
face.the this of table this 'this table-cloth'

A unified analysis of the facts in (59)-(60) has been proposed by Giusti (1991, 1993), who considers demonstratives to be base-generated in a Specifier position of a projection DemP immediately below D. The prenominal position would result from the raising of this phrase to SpecDP. In the case of postnominal demonstratives, the noun would raise to D and its passing through the head of DemP would endow the demonstrative with *-a* as a result of Spec-Head agreement. In the case of "pronominal" demonstratives (59c), an empty noun would determine the same agreement phenomenon, presumably because it would have to raise in order to be properly governed:

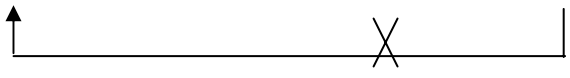
(61) a. $[_{DP}$ acest $[_{DemP}$ t_{acest} $[_{Dem'}$ Ø $[_{NP}$ băiat]]]]
this boy
b. $[_{DP}$ băiatul $[_{DemP}$ acesta $[_{Dem'}$ $t_{băiat}$ $[_{NP}$ $t_{băiat}$]]]]
SHA
c. $[_{DP}$ acesta $[_{DemP}$ t_{acesta} $[_{Dem'}$ $[_{N}e]$ $[_{NP}$ t_e]]]]
SHA

Giusti's hypothesis that the demonstrative is a Specifier is meant to account for the fact that it cannot intervene between prenominal adjectives and the N-head:

(62) frumosul (*acesta) băiat (*acesta)
handsome.the this boy this

On the assumption that the suffixation of the definite article on prenominal adjectives arises as a result of Adj-to-SpecDP raising applying to an input such as (62)′, the sequence in (62) can be ruled out as a violation of locality if the demonstrative is assumed to be a Spec:

(62)′ SpecDP $[_{D}$-L$]$ $[_{DemP}[_{SpecDemP}$ acesta$]$ $[_{Dem'}$ $[_{FP}$ $[_{SpecFP}$ frumos$]$ $[_{F'}$ $[_{NP}$ băiat]]]]]



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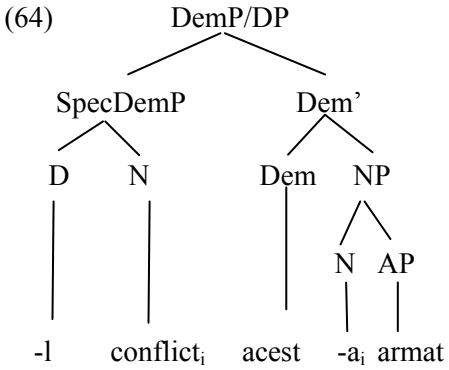
Note however that in the case of prenominal adjectives not only the order Adj-D Dem N is impossible, but also the order N-D Dem Adj, which doesn't result immediately from Giusti's analysis, since the N, moving a head, shouldn't be blocked by either Dem or A, which are assumed to be specifiers:

(63) a. acest prim exemplu
this first exemple
b. *exemplul acesta prim
exemple.the this first
c. această fostă profesoară
this former professor(fem)
d. *profesoara aceasta fostă
professor.the this former

Since we argued that article suffixation is not obtained by raising, we should give an analysis of these facts which dispenses with N-to-D movement.

We will retain Giusti's idea that DPs of the form N+def Dem, e.g., *băiatul acesta* 'boy-the this-a' are a Spec-Head configuration, but we will dismiss the hypotheses that (a) demonstratives are phrasal constituents and (b) the rule of N-to-D applies at all. We will assume instead that the demonstrative is a head that fills the D position and the DP-initial definite noun is in Spec, DP. For the sake of readability a DP headed by Dem will be notated DemP:

(64)



"conflictul acesta armat" – 'this military conflict'

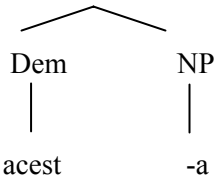
In this configuration, the coindexation between the lexical noun and the suffixal ending *-a* is not to be understood as indicating movement: the lexical noun is an X° constituent which as such cannot move to Spec, DP. We cannot assume that N first attaches to D° and then both move to Spec, DP, since N+D should still count as an X° element. The only way for N+D to count as a full DP is for it to be directly generated under a DP node, as in (64). We will propose then that (64) is a

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base-generated configuration comparable to Clitic Left Dislocation configurations, in which a left-peripheral DP (sitting in some Spec position) is doubled by a coindexed clitic. In (64), the lexical noun *conflictul* is doubled by a weak pro-N element spelled out as the suffix *-a*, which gets attached (at PF) to the demonstrative, yielding the 'long form' of the demonstrative.

