CONCORD AND AGREEMENT IN THE ROMANCE NOMINAL EXPRESSION[*]

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Abstract: Why are Nominal Expressions (NEs) and clauses so similar and yet so different? Can we derive all the differences between these two syntactic objects from a unique formal feature of either and the similarities from general requirements on syntactic structure? This paper reduces the similarities between NEs and clauses to three recursive relations triggering "Merge": selection, modification, and projection. The differences are reduced to the propositional vs. referential properties of the these syntactic objects. The truth value resulting from the propositional nature of clauses is the intersection of Person, Time and Polarity, while nominal reference is uniquely related to Person (which includes Number). Intersection occurs with the person feature of a possessor when present.

1. Aims and structure of the paper

Nominal structure is assumed in the literature[1] to display three main layers (1b) parallel to clausal structure (1a). In particular, both clausal and nominal structure establishes semantic/thematic relations in a lexical layer (VP, NP), realizing the morpho-syntactic requirements in an extended projection (IP, AgrP), and are topped by a peripheral layer (CP, DP) which has two functions: its hosts the elements that are evaluated for propositional/ referential interpretation and at the same time satisfies the syntactic requirements of the superordinate structure:

(1)   a.   [CP (Complementation layer) [IP (Inflectional layer) [VP (lexical layer)]]]
       b.   [DP (Complementation layer) [AgrP (Inflectional layer) [NP (lexical layer)]]]

In both kinds of syntactic objects, the three layers have been shown to be "split", resulting in much larger structures. The split is the consequence of the fact that different features can be realized by separate morphemes which are hierarchically ordered in the structure. Features can however be bundled and can appear in a single functional head in which case there is no split, as will also be argued for below.

The tripartite structure is a parallel between NEs and clauses as well know as the fact that NEs display a "defective" behavior with respect to clauses that is summarized in (2) (also cf. Giusti (1996)) which call for an explanation:

(2)   a.   reduced capacity of expansion in each of the three layers,
       b.   optionality of arguments,
       c.   only one structural case,
       d.   highly restricted occurrence of argument clitics,
       e.   lack of interrogative features (cf. English *I wonder what answer).

In a minimalist approach to language (cf. Chomsky 1995-2005 and too many others to be mentioned here), both the necessity of a tripartition in the structure of nominal and clausal
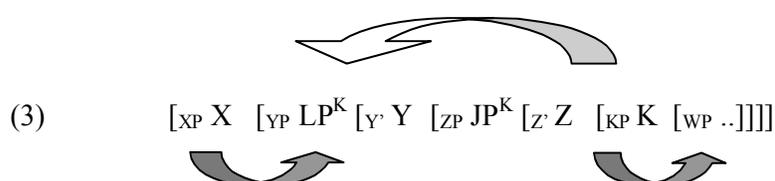
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[1] Among many others cf. Cornilescu (1995), Giusti (1996), Cardinaletti and Starke (1999), Bernstein (2001).
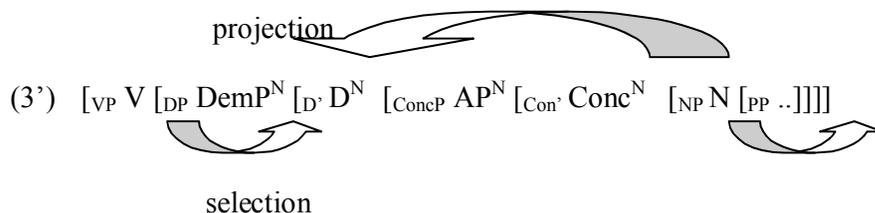
objects and its imperfect realization in NEs can either be viewed as accidental properties of the biological nature of UG, or as a necessity due to logical properties and the respective interpretive mechanisms. The latter is the null hypothesis and will be pursued in this paper. I will derive the tripartition from three recursive structure building relations: **selection**, **modification**, and **projection**, and reduce the defective behaviour summarized in (2) to the difference between the propositional value of a clause and the referential value of a NEs. Throughout the paper, I assume that "Merge" is ruled by universal hierarchies of theta-roles, modifiers, and formal features, which hold for NEs and clauses. The differences between NEs and clauses can be reduced to the propositional vs. referential values related to different formal features merged (and checked) at different stages in the three layers. In section 2, I motivate the tripartite structure for **Nominal Expressions** (from now on **NE**s). In section 3, I observe how the structural notion of "subject" related to the presence of an EPP feature carried by a probe, is realized in the inflectional layer. I follow main stream literature in labeling the feature transfer operation triggered by the probe as **Agree**. This section motivates the prenominal position of possessive adjectives as opposed to the postnominal position of PP possessives in Romance, by arguing that the person features of possessives are targeted by the optional EPP feature of the NE. In section 4, I claim that the feature transfer operation required by Romance adjectives is obtained by copying the features of the head onto the Specifier . It does not imply merge of a probe and movement of the goal. I label this Spec-Head relation **Concord**. In that section we observe that the multiple nature of concord is due to its interaction with projection of the functional features of N up in the syntactic tree. In section 5 I draw some conclusions.

