## THREE TYPES OF POSSESSIVE MODIFIERS\*

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#### 1. Introduction

Since Chomsky (1970) much research on the parallelism between the structure of nominal phrases and clauses has taken place in generative syntax. The first step in that direction is to consider NP as a counterpart to the clausal VP, a lexical category, which can be dominated by some functional material. Szabolcsi (1981, 1983, 1994) among others proposes that the functional projection dominating NP is headed by a determiner. This projection is labelled DP, for Determiner Phrase following Abney (1987). The 'DP-hypothesis' has been strengthened by much work in the late 1980's, specifically in comparative studies. Elements such as possessives, adjectives and demonstratives are widely studied in current research. One issue concerns the nature of these elements, whether they are heads or maximal projections, and another one their position in DP. In Section 1.1., the theoretical positions adopted here are briefly reported and supported by a selection of arguments. Of course, for reasons of space, the arguments presented are far from exhaustive.

#### 1.1. Theoretical background

#### 1.1.1. *From NP to DP*

The reanalysis of NP as DP is supported by two striking arguments. The first one is the cooccurrence of articles and possessive modifiers in various languages as (1) illustrates. As *a* and *te* in (1a) and *il* and *suo* in (1b) co-occur without leading to ungrammaticality, they cannot sit in the same position. In (1c), the article is followed by a demonstrative. The Hungarian examples below are from Szabolcsi (1994).

(1) a. a te valamennyi titk- od Hungarian

the you(-NOM) each secret- POSS.2SG

b. il suo libro Italian

the his book
c. bàiatul acesta Romanian

- boy-the this
- d. \*the this book

e. \*the his book

Although in English articles cannot co-occur with demonstratives or possessives as (1d-e) show, (1a-c) suggest that several positions are available to host these elements<sup>1</sup>.

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<sup>\*</sup> A first version of this paper consists of a DES unpublished manuscript entitled *A Typology of Possessive Modifiers*. The main points of this analysis have been presented at the 2000 conference *From NP to DP* in Antwerpen, Belgium. Thanks to Eric Haeberli, Liliane Haegeman and Ur Shlonsky for their valuable comments. Of course, all remaining errors are my own.

Consequently, the assumption that in English articles, demonstratives and possessives are in complementary distribution because they all sit in Spec,NP does not hold and the structure of NP has to be extended. In the DP-structure, articles can be analysed as functional heads corresponding to phrasal complementizers, as Szabolcsi proposes. The restricted number of articles in many languages (two in English, for example) supports the hypothesis that they represent a closed class of functional elements.

A second argument in favour of the reanalysis of NP into DP is the existence of DP-internal movement. Some languages such as French attest noun movement: in (2a) for example, *problème* has moved across the adjective. In English, as the adjective precedes the noun in (2b), no noun movement is postulated<sup>2</sup>. The ungrammaticality of (3a) shows that in languages attesting noun movement, this movement is obligatory. (3b), the representation of N-raising, argues in favour of an extended NP: a position is necessary between the article and the adjective to host the noun.

(2) a. le problème difficile<sup>3</sup> the problem difficult

French

b. the short book

(3) a. \*el corto libro the short bookb. el libro i corto ti

Spanish

Another DP-internal movement supports the parallelism DP – CP. Consider (4) which is analogous to the clausal wh-movement.

(4) a. [ AP How important ] is this decision? (Haegeman & Guéron, 1999:419)

b. This is [  $_{DP}$  a [  $_{AP}$  very important] decision].

c. [ DP [ AP How important ] a decision ] is this?

(4a) is an illustration of the well-known auxiliary-inversion: the *wh*-phrase *How important* is preposed and the auxiliary *is* has moved to C. In (4c), it is a DP, *How important a decision*, which is preposed. Inside the preposed DP, the AP has moved to the front of DP, illustrating *wh*-movement taking place inside DP (compare (4b) and (4c)). This A'-movement is similar to movement to Spec,CP in the clause. If these two A'-movements are analogous, the position occupied by *a* in (4c) is a complementizer position, like the position of *is* in (4a). Therefore, the same mechanism accounts for the presence of an AP in Spec,CP in (4a), and in Spec,DP in (4c). Both movements are instantiations of A'-movement, reinforcing the analogy between CP and DP. Other types of DP-internal movements which are not discussed here are attested (Aboh (1998), Bhattacharya (1998), Koopman (1999), Scott (1998)). In short, I assume that NP is dominated by functional material and that determiners are complementizer-like heads, implying that DPs correspond to CPs.

<sup>&</sup>lt;sup>1</sup> Examples such as (i) show that determiners, demonstratives and possessives can co-occur in some languages, implying that they all occupy different positions (see Aboh, 1998):

<sup>(</sup>i) àgásá sín àfo àtòn éhé ló lε Gungbe crab Pos foot Nral Dem Det Num 'these (specific) three feet of crab'

<sup>&</sup>lt;sup>2</sup> See Valois (1991), Cinque (1994), Bernstein (1993), Longobardi (1994, 1995, 1996), see also Delsing (1988, 1993) for a proposal in which nouns move to D in some North Germanic DPs.

<sup>3</sup> (2) and (3) are from Bernstein (1996).

#### 1.1.2 *The structure of DP*

If DP is parallel to the clausal CP, it seems natural to postulate additional functional projections between NP and DP, which could correspond to TP, AgrSP, GenP, NumP,... to mention only a few<sup>4</sup>. Only the projections relevant for the analysis of possessives<sup>5</sup> are discussed below. On the basis of Hungarian, for example, an agreement projection analogous to the clausal AgrSP is advocated. In this paper, the label AgrPossP is adopted, following Alexiadou, Haegeman & Stavrou (in preparation)<sup>6</sup>.

If DP is to NP what CP is to VP, as already mentioned, possessives in (5) are structurally parallel to clausal subjects. The nominative case displayed by *te* in (5) and *Mari* in (6) represents evidence for assimilating possessives to subjects of finite clauses. This suggests that possessives sit in a slot which corresponds to the canonical position of clausal subjects, Spec,AgrSP. Support for analysing possessives as subjects comes from deverbal nouns<sup>7</sup> which share the same argument structure as the verbs they correspond to. Consider (7), where the verb *destroy* and the noun *destruction* both take an Agent and a Patient.

- (6) (a) Mari kalap-ja- i Hungarian the Mari(-NOM) hat -POSS- PL (-3SG)
  'Mari's hats'
- (7) a. The enemy destroyed the city. (Haegeman & Guéron, 1999 : 412)
  - b. The enemy's destruction of the city.
  - c. Their destruction of the city.

In (7a), the subject of the clause, *The enemy*, corresponds to *The enemy's* in (7b) and to *their* in (7c). This parallelism suggests that possessives are arguments of the noun. If they are subjects, they should be generated in the specifier of the lexical projection NP and move to the counterpart of Spec,AgrSP to be licensed. As seen above, this position is Spec,AgrPossP. Of course, *The enemy's* and *their* represent different types of possessive phrases. The former is a Saxon genitive whereas the latter is a possessive modifier. Only the latter is discussed in the rest of the paper.

In addition to Spec,AgrPossP, possessives in Hungarian can occupy a position to the left of D when they have dative case. Consider (8), which has the same meaning as (6). One way of analysing (8) is to assume that *Marinak* sits in Spec,DP. *Marinak* can also undergo A'movement as in (9). In this example, Spec,DP is used as an escape hatch for the topicalised possessor.

<sup>&</sup>lt;sup>4</sup> Projections parallel to clausal VoiceP and Asp(ect)P have been postulated in DP. For example, Turkish and Modern Greek attest types of nominal which display morphological reflexes analogous to Voice in the clause. (see Alexiadou (1997), Burton (1997), Cinque (1997), Lecarme (1998) among others).

<sup>&</sup>lt;sup>5</sup> In this paper, I use the terms *possessives* or *possessive modifiers* not *possessor*, unlike Szabolcsi.

<sup>&</sup>lt;sup>6</sup> Cardinaletti (1998) labels this projection AgrS<sub>N</sub>P and Schoorlemmer (1998) PossP. The label AgrPossP adopted here is used throughout the paper.

<sup>&</sup>lt;sup>7</sup> Grimshaw (1990) calls the class of nouns illustrated in (7b) complex event nominals. She does not consider possessives as arguments.

(8) Mari-nak a- kalap-ja - i Hungarian Mar-DAT the hat- POSS-PL(-3sg)
'Mari's hats'

(9) [ [ TopP Marinak i [ FocP PETER làtta ... [ DP ti a kalapja ]]]]] Hungarian Mari-DAT Peter saw the hat 'Peter saw Mari's hat'

Additional projections above DP can be postulated if DP, like CP, can be split (see Rizzi (1997), and the references cited there). Rizzi for instance proposes that the complementizer system minimally consists of two projections, ForceP and Fin(iteness)P. The former encodes the illocutionary force, determining whether a sentence is declarative, interrogative, relative... The latter encodes finiteness, determining the type of IP selected. Force and Finiteness split when the field of two additional projections is activated, Topic (TopP) and Focus (FocP), as in (10a). TopP and FocP are in parenthesis because they are only projected when needed. The star signals the projections which are recursive. If DP consists of several projections in the same way as CP, it suggests that DP corresponds to the clausal FinP: DP determines whether a nominal structure is definite or not, and FinP whether a sentence is finite or not. (10b) represents the structure of nominals adopted here. The labels of the functional projections in the left periphery have to be determined. However, we shall see in this paper that a FocP may dominate DP.

(10) a. ForceP > (TopP\*) > (FocP) > (TopP\*) > FinP > AgrSP > ... > VP  
b. 
$$XP_1 > (XP_2) > (XP_3) > (XP_4) > DP > AgrPossP > ... > NP$$

In this section, I suggest that DP is not the highest layer in the nominal structure and that it could be treated on a par with the clausal FinP.

## 1.2. Aim and scope of the paper

This paper deals with possessive modifiers. As hinted at in Section 1.1., this concerns possessives of the type *my*, *your*, *his*, *her*, *our* and *their*. In addition, this category includes the forms *mine*, *yours*, *his*, *hers*, *ours*, *theirs* but not full DPs like *Mary's*, *the teacher's*... Although *mine*, *yours*... are instinctively assimilated to pronouns, *my*, *your*, *his*... are not easily classified. As this question arises in many languages, the term 'possessive modifier' is adopted in this paper.

