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Birtokos szerkezetek az angol, német és magyar nyelvben
Diskurzushoz köthető jelenségek és a birtokos DP

Possessive constructions in English, German and Hungarian
Discourse oriented phenomena and the possessive DP

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Horváth Katalin
a doktori értekezés szerzőjének aláírása

Összefoglaló

Birtokos szerkezetek az angol német és magyar nyelvben

Diskurzushoz köthető jelenségek és a birtokos DP

Horváth Katalin

Témavezető: Dr. Mark Newson

Jelen disszertáció az angol, német és magyar birtokos szerkezeteket vizsgálja, és különös figyelmet fordít a diskurzushoz köthető jelenségekre. A disszertáció elsődleges célja, hogy megmutassa, hogy a diskurzusjegyeket ([WH], [CONTR], [TOP] és [FOC]) nem lehet leellenőrizni a DP-n belül, mert a DP nem tartalmaz CP, ContrP, TopP és FocP projekciókat. Az itt javasolt elemzés szerint tehát a DP összetevőin található diskurzusjegyek a birtokos szerkezet legfelső DP csomópontjára perkolálnak, miután a köztük fennálló hierarchia alapján eldől, mely jegyek jogosultak a perkolációra. Így a mondatban a DP diskurzusfunkcióját a megöröklött jegyek határozzák meg.

A perkoláció alapú elmélet felállításához azonban először olyan szerkezetet kell javasolni, amely egységesen kezeli az angol, német és magyar birtokos szerkezeteket, de egyúttal e három nyelv közötti különbségekre is magyarázatot tud adni. A javasolt szerkezet alapján fogjuk majd megvizsgálni, hogyan viselkednek a diskurzusjegyek a DP-ben.

A perkoláció alapú elemzésnek van egy előnye a szétszakított DP megközelítéssel szemben, amely azt teszi fel, hogy a DP-ben is vannak TopP, FocP és ContrP projekciók. Ez az előny abban áll, hogy a perkoláció alapú elemzés nem kényszerül arra, hogy két diskurzusjegy készlettel dolgozzon azért, hogy egyrészt láthatatlan DP-beli mozgásokra adjon magyarázatot és másrészt, hogy megmagyarázza, miért mozog a DP a CP bal perifériájába.

Jelen értekezés elméleti háttere a Minimalista Program, pontosabban a Fáziselmélet. A disszertáció a kartografikus megközelítés szemszögéből elemzi a DP szerkezetét, hogy megválaszolja azt a kérdést, miért egy adott sorrendben kell megjeleníteni a szuffixumoknak az agglutináló nyelvekben (pl. a magyarban). A szuffixumok szigorú sorrendje megmutatja,

milyen sorrendben lépnek be az egyes fejek a komputációba. A kartografikus megközelítési mód tehát hasznos eszköznek bizonyul, ha a birtoklás DP szerkezetét le szeretnénk írni. Jelen disszertációban a fonológiaiailag realizált és az absztrakt affixumok külön fejeket foglalnak el, így a lexikális fejek fejmozgatás révén egyesülnek a kötött morfémákkal.

A frázisok viszont specifikáló pozíciókba mozognak, pl. hogy különféle jegyeket ellenőrizzenek le vagy esetet kapjanak. A specifikálóba irányuló mozgásokon kívül fejmozgatás révén is lehet jegyeket ellenőrizni, vagyis a jelen disszertációban használt modellben a jegyek ellenőrzése nem kötődik szigorúan specifikáló-fej egyezéshez.

Abstract

Possessive constructions in English, German and Hungarian

Discourse oriented phenomena and the possessive DP

by Katalin Horváth

Supervisor: Dr. Mark Newson

This dissertation provides an analysis of possessive DPs in English, German and Hungarian with special attention on discourse oriented phenomena. First and foremost, it intends to show that the discourse features [WH], [CONTR], [TOP] and [FOC] are not checked within the possessive DP as this does not contain any CP, ContrP, TopP and FocP layers. Therefore, it is proposed that the discourse features associated with the different constituents of the DP percolate onto the topmost DP node of the possessive construction after competing with each other to determine which will undergo this process. In this way, the DP has a discourse function in the CP determined by the features it inherits.

In order to be able to forge the mechanism of feature percolation, this study presents a uniform analysis of English, German and Hungarian possessive constructions which can also account for the differences between these languages. The proposed structure will be the bedrock of the examination focussing on the DP-internal behaviour of discourse features.

The advantage of the feature percolation based account of discourse oriented phenomena over the Split-DP analysis, which works with DP-internal TopP, FocP and ContrP layers, is that it avoids the assumption of a double set of discourse features forced on the latter to account for vacuous movements within the DP and to motivate the movement of possessive DPs targeting the left periphery of the CP.

In this dissertation the framework of discussion is the Minimalist Program: to be more precise, the Phase Theory version. The present study makes use of the cartographic approach in order to be able to account for the fact that in agglutinative languages, e.g. Hungarian, the suffixes are realised in a strict order. The strict order of the suffixes indicates in what order

the different projections are built in the course of the derivation and so the cartographic approach is an important tool in describing the structure of possessive DPs. It is proposed that the phonologically realised or unrealised affixes enter the derivation under heads. Therefore, lexical heads have to undergo head movement so that these bound morphemes can be affixed to them.

In addition, phrases have to move to specifier positions e.g. to check features or receive case. Beside movements targeting a specifier position, features can also be checked off as a result of head movement. So, in the framework used here, feature checking is not necessarily bound to spec-head agreement.

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Chapter 1

Introduction

The aim of this dissertation is to propose a uniform analysis of English, German and Hungarian possessive constructions which can also account for the differences between these languages. Then, based on the structure put forward, it intends to examine topic-focus phenomena in the possessive DP and to observe how the discourse features behave inside the DP. Finally, a third aim is to analyse some possessive constructions which, according to some traditional approaches, the speakers derive in an effort to express special discourse functions.

The dissertation is divided into six chapters. The introductory chapter is followed by a chapter which introduces the data to be analysed and reviews some influential analyses of possessive constructions. This will be followed by the description of the framework used in this dissertation.

In the light of the CP-DP parallelism, chapter 3 proposes a uniform DP structure for the analysis of English, German and Hungarian possessive constructions which is also able to account for the differences between these languages. In the course of the discussion the structural place of the different DP internal elements will be established. This chapter aims at defining which position the possessor, the possessum, the adjectives, the quantifiers and the demonstratives occupy in the DP.

As a next step, chapter 4 examines how the discourse features [WH], [CONTR], [TOP] and [FOC] behave in the possessive DP. It will be questioned whether they induce DP-internal movements to [Spec, ContrP], [Spec, TopP] and [Spec, FocP] positions. Concluding negatively on this issue and making use of the findings accumulated in chapter 3, this chapter proposes a feature percolation based approach to the description of discourse oriented phenomena in connection with possessive constructions, arguing that it is better to abandon the Split-DP account.

In chapter 5 possessive constructions will be analysed which, according to some traditional approaches, the speakers derive in order to express special discourse functions. In the course of the discussion it will be claimed that not all of them have such a special meaning. In addition, this chapter aims to extend the analysis proposed in the previous two chapters to Hungarian nominal pro-drop and to possessor extraction in Hungarian and some Southern German dialects.

Finally, chapter 6 summarises the main findings in this dissertation and draws the conclusion.

Chapter 2

Possession in generative syntax

2.0. Introduction

The present chapter aims at describing the properties of English, German and Hungarian possessive constructions which will be analysed in chapters 3-5. Then, it gives a short recension of the analyses in Szabolcsi (1994), den Dikken (1999), Roehrs (2005) and Olsen (1989), which seem to be four of the most influential models of the behaviour of possessive constructions and which the present thesis capitalises on greatly. Finally, the chapter describes the model used as a framework by the dissertation for its argumentation.

2.1. Possessive DP vs. possessor DP

In this dissertation the term ‘possessive DP’ refers to a DP which hosts both the possessor and the possessum, whereas ‘possessor DP’ is the term used to identify the possessor alone. In (1a) the DP *the man*, in (1b) the DP *Peter* and in (1c) the pronominal DP *his* are taken to be possessor DPs accommodated in the possessive DPs *the man’s two big houses*, *Peter’s two big houses* and *his two big houses* respectively.

- (1) a. *the man’s two big houses*
b. *Peter’s two big houses*
c. *his two big houses*

2.2. The properties of possessive constructions

The purpose of this section is to give a short description of the data the present dissertation aims to examine in chapter 3. The structural representation argued for here serves as the bedrock of the discussion in chapters 4 and 5.

2.2.1. Possessive constructions in English

In English the possessor can either precede or follow the possessum. If the possessor precedes the possessum, it must bear the Saxon Genitive morpheme ‘s, if it is not a pronoun, cf. (1a-b) above. However, pronominal possessors are not combined with this enclitic but are inherently genitive, see (1c) above. (1a-c) show that the numerals and the adjectives modifying the possessum must intervene between the pronominal possessor and the possessum, and the

numeral must precede the adjective. In addition, prenominal possessors are in complementary distribution with determiners belonging to the possessum, as shown in (2).

(2) **the his house*

Possessors following the possessum are realised as *of*-phrases. In these constructions both the possessor and the possessum may have a determiner of their own. The numeral and the adjective modifying the possessum must surface between the possessum and its determiner, and the numeral must precede the adjective. (3) illustrates this DP type.

(3) *the four wooden legs of the table*

In English the alternation of pre- and postnominal possessors is regulated by three conditions: the animacy of the possessor, the newness of the possessor and the determiner of the possessum. If the possessor is animate, it generally precedes the possessor, see (1). In contrast, inanimate possessors tend to be postnominal, as shown in (3).

A possessor which embodies new information mostly follows the possessum, cf. (4). In this dialogue, the possessor *Anthony King* constitutes a new piece of information, so it is postnominal.

(4)¹ A: *In whose house shall we organise the party?*
B: *In the house of Anthony King.*

If the possessum has a determiner of its own, the possessor is relegated to the postnominal position, see (5). In addition, it is ungrammatical in English for an article to be adjacent to a demonstrative in the same DP. This is shown in (6).

(5) *the eye of the tiger*

(6) **the this eye of the tiger*

It should be noted that there exists a construction in English labelled the ‘double genitive’, depicted in (7). In this construction the preposition *of* precedes a possessor bearing the Saxon Genitive enclitic.

¹ Similar claims and data are provided in Deane (1992: 203).

(7) *a cat of Peter's*

2.2.2. Possessive constructions in German

Standard German possessive constructions are very similar to those which can be found in English. In German, too, the possessor can surface either pre- or postnominally. If the possessum does not have a determiner of its own, the possessor is prenominal, and it is followed by the constituents modifying the possessum, the numeral and the adjective respectively. This constellation is depicted in (8). It is important to stress that in standard German only proper names (8a) and pronominal possessors (8b) may occupy the prenominal possessor position where they receive genitive case.

- (8) a. *Peter-s zwei groß-e Häus-er*
Peter-GEN two big-NEUT-PL-NOM house-NEUT-PL-NOM
'Peter's two big houses'
- b. *sein -e zwei groß-e Häus-er*
his-GEN-NEUT-PL-NOM two big-NEUT-PL-NOM house-NEUT-PL-NOM
'his two big houses'

If the possessum has a determiner of its own, as in (9), the possessor should surface postnominally. The numeral and the adjective of the possessum stand behind the determiner associated with the possessum. As (9) shows, the postnominal possessor can stand in the genitive (9a) or it can receive dative from the preposition *von* 'of' (9b).

- (9) a. *die zwei groß-en Häus-er*
the-NEUT-PL-NOM two big-NEUT-PL-NOM house-NEUT-PL-NOM
des Mannes
the-MASC-SG-GEN man-MASC-SG-GEN
'the man's two big houses'
- b. *die zwei groß-en Häus-er*
the-NEUT-PL-NOM two big-NEUT-PL-NOM house-NEUT-PL-NOM
von dem Mann
of the-MASC-SG-DAT man-MASC-SG-DAT
'the man's two big houses'

In German, as in English, the different kinds of determiner are in complementary distribution, as shown in (10) where the demonstrative *dieses* precedes the definite article *das*.

- (10) **dies-es* *das* *Haus*
 this-NEUT-SG-NOM the-NEUT-SG-NOM house-NEUT-SG-NOM

The agreement system of German deserves a few sentences, too. Based on the glosses provided for the data in (8)-(10), it can be observed that determiners, pronominal possessors and adjectives show overt agreement with the head noun, which in these cases is the possessum. This complex agreement system is described in detail in chapter 3.

The present dissertation intends to analyse the dialectal data in (11), which is traditionally referred to as ‘possessor doubling’. This construction is widespread in some southern German dialects and it often goes hand in hand with possessor extraction. In ‘possessor doubling’ constructions it seems that a non-pronominal possessor co-occurs with a pronominal one. As hinted at above, it may also happen that the former possessor is extracted out of the possessive DP, see (12). The prerequisites for this operation are discussed in chapters 3 and 5.

- (11) *dem Vater sein Haus*
 the father his house
 ‘the father’s house’

- (12) [_{DP} *Dem Vater*]_i *ist* [_{DP} *t_i sein Haus schön*].
 the father is his house beautiful
 ‘The father’s house is beautiful.’

2.2.3. Possessive constructions in Hungarian

In Hungarian the possessor can surface only in the prenominal position where it is marked nominative, cf. (13). This position can be occupied by both pronominal and non-pronominal possessors. In addition, in this language there is no co-occurrence restriction on prenominal possessors and determiners which belong to the possessum, see (13c). In (13c) the definite article *a* associated with the possessum is the first element in the construction. It is followed by the pronominal possessor, the adjective of the possessum and finally the possessum itself. In fact, pronominal possessors are obligatorily preceded by the article of the possessum in Hungarian. Quantifiers should stand between the possessor and the adjectives as in (13a-b).

- (13) a. *Péter két fekete kalap-ja*
 Peter-NOM two black hat-POSS-SG-3.SG
 ‘Peter’s two black hats’

- b. *a férfi két fekete kalap-ja*
 the man-NOM two black hat-POSS-SG-3.SG
 ‘the man’s two black hats’
- c. *az én fekete kalap-ja-i-m*
 the I-NOM black hat-POSS-PL-1.SG
 ‘my black hats’

As can be observed, inflectional morphology is realised on the possessum in a strict order. This restriction is the most straightforward in the case of a plural possessum (cf. 13c)) because this paradigm does not contain any zero morphemes. In (13c) the possessum *kalap* bears the possessive morpheme *-ja*, the plural suffix *-i* and the 1.SG ending *-m*. However, determiners, quantifiers and adjectives are not inflected based on the features of N.

Pro-drop is a very important property of Hungarian and non-prominent possessors may be phonologically empty. In such cases the agreement suffix on the possessum licenses the possessor:

- (14) *a pro fekete kalap-ja-i-m*
 the 1.SG black hat-POSS-PL-1.SG
 ‘my black hats’

The present dissertation addresses two further word order patterns in connection with Hungarian possessive constructions: possessor extraction and ‘possessor doubling’. If the possessor bears the suffix *-nak/-nek* it is able to leave the possessive DP, see (15). These suffixes are typical in ‘possessor doubling’ constructions, too, in which a *-nak/-nek*-possessor is followed by a pronominal one. This is shown in (16).

- (15) [_{DP} Péternek]_i eltűnt [_{DP} t_i a kalapja].
 Peter disappeared the hat
 ‘Peter’s hat disappeared.’

- (16) *a nőknek az ő kalapjuk*
 the women the she hat
 ‘the women’s hat’

At this point it must be noted that in Hungarian *-nak/-nek*-possessors can co-occur with demonstratives associated with the possessum. But importantly, in such constructions a definite article has to directly follow the demonstrative:

- (17) *a nőnek azt a kalapját*
 the woman that-ACC the hat-ACC
 ‘that hat of the woman’

2.3. Moving possessive DPs to the left periphery of the CP

In all of the three languages examined it is possible to move the whole possessive construction to the left periphery of a CP to check a discourse feature originating on one of its constituents. (18) demonstrates this with the help of a Hungarian dialogue.

- (18) A: *Képzeld, [DP Péter fehér Mercedes] el- tűnt.*
 Imagine Peter white Mercedes pre-verb disappeared
 ‘Just imagine, Peter’s white Mercedes disappeared.’

- B: *[DP A pro fehér TOYOTÁJA] tűnt el.*
 the 3.SG white Toyota-POSS-SG-3.SG-CONTR-FOC disappeared pre-verb
 ‘It is his white Toyota which disappeared.’

In Hungarian the verb can either be preceded by a pre-verb or a focus. In B’s correction of A the possessum Toyota carries the new information and the possessor and the adjective are already given by the preceding context. Yet the whole bracketed possessive construction is in the focus position. The main aim of the present dissertation is to set up a feature percolation based analysis which is able to account for this phenomenon in a more adequate way than the approaches making use of DP-internal ContrP, TopP and FocP layers. Chapter 4 is devoted to the scrutiny of this problem.

2.4. Some influential analyses of possessive constructions

At this point, the dissertation turns to the revision of some influential analysis of possessive constructions. There are various approaches aiming at accounting for the status of constituents occurring in possessive constructions. This section aims at reviewing four influential analyses of possessive constructions making use of syntactic tools which will be applied in the approach presented in this dissertation. Only those ideas are presented which are relevant from the point of view of the present work. First, Szabolcsi’s account will be presented offering ideas about possessor extraction and the possessive agreement morphology as the source of the possessor’s case. Second, based on den Dikken’s theory, the issue of speaker

variation and ‘anti-agreement’ in the Hungarian DP are discussed and it will be shown that in some languages P and not Agr is responsible for marking possessive relations by means of case-assignment. Third, Roehrs’ approach will be used to reveal details about the interpretation of possession. Fourth, Olsen (1989) has provided inspiration for much research on ‘possessor doubling’ constructions in Germanic languages, some of which will be reviewed here.

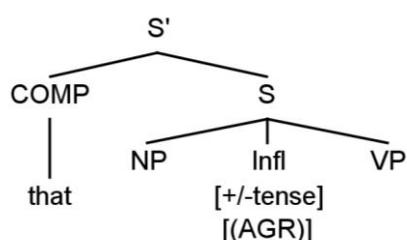
2.4.1. Szabolcsi’s approach

Szabolcsi’s work on the structure of the DP has aimed at accounting for several phenomena regarding possessive DPs in Hungarian, but her ideas are widely adapted to other languages as well. One of her most important concerns has been possessor extraction which addresses the status of possessor phrases outside the possessive DP: these constituents are not longer analysed as arguments or adjuncts of the verb in the CP.

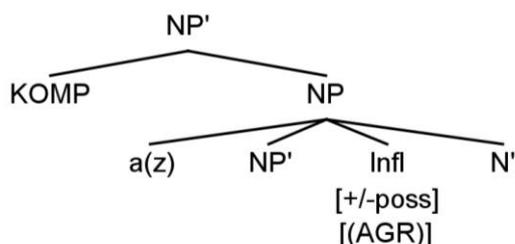
2.4.1.1. Szabolcsi’s DP structure

Szabolcsi’s analysis is based on the assumption that nominal phrases and clauses have similar structure. In Szabolcsi (1981; 1983) a noun phrase structure analogous to Chomsky’s (1981) S’ was assumed, as shown in (19)-(20).

(19)

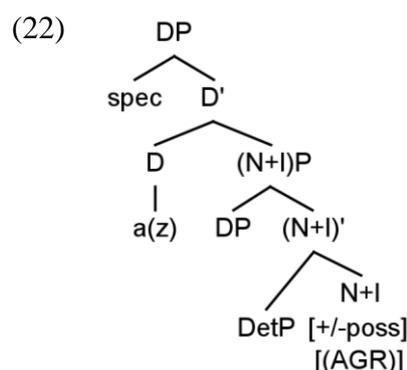
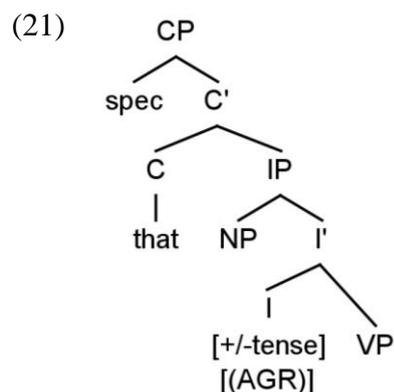


(20)



In (20) Szabolcsi proposes that the noun phrase contains a complementiser similar to clausal complementisers. In addition, she argues that the noun phrase, too, contains an inflectional head which encodes agreement features.

Later, Szabolcsi (1987; 1989; 1992; 1994) made use of Chomsky's (1986) binary branching CP structure in (21), and proposed the DP structure in (22).



In (21) it is claimed that both the inflection and the complementiser head their own functional projection: IP and CP respectively. Based on this and Abney's (1987) DP-Hypothesis, Szabolcsi argued that D heads the nominal construction which hosts the determiner *a(z)*. She also proposed that the nominal inflection projects its own category, though not alone. The inflection was claimed not to be an individual head, but a suffix which is amalgamated with N. Hence, a complex head N+I was supposed, which hosts the noun and the inflectional morpheme responsible for the possessive interpretation and the agreement relations in the DP.

After this short description of Szabolcsi's DP structure, the following sections aim at introducing her 1994 analysis.

2.4.1.2. Two kinds of possessors in Hungarian

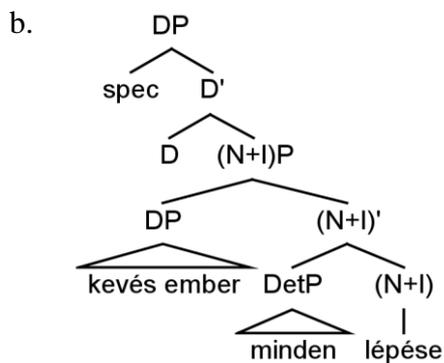
First and foremost, Szabolcsi (1994) differentiates between two kinds of possessors in Hungarian: a nominative following the definite article in the matrix D (23) and a *-nak/-nek*-possessor preceding it (24).

(23) *a nő kalapja*
 the woman-NOM hat
 ‘the woman’s hat’

(24) *a nőnek a kalapja*
 the woman the hat
 ‘the woman’s hat’

Szabolcsi supposes that the two possessor positions in the DP are structurally related. More precisely, the *-nak/-nek*-possessor is derived by movement from the nominative position. This is supported by the fact that the two kinds of possessors are in complementary distribution. As indicated in (25), Szabolcsi (1994), referring to Brody’s (1990) approach to inflections,² claims that the possessor originates in [Spec, (N+I)P] where it gets its case (nominative) and theta-role from the complex head (N+I). The complex head (N+I) consists of the possessum (N) and the possessive agreement suffix (I) (e.g. *lépés_{N+e_I}*, as illustrated in (25b)). After being case- and theta-marked by (N+I), the possessor may move up to [Spec, DP] to receive the *-nak/-nek* ending which entitles it to leave the DP, see (15) above.

(25) a. *kevés ember minden lépése*
 few person every step
 ‘few people’s every step’



² Brody (1990) argues that functional categories do not have projections of their own, but they are ‘mere suffixes’ attached onto the lexical categories.

2.4.1.3. Problems with Szabolcsi's approach

Although Szabolcsi's analysis can answer several questions regarding possession (agreement, case assignment to the possessor, possessor extraction, etc.), a few critical remarks are justified. It is unclear whether N+I constitutes a separate category from N. If it does not, then there seems little point in labelling it as such, though as it distributes the same as an uninflected noun there is little reason to label it as something different. Moreover, there is a certain inconsistency in the treatment of inflected nouns as syntactically unanalysed elements whereas the *-nak/-nek*-possessor is derived and not inserted in the structure inflected. As pointed out earlier, the morphology of Hungarian possessive constructions, particularly the plural, where there is more than one morpheme, lends itself to a cartographic analysis, such as has been widely adopted for the analysis of verbal inflections. Therefore, in accordance with Abney (1987), Chomsky (1986), Koopman (1992), Pollock (1989), Rizzi (1997) and Sportiche (1990), the present dissertation will not make use of inflected lexical elements.

Szabolcsi's analysis is a milestone in the literature on possession. However, it does not deal with many of the problems the present study addresses as she focuses mainly on Hungarian. Therefore, the present dissertation intends to set up a model which capitalises on some of Szabolcsi's assumptions, but at the same time it deviates from her analysis to extend it to English and German data, too.

First, agreeing prenominal modifiers are not in the scope of Szabolcsi's theory. For instance in German, prenominal adjectives show gender agreement with N (see (8)-(9) above).

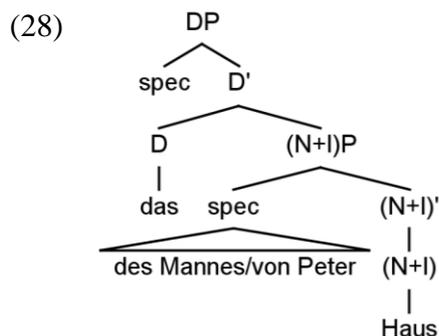
Furthermore, the present dissertation aims at analysing postnominal possessors in English (cf. (3)) and German (cf. (9)). Szabolcsi (1994) cites examples where the possessum precedes the possessor, but in these cases the possessor is already outside the possessive DP (see (26)-(27)).

- (26) [_{DP} t_i a kalapja] [_{DP} Péternek]_i tűnt el.
the hat Peter disappeared
'It is PETER whose hat disappeared.'

- (27) [_{DP} t_i a kalapja] túnt el [_{DP} Péternek]_i.
 the hat disappeared Peter
 ‘It is Peter’s HAT which disappeared.’

That the possessor is outside the DP in such examples follows if we accept Szabolcsi’s proposal that the structural place of the *-nak/-nek*-possessor is [Spec, DP], and therefore the possessum cannot precede it inside the DP. A DP internal focus or topic position is also unable to accommodate constituents in such a word order because these positions are also assumed to be under the projection of D. In addition, in (26) and (27) the strings *a kalapja* and *Péternek* constitute two separate intonational units. By contrast, possessive DPs containing a postnominal possessor are pronounced as one intonational unit.

Adapting Szabolcsi’s analysis to German DPs with a postnominal PP possessor is problematic as there is no landing site for the possessum to undergo head-movement, see (28) below. Moreover, PP possessors do not need case or theta-role, so they have no need to surface in the specifier of an agreement head.



2.4.2. The possessive DP as a small clause (den Dikken 1999)

Den Dikken (1999) accounts for many important characteristics of possessive constructions. In his Predicate Inversion account of possession, he assumes a P to be a case assigning element marking possession. As a result of the allomorphy regarding the Hungarian P (*-nak/-nek* and \emptyset), he emphasises that the two types of Hungarian possessors differ from each other by means of case-marking.

2.4.2.1. A predicate inversion account of possessive constructions: P as a marker of possession

Den Dikken's (1999) basic idea is that the dative *-nak/-nak*-possessor does not come about via raising from out of the nominative position to [Spec, DP] (as in Szabolcsi (1994)). Thus, he replaces Szabolcsi's raising-analysis with a Predicate Inversion account. The illustration for this comes from the English clausal domain: the double object construction, see (29)-(30).

(29) *he sent every letter to some student*

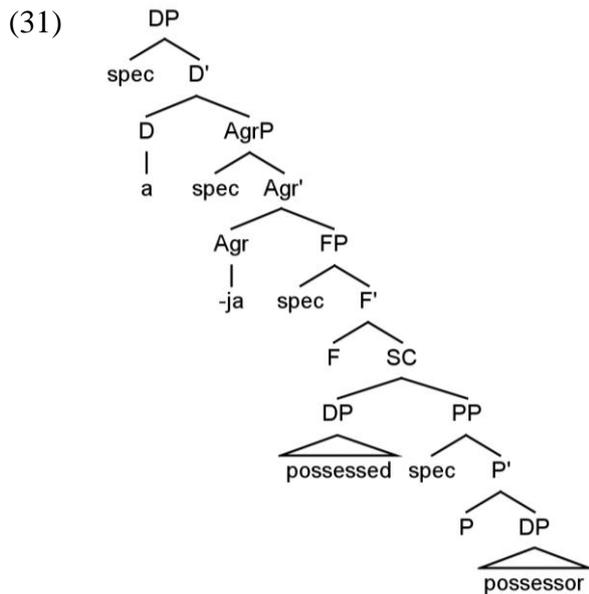
(30) *he sent some student every letter*

The double object construction in (30) is "derived from the P-dative construction [cf. (29)] via raising of the dative PP³ predicate (whose P-head is incorporated into the verb, (Baker 1988), by means of an operation called Predicate Inversion)," (den Dikken 1999: 146).

Taking the CP-DP parallelism to be fundamentally correct den Dikken (1999) assumes that it is Predicate Inversion in the Hungarian DP that results in a dative-nominative alternation in the case of possessors. Thus, it results in a description which regards the variation of dative and nominative possessors to be the source of the allomorphy of P (*-nak/-nek* and \emptyset).

In den Dikken's (1999) Predicate Inversion approach the possessive construction is analysed as a small clause whose PP predicate hosts the possessor at DS and whose subject is the possessum, see (31). The possessor gets its theta-role inside the PP from P. P has two allomorphs: *-nak/-nek* and \emptyset . The latter, being an empty category, has to be licensed. As a result, the PP undergoes Predicate Inversion and lands in [Spec, FP], whereas in the case of the dative PP, it lands in [Spec, DP] via A'-movement because the *-nak/-nek* allomorph of P does not need to be licensed. The possessive suffix originates in Agr and gets onto the possessum via affix hopping. In addition, den Dikken (1999) proposes that the nominal inflection has no EPP feature as opposed to the verbal one. Thus, it does not trigger movement to [Spec, AgrP]. Consequently, nothing ever appears in [Spec, AgrP].

³ The PP is analysed as the predicate of a small clause.



2.4.2.2. The resumptive strategy

Den Dikken (1999) addresses the different agreement behaviour of nominative and *-nak/-nek*-possessors. He examines the issues of ‘anti-agreement’ in Hungarian possessive DPs in 3.PL and speaker variation. The ‘anti-agreement’ in question concerns whether or not a non-pronominal *-nak/-nek*-possessor inside the possessive DP may agree in number with the possessive marker, cf. (32).