2. The tripartite structure

It is generally agreed upon that the internal layer is the result of the **selection** requirements of the lexical head onto its arguments. If there is one or more arguments in the NE, the external argument is singled out to satisfy an EPP requirement checked by a probe merged at the left edge of the intermediate layer. This EPP requirement is not obligatory in the NE. The intermediate layer also realizes the relation of **modification** (characteristic of adverbs and adjectives). This relation is not obligatory either in the clause or in NEs. I propose that modification holds between a copy of the lexical head (crucially including its functional features) and its specifier (the well-known Spec-Head configuration). The functional head is the result of **projection** (copy and remerge) of the lexical head and its functional structure (here I reformulate a previous proposal of mine, cf Giusti 2002). This operation takes place only if needed and is recursive. The external layer is a (split DP) structure where not only determiners, but also discourse features are projected (for this latter phenomena cf. Giusti 1996, 2005, 2006). The functional head(s) of the external layer are also the result of projection of the lexical head. These three types of relations are represented in (3). Selection holds between a lexical head and its arguments as represented by the lower, dark arrows: X selects YP and K selects WP. Modification holds between a lexical head and appropriate specifiers: JP and LP modify K, as represented by the superscript K. Merger of modifiers requires the projection of copies of the lexical the head as represented by the upper arrow:

(3) $[_{XP}$ X $[_{YP}$ LP^K $[_{Y'}$ Y $[_{ZP}$ JP^K $[_{Z'}$ Z $[_{KP}$ K $[_{WP}$ ..]]]]

Thus, if in (3) X = V, it selects a Nominal Expression YP, which is the extended projection of K = N. YP satisfies the semantic and formal selectional requirements of X (theta-role and Case assignment). At the same time, it contains all the formal features of K, since it is projected by K. The layer realizing the theta-role is also the layer in which the referential value of the Nominal Expression is computed at LF. The upper projection (DP in (3')) hosts the determiner is visible at LF for interpretation. I claim that only the specifier and not the head of D is relevant for LF-interpretation. The intermediate layer (ConcP in (3')) captures the wide spread phenomenon of inflectional **concord,** apparently necessary to license modifiers (when present). By means of projection, all formal features (gender and word class, number, and reference) are shared at all levels, reaching the topmost projection and the left edge DemP.

projection

(3') $[_{VP}$ V $[_{DP}$ DemP^N $[_{D'}$ D^N $[_{ConcP}$ AP^N $[_{Con'}$ Conc^N $[_{NP}$ N $[_{PP}$ ..]]]]]

selection

According to the minimalist point of view, features that are redundantly present in multiple copies are uninterpretable. I propose that these uninterpretable features do not project on their own but are bundled together with other interpretable and/or uninterpretable features hierarchically ordered by UG. So if gender, number, definiteness and case are ordered in this fashion from bottom up, it is possible to bundle gender and number in one and the same category realized as a unique morpheme, as MASC.PL. –i in Romanian *băieț-i* and Italian *ragazz-i* "boys". But if they are projected separately, gender is more internal than number, as in M.PL –os in Spanish *chic-os*, and number case is external to both as MASC.PL.DEF.GEN -lor in Romanian *băieț-i-l-or*.[2]

(4)   a.   băieț-i   (NUM+GEN)
       b.   ragazz-i (NUM+GEN)
       c.   chic-o-s, (NUM > GEN)
       d.   băieț-i-l-or. (NUM+GEN > DEFINITENESS > CASE)

The hierarchy is violated only if a lower feature dominates a higher feature, not if it is bundled in one and the same head. This complies with minimalist requirements on phrase structure (cf. Giorgi and Pianesi's (1997) Feature Scattering Principle) and can dispense with inert projections without giving up the welcome results of the cartographic approach.

The parallel tripartition in clauses and NEs can be reduced to the interaction of these three kinds of relation and should be expected in other constituents as well. Selection is realized in the lexical layer of the selecting head and is satisfied in the complementation layer of the selected element. Modification is realized though the mediation of the specifier of functional heads which bundle the functional features of the extended projection (in the sense of Grimshaw 1991), complementation is present only if theta-roles and argument structure is involved.

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[2] If indefiniteness is to be reduced to partitive case, definiteness can be reduced to all other cases including genitive of possession, with the result that definiteness would not be a morphological feature at all. This is however irrelevant for the moment.

I assume that the propositional value of a sentence is obtained by intersecting the time reference of a situation with the reference of the argument singled out as the subject of the clause (if present). This is done in syntax by insertion of a probe targeting the highest argument in the lexical layer and triggering subject-predicate Agreement in a finite clause. The propositional nature of the clause is then obtained syntactically by matching the person feature of the subject at the edge of the inflectional layer and the tense features of the verb climbing the tree up to the CP layer (Fin and Force).