The aim of the paper is to determine whether possessive modifiers are adjectives, or pronouns or whether they belong to another word category, and ideally to find a way of classifying possessive modifiers cross-linguistically. As a starting point, the typologies proposed by Cardinaletti (1998) and Schoorlemmer (1998) are examined and tested with French, English and West Flemish data. The results of this survey show that these analyses are problematic. In this descriptive work, I try to elaborate another classification of possessive modifiers. What I propose is to distinguish three types of possessive modifiers which occur in different contexts: some are determiners, others adjectives or pronouns. I also assume that each possessive may display two forms, a weak and a strong one, and that each language can attest more than one type of possessives.

This paper is organised as follows: in Section 2.1., Cardinaletti's tripartition of possessives, based on Cardinaletti & Starke's (1995) analysis of personal pronouns, is examined. Cardinaletti proposes that possessives be classified into clitic, weak and strong

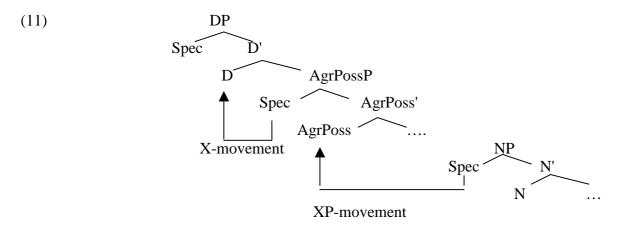
forms. The properties associated with these categories are summarised and tested. One issue is the nature of elements like *le sien* in French. Contrary to Cardinaletti, I suggest that these elements are strong. Section 2.2. summarises Schoorlemmer's paper. In her account, she classifies languages into two types, those which attest determiner possessives and those which have adjectival possessives. The main problem which arises is that many languages seem to have several types of possessive modifiers. A new typology is presented in Section 3.. In Section 4., the identification conditions on *pro* in ellipsis contexts are very briefly examined. The conclusions to this paper are presented in Section 5..

#### 2. Previous analyses

## 2.1. On the deficient/strong Opposition in Possessive Systems

## 2.1.1. *The tripartition*

In her paper, Cardinaletti (1998) extends the tripartite clitic-weak-strong division postulated for personal pronouns in the clause (Cardinaletti & Starke, 1995) to possessive modifiers. She proposes that, in languages attesting N-movement, pre-nominal possessive modifiers are deficient and that post-nominal ones are strong. In the tripartite account, strong elements are full projections, whereas weak ones lack the superior functional layer of strong elements, and clitics lack the highest layer of weak elements. To recover the missing feature(s), deficient possessives move from their post-nominal base position, Spec,NP<sup>8</sup>, to Spec,AgrPossP to be licensed (Picallo (1994:269)). This implies that strong possessives, which do not move because they do not lack any functional layer, are post-nominal. Deficient elements fall into two subcategories, clitics and weak possessives. From Spec,AgrPossP, clitics further head move and adjoin to D as (11) illustrates. According to Cardinaletti, this step explains why definite articles cannot co-occur with clitic possessives. Possessives preceded by definite articles must be either weak or strong.



In Section 2.1.2., the main characteristics<sup>9</sup> of the three types of possessive modifiers advocated by Cardinaletti are discussed. All the examples of Section 2.1.2. are from Cardinaletti.

<sup>8</sup> Recall that possessives are considered as arguments generated in the specifier of their lexical projection, Spec,NP, as clausal subjects are generated in Spec,VP.

<sup>&</sup>lt;sup>9</sup> For details, the reader is referred to Cardinaletti's own text. Cardinaletti also examines the interpretative properties of possessives. As these properties do not lead to clear conclusions in the languages studied here (French, English and West Flemish), they are not discussed.

## 2.1.2. The characteristics

## 2.1.2.1. Strong possessives

Cardinaletti assumes that in Italian the distribution of possessives indicates whether they are deficient or strong: only strong elements can be post-nominal. Deficient and strong possessives are transformationally related. In (12a), *sua* has moved to Spec,AgrPossP to be licensed, whereas in (12b) it sits in its base position, i.e. it is a full projection which does not move to recover any missing structure. In Paduan, a variety of Italian, weak and strong possessives are morphologically different as (13) shows. As the form occurring in (13c) corresponds to the post-nominal one in (13a), it must be strong. Consequently, Cardinaletti uses isolation contexts such as (13c) to identify strong possessives.

(12) a. la sua casa

Italian

b. la casa sua

the (his/her) house (his/her)

(13) a. el libro mio the book my

Paduan

b. el me libro

c. Speaker A: sto libro di chi zelo?

whose book is this?

B: Mio / \* me Mine

We have seen in (13) that *mio* in Paduan corresponds to a strong form. As predication structures such as (14) attest the same morphological form as in (13a,c), *mio* must be strong, too. The ungrammaticality of *me* in (13c) and (14) shows that only strong elements are possible in the contexts illustrated.

(14) Sto libro ze mio / \*me this book is mine

Paduan

Cardinaletti notices that the distribution of possessives is linked to their interpretation: post-nominal possessives are 'necessarily focalized' (1998:19). As post-nominal possessives are strong, Cardinaletti assumes that focalisation is a characteristic of that type of possessives <sup>10</sup>. This hypothesis is supported by (15a) which is ungrammatical because the emphasised element is deficient, as its pre-nominal position shows.

(15) a. \* la SUA casa, non tua 11,12

Italian

b. la casa SUA, non tua the (his/her) house his/her, not yours

Furthermore, according to Cardinaletti, only post-nominal possessives can be modified. In (16a), for example, *sua* is modified by *solo* and *proprio*. When possessive modifiers are pre-nominal as in (16b), modification leads to ungrammaticality.

<sup>&</sup>lt;sup>10</sup> Cardinaletti (1998:19) argues that 'pre-nominal possessives [i.e. clitic and weak possessives] cannot be contrasted, coordinated, nor modified'. Kayne (1977:87) makes a similar claim for clitics.

According to Cardinaletti, in this example, the possessive per se is focalised and not the whole phrase, in which case the example would be grammatical.

Notice that in (15b) *tua* does not co-occur with an article, which seems to contradict its status of strong possessive. A similar observation holds for (14), where the strong form is not preceded by an article.

(16) a. la casa solo / proprio sua the house only / really his/her

Italian

b. \* la solo / proprio sua casa

Like modification, coordination distinguishes pre-nominal possessives from post-nominal ones. In (17a), coordination of *sua* and *tua* is possible whereas it is not in (17b). That *sua* and *tua* in (17a) are strong, i.e. full projections, is supported by the fact that *sua* can also be coordinated with *di Maria*, a full DP.

(17) a. la casa sua e tua / sua e di Maria Italian the house his/her and yours / his/her and of Mary

b. \* la sua e tua /sua e di Maria casa

To summarise, we have seen that according to Cardinaletti, strong possessives should be post-nominal in languages attesting noun movement, that they are grammatical in isolation and predicative structures and that they can be contrasted, modified and coordinated.

## 2.1.2.2. Weak possessives

Cardinaletti argues that in ellipsis contexts, only weak possessives are licit. On the basis of examples such as (18), she assumes that in Italian *loro* is a weak element, without a clitic or a strong counterpart. As *loro* in (18a) co-occurs with the article, it cannot be a clitic (Section 2.1.2.3.), and as it cannot be post-nominal as the ungrammatical (18b) shows, it cannot be strong. Further evidence for analysing *loro* as weak, comes from its ungrammaticality in isolation and predicative constructions, which require strong forms. Consider (19).

(18) a. il loro interessante libro di sintassi the their interesting book of syntax

Italian

b. \*il libro loro di sintassi

(19) a. Speaker A: Di chi è questo libro? B: Suo / \*Loro Italian whose book is this his \* theirs

b. Questo ritratto è suo / ?\* loro this painting is his / \*theirs

As the weak possessive *loro* is grammatical in ellipsis constructions such as (20a), Cardinaletti concludes that these structures require weak elements. That strong possessives are not attested in ellipsis is further supported by (20b), (20c) and (20d): when the noun is non-overt, possessives cannot be focalised, coordinated or modified, three characteristics of strong elements.

(20) a. La mia casa e bella, la loro no. the my house is nice, the theirs not

Italian

b. \*il MIO, non suo the mine, not his

- c. \*il mio e suo the mine and his
- d. \*il solo mio the only mine

If ellipsis constructions require weak possessives as Cardinaletti claims, ellipsis can be used to identify weak possessives. However, Paduan is problematic for this assumption as (21) illustrates. Contrary to expectations, it is not the weak pre-nominal form *me* which is attested in (21b) but its strong post-nominal counterpart, *mio*. To account for this example, Cardinaletti argues that *me* cannot occur in ellipsis because it lacks word stress. As the determiner *el* does not bear any word stress either, the DP cannot survive. This explains why the strong form *mio* is introduced (Cardinaletti (1998:40)).

(21) a. el me libro the my (book)

Paduan

- b. \*el me [e] / el mio [e]
- c. el libro mio

As seen above, ellipsis contexts have to be used with caution: although they allow the identification of weak possessives, they can also attest strong possessives if weak ones do not bear any word stress.

## 2.1.2.3. Clitic possessives

As clitic possessives adjoin to D, they cannot co-occur with articles. Therefore, the absence of article can be considered as a property of clitics. Cardinaletti does not explicitly state whether weak and strong possessives *must* co-occur with articles or not. However, from her footnote 14, I infer that it is the case: she proposes that an alternative analysis of English clitic possessives is to consider them as weak, '... with the supplementary hypothesis that the requirement that D be lexically filled is not operative here' (1998:46). If D has to be lexically filled as Cardinaletti assumes, weak and strong possessives, which sit lower than D, should always co-occur with an article 13. Therefore, the deficient possessive *sua* in (22) is a weak element and not a clitic.

(22) la sua casa the his/her house

Italian

Cardinaletti mentions one exception to the obligatory cooccurrence of articles and weak possessives. Consider (23). Longobardi (1994, 1995) proposes that nouns like *Gianni* and *casa* head-move to D in such examples. As D is lexically filled, no article is required. Despite the absence of article, *mio* and *mia* cannot be analysed as clitics: if they were heads, the movement of *Gianni* and *casa* to D would violate the Head Movement Constraint (HMC)<sup>14</sup>.

