

THREE TYPES OF POSSESSIVE MODIFIERS*

Tabea Ihsane (tabea.ihsane@lettres.unige.ch)

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 elements¹.

* A first version of this paper consists of a DES unpublished manuscript entitled *A Typology of Possessive Modifiers*.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 postulated². 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 ³
the problem difficult
b. the short book | French |
| (3) a. *el corto libro
the short book
b. el libro _i corto t _i | 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?
b. This is [_{DP} a [_{AP} very important] decision].
c. [_{DP} [_{AP} How important] a decision] is this? | (Haegeman & Guéron, 1999:419) |
|---|-------------------------------|

(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.

¹ 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):

(i) àgásá sín àfo àtòn éhé ló le crab Pos foot Nral Dem Det Num 'these (specific) three feet of crab'	Gungbe
---	--------

² 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.

³ (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 few⁴. Only the projections relevant for the analysis of possessives⁵ 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)⁶.

- (5) a te kalap-ja i- d Hungarian
 the you(-NOM) hat- POSS- PL-2SG
 'your hats'

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 nouns⁷ 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.

⁴ 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).

⁵ In this paper, I use the terms *possessives* or *possessive modifiers* not *possessor*, unlike Szabolcsi.

⁶ Cardinaletti (1998) labels this projection AgrS_NP and Schoorlemmer (1998) PossP. The label AgrPossP adopted here is used throughout the paper.

⁷ 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 lätta ... [DP t_i 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. XP₁ > (XP₂) > (XP₃) > (XP₄) > 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..

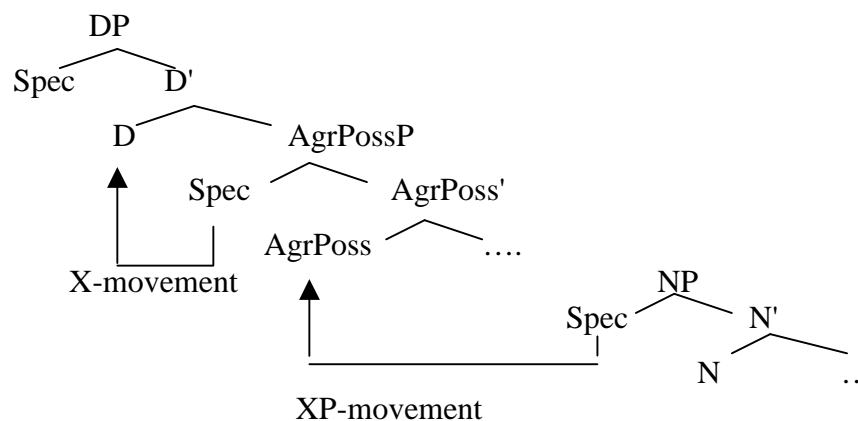
2. PREVIOUS ANALYSES

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,NP⁸, to Spec,AgrPossP to be licensed (Piccolo (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.

(11)



In Section 2.1.2., the main characteristics⁹ of the three types of possessive modifiers advocated by Cardinaletti are discussed. All the examples of Section 2.1.2. are from Cardinaletti.

⁸ 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.

⁹ 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 | Paduan |
| the book my | |
| b. el me libro | |
| c. Speaker A: sto libro di chi zelo? | B: Mio / * me |
| whose book is this? | 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 | Paduan |
| this book is mine | |

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 possessives¹⁰. 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.

¹⁰ 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.

¹¹ 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.

¹² 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 Italian
 the house only / really his/her
 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 Italian
 the their interesting book of syntax
 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. Italian
 the my house is nice, the theirs not
 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* Paduan
 the my (book)
 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 article¹³. Therefore, the deficient possessive *sua* in (22) is a weak element and not a clitic.

- (22) *la sua casa* Italian
 the his/her house

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)¹⁴.

¹³ The article co-occurring with weak and strong possessives does not have to be definite as (i) below shows:

- (i) *Un suo amico* Italian
 a/one his friend

¹⁴ 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.

- (i) a. *mio / suo fratello* Italian
 b. **il mio / suo fratello*
 (the) my / his brother

- (23) a. Gianni _i mio t _i Italian
 Gianni my
 b. casa _i mia t _i
 house my

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) illustrates¹⁵. 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.

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

(i) **son* père à Jean 'his father to John' French

- (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.

¹⁷ Thanks to Hayley Young and Stephanie Durlmann for their help with the judgements in English.