The interpretive value of a nominal expression is quite different. In the case of an object referring noun, it is not necessary to have a subject inside a NE. But if an argument is present, the reference of this argument intersects the reference of the noun in the same way. For example, *the bag* refers to a specific bag already known in the discourse while *John's bag* refers to a bag having some relation to John. This kind of Agreement inside the NE is the topic of the following section.

3. Agreement

Not only are subjects optional in NEs, but they can be realized by adjectives as well as DPs/PPs. Since Cinque 1980, further developed by Giorgi and Longobardi 1991, it has been observed that possessive adjectives in Italian must be distinguished from PP possessors as well as from other thematic adjectives. The relevant facts are so well known that we can omit a detailed presentation of the data which are summarized in (5):

(5)   a. A possAPs is a pronominal argument of a noun.
        b. In the presence another modifier/argument, it is designated by a thematic hierarchy.
        c. In the unmarked order, it occupies a high position in the nominal structure.
        d. This position interacts only indirectly with the position where articles are merged.
        e. This position must be derived by A-movement of the argument/modifier of the NE.
        f. This movement can be dispensed with if the possAP is focussed or emphasized.
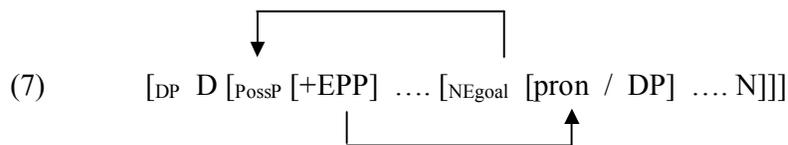   g. If the possAP remains in the lexical layer, it precedes other PP modifiers/arguments.

All properties in (5) are found both in the complex event interpretation and in the result interpretation of denominal nouns like *description* as well as in object referring nouns like *picture*. With the exception of (5a) and (5d), they constitute perfect parallels with clausal subjects. Subjects are designated by a thematic hierarchy, they are moved to a functional specifier, not only to receive Case, but also to instantiate the subject-predicate relation. In Italian this movement may be dispensed with if the subject is focalized bit in the sentence and in the clause (cf. Cardinaletti 1998):

(6)   a. Maria/(lei) ha telefonato   a'. la sua telefonata.
        b. Ha telefonato MARIA/LEI   b'. la telefonata SUA

The main difference between the NE and the clause is that the structural subject position in the clause is available to pronouns and full DPs, while in the Romance NE it seems to be

restricted to possAPs. *La telefonata di Maria* is in fact the only possibility for "Mary's phone-call" irrespective of the discourse features on the possessor.

One reasonable way to capture the previous observation is to propose that, parallel to clauses, there is a unique EPP position inside a NE, to be checked against the highest nominal argument/modifier. The EPP position is the highest in the intermediate layer. I assume that this position assigns structural possessive/genitive case in NE and I label it PossP in where the agreement process is split into two independent procedures: first the probe targets the goal (Agree), then goal is copied and remerged (Move) in SpecPossP:

(7) $[_{DP}$ D $[_{PossP}$ [+EPP] …. $[_{NEgoal}$ [pron / DP] …. N]]]

If the goal is a full NE, Move does not take place in Italian (8a-b), contrary to what happens of possessive adjectives, in which the postnominal position is discourse marked (8c-d):

(8)   a. la   immedata descrizione dettagliata di Gianni dell'incidente
          the   immediate description detailed   of Gianni of-the accident
      b. *la di Gianni immedata descrizione dettagliata _____   dell'incidente
          the of Gianni immediate description detailed   of-the accident
      c. l'   immediata descrizione dettagliata SUA   dell'incidente
          the   immediate description detailed   his   of-the accident
      d. la   sua   immediata descrizione dettagliata __   dell'incidente
          the his   immediate description detailed   of-the accident

Assuming that the possessive adjective is merged in NP to establish a thematic relation to N, one may suppose that possessive movement is triggered by the adjectival nature of the possAP, while genitive PPs would remain in place because they do not concord with N. This hypothesis, however, must be excluded for theoretical as well as empirical reasons.

From the empirical point of view, it would be difficult to motivate why so-called relational adjectives which receive a θ-role like possessives must be postnominal (9), while possAPs, which can be postnominal in the marked order, are moved in the unmarked case (10):

(9)   a. la vecchia opinione razzista italiana
          the outdated opinion racist Italian
      b. *L'italiana vecchia opinione razzista
          the Italian outdated opinion racist
          "the outdated Italian racist opinion"

(10) a. ?la vecchia opinione razzista tua
          the outdated opinion racist your
      b. la tua vecchia opinione razzista
          the your old opinion racist
          "your outdated racist opinion"

If adjectival concord can be satisfied in the postnominal position for relational adjectives, it should also be satisfied in the same position for possessive adjectives, as probably is in (9a).