Italian

Italian

b. \*il mio / suo fratello (the) my / his brother

<sup>&</sup>lt;sup>13</sup> The article co-occurring with weak and strong possessives does not have to be definite as (i) below shows:

<sup>(</sup>i) Un suo amico a/one his friend

<sup>&</sup>lt;sup>14</sup> That possessives in (23) are weak does not mean that clitic possessives do not exist in Italian. In (i), where no N-to-D raising takes place, the absence of article shows that *mio* is a clitic, adjoined to D. The ungrammaticality of (ib) supports this hypothesis: the article and the possessive cannot co-occur.

<sup>(</sup>i) a. mio / suo fratello

Italian

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(23) a. Gianni i mio t i
Gianni my
b. casa i mia t i
house my
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Another characteristic of clitics is doubling. Whenever a constituent is doubled as in (24), the doubling element is a clitic. Therefore, *so* which doubles *de Toni*, in (24a) is a clitic. This hypothesis is supported by the absence of article in this example. French also attests clitic doubling as (24b) illustrates<sup>15</sup>. Yet, the ungrammaticality of (24c) does not imply that *su* is not a clitic, but that clitic doubling goes only one way, i.e. that "doubling implies clitic', but not 'clitic implies doubling'", as is the case for non-possessive elements (Cardinaletti (1998:23)).

| (24) a. | so pare de Toni           | Paduan  |
|---------|---------------------------|---------|
|         | his father of Toni        |         |
| b.      | son père à lui            | French  |
|         | his father to him         |         |
| c.      | *su padre de él/ella      | Spanish |
|         | his/her father of him/her | •       |

It appears that the only distinctive property of clitic possessives is the impossibility for them to co-occur with articles.

#### 2.1.3. *Summary*

Table 1 summarises the properties mentioned above. The signs [+] means that the property in the leftmost column is displayed and the sign [-] that it is not displayed.

| TABLE 1 (Italian)         | Strong                  | Weak | Clitic |
|---------------------------|-------------------------|------|--------|
| a. Post-nominal position  | +                       | -    | -      |
| b. Isolation contexts     | +                       | -    | -      |
| c. Predicative structures | +                       | -    | -      |
| d. Focalisation           | +                       | -    | -      |
| e. Modification           | +                       | -    | -      |
| f. Coordination           | +                       | -    | -      |
| g. Ellipsis contexts      | - (+ if no word stress) | +    | -      |
| h. Definite article       | +                       | +    | -      |

Table 1 shows that weak possessives have properties of both strong elements and clitics. For example, like strong possessives, they co-occur with an article and like clitics they sit in pre-nominal positions, are ungrammatical in isolation and predicative contexts, and cannot be focalised, modified or coordinated. In the next section, the properties listed in Table 1 are tested with data from several languages.

French

<sup>&</sup>lt;sup>15</sup> Contrary to Paduan, doubled elements in French cannot be full DPs as the ungrammaticality of (i) shows; they must be pronouns as in (24b).

<sup>(</sup>i) \*son père à Jean 'his father to John'

#### 2.1.4. *The data*

The aim of this section is to determine whether the tripartite account applies to Romance and Germanic languages as Cardinaletti suggests. The languages examined here are French, a Romance language, English and West Flemish, two Germanic languages. If Cardinaletti's analysis is on the right track, testing the properties of the different types of possessives should lead to the *same* results as in Table 1. Let us start with French.

#### 2.1.4.1. French

As the absence of article is a property specific to clitics (property h), French possessives of the type *mon*, illustrated in (25), can be considered as clitics. If this analysis is correct, *mon* should display the same characteristics as those listed in the last column of Table 1. This means that they should *not* have the properties marked [-], i.e. a) post-nominal position, b) isolation contexts, c) predicative structures, d) focalisation, e) modification, f) coordination, and g) ellipsis contexts.

(25) a. mon livre my book b. \*Un (tel) / le mon livre a such / the my book

French

Let us examine properties (a-g). As expected, *mon* cannot be post-nominal (property a) although French attests N-movement and it is ungrammatical in isolation and predicative structures as (26) shows. Possessive modifiers of the type *le mien* are discussed below. Notice that these forms always co-occur with the definite article and are only attested when the noun is ellipted.

(26) a. \*(le) livre mon the book my

French

- b. Speaker A: A qui est ce livre? B: \*Mon / \*Mien / le mien 16 to whom is this book? \* my / \*mine / the mine
- c. Ce livre est \*mon /\*mien / le mien this book is \* my /\*mine / the mine

Concerning focus, Cardinaletti argues that '[t]he pre-nominal deficient form *ta* can receive contrastive focus. But the contrast does not involve the possessive per se, rather it is the whole noun phrase which is contrasted' (1998:45, fn. 12). However, some native speakers of French, including myself, consider that *TA* in (27) can be focalised, which means that French possessives of that type display property d), contrary to expectations if they are clitics (see Kayne (1977:89)).

(27) a. C'est TA recette qui est bonne, pas sa recette.
it is YOUR recipe that is good not his/her recipe
b. C'est la MIENNE qui est bonne, pas la tienne.
it is the mine that is good not the yours

<sup>16</sup> Examples (26b,c) are adapted from Cardinaletti. According to her, some properties are linked to the interpretation of the possessive modifier: in isolation and predication structures possessive modifiers can only refer to humans.

Concerning property e), (28) suggests that French possessives can be modified by an adverb, which is unexpected if they are clitics (see Kayne (1977)). In addition, *SA* in (28a) is slightly emphasised. (29a) shows that in French coordination of possessives (property f) is impossible and (30) that *son* is ungrammatical in ellipsis contexts (property g).

(28) a. Seulement SA maison a été vendue, pas la mienne. only his/her house has been sold not the mine

French

- b. Seulement la SIENNE a été vendue pas la mienne. only the his/hers has been sold not the mine
- (29) a. \*Ta et sa recette est très bonne / sont très bonnes. your and his/her recipe is very good / are very good

French

- b. La tienne et la sienne étaient bonnes. the yours and the hers/his were good
- (30) Mon ami m'a présenté \*son / le sien. My friend [to] me has introduced his / the his

French

Notice that the forms of the type *le mien* can be stressed as in (27b), modified as in (28b) and coordinated as in (29b). *Le mien* can also be introduced to salvage isolation and predicative structures as in (26b,c). As these properties are specific to strong possessives, *le mien* could belong to that category, contrary to Cardinaletti's conclusion that French has no strong possessives. However, possessives of the type *le mien* also display properties of deficient elements: they are grammatical in ellipsis contexts such as (30), a characteristic of weak elements according to Cardinaletti, and cannot be post-nominal as (31) shows. Property a) is irrelevant for possessives like *le mien* though, because they never co-occur with overt nouns. Notice that whether *le mien* is analysed as weak or strong, its cooccurrence with the article is expected (property h).

#### (31) \*(le) livre mien / le mien

French

This section shows that the criteria established by Cardinaletti to classify possessives only partly account for French: we have seen that possessive modifiers such as *mon*, *ton*, *son*... have the same properties as clitics except for focalisation and modification and that possessives of the type *le mien*, *le tien*... cannot be identified clearly because they display properties of both weak and strong elements. In conclusion, the criteria reported in Table 1 do not capture the differences among French possessives and should be reconsidered. Let us turn to Germanic languages and see whether possessives fit the tripartite analysis.

#### 2.1.4.2. English

Under a tripartite account, English possessives of the type *my* are considered as clitics, essentially because of the absence of article, as in (32). If this analysis is on the right track, *my* should *not* display the properties marked [-] in Table 1. (33) shows that English possessive modifiers cannot sit in post-nominal positions and (34) that in isolation and predicative structures *her* is ungrammatical.

- (32) a. my book
  - b. \*the my book

- (33) a. \*book her / hers
  - b. \*the book her / hers
- (34) a. Speaker A: Whose book is this? B: Hers / \*her
  - b. This is hers / \* her

Focalisation is problematic for Cardinaletti's analysis of English. (35a) shows that in English *your* can be emphasised, which is unexpected if it is a clitic. In (36a), *my* is modified, another property not normally displayed by clitics (property e). In this example, the possessive modifier is emphasised which supports the idea that it is not a clitic.

- (35) a. She likes YOUR / \*YOURS house, not hers. 17
  - b. She likes YOURS, not hers.
- (36)a. Only MY house was sold not yours.
  - b. Only MINE was sold not yours.

Coordination does not give rise to clear-cut results. Although in (37a), coordination of possessives is impossible, as expected, it is acceptable in (37b). This contrast remains unexplained. Finally, possessives of the type *her* are impossible in ellipsis contexts as (38) shows (needless to mention that it is not the case of the personal pronoun *her*).

- (37) a. \*Your and her recipe(s) is /are very good.
  - b. My and your secretary.
  - c. Yours and mine are the best.
- (38) My friend has introduced \*her / hers to me.

Let us now turn to the properties of possessives of the type *mine*, *yours*, *his*... These forms can be focalised, modified and coordinated as in (35b), (36b) and (37c) respectively, as it was the case with the French form *le mien*. In addition, as *hers* is grammatical in isolation and predicative contexts such as (34), this type of possessives could be analysed as strong. (33) shows that *hers*, like *le mien* in French, cannot be post-nominal because the noun is ellipted. On the other hand, as *hers* is attested in ellipsis contexts such as (38), it should be considered as weak. Recall that Cardinaletti assumes that in ellipsis contexts only weak possessives are attested, except if that element has no word stress, which does not seem to be the case of *hers*. However, whether possessives of the type *mine* are analysed as weak or strong, the absence of article is mysterious. To account for this absence, Cardinaletti, simply assumes that in English, '[c]ontrary to what we have seen in other languages, the possessive found in ellipsis contexts is capable of occurring alone', i.e. without any article (Cardinaletti (1998:40)). Such an assumption implies that weak possessives can occur with articles in some languages but not in others, and does not explain why English is different from French for example.

What this section underlines is that English remains problematic for Cardinaletti's account. If English possessives of the type *my*, *your*... are analysed as clitics, focalisation, coordination and modification lead to unexpected results. Furthermore, possessives considered as weak, like *mine*, *yours*, *his*..., not only do not co-occur with articles but also have some properties of strong elements. In the next section, we shall see that the study of West Flemish is problematic too.

<sup>&</sup>lt;sup>17</sup> Thanks to Hayley Young and Stephanie Durlemann for their help with the judgements in English.

#### 2.1.4.3. West Flemish

The second Germanic language studied in this paper is West Flemish<sup>18</sup>. As in the preceding sections, we check whether the properties of Table 1 are displayed or not. In West Flemish, several persons display two patterns of possessive modifiers. Cardinaletti does not discuss languages with this particularity. Consider the third person singular illustrated in (39). As *zynen* and its weak counterpart *zenen* are ungrammatical with the article as (39d,d') show, they should both be analysed as clitics.

