THE "PRO-N" CLITIC *EN* / *NE* AND THE THEORY OF CLITICIZATION

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Abstract: The Romance pro-N clitic (Fr., Cat.) *en* / (It.) *ne* is problematic for most theories of cliticization, because some phenomena support a movement analysis, while others seem to speak against movement. Endorsing the view that the pro-N clitic is the result of movement, this paper[1] argues that the problems of this analysis can be solved by assuming that this clitic does not represent an N or NP, but rather a functional head intermediate between D/Q and N (probably Num), whose complement is empty after the DP-phase is completed. Consequently, I propose that the theory of cliticization should be modified in order to allow "dynamic minimality": only minimal elements may cliticize, but non-minimal elements may become minimal in the course of the derivation, if their complement has a null spell-out.

Keywords: clitics, nominal ellipsis, DP syntax, X^0-status, Romance

1. Introduction

In the Romance languages that have PP-clitics (French, Italian, Catalan), there is a clitic that stands for nominals introduced by *de*: Fr., Cat. *en*, It. *ne*, stemming from Lat. *inde* 'from there'. This clitic can represent various types of *de-* constituents:
(i) a *de-* PP subcategorized by the verb (in Italian, the preposition is *di*):

(1)   a.   N' **en** parlons plus.   = Ne parlons plus **de cela**. (Fr.)
           not-**of-it** talk-1PL any-longer   not talk-1PL any-longer of that
           'Let's not discuss about that any more.'
       b.   Ottenne   finalmente la patente e **ne** approfittò subito.   (It.)
           (Cordin 1988)
           obtained-3SG finally   the licence and **of-it** took-profit immediately
           'He finally got the license and took profit of it immediately.'

(ii) an ablative *de-* PP, indicating the source of movement or the cause. In Italian, the preposition in this case can also be *da,* besides *di*:

(2)   a.   Il n' **en** est jamais sorti.   = Il n'est jamais sorti de là(-bas). (Fr.)
           he not-**of-it** is ever   come-out   he not-is ever come-out from there
           'He has never come out from there.'

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       b.   Erano   richiusi   in una prigione… ma **ne**   sono fugiti con
               were-3PL imprisoned in a   jail   but **from-it** are run with
               estrema facilità facilità.   (It.)
               extreme easiness easiness
               'They were imprisoned in a jail, but ran from there extremely easily.'

(iii) a genitival (adnominal) *de*-PP:

(3)   a.   J'**en** connais l' auteur. = Je connais l' auteur **de ce (livre…)**.   (Fr.)
               I **of-it** know the author   I know   the author of this (book..)
               'I know its author.'
      b.   Gli   piaceva Firenze e   amava visitar**ne**   i   musei   (It.)
               him.DAT liked   Florence and loved   to visit-**of-it** the museums
               'He liked Florence and loved to visit its museums.'   (Cordin 1988)

Besides these constituents, the *en / ne* clitic can also pronominalize an NP embedded under an indefinite determiner. This is what we call a "pro-N clitic" – corresponding to Milner's (1978) "quantitative *en*":

(4)   [Context: did you bring any books?]
      a.   J'**en** ai   apporté deux / beaucoup / quelques-uns / plusieurs **[Ø]**.   (Fr.)
               I *en* have brought two / many   / some   / several
               = J'ai apporté deux / beaucoup / quelques-uns / plusieurs **livres**.
               'I have brought two.'
      b.   **Ne** ho   portati   due / molti / alcuni.   (It.)
               ne have.1SG brought two / many / some
      a′.   *J'en ai   apporté ceux-là / chacun.   (Fr.)
                I *en* have brought those / each
      b′.   *Ne ho   portati quelli. / *Ne ho   portato ciascuno.   (It.)
                ne have.1SG brought those / *ne* have.1SG brought every

The DP to whose NP-part *en / ne* is associated must occupy a deep object position – it must be a direct object or a postverbal subject of an unaccusative verb.
     En / ne can also correspond to a deep-object DP introduced by the so-called "partitive articles" – Fr. *du, de la, des,* It. *del, della, dei, delle* – which are morphologically identical to *de* + definite article sequences, but function as (mostly weak) indefinite determiners introducing plurals and mass nouns. In Italian, it can also correspond to a deep-object bare noun (argumental bare nouns and DPs with partitive articles have a similar interpretation in Italian):

(5)   [Context: did you bring any books?]
      a.   Oui, **j'en** ai apporté.   = J'ai   apporté **des**   **livres**.   (Fr.)
               yes I *en* have brought   I have brought PART.PL books
      b.   Si, **ne** ho   portati.   = Ho portato **libri / dei libri**.   (It.)
               yes *ne* have.1SG brought   have.1SG brought books / PART.MPL books