A second piece of evidence against the reduction of movement of possessive adjectives to their adjectival nature is the fact that the 3rd Person pronoun *loro*, which has no adjectival concord, has the same distribution as possessive adjectives (11a):

(11)   a.   la {loro} vecchia {*loro} fotografia sbiadita {?loro}
               the {their} old {*their} picture faded {?their}
               "their old faded picture"
         b.   la {loro} vecchia {*loro} opinione razzista {?loro}
               the {their} old {*their} opinion racist {?their}
               "their old racist opinion"

A property shared by the genitive pronoun *loro* and possAPs and absent in possessive PPs is pronominal reference. Pronominal reference is in fact a bundle of person and number features unassociated to any other lexical feature. I propose that the probe in NEs targets the person features of the goal. If these are associated with lexical material, the probe is too weak to pied-pipe the full PP but if these are exhaustively dominated by NE, the probe triggers copy and remerge of the pronominal prossessor to SpecPossP. This is confirmed by the marginal possibility for a PP containing a personal pronoun to move, as in (12). Example (12a) is taken from a political trial dated 1821, while (11b-c) are contemporary Italian examples. The cases in (13) are the ungrammatical counterparts of the bold NEs in (12). The ungrammaticality is clrealy due to the full DP nature of the prenominal possessors:

(12)   a.   Allora i de Cristofaro scaricano **i di loro schioppi** contro Ramaglia (...)
               Then the de Cristofaro fire the of them rifles against Ramaglia
               from: Political Trials – Envelope 48 File 2b - Archivio di Stato di
               Campobasso, 1821. < http://www.ripamici.it/storia/storia.html> (March 2007)
         b.   con una nuora autoritaria e **le di lei tre figlie**
               with a bossy daughter-in-law and the of her three daughters
               <http://www.pannostrale.it/scheda.php?compagnia=I+TEATRANTI> (March
               2007)
         c.   Applausi scroscianti in sala e sorriso stellare sulle labbra del protagonista,
               mentre **il di lui cane** - di nome Pinocchio - zampetta giocoso sul palco del
               Teatro dell'Arte, **e la di lui figlia** - Teresa - abbozza un accenno di pianto fra
               le braccia di mamma Francesca, e **la di lui band** - Saturnino in primis -
               osserva l'intera scena ...
               the of him dog ... the of him daughter ... the of him bad
               <http://www.mybestlife.com/ita_anima/Jovanotti_Autobiografia_di_una_festa
               _sito.htm> (March 2007)

(13)   a.   *le [di sua nuora] tre figlie
               the of his daughter-in-law three daughters
         b.   *i [dei De Cristofaro] schioppi
               the of the De Cristofaro rifles
         c.   *il [di Jovanotti] cane / la [di Jovanotti] figlia /*la [di Jovanotti] band
               the of Jovanotti dog/daughter/band

If it is a matter of strength in the feature of the probe, variation is expected. In Germanic full DPs move on a par with pronominal possessives, but the probe cannot pied-pipe a PP:

(14)   a. his daughter
             b. the man's daughter
             c. the daughter of the man
             d. *of the man (the) daughter

Hebrew presents a clear-cut distinction between prepositional and non-prepositional possessives, with no distinction in their pronominal or DP nature. In the construct state (16) the N moves to D, substituting for the definite article and displaying reduced morphology (cf. Borer 1984, Ritter 1991, Siloni 1997). From this position, N licences Genitive (abstract) Case, since the NE$_{goal}$ (a full DP or a pronoun) is not introduced by a P:[3]

(15)   a. ha-bayit   ha-gadol šel ha-iša
                the-house the-big   of the-woman
             b. ha-bayit   ha-gadol šel-a
                the-house the-big   of-him

(16)   a. beyt   ha-iša   ha-gadol
                house   the-woman the-big
             b. beyt-a   ha-gadol
                house-her the-big
                "her big house"

In this language the probe is strong enough to attract pronouns and full DPs. The reason of the open choice for the realization of the PP and the impossibility for it to be moved must be related to a different property that cannot be studied here.

Romanian presents apparent similarities to Hebrew (cf. Grosu 1988, Longobardi 1996, Dobrovie-Sorin 2000, Cornilescu 2003). A full genitive DP or a pronominal possessor (17) can appear in second position following N+art. In the former case, no adjective can follow the genitive DP (17a), but it can follow a pronominal possessor (17b):

17)   a. casa   fetei   (*frumoasă)
                house-the girl-the.GEN   nice
             b. casa   sa   / ei   frumoasă
                house-the possAP.3P.SG.FEMM /pron.3P.SG.GEN   nice

Another difference between the possessive AP and the genitive DP is that the former but not the latter is licenced by a pronominal adjective inflected for the definite article, as in (17):

(18) a. *frumoasa   sa/ei/   *fetei   casă*
             nice-the possAP.3P.SG. /pron.3P.SG.GEN /girl-the.GEN.FEMM.SG house
             'her nice house / *'the nice house of the girl'
        b. *biata   sa/   ei/   *fetei   prietenă*
            piteous-the possAP.3P.SG/pron.3PSG.GEN/girl-the.GEN.FEMM.SG friend
            'her poor friend / *'the poor friend of the girl'

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[3] I thank Grabriella Hermon and Ur Shlonsky for providing the Hebrew data.