(39) a. zenen [zənən] boek a'. zynen [zinən] boek MASC, SING West Flemish his book his book b. zen [zən] lesse b'. zyn [zin] lesse FEM, SING his lesson his lesson c. zen werk c'. zyn werk NEUTER, SING his work his work d. \*de zenen boek d'. \*de zynen boek the his book the his book

Let us turn to the characteristics zyn(en) and zen(en) should not have if they were clitics. In isolation and predicative structures such as (40), both patterns are ungrammatical, as expected. The only possessive which can survive in these contexts is *den zynen*. This form, which is analogous to the French *le sien*, is further discussed below. Notice however that *zyne* in (40a) carries a suffix -e which is not normally found in neuter, as (39c) shows.

- (40) a. wien zen werk is da? T zyne / \*zyn(e) / \*zen(e) / \*de zene who his work is that the her-e (neuter) West Flemish
  - b. dat is den zynen / \*zyn(en) / \*zen(en) / \*den zenen this is the his

Although both variants, zyn(en) and zen(en), are ungrammatical when they co-occur with articles, they cannot be treated on a par. In (41), ZYN can be focalised whereas zen cannot. Focalisation is the first property which differentiates both patterns. As clitics cannot be emphasised, this suggests that zyn(en) is not a clitic. If this proposal is on the right track, the nature of zyn(en) has to be determined. Whether it is weak or strong, the absence of article is not accounted for. On the other hand, the possibility for zyn(en) to be stressed as in (41) suggests that it is strong: recall that strong possessives can be focalised. This hypothesis is further supported by the full vowel displayed by zyn(en) (see the phonetic transcription in (39)). Concerning property f), only forms of the type zyn(en), with a full vowel, can be coordinated. Consider (42). As myn can be coordinated with an NP as in (42c), it further suggests that we are dealing with a maximal projection, not a clitic.

(41) ze ziet ZYN / \*ZEN eus geren en t'eure niet West Flemish she sees HIS house 'gladly' and the hers not

(42) a. zyn [zin] / \*zen [zən] en eur recept West Flemish his and her recipe

<sup>18</sup>Warmest thanks to Liliane Haegeman for providing and discussing the West Flemish data, and more generally for her patience and support.

b. zynen [zinən] / \*zenen [zənən] en euren oto his and her car

- c. myn / \*men en Marese boeken my and Marese books
- d. de zynen en de mynen zyn a gereed the his and the mine are already ready

Let us now examine modification, another property specific to strong elements. As (43a) illustrates, *min*, contrary to *men*, can be modified by an adverb. As it was the case in English, the possessive modifier is emphasised in such contexts.

- (43) a. alliene MIN / \*men hus è verkocht (g)ewist, e nie tjoene. <sup>19</sup> West Flemish only my house is sold become(passive) and not yours
  - b. allien het mine è verkocht (g)ewist, nie tjoene. only the mine is sold become(passive) not yours

The next property examined is ellipsis, illustrated in (44). Neither zyn(en) nor zen(en) are grammatical in these constructions, as expected. In addition, as it was the case for isolation and predication structures illustrated in (40), (44) shows that de zynen has no weak counterpart de zenen (see Section 3. for a suggestion). In (44), only the pattern de zynen is grammatical.

(44) a. zynen boek a'. de zynen / \*zynen West Flemish

his book the his

b. zenen [zənən] boek b'. \* de zene [zənə] / \*zenen

his book the his

To conclude this section, let us briefly examine possessives of the type  $de\ zyn(en)$ . As zynen co-occurs with the article, it could be either weak or strong. As these forms are grammatical in isolation and predicative constructions such as (40), they should be considered as strong. On the other hand, their grammaticality in ellipsis contexts illustrated in (44) suggests that they are weak. Finally, notice that possessives of the type  $den\ zyn(en)$  can be coordinated as in (42d), modified as in (43b) and emphasised as in (45).

(45) t'is de ZYNEN dank liever een. it is the his that I rather have

West Flemish

In sum, contrary to what the absence of article suggests in (39), zen(en) and zyn(en) do not display the same properties. The former is closer to clitics than the latter, which seems to be strong. Possessives of the type  $den\ zyn(en)$ , like their French counterpart  $le\ sien$ , display properties of both weak and strong possessives. As described at length above, if D has to be filled and if zyn(en) is strong, the tripartite analysis does not account for Germanic languages such as West Flemish.

<sup>&</sup>lt;sup>19</sup> Thanks to Dieter Vermandere for mentioning this example and for discussing many additional aspects of West Flemish. For reasons of space (and time), I could not take his insightful remarks into account here but intend to do so in future work. Notice that examples such as (43) are not grammatical in all varieties of West Flemish.

## 2.1.5. *The problems:* Le mien, mine, den zyn(en)... *weak or strong forms?*

In this section, special attention is paid to elements of the type *le mien, mine, den zyn(en)*. What I propose here is that these forms are strong, and that their grammaticality in ellipsis structures is not sufficient to consider them as weak.

Recall from Section 2.1.4. that possessives of the type *le mien* display several properties identified as specific to strong forms by Cardinaletti. They are licit in isolation and predicative structures, and can be coordinated, focalised and modified, contrary to expectations. As the forms occurring in isolation and predicative constructions are the same as those attested in ellipsis, they could belong to the same category, strong elements. If this analysis is on the right track, it means that ellipsis contexts attest strong forms and not weak ones<sup>20</sup> and therefore that property g) is a characteristic of strong possessives. Intuitively, it also seems natural to have strong possessives when the noun is non-overt in order to 'compensate' for the missing element. This analysis is supported by Paduan examples such as (46c), where only the strong form is grammatical. Recall from Section 2.1.2.2. that to account for (46c), Cardinaletti proposes that strong forms are only licit in ellipsis if their weak counterparts do not bear any word stress. However, if ellipsis structures attest strong forms as suggested here Cardinaletti's assumption is redundant.

(46) a. el me libro <sup>21</sup>

Paduan

b. el libro mio the my (book)

c. \*el me / el mio

A further argument of the tripartite account for analysing forms of the type *le mien* as weak, is the adjectival agreement they display. Cardinaletti assumes that '[e]llipsis requires possessives with adjectival agreement inflection, which means that they are necessarily prenominal' (1998:38). This claim suggests that post-nominal possessives cannot be adjectival, and therefore that for possessives to be adjectival *and* strong is incompatible. It forces Cardinaletti to consider possessives occurring in ellipsis constructions as weak. Recall that in the tripartition only deficient elements are pre-nominal. To recover their missing highest projection(s) they have to move to 'a pre-nominal 'subject' position, corresponding to Spec,AgrS in the clausal domain' (1998:20). This position corresponds to Spec,AgrPossP in the structure adopted here. As strong possessives are full projections, their movement is not triggered and they stay in their base-position, Spec,NP. This position is post-nominal if the noun head-moves, as in Italian for example. However, examples such as (47) and (48) show that strong possessives display the same 'adjectival agreement inflection' as weak ones, suggesting they are adjectives too. Compare (47) and (48).

(47) a. il libro mio

MASC, SING

Italian

the book my b. la casa mia

FEM, SING

the house my

<sup>20</sup> Of course something has to be said about *loro*, on which Cardinaletti bases her account. See Section 3..

(i) mi libro Paduan

<sup>&</sup>lt;sup>21</sup> In fact, Paduan displays three forms of possessives. The third one is illustrated below. For a proposal, see Section 3..

(48) a. il mio caro amico MASC, SING Italian b. la mia cara amica FEM, SING

The adjectival inflection on *mio* and *mia* in (47) can be accounted for if the nouns and the possessive modifiers in this example are in a configuration satisfying the operation Agree proposed by Chomsky (1998). According to Chomsky, Agree 'establishes a relation (agreement, Case-checking) between an LI α and a feature F in some restricted search space (its domain)' (1998:14). By the means of this operation, agreement can be checked without involving movement <sup>22</sup>. Notice also that post-nominal possessives could be treated on a par with post-nominal subjects, as languages attesting the former seem to have the latter too (see Section 3.2.2.). If agreement on post-nominal possessives can be licensed without postulating movement, it does not mean that strong possessives never move. Otherwise, how can examples such as (49) be accounted for? As seen in preceding sections, *myn* and *zyn* in West Flemish have more properties of strong elements than of weak ones. As no article can occur in (49), *myn* and *zyn* should sit in DP, and not in their base-position (for further details see Section 3.1.). In sum, if strong possessives can be displaced, property a) should be abandoned.

(49) a. myn / \*men en Marese boeken my and Marese booksb. ze ziet ZYN eus geren en t'eure niet

the my dear friend

West Flemish

she sees HIS house 'gladly' and the her not

c. alliene MIN / \*men hus è verkocht (g)ewist, e nie tjoene. only my house is sold become(passive) and not yours

Let us come back to the predictions of Table 1. Possessives of the type le mien and den zyn(en) display all the properties of strong elements listed in this table, except for property a). However, as already mentioned this property is irrelevant for possessives which do not cooccur with overt nouns. In addition, in the discussion of (49) above, it has been observed that strong pre-nominal possessives seem to be attested in West Flemish and that consequently property a) does not characterise strong forms. For mine to be analysed as strong, property h) further leads to problematic results. Let us turn to such forms.

As clitic possessives adjoin to D, they cannot co-occur with articles. However, that weak and strong possessives always co-occur with articles as Cardinaletti suggests is not obvious. Whether *mine* is analysed as weak or strong, the absence of article should lead to ungrammaticality, contrary to fact. The same observation applies to the West Flemish form zyn(en) illustrated in (50): if it is strong, it should co-occur with an article contrary to fact. The introduction of *den* in (50) leads to ungrammaticality.

(50) (\*den) zynen [zinən] boek the his book West Flemish

Examples from Paduan and Italian also show that property h) is problematic. In isolation and predication structures, which require strong possessives according to Cardinaletti, possessives do not always co-occur with articles. In (51), *mio* and *suo* are not preceded by *el* and *il* respectively contrary to ellipsis constructions illustrated in (52).

<sup>&</sup>lt;sup>22</sup> Another possibility is to assume that agreement on post-nominal possessives is checked at LF. Thanks to Michal Starke for mentioning it (pc). See Chomsky (1995).