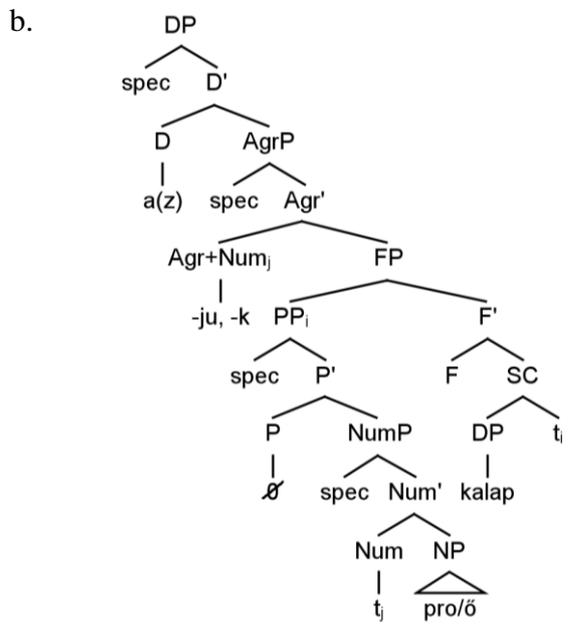
- (32) a. [DP *a nőknék* *a kalap-ja*]
 the woman-**3.PL** the hat-POSS-SG-**3.SG**
 ‘the women’s hat’
- b. [DP *a nőknék* *a kalap-juk*]
 the woman-**3.PL** the hat-POSS-SG-**3.PL**
 ‘the women’s hat’

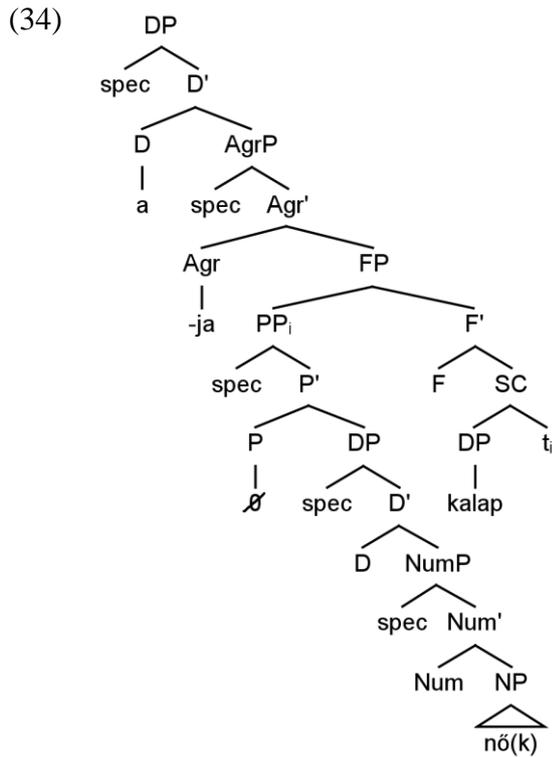
Concerning ‘anti-agreement’ in the Hungarian DP, den Dikken (1999) makes a distinction between the structural make-up of non-pronominal and pronominal possessors. He proposes that non-pronominal nominal phrases are DPs, but pronouns are only as big as NumPs, whose head must be licensed by the matrix D under government. Consequently, the Num head associated with the possessor moves to Agr. Then, the agreement and the number morphology hop onto the possessum (resulting in the plural form *kalapjuk* in (32b)). The pronoun *ő* is invariant because it cannot pick up the plural inflection in Num (raised to Agr) since N-to-Agr

movement is ruled out due to the Head Movement Constraint as the pronoun under N would skip Num which is occupied by the trace of the number suffix, cf. (33).

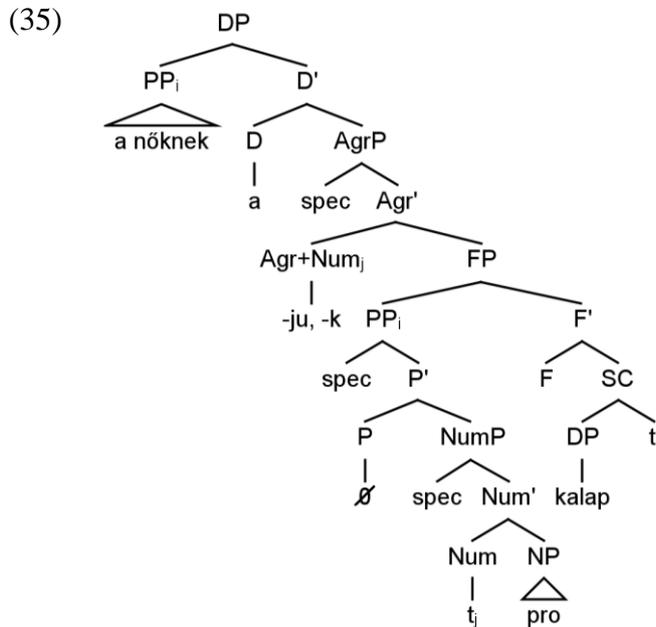
The Num of a non-pronominal DP, on the other hand, is licensed by its own D. Because of this, the Num of the possessor does not move to Agr and the DP of the possessor therefore does not agree with it. That is why there is only a default singular marker on the possessum in this case, see (34).

- (33) a. [DP *az õ* *kalap-juk*]
 the she-**3.SG-NOM** hat-**POSS-SG-3.PL**
 ‘their hat’





Nevertheless, (32b) is also a possible construction. Den Dikken (1999) accounts for this by assuming two PP predicates in the possessive DP: one in the specifier of the matrix D and another with a (pronoun) *pro* in the small clause (later landing in [Spec, FP]), consider (35).



These two PPs are coindexed because the pronominal one (*pro*) is bound by the non-pronominal one. The pronoun is taken to be a resumptive pronoun which lacks its own DP

projection. So, based on the analysis in (33), the Num of *pro* moves to Agr because it should be licensed by the matrix D. Then, Agr and Num are affixed to the possessum. As a result, the possessum is inflected as 3.PL. In this way the plural non-pronominal PP possessor in [Spec, DP] may co-occur with a possessum bearing the 3.PL suffix *-juk*. Nevertheless, plural non-pronominal possessors normally combine with a possessum bearing the 3.SG ending, see (32a) and (34). In sum, based on the above reasoning, den Dikken concludes that speaker variation by means of agreement in 3.PL is a matter of the distribution of the resumptive strategy.

2.4.2.3. Problems with den Dikken's account and the questions it may answer

Den Dikken's (1999) analysis runs into difficulties, too. The most obvious question is the make-up of the syntactic structure of pronouns and non-pronominal DPs. Substitution tests show that pronouns substitute DPs (see (36)-(37)). This would be surprising if they are structurally different.⁴

(36) *a férfi háza*
 the man-NOM house-POSS-SG-3.SG
 'the man's house'

(37) *az ő háza*
 the he-NOM house-POSS-SG-3.SG
 'his house'

Secondly, the source of the possessor's theta-role is not clear in den Dikken (1999). It seems to be P in the analysis, so Hungarian in this respect resembles English because in both languages possession is marked by P. Den Dikken (1997) discusses this characteristic of English in detail. Thirdly, if (33b) is examined carefully, it becomes clear that the Num-to-Agr movement violates the Head Movement Constraint because P is skipped.

Nevertheless, if this approach is adapted to German it can also account for the structural place of postnominal possessors. It can be said that P in German has the allomorphs *von* [DAT] (38) and \emptyset [GEN] (39) which do not need to be licensed, so they may remain in their postnominal base position inside SC.

⁴ Pronouns have deictic meaning. Based on the Hungarian word order pattern in (17), in chapter 3 it is assumed that deictic features are encoded in D. Consequently, pronouns are DPs.

(38) *das Haus des Vaters*
 the-NEUT-SG-NOM house the-MASC-SG-GEN father-MASC-SG-GEN
 ‘the father’s house’

(39) *das Haus von dem Vater*
 the-NEUT-SG-NOM house of the-MASC-SG-DAT father-MASC-SG-DAT
 ‘the father’s house’

In the cases of (38)-(39) the postnominal possessors are DPs, so according to den Dikken (1999), their Num is licensed in their own DP. Thus, there is no need for head movement of Num to Agr.

On the other hand, the prenominal genitive in German (40) and the ‘Saxon Genitive’ in English (41) pose difficulties because once P [GEN] does not need to be licensed, the PP containing the possessor does not need to move out of the SC. In other words, there is no motivation for the derivation of the prenominal genitive construction.

(40) *Karl-s Haus*
 Karl-GEN house-NOM
 ‘Karl’s house’

(41) *Peter’s house*

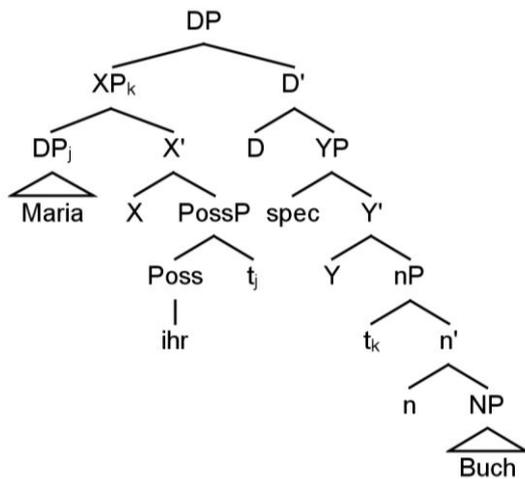
However, if the ‘Saxon Genitive’ is not regarded as a case, the ‘s morpheme could be conceived of as an agreement head in Agr, which cliticises onto the possessor.⁵ Nevertheless, in den Dikken (1999) there is still no motivation for the non-pronominal possessor to move to a position which is higher up in the structure than Agr.

2.4.3. Roehrs’ (2005) account of possession

The most important component of Roehrs’ analysis is theta-role assignment in the possessive DP. In the light of the CP-DP parallelism he proposes that both in the clausal and in the nominal domain theta-role assignment applies in a similar way, i.e. with the help of extended projections headed by thematic heads. In other words, in the CP light verbs (*vs*) theta-mark some of the arguments of the verb, whereas in the DP light nouns (*ns*) theta-mark the arguments. Roehrs (2005) proposes the structure in (42):

⁵ A similar option will be discussed in chapter 3.

(42)



The XP and YP in the structure are analysed as some kind of functional projections which can be exploited when accounting for agreement phenomena inside the DP. In this way YP is used for hosting APs or QPs in its specifier. Roehrs proposes that “case- and theta-role assignment occur both inside PossP [Possessive Phrase] and to PossP itself” (Roehrs 2005: 121). PossP is an argument in XP which in turn originates in [Spec, nP] where it gets its theta-role from n (the empty possessive marker in German). In ‘possessor doubling’ constructions the pronominal possessors (surfacing as *sein* or *ihr* (or \emptyset in constructions without ‘possessor doubling’)) are base generated in Poss and the non-pronominal possessor as the complement of Poss. In addition, it is Poss that theta-marks and case-marks the non-pronominal possessor in its complement position. Then, non-pronominal possessors must move to [Spec, XP] in order to avoid a Principle C violation.

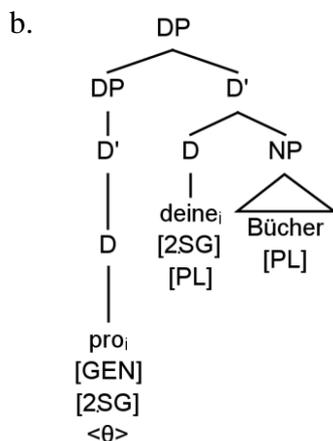
According to Roehrs, the possessum undergoes head movement via n to Y to pick up inflection. Afterwards the possessor raises to [Spec, DP] to license the nominal features encoded in D. Alternatively, the possessor can also remain in [Spec, nP] resulting in a construction containing a postnominal possessor.

Basically, Roehrs (2005) focuses on Germanic languages. So, the word order patterns of Hungarian possessive constructions lie outside the scope of his model. As a result, (42) cannot be expected to host (13c) and (17). (42) cannot accommodate neither Hungarian pronominal possessors preceded by a definite article nor the string of a *-nak*-possessor, a demonstrative and a definite article. Still, the present dissertation intends to analyse these constructions as well.

2.4.4. Olsen (1989)

Olsen (1989) must be mentioned because of her analysis of ‘possessor doubling’ constructions provided in (11). She assumes that, similarly to Hungarian, pro-drop phenomena play a crucial role in the German DP too. Thus, the syntactic characteristics of pronominal possessors are distributed among the matrix D and the [Spec, DP] positions, see (43). So, *pro* as a pronoun bears a theta-role and case, whereas D as an inflectional category bears the agreement features. The feature bundles under D are realised as *mein, dein, sein, ihr, unser, euer* and are regarded as agreement categories, not as pronouns. As a result, Olsen’s analysis does not run into the problem of Principle B violation. Although (43b) cannot accommodate Hungarian pronominal possessors (cf. (13c)), i.e. the string of a definite article associated with the possessum and a pronominal possessor, some aspects of Olsen’s (1989) work will be relied on in the discussion of agreement and ‘possessor doubling’ constructions in chapter 5.

(43) a. *deine Bücher*
‘your books’



2.5. The framework used in the present dissertation

The main aim of the present dissertation is to describe the behaviour of discourse features in the DP. Although the analyses reviewed in section 2.4. do not address [WH], [CONTR], [TOP] and [FOC], they could also develop a feature percolation based account to model the syntactic effects of these features. The result could be a similar analysis to the one presented in chapter 4. However, even if Szabolcsi’s, den Dikken’s, Roehrs’ or Olsen’s models were

extended with feature percolation and Phase Theory, they still could not fulfil every aim the present dissertation sets for itself.

Szabolcsi's model is not designed to account for postnominal possessors, den Dikken (1999) cannot derive Saxon Genitive constructions and Roehrs (2005) and Olsen (1989) cannot handle cases where a prenominal possessor co-occurs with the article of the possessum. Nevertheless, this dissertation aims at giving a uniform analysis of English, German and Hungarian DPs which is also able to account for the differences between these languages. Consequently, the present discussion abandons the approaches reviewed in section 2.4. but at the same time it capitalises on many of their analyses.

The present dissertation is based on the Phase Theory version of the Minimalist Program (Chomsky 2001; 2008) and makes use of the cartographic approach (based on Abney (1987), Chomsky (1986), Koopman (1992), Pollock (1989), Rizzi (1997) and Sportiche (1990)) in order to be able to account for the fact that in agglutinative languages, e.g. in Hungarian, the suffixes are realised in a strict order. The strict order of suffixes is an important tool in describing the structure of possessive DPs because the series of suffixes reflect the order of the different layers in the construction (cf. Baker (1985)'s Mirror Principle). Hence, it is proposed that the phonologically realised or unrealised affixes enter the derivation under heads. Therefore, lexical heads have to undergo head movement so that these bound morphemes can be affixed to them.

In addition, phrases have to move to specifier positions e.g. to receive inflection or case. Beside movements targeting a specifier position, features can also be checked off as a result of head movement. So, in the framework used here, feature checking is not necessarily bound to spec-head agreement.

The present dissertation also makes use of an operation which lies outside the traditional MP. This is feature percolation. It is proposed that the discourse features ([WH], [CONTR], [TOP] and [FOC]) of the possessor, adjectives, the possessum etc. cannot be checked inside the possessive DP because it does not contain any CP, ContrP, TopP or FocP projections. Consequently, the discourse features compete with each other and the most dominant ones percolate up to the topmost layer of the possessive DP. As a result, the DP will be marked for

the winning features. Hence, the DP is able to check them in the CP against an appropriate head: C, Contr, Top or Foc. This operation will be discussed in detail in chapter 4.

2.6. Chapter summary

In sum, based on the four approaches presented in section 2.4., six points can be deduced. First, the different possessor positions inside the DP are structurally related and are derived by means of movement. Second, it is the possessive affix (n) which introduces the possessor into the structure. Third, under the guidance of the CP-DP parallelism the agreement heads in the DP can be conceived of as case assigners in analogy with the clausal inflectional heads. However, in some languages P can also assign case to the possessor. Fourth, the nominal inflectional projections should be exploited by agreement phenomena in the DP (i.e. in the case of possessor phrases). Fifth, ‘possessor doubling’ may be approached based on Olsen’s analysis of nominal inflection and pro-drop. Sixth, a peculiarity of Hungarian nominal agreement in 3.PL may be explained with the help of den Dikken’s resumption based account.

These are the most important assumptions collected from the discussion in this chapter. Throughout the present dissertation these ideas will be constantly made use of. However, they will always be adapted to the framework presented in section 2.5.

Chapter 3

The structure of the possessive DP

3.0. Introduction

The aim of this chapter is to provide a basis for the research which is the bedrock of the argumentation in chapter 4. In order to be able to construct these foundations, we have to establish the syntactic status of the possessum, the possessor, the quantifiers, the adjectives and the determiners in the structure of the English, German and Hungarian DP. Thus, the present chapter intends to review the derivation of the possessive DP in the three languages examined in this dissertation. The constructions described in section 2.2. are the focus of the discussion.

As a first step, this chapter provides a review of the CP-DP parallelism. Secondly, it examines how the possessive relation is interpreted. Then, it gives a detailed description of the derivation of possessive DPs in Hungarian, German and English. Finally, it discusses the structural status of attributive adjectives in the three languages under discussion.

The problem of attribution is complex. As a thorough analysis of APs would take us too far afield from the aim to define the structural place of the other constituents in the possessive DP, a separate section is devoted to their examination at the end of the chapter. In the sections dealing with English and German possessive constructions, adjectives are discussed only to the extent which is necessary for determining the structural place of other constituents.

3.1. The CP-DP parallelism

A number of syntacticians (e.g. Szabolcsi (1983, 1994) and Lühr (2002)) assume that the CP and the DP are made up of similar projections. However, the present dissertation works with a richer phrase structure than the original CP-DP parallelism. In addition, it admits that it is not possible to draw an absolute parallelism between the clausal and the nominal domain. Hence, the aim of the present chapter is to describe the CP-DP parallelism as a set of tendencies. The following paragraphs list the projections the present dissertation makes use of.

Both the CP and the DP contain specific heads responsible for introducing ‘arguments’ specific to these constructions. In the clausal domain this head is the *v* introducing [Spec, *v*P] into which, for instance, the agent can be merged. In the nominal domain the head *n*

introduces [Spec, nP] into which the possessor is merged. So, vP and nP can be regarded as parallel projections.

Both the CP and the DP contain an inflectional projection⁶ which the present dissertation will label IP and I_{nom}P respectively. As Szabolcsi (1994) and Zimmermann (1990) claim, the possessor is taken to be the DP parallel of the clausal subject. So, the possessor has to move to [Spec, I_{nom}P] to receive case from the inflectional head, just like the subject moves to [Spec, IP] in the CP in order to be marked nominative.

Both the CP and the DP are headed by functional elements which embody a phase boundary. C encodes information on the finiteness and force of the clause, whereas D hosts the deictic features of the DP it heads.

In addition to the functional projections the original CP-DP parallelism is based on, we also have to postulate the existence of a NumP and a DefP in the DP. Ritter (1991) assumes that the noun receives its number morphology in Num, hence we should erect a NumP on top of the nP. In Bartos (2000: 686) DefP is situated between the DP and the inflectional projection and is tasked with encoding definiteness features. DefP can be regarded as the parallel projection of Rizzi's (1997, 2001, 2004) FinP.

(44) summarises the verbal and the nominal projectional system.

(44)	verbal domain:	CP	>	FinP	>	IP	>		>	vP	>	VP
	~	~		~		~				~		~
	nominal domain:	DP	>	DefP	>	I _{nom} P	>	NumP	>	nP	>	NP

The motivation for the different projections in the DP will be elaborated on in the next sections. The dissertation introduces these phrases with the help of Hungarian because this language overtly marks the grammatical features these functional heads host. The findings accumulated in the sections about Hungarian will be exploited in the discussion of English and German possessive constructions.

⁶ In the nominal domain the head which hosts the inflectional features is called (N+I) in Szabolcsi (1994) and Agr in den Dikken (1999) and Haegeman and Guéron (1999).

3.2. The possessive relationship

This section deals with the syntactic tools and mechanisms enabling the interpretation of the relation between the possessor and the possessum. It will be argued that the possessor is merged in to a [Spec, nP] position introduced by the possessive morpheme. It will also be claimed that there is no need for theta roles in the case of possessive constructions because the possessor status is represented by case and not by theta roles.

In order to be able to describe how the possessive relationship is interpreted it is necessary to take a closer look at the processes governing the interpretation of the arguments of verbs.

3.2.1. Theta-role assignment in the verbal domain

In generative syntax there have been many attempts to describe the mechanism of theta-role assignment in sentences. Nowadays it is an accepted analysis to assume that the VP has extended projections (vPs) which are responsible for theta-marking some of the arguments.

Kratzer (1996) proposes that “the lexical root contains information about the internal argument, but the external argument is introduced by a hierarchically superior functional head *v*” (Ramchand 2008: 17). Harley (1995) and Folli and Harley (2004) add that different types of *v* introduce different external arguments. This idea is in concord with Baker’s (1988) Uniformity of Theta-role Assignment Hypothesis (UTAH) according to which “identical thematic relationships between items are represented by identical structural relationships between those items” (Baker 1988: 46).

In English and German, too, the same mechanism can be assumed to operate. However, in these languages the *v* heads are typically filled in by null-morphemes.

3.2.2. Interpretation of the possessive relationship

Assuming that the possessum is merged in to *N* at the beginning of the computation, the question arises as to where the possessor is merged. At this point it is crucial to differentiate between the argument structure of verbs and nouns. Verbs can be associated with events, some of which can be decomposed into subevents, as shown in the sections on verbal theta-role assignment (see section 3.2.1.). However, this cannot be said in the case of referential nouns. For instance, *table* does not express any kind of action, state or relation which could be displayed structurally as a system of thematic heads. Instead, the DP hosting the noun *table* denotes an object. If we assume that argument structure is necessarily based on event structure, referential nouns cannot have an argument structure in any human language. This has consequences for the treatment of the possessor.

According to Szabolcsi (1994) and Roehrs (2005), the possessor is introduced by the possessive morpheme. Adopting Roehrs' (2005) ideas, the present dissertation proposes that on top of the NP there is an nP layer headed by the possessive morpheme. This nP is taken to be the parallel projection of the vP. However, given the non-thematic nature of nominals, it can be argued that *n* plays only a structural role in that it introduces the position [Spec, nP]. As verbs are associated with an argument structure, *v* introduces and theta-marks some of the arguments of the verb. In contrast, nouns do not have an argument structure, so *n* does not theta-mark arguments.⁸ Thus, the constituents merged in to [Spec, nP] are interpreted differently from the phrases merged in to a [Spec, vP].

⁸ Deverbal nouns originate as verbs with an argument structure. So, they preserve the argument structure of the verb they are derived from. There are two main classes of deverbal nouns: process nouns (I) and result nouns (II).

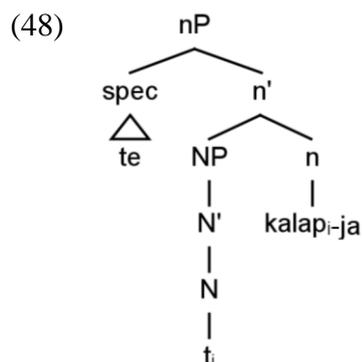
(I) *his* *building of the bridge*
 <agent> <theme>

(II) *his* *building*
 possessor → no theta-role

Process nouns are similar to verbs in that they denote events and hence the *n* heads associated with them assign verbal theta-roles, such as <agent> in (I). Result nouns, on the other hand, are more like referential nouns, so in

In English and German *n* is manifested by a null-morpheme, whereas it may be phonologically realised as the possessive morpheme *-ja/-je/-a/-e* in Hungarian (the form of the possessive morpheme depends on the phonology of the possessum), see (47)-(48).⁹

- (47) *a te kalap-ja -i -d*
 the you-NOM hat -POSS -PL -2.SG
 ‘your hats’



In (48) the possessor *te* ‘you’ is merged in to [Spec, nP] and the possessum *kalap* ‘hat’ moves from N to n to amalgamate with the bound possessive suffix *-ja*.

(II) *his* does not get any theta-role and it functions like a possessor. The way the arguments of a deverbal noun are interpreted depends on the features the *n* heads inherit from the original verb in the course of nominalisation.

Hungarian demonstrates the way a noun can also inherit the argument structure of an adjective. This language derives nouns from adjectives with the help of suffixes (*-ság* and *-ség*), consider (III).

- (III) a. *Az áldozat bátor volt.*
 <experiencer>
 the victim-NOM courageous was
 ‘The victim was courageous.’
- b. *az áldozat bátorsága*
 <experiencer>
 the victim-NOM courage-POSS-SG-3.SG
 ‘the victim’s courage’

The present dissertation does not aim at dealing with derived nouns. Hence, only such constructions will be examined in which *N* is a referential noun. This thesis does not intend to give a classification of the *n* heads either. Horváth (2010) discusses the types and the order of the *n* heads in detail.

⁹ In Hungarian there is a further *n* type *-é* which is associated with a zero possessum. This is illustrated in (I).

- (I) *Ez a könyv Péteré.*
 this the book Peter-POSS
 ‘This is Peter’s book.’

According to Bartos (2000: 686), the ending *-é* on *Péter* in (I) can be analysed as an anaphoric possessive suffix representing the elided possessum which is recoverable from the word *könyv* ‘book’. The possessor and the adjacent anaphoric possessive ending are joined at PF as a result of a phonological operation.

The possessive *n* introduces [Spec, nP] into which the possessor is merged. It should, however, be noted that possession encodes a quite vague relationship.¹⁰ That is why it can be assumed that in contrast to the arguments of verbs, possessors are not assigned theta roles in syntax. Nevertheless, possession is formally marked with the help of case which the possessor can receive either from the inflectional head in the prenominal possessor position ([Spec, I_{nom}P]) or from a semantically empty preposition in the postnominal possessor position ([Spec, nP]).¹¹ The former operation is available in English, German and Hungarian but possessors surface in [Spec, nP] only in English and German. After spell-out, the possessive relationship is interpreted in LF. As the possessor is case-marked, it is visible to LF operations which make it possible to interpret it as a possessor.¹²

3.2.3. The nP-shell

In the previous section it was proposed that referential nouns do not refer to actions expressed with the help of more than one participant. Therefore, it is impossible to associate two grammatical possessors with a referential noun possessum. Hence, only one possessive nP can be erected on top of the NP and only one slot can be opened with the help of the possessive element hosted in *n*.

We should now extend the CP-DP parallelism discussed so far as VP~NP, vP~nP by turning to the functional projections.

¹⁰ As Storto (2005) claims, possessive DPs have a semantic core (the nP-shell in our analysis) “playing a role in licensing the availability of certain contextually determined interpretations,” (Storto 2005: 83). The structure *Peter’s house* can mean that Peter owns the house, or he built it, or he was born in it, etc.

¹¹ Case assignment is discussed in sections 3.3.4., 3.4.2 and 3.5.2. below.

¹² The head *n* can also introduce other phrases than the possessor. In (I) the phrase *about linguistics* is such an element. In (II) the order of the postnominal possessor and the PP *about linguistics* was swapped. Some native speakers of English judged this construction to be marginal. So, for these speakers the phrases *of John’s* and *about linguistics* can surface in any order. Hence, it can be assumed that *about linguistics* is also introduced by an *n*-head into the structure. However, the present dissertation does not deal with these PPs.

- (I) *a book of John’s about linguistics*
 (II) *? a book about linguistics of John’s*

For the sake of completeness it must be noted that for some other native speakers (II) is ungrammatical. The slight or severe degradation of (II) might be traced back to the heaviness of the bi-syllabic preposition *about*.

3.3. The possessive DP in Hungarian

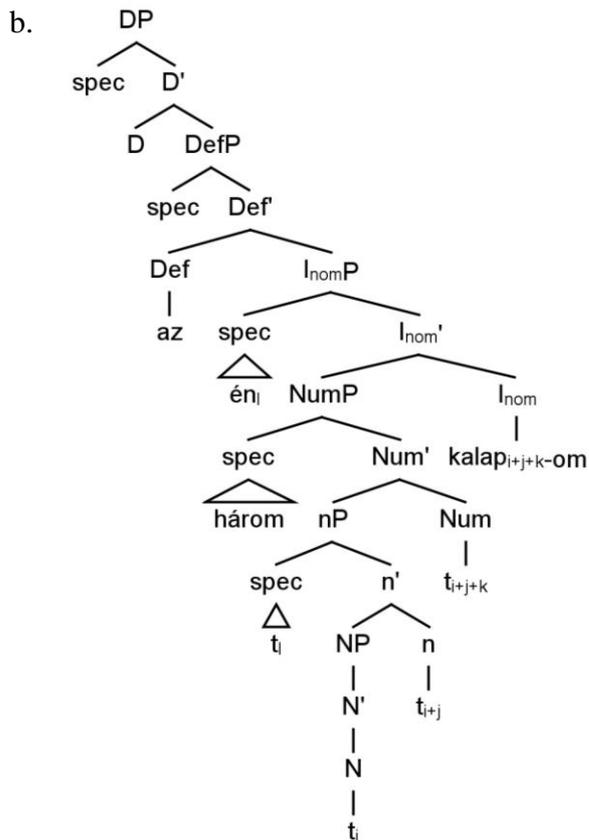
The following sections give a detailed description of Hungarian possessive constructions. The argumentation focuses on the system of functional projections in the DP.

3.3.1. Headedness

As a first step we will argue for the head final status of certain Hungarian phrases as opposed to their English and German counterparts which are head initial. Based on the data it can be concluded that in Hungarian the DP and the DetP are head initial and the $I_{\text{nom}}\text{P}$ is head final. Unfortunately, there is no direct evidence which could argue for the head-final or head-initial status of NumP, nP and NP. However, as we will see, from the perspective of the present discussion it does not make any difference because the possessum always moves up to I_{nom} . Therefore, both head-initial and head-final NumP, nP and NP projections could account for the same word order patterns. So, based on analogy with $I_{\text{nom}}\text{P}$, it will be assumed that NumP, nP and NP are head-final, too.

In Hungarian possessive constructions, it is always the inflected possessum which fills in the last position. This is preceded by the possessor *én*, the determiner *az* ‘the’ and the QP *három* ‘three’:

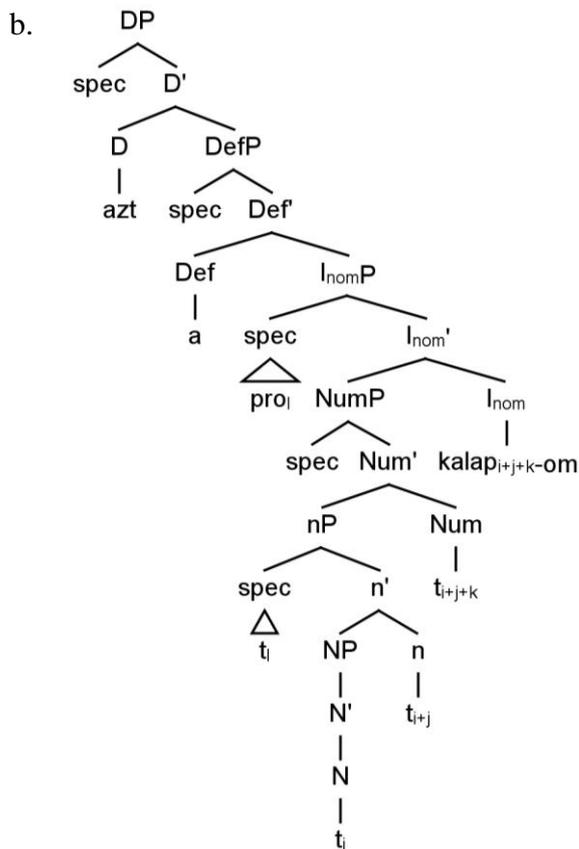
- (49) a. *az én három kalap-om*
the I three hat-POSS-SG-1.SG
‘my three hats’



As the possessum bears the nominal inflection it must occupy the nominal inflectional head I_{nom} . However, this position is higher up in the DP structure as the [Spec, NumP] hosting the QP. The only way to represent the word order pattern in (49a) is to assume that $I_{nom}P$ is head final. The DefP is taken to be head first because in (49) the X^0 determiner *az* in Def precedes the possessor *én* in [Spec, $I_{nom}P$].