I take the facts in (17)-(18) to show that a full genitive NE following the head noun "freezes" the structure building procedure blocking the insertion of any further modifier. This can be derived in the framework sketched above by claiming that in Romanian an N inflected for the definite article acts as the probe targeting an NE_{goal}, in configuration (19). Being inflected with the definite article, N projects a DP which is required for the NE to act as an argument (cf. Longobardi 1994). In this configuration, there is no movement of NE_{goal} to SpecDP:

(19) $[_{NE=DP}$ N+ art+AGREE $[_{NP}$ $[NE_{goal}]$ N$]]$

Merger of a further element after Agreement has taken place would break the relation between the goal and the probe, which could be no more restored, therefore no further projection of N could occur. This proposal keeps the generalization that the nominal probe is weak in Romance without exceptions.

No freezing is found with a possessive adjective. I suggest this is due to the pronominal nature of the possessive. Agreement takes place only very late in (18b), after the AP is already merged in (20):

(20)   a. $[_{NE=DP}$ N+ art $[$ $[$N +AGREE $[_{ConcP}$ AP N $[_{NP}$ $[NE_{goal}]$ N$]]$ $\rightarrow$

            b. $[_{NE=DP}$ N+ art $[[NE_{goal}]$ $[$N +AGREE $[_{ConcP}$ AP N $[NE_{goal}]$ $[_{NP}$ N$]]$

The freezing effect observed in (19) reminds us of the "freezing" effect proposed by Rizzi (2006) for Subject agreement.[4] Rizzi proposes that the subject requirement is a criterial relation and that criterial relations have a "freezing" property which ensures that once a criterial feature is checked no other criterial feature can be assigned/checked on the same element. I propose that possessor licensing, is also criterial in the sense that it must be checked once and only once. As a result of checking, Genitive Case is assigned to the possessor and both the probe and the goal remain frozen in that configuration. The possessor criterion is optional in NEs, while the subject criterion is obligatory in clauses for the independent nature of referential vs. propositional interpretation, as discussed in section 2.

My proposal so far can be summarized as follows. (i) in nominal constructions the presence of a probe, which triggers an Agreement relation between the NE and a NE_{goal} embedded into it, is optional due to the nature of nominal reference which does not require the intersection with the person of a possessor, contrary to the propositional value of a clause which requires the intersection of time and person; (ii) the feature targeted by a nominal probe is Person. In Romance NEs, the probe is weak: it targets and agrees with an NE_{goal} but it only attracts it if it uniquely contains person features; (iii) variation is found as regards the strength of the probe in pied-piping the rest of a genitive DP together with the person features. A different kind of variation is found as regards the possibility to pied-pipe a prepositional possessor. These three

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[4] With one major difference: Rizzi's freezing only regards the moved element and not the triggering head. This is because Rizzi observes cases of movement and not of Agree in place. For lack of space, I will leave the discussion of this difference for future research.

proposals can derive the generalizations reported in (5). More research is needed to motivate the two kinds of variation (DP vs PP, pronoun vs full NE) discussed above.

4. Concord

In this section, I claim that the feature sharing that takes place between the noun and an adnominal adjective is not subject to the Agreement process described above. I will call this different kind of feature sharing **Concord**. Before doing so, I briefly formalize a proposal on the structure building procedure of the intermediate layer assumed so far. I propose that **projection** consists in copying all formal features of the lexical head creating a chain of functional heads. The intermediate layer is the place for direct merge of attributive adjectives which in many languages are underspecified for nominal φ-features. I follow Cinque's (1994, 1999) seminal idea that adjectives and adverbs appear in functional specifiers and are merged according to a universal hierarchy which is not subject to acquisition. I depart from his proposal in two respects. Reformulating what I suggested in Giusti (2002), I propose that the hierarchy of adjectival modifiers does not reflect a rigid sequence of functional projections that are always merged in the structure, but a principle which constraints Merge. I assume that the functional heads in the inflectional layer are trivial copies of the functional features of the head noun (i.e. number and gender or word class and case). These functional features are hierarchically ordered. I follow Giorgi and Pianesi (1997) in assuming that the hierarchy is not violated if two or more ordered features are bundled in one and the same head.