(51) a. Speaker A: sto libro di chi zelo? B: Mio Paduan

whose book is this? Mine

b. Questo libro è suo. Italian

this book is his

(52) a. el mio Paduan

the my

b. Il mio amico mi ha presentato il suo. Italian

the my friend [to] me has introduced the his

If isolation and predicative structures attest strong forms, (51) suggests that there is no requirement for strong possessives to co-occur with articles and that property h), which does not characterise strong elements, can be abandoned. Consequently, *le mien, den zyn(en)* and *mine* display all the characteristics of strong possessives reported in Table 1.

#### 2.1.6. *Summary*

Sections 2.1.4. and 2.1.5. show that a tripartite analysis of possessives raises different problems for several languages. Basically, what I show is that *le mien, mine* and *den zyn(en)* display all the properties of strong elements. If this is the case, it does not only imply that ellipsis contexts (property g) display strong forms, but also that strong possessives do not have to be in their base-position (property a), and that they do not always co-occur with articles (property h), as zyn(en) in West Flemish and *mine* in English illustrate.

## 2.2. Possessors, Articles and Definiteness

In this section, Schoorlemmer's (1998) analysis of possessive modifiers, based on Giorgi & Longobardi (1991), is examined. Schoorlemmer distinguishes languages attesting adjectival possessives (Type 1), like Italian, from languages attesting determiner possessives like English (Type 2). In addition, clitic possessives are postulated in French (and Bulgarian).

Like Cardinaletti, Schoorlemmer assumes that possessives are licensed in the specifier of a projection corresponding to the clausal IP and labelled PosP<sup>23</sup>. According to Schoorlemmer, in languages attesting determiner-like possessives, the head Pos carries a feature [def], which forces Pos-to-D movement. It is the presence of Pos in D<sup>24</sup> which prevents the appearance of articles, and renders these constructions definite. These properties explain why Schoorlemmer assumes that possessives in languages of Type 2 are like determiners. For ellipsis constructions, Schoorlemmer follows Kester's (1996) analysis (based on Lobeck 1995). She assumes that an empty noun, pro, is attested in ellipsis and has to be licensed by strong inflection. In ellipsis contexts, Pos does not move to D, because its [def] feature is satisfied by the empty head (pro) which moves to Pos. As languages of Type 1 do not have a [def] feature, possessives and articles, which can be definite or indefinite, can cooccur. In some languages of Type 1, possessives cliticise onto D, preventing the introduction of an article. Schoorlemmer further assumes that a particular possessive modifier may have two paradigms, a weak one and a strong one. In ellipsis, she shows that not just strong variants are attested but that weak forms and strong forms with a 'special' affix are possible as well. Languages of Type 2 for example, have a form of possessives occurring in elliptical

 $<sup>^{23}</sup>$  One distinction between Cardinaletti's and Schoorlemmer's projections corresponding to the clausal IP, is that for the former  $AgrS_NP$  is analogous to the clausal AgrSP whereas for the latter PosP corresponds to the clausal TP. The label AgrPossP is used throughout this paper. Shoorlemmer's Pos corresponds to our AgrPoss.

Notice that in Schoorlemmer's account, only the features on Pos move to D, not possessives themselves.

constructions only. In Section 2.2.1., the criteria proposed by Schoorlemmer to distinguish languages attesting adjectival possessives from those attesting determiner possessives are reported.

#### 2.2.1. The characteristics

Schoorlemmer identifies two types of languages and assumes that a cluster of properties distinguishes these languages. Italian is an example of languages with adjectival possessives (Type 1) and French and English are languages attesting determiner possessives (Type 2). The first property, attested by languages with adjectival possessives and not by those with determiner possessives, is the cooccurrence of articles and possessives, as (53) illustrates. The second property is the possibility for DPs containing adjectival possessives to be indefinite, as the presence of *un* in (54a) shows. On the contrary, DPs with determiner possessives cannot be indefinite as their ungrammaticality in contexts requiring indefinite elements such as expletive constructions illustrated in (54b) proves. The third property concerns ellipsis constructions: in languages of Type 1, possessives display the same form whether the noun is overt or not, contrary to languages of Type 2. In (55), the form of *suo* is the same in ellipsis and non-ellipsis contexts, whereas in (56) two different forms are attested, *mein* and *meins*.

(53) a. Il mio libro the my book

b. \*(Das) mein Buch the my book

German

Italian

(54) a. Un suo amico a/one his friend

b. \*Es war mein Buch auf dem Tish there was my book on the table

German

(55) a. il suo amico Italian

the his/her friend

b. Il mio amico mi ha presentato il suo. The my friend [to] me has introduced the his

(56) a. mein Buch German

my book b. Dein Buch, n

b. Dein Buch, nicht meins your book not mine

To sum up, in languages with adjectival possessives Pos-to-D does not take place because there is no [def] feature on Pos. As a consequence, determiners can co-occur with possessives and the constructions containing possessives can be indefinite. The cluster of properties distinguishing languages with adjectival possessives from those with determiner possessives are summarised in Table 2.

| TABLE 2                                  | Type 1 | Type 2 |
|--|--------|--------|
| a. article in possessive constructions   | +      | -      |
| b. a possessive occurs in indefinite DP  | +      | -      |
| c. special elliptical form of possessive | -      | +      |

#### 2.2.2. *The data*

In this section, the same languages as in Section 2.1.4. are discussed, i.e. English, West Flemish and French. (57)-(59) show that these languages have the characteristics of languages of Type 2. (57) shows that possessives and articles cannot co-occur, (58) that possessives are ungrammatical in expletive contexts, and (59) that ellipsis and non-ellipsis constructions display different forms.

(57) a. \*the my book

b. \*de myn katte West Flemish

the my cat

c. \*le mon livre French

the my book

(58) a. \*There was my book on the table.

b. Der is een katte / \*myn katte West Flemish

there is a cat / \*my cat

c. Il y avait un livre / \* mon livre French

'There was a book/ my book'

(59) a. **my** book a'. Your book, not **mine** 

b. **mon** livre b'. Ton livre à toi, pas **le mien** French

my book your book to you not the mine

c. **zen/zyn** werk c'. **t zyne** NEUTER, SING West Flemish

his job.NEUT the his

Although these examples seem clear, Schoorlemmer has to consider French as a language of Type 1. The reasons for such an analysis are reported in the next section.

## 2.2.3. The problems

Although French has the characteristics of a language with determiner possessives, it is problematic for Schoorlemmer's analysis. On the basis of the word order illustrated in (60), Schoorlemmer has to analyse French as a language of Type 1.

(60) Mon livre lourd my book heavy

French

As French is a Romance language attesting N-raising, it is expected that the noun precedes the adjective (see Valois (1991), Cinque (1994), Bernstein (1993)). However, that the noun follows *mon* in (60) is surprising: Schoorlemmer's analysis predicts that, if French is a language of Type 2, the strong feature [pos] on the noun triggers noun-movement to Pos, and that the strong feature [def] on Pos triggers Pos-to-D to satisfy [def]. This means that the noun, which has raised to Pos, should be carried along to D by the Pos-to-D movement advocated. Such an analysis would result in the word order N-Poss, contrary to fact. As Schoorlemmer assumes that [def] is a strong feature and as she would like to maintain this restrictive assumption, she proposes that there is no weak [def] feature in French and therefore, that this language lacks [def] on Pos. If French has no [def] on Pos, it corresponds to a language of Type 1. However, to account for the absence of article and of indefinite DPs

containing a possessive, Schoorlemmer suggests that French possessives cliticise onto D. This means that possessive modifiers first move as maximal projections to Spec, AgrPossP to be licensed as possessives, and then to D as heads, preventing the introduction of articles and forcing definite constructions. According to Schoorlemmer, this also fulfils the requirement that D must be lexically filled. If French is a language of Type 1, the forms occurring in ellipsis and non-ellipsis contexts should be the same, contrary to fact. To solve this problem, Schoorlemmer simply suggests that '[t]he special form found in ellipsis must then be treated as a strong form...' (1998:80). Recall that Schoorlemmer assumes that a possessive modifier can have a weak and a strong form. This analysis does not apply to English because the feature [pos] on N is weak and does not trigger N movement to Pos. In English, Pos-to-D is therefore not problematic. This means that there are two sorts of languages with adjectival possessives, those in which possessives and articles co-occur and those attesting clitic possessives. This implies that on the basis of the criteria established by Schoorlemmer and reported in Table 2 languages such as French cannot be classified correctly: they display the properties of languages of Type 2 but are of Type 1.

Another problem for Schoorlemmer's analysis is the Italian element *loro* which does not seem to be a determiner or an adjective. Schoorlemmer does not mention the lack of agreement on *loro*. If it is adjectival and moves to Spec,AgrPossP, it should carry adjectival inflection, contrary to fact, as (61) illustrates.

| (61) a. | il loro caro amico    |             | MASC, SING | Italian |
|---------|-----------------------|-------------|------------|---------|
| b.      | la loro cara amica    | (cf. *lora) | FEM, SING  |         |
| c.      | i loro cari amici     | (cf. *lori) | MASC,PL    |         |
| d.      | le loro care amice    | (cf. *lore) | FEM,PL     |         |
|         | the their dear friend | l(s)        |            |         |

#### 2.2.4. *Summary*

The problem of Schoorlemmer's analysis is that languages such as French, which lack [def] and in which possessives adjoin to D, share the same characteristics as languages of Type 2: in both cases possessives cannot co-occur with definite articles, cannot occur in indefinite DPs and do not display the same form in ellipsis and non-ellipsis structures. Therefore, the distinction between languages of Type 1 like French and of Type 2 is not clear anymore and the properties in Table 2 are not sufficient to telling apart both types. In sum, the main problem of Schoorlemmer's analysis is the assumption that in languages of Type 1, possessives are adjectival and in languages of Type 2 that they are determiner-like. As mentioned above, French has the characteristics of a language with determiner possessives. In addition, *loro* in Italian, a language with adjectival possessives, does not have the form of an adjective.

#### 3. ANALYSIS

The typology proposed in this section is simple, almost obvious, but as no-one, at least to my knowledge, seems to have classified possessives in that way, it is worth exploring. Three types of possessives are advocated, determiner, adjectival and pronominal possessives. All of them can be arguments generated in Spec,NP and licensed in a higher specifier position. Furthermore, I assume that each type of possessives may display two paradigms, a weak and a strong one<sup>25</sup>, and that a particular language can attest several types of possessives. This

<sup>&</sup>lt;sup>25</sup> Notice that the terms weak/strong adopted in this paper differ from those found in a tripartite account. Here the notions weak/strong are taken to describe the morpho-phonetic properties of possessives.

analysis partly follows Cardinaletti's and Schoorlemmer's accounts but also differs from their proposals on several points. Each type of possessives advocated is examined below.