2.1.4.3. West Flemish

The second Germanic language studied in this paper is West Flemish¹⁸. 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.	<i>zenen</i> [zənən] boek his book	a'. <i>zynen</i> [zinən] boek his book	MASC, SING	West Flemish
b.	<i>zen</i> [zən] lesse his lesson	b'. <i>zyn</i> [zin] lesse his lesson	FEM, SING	
c.	<i>zen</i> werk his work	c'. <i>zyn</i> werk his work	NEUTER, SING	
d.	* <i>de zenen</i> boek the his book	d'. * <i>de zynen</i> boek 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.	<i>wien zen werk is da?</i> T <i>zyne</i> / * <i>zyn(e)</i> / * <i>zen(e)</i> / * <i>de zene</i> who his work is that the her-e (neuter)	West Flemish
b.	<i>dat is den zynen</i> / * <i>zyn(en)</i> / * <i>zen(en)</i> / * <i>den zenen</i> 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)	<i>ze ziet ZYN</i> / * <i>ZEN</i> eus geren en t'eure niet she sees HIS house 'gladly' and the hers not	West Flemish
(42) a.	<i>zyn</i> [zin] / * <i>zen</i> [zən] en eur recept his and her recipe	West Flemish

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

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 ones²⁰ 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 | ²¹ | 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 pre-nominal' (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 | | |

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

²¹ In fact, Paduan displays three forms of possessives. The third one is illustrated below. For a proposal, see Section 3..

(i) mi libro	Paduan
--------------	--------

- (48) a. *il mio caro amico* MASC, SING Italian
 b. *la mia cara amica* FEM, SING
 the my dear friend

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 movement²². 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 West Flemish
 my and Marese books
 b. *ze ziet ZYN eus geren en t'eure niet*
 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 co-occur 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 West Flemish
 the his book

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).

²² 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).

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
- (54) a. Un suo amico
a/one his friend
b. *Es war mein Buch auf dem Tisch
there was my book on the table
- (55) a. il suo amico
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
my book
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	-	+

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 amiche	(cf. *lore)	FEM, PL	
	the their dear friend(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 one²⁵, and that a particular language can attest several types of possessives. This

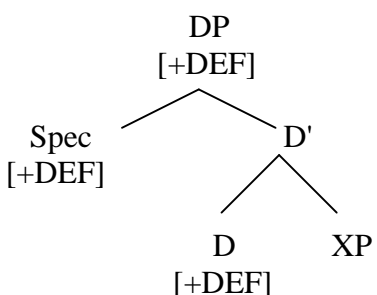
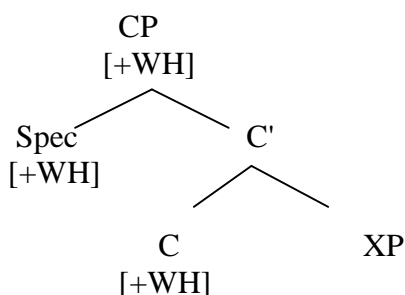
²⁵ Notice that the terms weak/strong adopted in this paper differ from those found in a tripartite account. Here the notions weak/strong are taken to describe the morpho-phonetic properties of possessives.

- (65) a. *de men / myn katte West Flemish
 the my cat
 b. Der is een katte / *myn / *men katte
 there is a cat / my cat

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 West Flemish
 she sees HIS house 'gladly' and the hers not
 b. zyn [zin] / *zen [zən] 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.

- (67) a.  b. 

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
b. [_{DP} myn katte
my cat

West Flemish

- (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
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

French

(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 clitic²⁸ 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 DP²⁹. 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.

²⁸ 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.

²⁹ 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 secretary³⁰
 b. ... her and Mark's first-born baby³¹
 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.

³⁰ 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.

³¹ From *Bridget Jones: The Edge of Reason*. Helen Fielding, 1999, Picador, London, p. 102.

- (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? his

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 Italian
 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 Italian
 the dress / the dresses blue
 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 domain³⁶. 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 Italian
 the their interesting book of syntax
 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).

³⁶ For the reasons of this assumption, the reader is referred to Cardinaletti's own paper.

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 ellipited 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 [_{IP} e]].
 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.

Language	Type	E.g.	Art.	[+DEF]	Agr with possessee	Case	Weak 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	-	+	-	+	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 possessee 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?