(50) suggests that the DP is also head initial because the demonstrative *azt* precedes the definite article *a*. As *a* sits in Def, the only way to display the word order pattern in (50) is to assume that the X^0 demonstrative occupies a head position (D) which is the left sister of DefP. Consequently, the DP layer seems to be head initial.

- (50) a. *azt a kalapom*
 that the hat-POSS-SG-1.SG
 ‘that hat of mine’



3.3.2. Quantification

In the discussion of the derivation of the Hungarian possessive DP we have to define the structural place of quantifiers and the number morpheme on the head noun. In Hungarian the quantifiers have an effect on the plurality of the noun. If the DP contains an overt quantifier the noun must not bear the plural morpheme, see (51)-(52). Conversely, the noun can be marked as plural if there is no quantifier in the construction, see (53).

- (51) a. *nyolc ház*
 eight house-SG
 b. **nyolc ház-ak*
 eight house-PL

- (52) a. *sok ház*
 lot house-SG
 b. **sok ház-ak*
 lot house-PL

- (53) *ház-ak*
house-PL

Based on the data in (51) and (52) it can be assumed that in Hungarian all the quantifiers are syntactically singular and they have to agree with the noun. It may seem odd to assume that the numeral quantifier *nyolc* ‘eight’ is syntactically singular but semantically plural. Nevertheless, a quantified subject’s agreement with the verb argues for this conclusion:

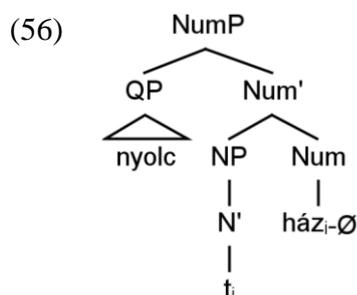
- (54) a. [*Nyolc férfi*] *ül a szobában.*
eight man-SG sit-3.SG the room-in
‘Eight men are sitting in the room.’

- b. * [*Nyolc férfi*] *ülnek a szobában.*
eight man-SG sit-3.PL the room-in
‘Eight men are sitting in the room.’

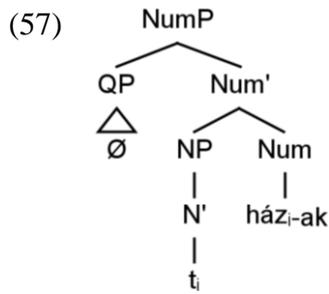
- (55) [*Férfiak*] *ülnek a szobában.*
man-PL sit-3.PL the room-in
‘Men are sitting in the room.’

In (54a-b) the subject *nyolc férfi* ‘eight men’ triggers singular agreement morphology on the verb. The 3.PL verb form *ülnek* can co-occur only with a plural noun subject which does not contain any quantifiers, see (55).

As a consequence of these observations, this dissertation adapts Ritter’s (1991) notion of NumP and proposes the structure in (56)-(57) where the quantifier is merged into [Spec, NumP]¹³ and the noun is moved to Num to pick up the singular zero suffix (cf. (56)) or the plural morphology *-ak* (cf. (57)).



¹³ In Hungarian all the quantifiers are in [Spec, NumP]. In addition, only one quantifier can surface in one DP.



As shown in (58), in the possessive DP the possessum hosts the suffixes in the following order: 1. possessive morpheme *-a* (in *n*), 2. number *-i* (in Num) and 3. agreement with the possessor *-m* (in I_{nom}). Thus, it can be stated that the NumP is between the nP and the I_{nom} P.¹⁴

- (58) *az én ház -a -i -m*
 the I house-POSS-PL-1.SG
 ‘my houses’

¹⁴ (I) and (II) seem to suggest that in the Hungarian DP structure the NumP layer may be on top of the I_{nom} P:

- (I) *eny -é -i -m*
 I -POSS-PL-1.SG
 ‘mine’
- (II) *eny -é -m -ek*
 I -POSS-1.SG-PL
 ‘mine’

In (I) the possessive *-é* precedes the plural *-i* which in turn precedes the agreement morpheme *-m*. In contrast to this, the order of the endings in (II) is the following: possessive *-é*, agreement *-m* and plural *-ek*. This gives the impression that in (I) NumP is between nP and I_{nom} P, whereas in (II) NumP dominates I_{nom} P.

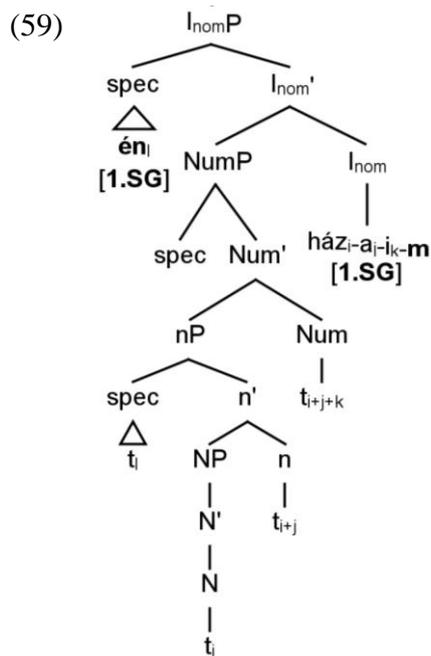
However, *enyémek* is not derived by placing the NumP layer above I_{nom} P. It can be seen that *enyém* consists exclusively of bound morphemes and for an average native speaker of Hungarian the word boundaries are faded. So, it can be assumed that *enyém* has been reanalysed and lexicalised as a morphologically simple noun whose plural form is *enyémek*. The paradigm in (III) seems to support this argument:

- (III)
- | | | |
|------|---------------|-------------------|
| 1.SG | <i>enyém</i> | <i>enyémek</i> |
| 2.SG | <i>tiéd</i> | * <i>tiédek</i> |
| 3.SG | <i>övé</i> | * <i>övék</i> |
| 1.PL | <i>miénk</i> | * <i>miénkek</i> |
| 2.PL | <i>teitek</i> | * <i>tiétekek</i> |
| 3.PL | <i>övéik</i> | * <i>övékek</i> |

If we take a closer look at (III), there are personal pronouns (e.g. *ő*, *mi*, *ti* etc.) in all of the elements except for *enyém*. These DPs cannot be marked as plural with the ending *-k*. This means that as opposed to the other DPs in (III) *enyém* has started to lose its internal structure as an elliptic possessive DP and its two coexisting structural representations allow for the two plural forms. (Bartos (2000) comes to a similar conclusion.)

3.3.3. Agreement

In Hungarian the possessum must bear an inflectional suffix (merged in to I_{nom}) which spells out the person and number features of the possessor.¹⁵ However, there is no grammatical gender in the language. As shown in (58) above, Hungarian displays a synthetic agreement pattern:



In (59) the possessum *ház* ‘house’ moves from N to n to pick up the possessive morpheme *-a*. Then, they move together to Num for the number ending *-i* and from here to I_{nom} to host the nominal inflectional suffix *-m*. The 1.SG pronominal possessor *én* ‘I’ moves from [Spec, nP] to [Spec, $I_{nom}P$] to check off the agreement features in I_{nom} .¹⁶

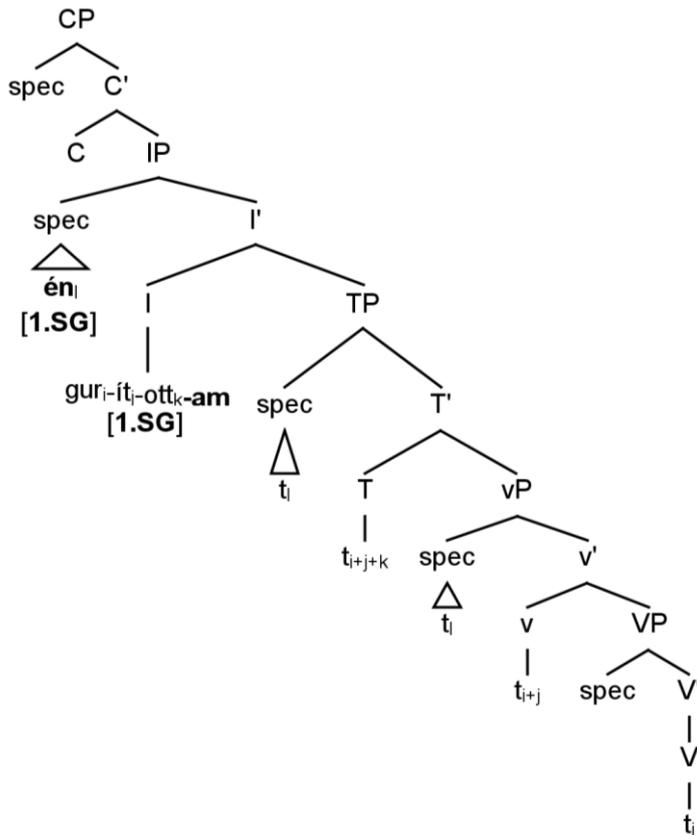
As can be seen, the inflectional suffix spells out the nominal features [1.SG] which the possessor also bears. This is the same synthetic relation as we can observe in the CP as illustrated in (60)-(61).

(60) *én gur-ít -ott -am*
 I roll -AGENTIVE-PAST-1.SG

¹⁵ In Hungarian there are three persons and two numbers. All nouns are specified for one value of each of these.

¹⁶ In chapter 2 it was mentioned that in Hungarian DPs pro-drop applies if the possessor is not prominent. In this case the possessor is not realised phonologically but it is licensed by the inflectional element in I_{nom} . The exact motivation for this phenomenon will be discussed in chapter 5.

(61)



The verb stem *gur* ‘roll’ moves from V to v for the bound agentive suffix *-ít*, and then up to T to pick up the past tense morpheme *-ott*, and from here to I to host the inflection in the form of the 1.SG suffix *-am*. The 1.SG pronominal subject *én* ‘I’ moves from [Spec, vP] via [Spec, TP] to [Spec, IP] to check off the agreement features in I.

The table in (63) summarises the nominal agreement paradigm in the Hungarian possessive DP. The basis of the table is the construction in (62).

(62) *az én ház-a-i-m*
the I house-POSS-PL-1.SG¹⁷
‘my houses’

¹⁷ It is important to note again that in Hungarian there is a strict order of the suffixes. In the nominal domain the possessum bears the endings in the following way:

- (I) i. possessive morpheme
- ii. number morpheme
- iii. agreement morpheme

As seen in (60), there is a similar strict rule in the clausal domain, too, where first the agentive suffix is attached to the verb. Then, the tense morpheme and finally the agreement ending are suffixed to the verb.

(63)¹⁸

Nominal inflection in Hungarian	
1.SG	<i>az én ház-a-i-m</i>
2.SG	<i>a te ház-a-i-d</i>
3.SG	<i>az ő ház-a-i-Ø</i>
1.PL	<i>a mi ház-a-i-nk</i>
2.PL	<i>a ti ház-a-i-tok</i>
3.PL ¹⁹	<i>az ő ház-a-i-k</i>

3.3.4. The case of the possessor

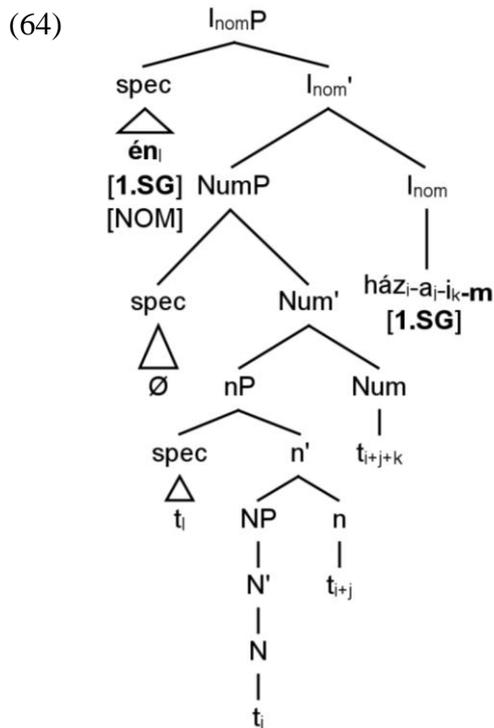
In section 3.1. it was said that I_{nom} hosts the nominal agreement features, i.e. it is responsible for the agreement between the possessor and the possessum. Besides, I_{nom} is tasked with the case assignment of the possessor. This section describes the latter process.

Similarly to the clausal subject, which has to move to [Spec, IP] to receive nominative from the finite inflection in I, the possessor has to move to [Spec, $I_{\text{nom}}P$] for case, cf. (64). The reason for this is that n cannot assign case to [Spec, nP].²⁰

¹⁸ The inflectional system is much more complicated in Hungarian but this dissertation does not aim at giving a full morphological and phonological analysis of the paradigms. I chose the paradigm in (63) because it shows the different morphemes in the clearest way, so we can see the boundaries of the different suffixes clearly. Without the plural marker *-i* (if the possessum itself is in singular) it often happens that the agreement suffixes modify the realisation of the possessive morpheme (*-a/-ja/-e/-je/-Ø*).

¹⁹ In 3.PL there seems to be a mismatch of the agreement features because the singular pronoun *ő* co-occurs with the 3.PL inflectional head in I_{nom} . This is a complex problem which will be addressed in chapter 5.

²⁰ This conclusion can be drawn based on the $v \sim n$ parallelism (cf. section 3.2.). Based on Kratzer (1996: 118) it can be proposed that v assigns case to the specifier of its sister but not to its own specifier. As proposed, there is only one nP layer in DPs with a referential noun possessum. Therefore, n could theoretically assign case only to [Spec, NP] but the possessor never occupies this position because it is merged in to [Spec, nP]. Whether n is capable of assigning any case at all is not discussed in this dissertation.



In (64) the possessor *én* ‘I’ undergoes a [Spec, nP]-to-[Spec, I_{nom}P] movement to check off the agreement features in I_{nom} and to receive nominative from this head. [Spec, NumP] is not a potential landing site for the possessor because the possessor does not influence the number morphology realised on the possessum. Therefore, it can be assumed that the possessor and Num do not have matching features, so agreement cannot take place. As a result, Num does not trigger the movement of the possessor to its specifier.

As (64) shows, it is not only the agreement mechanisms that are similar in the CP and DP in Hungarian, but case assignment as well. There seems to be an additional case a possessor can receive: the dative (cf. (65)).

- (65) *Péter-nek a kalapja*
 Peter-DAT? the hat-POSS-SG-3.SG
 ‘Peter’s hat’

However, it will be argued in section 3.3.6. that the Hungarian possessor is not in the dative and that in the Hungarian DP there is only one case position: [Spec, I_{nom}P], which is associated with nominative.

3.3.5. The DefP and the DP layers

In section 3.1. it was proposed that Def is the element which is responsible for the definiteness of the DP. This element can either be phonologically realised or an empty definite article, see (66)-(67) respectively.

(66) *A fiút láttam.*
the boy-ACC saw-1.SG.DEFOBJ
'I saw the boy.'

(67) *Ø János fiát láttam.*
DEF John son-ACC saw-1.SG.DEFOBJ
'I saw John's son.'

As the definite object conjugation shows, both the phonologically realised and the unrealised definite article can make a DP definite.

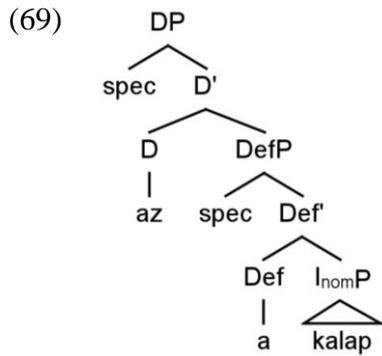
Demonstratives can also be present in DPs.²¹ Demonstratives always precede the article:

(68) *az a kalap*
that the hat
'that hat'

In (68) the noun *kalap* is associated with a definite article and a demonstrative at the same time. Izvorski (1995) argues for the existence of a DP-shell in comparatives. This DP-shell is similar to Rizzi's (1997, 2001, 2004) CP-shell. Rizzi argues that there are two CP layers erected on top of the IP: one of them is headed by a C-head responsible for force, whereas the other is headed by the Fin-head introducing information on finiteness. Based on Izvorski's and Rizzi's ideas it can be assumed that there are two layers on top of the I_{nom}P: the lower head is Def responsible for definiteness features, and the upper one is D encoding deictic information. In Hungarian Def hosts articles, and D hosts demonstratives, see (69).

²¹ Kenesei (1994) (cited in den Dikken (1999)) analyses demonstratives as elements in [Spec, DP] because he assumes that *nek*-possessors are in complementary distribution with them. However, as (I) shows this is not the case:

(I) *a nőnek az a kalapja*
the woman that the hat
'that hat of the woman'



3.3.6. Possessors at the edge

As hinted at above, Hungarian displays other possessive constructions which this dissertation has not yet discussed.

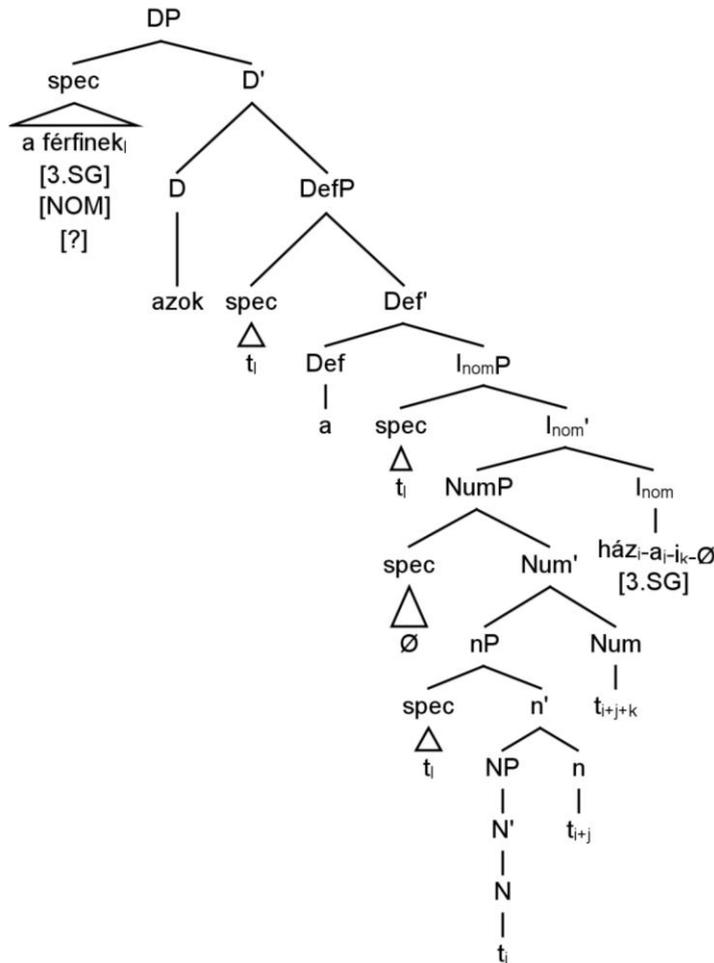
- (70) *a férfi-nek azok a házai*
 the man-DAT? those the house-POSS-PL-3.SG
 ‘those houses of the man’

In constructions like (70) Balogh (2000) analyse the *-nek* ending on the possessor as a manifestation of dative. However, it was shown above that the possessor moves to [Spec, I_{nom}P] to check off the agreement features in I_{nom} which in turn marks it nominative. Given this type of reasoning, an additional dative case on the possessor would render the construction ill-formed.

In order to be able to account for this *-nek* ending in (70), both its function has to be defined and its source found.

Taking a closer look at (70) it can be seen that the possessor bearing the ending *-nek* precedes both the definite article in Def and the demonstrative in D. Hence, Szabolcsi (1994) argues that in (70) the possessor occupies the [Spec, DP] position, as illustrated in (71).

(71)



If the possessor obligatorily moves to [Spec, I_{nom}P] to check off I_{nom}'s agreement features and to receive case, it must move from this position to [Spec, DP] where it gets the *-nek* suffix.²²

Szabolcsi (1994) claims that not just D and C show parallels but [Spec, CP] and [Spec, DP], too. In English [Spec, CP] is an escape hatch for a wh-element leaving a clause (e.g. in Haegeman and Guéron (1999)):

(72) [_{CP} *who*_i *do* [_{you think} [_{CP} *t*_i [_t_i *will visit us*]]]]

In MP terms this means that in (72) the wh-subject *who* undergoes a [Spec, vP]-to-[Spec, IP]-to-[Spec, CP] movement in the subordinate clause, i.e. in the first two phases of the

²² (I) provides evidence for handling possessive DPs containing a *nak*-possessor as one constituent. In Hungarian the position between the verb (*látta*) and the elements *nem csak* is a typical focus position, i.e. [Spec, FocP].

(I) [_{Top} *Kati*] *nem csak* [_{Foc} *Marinak a kalapját*] *látta*.
 Kati not only Mari the hat-POSS-SG-1.SG-ACC saw
 'It was not only Mary's hat which Kati saw.'

(Szabolcsi 1994: 199)

derivation. Then, the subclause becomes opaque, so only elements on the edge (in C and [Spec, CP]) remain available for the next phase in the derivation (cf. Svenonius (2004) citing Chomsky (2001)). In (72) the lower C cannot check off the [WH] feature of *who*. Consequently, *who* has to move to the superordinate interrogative CP's specifier position so that feature checking can take place.

According to Svenonius (2004), it can be claimed that similarly to CPs, DPs constitute phases, too. Therefore, [Spec, DP] can also serve as an escape hatch in the nominal domain. This is exactly the case in Hungarian.

According to Szabolcsi (1983; 1992; 1994), Hungarian allows for possessor extraction so that the possessor can take part in topic-focus relations in the CP separately from the possessum.²³ The prerequisite for possessor extraction to take place is that the possessor must bear the suffix *-nak/-nek* (70)-(71). Otherwise, the possessor must not leave the possessive DP. Given this type of reasoning, *-nak/-nek* indicates that the possessor is on the edge in [Spec, DP]. So, this ending is the embodiment of an edge feature in the Hungarian possessive DP which will be called [EDGE] from this point on throughout the discussion.

- (73) *_{[DP A férfi]_i} szépek _{[DP t_i [D a [InomP házai]}].
the man-NOM beautiful the house-POSS-PL-3.SG
‘The man’s houses are beautiful.’

²³ Szabolcsi (1983) observes that only the possessors can be extracted from the possessive DP. This agrees with Cinque's (1980) generalisation that “among phrases belonging to the frame of a head N, only that which represents the argument expressible by a possessive can be extracted from X^{max}” (Giorgi and Longobardi (1991: 59). It must be added that Szabolcsi (1994) observes that pronominal *-nak*-possessors obligatorily leave the possessive DP, see (I). Furthermore, all kinds of *-nak*-possessor have to leave the possessive DP if the possessum is associated with a phonologically unrealised indefinite determiner, see (II).

- (I) a. *_[DP Nekem a kalapom] tűnt el.
I-NOM-EDGE the hat-POSS-SG-1.SG disappeared
‘It is my hat which disappeared.’
- b. _{[DP Nekem]_i} tűnt el _[DP t_i a kalapom].
I-NOM-EDGE disappeared the hat-POSS-SG-1.SG
‘It is my hat which disappeared.’
- (II) a. **Nem ismerek* _[DP Marinak nővérét].
not know-1.SG Mary-NOM-EDGE sister-POSS-SG-3.SG-ACC
‘I don’t know any sisters of Mary.’
- b. _{[DP Marinak]_i} *nem ismerek* _[DP t_i nővérét].
Mary-NOM-EDGE not know-1.SG sister-POSS-SG-3.SG-ACC
‘I don’t know any sisters of Mary.’

(74) [_{DP} *A férfinék*]_i *szépek* [_{DP} *t_i*] [_D *a*] [_{InomP} *házai*].
 the man-NOM-EDGE beautiful the house-POSS-PL-3.SG
 ‘The man’s houses are beautiful.’

In (73) the possessor *a férfi* is marked only for nominative but not [EDGE]. The sentence is ungrammatical because a non-[EDGE] possessor was extracted out of the possessive DP. In contrast to (73), (74) is well-formed.

Based on the observation that *-nak*-possessors precede the demonstrative in D (cf. (70) and (71)) it can be proposed that inside the DP it is the [Spec, DP] position which is associated with the edge suffix. As a result, we can assume that D assigns this morpheme to the possessors which have to stop in [Spec, DP] in order to be able to leave the possessive DP.²⁴ In other words, *-nak/-nek* embodies the edge feature [EDGE] in the form of a suffix which enables the possessor to leave the possessive DP. Therefore, it is not a manifestation of dative case, even though dative and Edge are homophonous in Hungarian.²⁵

In sum, D has other roles apart from hosting demonstratives (i.e. deictic features) in Hungarian. Namely, it marks the possessor in its specifier as [EDGE]. The exact motivation behind possessor extraction will be elaborated on in chapter 5.

3.3.7. Szabolcsi’s (1994) determiner deletion

Now we should turn to a problem: if (76) is derived from the same numeration as (75), the question arises as to how it is possible that (76) contains two articles, whereas (75) only one.

(75) *a férfi házai*
 the man-NOM house-POSS-PL-3.SG
 ‘the man’s houses’

²⁴ Cinque (1980) also assumes that the [Spec, DP] position must be the escape hatch for the possessor leaving the possessive DP.

²⁵ The *-nak/-nek* morpheme can be conceived of as being an edge marker only in the possessive DP and with this function it can only be attached to possessors. However, there is another construction in Hungarian which provides evidence for the assumption that the ending *-nak/-nek* does not always embody dative:

(I) *Háznak ház.*
 ‘For a house it is a house.’

(76) *a férfinak a házai*
 the man-NOM-EDGE the house-POSS-PL-3.SG
 ‘the man’s houses’

Szabolcsi (1994) answers this question with the help of a phonological mechanism called determiner deletion. The basic idea is that if there are two successive articles (one associated with the possessor and the other with the possessum) one of them has to be deleted, see (77). In addition, if the possessor is quantified and the possessum has a determiner, this determiner has to be deleted, see (78)-(79).

(77) ~~a~~ [*a lány*] *kalapja*
 the the girl hat
 ‘the girl’s hat’

(78) ~~a~~ [*egy lány*] *kalapja*
 the a girl hat
 ‘a girl’s hat’

(79) ~~a~~ [*minden lány*] *kalapja*
 the every girl hat
 ‘every girl’s hat’

Being a phonological rule, the only prerequisite for determiner deletion to take place is the adjacency of the two articles or the adjacency of the article and the quantifier. So, for example, if both the possessor in [Spec, I_{nom}P] and the possessum have an article of their own one of the articles has to be deleted because they are adjacent to each other in PF.

However, if the possessor is in [Spec, DP] its article is not adjacent to the article sitting in the matrix D position, see (80). Hence, both of the articles can surface. In addition, if the possessor is in [Spec, DP], the article in the matrix D is not adjacent to the QP hosted in the possessor DP. So, determiner deletion does not operate, cf. (81)-(82).

(80) [*a lány*nak] *a kalapja*
 the girl-EDGE the hat
 ‘the girl’s hat’

(81)²⁶ [*egy lánynak*] *a kalapja*
 a girl-EDGE the hat
 ‘a girl’s hat’

(82) [*minden lánynak*] *a kalapja*
 every girl-EDGE the hat
 ‘every girl’s hat’

The important question is why two subsequent determiners or a determiner and a quantifier cannot surface. From Szabolcsi’s point of view the answer has to be partly phonological. The Obligatory Contour Principle seems to account for the restriction on the adjacency of the possessor’s and the possessum’s determiner. According to this principle, “identical units are not associated independently with two successive positions” in a string (Mathews 1997: 253).

However, as the rule affects only quantifiers and determiners, it can be assumed that there must also be a syntactic motivation behind it. The present dissertation cannot provide an answer to the question of what triggers the elimination of the string consisting of the possessor’s quantifier and the determiner associated with the possessum. Nevertheless, this is not a central issue for the purposes of this work. Thus, this problem is left open for further research.

3.4. The possessive DP in German

The following sections discuss the structure of the German possessive DP. A lot of the findings accumulated in the analysis of Hungarian possessive constructions will be used throughout the argumentation.

²⁶ Evidence for the QP status of *egy* ‘a’ is that it follows the definite article *az* if the *-nak*-possessor’s DP contains a demonstrative *annak*, too:

(I) [_{DP} *annak az egy fiúnak*] *a kalapja*
 that-EDGE the a boy-NOM-EDGE the hat-POSS-SG-3.SG
 ‘that single boy’s hat’

3.4.1. Agreement

As a first step, this section describes the system of German agreement in a traditional (non-generative) way. The German DP displays different agreement mechanisms to those in Hungarian in three major aspects.

First, the agreement features in the two languages should be considered. In Hungarian, agreement has only two dimensions: person and number, whereas in German gender and case play a central role, too. So, the features the inflectional morphemes embody are the three potential person features in the two numbers ([1.SG], [2.SG], [3.SG], [1.PL], [2.PL], [3.PL]), the three gender features (masculine: [MASC], feminine: [FEM] and neuter: [NEUT]) and the four case features (nominative: [NOM], accusative: [ACC], dative: [DAT] and genitive [GEN]).

Second, as opposed to Hungarian, in German the inflectional morphology, by virtue of which the possessor and the possessum agree, is not attached to the possessum but to the possessor or it constitutes a free morpheme.

The third difference between German and Hungarian is that German has adjective and quantifier declension, whereas Hungarian does not. It can be proposed that in German there are two separate but interdependent systems of agreement: one for determiners (D) (and pronominal possessors,²⁷ as we will see) and the other is reserved for adjectives and quantifiers modifying the noun. In the double inflectional system of German, the type of the suffix an adjective or quantifier receives depends on the nature of the inflection the determiner or pronominal possessor is associated with. But importantly, both the determiner/pronominal possessor and the adjective/quantifier must bear the same features as the possessum and these features are spelled out as suffixes.

The next sections describe this mechanism in detail as this enables us to gain a deeper insight into co-occurrence phenomena which help us define the exact structural place of the constituents within the possessive DP. There is another reason for why a detailed description

²⁷ In German the pronominal possessor must agree with the possessum just like the subject must agree with the finite verb in the CP. This is exactly what happens in Hungarian, too.

of agreement is necessary: it will help us to determine which head is the ultimate landing site of the possessum undergoing head movement.

3.4.1.1. Determiner- and adjective declension

There are three types of adjective declension in German. The speakers choose from the three paradigms depending on the nature of the determiner. The present subsection overviews these three cases.