It is easy to show that in this construction we have the same pro-N clitic as in (4): first, note that the semantic relation between the pro-form and the antecedent is the same in (5) and (4), and different from (1)-(3): the pro-form is not related to its antecedent by referential anaphora, but by identity-of-sense anaphora. The objects in (4)-(5) are interpreted by recovering a nominal content – the NP 'books'. There is no salient referent (in the previous discourse or in the extralinguistic context, for deictics) to which the pro-form refers, but only a salient nominal concept which acts as the descriptive part of the deep object that the pro-form is associated with. The *en / ne* clitic is thus associated to noun-ellipsis or "nominal anaphora"[2]. Secondly, the same syntactic restriction to deep objects appears in (4) and (5). These facts lead to an analysis of the examples in (5) as representing a null spell-out of the partitive article in the context _[Ø] (i.e., when followed by an empty N(P) constituent); of course, for bare nouns the determiner is null anyway (see Longobardi 1994 for arguments for the presence of a null D in argumental bare nouns). The *en / ne* clitic is associated to the empty NP constituent inside the object:

(6)   J'**en** ai apporté **[de[Ø]]**.
        Ne ho portati **[Ø/di [Ø]]**.

Further evidence in favor of this proposal is that the complement of D can contain overt material – modifiers that fall outside nominal ellipsis:

(7)   a.   J'**en** ai   apporté **de** bons **[Ø]**. = J'ai   apporté de bons livres.   (Fr.)
                I *en* have brought *de* good   I have brought *de* good books
        b.   **Ne** voglio   **di** belle **[Ø]**.   (It.) (Cordin 1988)
                ne want-1SG *di* beautiful-F.PL

2. Problems for a base-generation analysis of *en/ne*

Besides the traditional analysis of clitic placement by movement, there is also a line of thought which considers that sees clitics as base-generated functional heads of the verbal extended projection or as agreement markers on the verb (Borer 1984, Jaeggli 1982, 1986, Sportiche 1996, Roberts 2006). This analysis is highly problematic for the clitic *en / ne*, including its pro-N use.

First, if clitics represent functional heads of the verbal extended projection or agreement markers on verbs, we expect them to be associated with the main grammatical functions realized in a clause, which are standardly considered to be licensed by functional elements of the verbal extended projection – subjects (licensed by Tense), objects (licensed by v* or transitive Voice), possibly indirect objects, at least in the double object construction (licensed by Appl). But none of the PP-uses of *en / ne* listed in section 1 above – see (1)-(3) – belongs to this category: in (1)-(2), *en / ne* pronominalizes a PP selected by the verbal root, where P can directly eexpress a theta-role – see the ablative use in (2); in (3), the pronominalized constituent is not even attached to a verbal

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[2] This term is used for identity-of-sense anaphora in the case of nominal constituents by Corblin (1995).

projection: it is an adnominal constituent. The same problems for a base-generation analysis of clitics are found with the "locative" clitic *y*, which can even pronominalize adjuncts:

(8)   J'y   ai   mangé aussi.   (Fr.)
       I LOC.CL have eaten   too
       'I also ate there.' (e.g. in a restaurant)

The pro-N use of *en / ne* is similar to the pro-genitive-PP use, in that the pronominalized constituent is DP-internal. Since structural case is assigned to whole DPs and agreement concerns whole DPs, it is not likely that this clitic is associated to structural case licensing. The same conclusion can be drawn from the fact that it can be associated to both objects (see (4)-(5)) and postverbal subjects[3] (see (9)):

(9)   a.   Ne sono   morti tre.   (It.)
               ne   are.3PL dead   three
               'Three have died.'
      b.   Il en est venu   beaucoup.   (Fr.)
               it *en* is   come many

A general problem for the analysis of clitics as verbal functional heads in French and Italian is that these languages don't have in situ clitic-doubling – clitics are in complementary distribution with realized arguments – see (10). This is not the case for agreement markers such as subject agreement, which appear on the verb independently on the overtness of the subject – see (11).

(10)   a.   Je (*le)   vois Jean.   (Fr.)
               I   him.ACC see   Jean
      b.   (* Lo)   vedo   Gianni.   (It.)
               him.ACC see.1SG G.
(11)   a.   Les enfants dorment / *dort.   (Fr.)
               the children sleep-3PL / sleep-3SG
      b.   I   bambini dormono / *dorme   (It.)
               the children sleep-3PL / sleep-3SG

Sportiche (1995) proposed that the complementary distribution is due to a double-filled-Comp-Spec filter on Cl-projections. But, besides the ad hoc character of this assumption, one may wonder why the same filter does not apply to subjects.