## 3.1. Determiner possessives

Let us start with the first type of possessive modifiers postulated here, determiner possessives. The choice of the label will become clearer throughout the section.

As mentioned several times in this paper, the impossibility for some possessive modifiers to co-occur with articles as in (62) is accounted for if these possessive elements sit in D.

(62) \*le mon livre a'. mon livre the my book

French

In (62), *le* and *mon* seem to compete for the same position. However, to assume that *mon* is base-generated in D, like definite articles would be incompatible with the assumption that possessives are arguments generated in Spec,NP. On the other hand, *mon* can be analysed as a head which has moved out of Spec,AgrPossP, its licensing position. The reason of this movement has to be accounted for. One possibility is to link this movement to the difference between definite articles and possessives mentioned by Schoorlemmer. According to her, DPs with definite articles have two properties, specificity *and* uniqueness, whereas possessives like *mon* or *my* lack the second one. For example the DP *the book* is specific and unique whereas *my book* is specific but not unique. We could assume that definite articles are marked [+unique] by default, contrary to possessives. On the other hand, determiner possessives and articles are both marked [+specific], or [+definite]<sup>26,27</sup>, which explains their presence in D. In that case, the reason for *mon* to move to D in (62) is the presence of this feature. This also explains why DPs headed by such a possessive cannot be indefinite, as (63) illustrates. In (63), *mon* is ungrammatical in expletive constructions which require indefinite elements. The label determiner possessive therefore refers to possessives with the feature [+definite], say [+DEF].

il y a un /\*mon livre sur la table 'there is a / \*my book on the table'

French

Let us turn to West Flemish. Recall from preceding sections that in this language a weak and a strong paradigm co-exist. (64a) illustrates the strong variant and (64b) the weak one, as the phonetic transcriptions in brackets show. *ST* stands for strong and *WK* for weak. (65) shows that none of these two patterns can co-occur with definite articles and that both are ungrammatical in expletive contexts.

(64) a. zynen [zinən] boek his-ST bookb. zenen [zənən] boek his-WK book West Flemish

<sup>26</sup> Schoorlemmer does not seem to distinguish these two features.

<sup>&</sup>lt;sup>27</sup> Of course, this is not an exhaustive list of the features displayed by possessive modifiers. For example, they must have a feature [+possessive] encoded in their meaning.

(65) a. \*de men / myn katte
the my catb. Der is een katte / \*myn / \*men katte
there is a cat / my cat

West Flemish

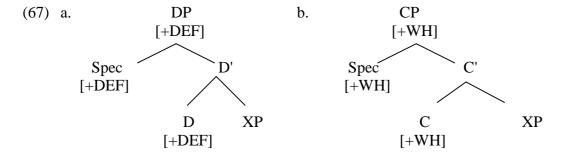
From the above discussion, we infer that the ungrammaticality of (65a) is due to the definiteness of the possessive modifiers. This implies that both the weak *and* the strong variant carry a feature [+DEF], i.e. that both are determiner possessives. However, both variants cannot be treated on a par as the forms of the type myn(en) can be coordinated, contrasted and modified as in (66) and are considered as maximal projections. If both zen(en) and zyn(en) have a feature [+DEF] and occupy DP, the only possibility is to assume that the former, which is weak, occupies D, whereas the latter which is strong occupies the specifier of DP.

(66) a. ze ziet ZYN / \*ZEN eus geren en t'eure niet she sees HIS house 'gladly' and the hers not

West Flemish

- b. zyn [zin] / \*zen [z⊕n] en eur recept his and her recipe
- c. alliene MIN / \*men hus è verkocht (g)ewist, e nie tjoene. only my house is sold become and not yours

To license the [+DEF] feature on D, a definite element is necessary in DP, exactly in the same way as a *wh*-phrase is required to license the [+WH] feature on C in interrogative clauses. The feature on the head can be licensed either by overt spell-out of the head or by a specifier-head relation. Consider (67), where the features on the head percolate to the maximal projection and where the head agrees in features with its specifier. In other words, [+DEF] and [+WH] in (67a) and (67b) respectively are licensed when either the head or the specifier of the projections are filled with an element satisfying these features.



If nominals can be compared to clauses as assumed here, DP in (68) is parallel to CP in (69). In (68a), when the specifier of the projection is filled with an element carrying the feature [+DEF], i.e. when the feature on the head is licensed, the head of the projection cannot contain another element marked [+DEF]. In the same way, if the head is filled with an element marked [+DEF], the specifier cannot be occupied by an element with the same feature. This means that the strong variant of determiner possessives in West Flemish (68) sitting in Spec,DP, and the weak one in D satisfy the feature [+DEF]. If this analysis is on the right track, it could be extended to French examples such as (70).

(68) a. ze ziet ZYN / \*ZEN eus geren en t'eure niet she sees HIS house 'gladly' and the hers not

West Flemish

b. [ DP myn katte my cat

- (69) a. John wonders [ CP when [ IP Mary will come ] ].
  - b. \*John wonders [ CP when if [ IP Mary will come ] ].
- (70) a. ta maison à toi your house to you

French

- b. C'est TA recette qui est bonne, pas sa recette. it is YOUR recipe that is good not his/her recipe
- c. Seulement SA maison a été vendue, pas la mienne. only his/her house has been sold not the mine

(70) leads to contradictory results: on the one hand the grammaticality of ta in a doubling construction such as (70a) shows that this form is a clitic<sup>28</sup> and on the other hand the focus on TA in (70b) and the modification preceding TA in (70c) suggest that this element cannot be a clitic (Kayne (1977:89)). To solve the dilemma, I tentatively propose that French be treated on a par with West Flemish, attesting two variants of determiner possessives: a weak ta in D and a strong TA in Spec,DP. It is on the basis of such data that I consider that a particular possessive may have a weak and a strong paradigm. Weak determiner possessives move to D and strong ones to Spec,DP. Such a proposal could also apply to English. (71a) shows that YOUR can be emphasised on a par with the West Flemish ZYN and the French TA, illustrated in (72) and (70b) respectively. Another possibility would be to assume that YOUR, ZYN and TA move to the specifier of a FocP above  $DP^{29}$ . Evidence for this hypothesis comes from the pause which separates ZYN and EIGEN in (72). If ZYN in (72) moves to Spec,FocP, Spec,DP is used as an escape hatch. Movement through Spec,DP is sufficient to licence the feature [+DEF]. In (71b), MY is modified, another characteristic not displayed by clitics.

- (71) a. She likes YOUR house, not hers.
  - b. Only MY house was sold not yours.

# (72) ZYN EIGEN us his own house

West Flemish

The existence of two variants of determiner possessives also accounts for (73). If clitics cannot be coordinated (Kayne 1977:87,89), my and your in (73a) are not clitics. (73b), in which her is coordinated with a maximal projection, further supports the hypothesis that possessives of that type are not heads and that they may be strong. Why only some determiner possessives can be coordinated and others not as (73c) shows remains mysterious. That French possessives mon, ton.. cannot be coordinated is not accounted for either. Finally, as her in English, son in French and zen(en)/zyn(en) in West Flemish are determiners, their ungrammaticality in ellipsis contexts such as (74) is expected.

<sup>28</sup> According to Cardinaletti, whenever a constituent is doubled as in (70), the doubling element is a clitic ('Doubling is *clitic* doubling' (1998:23)). The contrary, however, is not true, clitic does not imply doubling.

<sup>&</sup>lt;sup>29</sup> Recall that I assume that DP might correspond to the clausal FinP and that it is dominated by further projections.

- (73) a. My and your secretary <sup>30</sup>
  - b. ... her and Mark's first-born baby <sup>31</sup>
  - c. \*Your and her recipe(s) is /are very good.
- (74) a. my friend has introduced \*her / hers.

b. mon ami m'a présenté \*son / le sien. French my friend [to] me has introduced his / the his

c. de zynen / \*zynen / \*zenen West Flemish

the his his-st his-wk

To sum up this section, possessives which move to Spec,DP or D are considered as determiner possessives, whether they are heads or maximal projections. This analysis includes languages classified as Type 2 by Schoorlemmer and attesting Pos-to-D movement in Schoorlemmer's account, as well as the languages of Type 1 in which possessives cliticise onto D. Contrary to Schoorlemmer's analysis, no movement involving the features on Pos is postulated here. Instead, it is either the possessive modifier sitting in Spec,AgrPossP which moves to Spec,DP, or the head of the possessive in Spec,AgrPossP which moves to D. Concerning the two variants of determiner possessives, I suggest on the basis of a Principle of Economy that strong forms occur when weak ones are not possible, i.e. in focalisation, coordination and modification contexts. Two paradigms of determiner possessives are attested in West Flemish, and maybe even in French and English. In the next section, another type of possessive modifiers is examined.

## 3.2 Adjectival possessives

## 3.2.1. Weak and strong forms

In preceding sections, the similarity between agreement on Italian possessives and adjectives has already been mentioned. (75) shows that *mio* and *caro*, *mia* and *cara*... carry the same inflection. On the basis of (75), I assume following Cardinaletti and Schoorlemmer that *mio* in such contexts is an adjectival possessive.

(75) a. il mio caro amico MASC, SING Italian b. la mia cara amica... FEM, SING

the my dear friend

Notice that in (75) the agreement displayed by possessives is not sufficient to classify them as adjectives. Otherwise, French definite articles such as *le*, *la*, *les* 'the masc, fem, pl', which carry agreement, should also be considered as adjectives. As mon, ton, son in French move through Spec,AgrPossP, the adjectival inflection they display is not incompatible with our analysis which suggests that these elements are determiners. If this proposal is on the right track, mio in Italian can also be considered as a determiner when occurring with singular kinship nouns, as in mio fratello 'my brother'. According to Schoorlemmer, a characteristic of adjectival possessives is the cooccurrence of articles and possessives, an assumption adopted here. The article can be definite as in (75) or indefinite as the grammaticality of (76) shows. This implies that, in some languages, DPs containing adjectival possessives can be indefinite.