A direct consequence of this, is that we can dispense with empty (or inert) functional heads and empty (or inert) functional specifiers.[5] A head is projected in the inflectional layer only if it is needed to project a specifier or to merge a free morpheme in the head. This proposal captures the fact that adjectives (and even other adnominal elements) display concord for the same bundle of formal features, and not for separate dedicated features (such as gender, number, or speaker-orientation, size, etc.). It also captures the obvious observation that agreement in the clause results in intersecting the φ-features of the subject with the tense features of the verb (the lexical head in the clause), while nominal concord is quite the opposite in that it consists in sharing the φ-features of the lexical head N with its modifiers. Carstens (2000), following a previous proposal by Bosque and Picallo (1996) unifies the two procedures by assuming that adjectival agreement is triggered by targeting a lower element (AP or DP merged inside NP) and attracting it to its Spec. I take the opposite direction here.
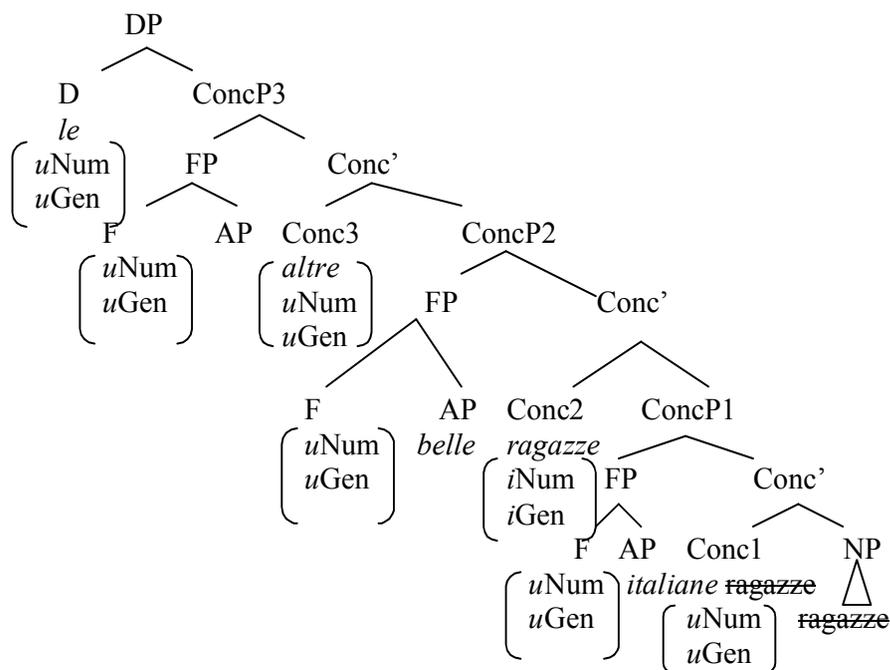
While for genitives we have evidence for a base and a derived position, there is no such evidence for adjectives. Most adjectives do not have any thematic relation[6] to the noun and can be compared to adverbs, which never (need to) A-move.[7] I therefore propose that the feature sharing of concord is obtained by copying and merging the formal features of the lexical head to create a new functional head (Conc). An AP (encapsulated into its own functional structure) is merged in the Specifier of this newly created functional projection (ConcP). The functional structure of the AP (FP/AP) can then check its uninterpretable features. As a result, A is inflected and the uninterpretable features deleted. The main difference with respect to Carsten's proposal is that APs are generated in the same position in which they check the concord with the noun, as originally proposed by Cinque (1994). As an example, an Italian noun phrase with two prenominal and one postnominal adjective is given in (21a).The structure is given in (21b):

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[5] Cf. Belletti (2001) for a defence of the assumption of AgrPs in a minimalist approach.
[6] With the exception of thematic adjectives and even in that case, they do not move parallel to other adjectives and differently from possAPs in Italian.
[7] Of course adverbials, as well as adjectives can A-bar move. to comply with discourse requirements.

(21)   a.   *le altre belle ragazze italiane*
                    the other nice girls Italian
                    'the other nice Italian girls'
            b.

DP
D   ConcP3
le
$\begin{bmatrix} u\text{Num} \\ u\text{Gen} \end{bmatrix}$

FP   Conc'
F   AP   Conc3   ConcP2
$\begin{bmatrix} u\text{Num} \\ u\text{Gen} \end{bmatrix}$ $\begin{bmatrix} altre \\ u\text{Num} \\ u\text{Gen} \end{bmatrix}$ FP   Conc'

F   AP   Conc2   ConcP1
$\begin{bmatrix} u\text{Num} \\ u\text{Gen} \end{bmatrix}$ *belle* $\begin{bmatrix} ragazze \\ i\text{Num} \\ i\text{Gen} \end{bmatrix}$ FP   Conc'

F   AP   Conc1   NP
$\begin{bmatrix} u\text{Num} \\ u\text{Gen} \end{bmatrix}$ *italiane* ~~ragazze~~   ~~ragazze~~
$\begin{bmatrix} u\text{Num} \\ u\text{Gen} \end{bmatrix}$

   The lexical head [N *ragazze*] with its interpretable formal features of Gender (feminine) and Number (plural) moves out of NP, i.e. is copied and re-merged as the head of ConcP1, in whose Spec an FP/AP is merged with the uninterpretable Num and Gen features bundled in a functional head F. The interpretable values for Num and Gen in N+Conc are transferred to F. In Romance, N further moves to create a higher ConcP (ConcP2). If more than one AP is present in the lexical array, the merging operation of adjectival modifiers proceeds, subject to a universal hierarchy of modification.[8] The head N in Romance moves no further. But silent copies of the feature bundle are copied in higher ConcPs if needed for the merging of more APs present in the lexical array. When the FP/AP containing the hierarchically higher adjective is merged and the highest ConP is created, the operations building the intermediate layer are concluded with the merging of an AgrPossP (if an EPP feature is present in the lexical array, as we have seen in sect 3). After that, the projection of the complementation layer can start.
   This proposal is in the line with Grimshaw's (1991) notion of extended projection as a chain of heads sharing all features. It is best captured by Giorgi and Pianesi's (1997:14-16) *Feature Scattering Principle*, and is compatible with Matushansky's (2006) recent definition of head as "a syntactically indivisible bundle of formal features". It also complies with minimalist assumptions that formal features are interpreted once but have uninterpretable copies which serve syntactic licensing, as in Chomsky (1995) and much following work.