      Another problem for the analysis of clitics as functional heads licensing arguments is the fact that clitics may appear with a different verb than the one which case-licenses them, in clitic-climbing environments:

(12)   Non glielo   posso   dare.   (It.)
       not   him.DAT-3M.SG.ACC can.1SG give

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[3] In French, the use with subjects is restricted to unaccusatives in the expletive *il* construction.

We conclude that the clitic *en / ne* is not base-generated in the verbal extended projection, but is moved to its surface position. This movement is due to a morpho-phonological requirement of weak pronominal forms to be spelled-out in the vicinity of designated functional heads. In the Romance languages discussed, this designated head is T. For a formalization of clitic placement compatible with the current minimalist representation of movement as attraction, see Nash and Rouveret (1997, 2002).

3. Problems for the analysis of *en / ne* as a pro-NP

In a movement analysis of clitics, the most straightforward way to represent the pro-N use of *en / ne* is to treat this element as an N or NP with anaphoric properties, comparable to English *one* (see, a.o., Corblin 1995). This analysis faces however two problems.

The first problem is that the clitic *en / ne* also appears when the NP-part of an indefinite DP is dislocated, as in (13) below), and there is evidence that at least some of these dislocations are derived by movement.

(13) a.   De roses, j'en ai   acheté onze.   (Fr.)
              of roses I *en* have bought eleven
               'As for roses, I bought eleven.'

      b.   J'en ai   visité plusieurs, d'expositions d'architecture.   (Fr.)
              I *en* have visited several   of exihitions of architecture
              'I visited SEVERAL architecture exhibitions.'

      c.   Di bambini, ne sono venuti molti.   (It.)
              of children *ne* are   come many
              'As for children, there came many.'

      d.   (Di) sedie, ne abbiamo   portate (molte) nel   magazzino.   (It.)
              (of) chairs *ne* have-1PL brought (many) in-the   store
              'As for chairs, we brought many into the store.'   (Benincà et al. 1988)

      e.   Ne ho   viste molte di situazioni come queste.   (It.)(Internet)
              ne have.1SG seen many of situations like these
              'I've seen MANY situations like these.'

Unlike other cases of clitic doubling, which are restricted to topicalization, the clitic is obligatory irrespective of the type of dislocation. Thus, it is also required in focus fronting and clefting:

(14) a.   (DI) ARTICOLI, ne ha letti pocchi   (It.)(Benincà et al. 1988)
              (of) articles   *ne* has read few
      b.   È DI SEDIE che ne abbiamo portato molte dal   magazzino
              is of chairs   that *ne* have.1PL brought many from-the store

There is evidence that at least some instances of dislocation are the result of movement. The most undisputed case is focus fronting. Since this construction does not allow a doubling clitic in other cases – see (15), it is commonly considered an instance of movement. Cinque (1990) presented various other similarities between focus fronting and wh-movement, among which the fact that focus fronted subjects behave like postverbal subjects with respect to *ne*- cliticization – see (18)).

(15)   MARIO (*l') ho   visto.
        Mario   (CL) have.1SG seen
(16)   a.   Quattro (*ne) sono arrivati.
                four   *ne* are arrived
        b.   *(Ne) sono arrivati quattro.
                 ne are   arrived four
        c.   No, QUATTRO *(ne) sono arrivati, non dieci!
                no four   *ne* are   arrived not ten

If focalization is the result of movement, it follows that the fronted NP in (14) has moved to its surface position, presumably from the DP-internal position following the quantifiers (*pocchi*, *molte*). But in this case we cannot say any longer that *ne* is a pro-N generated in that position.

Turning now to (13), there is evidence that at least some types of topicalization are derived by movement. For clitic left dislocation, the structure with movement and the structure with base-generation (Hanging Topic) can be formally distinguished only with PPs (the presence of a P reflects movement). For dislocated NPs as in (13), *de* can represent the spell-out of a nominal functional head in the absence of a higher nominal functional head – this may explain the fact that it doesn't appear when the NP is DP-internal, except after a special type of quantitative determiners such as Fr. *beaucoup*:

(17)   J'ai   acheté onze (*de) roses.   (Fr.)
        I have bought eleven (of) roses

Therefore, constructions with left-dislocated *de*-NP can represent hanging-topics. But *en* doubling a dislocated NP also appears with right-dislocated NPs, and there is evidence that this construction always relies on movement. This evidence was presented by Milner (1978) for French, and Villalba (2001) for Catalan. The pieces of evidence refer not only to the NP-dislocation in particular, but also to right-dislocation in general:
(i) Number agreement is obligatory in right dislocation:

(18)   a.   j'en ai   un, de cheval   (Fr.)(Milner 1978: 3.41)
                I *en* have one of horse
        b.   *j'en ai   un, de chevaux
                I *en* have one of horses
        c.   *j'en ai   deux, de cheval
                 I *en* have two   of horse

    d.   j'en ai   deux, de chevaux
            I *en* have two   of horses

(19)   i gatto- comunisti poi sono anche peggio. Una volta **ne** ho   visto **uno, di**
        the cat- communists then are even worse once *ne* have.1SG seen one of
        gatto-comunista, che si sgranocchiava un intero asilo   a merenda. (It.)(Internet)
        cat-communist   that REFL crunched   an entire asylum for snack

(ii) Prepositions cannot be omitted before the right-dislocated constituent:

(20)   a.   Je lui   ai parlé hier,   *(à) Marie.   (Fr.)(Milner 1978)
              I CL.DAT have talked yesterday to Marie
        b.   Marie, je lui ai parlé hier.

(iii) Right dislocation obeys common islands constraint (the Catalan examples are from Villalba 2000):
(a) The coordinated-subject constraint:

(21)   a.   *{La Maria va preparar-lo} i   en Pere va parlar d'aquest llibre,
               the Maria has prepared-it and the Pere has spoken of this   book
               el sopar.   (Cat.)
               the dinner
        b.   *J'ai   apporté la mienne et deux draps,   de couette.   (Fr.)
               I have brought the mine   and two bed sheets of blanket

(b) The subject island:

(22)   a.   *{Ser-ho} no és fàcil, de ric.   (Cat.)(Villalba 2000: 3.27b)
               be -it   not is easy of rich
        b.   *La mienne lui a révélé   toute la vérité,
               the mine   him has revealed all   the truth
               de sœur.   (Fr.) (Milner 1978: 3, n. 1)
               of sister

(c) Adjunct islands:

(23)   a.   *{Si en Pere en parla}, has de fer el   sopar, d'aquest
               if the Pere *en* speaks must   do the dinner of this
               llibre.   (Cat.)(Villalba 2000: 3.27e)
               book
        b.   *Si elle en apportera deux, ce sera   suffisant, de rôtis.   (Fr.)
               if she *en* will-bring two it will be enough   of steaks
        c.   Si tu le connais, mon frère, dis-le/*Si tu le connais, dis-le,
               if you him knows my brother say-it
               mon frère.   (Fr.)(Milner 1978: 3.77a)
               my brother

(d) The Right Roof constraint: Villalba (2000) tests this constraint by using right-dislocated material in the matrix clause. Right-dislocated material from an embedded clause cannot follow right-dislocated material from the matrix clause, showing that right dislocation is clause-bound:

(24)   a.   [S1 Li van suggerir [S2 que **hi**   anés, **a casa**],
                 her go suggest   that there.CL goes at home
                 a la Maria].   (Cat.)(Villalba 2000: 4.11)
                 to the Maria
        b.   *[S1 Li van suggerir [S2 que **hi**   anés], a la   Maria, **a casa**].
                 her go suggest   that there.CL goes to the Maria at home

Milner shows that right dislocation is clause-bounded by using infinitive complement clauses:

(25)   a.   J'ai avoué [**l'** avoir rencontré une fois, **l'inculpé**,] au policier   qui
                 I have confessed him have met once the defendant to-the policeman   who
                 m' interrogeait.   (Fr.)(Milner 1978: 3.78a)
                 me-was-questioning
        b.   *J'ai avoué [**l'**avoir rencontré une fois] au policier qui m'interrogeait,
                 l'inculpé.
(26)   a.   J'ai   avoué   [**en** avoir lu   deux en trois ans, **de livres censurés**,] au
                 I have confessed *en* have read two in three years of books censored to-the
                 policier   qui m' interrogeait.   (Fr.)(Milner 1978: 3.78c)
                 policeman who me was-questioning
        b.   *J'ai avoué [**en** avoir lu deux en trois ans] au policier qui m'interrogeait,
                 de livres censurés.

We come thus to the conclusion that the NP is moved to its surface position in at least some of the dislocations illustrated in (13)-(14) (in focalization and right dislocation). But then *en / ne* cannot represent the NP itself.

The generalization is that *en / ne* is associated to an NP gap inside a postverbal deep object. The gap can be an NP-ellipsis – yielding the nominal-anaphora interpretation illustrated in (4)-(7), a trace of movement – see (13)-(14), or even a base-generated empty N. Indeed, as shown by Corblin (1995), sometimes the empty N associated with *en / ne* is not interpreted by nominal anaphora (as an ellipsis):

(27)   a.   Il y   **en** a **qui n' ont peur de rien**.   (Fr.)
                 it there *en* has who not have fear   of nothing
                 'There are **people** who fear nothing.'
        b.   J'**en** connais **des**   **comme ça**.   (spoken Fr.)
                 I *en* know   ART.INDEF.PL like   that
                 'I know some people like that/of this sort.'
        c.   J'**en** connais **un qui va   protester**.   (Corblin 1995: 5.11)
                 I *en* know   one who will protest
                 'I know somebody who will protest.'

    d.   J'**en** connais **qui vont protester**
            I *en* know   who will.3PL protest
            'I know some people who will protest.'
(28) %   **Ne** sono venuti molti   (without N-antecedent) (It.)[4]
            'There came many people.'