(83)²⁸

DPs with a phonologically empty determiner → D₀				
	[MASC][SG]	[FEM][SG]	[NEUT][SG]	[PL] ²⁹
NOM	schöner Mann	schöne Frau	schönes Kind	schöne Kinder
ACC	schönen Mann	schöne Frau	schönes Kind	schöne Kinder
DAT	schönem Mann	schöner Frau	schönem Kind	schönen Kindern
GEN	schönes Mannes	schöner Frau	schönes Kindes	schöner Kinder

In the case of (83) there is no overt determiner which could bear overt inflection. But the adjective is declined overtly. It is, however, reasonable to assume that there is a phonologically null article in these DPs because they are indefinite. In addition, there seems to be a zero inflectional morpheme associated with this determiner as D always bears the same features as N in German. So, it can be assumed that the determiner is associated with a different agreement suffix set than the adjective.

(84)³⁰

DPs with a determiner (Type A) → D_A				
	[MASC][SG]	[FEM][SG]	[NEUT][SG]	[PL]
NOM	der schöne Mann	die schöne Frau	das schöne Kind	die schönen Kinder
ACC	den schönen Mann	die schöne Frau	das schöne Kind	die schöne Kinder
DAT	dem schönen Mann	der schönen Frau	dem schönen Kind	den schönen Kindern
GEN	des schönen Mannes	der schönen Frau	des schönen Kindes	der schönen Kinder

²⁸ *schön* = beautiful, *Mann* = man, *Frau* = woman and *Kind* = child

²⁹ In German there is no gender difference in plural.

³⁰ These constructions contain the definite article in its forms *der*, *die*, *das*, *dem*, *den* and *des*.

In (84) the DPs contain a phonologically realised article. In this paradigm both the article and the adjective bear overt agreement suffixes. It can be observed that the agreement suffixes on the adjective and the article constitute two different paradigms.

(85)³¹

DPs with a determiner (Type B) → D _B				
	[MASC][SG]	[FEM][SG]	[NEUT][SG]	[PL]
NOM	kein schöner Mann	keine schöne Frau	kein schönes Kind	keine schönen Kinder
ACC	keinen schönen Mann	keine schöne Frau	kein schönes Kind	keine schönen Kinder
DAT	keinem schönen Mann	keiner schönen Frau	keinem schönen Kind	keinen schönen Kindern
GEN	keines schönen Mannes	keiner schönen Frau	keines schönen Kindes	keiner schönen Kinder

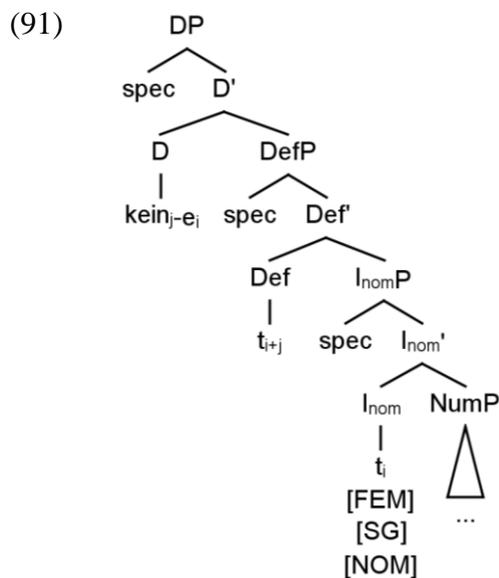
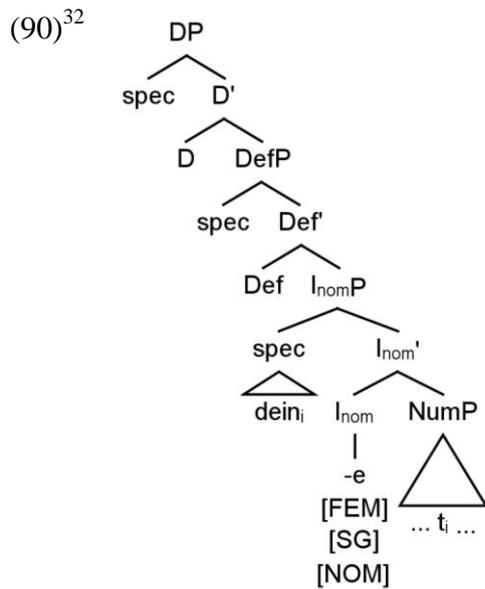
Finally, (85) is similar to (84) in that both the determiner and the adjective are phonologically realised in the DPs. The difference is that the adjective is always associated with overt inflection, whereas the determiner hosts only a zero morpheme in three cases: [NOM][MASC][SG], [NOM][NEUT][SG] and [ACC][NEUT][SG]. But importantly, just like in (84), the inflectional morphology on the determiner and the adjective constitute two separate paradigms because they are obviously distinct manifestations of the agreement features.

But which heads encode these feature sets? In order to be able to answer this question we have to take a look at some co-occurrence restrictions in the German DP: first, restrictions holding for determiners and pronominal possessors, and secondly, restrictions regarding the compatibility of determiners and quantifiers.

3.4.1.2. Co-occurrence restrictions of determiners and pronominal possessors

Due to the obligatory nature of the agreement between the determiner and N on the one hand, and the pronominal possessor and N on the other, there are co-occurrence restrictions between the determiners and pronominal possessors in the German DP:

³¹ In (85) the determiner is realised as the negative article *kein*.



In (90) the possessor undergoes a [Spec, nP]-to-[Spec, I_{nom}P] movement³³ to receive case from I_{nom} and to check off the agreement features hosted in this inflectional head. Then, the DP is spelled out and the pronoun *dein* is united with the ending *-e* due to a phonological

³² In German there are no overt separate morphemes which spell out the definiteness and deictic features. Thus, all the determiners have to undergo Def-to-D head movement to license both of these features.

³³ Remember that [Spec, NumP] is not a potential landing site for the possessor as their features are incompatible. So, Num does not trigger its movement to [Spec, NumP].

process at the PF interface.³⁴ In (91) the determiner *keine* is merged in to I_{nom} and it moves up to Def and then to D to license definiteness and the deictic features.

According to Horváth (2012a), determiners are ruled out from (90) due to the presence of the possessor's inflectional morpheme in I_{nom} . This disallows the presence of another agreement affix in I_{nom} which could be associated with a determiner. In other words, in such a constellation the determiner cannot agree with N, rendering the construction ungrammatical. Hence, determiners must be excluded from DPs which contain prenominal possessors.

3.4.1.3. Quantification

In order to be able to give a full description of the exact syntactic mechanisms behind German nominal agreement it is crucial to take a closer look at the distribution and the declension of quantifiers. It can be shown that as opposed to Hungarian, German has two kinds of quantifiers which are associated with different structural positions within the DP.³⁵

(92) a. *die wenige Häuser*
the few houses

b. **die alle Häuser*
the all houses

(93) a. *meine wenige Häuser*
my few houses

b. **meine alle Häuser*
my all houses

The data in (92) and (93) suggest that the quantifiers *wenig* and *alle* are situated in different structural positions in the nominal construction because they exhibit different distribution patterns.

³⁴ These two elements cannot be said to be united by syntactic movement because the inflectional suffix occupies a head position (I_{nom}), whereas the possessor sits in a phrase position ([Spec, I_{nom} P]). Neither an X^0 category moves to an X^{max} position, nor an X^{max} category to an X^0 position.

³⁵ A similar analysis is introduced for English in Jackendoff (1977).

Just like determiners, *alle* cannot be modified by any degree elements, see (94) where the combination of the degree element *sehr* and the quantifier *alle* degrades the structure. *Wenig*, on the other hand, can be modified by the degree element *sehr*, cf. (95).

(94) **sehr alle Häuser*
 very all houses

(95) *sehr wenige Häuser*
 very few houses

Besides this, *alle* seems to be associated with the same inflectional elements as the determiners and pronominal possessors, i.e. with elements in I_{nom} since the presence of the pronominal possessor and the determiner rules out *alle* from the DP (see (92b) and (93b)). Furthermore, *alle* is also associated with [DEF] and deictic features just like the determiners. As a result, it can be assumed that *alle* is merged in to I_{nom} and moves up to D via Def.³⁶ However, *wenig* is compatible with articles and pronominal possessors (cf. (92a) and (93a)). Consequently, it is not associated with the inflectional elements in I_{nom} . But it is interesting that *wenig* shows parallel declension with adjectives which is distinct from the inflectional morphemes of determiners, see (96)-(97).

(96) *wenig-e* *rot-e* *Äpfel*
 few-MASC-PL-NOM red-MASC-PL-NOM apple-MASC-PL-NOM
 ‘a few red apples’

(97) *die* *wenig-en* *rot-en* *Äpfel*
 the-MASC-PL-NOM few-MASC-PL-NOM red-MASC-PL-NOM apple-MASC-PL-NOM
 ‘the few red apples’

We saw above that the elements in D are associated with inflectional morphemes in I_{nom} . (96)-(97) suggest that quantifiers such as *wenig* are hosted in the same position as the adjectives because both the adjectives and the *wenig*-type quantifiers³⁷ are associated with the same declension paradigm, and hence with the same inflectional features. As the *wenig*-type of quantifiers are compatible only with plural nouns it can be said that they occupy the [Spec,

³⁶ Other *alle*-type quantifiers: *jene* ‘that’, *manche* ‘some’, *einige* ‘some’. These are declined in analogy with the definite article.

³⁷ Another *wenig*-type quantifier: *viel* ‘a lot’.

NumP] position because they must be in agreement with the number feature of the noun, which is checked off in Num.³⁸ So, *wenig* has to agree with Num.

Adjectives receive the same inflectional endings as the *wenig*-type of quantifiers, so these categories seem to occupy the same structural position. However, adjectives are not supposed to be in [Spec, NumP] in German because in this case there should be as many NumP layers in the DP as occurring adjectives. This structure would give rise to the possibility that a single noun can be both singular and plural which is severely ungrammatical. Moreover, adjectives do not influence the number feature associated with Num. Thus, the present analysis assumes that adjectives check their inflectional features in NumP, but they are head-adjuncts of the noun. So, the adjective moves along with the noun to Num where they check their features.³⁹ As an illustration, (98) gives a structural representation of (97).

³⁸ The singular ending is not always phonologically empty in German. A good example for this is the neuter singular genitive suffix *-es*:

(I) *des* *schönen* *Kind-es*
the-NEUT-SG-GEN beautiful-NEUT-SG-GEN child-NEUT-SG-GEN

(II) is a further illustration of a non-empty singular ending.

(II) *in diesem* *Sinn-e*
in this-MASC-SG-DAT sense-MASC-SG-DAT
‘in this sense’

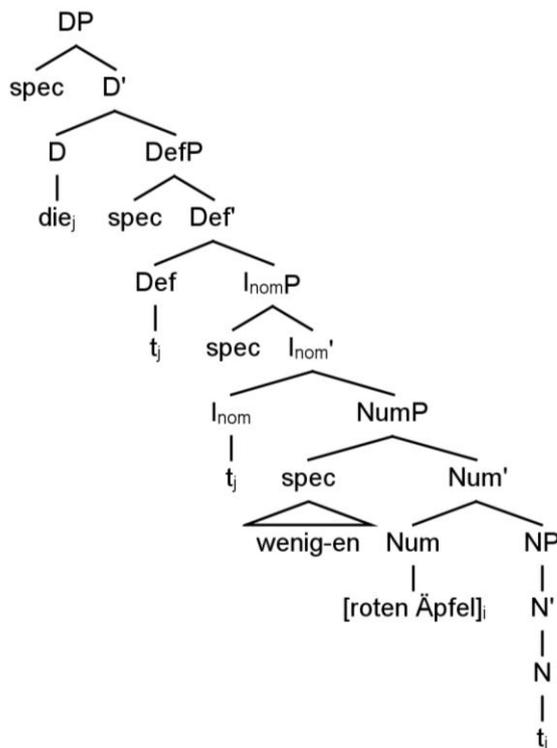
As demonstratives bear the same type of agreement morphemes as the articles, it can be proposed that they are in D. In (II) the noun hosts the archaic masculine singular dative ending *-e*.

By the examination of postnominal possessors further evidence will be given for the n-to-Num movement of the possessum.

³⁹ The inflection that N (the complex consisting of the possessum and its N-adjunct adjectives) bears has to be overt on both the possessum and every adjective. It can be assumed that the noun and the adjectives enter the derivation already inflected. The adjectives check their features against the noun when they adjoin to it. Then, the noun moves to Num to check its feature. The fact that in German the plural form of a noun is specified in the lexicon: *Haus-Häuser*, *Auto-Autos*, *Tisch-Tische* etc. supports this assumption.

The question of where the noun and the adjectives move from will be answered in section 3.6. at the end of this chapter.

(98)⁴⁰



At the end of the chapter the N-adjunct status of attributive adjectives will be accounted for.

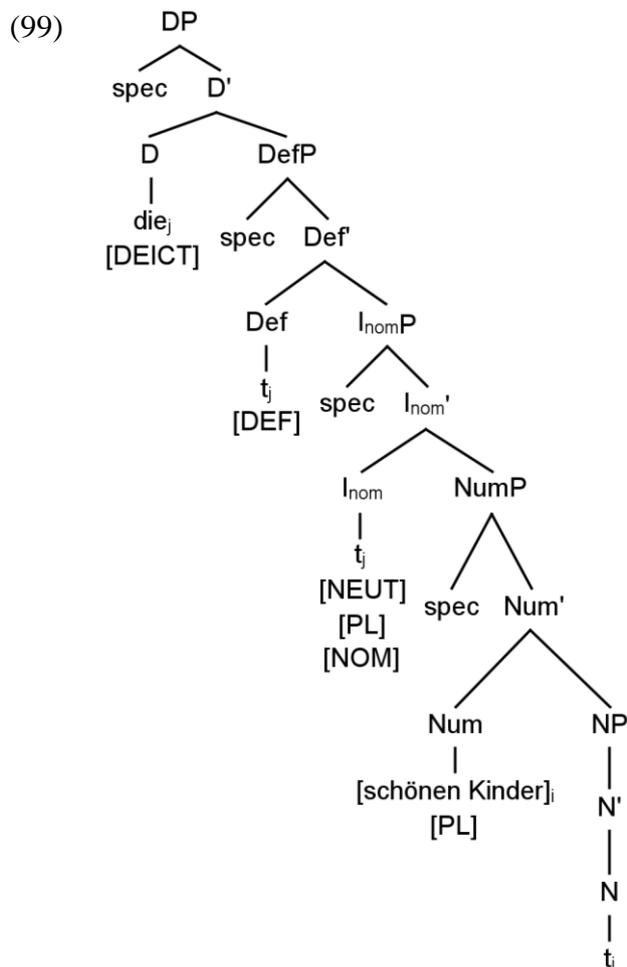
3.4.1.4. The syntactic mechanism of nominal agreement in German

It is time to sum up the syntactic mechanisms behind the dual nature of the German nominal agreement system. For the sake of simplicity this section makes use of adjective declension in non-possessive DPs without quantification. This is the clearest way to gain insight into these processes because adjective declension has a full singular-plural paradigm. The other reason for this choice is that adjectives and determiners represent the two declensional paradigms we established in our analysis: determiners are taken to be associated with inflectional elements in I_{nom} , whereas adjectives with elements in Num.

The tables (83)-(85) revealed that both the determiner and the adjective obligatorily bear the same features as the noun in German but they make use of different morpheme sets. Moreover, the morpheme set used in the course of adjective declension depends on the type of D, i.e. whether it is phonologically realised and if so whether it is D_A or D_B .

⁴⁰ The Num head assigns the inflection *-en* to the quantifier *wenig* hosted in [Spec, NumP].

To illustrate briefly how agreement works in German, (99) demonstrates the structure associated with the agreement paradigm in (84).



In (99) the noun and the adjective check the number feature by undergoing a movement targeting Num. Then, the determiner is merged into I_{nom} and moves up to Def to pick up the definiteness morphology, and then to D to license the deictic features.

3.4.2. The case of the possessor

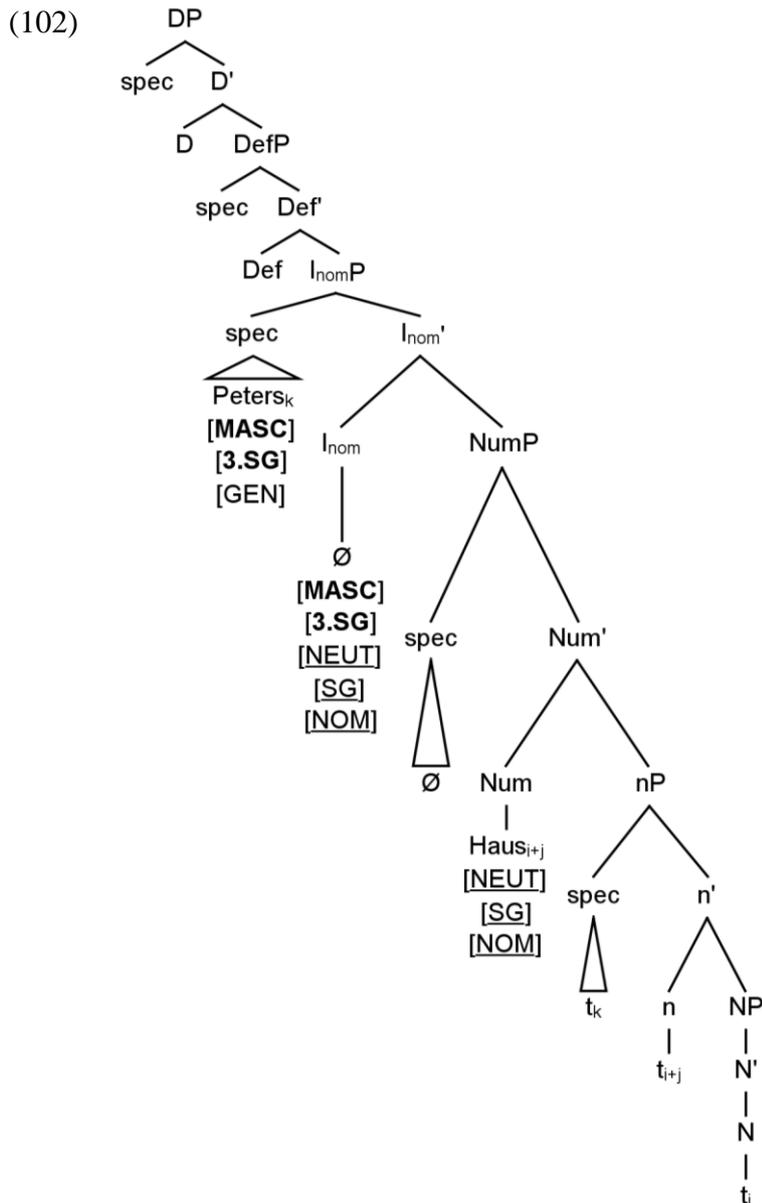
After discussing the mechanism of agreement in the German DP, it is time for us to move on to the case-marking of the possessor. First and foremost, it has to be highlighted that, as opposed to Hungarian, there are two case positions in the German possessive DP: a prenominal (100) and a postnominal (101) position.

- (100) a.⁴¹ *des Mannes Haus*
 the-MASC-SG-GEN man-MASC-SG-GEN house-NEUT-SG-NOM
 ‘the man’s house’
- b. *Peters Haus*
 Peter-GEN house-NEUT-SG-NOM
 ‘Peter’s house’
- c. *sein Haus*
 he-GEN house-NEUT-SG-NOM
 ‘his house’
- (101) a. *das Haus des Mannes*
 the-NEUT-SG-NOM house-NEUT-SG-NOM the-MASC-SG-GEN man-MASC-SG-GEN
 ‘the man’s house’
- b. *das Haus von dem Mann*
 the-NEUT-SG-NOM house-NEUT-SG-NOM of the-MASC-SG-DAT man-MASC-SG-DAT
 ‘the man’s house’

3.4.2.1. Prenominal possessors

In the above discussion of agreement and the co-occurrence restrictions imposed on prenominal possessors and determiners it was claimed that prenominal possessors move to [Spec, I_{nom}P] to check off the agreement features in I_{nom} and to receive genitive from the inflectional morpheme. To illustrate this (102) provides the structural representation of (100b).

⁴¹ Early New High German



In (102) the possessum *Haus* undergoes an N-to-n-to-Num movement to pick up the possessive zero morpheme and to check the number feature. The possessor *Peters* moves from [Spec, nP] to [Spec, I_{nom}P] to check off the inflection in I_{nom} (to agree with the possessum) and to receive genitive from the inflectional element. As the possessor occurs prenominally, no articles can occupy D.

The archaic (103) provides evidence for the existence of a prenominal genitive position in [Spec, I_{nom}P] (which is preceded by the definite article *die* in D). (103) shows, too, that in earlier phases of the history of German the combination of a determiner and a prenominal

possessor was grammatical. However, in present day German (103) is no longer grammatical.⁴²

- (103) *die* *Gottes* *Kraft*
the-FEM-SG-NOM god-MASC-SG-GEN power-FEM-SG-NOM
‘God’s power’

(Demske 2001: 225)

In some Southern German dialects the possessor undergoes [Spec, I_{nom}P]-to-[Spec, DP] movement, too. In ‘possessor doubling’ constructions it is possible to have the possessors at the edge (in [Spec, DP]) so that they are available for possessor extraction. Similarly to Hungarian, D marks the possessor as [EDGE] in some Southern German dialects. It is also interesting to note that in analogy with Hungarian, Edge and dative are marked with the use of homonymous morphemes.⁴³

- (104) [DP *Dem* *Mann*
the-MASC-SG-GEN-EDGE man-MASC-SG-GEN-EDGE
sein -Ø *Haus*] *ist schön.*
his-GEN -NEUT-SG-NOM house-NEUT-SG-NOM is beautiful
‘The man’s house is beautiful’

- (105) [DP *Dem* *Mann*]_i *ist*
the-MASC-SG-GEN-EDGE man-MASC-SG-GEN-EDGE is
[DP _{t_i} *sein* -Ø *Haus*] *schön.*
his-GEN -NEUT-SG-NOM house-NEUT-SG-NOM beautiful
‘The man’s house is beautiful’

⁴² It must be stressed, however, that southern German dialects display word order patterns in which a prenominal possessor is preceded by a determiner, see (104). Nevertheless, in such a case the determiner is hosted in the possessor DP. In addition, in Early New High German it was a typical constellation that the prenominal genitive possessor had an article of its own, cf. (100a).

In standard German the constructions in (101) are used instead of (100a), (103) and (104). The reason for the gradual disappearance of these constructions is that I_{nom} gradually loses its ability to assign genitive to [Spec, I_{nom}P]. Throughout the history of German it is a tendency that genitive has less and less function. In the literature this is referred to as *Genitivschwund* ‘the disappearance of genitive’ (van der Elst (1984)).

⁴³ These constructions seem to be problematic for the analysis presented in this dissertation. It is said that the non-pronominal possessor raises from [Spec, I_{nom}P] to [Spec, DP]. However, [Spec, I_{nom}P] is occupied by a pronominal possessor. This is a complex problem which the present section does not address because it would lead us too far afield. In chapter 5 the dissertation will return to this problem and will argue that the elements in (104) and (105) which are traditionally assumed to be pronominal possessors are in fact inflectional elements in I_{nom}. These elements are the German counterparts of the agreement suffixes in Hungarian which are also hosted in I_{nom}. The difference between these inflectional elements is that the Hungarian suffixes are bound morphemes, whereas the German inflectional heads are free morphemes.

In (104) the possessor is in [Spec, DP] where D marks it as [EDGE]. Then, as a next step the possessor can be extracted from the possessive DP, see (105). We will return to these data in chapter 5 to give a detailed discussion of the mechanism underlying possessor extraction.

3.4.2.2. Postnominal possessors

As seen in (101) the possessor can also be realised postnominally in German. If we take a closer look at these data it becomes clear that the possessor is postnominal because there is a determiner which is associated with the possessum. Hence, its trace occupies the I_{nom} position expelling the inflectional element with the help of which the possessor could agree with the possessum. That is why the possessor cannot surface in the prenominal case position, i.e. in [Spec, I_{nom} P].

As postnominal possessors do not have to move to the specifier of any inflectional phrase in the DP, they do not agree with the possessum. Thus, they remain in situ (in [Spec, nP]) where they are case marked by a phonologically realised or unrealised semantically empty preposition.⁴⁴ The phonologically realised P *von* ‘of’ assigns dative to the possessor DP, whereas the empty P genitive. As (101a) and (101b) differ only in the realisation of P and the case assigned to the possessor DP, here only the structural representation of (101b) is provided.⁴⁵

⁴⁴ This paper proposes that if the Numeration contains a determiner to be merged in under the matrix D, the possessor is always a PP. The preposition is part of the input and it forms a real PP with the possessor. In this case the whole PP is interpreted as the possessor in [Spec, nP]. In addition, the case on the possessor formally marks the possessive relation.

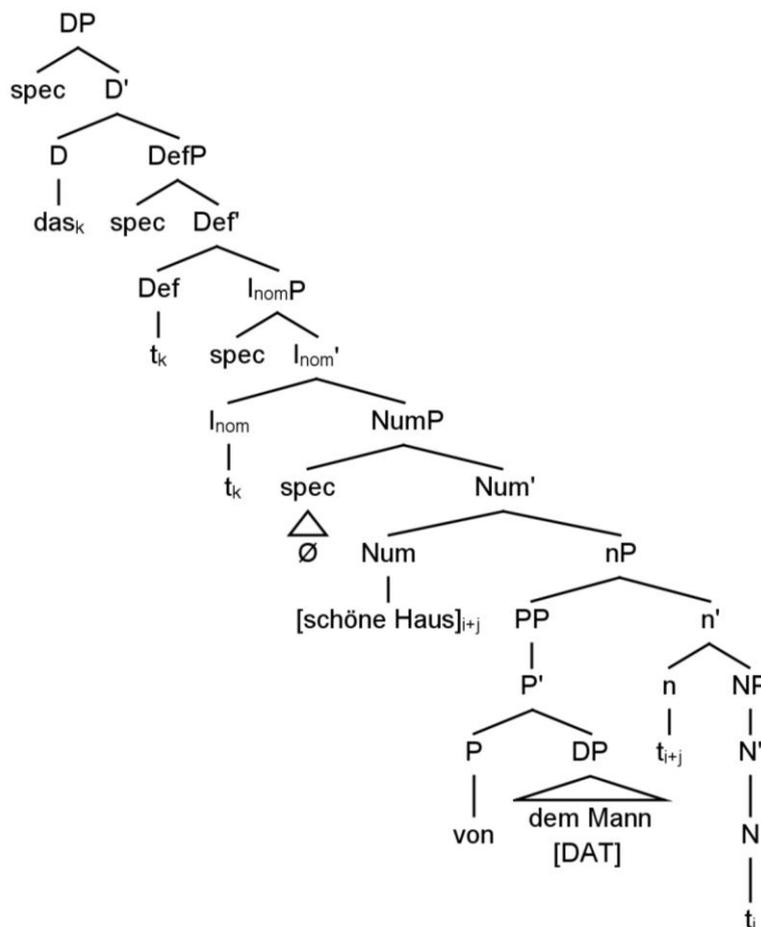
⁴⁵ The same derivational steps take place if N is a bivalent deverbal noun with two nP layers on top of the NP:

- (I) *Cäsars Eroberung von Gallien*
 Caesar-GEN conquest of Gaul-DAT
 ‘Caesar’s conquest of Gaul’

The subject argument *Cäsar* raises from the upper [Spec, nP] to the prenominal [Spec, I_{nom} P] position, whereas the object argument *Gallien* is realised postnominally in the lower [Spec, nP]. In addition, it is possible to raise *Gallien* to [Spec, I_{nom} P] if the argument *Cäsar* does not surface:

- (II) *Galliens Eroberung*
 Gaul-GEN conquest
 ‘Gaul’s conquest’

(106)⁴⁶



3.4.2.3. The alternation of pre- and postnominal possessors in German

In German there is a single motivation behind the alternation of pre- and postnominal possessors: the realisation of I_{nom} . If I_{nom} is associated with a determiner, i.e. it is occupied by the trace of a determiner, the possessor must be postnominal because it is impossible for it to agree with the possessum. However, if I_{nom} hosts an inflectional element which is associated with the possessor, the possessor is prenominal and it disallows the surfacing of any determiner be it phonologically realised or empty.

3.5. The possessive DP in English

The following sections introduce the structure of the English possessive DP. As it will turn out English is very similar to German regarding the nominal domain. However, some of the

⁴⁶ In (106) the postnominal possessor (in [Spec, nP]) must follow the possessum which suggests that the possessum moves from n to Num. As the postnominal possessor (being a PP) does not need case and it does not agree with the possessum, it is not motivated to leave [Spec, nP].

similarities are not visible anymore because the old English inflectional system underwent extensive simplifications. This claim will be elaborated on in the next section.

3.5.1. Agreement

In the Old English period the similarities between English and German were obvious, however, they vanished as English morphology became simpler. Adjectival declension was very similar to the present day German system. Although there are no visible morphological traces of the old paradigms in present day English, they still have an effect on the build-up of possessive constructions because they continue to influence the realisation of the possessor by imposing co-occurrence restrictions on prenominal possessors and determiners. In other words, the original system has the same effects in current English as the ones we observed in the discussion of the German DP.

3.5.1.1. The Old English agreement system

As the old morphology plays a crucial role in present day English as well, it is important to scrutinise it. Without a detailed enough description it is not possible to identify the structural place of the constituents in present day English possessive DPs. Therefore, the next sections provide a short description of Old English determiners and adjectives.

3.5.1.1.1. Determiners

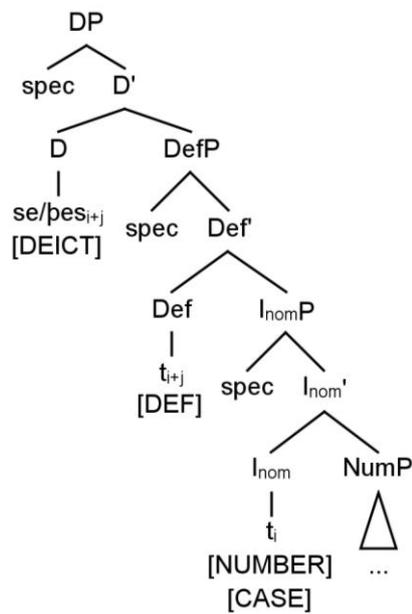
Old English had two main determiners: *se* and *þes*. According to Pyles and Algeo (1993), *se* may be translated as *the*, *that* or *those*. *þes*, on the other hand, had the function of *this* and *these*.