This analysis immediately explains why postnominal demonstratives have the same form as "pronominal" demonstratives: in both cases, Dem is followed by an empty N (compare (64) to (65). the structure assumed for a "pronominal" demonstrative):

(65) DemP



Another advantage of this analysis over Giusti's is that we need not analyze the demonstrative as phrasal (as a specifier). Our view that demonstratives are heads seems to be favored by a widely spread crosslinguistic generalization according to which prenominal demonstratives are in complementary distribution with definite (and indefinite) articles.

Nevertheless, we do need to explain why adjectives cannot occur in the pre-demonstrative position. Under our account, we have to say that Adjectives cannot go to SpecDemP. This impossibility can be related to the fact that SpecDemP can only host a constituent that triggers doubling: *-a* is a pro-N, which can only double a lexical N (not an Adj).

We also must explain why a noun preceding the demonstrative is necessarily definite. Under our account, this generalization can be stated as a constraint on the element that can occur in SpecDemP. As we have seen in the previous paragraphs (4.1-4.2), SpecDP is restricted to definite DPs.

A further point on which our account seems to fare better than Giusti's is the impossibility of phrases such as (63)b, d or (66) below, which show that adjectives that are only prenominal cannot appear in the construction with postnominal demonstratives:

(66) a. *observația aceasta primă
observation.the this(-one) first
b. *nevasta aceasta fostă
wife.the this(-one) former

Notice that these adjectives are also impossible with pronominal Dems:

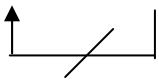
(67) a. *aceasta primă
this-one first

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b. *aceasta fostă
this-one former

Our proposal, which treats postnominal Dems on a par with pronominal Dems, predicts this fact. The impossibility for prenominal adjectives to appear in this construction can be derived from the following assumptions: (i) the suffix *–a* on the demonstrative represents pro-N or appears as a reflex of [$_N$e]; (ii) pro-N/[$_N$e], as all N, cannot move past an prenominal adjective; (iii) suffixal pro-N must be adjacent to its host (or, in terms of null categories, [$_N$e] must be adjacent to a licensing determiner). (iii) must be a PF requirement, since it involves the morphological realization of pro-N/[$_N$e] as a suffix, respectively as licensed by a determiner with a particular inflection:[17]

(68) această primă [$_N$-a]



However there is a point on which our approach fares worse than Giusti's: this is the impossibility of any material between N+D and Dem, illustrated in (60). In Giusti's analysis, this is a consequence of N's head-raising to D and D's taking DemP as a complement. In our approach, we need to stipulate that the DP in SpecDemP must be the lightest possible, i.e. consisting only of the lexical N and its functional projections Num and D. It is not clear how to derive this requirement.

[17] This explanation is supported by similar facts in other languages, such as English. In several papers, Larson (2003, 2004) argues that in structures with pro-N attached to the determiner, the adjectives which may appear are base-generated posnominally. Thus, although prenominal adjectives are allowed, adjectives which have different interpretations in prenominal and postnominal position have only the latter interpretation:

(i) a. every person responsible → everybody responsible
b. every responsible person ≠ everybody responsible
c. every visible star stage-level / individual-level
d. every star visible only stage-level
e. everything visible only stage-level

There is also a ban on recursion which characterizes also post-nominal adjectives, not prenominal ones (essentially, two adjectives after a noun or a determiner compounded with a pro-N are possible only if the second one is heavy enough):

(ii) a. every large heavy thing
b. *every thing large heavy
c. *the rivers explored navigable
d. the rivers [explored] [navigable in the summer]
e. everyone [present] [capable of lifting a horse]

For further arguments, see Larson and Cho (2003), Larson and Marusic (2004).

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Notice that the opposite situation is found in Spanish: demonstratives may appear postnominally in DPs introduced by the definite article, but in this case they must sit at the end of the phrase.

To sum up, we have tried to show that the displacement effects exhibited by demonstratives may be explained without appealing to N-to-D. This allows us to conclude that there is no context in which the process underlying the suffixation of the definite article in Romanian is the rule of N-to-D.

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