A second argument against considering *en / ne* as a true pro-NP comes from the theory of ellipsis. We have shown that one of the interpretations of DPs containing a gap associated to the clitic *en / ne* is by nominal anaphora (interpreted the missing NP as a salient nominal concept), which is a type of ellipsis. Research on ellipsis has drawn an important distinction between opaque null anaphorae, with no internal structure, and anaphorae which have internal structure visible to syntax and interpretation, such as VP-ellipsis or sluicing. Nominal anaphora, including the one associated with *en / ne*, belongs to the category of anaphorae with internal structure. The existence of internal structure for interpretation is illustrated in (29), where the empty NP constituent contains a quantifier which takes scope over the DP (for other arguments in favor of the existence of internal structure of nominal anaphorae, see Giurgea 2010).

(29)   Le journal   contient deux interviews de chaque concurrent et   la   revue
        en contient **trois [$_N$e]**.
        the newspaper contains two   interviews of each   competitor and the magazine
        en contains three
        [$_N$e] = interviews with each competitor

It has been argued that anaphorae with internal structure are distinguished from opaque anaphorae by being the result of deletion (see Depiante 2000, translating into the recent framework the distinction between *surface* and *deep* anaphora, see Hankamer and Sag 1976). Smith (2001) argues that in the minimalist framework, where all operations are triggered by properties of the lexical items, anaphorae with internal structure cannot be but the result of deletion (as structure-building operations are triggered by lexical items). One might argue that all is needed for ellipsis is copy, so that the structure is built only once, in the antecedent. But since ellipsis may cut across sentences, this requires the possibility of a Copy operation across different derivations.

        If this analysis of nominal anaphora is correct, it follows again that *en* cannot represent the NP, because the NP is represented in syntax by lexical material which undergoes deletion in the PF-component.

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[4] Cardinaletti and Giusti (1992, 2006) claim that the clitic *en* must be absent if the empty N is non-anaphoric. However, not all Italian speakers accept such examples; for some, the use of *ne* is obligatory with an object or unaccusative postverbal subject even if the interpretation is without nominal anaphora:

(i)   (%) Ieri   ho   incontrato molti   per la strada.   (Cardinaletti and Giusti 2006: 114)
            yesterday have.1SG met   many-M.PL on the street

4. Proposal: Dynamic minimality

Summing up the conclusions of the previous sections, we are after an analysis of *en / ne* in which (i) *en / ne* is not base-generated as or on a functional head of the verbal extended projection (a Cl-head or agreement features on a verbal functional head) and (ii) *en / ne* does not represent an N-constituent. Although these two desiderata may look irreconcilable at first sight, I argue that they can be both fulfilled if we revise some assumptions of the movement theory of cliticization.

It is generally accepted that elements undergoing cliticization must have X^0-status. This appears to exclude constituents of the type [H XP]. However, given that X^0-status and affixal behavior are phenomena mainly pertaining to morphology, it should be possible that [H XP] constituents behave as heads as long as their XP-component is empty. Now, if we adopt Chomsky's (2000, 2001, 2008) phase theory, in which spell-out applies, cyclically, to certain chunks of structure, during the derivational process, we can consider the possibility that XP becomes empty at a certain point of the derivation, allowing H to behave as a head with respect to further head-sensitive syntactic processes such as cliticization. This allows us to formulate the analysis of *en / ne* as follows:

(30)   The "pro-N" clitic *en / ne* represents a nominal functional category whose
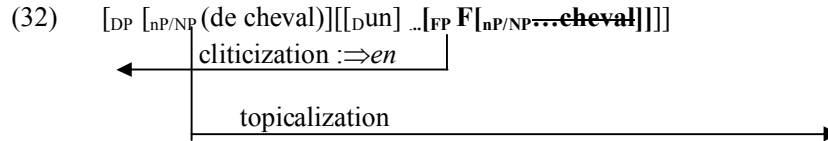   complement is null by the time the DP-phase is completed

Identifying the empty complement of *en / ne* to nP or NP, we arrive at the representation in (31), where the bold-faced constituent is the item which undergoes clitic placement and is then spelled-out as *en / ne*:

(31)   [D[**F[$_{NP/nP}$ Ø]**]]

The NP (or nP) can be null (i) as the result of ellipsis, which can result from deletion – see (4) and (29) above, (ii) as the result of movement – see (13)-(18) above, or (iii) by base-generation, in which case the empty N is not interpreted by ellipsis, but receives a very general interpretation, normally [+human] – see (27)-(28) above.