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[8] As established by Cinque (1994), and many others after him, among whom Bosque and Picallo (1996), Laetzlinger (2005), Cinque (2005).

A possible candidate for a filler of F/A is the Romanian "adjectival article" *cel*.[9] In (22a) the Romanian FP/AP displays the same concord suffixed on A as Italian, but can optionally be preceded by *cel*. Notice that only adjectives with restrictive function can be preceded by *cel* . A thematic AP cannot, as in (22b):

(22)   a.   tabloul (cel) frumos
             picture+art (CEL) nice
             'the nice picture'
      b.   invasia (*cea) italiană
             invasion+art CEA Italian
             'the Italian invasion'

(23)   a.   cel frumos (*tablou)
             CEL nice
             'the nice one'
      b.   (*tabloul) cel al Mariei
             CEL AL Maria.Gen.
             'Maria's'
      c.   cei trei (băieți)
             'the three boys'

It is apparent that *cel* can appear at least with three different functions. In (22) it introduces a restrictive FP/AP in postnominal position. In (23a) it cannot appear when the FP/AP is in prenominal position, but can licence an empty N. This is also the case of (23b) where a PP is present and N must be non-overt. Finally, *cel* can appear in D and co-occur with N in the presence of a numeral AP. Such variation in how overlapping bundles of features are realized is expected in the present framework. I follow Cinque (2004) in suggesting that *cel* represents uninterpretable φ-features in a reduced relative clause which is responsible for the restrictive interpretation of the AP in (22a). In (23) *cel* has two different functions: in (23a-b), it overtly realizes the same uninterpretable features in D thereby licencing an ampty N. In (23c) it realizes F for numeral adjectives which are otherwise uninflected.

Summarizing the results of this section, Concord is feature transfer from the head onto its specifier. It does not take place in a dedicated projection. As a consequence, we expect Concord to occur not only with adjectives but also with NE merged in SpecNP, provided that the highest head of NE comes from the lexicon with unvalued Number and Gender features. This is the case of the adjectival preposition *a* in Romanian. In (24b), the N *portretul* is first merged as already inflected with the definite article. The possessor is inserted in SpecNP and in this configuration the functional element *a* copies the Number and Gender features of the head noun, which moves out of NP and creates ConcP1. The extended projection of an adjective can further merge in SpecConcP and copy the features of N. In (24c) N remerges for the second time. Its lower copy in Conc1 is uninterpretable and the upper copy carries the interpretable features with it. The specifier can function as left edge and the projection can be completed by probing the Person features FF_i of the possessor *Maria* and intersect them with the Person features FF_j of the NE *portretul*:

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[9] Cf. Coene (1999) for a detailed presentation of the data and an alternative proposal. Also cf. D'Hulst, Coene and Tasmowski (2000) for an analysis of *cel* and *al* as pronominalizers.

(24)   a.   portretul   nou   al   Mariei
               portrait-the new P-the Mary.Gen
          b.   [$_{ConcP1}$ [$_{FP}$F[uMASC,uSG]] [$_{AP}$ nou-]] [portretul[iMASC,iSG]] [$_{NP}$ [$_{NEgoal}$ [$_P$ al[uMASC, uSG]] [Mariei]] [$_N$~~portretul~~[uMASC, uSG]]]]]] →
          c.   [$_{DP=NE}$ FF$_j$+FF$_i$ [$_D$portretul[iMASC,iSG]+AGREE] [$_{ConcP1}$ [$_{FP}$F[uMASC,uSG]] [$_{AP}$ nou-]] [~~portret~~[uMASC, uSG]] [$_{NP}$ [$_{PP=NEgoal}$ [$_P$al[uMASC, uSG]] [Mariei]$_i$] [$_N$~~portretul~~[uMASC, uSG]]]]]]

In (24c) the Person features of NE and the Person features of NE$_{goal}$ combine at the left edge. This is done overtly in Germanic where the possessor is in complementary distribution with determiners. For Romance, a possible alternative is to project the probe in a separate projection ConcP2 in (25) which is headed by a silent copy of N and its φ-features:

(25)   [$_{NE}$ FF$_j$ [$_D$N[iφ]] [$_{ConP2}$FF$_i$ [$_{Conc}$ ~~N~~[uφ]+AGREE [$_{ConcP1}$ [$_{Conc}$ ~~N~~[uφ]]] [$_{NP}$ [$_{NEgoal}$ [$_P$al [uφ] [Mariei]$_i$] [$_N$~~N~~[uφ]]]

In the minimalist spirit, I favour the analysis in (24c) over (25), as it is more economical and parallel to Germanic (26a)-(27a) below.