Horváth (2012a) proposes that both the old *se* and *þes* and the present day *the*,⁴⁷ *this*, *these*, *that* and *those* are associated with definiteness and agreement features just like their modern

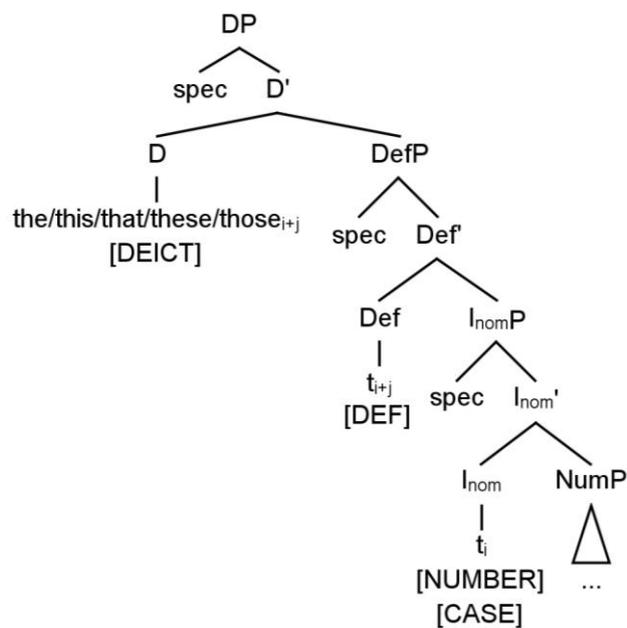
⁴⁷ Based on its history, *the* is also associated with features in I_{nom} , Def and D. The determiner *the* is the present day reflex of the old masculine nominative demonstrative, so it used to be associated with case, definiteness and deictic features. Below, this will be accounted for in the discussion of the alternation of modern English pre- and postnominal possessors triggered by the co-occurrence restrictions on determiners and prenominal possessors.

German counterparts *der* and *dieser*, as shown in (84) and (99) above. As a result, they are merged in under I_{nom} and move up to Def and then to D:

(107) a.



b.⁴⁸



(107) shows that in English, just like in German, the determiners must always agree with the noun regarding number, i.e. they have to spell out the same number features.

⁴⁸ The present day English indefinite articles *a* and *an* encode information on definiteness. In addition, they impose the same restrictions on the realisation of the possessor as their German counterparts. Consequently, *a* and *an* can be analysed as determiners which are merged in under I_{nom} and move up to Def and then to D.

3.5.1.1.2. Adjective declension

Just like in present day German, in Old English the adjectives also had to bear affixes spelling out the same features as the noun bears. Furthermore, the inflection of the adjective always depended on the inflection the determiner received. Hence, it can be proposed that the Old English nominal inflection also comprises two separate interdependent systems: one associated with determiners and their inflectional elements in I_{nom} and the other with adjectives and phrasal quantifiers whose inflectional morphemes have their origin in Num. In addition, it must be noted that English nouns are taken to check their number features in Num.

If the determiner was phonologically null, the adjective received the endings based on the paradigm presented in (108).

(108)⁴⁹

DPs with a phonologically empty determiner → D₀			
	[MASC][SG]	[FEM][SG]	[NEUT][SG]
NOM	dol cyning	dolu ides	dol bearn
ACC	dolne cyning	dole idese	dol bearn
DAT	dolum cyninge	dolre idese	dolum bearne
GEN	doles cyninges	dolre idese	doles bearnes
INS	dole cyninge	dolre idese	dole bearne
	[MASC][PL]	[FEM][PL]	[NEUT][PL]
NOM	dole cyningas	dola idesa	dolu bearn
ACC	dole cyningas	dola idesa	dolu bearn
DAT	dolum cyningum	dolum idesa	dolum bearnum
GEN	dolra cyninga	dolra idesa	dolra bearna
INS	-	-	-

(based on Pyles and Algeo (1993: 115))

⁴⁹ *dol cyning* = ‘a foolish king’, *dolu ides* = ‘a foolish woman’, *dol bearn* = ‘a foolish child’

In these cases the zero-determiner is associated with a zero-morpheme in I_{nom} and the adjective with an overt one whose features are checked in Num.⁵⁰ The adjective is merged in as an N-adjunct, and it moves to Num together with the noun.⁵¹

If the determiner was phonologically realised the adjective was declined according to (109).

(109)

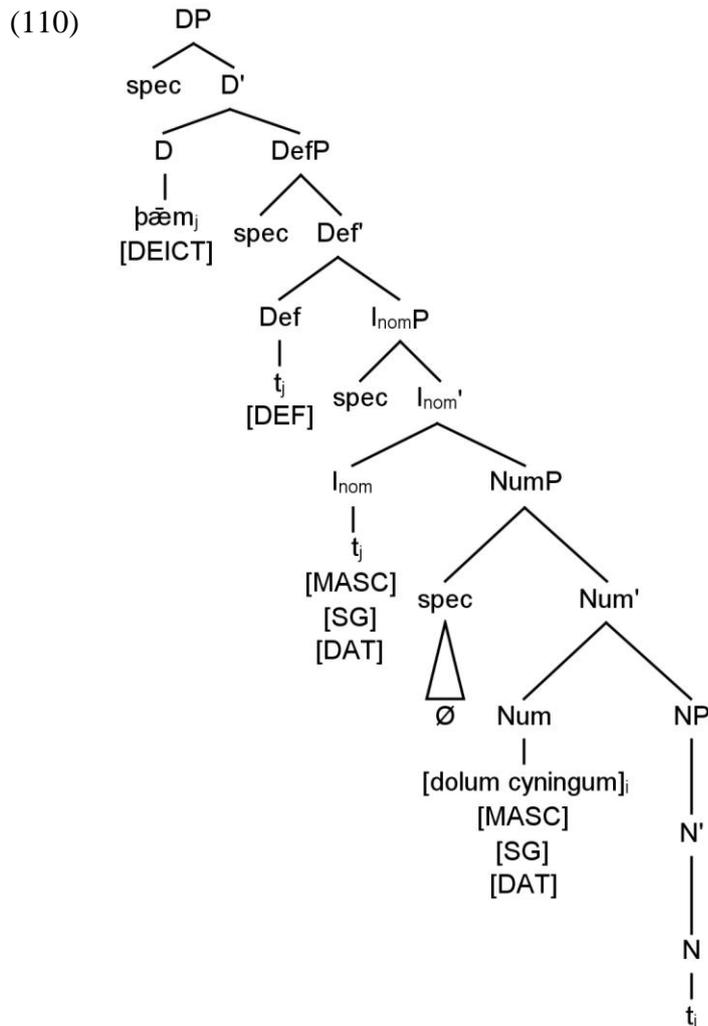
DPs with a phonologically realised determiner → D_A			
	[MASC][SG]	[FEM][SG]	[NEUT][SG]
NOM	se dola cyning	sēo dole ides	þæt dole bearn
ACC	þone dolan cyning	þā dolan idese	þæt dole bearn
DAT	þæm dolan cyninge	þære dolan idese	þæm dolan bearne
GEN	þæs dolan cyninges	þære dolan idese	þæs dolan bearnes
INS	þȳ dolan cyninge	þære dolan idese	þȳ dolan bearne
	[MASC][PL]	[FEM][PL]	[NEUT][PL]
NOM	þā dolan cyningas	þā dolan idesa	þā dolan bearn
ACC	þā dolan cyningas	þā dolan idesa	þā dolan bearn
DAT	þæm dolum cyningum	þæm dolum idesum	þæm dolum bearnum
GEN	þāra dolra cyninga	þāra dolra idesa	þāra dolra bearna
INS	-	-	-

(based on Pyles and Algeo (1993: 115))

In this case the determiner is overt and is associated with an overt inflectional element in I_{nom} . However, the adjectives receive another type of inflection associated with features in Num:

⁵⁰ The inflection N (the complex consisting of the possessum and its N-adjunct adjectives) has to be overt on both the possessum and every adjective. It can be assumed that the noun and the adjectives enter the derivation inflected. The adjectives check their features against the noun when they adjoin to it. Then, the noun moves to Num to check its feature. Evidence for this approach could be that there are irregular plural forms in English: *mouse-mice, man-men*, etc.

⁵¹ The question as to where the noun and the adjectives move from will be answered in section 3.6. at the end of this chapter.



If the DP contained a pronominal possessor,⁵² which had to agree with the possessum, the speakers used the paradigm in (109). This suggests that the Old English possessor was associated with the same inflectional elements in I_{nom} as the determiners. However, based on the data in Demske (2001), Horváth (2012a) observes that in Old English the pronominal possessor could co-occur with determiners:

- (111) a. *se* *heora* *bisceop*
the-MASC-SG-NOM their-MASC-SG-GEN bishop-MASC-SG-NOM
‘their bishop’
- b. *þes* *min* *gefea*
this-NEUT-SG-GEN my-NEUT-SG-GEN joy-NEUT-SG-GEN
‘my happiness’

(Demske 2001:190)

⁵² Wright and Wright (1914) claim, the pronominal possessors were the genitive forms of personal pronouns in Old English.

The word order depicted in (111) is not grammatical in Present Day English. The reason for this change can be traced back to the gradual simplification of English morphology. This argument will be built more in the next section.

3.5.1.2. Co-occurrence of pronominal possessors and determiners in Present Day English

By the Early Modern English period the old inflectional system collapsed, which resulted in a lot of changes. According to Demske (2001), there was a functional split in the class of the determiners due to which the present day articles and demonstratives were formed. In addition, the overt adjective declension vanished from the language. All this led to another important change, which was the redefinition of the status of the pronominal possessor, which also lost its overt agreement characteristics.

As a consequence of English morphology becoming less and less rich, the language became structure configurational. In other words, the word order became rigid and the marking of syntactic features became non-redundant (i.e. everything is marked only once in an overt way).

Consequently, the present day adjectives and some of the determiners fail to be overtly inflected. However, the I_{nom} vs. Num distinction seems to be still preserved in the language. I_{nom} accommodates overt or covert inflectional elements associated with the pronominal possessor or the determiner, whereas Num hosts the number feature the noun checks and inflectional features associated with QPs and adjectives. As we will see in (112)-(115), the co-occurrence restrictions imposed on pronominal possessors and determiners suggest that although there is no phonological reflex of the I_{nom} vs. Num distinction anymore, it still has an important role in English syntax:

(112) *Peter's house*

(113) * *this Peter's house*

(114) *his house*

(115) * *the his house*

(112) and (114) are grammatical because the possessors are not combined with any determiner. In contrast to these, (113) and (115) are ungrammatical because the possessors co-occur with a determiner. The reason for this is that both the pronominal possessor and the

determiner have to bear overt or covert agreement affixes. However, they expel each other's inflectional element from I_{nom} .

According to Wright and Wright (1914), even the definite and the indefinite article are inflected for the same features as N in a covert way. But it can be shown that the demonstratives (which also occupy D) show overt declension.

(116) *this house*

(117) * *this houses*

(118) *these houses*

(119) * *these house*

Based on Strunk (2005), Lühr (2002) and Pyles and Algeo (1993), Horváth (2012a, 2013) proposes that the pronominal possessor must show some kind of an agreement with the possessum, just like the subject agrees with the verb in the CP. The non-pronominal possessors show overt agreement with the help of the Saxon Genitive morpheme⁵³ (cf. (120))

⁵³ The term 'Saxon Genitive' refers to the history of the enclitic 's because it was formed from the old genitive ending *-(e)s*. In Present Day English the Saxon Genitive morpheme is taken to be an inflectional head. That is why it is hosted in I_{nom} . (I) shows that unlike case morphemes, 's does not attach to N and/or D inside the possessor's DP but it is realised at the end of the whole possessor phrase. So, it attaches to anything that happens to be in front of it.

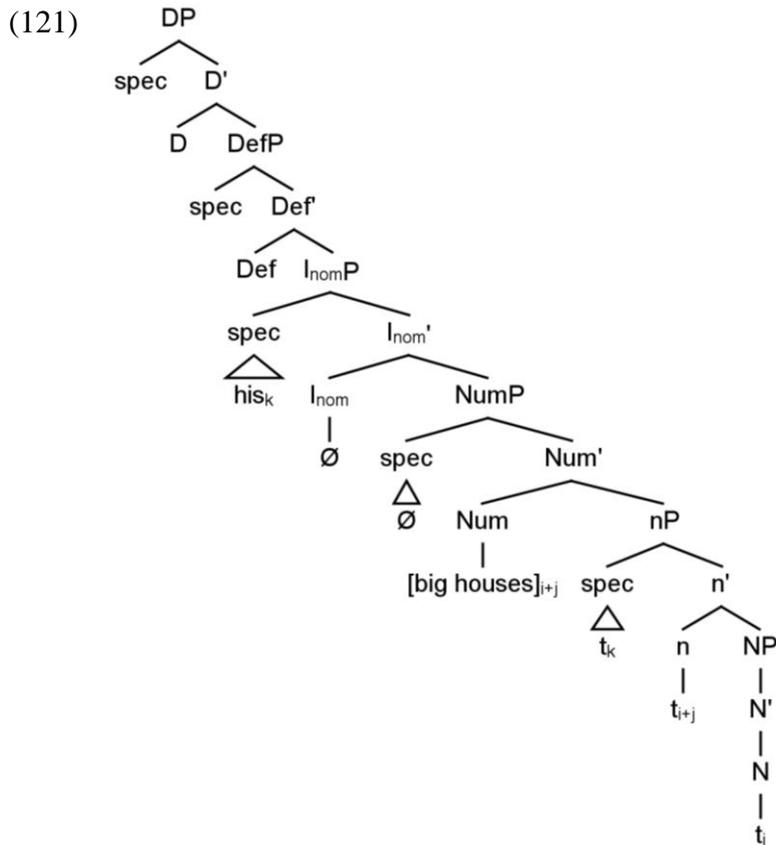
- (I) a. [_{DP} *the man next door*]'s key
 b. [_{DP} *the man running*]'s key

This leads us to the conclusion that the possessor-DP is united with 's as a result of a phonological rule in PF. This can be backed up by the fact that heads cannot move to phrase positions, so the inflectional head 's cannot move to the X^{\max} possessor *the man next door*.

Newson et al (2006: 139-141) state that there are other morphemes in English which behave like the Saxon Genitive: the contracted auxiliaries 'll, 'd and 's. Such elements attach to whatever phrase end up in front of them at the surface and cannot be moved with the subject, as shown in (II).

- (II) a. [_{DP} *The man next door*] *is going to a party tonight*.
 b. [_{DP} *The man next door*]'s *going to a party tonight*.
 c. *Who_i does John think* [_{CP} *t_i's going to a party tonight*]?

In sum, the previous syntactic tests, which showed the analogous behaviour of the 'Saxon Genitive' morpheme 's with contracted auxiliaries (CP-level I-heads), back up the statement made some paragraphs earlier that the 'Saxon Genitive' enclitic is not a manifestation of genitive but it is an inflectional element which occupies I_{nom} . As any other I_{nom} elements 's is also able to case mark the possessor in [Spec, I_{nom} P].



In (120) and (121) the possessum *house* and its adjunct *big* undergo movement from N to n to pick up the possessive zero-morpheme and from here to Num to check the number feature.⁵⁵ The possessor moves from [Spec, nP] to [Spec, I_{nom}P] to receive case from the inflectional element and to check off the agreement features in I_{nom}, which can be embodied by 's (in the case of non-pronominal possessors) or \emptyset (in the case of pronominal possessors).

The presence of the possessor's inflectional element excludes all other inflectional elements from I_{nom} which could be associated with a determiner. That is why (113) and (115) are degraded. On the other hand, the presence of the determiner's trace in I_{nom} makes it impossible for a pronominal possessor to surface because it could not show agreement with the possessum as there is no place for its inflectional element. In such a case the possessor has to occupy the postnominal case position [Spec, nP], just as in German.

⁵⁵ The existence of postnominal possessors argues for the validity of n-to-Num movement in English, too. Postnominal possessors will be discussed in section 3.5.2. below.

3.5.1.3. Quantification

Quantification in the English DP displays many parallelisms with German because this part of English grammar is still governed by the old I_{nom} vs. Num inflectional distinction whose phonological manifestation virtually vanished from the current language.

It can be said that in English, too, there are two kinds of quantifying elements. The first group of quantifiers are heads sitting in D at Spell Out, and these are associated with inflectional elements in I_{nom} . This means that they cannot co-occur with determiners (122) and pronominal possessors (123) and they cannot be combined with degree elements (124). In English such quantifiers are: *some, each, all, no, every* etc.⁵⁶

$$(122) \quad * \quad \left\{ \begin{array}{l} \text{those} \\ \text{a} \\ \text{the} \end{array} \right\} \left\{ \begin{array}{l} \text{some} \\ \text{each} \\ \text{all} \\ \text{no} \\ \text{every} \end{array} \right\} \text{ dwarfs}$$

(Jackendoff 1977: 105)

$$(123) \quad * \quad \left\{ \begin{array}{l} \text{Peter's} \\ \text{my} \\ \text{her} \end{array} \right\} \left\{ \begin{array}{l} \text{some} \\ \text{each} \\ \text{all} \\ \text{no} \\ \text{every} \end{array} \right\} \text{ dwarfs}$$

$$(124) \quad * \quad \left\{ \begin{array}{l} \text{so} \\ \text{very} \end{array} \right\} \left\{ \begin{array}{l} \text{some} \\ \text{each} \\ \text{all} \\ \text{no} \\ \text{every} \end{array} \right\} \text{ dwarfs}$$

The other type of quantifier is a phrasal category which can co-occur with determiners (125), pronominal possessors (126) and degree elements (127). These are: *many, few, several* etc.

⁵⁶ The quantifier *all* (together with *both* and *half*) can co-occur with determiners and pronominal possessors. However, in these cases they require a partitive *of*-PP which means that they are not inside the same (embedded) DP as the possessor and the determiner:

- (I) $[_{DP} \text{all} [_{PP} \text{of} [_{DP} \text{the books}]]]$
 (II) $[_{DP} \text{all} [_{PP} \text{of} [_{DP} \text{Mary's books}]]]$

(125) { those } { many }
 { the } { few } } dwarfs
 { several }

(Jackendoff 1977: 105)

(126) { Peter's } { many }
 { my } { few } } dwarfs
 { her } { several }

(127) a. so many dwarfs
 b. very few dwarfs

Old English data provide evidence for assuming that the *many*-type phrasal quantifiers occupy the [Spec, NumP] position in English, too. According to Lehrer (1987), in Old English these quantifiers “had the same syntactic distribution and inflectional endings as adjectives.” (Lehrer 1987: 102). (128) illustrates this.

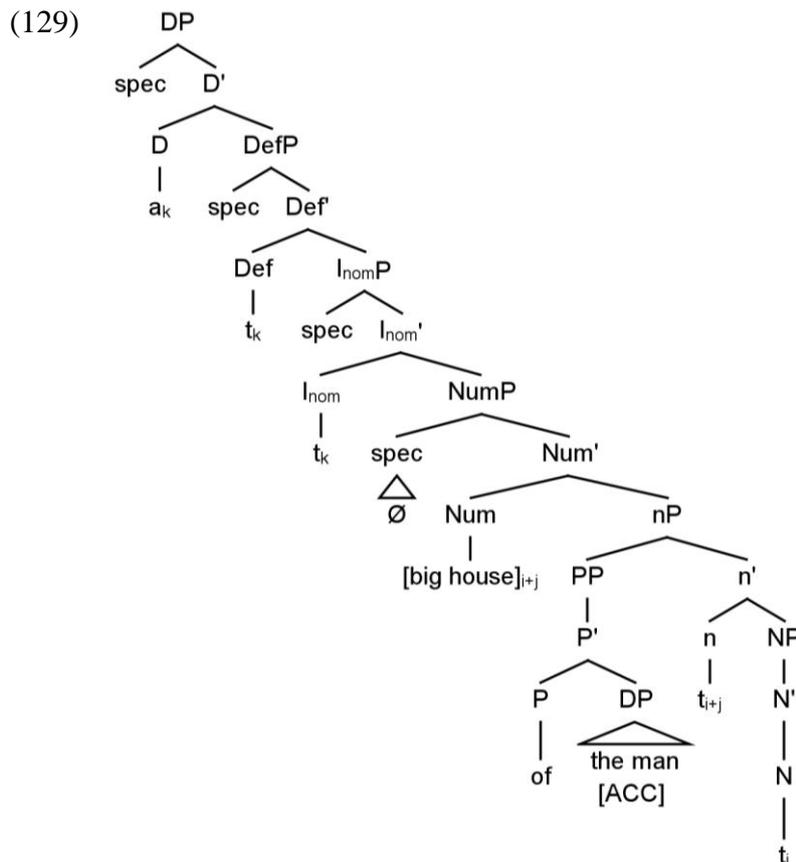
(128) *mæneg-um* *yfel-um* *men*
 many-MASC-PL-DAT evil-MASC-PL-DAT man-MASC-PL-DAT
 ‘to many evil people’

(Irvine and Godden 2012: 360)

In (128) both the quantifier *mæneg* ‘many’ and the adjective *yfel* ‘evil’ receive the same [MASC][PL][DAT] ending *-um*. As a consequence, it can be proposed that by analogy with German, both the English adjective and the *many*-type of English quantifiers are associated with the same inflectional affix set, whose features are checked in NumP. However, as they cannot impose restrictions on the number of N, it is proposed that adjectives are left adjuncts of N, just as in German. This analysis will be elaborated in section 3.6. at the end of this chapter.

3.5.2. The case of the possessor

There are two possessor positions in the English possessive DP. One of them is the prenominal [Spec, I_{nom}P]⁵⁷ where the possessor gets genitive from the inflectional head, see (120)-(121). The other one is the postnominal [Spec, nP] position where the possessor is assigned case by the semantically empty preposition *of*. The latter construction can be seen in (129):



⁵⁷ (111) and (120) together suggest that the prenominal genitive position is [Spec, I_{nom}P] in English. (120) shows that the prenominal case position is followed by the inflectional enclitic 's hosted in I_{nom}. (111) demonstrates that this case position directly follows the determiner. These two descriptions are true for only one position, [Spec, I_{nom}P].

Besides, (111) also shows that this position is a genitive position because the Old English data indicates that the DP hosted here is marked as genitive. In addition, present day pronominal possessors, which also occupy [Spec, I_{nom}P] are taken to be inherently genitive.

In current English only pronouns are overtly marked for case: *his, him, her, us* etc. Nouns, on the other hand, cannot bear overt case affixes any more. However, the present dissertation assumes that if pronouns receive genitive in [Spec, I_{nom}P], non-pronominal possessors must also get this case in this position even if it is not visible.

In (129), I_{nom} encodes an inflectional element associated with the determiner, i.e. it is occupied by the trace of the determiner *a*. So, the possessor cannot surface prenominally because it could not be inflected for the same features as the possessum.⁵⁸ As a consequence, the possessor remains in situ and receives accusative⁵⁹ from the preposition *of*.^{60,61}

3.6. Attributive adjectives in the DP

The present dissertation assumes that attributive adjectives move together with the possessum inside the possessive DP because attributive adjectives are the left adjuncts of N.⁶² The basis of the arguments for this approach was German (and Old English) adjective declension. This section aims at showing how the adjective gets onto the noun.

First and foremost, a distinction must be made between lexical and syntactic compounding. Lexical compounds are not derived in syntax via X^0 -adjunction but are formed in the lexicon, so their stress pattern is also determined there. By contrast, syntactic compounds are constructed in syntax via X^0 -adjunction, and their stress pattern reflects this difference.

(130) *I lived in 'Whitehorse in Canada.*

(131) *I have a 'white 'horse.*

⁵⁸ According to descriptive grammars, there are other reasons behind the alternation of English pre- and postnominal possessors apart from the realisation of I_{nom} . Discourse relations and animacy will be discussed in chapter 5.

It has to be noted that similarly to German, not just the possessor can raise to the [Spec, $I_{\text{nom}}P$] position but other arguments in nP, too, which are traditionally referred to as the 'genitive arguments'. See (I).

(I) *the city's destruction*

⁵⁹ The DP *a house of Peter's*, which is traditionally referred to as 'double genitive construction', will be analysed in chapter 5.

⁶⁰ In English the possessor is associated with a P in the Numeration if the Numeration also contains a determiner, which is to be merged in under the matrix D associated with the possessum.

⁶¹ In English N can also be filled in by a bivalent deverbal noun as in (I).

(I) *Caesar's conquest of Gaul*

In this case the inflectional element of the prenominal argument *Caesar* occupies I_{nom} , so the other argument *Gaul* must be postnominal.

⁶² Travis (1988) also assumes that adjectives are N-adjuncts.

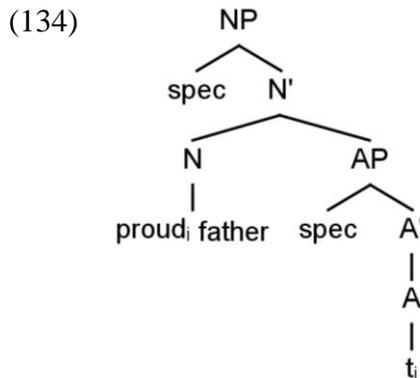
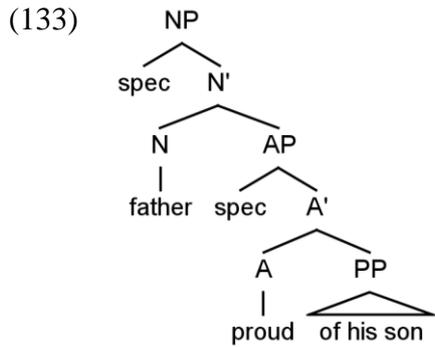
In (130) *Whitehorse* is a lexical compound noun, whereas in (131) *white* and *horse* constitute a syntactic compound noun. This is clearly reflected in their stress patterns. It is reasonable to assume that PF must have access to the structural information in the case of syntactic compounding but not with lexical compounding. Given this type of reasoning, representing attributive adjectives as X^0 -adjuncts does not result in confusing them with lexical compounds.

A further piece of evidence for handling adjectives as N-adjuncts comes from the fact that nothing ever can intervene between a noun and the adjective modifying it:

- (132) a. **the big two houses*
b. **die großen zwei Häuser*
the big two houses
c. **a nagy két ház*
the big two house

A potential problem for this analysis is how it is possible to modify or complement attributive adjectives if they are left adjuncts of N. An answer to this is provided by Larson (1988) who assumes that adverbs are complements of verbs at the beginning of structure building. In the discussion of the CP-DP parallelism it was proposed that the NP is the nominal counterpart of the VP. If adverbs are verb modifiers and adjectives noun modifiers, it can be argued that the AP is the nominal counterpart of the AdvP. Hence, APs can be merged into a position which can be regarded as the nominal counterpart of the complement of V. This position is the complement of N.

Consequently, it can be proposed that adjectives are basically APs merged into the $[_N' N, AP]$ position. Nevertheless, A undergoes head movement to adjoin to the noun:



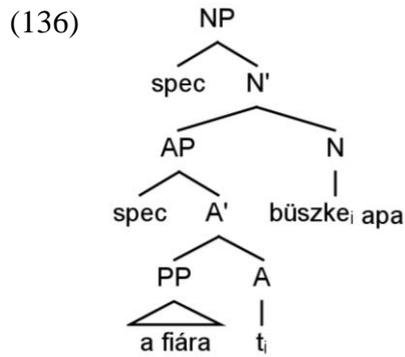
(133) shows that adjectives that have a complement stay behind the noun in English. In (134) the adjective does not have a complement, so it undergoes head movement and adjoins to N.⁶³

In German and Hungarian the adjective obligatorily adjoins to the noun regardless of whether it has a complement or not. (136) is the structural representation of (135). It can be seen that the adjective *büszke* ‘proud’ raises to the noun *apa* ‘father’ but the complement of the adjective is left behind just like in English. However, due to the head right nature of some Hungarian phrases, the complement PP *a fiára* precedes the syntactic compound consisting of the adjective and the noun.

- (135) *a fiára büszke apa*
 the son-of proud father
 ‘the father proud of his son’

⁶³ There are some exceptions but the following datum clearly shows that the adjective undergoes movement:

(I) *a hard man to frighten*



Unfortunately, in German we can observe the same word order pattern as in Hungarian. However, the German nominal domain is head left. Consequently, for this analysis of attributive adjectives it is still a problem to host the complement of A in German. It seems that these PPs raise to somewhere, too:

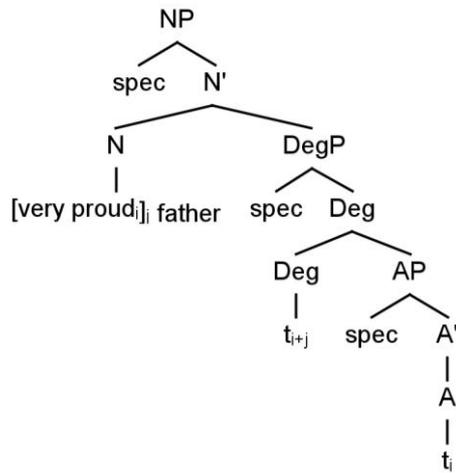
- (137) *ein* [_{PP} *auf seinen Sohn*] *stolzer Vater*
 a on his-ACC son proud father
 ‘a father proud of his son’

In the future research has to be carried out on the landing site of the PP *auf seinen Sohn*.

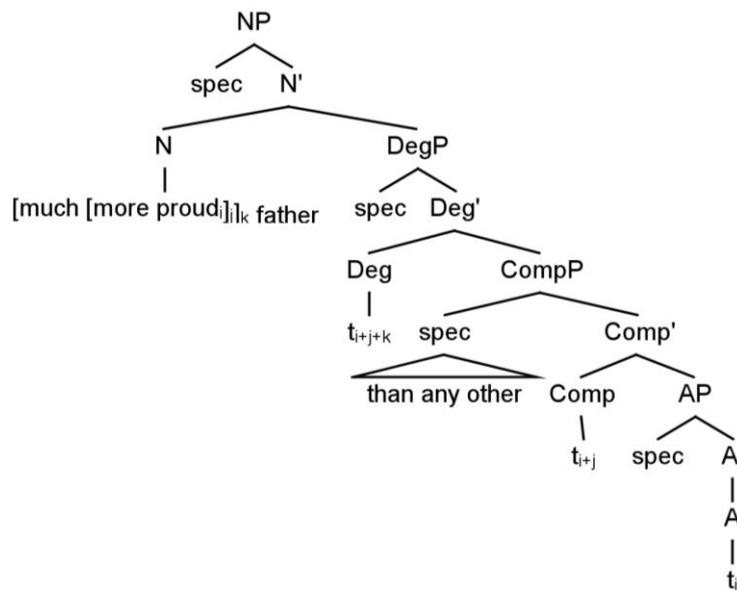
(138) and (139) depict that the attributive adjective moves from A via Deg to N or undergoes an A-to-Comp-to-Deg-to-N movement to pick up the degree and the comparative elements.⁶⁴

⁶⁴ Hale and Kayser (1993) also make use of incorporation in the same way as the present thesis. They propose that the head of the complement of X is incorporated by X in the creation of denominal verbs. In other words, the head of the complement of X undergoes head movement to X.

(138)⁶⁵



(139)

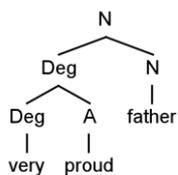


The data in (140)-(142) indicate that Comp is also involved in head movement.

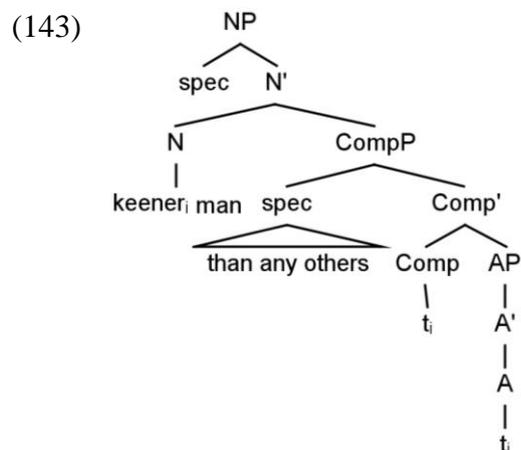
- (140) *a man keener than most others*
- (141) *a keener man than most others*
- (142) **a keener than most others man*

⁶⁵ The adjective is adjoined to the right of the degree element. The complex *very proud* (Deg) is adjoined to the left of the noun. This is shown in (I).