In the case of NP-extraction, in (13)-(18) above, on the assumption that DP is a phase, we must say that when cliticization takes place, the NP is in the escape-hatch position of the DP phase. Thus, that the complement of F is already empty at that point, allowing FP to undergo clitic placement[5]:

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[5] Note that we should probably assume the same type of intermediate movement for FP (to another Spec of D used as an escape-hatch): even if we assume the second formulation of the Phase Impenetrability Condition (Chomsky (2001)), according to which the DP-phase is spelled-out when the next phase head, v*, is inserted, it is likely that *en / ne* raises to the verbal domain after v* is inserted. But if FP moves by virtue of its clitic status, and this status is acquired after the spell-out of the DP phase domain, we run into a timing problem. A possible solution is that the deletion of F's complement precedes operations at the D level because it involves the spell-out of a lower domain, the nP phase (for an nP phase parallel to vP in the verbal domain, see Svenonius 2004, Chomsky 2008).

(32) $[_{DP}\ [_{nP/NP}$ (de cheval)$]][[_{D}$un$]\ ..._{FP}\ \mathbf{F[_{nP/NP}...cheval]}]]]$

cliticization :$\Rightarrow$*en*

topicalization

Cliticization cannot be movement of F alone, because functional heads cannot in general be separated from their complements. That is why I proposed that it is the entire FP that moves, and this movement is made possible by the fact that FP only contains F as an overt element.

The idea that a complex constituent can acquire the status of an X^0 element during the derivation, following deletion operations, can be formulated as a recursive definition of 'minimal':

(33)   a.   If X is a lexical item, X is minimal.
       b.   If X is minimal and it's the only *overt* element of its phrase, XP is minimal.
       c.   If X is marked as a clitic and merges with Y, Y minimal, forming the object Z, then Z is minimal.

Because the minimal status is not established once for all, but can be acquired during the derivation, this concept of minimal status can be called "dynamic minimality". The underlying assumption is that X^0 (i.e. "minimal") status remains a condition for cliticization, and, more generally, for complex head formation, which is seen here as a syntactic operation (for arguments that head movement is syntactic, see Zwart 2001, Lechner 2005, Surányi 2005). Syntactic cliticization is a species of complex head formation.

Given that the minimality concept proposed is relevant for complex head formation and complex head formation is presumably an operation needed to fulfill PF-requirements (essentially, providing appropriate hosts for phonologically weak elements), it is not theoretically implausible to consider that the X^0-status can be acquired during the derivation, following PF deletion in a lower phase. The main objection which can be raised is that we assume that phenomena on the PF-branch may affect further syntactic computation (by making an element minimal, in this case). But notice that the phenomena we discuss are not purely phonological: copy deletion and ellipsis, the phenomena which we claim to be able to affect the X^0-status of an element, belong to an abstract level of the PF-component, where syntactic structure is still visible. Current research in the syntax-phonology mapping distinguishes several stages in the PF-derivation, of which some precede and some follow Vocabulary Insertion (see Embick and Noyer 2001, Bobaljik 2002, a.o.). Linearization is certainly sensitive to structural notions, and it probably follows copy deletion and ellipsis. The fact that PF-deletion may have syntactic effects is independently argued for in Bošković (2011). The level where copy deletion and ellipsis apply may thus be called a syntactic level of the PF-derivation, where the abstract features of syntactic objects have not yet been replaced with phonological matrices. The assumption we need can thus be made more innocuous: not any PF-operations may effect further syntactic computation, but only those placed in the syntactic stage of the PF-derivation.

5. Possible independent evidence that *ne* may represent a nominal functional projection

Kupferman (2004) argued that *en / ne* cannot represent a partitive PP (a proposal which appears to be supported, for Italian, by some examples in Cardinaletti and Giusti 1992, 2006[6]). However, *en / ne* may appear after fractional nouns such as *half*. Interestingly, in this case it is possible, in Italian, to have agreement with the quantifier – although *not* with the DP complement of the partitive P:

(34)   Ho   comprato delle mele e   **ne** ho   mangiat**a**   la   metà. (Cordin 1988)
        have.1SG bought   some apples and *ne* have eaten- F.SG the half(F.SG)

Assuming that these constructions, like true partitives, rely on a functional head R/Q (as proposed for partitives by Zamparelli 1998; see also (for true partitives) Kupferman 2004 for French, Giurgea and Nedelcu 2009 for Romanian), we may say that the head R or Q receives feminine singular from the specifier *metà*, then RP/QP, raising as *ne*, transmits these features to the participle:

(35) $[_{DP}[_{DPQuant}$ la metà$][D[_{\mathbf{RP}} (t_{DPQuant})\mathbf{R}[_{DP/KP} Ø]]]]$

If *ne* represented a PP, the presence of φ-features would be unexpected. Note that these features are not the features of the complement of the partitive P, which is plural (*le melle* 'the apples').