REFERENCES

- Abney, Steven P. 1987. The English noun phrase in its sentential aspect. PhD. thesis, MIT:
- Aboh, Enoch. 1998. *On the syntax of Gungbe Noun Phrases*. Clearinghouse on Languages and Linguistics. ERIC Documentation Reproduction Service n° ED 420 209.
- Alexiadou, A., Haegeman, L. & M. Stavrou. 1999. Ms.
- Alexiadou, Artemis. 1997. *Adverb Placement: a Case Study in Antisymmetric Syntax*. Amsterdam: John Benjamins.
- Bernstein, Judy. 1993. Topics in the syntax of nominal structure across Romance. Ph.D. thesis, City University of New York.
- Bernstein, Judy. 1996. Demonstratives and reinforcers in Romance and Germanic languages. *Lingua* 102: 87-113.
- Bhattacharya, Tanmoy. 1998. *DP-Internal Movement*. Working Papers in Linguistics 10. Department of Phonetics and Linguistics University College. London.
- Burton. Strang C. 1997. *Past Tense on Nouns as Death, Destruction, and Loss*. K. Kusomoto (ed.), *NELS* 27: 65-77.
- Cardinaletti, Anna & Michal Starke. 1995. 'The typology of structural deficiency: On the three grammatical classes'. *FAS Papers in Linguistics* 1: 1-55.
- Cardinaletti, Anna. 1998. 'On The Deficient/Strong Opposition in Possessive Systems'. In A. Alexiadou and Ch. Wilder (eds). *Possessors, Predicates and Movement in the Determiner Phrase*. 22: 17-53.
- Chomsky, Naom. 1970. 'Remarks on Nominalization'. In R. Jacobs & R. Rosenbaum (eds), *Readings in English Transformational Grammar*. Boston: Ginn, 184-221.
- Chomsky, Naom. 1995. *The Minimalist Program*. Cambridge MA: MIT Press.
- Cinque, Guglielmo. 1997. *Adverbs and Functional Heads. A Cross-Linguistic Perspective*. MS, University of Venice. (To be published by Oxford University Press.)
- Cinque, Guglielmo. 1994. 'On the Evidence for Partial N-Movement in the Romance DP'. In G. Cinque, J. Koster, J.-Y. Pollock, L. Rizzi and R. Zanuttini (eds), *Paths Towards Universal Grammar. Studies in Honour of Richard Kayne*. Washington, D.C.: Georgetown University Press, 85-110.
- Delsing, Lars-Olof. 1988. The Scandinavian noun phrase. *Working Papers in Scandinavian Syntax* 42: 57-79.
- Delsing, Lars-Olof. 1993. *The Internal Structure of Noun phrases in the Scandinavian Languages. A Comparative Study*. Ph.D. dissertation, Dpt. Of Scandinavian Languages, Lund.
- Fielding, Helen. 1999. *Bridget Jones: The Edge of Reason*. London. Picador.
- Giusti, Giuliana. 1997. The categorial status of determiners. In L. Haegeman (ed.) *The New Comparative Syntax*, Harlow; Addison Wesley Longman.
- Grimshaw, Jane. 1990. *Argument Structure*. Cambridge, Mass.: MIT Press.
- Haegeman, Liliane & Jacqueline Guéron. 1999. *English Grammar*. Blackwell Publishers Ltd. London.
- Ihsane, Tabea. 1999. *A Typology of Possessive Modifiers*. Mémoire de DES. University of Geneva. Department of Linguistics. Ms.
- Kayne, Richard. 1977. *Syntaxe du français*. Paris: Editions du Seuil (French translation of *French Syntax*. Cambridge, Mass.: MIT Press, 1975).
- Kester, Ellen-Petra. 1996. *The Nature of Adjectival Inflection*. Ph.D. dissertation, Utrecht University.
- Koopman, Hilda. 1999. The Internal and External Distribution of Pronominal DPs. In D. Johnson and I. Roberts (eds.), *Beyond Principles and Parameters*. Kluwer Academic Publishers. Printed in the Netherlands. 91-132.

- Lobeck, Anne. 1995. *Ellipsis: Functional heads, licensing and identification*. Oxford: Oxford University Press.
- Longobardi, Giuseppe. 1991. 'N-movement in Syntax and in LF', University of Venice, *Working Papers in Linguistics*, 91.I.9.
- Longobardi, Giuseppe. 1994. 'Reference and Proper Names: A Theory of N-Movement in Syntax and Logical Form'. *Linguistic Inquiry* 25(4): 609-665.
- Longobardi, Giuseppe. 1995. 'A case of construct state in Romance'. To appear in R. Ajello and S. Sani (eds), *Scritti linguistici e filologici in onore di Tristano Bolelli*. Pisa: Pacini.
- Longobardi, Giuseppe. 1996. The syntax of N-raising: A minimalist interpretation. Ms., University of Venice.
- Picallo, Carme. 1994. 'Catalan Possessive Pronouns: The Avoid Pronoun Principle Revisited'. *Natural Language and Linguistic Theory* 12(2): 259-299.
- Pollock, Jean-Yves. 1989. 'Verb Movement, Universal Grammar and the Structure of IP'. *Linguistic Inquiry* 20: 365-424.
- Rizzi, Luigi. 1997. 'The fine structure of the left periphery'. In Haegeman, Liliane (1997). *Elements of Grammar*. Dordrecht : Kluwer.
- Schoorlemmer, Maaike. 1998. 'Possessors, Articles and Definiteness'. In A. Alexiadou and Ch. Wilder (eds). *Possessors, Predicates and Movement in the Determiner Phrase*. 22: 55-86.
- Scott, Gary-John. 1998. *Stacked adjectival modification and the structure of nominal phrases*. SOAS Working Papers in Linguistic and Phonetics Vol. 8:59-89.
- Szabolcsi, Anna. 1981. The possessive construction in Hungarian. *Acta Linguistica Scientiarum Academiae Hungaricae* 31: 261-289.
- Szabolcsi, Anna. 1983. 'The possessor that ran away from home'. *The Linguistic Review* 3.: 89-102.
- Szabolcsi, Anna. 1994. 'The Noun Phrase'. In F. Kiefer & K.E. Kiss (eds), *The Syntactic Structure of Hungarian* [Syntax and Semantics 27]. Academic Press: New York, 179-274.
- Valois, Daniel. 1991. *The internal syntax of DP*. Ph.D. dissertation, MIT.
- Zamparelli, Roberto. 1993. 'Pre-nominal Modifiers, Degree Phrases and the Structure of AP'. *University of Venice Working Papers in Linguistics* 3(1): 138-163.