(I)



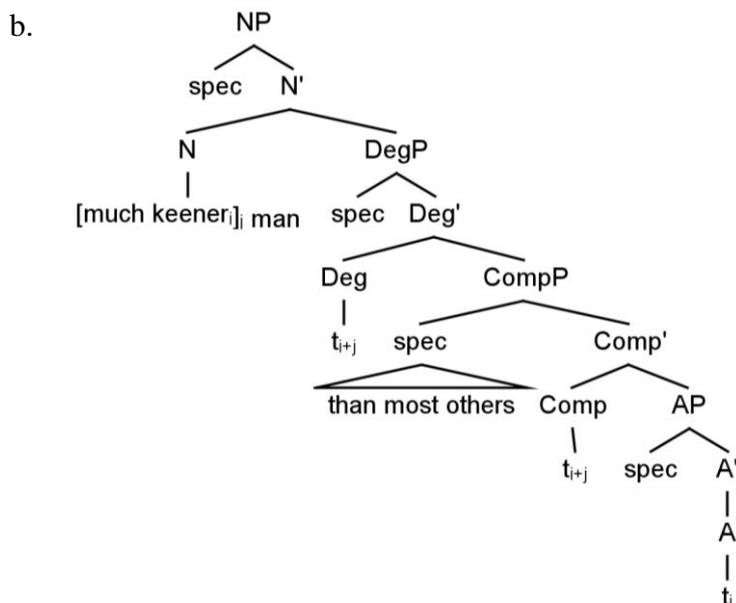
In (140) N *man* has a CompP complement *keener than most others*. In this CompP the adjective *keener* undergoes head movement to check off its features against the abstract Comp head.⁶⁶ In (141) the adjective moves on to N:



In analogy with (140)-(142), (144)-(146) demonstrate that it is not only Comp which can be subject to incorporation but Deg, too.

(144) *a man much keener than most others*

(145) a. *a much keener man than most others*



(146) **a much keener than most others man*

The same syntactic processes take place in German and Hungarian, too:

⁶⁶ As opposed to the periphrastic comparative in (139), which is treated as an instance of syntactic compounding (adjunction), the morphological comparative is lexically formed. Irregular comparative forms such as *better*, *worse*, *more* etc. argue for this assumption.

(147) *ein viel begeisterterer Mann als die Meisten*
a much keener man than the most
'a much keener man than most others'

(148) *egy sokkal lelkesebb férfi, mint a legtöbбек*
a much keener man than the most
'a much keener man than most others'

It may seem to be strange that the noun incorporates the adjective. However, incorporation is part of English grammar. According to Grimshaw (1990), verbs (gerunds) may incorporate their objects:

(149) *gift-giving to children*

(Grimshaw (1990: 14-15))

(150) illustrates further that object incorporation operates in English, German and Hungarian. Nevertheless, the ungrammaticality of the data in (151) indicates that incorporation cannot take place in any of the languages under discussion if the object noun has a complement. This is the same restriction as the one we observed in connection with (133).

(150) a. *storytelling*

b. *Geschichtenerzählen*
storytelling

c. *történetmesélés*
storytelling

(151) a. **story of Little Red Riding Hood telling*

b. **Geschichte von Rotkäppchen Erzählen*
story of Little Red Riding Hood telling

c. **történet Piroskáról mesélés*
story Little Red Riding Hood-about telling

(134), (149) and (150) suggest that incorporation can take place in English, German, and Hungarian, too. In fact, there are agglutinative languages which make extensive use of incorporation. Chukchee, a Paleosiberian language spoken in Northeast Siberia, is a good example.

In Chukchee nouns often incorporate their adjectives:

- (152) a. *nətenqin ηelgən*
 good hide
 ‘a good hide’
- b. *teη-ηelgən*
 ‘a good-hide’

(Radford et al (2009: 160))

In (152a) *teη* is an adjective root which obligatorily bears the prefix *nə-* and the suffix *-qin* if the adjective is not part of a compound. In (152b) the adjective root does not bear these affixes because it constitutes the first part of a syntactic compound noun. The syntactic compound noun resulting from adjective incorporation can take part in object incorporation, see (153). The fact that V can incorporate this noun provides evidence for its status as a head.

- (153) a. *tə-lʔu-gʔen nətenqin ηelgən*
 I-saw-it good hide
 ‘I saw a/the good hide.’
- b. *tə-lʔu-gʔen teη-ηelgən*
 I-saw-it good-hide
 ‘I saw a/the good hide.’
- c. *tə-teη-ηelgə-lʔu-k*
 I-good-hide-saw-it
 ‘I saw a/the good hide.’

(Radford et al (2009: 161))

The analysis of modification presented here is far from perfect and, just like the other analyses in the literature, it has problems, too. For instance, if the DP contains more than one adjective, in the present proposal it cannot be explained why they are merged in in a given order. However, from the perspective of the main findings of the present work (in chapter 4) it is enough to say that the adjective is an N-adjunct at Spell Out. The dissertation does not intend to work out a sounder analysis of attribution. Hence, it is left open for further research.

3.7. Chapter summary

This chapter reviewed the derivation of possessive DPs in Hungarian, German and English. It was assumed that in all of these three languages the possessive DP contains lexical and functional projections. The lexical projections are NP and nP, whereas the functional projections are NumP, I_{nom}P, DefP and DP. The aim of this chapter was to establish the

structural status of the possessum, the possessor, the quantifiers, the adjectives and the determiners in the DP.

In all of the three languages examined the possessum is merged in under N. Adjectives are argued to be merged in as the AP complements of N. Then, the A head undergoes head movement from the AP to adjoin to the noun. Thus, in all of the three languages discussed adjectives are believed to be N-adjuncts which move together with the noun to higher functional projections. The syntactic compound noun, consisting of the adjective (A) and the possessum (N), moves up to n to pick up the possessive morpheme which introduces a structural position for the possessor ([Spec, nP]) into which it can be merged.

The next projection which is formed during the computation is NumP. In all of the three languages examined the compound possessum moves together with the possessive morpheme to Num to check its number feature. In Hungarian all of the quantifiers are merged in to [Spec, NumP]. In English and German only the phrasal quantifiers occupy this position because the X^0 quantifiers are merged in to I_{nom} and move to Def and then to D.

As a next step in the derivation $I_{nom}P$ is formed. I_{nom} hosts the agreement suffixes which are attached to the Hungarian possessum. In English and German determiners or X^0 quantifiers or inflectional elements associated with a prenominal possessor can be merged in to I_{nom} . (This difference might be based on the synthetic nature of Hungarian and the analytic nature of English and German.) Nevertheless, in all of these languages I_{nom} is responsible for the case marking of the prenominal possessor. That is why the possessor must move from [Spec, nP] to [Spec, $I_{nom}P$] if I_{nom} is filled in by an overt or a covert element associated with possessors. In addition, in such a case the possessor also has to check off the agreement features encoded in I_{nom} . However, if I_{nom} hosts the trace of a determiner or an X^0 quantifier, the possessor is realised as a PP and remains in [Spec, nP].

Finally, the DefP and the DP projections are created as the outcome of the last external merge operations. Def contains definiteness features, which can be licensed by a determiner. D hosts the deictic features licensed also by determiners. In Hungarian and in some Southern German dialects [Spec, DP] also serves as an escape hatch for the possessor before it leaves the possessive DP in order to be able to take part in topic-focus relations in the CP independently of the possessum. In these languages the possessor receives the overt Edge marker from D. In

English D cannot mark any constituents as Edge because it lacks an overt morphology for this. Hence, the possessor never raises to [Spec, DP] in this language and possessor extraction is not allowed.⁶⁷

In order for us to be able to reach the aims of the next chapter it was crucial to establish the exact structural status of the possessor, the possessum, the adjectives, the quantifiers and the determiners in the English, German and Hungarian DP. Based on the information we accumulated in this chapter we can carry out a highly purpose-oriented scientific investigation knowing exactly which constituents (in what positions) we must examine. In Hungarian the possessum, the possessor, the N-adjunct adjective, the quantifiers in [Spec, NumP] and the determiners are of crucial importance in our analysis. In German and English we should focus on the possessum, the possessor, the X^0 -quantifier in D, the X^{\max} quantifiers in [Spec, NumP] and the N-adjunct adjectives.

⁶⁷ [EDGE] might be required to be overtly marked because the extracted possessor needs to be explicitly differentiated from the subject and the objects in the CP. English, being a structure configurational language, marks the function of a DP in the clause with the help of word order (not overt case). The object has to directly follow the verb, whereas the subject precedes it (in the majority of the cases). If a possessor DP with a zero [EDGE] morpheme could be extracted from the English possessive DP, it could be interpreted difficultly.

Chapter 4

Discourse features in the possessive DP

4.0. Introduction

The aim of the present chapter is to provide a novel analysis of the behaviour of DP-internal wh-elements, topics and foci. First, it reviews the Split-DP approach to this research area, highlighting some of its weak points. Then, making use of the DP structure proposed in the previous chapter, it introduces a feature percolation approach. It will be demonstrated that this analysis has fewer problems and is able to describe a wider range of data than the Split-DP approach.

4.1. The Split-DP analysis

According to syntacticians arguing for the Split-DP account, the projectional system presented in the previous chapter cannot by itself account satisfactorily for some important phenomena in the DP. For example, it cannot explain topic-focus phenomena, wh-movement and CP-level inversions caused by DP-internal elements. Consequently, there is a need for a more articulated structure describing the syntax of DPs. The following sections review the analysis of Ihsane and Puskás (2001), introducing their proposed DP-internal projections in a step-by-step fashion.

4.1.1. Definiteness and specificity

According to Ihsane and Puskás (2001), definiteness and specificity constitute two distinct features and there is no necessary correlation between them. They cite Heim (1982) who points out that definiteness selects one object in the class of possible objects.⁶⁸ Referring to Enç (1991), they state that specificity relates to pre-established elements in the discourse.⁶⁹ Based on Diesing (1992), they claim that elements can be associated with [+/-definite] and [+/-specific] values and that these features are independent, so all the four possible combinations of their values are attested providing the following French data to demonstrate this.

⁶⁸ This idea dates back to Russel (1905).

⁶⁹ Ihsane and Puskás (2001) use the term ‘pre-established’ in the sense ‘discourse old’.

(154) *L' étudiant* est venu voir la professeur.
the student-[+DEF][+SPEC] is come to-see the professor
'The student came to see the professor.'

(155) *Jean a rate le train.*
John has missed the train-[+DEF][-SPEC]
'John missed the train.'

(156) *Un étudiant* est venu voir la professeur.
a student-[-DEF][+SPEC] is come to-see the professor
'A student came to see the professor.'

(157) *L' étudiant a acheté un livre.*
the student has bought a book-[-DEF][-SPEC]
'The student bought a book.'

(Ihsane and Puskás 2001: 43)

According to the authors, in (154), the DP *l'étudiant* 'the student' is definite and it preferably has a specific reading because it is easily interpreted as pre-established in the discourse. *Le train* 'the train' in (155) is definite and can be non-specific. In (156) *un étudiant* 'a student' is indefinite and can be interpreted as specific, i.e. pre-established. In (157), *un livre* 'a book' is indefinite and has a favoured non-specific reading.⁷⁰

Ihsane and Puskás (2001) propose that the definiteness and specificity features may be associated with different heads in the structure. They argue that there are two functional projections in the DP on top of the inflectional projection: DefP, whose head hosts [+/- definite], and TopP, whose head hosts [+/- specific]. In other words, Def is responsible for the definiteness of the DP and TopP is associated with specific elements, i.e. topics.⁷¹ The exact positions of these projections are shown in (158).⁷²

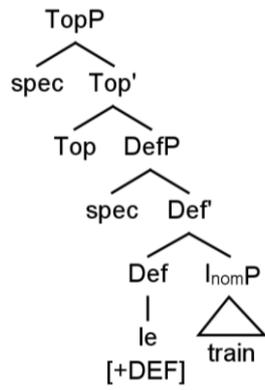
⁷⁰ Given the fact that Ihsane and Puskás (2001) define specificity as pre-establishment, it must be noted that in the case of (156) the use of the indefinite article excludes the pre-established status. The phrase *un étudiant* 'a student' can be 'specific' in the sense that the speaker has a particular student in mind, but this does not make it pre-established (based on Mark Newson's comment). An additional problem with this approach is that every topic must be specific but not every specific DP is a topic.

⁷¹ According to Vermeulen (2010), a topic introduces a referent which is pre-established in the discourse.

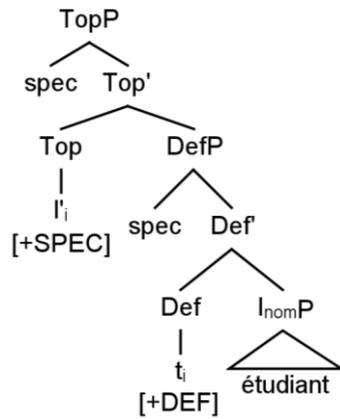
⁷² (158) provides the structural representation of the bold DPs in (154)-(157) in the following way: (154) → (158b), (155) → (158a), (156) → (158d) and (157) → (158c).

(158)⁷³

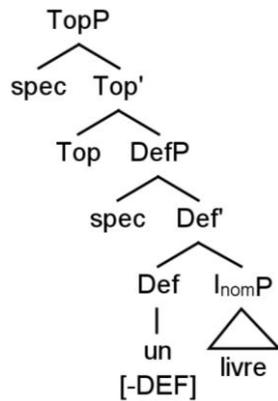
a.



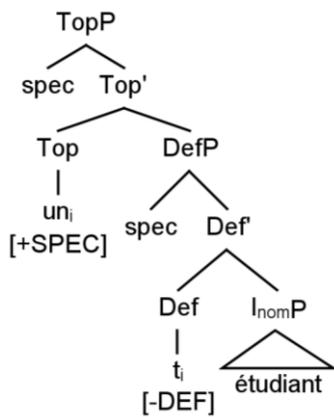
b.



c.



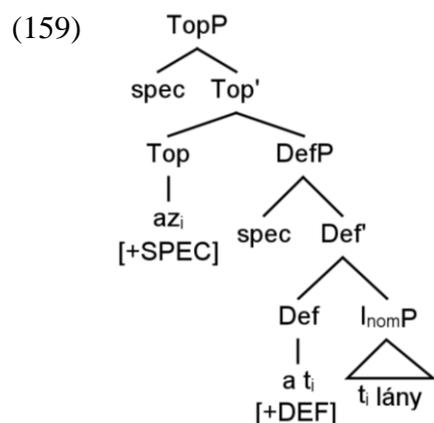
d.



⁷³ Ihsane and Puskás (2001) do not use the label I_{nom}.

There is a major problem with this analysis as to how negative features are handled. Although Ihsane and Puskás (2001) make use of the feature [-SPEC], they do not include it into their tree diagrams. So, it seems that it does not have to be checked off. By contrast, the determiner always moves to the specifier of the [-DEF] Def head, indicating that it does enter into checking relations and introducing an inconsistency into the analysis.

Ihsane and Puskás (2001) account for the relative position of the newly introduced phrases (DefP and TopP) with the help of Hungarian demonstratives.⁷⁴ They propose that demonstratives are generated in the specifier position of the highest projection in the inflectional system and always contribute to the specificity of the DP because they are linked to the discourse. In addition, demonstratives are associated with definiteness, too. Consequently, they move to Def to check their [+DEF] feature and then to TopP to check their [+SPEC] feature. Ihsane and Puskás (2001) argue that the head of demonstratives can extract and so undergo head movement.⁷⁵ For example the DP *az a lány* ‘that girl’ would have the following structure under these assumptions:



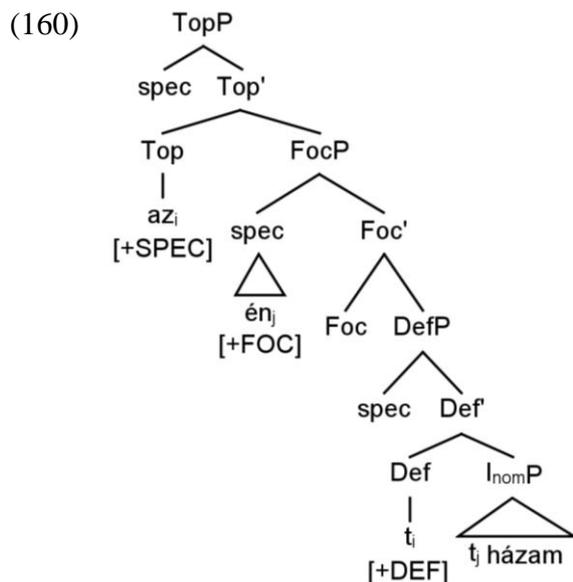
Note that (159) is problematic as Def is occupied by both the definite article *a* and the trace of the demonstrative.

⁷⁴ Ihsane and Puskás (2001) make use of Hungarian demonstratives because these elements co-occur with definite articles. (In English, for instance, such a word order is ruled out.)

⁷⁵ It is not typically accepted that the head of a phrase sitting in specifier position can be extracted.

4.1.2. Foci in the DP

So far this review has dealt mainly with pre-established elements, i.e. topics. However, there are also DP-internal elements which are not pre-established, but focused. According to Ihsane and Puskás (2001), these constituents should be hosted in a focus phrase in the DP. Based on the word order pattern observed in a phrase such as *az én házam* ‘MY house’, they claim that FocP is situated between DefP and TopP.⁷⁶



In (160) the article, the [+DEF][+SPEC] *a*, is merged into the structure under Def where it can check off its [+DEF] feature. Then, it moves to Top to check its [+SPEC] feature. The possessor is marked as [+FOC] and is merged into a specifier in the inflectional phrase. In order to check its focus feature it has to move to [Spec, FocP].

This analysis can be criticised on the grounds that a determiner may also be [-SPEC][+DEF]. In this case the [+FOC] possessor is expected to precede the definite article. Yet, the string *én az házam* is ungrammatical in Hungarian.

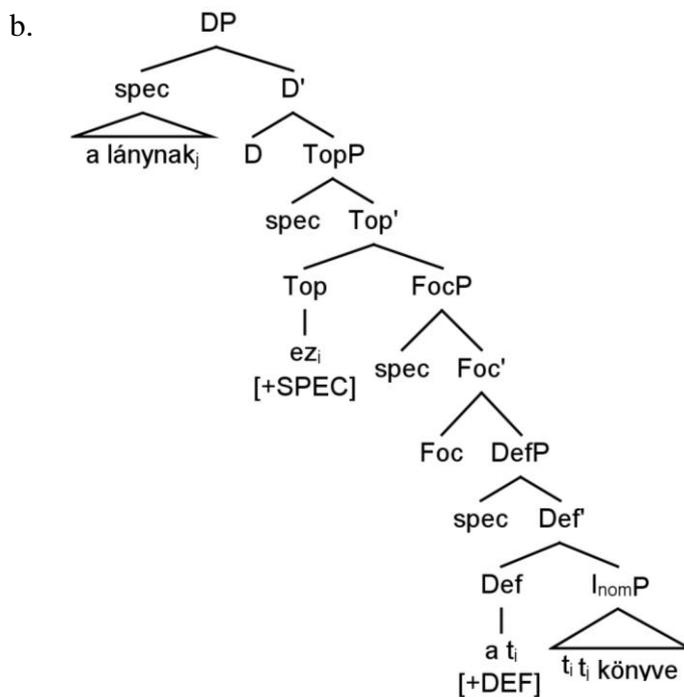
Another weak point of this analysis is that in (160) the definite article *az* skips the Foc head position when it moves from Def to Top. Therefore, this movement operation violates the Head Movement Constraint.

⁷⁶ (160) does not provide evidence for the existence of a FocP layer between DefP and TopP. The pronominal possessor can be found between the article and the possessum regardless of whether it is focussed or not.

4.1.3. The DP

Based on Szabolcsi (1994), Ihsane and Puskás (2001) propose that D can be conceived of as a nominal complementiser/subordinator, enabling the nominal expression to function as an argument (or an adjunct). As shown in the previous chapter, possessor extraction provides evidence for this idea because [Spec, DP] serves as an escape hatch for the possessor leaving the possessive DP in a way similar to the escape hatch that [Spec, CP] provides for wh-phrases. (161) displays the DP structure proposed by Ihsane and Puskás (2001).

- (161) a. *a lánynak ez a könyve*
 the girl-EDGE this the book-POSS-SG-3.SG
 ‘this book of the girl’s’



4.2. Critique of the Split-DP analysis

If we maintain the analysis proposed by Ihsane and Puskás (2001), we must work with a double set of discourse features (a verbal and a nominal set) in order to be able to account for possessor extraction. This leads to an unnecessarily over-complicated system which is described in the following paragraphs (based on Horváth (2012b)).

As mentioned above, Szabolcsi (1994) argues that [Spec, DP] is the escape hatch for the possessor leaving the possessive DP. In the present dissertation this is associated with the feature [EDGE], manifested by the suffix *-nak/-nek*. Under the Split-DP account there can be three types of motivation for the *-nak*-possessor to leave the possessive DP, these are the [WH], the [FOC_{ver}]⁷⁷ and the [TOP_{ver}] features on the possessor to be checked at the CP-level. In this way the possessor and the possessum can take part in topic-focus relations in the CP independently of each other.

- (162) a. [_{DP} *Kinek* *a kalapja*] *tűnt el?*
 [whose-WH.EDGE the hat-POSS.3.SG]-WH disappeared
 ‘Whose hat disappeared?’
- b. [_{DP} *Kinek*]_i *tűnt el* [_{DP} *t_i a kalapja*]?
 whose-WH.EDGE disappeared the hat-POSS.3.SG
 ‘Whose hat disappeared?’
- (163) a. *Tegnap* [_{DP} *MARI kalapja*] *tűnt el.*
 yesterday-TOP_{ver} [Mari-FOC_{nom} hat-POSS.3.SG]-FOC_{ver} disappeared
 ‘It was MARI’s hat which disappeared yesterday.’
- b. *Tegnap* [_{DP} *MARINAK*]_i *tűnt el* [_{DP} *t_i a kalapja*].
 yesterday-TOP_{ver} Mari-FOC_{ver}.EDGE disappeared the hat-POSS.3.SG
 ‘It was MARI’s hat which disappeared yesterday.’
- (164) a. [_{DP} *Mari kalapja*] *TEGNAP* *tűnt el.*
 [Mari-TOP_{nom} hat-POSS.3.SG]-TOP_{ver} yesterday-FOC_{ver} disappeared
 ‘Mari’s hat disappeared YESTERDAY.’
- b. [_{DP} *Marinak*]_i *TEGNAP* *tűnt el* [_{DP} *t_i a kalapja*].
 Mari-TOP_{ver}.EDGE yesterday-FOC_{ver} disappeared the hat-POSS.3.SG
 ‘Mari’s hat disappeared YESTERDAY.’

(163) and (164) show cases where either the whole possessive DP or the possessor of this phrase move to Focus or Topic positions to check off the relevant verbal feature. Following Ihsane and Puskás’ (2001) analysis, if the possessor is not extracted from the possessive DP (see the *a.* examples), the possessor should move to the DP internal focus or topic positions to check off Foc_{nom} or Top_{nom}. Then, the whole possessive DP is turned into a focus or topic and moves to the left periphery of the CP to check Foc_{ver} or Top_{ver}. In the data where the possessor leaves the possessive DP (see the *b.* examples), the possessor moves to [Spec, DP] to pick up

⁷⁷ For the sake of clarity in this section the verbal features and positions are indexed as *ver*: e.g. [FOC_{ver}]. The nominal features and positions bear the label *nom*: e.g. [FOC_{nom}].

[EDGE] (*-nak/-nek*) before it moves to the relevant position in the CP to check Foc_{ver} or Top_{ver} .

However, a question can be raised in connection with, for instance, (163a): how can it happen that the possessor turns the whole possessive DP into a CP-level focus (marked as $[FOC_{ver}]$) if its $[FOC_{nom}]$ feature has already been checked off in $[Spec, Foc_{nom}P]$ against Foc_{nom} ? Features do not just come into being from nothing.

In addition, how can it happen that the possessor sometimes bears verbal discourse features and sometimes nominal ones? In (163) and (164) only the verbal discourse feature set motivates visible movements. On the other hand, the nominal set triggers only vacuous movements.

Due to these problems, it would be better to say that the focus and the topic features are not checked off inside the DP and that is why the whole possessive construction becomes a focus or a topic. This approach would be analogous to the treatment of the other feature $[WH]$ (see (162)) which cannot be checked off in the DP as there are no DP-internal CP projections to facilitate this. From this perspective, there would be no need to have DP-internal focus and topic positions and hence the assumption that such things exist is made redundant. Given this type of reasoning, there is no need for a separate verbal and nominal discourse feature set either. The use of double set of discourse features results in a complicated analysis describing vacuous movements in the DP. Thus, the Split-DP approach should be abandoned in favour of a simpler, feature percolation based system which is introduced in section 4.11.

4.3. Feature percolation in the literature – Pied-piping

In order to introduce the notion of feature percolation, this section intends to give a short review of the reconstruction based and feature percolation based accounts of wh-pied-piping.

In the early days of generative grammar, the nature of the moved ‘wh-phrase’ was not discussed adequately because movement was not really motivated. When the motivation for movement became important, and the idea of feature checking introduced, what counted as a ‘wh-phrase’ became an issue, as wh-phrases carry wh-feature. So, the question arose as to

how, for instance, a PP containing a wh-DP becomes a wh-phrase, see (165a). Therefore, researchers started to examine whether P moves together with the wh-DP in (165).

- (165) a. [PP *To* [DP *whom*]]_i *did you talk* t_i?
b. [DP *Whom*]_i *did you talk* [PP *to* t_i]?

Although its main aim was to solve binding related problems, reconstruction⁷⁸ sparked the idea which provided solution to this problem. In the late GB approach, syntacticians accounted for the construction in (166) with the help of reconstruction.

- (166) [CP [*which pictures of himself*]_j *will* [AGRP *John*_i [VP t_i *sell* t_j]]]?

(Haegeman and Guéron 1999: 551)

According to Principle A of the Binding Theory, anaphors must be locally A-bound. In (166) *himself* is not bound by its antecedent *John*. So, according to Haegeman and Guéron (1999), linguists tried to solve this problem by stipulating that a part of the wh-phrase *which pictures of himself* has to be reconstructed to its base position [Spec, VP]:

- (167) [CP [*which*]_j [AGRP *John*_i *will* [VP t_i *sell* x_j *pictures of himself*]]]?

(Haegeman and Guéron 1999: 553)

As (167) shows, the wh-phrase *which pictures of himself* is decomposed into the wh-component *which* and the rest of the DP. Haegeman and Guéron (1999) explain that reconstruction does not restore the entire wh-phrase into a lower position, but only its part which does not include the wh-element. The reconstruction of *x pictures of himself* attains the c-command configuration between *John* and *himself* which is required for the interpretation of the anaphor. The wh-element *which* is left in its surface position so that it can encode the illocutionary force of the clause.

Haegeman and Guéron (1999) show that this process is also available at S-structure in certain languages, e.g. in French:

⁷⁸ “Reconstruction is a process by which a moved phrase is restored, ‘reconstructed’, to a previous position. [...] The reconstruction site is either the base-position of the moved element or an intermediate trace of its movement. [...] Reconstruction is an ‘abstract’ [covert] operation which creates semantic representations. It does not have any overt reflex. Reconstruction turns S-structure representations into LF-representations.” (Haegeman and Guéron 1999: 553-555)

(168) **Combien de livres** astu lus?
how many of books have-you read
'How many books did you read?'

(169) **Combien** astu lu **de livres**?
how many have-you read of books
'How many books did you read?'

(Haegeman and Guéron 1999: 553)

In (168) the whole DP *combien de livres* moves to [Spec, CP]. By contrast, in (169) only the wh-element *combien* moves and the rest of the DP *de livres* is stranded. The advocates of the reconstruction approach cannot explain why French displays this variation but they came up with the idea that it is only *combien* which is a wh-element and the part *de livres* is only pied-piped with it in (168). Based on these observations, feature percolation was proposed to explain how it is possible that the whole DP *combien de livres* behaves as a wh-element even if it is only *combien* which bears [WH].

In the wake of minimalism, syntacticians could dispense with reconstruction because the new copy-delete approach to movement could solve the problems related to binding. In this approach it is assumed that at every step of movement a new copy of the moved element is created and the lower copy is immediately deleted. Hence, the moved element is taken to be present in its intermediate positions, too. Therefore, in (170) the lower deleted copy of *himself* is bound by the lower deleted copy of *John*:

(170)⁷⁹ [_{CP} *which pictures of himself* will [_{AGRP} *John* [_{VP} ~~*John*~~ sell ~~*which pictures of himself*~~]]]]?

In the light of the new approach to movement, wh-pied-piping could also be approached from a different direction. Ortiz de Urbina (1993), among others, advocates a feature percolation approach to wh-pied-piping. He assumes that an expression containing an operator behaves like the operator itself because the feature of the operator percolates up to the XP of the expression containing it. Then, this XP undergoes movement in the same fashion as the operator. Ortiz de Urbina (1993) adds that this XP must be at least a DP.

⁷⁹ Minimalist linguists make use of the copy-delete approach to movement but in order to be able to draw simple trees they go on marking lower deleted copies of moved elements as traces.

- (171) [DP *who*]_i *did you see* t_i?
(172) [DP *which man*]_i *did you see* t_i?

(Ortiz de Urbina 1993: 190)

In (171) the single wh-operator moves to [Spec, CP]. On the other hand, in (172) the whole DP *which man* undergoes movement, not just the wh-element. Ortiz de Urbina (1993) argues that (172) involves wh-pied-piping because the [WH] feature of *which* percolates up to the DP of the expression *which man*, so the whole phrase behaves like a wh-element. Hence, this DP moves to [Spec, CP] to check off [WH] which was originally born only by the wh-element *which*.

Yoon (2001) makes use of the findings in Ortiz de Urbina (1993). He analyses the data we observed in (165) in the following way:

- (173) [*to whom*]_i *did you talk* t_i?
(174) *whom*_i *did you talk to* t_i?

(Yoon 2001: 287)

Yoon (2001) proposes that in (173) the [WH] feature of *whom* percolates to the maximal projection of the PP containing it. Therefore, the whole PP *to whom* moves to [Spec, CP] to check off [WH] against C. That is why (173) exhibits wh-pied-piping. By contrast, in (174), [WH] does not percolate from *whom* to the PP. So, only *whom* moves to [Spec, CP] and the preposition is stranded, i.e. no pied-piping takes place.