6. Unification of the uses of *en / ne* and the restriction to indefinites

We have seen in section 1 that *en / ne* is not only associated with NP-gaps inside indefinite deep objects, but also to various PP-gaps in which the preposition is *de*. Milner (1978) attempted to unify all these uses by assuming that *de* is always present between the determiner and N in the underlying structure and is deleted after certain determiners after the cliticization of the [*de* + Ø] constituent has taken place; if the determiner (analyzed as SpecNP at the time) is a more autonomous expression (possessing a specifier, i.e. having phrasal status, we may say), this *de* is not deleted, resulting in strings such as *beaucoup d'enfants* 'many *de* children'. This allows a general rule covering all the uses of *en*, according to which *en* spells-out the [*de* + Pro] sequence (Milner 1978: 164). Quantitative *en* corresponds to a Pro which is an N′ or N, the other uses, to a NP as Pro. As for the fact that *de* appears in NP-dislocation even with definites, while *en* is restricted to indefinites, Milner (1978) proposes a rule that deletes *de* after a [+definite] SpecNP. Note that this rule must apply after dislocation but before *en*-cliticization.

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[6] The relevant example (for which the authors propose a different account) is:
(i)   *Maria deve essere innamorata di [**Gianni e   Mario**]ᵢ perchè vuole ricever**ne**ᵢ   almeno uno
            Maria must be   in-love   of Gianni and Mario   because wants to-receive-*ne* at-least one
            prima delle undici
            before of   eleven

The reader may have noticed that mutatis mutandis, Milner's (1978) analysis of quantitative *en* is quite similar to the one proposed here. However, it is more difficult to update his unification of the uses of *en*: in the framework adopted here, syntax operates with objects made of abstract features, and forms such as *de* only appear at a later stage of PF, at Vocabulary Insertion. It seems difficult to find a common feature of the preposition or case marker *de* appearing in genitives and source PPs and a functional head intermediate between D and N. A possibility is to treat the preposition *de* as a functional preposition or case marker, which is supported by its genitival use. It is well-known that some determiners may assign genitive to their NP-complement (see Slavic numerals). We can assume that indefinite determiners assign genitive to their complement, which we may identify with NumP (see also Cardinaletti and Giusti 1992, 2006), who proposed that determiners associated to quantitative *en* assign partitive case to their NP-complement). In case *en / ne* represents nP rather than NumP (see discussion in the next section), we can say that the [genitive] feature assigned by the determiner spreads to all functional heads in the noun's extended projection.

These hypotheses allow us to propose the following vocabulary insertion rule for *en*:

(36)   *en / ne* spells-out a functional head having the features genitive/ablative, whose complement is empty

7. The exact label of *en/ne*

The main problem of the analysis proposed here, which I will not receive a definite answer in this article, is that the label of the constituent spelled-out by *en / ne* is not easy to identify. The N-gap does not necessarily comprise all the NP-internal material, but can exclude various modifiers and even complements of the N:

(37)   a.   J'aime bien ta vidéo, je la trouve marrante mais j'aurai bien aimé qu'elle continue un peu plus longtemps!! J'espère qu'on **en** verra **une de toi** sur la planche de surf!!!   (Fr.)
              (http://tracetaroute86.blogspot.com/2009/09/la-deuxieme-video.html)
              'I like your video, I find it funny but I would have liked it to continue a little bit. I hope we'll (**en**) see **one** (video) **of you** on the surfing board.'
        b.   Parmi ces   traductions, il y   **en** avait **deux de l'   Iliade**.
              among these translations there *en* had   two   of the Iliad
(38)   – Quanti   traduzioni di Homero in italiano ci   sono?   (It.)
          how-many translations of Homer in Italian   there are
         – **Ne** conosco **due dell' Iliade e   tre   dell' Odissea**.
           ne know.1SG two of-the Iliad   and three of-the Odyssey

Postnominal as well as prenominal adjectives may appear around the N-gap. The distinction between prenominal and postnominal adjectives can be drawn, in French, based on the form of the indefinite plural article, which is *de* when there is a prenominal A and *des* otherwise (examples from Jamet 2007, 2.21-2.23):

(39)   a.   Des gâteaux? On en mange **d'** excellents   / **de** très bons à la
                des cakes   one *en* eats   *de* excellent-M.PL / *de* very good at the
                pâtisserie viennoise.
                Pastry-shop Viennese
        a´.   [**de très bons gâteaux**]
        b.   Des gâteaux aux noisettes ? On en mange **des** excellents à la pâtisserie
                viennoise.
        b´.   [**des gâteaux** excellents]
        c.   – Je cherche des nappes.   Vous en avez **des** carrées,
                 I look for *des* tablecloths   you   *en* have *des* square.-F.PL
                des rectangulaires.   ou **des** rondes.
                des rectangular.-F.PL or *des* round-F.PL

The presence of overt complements suggests that the gap can be a part of the NP (as already noticed by Milner 1978). But this is not compatible with the present analysis of cliticization, according to which at least the whole NP must be empty in order for a higher head F to acquire minimal status and be subject to cliticization.