<sup>&</sup>lt;sup>30</sup> As *my* and *your* are elements of the same category, they can be coordinated (see Chomsky (1957:36)). Notice that as is the case for possessive modifiers, only some personal pronouns can be coordinated. Thanks to Ur Shlonsky for mentioning this point.

<sup>&</sup>lt;sup>31</sup> From *Bridget Jones: The Edge of Reason*. Helen Fielding, 1999, Picador, London, p. 102.

In (76) for example, it is the article in D which determines the [ $\pm$  definiteness] value of DP, not the possessive element.

(76) Un suo amico a/one his friend

Italian

Recall from the preceding section that determiner possessives carry a feature [+DEF], which forces their movement to DP. Such an analysis implies that adjectival possessives are not marked [+DEF] and therefore that they do not move to DP. If adjectival possessives remain in Spec,AgrPossP, where they are licensed, an article has to be introduced to determine the [± definiteness] value of D.

As Italian possessives occurring in ellipsis contexts display the same agreement inflection as those modifying overt nouns and as they co-occur with the article as (77) shows, they are analysed as adjectival possessives. Cardinaletti also admits that '[e]llipsis requires possessives with adjectival agreement inflection, which means that they are necessarily prenominal' (1998:38).

(77) il suo , la sua... MASC/FEM, SING the his/her...

Italian

Not only Italian possessives display adjectival agreement inflection in ellipsis. As already mentioned in preceding sections, the ending -e on t zyne in (78a), is an affix not normally found in neuter as (78b) shows. The contrast illustrated in (78) suggests that zyne is an adjectival form.

(78) a. wien ze werk is da? T zyne / \*t zen(e)

**NEUT,SING** 

West Flemish

who his work is that the her-e (neuter)

b. zyn nieuw werk

**NEUT,SING** 

his new job

Possessives of the type *mijne* in Dutch carry the same inflection as those in West Flemish. Consider (79a). The inflection -*e* is specific to adjectives and is suffixed both on *mijne* and *grote* in (79b). In German, the same phenomenon is attested as (80) illustrates. Both *seine* and *regnerische* carry an adjectival -*e*. In addition to adjectival possessives, German attests determiner possessives as (81) shows: the absence of article in this example suggests that *meine* is a determiner<sup>32</sup>.

German

(i) can be analysed in two ways. Either *meine* is considered as an adjective sitting in Spec,AgrPossP and the demonstrative as a type of determiner, or *meine* is a determiner and the demonstrative sits in a position above DP. As demonstratives are deictic elements i.e. that their interpretation is context dependent, it is not inconceivable that they sit in the left-periphery of nominals. As German is out of the scope of this paper, I leave the question open. Constructions in which demonstratives and possessives co-occur are also attested in English as (ii) shows. This example is a remnant of Old English in Modern English.

(Haegeman & Guéron 1999:450)

b. That mine murnede mod

Whether *his* and *mine* in (ii) can be considered as adjectives or not would require a thorough analysis of Old English, which I intend to do in further research.

<sup>&</sup>lt;sup>32</sup> If (81) is unproblematic, it is not the case of (i), where a demonstrative precedes the possessive.

<sup>(</sup>i) Diese meine Bücher these my books

<sup>(</sup>ii) a. This his last book

(79) a. Dat is niet jouw boek op tafel, maar het mijne that is not your book on table, but the mine

b. het grote huis (Kester (1996:91)) the big-AGR house

(80) a. Das seine [e] gefällt mir nicht the his-AGR pleases to-me not

German

Dutch

b. diese regnerische Woche this rainy-AGR week

(81) Meine Bücher my books

German

West Flemish brings additional information on the forms of possessives attested in ellipsis. In (78), the ungrammaticality of t zen(e), the weak counterpart of t zyne, suggests that in ellipsis only strong adjectival possessives are grammatical. Recall that in West Flemish, two variants of possessives are attested when the noun is overt. This is not the case in ellipsis as (78) shows. I suggest that in ellipsis constructions, strong adjectival possessives are required to license a null pronoun pro, a hypothesis briefly discussed in Section 4. (see Kester (1996), Lobeck (1995)). If pro has to be licensed by a strong form, this accounts for the ungrammaticality of weak forms such as de zen(e) in (78a). Therefore, I assume that like determiner possessives, adjectival possessives may display a weak and a strong paradigm. I further propose that some languages, like West Flemish, only attest strong adjectival possessives, whereas others, like Paduan, have two variants of adjectival possessives. Consider (82).

(82) a. el me libro a'. \* el me the my book the my b. el libro mio b'. el mio the book my the my

According to the analysis proposed here, *me* in (82a) is adjectival, i.e. it is not marked [+DEF] and sits in a position lower than DP, as the presence of the article demonstrates. The ungrammaticality of the form *me* in (82a') shows that our hypothesis is on the right track: in ellipsis structures such as (82b'), the strong form *mio* is required to license *pro*. Therefore, to be licit with a non-overt noun, adjectival possessives have to be strong. Paduan further suggests that post-nominal possessives are strong adjectival possessives whereas pre-nominal ones are weak adjectival possessives. Compare (82a) and (82b). Why post-nominal adjectival possessives are strong and pre-nominal adjectival possessives are weak is not clear. In some languages weak and strong forms are homophones as in Italian (83).

(83) a. il suo amico

Italian

Paduan

b. il amico suo

c. Il mio amico mi ha presentato il suo. The my friend [to] me has introduced the his

<sup>33</sup> In the analysis proposed here, mi in (i) is considered as a determiner.

(i) mi libro 'my book'

Paduan

French further demonstrates that adjectival possessives must be strong when the noun is non-overt. (84) clearly shows that possessives of the type *le mien*, *le tien*... display characteristics of strong elements. In (84a), *MIENNE* is contrasted, in (84b) it is coordinated with *tienne*, and in (84c) it is modified, three properties of strong forms.

(84) a. C'est la MIENNE qui est bonne, pas la tienne. French it is the mine which is good not the yours

- b. La tienne et la mienne sont bonnes. the yours and the mine are good
- c. Seulement la MIENNE a été vendue pas la sienne. only the mine has been sold not the his/hers

The analysis advocated here avoids the distinction between languages with and without 'special forms' of possessives in ellipsis as Schoorlemmer suggests. In her account, she has to assume that 'the different morphology found in ellipsis and non-ellipsis can be related to whether the possessor is sister to Pos or just the trace of Pos' (Schoorlemmer, 1998:81). In our analysis, the only distinction necessary in ellipsis is between weak and strong possessives<sup>34</sup>. Finally, notice that the status of arguments of possessives is not in contradiction with their adjectival nature. In (85), for example, the adjective *Iraqi* refers to the subject of the deverbal noun *invasion*, it is an argument of *invasion*.

## (85) the Iraqi invasion of Kuwait

To sum up, I propose that adjectival possessives display two variants, a weak one and a strong one. Strong adjectival possessives occur in ellipsis contexts, whereas weak adjectival possessives occur with overt nouns. In ellipsis, strong forms *and* agreement are necessary to license *pro*. Furthermore, when post-nominal possessives are attested, they seem to be strong. As adjectival possessives do not have a feature [+DEF], they stay in a position lower than DP and an article is required.

## 3.2.2. Post-nominal possessives

The presence of the article *and* the adjectival inflection displayed by *mia* and *mio* in (86) show that these elements are adjectival. However, post-nominal possessives are problematic because their exact position is difficult to determine. In this section, the position of post-nominal possessives is not further discussed. The main remark concerns languages attesting post-nominal possessives.

(86) a. la casa mia Italian the house my

b. el libro mio Paduan the book my

As post-nominal possessives are not attested in English, French and West Flemish, as (87) shows, we could suggest that they only occur in languages which have post-verbal subjects<sup>35</sup>, like Italian. Consider (88).

French

<sup>&</sup>lt;sup>34</sup> For English possessives of the type *mine*, see Section 3.3..

<sup>&</sup>lt;sup>35</sup> Post-verbal subjects here do not include expletive constructions such as (i) and (ii).

<sup>(</sup>i) There arrived three girls.

<sup>(</sup>ii) Il est arrivé deux dames. it is arrived two ladies

(87) a. \*(the) book my / mine

b. \*(le) livre mon / mien / le mien French

the book my / mine / the mine

c. \*(de) boek menen / mynen / de mynen West Flemish

(88) ha telefonato mia moglie. has phoned my wife

Italian

If possessives are parallel to clausal subjects as suggested in Section 1.1., post-nominal possessives would correspond to post-nominal subjects. Recall that possessives are generated in Spec,NP, as clausal subjects are generated in Spec,VP.

## 3.3. Pronominal possessives

## 3.3.1. *Strong forms*

In addition to determiner and adjectival possessives, pronominal possessives are advocated here. Consider (89), which illustrates isolation, predicative and ellipsis constructions in English.

- (89) a. Speaker A: Whose book is this? B: Hers/Mary's.
  - b. This is hers/Mary's.
  - c. My friend has introduced hers to me.

Recall that such examples are problematic for Cardinaletti's account mainly because of the unexpected absence of article. Whether *hers* is analysed as strong as in (89a,b) or as weak as in (89c), Cardinaletti's analysis predicts that these forms should co-occur with the definite article. In our account too, *hers* cannot be adjectival because it is not preceded by the article. The absence of article and the definiteness of *hers* suggest that in (89) it sits in DP, i.e. that it moves to DP to check a feature [+DEF]. As this form does not co-occur with an overt noun, it cannot be a determiner. The obvious alternative is to analyse it as a pronoun.

If pronominal possessives sit in DP, one possibility, adopted here, is to assume that possessive pronouns are maximal projections moving from Spec,AgrPossP to Spec,DP. In that case, they are maximal projections, analogous to *Mary's* and *whose* in (90) and the morpheme –s on *hers*, *ours*, *theirs* would correspond to the 's on *Mary's*. Notice also that in (89) *hers* can be replaced by a full DP such as *Mary's*.

- (90) a. Mary's book
  - b. whose book

Support for analysing pronouns as strong forms comes from (89). As isolation and predicative contexts require strong elements, *hers* in (89) must be strong. In addition, recall from Section 2.1.5. that, more generally, possessives occurring in ellipsis are analysed as strong because they can be contrasted, coordinated and modified as in (91).

- (91) a. She likes YOURS, not hers.
  - b. Yours and mine are the best.
  - c. Only MINE was sold not yours.

If predicative and isolation structures require strong elements, *suo* in (92) must be strong. As it is not preceded by an article and does not co-occur with an overt noun, it is pronominal. In short, Italian displays determiner, adjectival and pronominal possessives.