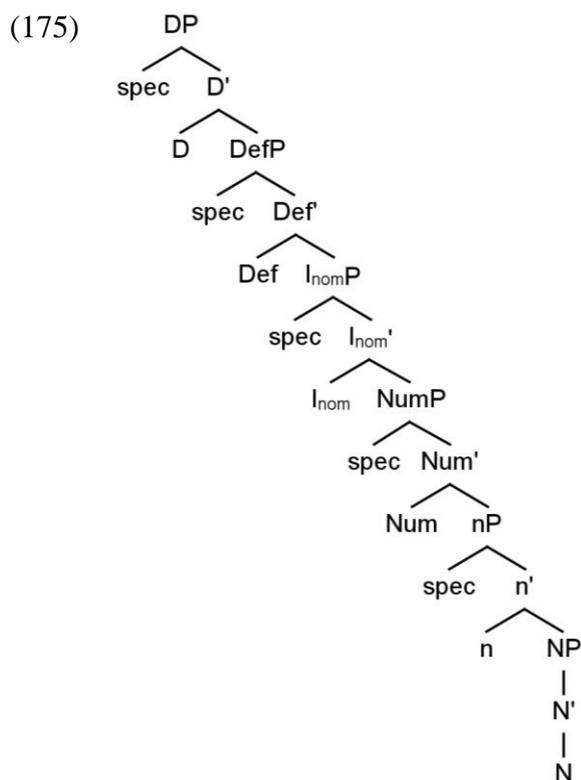
Yoon's (2001) analysis can be utilised to describe the French data in (168) and (169). It can be assumed that in (168) [WH] percolates from the wh-element *combien* to the DP (*combien de livres*) containing it, so the whole DP moves to [Spec, CP], i.e. the construction involves wh-pied-piping. In (169) [WH] does not percolate. Thus, only the wh-element *combien* moves to [Spec, CP] and the sentence does not display pied-piping.

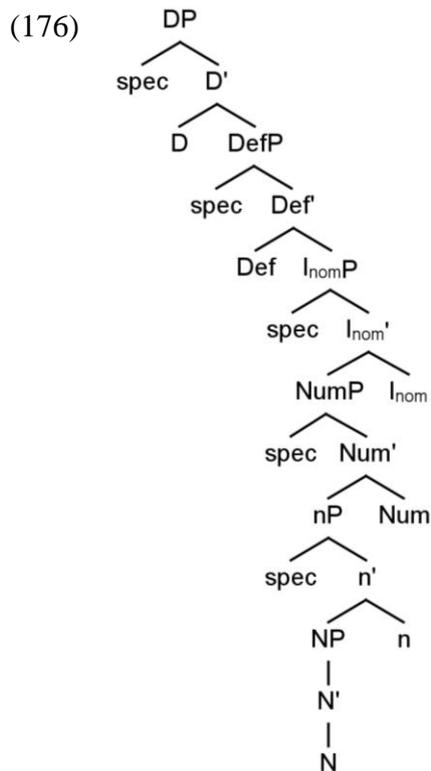
After this short discussion of feature percolation, the dissertation now introduces the discourse features it intends to examine.

4.4. Discourse features

The discussion in section 4.2. demonstrated that the Split-DP analysis is inadequate to account for phenomena in connection with DP-internal focalisation and topicalisation processes. In Hungarian a focalised or topicalised element causes no visible word order changes in the DP. Moreover, utilising a separate verbal and nominal discourse feature set results in an unnecessarily overcomplicated system. So, it is unnecessary to stipulate DP internal TopP and FocP layers. Consequently, the present study examines the possibility of treating DP-internal focalisation and topicalisation processes without making use of the projections mentioned which might result in a more economical account of DP-internal information structure.

Aiming for a more minimal analysis, this dissertation operates with the phrase structure proposed in chapter 3. The structure of the English and German DP is repeated here as (175) and that of Hungarian in (176).





In order to be able to dispense with the nominal topic and focus projections, it is necessary to take a closer look at the behaviour of topicalised and focalised elements within the DP and to see how they influence the syntactic status of the whole host DP in the sentence.

This thesis intends to examine topics, foci, contrastive topics, contrastive foci, wh-elements and contrastive wh-elements. The following paragraphs define these discourse functions one by one.

According to Newson and Maunula (2006), topics are given and foci are new elements. The topic has to be present in the discourse either by having been mentioned or being known by the interlocutors. Hence, a topic is taken to refer to a discourse-old entity of which something is predicated without contrasting it with another element. So, if we introduce an element into the discourse and later something is predicated of this element, it is a topic. In (177) *he* printed in bold is an illustration of a topic.

(177) *Peter won the lottery. So, **he** decided to buy a Mercedes.*

Newson and Maunula (2006) propose that the focus is the essence of the speaker's message, a piece of information which is assumed not to already be encompassed by the listener. So, a focus is a new element introduced into the discourse without contrasting it with another

element. One place foci occur is in answers to questions. In an answer, the focus carries the main information because it is what provides the questioner with the information he needs. In (178) the PP *on your desk* is a focus.

- (178) A: *Where are the car keys?*
B: *They are **on your desk**.*

According to Neeleman et al (2009), topic and focus are basic notions in information structure which can also be enriched to have a contrastive interpretation. In Newson and Maunula (2006) contrastive topics are taken to be used in situations where a set of topics is established in the discourse. Then, the interlocutors predicate something different of each of them. This means that these topics are contrasted with each other with respect to some predication. In (179) *Morphology* printed in bold is a contrastive topic.

- (179) *I had two exams this week, Syntax and Morphology. Syntax is easy, but **Morphology** is the most difficult subject I have ever studied.*

Newson and Maunula (2006) define contrastive focus as a newly introduced element contrasted with something else which is already part of the discourse. So, contrastive foci can typically be found in corrective situations. In (180) the DP *the Mercedes* embodies the correction, so it is a contrastive focus.

- (180) A: *Peter bought the Volks Wagen.*
B: *No, he bought **the Mercedes**.*

Wh-elements are question words indicating that the questioner needs information which does not stand in contrast with anything else, see *what* in (181). Contrastive wh-elements, on the other hand, are used for asking for new information which is contrasted with a discourse old element, cf. *what* in (182), which is contrasted with *the soup*.

- (181) ***What** did you eat for lunch?*

- (182) A: *Have you eaten the soup for lunch?*
B: *I ate it in the morning.*
A: *Then **what** did you eat for lunch?*

Following Neeleman et al (2009), the present dissertation makes use of the following discourse features: [TOP], [FOC] and [CONTR]. In addition, [WH] is also included to handle

wh-elements. (183) shows which of these four features are associated with which discourse functions.

(183) Discourse function	Features	Use
Topic	[TOP]	reference to a discourse-old entity of which something is predicated
Contrastive topic	[CONTR][TOP]	reference to a discourse old entity of which something is predicated in contrast with another discourse-old element
Focus	[FOC]	e.g. providing answer to a wh-question → providing new information
Contrastive focus	[CONTR][FOC]	e.g. correction → providing new information instead of another piece of information for which the predication is not true
Wh-element	[WH]	asking for information
Contrastive wh-element	[CONTR][WH]	asking for information which is in contrast with a discourse old piece of information (similar to Pesetsky's (1987) D-linking)

It is clear from (183) that the present discussion makes use of unary features. Lee's (2003) Japanese data in (184) shows why it is reasonable to work with unary discourse features. In Japanese contrast is incorporated by the suffix *-wa*. The presence of [CONTR] is indicated by the presence of this morpheme, whereas the non-contrastive nature of an element is marked by the absence of *-wa*.

(184) *ki-wa shita*
 come-CONTR do-PAST
 'He came.'

(Lee 2003: 4)

The use of unary features lend itself to the analysis of interrogatives as well. Interrogatives are marked by the presence of the wh-feature which manifests itself in a number of ways – in some languages there are question particles and in others special syntax (movements). Declaratives, on the other hand, are marked by the absence of [WH] and subsequently the absence of any marker. The same holds for topics and foci, which can be marked by morphology or special syntax, whereas the absence of [TOP] and [FOC] is unmarked.

Before we go into the details of feature percolation it is essential to examine how the discourse features [TOP], [FOC], [CONTR] and [WH] behave in the clause in the three languages under discussion. For this, clausal topics, foci, contrastive topics, contrastive foci,

wh-elements and contrastive wh-elements will be examined. As a result of the observation of these six discourse functions, we can gain useful testing methods with the help of which we can get a deeper insight into the behaviour of the discourse features in the DP. The following sections deal with Hungarian, German and English separately. At the end of the discussion the dissertation will take stance as to whether it is possible to dispense with the Split-DP analysis proposed in Ihsane and Puskás (2001).

4.5. The Hungarian CP

Although Hungarian was examined to some extent in the discussion of Ihsane and Puskás' (2001) analysis, this section will summarise the most important facts concerning the discourse features in the Hungarian CP. The dialogues in (185)-(187) provide the basis for this description.

(185) Context: Two friends (A and B) are talking about their colleague, Péter. A has not seen Péter for a week, but he knows that he wanted to buy a Mercedes.

A: *Mi van Péterrel? Egy hete nem láttam.*
 what is Peter-with one week-since not saw
 'What do you know about Peter? I haven't seen him for a week.'

B: *pro (*pedig) állítólag megvette / *vette meg a Mercedest.*
 pro-TOP contr allegedly pre-verb bought the Mercedes.
 'He allegedly bought the Mercedes'

(186) Context: Two friends (A and B) are talking about their colleague, Péter. A has not seen Péter for a week, but he heard that he bought a new car, either a Mercedes or a Toyota.

A: *Melyik autót vette meg / *megvette Péter?*
 [which car]-WH bought pre-verb Peter
 'Which car did Peter buy?'

B: *A Mercedest vette meg / *megvette.*
 the Mercedes-FOC bought pre-verb
 'He bought the Mercedes.'

(187) Context: Two friends (A and B) are talking about their colleagues, Péter and Géza. A has not seen Péter for a week. They know that Péter wanted to buy a Mercedes and Géza a Toyota. A does not know that they have already bought them.

A: *Mi van Péterrel? Egy hete nem láttam.*
 what is Peter-with one week-since not saw
 ‘What do you know about Peter? I have not seen him for a week.’

B: *pro megvette a Mercedest. Géza pedig állítólag*
 pro bought the Mercedes Géza-CONTR-TOP contr allegedly
*megvette /*vette meg a Toyotát.*
 pre-verb-bought the Toyota
 ‘He bought the Mercedes, and Géza allegedly bought the Toyota.’

As can be seen in (185), no special word order pattern or additional remark can be associated with a non-contrastive topic. Non-contrastive topics are not grammatical with the contrastive element *pedig* ‘on the other hand’ and they are not stress prominent either. However, the adverb *állítólag* ‘allegedly’ indicates that *pro* is a topic as this AdvP may directly follow any topic (Gécseg and Kiefer (2009)). (187) shows that contrastive topics typically co-occur with *pedig* and they may also be followed by the adverb *állítólag*. In addition, contrastive topics are pronounced with stress prominence and rising intonation (Gécseg (2001)). Consequently, it can be assumed that [CONTR] is associated with prominence and it may require the presence of some contrastive element in the sentence.

Next, in (186) it can be seen that if the sentence contains a focus or a wh-element the pre-verb obligatorily follows the verb: *vette meg*. This phenomenon is ungrammatical in the case of topics, topics allow only *megvette*. Hence, it can be proposed that [FOC] and [WH] require

the inversion of the pre-verb and the verb.⁸⁰ In addition, [WH] has an influence on the illocutionary force of the clause. If [WH] is present, it obligatorily makes the CP interrogative, see A's question in (186).

4.6. The Hungarian DP

In the discussion of the analysis in Ihsane and Puskás (2001) it was mentioned that a focus element can turn the whole host DP into a focus. It is, however, not clear how this happens. The observations in section 4.5. provide us with methods by which we can test how discourse features behave.

⁸⁰ Kenesei (2006) assumes that non-contrastive foci do not require pre-verb verb inversion because this phenomenon is associated exclusively with contrastive foci. He assumes that contrastive foci occupy the preverbal focus position [Spec, FocP], whereas non-contrastive foci follow the verb. He provides the following dialogue as an illustration of this:

(I) A: *Mit vettél tegnap?*
 what bought-you yesterday
 'What did you buy yesterday?'

B1: *Vettem egy kalapot.*
 bought-I a hat
 'I bought a hat.'

B2: *Egy kalapot vettem.*
 a hat bought-I
 'I bought a hat.'

According to Kenesei, in (I)/B1 the DP *egy kalapot* is non-exhaustive, so he regards it as a non-contrastive focus which does not raise from its postverbal position to [Spec, FocP]. He analyses the DP *egy kalapot* in (I)/B2 as being exhaustive. Therefore, he assumes that it is a contrastive focus which must precede the verb, i.e. it must move to [Spec, FocP].

However, this analysis can be criticised. First, foci in [Spec, FocP] are not necessarily exhaustive, see (II) where the element *többek között* 'among others' makes exhaustive listing impossible.

(II) A: *Jó sokáig voltál a próbafülkében tegnap. Végül miket vettél meg?*
 good long were the fitting room-in yesterday at the end what-PL bought-you pre-verb
 'You spent a lot of time in the fitting room yesterday. What did you buy at the end?'

B: *Többek között a kalapot vettem meg.*
 others among the hat bought-I pre-verb
 'I bought the hat among other things.'

Second, the DP *a kalapot* does not seem to be contrasted with anything as it is the only DP in (II). Hence, it can be assumed that [Spec, FocP] is not reserved exclusively for contrastive foci.

Third, as FocP is recursive (É. Kiss 2009: 302), it can be argued that there are two FocP layers in (I)/B1. It seems that the verb *vettem* is in the upper Foc head and the DP *egy kalapot* in the lower [Spec, FocP].

4.6.1. Discourse features percolate

First, the present section focuses on wh-elements. In the case of DP-internal wh-elements possessors have to be examined separately from other elements. The wh-possessor obligatorily occupies the [Spec, DP] position and it is always marked as [EDGE].⁸¹

- (188) [DP [DP *Kinek*] *a Toyotaja* *tűnt el?*
 whose-WH-NOM-EDGE the Toyota-POSS-SG-3.SG disappeared
 ‘Whose Toyota disappeared?’

In (188) the wh-possessor *ki* raises from the [Spec, I_{nom}P] case position to [Spec, DP] where it receives the EDGE-marker *-nek* from D. From this position its [WH] feature percolates onto the possessive DP. This can be verified by the fact that the whole possessive DP *kinek a Toyotaja* behaves as a wh-element in the sentence requiring the pre-verb *el* to follow the verb *tűnt*. In addition, the possessive DP makes the CP interrogative.⁸²

If the wh-element is different from the possessor, the possessor does not necessarily move to [Spec, DP]. In (189) the wh-element is the possessum in I_{nom}, in (190) the N-adjunct adjective, in (191) the quantifier in [Spec, NumP] and in (192) the demonstrative in D.

- (189) [DP[DP *Péter*] *mije* *tűnt el?*
 Peter-NOM what-WH-POSS-SG-3.SG disappeared
 ‘What of Peter’s disappeared?’

- (190) [DP[DP *Péter*] *milyen színű autója* *tűnt el?*
 Peter-NOM what colour-WH car-POSS-SG-3.SG disappeared
 ‘What is the colour of Peter’s car which disappeared?’

- (191) [DP[DP *Péter*] *hány autója* *tűnt el?*
 Peter-NOM how many-WH car-POSS-SG-3.SG disappeared
 ‘How many cars of Peter’s disappeared?’

⁸¹ In earlier stages of the history of Hungarian it was grammatical to have a wh-possessor which is not [EDGE] (den Dikken 1999: 172). Nowadays non-edge wh-possessors are only dialectal.

- (I) [DP[DP *Ki*] *kalapja* *tűnt el?*
 whose-WH hat-POSS-SG-3.SG disappeared
 ‘Whose hat disappeared?’

In (I) the possessor does not move to [Spec, DP]. It is in [Spec, I_{nom}P].

⁸² In (I) in footnote 81 the [WH] feature of the possessor percolates onto the possessive DP from [Spec, I_{nom}P].

- (192) [DP_[DP Péter] *melyik autója* *tűnt el?*
Peter-NOM which-WH car-POSS-SG-3.SG disappeared
‘Which car of Peter’s disappeared?’

As all these clauses are interrogative and involve pre-verb verb inversion, we can conclude that the pre-verbal DP is marked [WH] and that this feature originates with the wh-element inside the DP. Thus, [WH] percolates from I_{nom}, [N A, N], [Spec, NumP] and D respectively. Yet none of these elements move to [Spec, DP].

The data in (188)-(192) and in (I) in footnote 81 suggest that any of the constituents can bear discourse features in the DP. Furthermore, there is no dominance hierarchy between the syntactic positions of the host elements as all the elements in the DP (the possessor, the possessum, the AP, the QP and the demonstrative) have equal chance to give their discourse feature to the possessive DP.

The behaviour of [WH] is ‘to some extent’ similar to that of [CONTR], [TOP] and [FOC]. They are similar in that the syntactic status of the host does not have an effect on the outcome of feature percolation because [WH], [CONTR], [TOP] and [FOC] percolate with equal chances from the possessor, the possessum, the adjective, the QP or the demonstrative, see (193) as an illustration.

- (193) A: *Melyik Toyotád tűnt el?*
which-WH Toyota disappeared
‘Which of your Toyotas disappeared?’
- B: [DP A *fehér Toyotám*] *tűnt el.*
the white-FOC Toyota disappeared
‘My white Toyota disappeared.’

In B’s answer, the adjective *fehér* carries the new information, yet the whole DP sits in the focus position causing pre-verb verb inversion. Therefore, it can be proposed that the [FOC] feature of the N-adjunct has percolated onto the whole possessive DP.

In order to keep the discussion short and concise relevant data is included in appendices (I)-(VII) which demonstrate further that [CONTR], [TOP] and [FOC] behave like [WH].

The difference between [CONTR], [TOP] and [FOC] on the one hand, and [WH] on the other hand, is that in the case of [WH], the possessor has to move to [Spec, DP] in Standard

Hungarian, whereas it does not move obligatorily if it is marked as [TOP] or [FOC] or [CONTR], cf. (188) above and (194). The wh-constituents in the DP which are different from the possessor never move to [Spec, DP], see (189)-(192) above.⁸³

(194) A: *Olyan Mercedest szeretnék venni, mint Péter vett tavaly*
 such Mercedes like-I buy like Peter bought last year
 ‘I would like to buy a Mercedes like Peter bought last year.’

B: *Képzeld, [DP Péter Mercedese] állítólag eltűnt.*
 imagine Peter-TOP Mercedes-TOP allegedly disappeared
 Just imagine, Peter’s Mercedes allegedly disappeared.’

In this dialogue in B’s subordinate clause the bracketed possessive DP seems to occupy the topic position because it is directly followed by the adverb *állítólag* and it is not contrasted with anything. So, it can be assumed that the possessive DP inherited [TOP] from the possessor or the possessum.

4.6.2. How do features percolate?

At this point it should be examined how discourse features percolate in the DP. In the previous section (and in appendix 1/A-C) it was shown that all [WH], [CONTR], [TOP] and [FOC] can percolate independently of the syntactic status of the DP-internal host element. Thus, it can be concluded that if a DP contains one of these features on one of its constituents, this DP may inherit the feature and the DP behaves in the CP accordingly.

However, DPs can also contain contrastive topics ([CONTR][TOP]), contrastive foci ([CONTR][FOC]) and contrastive wh-elements ([CONTR][WH]). The question arises whether both of their features percolate or just one of them. (195) and the dialogues (VI)-(VII) in the appendix provide the answer to this question.

⁸³ Based on this observation, refuting Szabolcsi’s (1994) claims, it can be concluded that it is not [WH] which forces the wh-possessor to [Spec, DP]. [EDGE] seems to be responsible for this movement, as [EDGE] is the only feature in the DP which is born exclusively by possessors. For some reason Hungarian wh-possessors have to be [EDGE]. This phenomenon is subject to future research.

(195) Context: A and B are talking about their colleagues, Péter and Géza. Both Péter and Géza have a Toyota.

A: *Géza mesélte, hogy* [_{DP} *Péter Toyotája*] *eltűnt.*
Géza told that Peter Toyota disappeared
'Géza told me that Peter's Toyota disappeared.'

B: *Szegény Péter.* [_{DP} *Géza Toyotája*] *pedig állítólag*
poor Peter Géza-CONTR-TOP Toyota-TOP in contrast allegedly
lerobbant.
broke down
'Poor Peter. And Géza's Toyota allegedly broke down.'

In (195), B's bracketed DP hosts a contrastive topic possessor *Géza*. The possessor can be said to be discourse old because A has already introduced *Géza* into the discourse. *Géza* has a contrastive interpretation because B predicates something of him in contrast with *Péter*. The possessive DP *Géza Toyotája* is followed by the contrastive element *pedig* and the adverb *állítólag*. So, it seems that the possessive DP as a whole behaves as a contrastive topic. This suggests that both [CONTR] and [TOP] percolated from the possessor onto the possessive DP.

(195) and the dialogues (VI)-(VII) in the appendix demonstrate that discourse features percolate as sets in the possessive DP. Nevertheless, it should be noted that the two percolating features were originally associated with the same host element. With the help of (196) and dialogue (VIII) in the appendix it should also be tested whether it is also true in such cases where the two percolating features are associated with different constituents of the possessive construction.

(196) A: *Kinek a Toyotája tűnt el?*
whose-WH-EDGE the Toyota disappeared
'Whose Toyota disappeared?'

B: [_{DP} *Péter Toyotája*] *tűnt el.*
Peter-FOC Toyota-TOP disappeared
'It was Peter's Toyota which disappeared.'

In B's answer the possessor *Péter* is a new piece of information and it is not contrasted with anything. The possessum *Toyotája* is discourse old because A has already introduced it into the discourse without contrasting it with anything. In B's answer the pre-verb *el* follows the verb *tűnt*. Hence, it can be assumed that the possessive DP inherited the discourse feature set of the possessor and not those of the possessum as the DP shows no properties of a topic.

(196) and example (VIII) in the appendix suggest that the discourse features compete with each other if they are hosted by different constituents in the DP. It seems that only the winner is entitled to percolate onto the DP. However, it must be admitted that [FOC] is incompatible with both [TOP] and [WH] for semantic reasons, as an element cannot be discourse old and discourse novel, and it cannot ask for and provide new information at the same time. Therefore, as a next step it should also be tested whether the compatible discourse features compete with each other as sets.

(197) and the dialogues (VI), (VII) and (IX) in the appendix display cases where one of the constituents in the DP is associated with two discourse features, whereas the other one bears only one.

(197) Context: A knows that Peter's Mercedes disappeared and Géza's Toyota broke down. He also knows that B does not know what happened to these cars or even that Géza has a Toyota.

A: *Géza mesélte, hogy Péternek eltűnt az autója.*
 Géza said that Peter-EDGE disappeared the car
 'Géza told me that Peter's car disappeared.'

B: *Tényleg? Melyik autója tűnt el?*
 really which car disappeared
 'Really? Which of his cars disappeared?'

A: *A Mercedese.*
 the Mercedes-his
Pont aznap, amikor [Géza Toyotája] pedig
 very same day-on when Géza-CONTR-TOP Toyota-FOC contr
állítólag lerobbant.
 allegedly broke down
 'His Mercedes. On the very same day when Géza's Toyota allegedly broke down.'

In A's second turn, in the bracketed possessive DP *Géza Toyotája*, the possessor *Géza* is a contrastive topic because it is discourse old and stands in contrast with *Péter*. The possessum *Toyota* is discourse novel and does not bear any contrast, so it is a plain focus. In the CP *amikor Géza Toyotája pedig állítólag lerobbant* the verb and the pre-verb are not inverted. This suggests that [FOC] did not percolate from the possessum to the possessive DP. However, the possessive DP is directly followed by the contrastive element *pedig* and the adverb *állítólag* which leads us to the conclusion that the possessive DP *Géza Toyotája* behaves as a contrastive topic. This means that the DP must have inherited both the [CONTR]

and the [TOP] features from the possessor. This suggests that the discourse features on the different constituents compete with each other as sets.

The data above demonstrate that it is impossible for the discourse features to percolate to the DP from separate constituents. Thus, the DP can inherit the discourse features of only one of its constituents. In other words, [WH], [CONTR], [TOP] and [FOC] percolate exclusively as sets originating on a single constituent.

If we take a closer look at the data in (196) and (197) and the dialogues (VII)-(IX) in the appendix, it seems that there is a hierarchy which defines which feature set the DP inherits. [FOC] suppressed the percolation of [TOP] in (196) and (VII). [CONTR] blocked the percolation of [FOC] in (197). In (VIII) [WH] hindered the percolation of [FOC]. In (IX) [WH] won over [CONTR] and [TOP]. This can be summarised in the following dominance hierarchy:

(198) [WH] > [CONTR] > [FOC] > [TOP]

According to (198) when DP internal features originate on different elements and so are in competition for percolation to the whole DP, contrastiveness will win only in the absence of interrogativeness, [FOC] wins only over [TOP] and [TOP] will win only in the absence of all other discourse features.

4.7. The German CP

In the following sections we turn to the examination of German. Above it was observed how the features [WH], [TOP], [FOC] and [CONTR] behave in the Hungarian CP and DP. This section aims at examining which of the four discourse features give rise to movement in German.

In matrix sentences German exhibits the obligatory V2 word order. This means that the finite verb must occupy the second position in matrix declarative sentences.⁸⁴ However, in subordinate clauses the finite verb must stand in the last position. (199) and (200) illustrate these patterns.

⁸⁴ German matrix wh-questions are also V2.

(199) *Ich trinke einen Tee.*
I drink a tea
'I drink a tea.'

(200) ... *dass ich einen Tee trinke.*
... that I a tea drink
'... that I drink a tea.'

Mohr (2005) observes that the first position can be filled in by elements other than the subject. These are topicalised phrases (201) and contrastive foci (202). However, non-contrastive foci are not allowed in this position, see (203).

(201) A: *Der Aussenminister hat das Parlament verlassen.*
the Minister of Foreign Affairs has the parliament left
'The Minister of Foreign Affairs has left the parliament.'

B: *Diesen Minister hat die Presse schon lange kritisiert.*
this minister-TOP has the press already long criticised
'The press has criticised this minister for a long time.'

(202) A: *Die Presse hat den Kanzler schon lange kritisiert.*
the press has the Chancellor already long criticised
'The press has criticised the Chancellor for a long time.'

B: *Einen MINISTER hat die Presse kritisiert (aber nicht den Kanzler).*
a minister-CONTR-FOC has the press criticised but not the Chancellor
'It was a minister whom the press criticised (not the Chancellor).'

(203) A: *Wen hat die Presse schon lange kritisiert?*
who has the press already long criticised
'Who has the press criticised for a long time?'

B: **Einen Minister hat die Presse schon lange kritisiert.*
a minister-FOC has the press already long criticised
'The press has criticised a minister for a long time.'

(Based on Mohr (2005: 4))

Based on (201)-(203) it can be proposed that there are discourse related word order patterns in German, too. (201) shows that the topic object DP *diesen Minister* can occupy the pre-verbal first position in the matrix declarative clause. However, the feature [FOC] is not allowed in this position if its host is not associated with [CONTR], too, see (202) and (203). This means that the presence of [TOP] or [CONTR] motivate movements to the left periphery of the CP.

(200) demonstrates that the German subordinate clause has an SOV word order. However, Büring and Gutiérrez (2001) point out that the SOV pattern may turn to OSV if the subject is focussed and the object is a topic, see (204b). Nevertheless, there is a slight preference for the SOV order disregarding the interpretation.

- (204) A: *Wer ernennt den Aussenminister?*
who appoint the Minister of Foreign Affairs
'Who appoints the Minister of Foreign Affairs?'
- B: a. *Es wird erwartet, dass der Kanzler*
it is expected that the Chancellor-FOC
den Aussenminister ernennt.
the Minister of Foreign Affairs-TOP appoints
'It is expected that the Chancellor appoints the Minister of Foreign Affairs.'
- b. *?Es wird erwartet, dass den Aussenminister*
it is expected that the Minister of Foreign Affairs-TOP
der Kanzler ernennt.
the Chancellor-FOC appoints
'It is expected that the Chancellor appoints the Minister of Foreign Affairs.'

(based on Büring and Gutiérrez 2001: 2)

Importantly, OSV subordinate clauses are ungrammatical if the subject is not associated with the feature [FOC]. In (205B) the object is the focus and the subject is topic.

- (205) A: *Wen ernennt der Kanzler?*
who appoints the Chancellor
'Who does the Chancellor appoint?'
- B: * *Es wird erwartet, dass den Aussenminister*
it is expected that the Minister of Foreign Affairs-FOC
der Kanzler ernennt.
the Chancellor-TOP appoints
'It is expected that the Chancellor appoints the Minister of Foreign Affairs.'

Based on (204) and (205) it can be proposed that there is a further [FOC] related word order variation in German.

Finally, this section turns to the [WH] feature. Wh-elements target the [Spec, CP] position in German, too. (206) illustrates this with the help of a matrix question, where the wh-element fills in the pre-verbal position. (207) displays an embedded question containing a wh-element

which precedes both the subject and the object. Thus, it can be assumed that [WH] gives rise to movement to [Spec, CP] in this language.

(206) *Was liest Peter?*
what read Peter
'What is Peter reading?'

(207) *Ich habe gefragt, wo Peter das Buch liest.*
I have asked where Peter the book read
'I asked, where Peter is reading the book.'

4.8. The German DP

With the help of the findings accumulated in the previous section, we turn to the behaviour of [WH], [CONTR], [TOP] and [FOC] in the German DP.

4.8.1. Discourse features percolate

In examining the German data, the [WH] feature will be discussed first.

(208) *Ich weiß es nicht, [wessen Fischsuppe] ich gegessen habe.*
I know it not whose-WH fish soup I eaten have
'I don't know whose fish soup I ate.'

(209) *Ich weiß es nicht, [welche Fischsuppe von Peter] ich gegessen habe.*
I know it not which-WH fish soup of Peter I eaten have
'I don't know which of Peter's fish soups I ate.'

(210) *Ich weiß es nicht, [wie viele Fischsuppe von Peter] ich gegessen habe.*
I know it not [how much]-WH fish soup of Peter I eaten have
'I don't know how much of Peter's fish soup I ate.'

In all of the three examples in (208)-(210) the bracketed possessive DPs behave as CP-level wh-elements because they precede every constituent in the subordinate clause, i.e. they occupy [Spec, CP]. This suggests that the feature [WH] percolated onto the DP from the different wh-constituents.

The above examples also demonstrate that wh-elements are first in German DPs. Furthermore, if the wh-element is not the possessor, as in (209) and (210), the possessor has to surface postnominally.⁸⁵

At this point we should turn our attention to [TOP], [FOC] and [CONTR] which do not cause DP-internal movement in German. The percolation of [FOC] can be demonstrated with the help of (211) which displays the focus related SOV-OSV alternation in German subordinate clauses.

(211) Context: We are at a company cooking contest. Two colleagues are talking about some dishes cooked by some other colleagues' children.
The loudspeaker (L) announces the winners, however, speaker A cannot hear every word clearly.

L: *Peters xxx hat die Fischsuppe gekocht.*
Peter's xxx has the fish soup cooked
'Peter's xxx cooked the fish soup.'