A solution to this problem has been proposed in the recent research on nominal ellipsis, which starts from the assumption that deletion must apply to a whole phase or phase domain: Corver and van Koppen (2005, 2006, 2007) have proposed that the overt material, which is distinguished from the elided or extracted material by not being (context-)given, is first separated from the elided or fronted domain by being extracted to a Focus position inside the DP (for focus movement inside the DP, see also Giannakidou et Stavrou 1999, Ntelitheos 2004, Eguren 2007). Adopting this sort of analysis, the example (38)a will be represented as follows, assuming extraction of the non-given material to the right:

(40)   [_{DP}une[_{FP}**[_{nP/NumP}n/Num[_{NP} [_{+Given}~~video~~] [_{+F} ~~de toi~~]]]**[_{+F}de toi]]]

Notice that if the [+F] material is linearized to the left, we cannot explain the fact that the French indefinite article still distinguishes between prenominal and postnominal constituents, as we have seen in (39)[7].The bold-faced constituent in (40) represents the element undergoing cliticization.

A further problem is the fact that in case of dislocation, the NP is preceded by the element *de / di* (optionally in Italian, obligatorily in French: see section 2, examples (13)-(14) and (18)-(19)). Unless *de / di* is inserted postsyntactically, we must assume a functional head intermediate between N and the one realized by *en*:

(41)   [_{D}D… [_{F}**F**[_{G}de[NP]]]]

We might say that *en/ne* spells-out Num(P) and *de* spells-out n. Notice that the possibility to have prenominal adjectives (see (39)) excludes the identification of *en* with Q (the head introducing quantitative expressions), because such adjectives cannot precede Q:

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[7] For further problems for this analysis of the overt constituents with ellipsis, see Giurgea (2010).

(42)   a.   ces   trois   excellents   gâteaux
                 these   three   excellent   cakes
        b.   *ces   excellents trois   gâteaux
                 these   excellent   three   cakes

In conclusion, *en / ne* may be the spell-out of NumP, or, if *de / di* in dislocations is inserted post-syntactically, of nP (for n, a functional head in the nominal domain similar to v in the verbal domain, see Marantz 1997, Saab 2005, Svenonius 2004, Chomsky 2008, Cornilescu 2007). Notice that if *en / ne* spells-out nP and adjectives are allowed to adjoin to NumP or above, we can explain the presence of some the overt modifiers without resorting to focus movement, by simply base-generated them above nP[8]:

(43) $[_{NumP}$(AP) [Num $[_{nP}$ **[n $[_{NP}$Ø]]**]](AP)]
                (bons)   en   (carrées / rectangulaires / rondes)

8. Conclusions

The main idea proposed in this paper, that the X^0-status which is a precondition for cliticization may be acquired during the derivation as a result of deletion, is useful in dealing with other cliticization phenomena, besides the *en / ne* clitic. A case in point is 3rd person clitic pronouns.

Elbourne (2001, 2005) convincingly argued that 3rd person pronouns can be interpreted as *the + NP-ellipsis*. But this requires a complex internal structure of personal pronouns: [D [NP]]. Notice that this interpretation is also found with clitics. This means that the arguments associated with clitics cannot always be simple X^0s, they can be phrasal [D NP] constituents. It is of course possible to analyze clitics as base-generated Cl heads which are related by Agree with a *pro* in the argumental position (see Sportiche 1995), but, as we have seen in section 1, this analysis of clitics is quite implausible for languages (such as French and Italian) where clitics are in complementary distribution with overt arguments and are not restricted to structural cases. The dynamic minimality defined in (33) allows a simpler solution: clitics can be considered moved arguments, in spite of having a complex structure ([D [NP]]), because the minimal status can be acquired if the complement of D is empty after the completion of the DP-phase.

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[8] Regarding the correlation between ellipsis and phasehood, notice that the structure in (43) is in accordance with the view that ellipsis affects phase domains (i.e., complements of a phase head), under the natural assumption that nP is a phase (see Svenonius 2004, Chomsky 2008, Cornilescu 2007).

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