However, when Person features are realized in pronominal possessives in Romance, FF$_j$ and FF$_i$ do appear in separate specifiers. For example if FF$_j$ are in SpecDP and the article is in D in Italian (25b), the possessive adjective follows the determiner and must be in the immediately lower SpecConP, as represented in (27b):

(26)   a.   her other nice Italian friends
          b.   le sue altre belle amiche italiane
               the her other nice friends Italian
(27)   a.   [$_{DP=NE}$ FF$_j$ +[$_{FP=NEgoal}$ FF$_i$ [her]] [$_{Conc4}$ [iPL]] [$_{ConcP3}$ [$_{FP}$ [$_{AP}$ other]] [$_{Conc3}$ [uPL]] [$_{ConcP2}$ [$_{FP}$ [uPL] [$_{AP}$ nice]] [$_{Conc2}$ friend+s[uPL]] [$_{ConcP1}$ [$_{FP}$ [uPL] [$_{AP}$ Italian]]$_i$ [$_{Conc1}$ ~~friends~~[uPL]] [$_{NP}$ [$_{NEgoal}$ ~~her~~]$_i$] ~~friends~~[uPL]]]]]]
          b.   [$_{DP=NE}$ FF$_j$ [$_D$ le[iFEMM, iPL] [$_{ConcP4}$ [$_{FP}$ FF$_i$ [uFEMM, uPL] [$_{AP}$ sue]] [$_{Conc4}$ [uFEMM, uPL]] [$_{ConcP3}$ [$_{FP}$ [uFEMM, uPL] [$_{AP}$ altr-]] [$_{Conc3}$ [uFEMM, uPL]] [$_{ConcP2}$ [$_{FP}$ [uFEMM, uPL] [$_{AP}$ bell-]] [$_{Conc2}$ amiche+[uFEMM, uPL]] [$_{ConcP1}$ [$_{FP}$ [uFEMM, uPL] [$_{AP}$ italian-]]$_i$ [$_{Conc1}$ ~~ragazze~~[uFEMM, uPL]] [[$_{FP}$FF$_i$ [$_{AP}$su-]] $_{NP}$ ~~amiche~~[uFEMM, uPL]]]]]

The hierarchy of reference mirrors the hierarchy of embedding. The person features that are therefore in the following order: NE > NE$_{goal}$, namely FF$_j$ > FF$_i$, as represented in (18) and (27). In (27b) each FF is in a different specifier obeying this hierarchy. In (27a) FF$_j$ and FF$_i$ are merged in the same specifier, but they are checked in the required order and do not violate the hierarchy.

The question why in some languages the peripheral position in the intermediate layer is to host the attracted agreeing possessor, while in others it is the peripheral position in the upper layer remains open for the moment. The answer may lie in how the intersective reference is obtained at LF (possibly the two features must combine at LF in all languages) and how this interacts with overt vs. covert movement in syntax.

If the place of interpretation is the leftmost specifier, we can assume that the intersection of the referential features of NE and of NE$_{goal}$ must combine in the highest specifier at the latest at LF (as implied by Campbell 1996, Giusti 1997).

5. Conclusions

In this paper I have sketched a principled proposal to derive parallels and differences between NEs and clauses. The parallels are derived by the fact that Merge is regulated by general principles representing semantic relations in the syntactic structure: selection, projection and modification. What is different between clauses and NEs is derived by Economy and by the different nature of formal features. Clauses have truth value and Force which require the intersection of the the reference of the subject and the time reference of the situation. NEs have just referential features which include Person and Number. These features are intrinsic to nominal interpretation and do not require intersection with other reference features. However, they are compatible with an EPP element which triggers intersection between the referent of the lexical noun and the referent of the external argument. On the contrary, the EPP feature is obligatory in a clause.

Let us now summarize the defective characteristics of NEs reported in (2) above and how they are captured by the proposals developed here:

(2)   a.   reduced capacity of expansion in each of the three layers;
         b.   optionality of arguments;
         c.   only one structural case;
         d.   highly restricted occurrence of pronominal clitics;
         e.   lack of interrogative features (cf. English *I wonder what answer).

If we assume that the structure is projected only if needed, a reduced expansion in NEs (2a) is expected, given that NEs do not need a probe. Lack of an obligatory probe also accounts for the optionality of arguments in (2b). If there is at most one probe in NEs, and if structural case is assigned as the result of Agree, we also expect (2c). The question remains open as to the nature of accusative in the clause (whether it is the result of a lower probe and why this second probe does not appear in the NE)

If pronominal clitics in Italian are related to Tense, the lack of productive pronominal clitics in NEs (2d) can be related to lack of tense features. More remains to be said as to the nature of pronominal clitics in Balkan languages, whether they are of a different kind and for this reason they can appear in NEs. Finally, lack of interrogative values (2e) checked inside the NE is straightforwardly explained by the lack of propositional value, which implies Force and truth value in clauses and not in NEs.

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