(92) a. Questo ritratto è suo.

Italian

this painting is his

b. Speaker A: Di chi è questo libro ? B: Suo. whose book is this?

In conclusion, forms of the type *mine*, *yours*, *his*, *hers*... are analysed as strong pronominal possessives. Weak pronominal possessives are also postulated. They are briefly discussed in the next section.

#### 3.3.2. Italian loro

At first sight, as the Italian possessive *loro* co-occurs with an article, it should be analysed as an adjective. However, its lack of adjectival agreement illustrated in (93) suggests that it does not belong to this category. *Loro* cannot be an invariable adjective either, as Cardinaletti, following Zamparelli (1993), notices: invariable adjectives are restricted to post-nominal positions as (94) shows.

(93) a. il loro caro amico MASC, SING

b. la loro cara amica (cf. \*lora) FEM, SING

c. i loro cari amici (cf. \*lori) MASC, PL

d. le loro care amiche (cf. \*lore) FEM, PL the their dear friend(s)

(94) a. il vestito / i vestiti blu the dress / the dresses blue Italian

Italian

- b. \*la blu bandiera degli avversari
- c. la rossa bandiera degli avversari the \*blue /red-FEM flag of-the enemies

Cardinaletti analyses *loro* as a personal pronoun which functions as a possessive in the nominal domain<sup>36</sup>. I also assume that *loro* is a pronoun, but I propose that it is a weak pronominal possessive. If a particular possessive may display a weak and a strong form as assumed here, *loro* can be the weak variant of pronominal possessives. As mentioned above, if *loro* is a pronoun, its lack of adjectival agreement is expected. In addition, as it is not a strong adjectival possessive, its ungrammaticality in post-nominal positions such as (95a) is accounted for.

(95) a. \*il libro loro di sintassi the their interesting book of syntax Italian

b. il loro libro di sintassi

If *loro* is a pronoun, its cooccurrence with articles is surprising. Recall that in the analysis proposed here, only adjectival possessives co-occur with articles. However, the weakness of *loro* could be responsible for the presence of *il* in (95b). It could also explain why *loro* is ungrammatical in isolation and predicative contexts such as (96a,b), which require strong elements. The strong forms in isolation and predicative structures can be either adjectival as *la sienne* in (96c) or pronominal as *hers* in (96d).

<sup>&</sup>lt;sup>36</sup> For the reasons of this assumption, the reader is referred to Cardinaletti's own paper.

(96) a. Questo ritratto è suo / ?\* loro this painting is his / \*theirs

b. Speaker A: Di chi è questo libro ? B: Suo /\*Loro whose book is this? B: Suo /\*theirs

c. A: Quelle voiture as-tu volée? B: la sienne French which car have you stolen the his/hers

d. It is hers.

The presence of the article in examples such as (95b) implies that *loro* does not carry the feature [+DEF] and therefore that it does not move to DP. The [ $\pm$  definiteness] value of DP is determined by an article<sup>37</sup>. In (97), it is *Gianni* which has moved to D. Such examples show that *loro* is not a head but a maximal projection.

(97) a. Gianni<sub>i</sub> loro t<sub>i</sub>
Gianni their
b. casa<sub>i</sub> loro t<sub>i</sub>
home their

Italian

Notice that *loro* is grammatical in ellipsis structures such as (98). In these contexts, it is preceded by the definite article. The question which arises is How can *loro* satisfy the identification conditions of *pro* if it does not display any agreement? This problem is briefly addressed in Section 4..

(98) Ho invitato i miei amici, e Gianni e Maria i loro. Italian [I] have invited the my friends and G. and M. the theirs

In this section, I propose that *loro* is a weak pronominal possessive. Its status of pronoun accounts for the lack of adjectival agreement. The case it displays might play a role in the identification of *pro* in ellipsis contexts.

## 3.4. Summary

In this analysis, three types of possessive modifiers are advocated, determiner, adjectival and pronominal possessives. All of them can be generated in Spec,NP and licensed in an AgrPossP. Determiner possessives are extracted from the specifier of AgrPossP and either move to D or to Spec,DP as maximal projections. Their presence in D accounts for the impossibility for determiner possessives to co-occur with articles and for the definiteness value of DPs. The existence of a weak and a strong paradigm allows some determiner possessives to be coordinated, emphasised and modified, three characteristics of strong elements. Adjectival possessives do not move to D because they lack a [+definite] feature. As they occupy Spec,AgrPossP, articles are required to fill D and to determine the [± definiteness] value of DP. Like determiner possessives, adjectival possessives display two patterns. In ellipsis, only the strong variant is grammatical, because a strong form with agreement is required to licence *pro*. Strong forms are also attested post-nominally in

Italian

<sup>&</sup>lt;sup>37</sup> Notice that (96a,b) can be salvaged by the introduction of the preposition *di* (*Questo ritratto è di loro*; *Di chi è questo libro? Di loro*). This is not always the case as *ne-cliticisation* contexts illustrate: (i) cannot be salvaged by the preposition *di*. Examples from Cardinaletti (1998).

<sup>(</sup>i) Ne ho letti di suoi / \* di loro.

<sup>[</sup>I] NE have read of his / \*of theirs

languages such as Italian. Post-nominal possessives can be analysed on a par with post-nominal subjects. Finally, strong pronominal possessives, which occupy DP, are advocated. *loro* in Italian is analysed as a weak counterpart.

#### 4. SPECULATIONS ON NP ELLIPSIS

In this section, the empty category *pro* postulated in ellipsis contexts is briefly discussed. In her work on ellipsis, Lobeck (1995) proposes that ellipted categories are identified and licensed under the conditions in (99).

## (99) Licensing and Identification of pro

An empty, non-arbitrary pronominal must be properly head-governed, and governed by an X-O specified for strong agreement.

As a detailed analysis of *pro* would be out of the scope of this paper, only the identification conditions on *pro* are briefly examined. Lobeck classifies ellipsis contexts into three types: VP ellipsis, Sluicing and Ellipsis in NP illustrated in (100a), (100b) and (100c) respectively (examples from Lobeck (1995:3-4)). However, if as assumed here, NPs are extended into DPs, and if DPs are parallel to clauses, the types of ellipsis illustrated in (100) can be restricted to two as in (101) and (102).

- (100) a. Because [IP Pavarotti couldn't [VP e ]], they asked Domingo to sing the part.
  - b. We want to invite someone, but we don't know [CP] who [CP]
  - c. Although [ $_{NP}$  these [ e ]] were pretty good, those books will never be bestsellers.
- (101) a. [CP Because [IP Pavarotti couldn't [VP e ]]... VP ellipsis b. [DP il [AgrPossP mio [NP e ]] NP ellipsis (102) a. ... but we don't know [CP who [IP e ]]. Sluicing b. ... [DP mine [AgrPossP e ]]. Sluicing

Two types of ellipsis in NP (DP) are postulated here. The first one is parallel to VP ellipsis and the second one to Sluicing: in (101) it is the lexical category which is omitted, and in (102) a functional projection. Notice that if this analysis is on the right track, *mio* in (101b) cannot sit in its base-position, NP being empty.

The problem is to determine what 'strong agreement' in (99) represents. The main characteristics of the possessives attested in ellipsis are reported in Table 3 below. The first column indicates the language illustrated, the second column the type of possessives represented, and the third column contains the examples. The fourth column indicates whether or not the (definite) article co-occurs with the possessive modifier, the fifth column indicates the definiteness value of the possessive modifier itself, the sixth column whether or not the possessive modifier agrees with the possessee. Whether possessive modifiers have (overt) case or not is mentioned in the seventh column and whether they are strong or weak in the last column. Nbr stands for agreement in number and Gen for agreement in gender. St stands for strong and Wk for weak.

| Table 3  |      |          |      |        |                    |      |                |
|----------|------|----------|------|--------|--------------------|------|----------------|
| Language | Type | E.g.     | Art. | [+DEF] | Agr with possessee | Case | Weak<br>strong |
| Paduan   | Adj  | El mio   | +    | -      | Nbr + Gen          | -    | St             |
| Italian  | Adj  | Il mio   | +    | -      | Nbr + Gen          | -    | St             |
| French   | Adj  | Le mien  | +    | -      | Nbr + Gen          | -    | St             |
| WF       | Adj  | De mynen | +    | -      | Nbr + Gen          | -    | St             |
| Italian  | Pron | Il loro  | +    | -      | -                  | +    | Wk             |
|          |      |          |      |        |                    |      |                |
| English  | Pron | mine     | 1    | +      | -                  | +    | St             |

The main characteristics of the possessives attested in ellipsis are the following: both adjectival and pronominal possessives agree in person with the possessor. All the examples are definite, either because the possessives co-occur with a definite article or because the possessive modifiers carry a feature [+DEF]. Adjectival possessives agree in number and gender with the possesse contrary to pronominal possessives. In addition, adjectival possessives lack case, i.e. case assigned DP internally, contrary to pronominal ones. This difference is expected if only DPs, including pronouns, require case. I assume here that *mine* and *loro* have genitive case (see Cardinaletti (1998) for an analysis of *loro*).

Another way to read Table 3 is to treat the first five examples as NP ellipsis and the last one as a kind of Sluicing. For *pro* to be grammatical in *NP ellipsis* (with the definite article), there are two possibilities: either the possessive modifier is adjectival (with number and gender agreement) *and* strong, or it is pronominal, weak, with case. Notice that all the adjectival possessives occurring in NP ellipsis and reported in Table 3 are strong, which supports the analysis proposed in this work. On the other hand, the case displayed by the pronominal possessive *loro* seems to be sufficient for ellipsis structures to be well formed: strong forms are not required. However, in examples of Sluicing such as (102b), the pronoun has case *and* is strong. It also carries a feature [+DEF] and is therefore not preceded by an article. The above observations suggest that the more structure there is to be licensed, the more features are necessary.

To determine with more precision the combination of features required to identify *pro* in ellipsis, further research is required.

## 5. CONCLUSION

In this paper, two typologies of possessives have been examined and tested, Cardinaletti's and Schoorlemmer's. Both of them are very instructive and helpful to understand the systems of possessives. However, some points remain problematic in both proposals, as I tried to show in this paper. Although the typology proposed here is mainly descriptive, it seems that the data examined are better accounted for if three types of possessive modifiers are postulated. Of course, the main question which has to be answered is Why do languages vary the way they do?

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