A: *Welches Kind von Peter hat die Fischsuppe gekocht?*
which child of Peter has the fish soup cooked
'Which child of Peter's cooked the fish soup?'

B: *Er hat gesagt, dass die Fischsuppe [DP Peters Tochter] gekocht hat.*
he has said that the fish soup-TOP Peter-TOP daughter-FOC cooked has
'He said that it was Peter's daughter who cooked the fish soup.'

In (211) the announcer introduces the elements *Peters* and *die Fischsuppe* into the discourse. Thus, they are discourse old ([TOP]) in B's answer. In B's answer to A's question, *Tochter* is [FOC]. Hence, the possessive DP *Peters Tochter* contains a topic possessor *Peters* and a focus possessum *Tochter*. As the possessive DP subject follows the object it must have inherited the [FOC] feature associated with the possessor.

In order to curtail discussion at this point relevant data is included in appendices 2/B-C. These demonstrate that [CONTR] and [TOP] percolate within the German DP in much the same way that [WH] and [FOC] do.

⁸⁵ As wh-elements are not marked as [EDGE], it can be argued that they do not move to [Spec, DP] or D in German. In (208) the possessor *wessen* is in [Spec, I_{nom}P], in (209) *welche* is a determiner and in (210) the QP *wie viele* is in [Spec, NumP]. In (209) and (210) the possessor is postnominal. The reason for this is that in (209) the wh-determiner undergoes an I_{nom}-to-Def-to-D movement (cf. section 3.4.2.3.). In (210) there might also be an abstract determiner which undergoes an I_{nom}-to-Def-to-D movement. This question is left open for future research.

4.8.2. How do features percolate?

(211) and the data in appendix 2/D suggest that, similarly to Hungarian, the discourse features compete with each other if they do not originate on the same constituent of the possessive DP.

(208)-(210), (211) and dialogues (X)-(XIII) in the appendix show that the syntactic status of the different constituents in the possessive DP does not play a role in determining the outcome of feature percolation. (X)-(XIII) show that discourse features may also percolate from [Spec, I_{nom}P] (from the prenominal possessor), from [Spec, nP] (from the postnominal possessor), from the QP in [Spec, NumP] and from the N-adjunct adjective. So, it can be concluded that similarly to Hungarian, the structural status of the host constituent does not have an effect on feature percolation. However, features must percolate as sets in German, too:

(212) A: *Peters Fischsuppe ist super.*
Peter fish soup is super
'Peter's fish soup is super.'

B: *Peter hat keine Fischsuppe gekocht.*
Peter has no fish soup cooked
'Peter didn't cook any fish soup.'

A: *Ich weiß dann nicht, [DP wessen Fischsuppe] wir gegessen haben.*
I know then not whose-CONTR-WH fish soup-TOP we eaten have
'Then, I do not know whose fish soup we ate.'

In (212) it can be seen that in A's second response the possessor provides both [CONTR] and [WH] to the possessive DP. This means that, just like in Hungarian, the discourse features percolate as sets in the DP. (213) and (XVII) in the appendix illustrate a further parallelism of German with Hungarian demonstrating that the features compete with each other as sets if they originate on separate constituents of the possessive construction.

(213) Context: We are at a company cooking contest. B knows that A does not know that Hans and his girlfriend got married, so he uses a question to pass on this information.

A: *Hans hat erzählt, dass Peters Tochter*
 Hans has told that Peter daughter
die beste Fischsuppe gekocht hat.
 the best fish soup cooked has
 ‘Hans told me that Peter’s daughter cooked the best fish soup.’

B: * *Und weißt du, dass Fischsuppe [Hans’s Frau]*
 and know you that fish soup Hans-CONTR-TOP wife-FOC
auch gekocht hat?
 too cooked has
 ‘And do you know that Hans’ wife, too, cooked fish soup?’

In (213), B’s question is not appropriate in this context because the subject possessive DP *Hans’s Frau* follows the topic object. This suggests that this DP inherited the feature set of the possessor. Hence, it behaves as a contrastive topic in the sentence.

Based on (211)-(213) and dialogues (XVI)-(XVII) in the appendix, it can be concluded that in German, too, there is a hierarchy of the features [WH], [CONTR], [TOP] and [FOC]. This hierarchy is the same as in Hungarian because the elements with different discourse function relate to each other in the same way in these two languages. It can be observed that [WH] suppresses the percolation of [FOC] (XVI) and [CONTR] and [TOP] (XVII) if they are on separate elements in the DP. The feature [CONTR] blocks the percolation of [FOC] (see (213)) and [FOC] prevents the percolation of [TOP] (cf. (211)). The hierarchy is repeated in (214).

(214) [WH] > [CONTR] > [FOC] > [TOP]

4.9. The English CP

Finally, this discussion focuses on discourse related operations in English. In this language wh-elements occupy the first position in interrogative clauses, and they cause subject-auxiliary inversion in matrix CPs, see (215). Hence, it is assumed that wh-elements move to [Spec, CP].

(215) *What did Peter buy yesterday?*

It seems that, similarly to German and Hungarian, in English [WH] obligatorily gives rise to movement.

(216)-(217) show that in English contrast may be associated with fronting phenomena:

(216) A: *Did you say that you wouldn't store carrots in that room and cabbage in this room?*

B: *I said that, in this room, potatoes I wouldn't store.*

(217) A: *There are potatoes here. I thought we agreed that you wouldn't put potatoes in this room.*

B: a. *We were discussing potatoes and carrots but I said that, potatoes, in that room, I wouldn't store.*

b. **We were discussing potatoes and carrots but I said that, in that room, potatoes, I wouldn't store.*

(Based on Newson et al (2006: 273))

In (216), in B's sentence *in this room* is a contrastive topic and *potatoes* is a contrastive focus. As both of them are associated with [CONTR], they can be fronted. However, it is important to note that the contrastive topic must precede the contrastive focus, as in (217a). The reverse order causes ungrammaticality, cf. (217b).

The feature [TOP] cannot induce movement alone in English. It motivates topicalisation only together with [CONTR]. According to native speaker informants, in (218) the object *this boat* conveys old information but it also bears contrast.

(218) *Suddenly I caught sight of a boat on the horizon. This boat, I had never seen before.*

Finally, it can be stated that [FOC] does not give rise to movement in English. In (219) *Mary* is interpreted as a focus but it does not seem to move anywhere from the object position. The only indication of the presence of [FOC] on this constituent is that phonologically it is the most prominent in the sentence.

- (219) A: *Who did you see yesterday?*
B: *I saw MARY yesterday.*

It is important to note that, in English, clefting is associated with focus. However, cleft sentences are not structurally related to constructions like (219B), so they will not be considered in this dissertation.

4.10. The English DP

Making use of the testing methods listed in the previous section, it can now be examined how the discourse features [WH], [CONTR], [TOP] and [FOC] affect the syntax of DPs in English.

4.10.1. Discourse features percolate

Just like in the case of Hungarian and German it is necessary to test whether feature percolation takes place in the DP. [WH] elements must move in single wh-questions. In this section we will make use of this movement type as a testing device.

(220) [_{DP} *Whose potatoes*] *do you store in this room?*

(221) [_{DP} *How many potatoes*] *do you store in this room?*

(222) [_{DP} [_A *What colour*] *potatoes*] *do you store in this room?*

(223) [_{DP} *Which potatoes*] *do you store in this room?*

In all of the three sentences in (220)-(223) the DP is fronted and subject-auxiliary inversion can also be observed. This suggests that the [WH] feature percolated onto the DP from the possessor in (220), from the QP in (221), from the adjective in (222) and from D in (223).

The syntactic behaviour of [CONTR] is displayed by (224). In these constructions fronting is used to see whether [CONTR] percolates onto the possessive DP.

(224) Context: Two farmers (A and B) are talking. B has a big store house. For some money their neighbours can also store their vegetables there.

A: *Do you store Peter's and Bill's potatoes in this room?*

B: *I store Peter's potatoes here, but [_{DP} Bill's potatoes] I store over there.*

(224) contains the bracketed possessive DP *Bill's potatoes* in which both the possessor and the possessum are discourse old. As *Bill* is contrasted with *Peter*, it is a contrastive topic. In (224) the whole possessive construction is fronted demonstrating that it inherited the [CONTR] and the [TOP] features from the possessor sitting in [Spec, I_{nom}P]. This shows that, similarly to German and Hungarian, the discourse features percolate as a set if they are associated with the same host element in the DP.

(XXII) in the appendix illustrates that apart from [WH], [CONTR] and [TOP], the feature [FOC] may also undergo percolation. In addition, feature percolation may start from other positions than [Spec, DP], D and [Spec, I_{nom}P]. (XVIII)-(XXI) in the appendix illustrate that the postnominal possessor in [Spec, nP], the possessum in Num, the N-adjunct adjective and the QP in [Spec, NumP] have also equal chances to be the hosts of the percolating [CONTR] feature. So, the outcome of feature percolation seems to be independent of the original host element in English, too.

4.10.2. How do features percolate?

The previous section argued that discourse features percolate as sets if they originate on the same constituent in the possessive DP. This section aims at showing that the discourse features compete with each other as sets if they originate on separate constituents.

In order to show this, the relationship of DP-internal topics and contrastive foci is discussed.

(225) Context: Two farmers (A and B) are talking. B has a big store house. For some money their neighbours can also store their vegetables there.

A: *Do you store Peter's potatoes in room 1?*

B: *No. [_{DP} JOHN'S potatoes] I store there.*

In (225) in B's answer the possessum is a topic, whereas the possessor constitutes the contrastive focus. As *John's potatoes* is fronted, we can suppose that this DP inherited the discourse feature set of the contrastive focus possessor *John*.⁸⁶

The data in (225) and dialogues (XXII)-(XXV) in the appendix show that the discourse features [WH], [CONTR], [FOC] and [TOP] stand in the same hierarchical relationship in English as in German and Hungarian. [WH] can block the percolation of [CONTR], [TOP] and [FOC] if these features are on different constituents in the DP. [CONTR] suppresses [TOP] and [FOC], while [FOC] dominates only over [TOP]. Again we find the same hierarchy as is apparent for the other languages discussed:

(226) [WH] > [CONTR] > [FOC] > [TOP]

4.11. Feature percolation in the possessive DP

In sections 4.5., 4.7. and 4.9. it was shown that Hungarian, German and English exhibit CP-level movements driven by the discourse features [WH], [CONTR], [TOP] and [FOC]. Consequently, it can be proposed that these three languages have ContrP, TopP and FocP layers between the CP and the IP projections.

In sections 4.6., 4.8. and 4.10. it was observed that these discourse features percolate in the DP. If they originate on one element, they travel as a set. However, if they are hosted on different constituents, they compete with each other, and at the end the DP inherits the most dominant discourse feature set from one of its constituents.

⁸⁶ It has to be noted that English is assumed to display a focus-related alternation of pre- and postnominal possessors. This phenomenon will be examined in chapter 5.

In sum, the DP itself may not be assigned any discourse features, but its constituents enter the derivation bearing the discourse features. Then, as a result of feature percolation the DP inherits the feature set of one of its constituents and behaves accordingly.

Based on the observations made in connection with English, German and Hungarian, the following section aims at proposing a syntactic description of feature percolation. Another goal of this section is to give a structural representation of this phenomenon.

4.11.1. The mechanism of feature percolation

The argumentation in this chapter is based on the idea that [WH], [CONTR] [TOP] and [FOC] percolate in the nominal domain because the DP does not contain heads against which these features can be checked. Thus, the features percolate onto a category which can move to a position where they can be checked under spec-head agreement. In sections 4.6., 4.8. and 4.10. it was found that this category must be the DP because it is always the whole possessive construction which undergoes movement, as demonstrated in the test dialogues. So, the motivation behind feature percolation is clear. However, it has to be described in more detail exactly how it works.

Although there are a lot of different assumptions about the nature of feature percolation, this dissertation makes use of the ideas presented in Weibelhuth (1989), according to which features can percolate onto the maximal projection of a phrase from its specifier and complement positions. However, the present discussion suggests that features can also percolate from adjuncts because all of the elements in the possessive DP can host the features [WH], [CONTR] [TOP] and [FOC]: the possessor, the possessum, the demonstrative, the adjectives and the quantifiers.⁸⁷ And by the examination of the test dialogues we saw that feature percolation can start from any of these syntactic positions in the possessive DP.

⁸⁷ Remember that these constituents occupy the following positions in the three languages examined:

(I)	English	German	Hungarian
possessor	[Spec, I _{nom} P] [Spec, nP]	[Spec, I _{nom} P] [Spec, nP]	[Spec, I _{nom} P] [Spec, DP]
possessum	Num	Num	I _{nom}
adjective	[_N A; N]	[_N A; N]	[_N A; N]
quantifier	[Spec, NumP] D	[Spec, NumP] D	[Spec, NumP]
demonstrative	D	D	D

Yoon (2001) assumes that feature percolation is cyclic. This means that a feature percolates in a step by step fashion from a daughter node to its mother until it reaches a category on which it can be checked. Thus, feature percolation ends when the features arrive to an X^{\max} category which can move to a specifier position where the features can be checked.

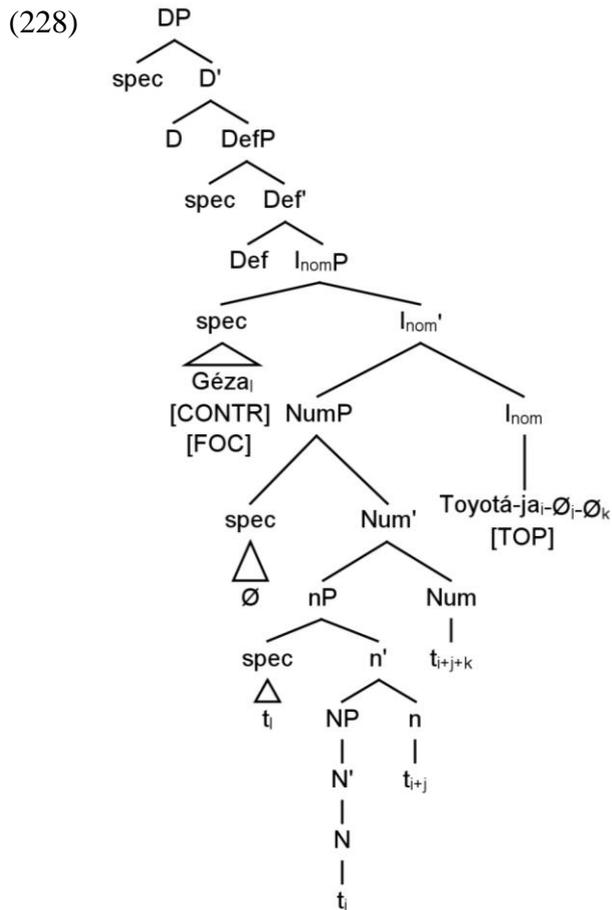
The following paragraphs illustrate this on a concrete example. As all of the languages examined behave in the same way regarding this mechanism it is enough to illustrate the whole process on a Hungarian dialogue (227).

(227) Context: A and B are talking about their colleagues, Péter and Géza. Both Péter and Géza have a Toyota.

A: *Péter Toyotája eltűnt.*
Peter Toyota disappeared
'Peter's Toyota disappeared.'

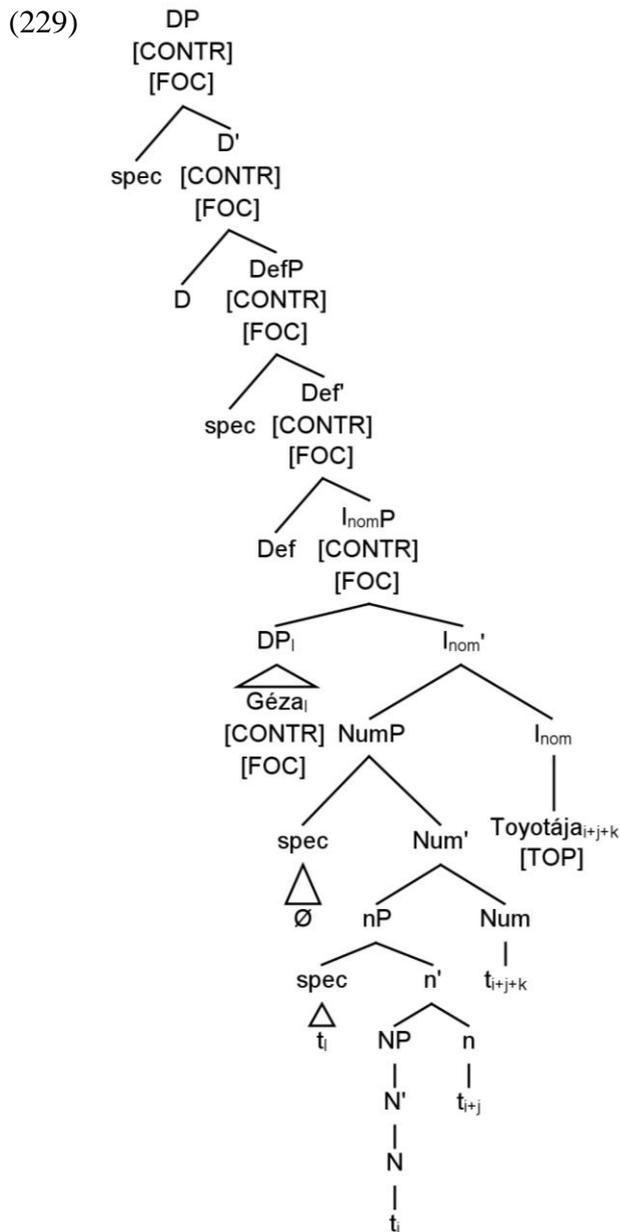
B: *Nem, [Géza Toyotája] tűnt el (és nem Péteré).*
no Géza-CONTR-FOC Toyota-TOP disappeared (and not Peter's)
'No, it was Géza's Toyota which disappeared (and not Peter's).'

The DP *Géza Toyotája* is a construction containing a contrastive focus possessor and a topic possessum. Based on the dominance hierarchy of the discourse features in (198), the possessive DP inherits [CONTR] and [FOC] from the possessor because features percolate as sets. So, syntactically the possessive DP will be a CP-level contrastive focus.



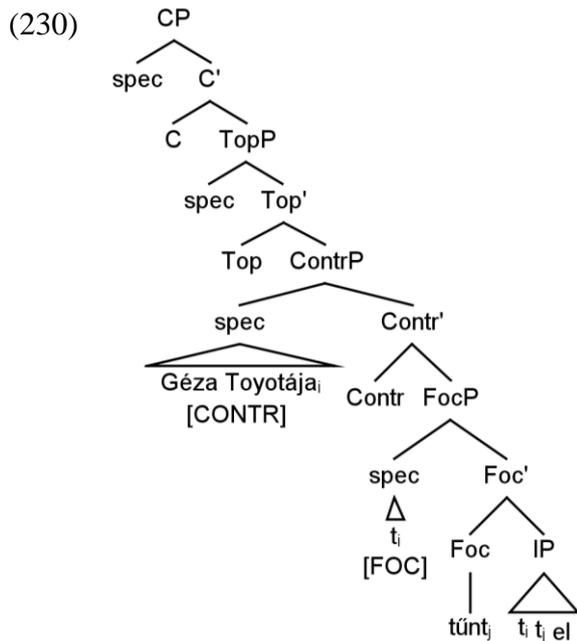
(228) displays the last step of the derivation before [CONTR] and [FOC] start percolating from the possessor-DP *Géza*.⁸⁸ As there are no TopP and FocP projections inside the possessive DP against which the possessor could check its discourse features, feature percolation must take place. The clause which hosts the DP in (228) has a TopP and a FocP in its projection system where these features can be checked.

⁸⁸ In Hungarian it may happen that the possessor does not give over its features to the possessive DP. In such a case the possessor DP is extracted from the possessive DP. This mechanism will be discussed in chapter 5.



(229) shows that the feature set [CONTR][FOC] percolates from the possessor in [Spec, I_{nom}P] to the maximal projection of the upper DP. As proposed, from this time on the whole possessive DP bears the features [CONTR][FOC]. After this, *Géza Toyotaja* is Spelled Out as DPs are phases⁸⁹ in the derivation. Then, the features which the possessive DP inherited are checked in the CP:

⁸⁹ According to Chomsky (2001; 2008) phases are maximal projections which are spelled out. After Spell Out only the specifier and the head of the phase's upmost XP are available for further derivational steps, the rest becomes opaque. Chomsky considers vPs and CP as phases. However, Svenonius (2004) proposes that DPs constitute phases, too.



In (230) the possessive DP *Géza Toyotája* moves from its IP-internal subject position ([Spec, IP]) to [Spec, FocP] to check [FOC] against Foc. Then, it moves to [Spec, ContrP] to check off [CONTR] against Contr. So, syntactically it behaves as a contrastive focus in the clause. The verb raises from I to Foc and leaves its pre-verb behind.

It is important to note that, as opposed to English, Hungarian and certain German dialects allow feature percolation to stop at a lower point in the structure, if the possessor is extracted from the possessive DP. This syntactic operation will be introduced in chapter 5.

4.11.2. When does feature percolation take place?

As a next point in the description of feature percolation, we should address the question as to when it takes place. In this respect two cases need to be described. First, if no trigger is merged into a phase against which the percolating features can be checked, and second, if such a trigger is merged in.

If no trigger is merged into the structure of a phase, feature percolation applies after structure building but just before Spell-Out. In (231) we can see two DPs, i.e. two phases: the [CONTR][FOC] possessor-DP *Géza* in [Spec, I_{nom}P] has a DP layer and the possessive DP also has a DP layer. The following paragraphs review the derivation of these two phases.

The second phase boundary in the derivation of (231) is constituted by the DP node of the possessive DP. In the course of the structure building in this phase, the possessor is merged in to [Spec, nP], then it moves to [Spec, I_{nom}P] for case. Before Spell-Out the set [CONTR][FOC] percolates onto the DP node of the possessive construction because the possessor-DP cannot raise to any [Spec, FocP] position where these features could be checked. After feature percolation this phase is also spelled out.

This step in the computation brings us to the second case we should consider by giving answer to the question of when feature percolation takes place. At this point in the derivation, the whole possessive DP, which now hosts [CONTR] and [FOC], is merged in to [Spec, vP] and it moves to [Spec, IP] for case. As soon as Foc is merged into the structure it triggers the movement of the possessive DP to its specifier and feature checking takes place. Following this, Contr is merged in and it triggers the movement of the possessive DP to [Spec, ContrP] so that [CONTR] can be checked. Then, the rest of the clause is built, and the CP is spelled out. This process is displayed in (230) above.

All in all, not only structure building but feature percolation, too, is cyclic. In the absence of an appropriate trigger the discourse features percolate just before a phase is spelled out and they stop at every phase boundary until they get to a maximal category which can move to an appropriate specifier position where feature checking can take place. In this way only those features which are at the phase boundary can percolate in the next phase. So, there is a parallelism between feature percolation and movement because after Spell-Out only those elements can be extracted out of a phase which are on the edge.

It is important to stress that the maximal category which can take the percolated features to an appropriate specifier is not necessarily a phase boundary. For example a PP can also serve this function:

- (232) A: *Elmentetted a fájl Péter gépére?*
 pre-verb saved-2.SG the file Peter computer-POSS-SG-3.SG-on
 ‘Have you saved the file on Peter’s computer.’
- B: *Nem, [PP a pro pendrivejára] mentettem el.*
 no the pendrive-POSS-SG-3.SG-on saved-2.SG pre-verb
 ‘No, I saved it on his pendrive.’

Here the bracketed PP contains a possessive DP in which the possessum is interpreted as a contrastive focus. The feature set [CONTR][FOC] percolates onto the topmost DP node of the possessive DP. Then, after Spell-Out of the possessive DP the PP layer is erected. Then, this PP is merged into the clause. As soon as Foc is merged in [FOC] and [CONTR] percolate onto the PP. This PP then moves to [Spec, FocP] and then to [Spec, ContrP] to check them.⁹⁰

This mechanism of feature percolation ensures that the features find an XP on which they can be checked and they do not percolate past this node. If feature percolation ran parallel with structure building, the features would travel past the XP which can serve as a host taking them to the required specifier position.

4.11.3. The competition of discourse features

In sections 4.6.2., 4.8.2. and 4.10.2. it was proposed that the discourse features of the DP internal elements have to compete with each other, and the possessive DP inherits the feature set which wins the competition. At this point the dissertation focuses on the mechanism of the competition of the features.

(227) showed how [TOP] and [CONTR][FOC] behave if they are associated with two separate hosts in the possessive DP. The feature set [CONTR][FOC] defines the CP-level behaviour of the possessive DP *Géza Toyotája* because it inherited the [CONTR][FOC] feature set from the possessor. However, the possessum did not pass [TOP] over to the possessive construction.

Given this, the competition of the discourse features takes place before feature percolation. First, it should be defined what features the different constituents bear. Then, it is decided which feature set is the most dominant.

After competition the most dominant feature set percolates onto the maximal projection of the possessive DP. This DP then moves to a specifier position in the sentence in which it can check its inherited features. (233) summarises the possible competitions of the discourse feature sets, and how the possessive DP behaves in the sentence after feature percolation.

⁹⁰ The fact that the pre-verb follows the verb provides evidence for the assumption that the PP at issue is a focus in the clause.

(233)⁹¹

		Constituent A					
		T	F	CT	CF	WH	CWH
Constituent B	T	T	F	CT	CF	WH	CWH
	F	F	F	CT	CF	WH	CWH
	CT	CT	CT	CT	CF	WH	CWH
	CF	CF	CF	CF	CF	WH	CWH
	WH	WH	WH	WH	WH	WH	CWH
	CWH	CWH	CWH	CWH	CWH	CWH	CWH

4.11.4. Deletion of feature sets

What happens to the features after feature percolation takes place? Discourse features have multiple roles: they may motivate discourse related movements in syntax, they define how a given element has to be interpreted at LF and they determine the intonation and stress pattern of the constituents at PF. This might suggest that discourse features have basically three components: a syntactic, a semantic and a phonological sub-feature. When a constituent is marked for a discourse feature in the numeration, it bears all the three sub-features, i.e. the three sub-features together constitute a single feature. However, the different sub-features motivate operations in different spheres of grammar, and so they are interpreted (and possibly deleted) at different times in the computation (the syntactic sub-feature in syntax before Spell Out, the semantic and the phonological sub-features after Spell Out at LF and at PF respectively).

That is why the features which lose the competition before feature percolation do not entirely disappear. The semantic and phonological sub-features of every element in the DP play an important role at LF and PF because it is always interpretable and audible which element is associated with which discourse function. However, loser features cannot influence syntax, i.e. word order.

As only the winner features motivate movement, it can be assumed that only the syntactic sub-features compete and percolate. The loser syntactic sub-features cease to exist, the winners percolate onto the topmost DP node and they serve as triggers for discourse related movements targeting the left periphery of the CP where they are checked against an

⁹¹ T = topic ([TOP]), CT = contrastive topic ([CONTR][TOP]), F = focus ([FOC]), CF = contrastive focus ([CONTR][FOC]), WH = wh-element ([WH]), CWH = contrastive wh-element ([CONTR][WH])

appropriate head. It is important to highlight that feature percolation is a ‘copy-delete’ operation proceeding from node to node in a step by step fashion. This means that at every step a new copy of the syntactic sub-features of the feature set is created and the copy on the lower node is immediately deleted.⁹²

On the other hand, the semantic and phonological sub-features do not compete or percolate. They stay on their original host element and they do their job at the interfaces.⁹³ As LF has access to the semantic sub-features, it is always clear what discourse function a given element plays even if the syntactic sub-features lose the competition. For instance, in (227) it is still clear that only the possessor *Géza* is contrasted with *Peter* and not the whole possessive DP. PF maps stress and intonation onto the DP based on the phonological sub-features defining which elements has to be the most prominent and with what prosody. For instance in (227) it is only the possessor *Géza* which receives extra stress because it bears the phonological sub-features of [CONTR] and [FOC]. As the present dissertation deals with the syntactic part of feature percolation, the phonological and semantic aspects fall outside the scope of the discussion.

We can conclude that whenever the features [WH], [CONTR], [TOP] and [FOC] cause movement of the DP, their syntactic sub-features percolate. It was proposed that in all of the languages discussed here, these four discourse features can oblige the DP to move to [Spec, CP], [Spec, ContrP], [Spec, FocP] and [Spec, TopP].

4.12. Chapter summary

In the first part of this chapter, we reviewed the Split-DP analysis of DP-internal foci and topics. After introducing the projection system of the Split-DP this was shown to have many disadvantages. To start, it must make use of a double set of (verbal and nominal) discourse features to be able to account for possessor extraction and (word order) phenomena in

⁹² There is a difference between what is standardly considered to be copy-delete and what is meant here. Copy delete, as a movement, deletes only the phonologically relevant material, but leaves the rest as a trace. Given that features do not have phonological forms, their deletion is not the same as movement. Hence, in the case of features we talk about syntactic deletion.

⁹³ Yoon (2001) also analyses the percolation of such features which must be checked off before Spell Out. These features are not interpretable at the interfaces and thus cause a crash if they remain unchecked. That is why he proposes that the features are deleted from their original hosts. However, [WH], [CONTR], [TOP] and [FOC] are interpretable features, so they do not cause a crash at the interfaces.

connection with the syntactic status of the DP in the CP. This results in an uneconomic and complicated system with little explanatory power. Furthermore, the Split-DP analysis works with unnecessary vacuous movements.

The unnecessary nature of the separate verbal and nominal discourse feature sets inspired the feature percolation analysis presented in this chapter. This approach dispenses with ContrPs, TopPs and FocPs inside the DP and it works only with one discourse feature set: [WH], [CONTR], [TOP] and [FOC].⁹⁴ The mechanism of feature percolation can explain why a DP has a given syntactic position in the CP. Namely, it proposes that the DP can inherit the syntactic sub-features of the most dominant discourse feature set from one of its elements, which are then responsible for its CP-level behaviour.

In the course of the discussion, first, it was observed that feature percolation operates similarly in English, German and Hungarian. Then, it was demonstrated that the structural status of the feature set's host element does not have an influence on the outcome of the competition of the discourse features preceding feature percolation. It was concluded that the only factor defining the winner of the competition is a dominance hierarchy of the discourse features themselves ([WH] > [CONTR] > [FOC] > [TOP]) which seems to be identical in all of the three languages discussed in this dissertation.

It seems that this hierarchy is a universal property of languages. [WH], [CONTR], [FOC] and [TOP] are discourse oriented features. The way the speakers of a language structure their dialogues, i.e. the discourse, reflects basic cognitive processes. Although the rules of turn taking and the conventions in connection with the structure, coherence and cohesion of a text may vary from context to context and from culture to culture, it can be proposed that information packaging is independent of culture. In every community it is important for the speakers to filter out new information, to highlight contrast, to be able to ask for new information, etc. All of these are universal processes in human communication which drive the structure building process with the help of the discourse features [WH], [CONTR], [FOC] and [TOP].

⁹⁴ [NEG] would also be interesting to examine, however, it is left for future research.

Chapter 5

**Are there discourse related syntactic operations in
possessive constructions?**

5.0. Introduction

In the previous chapter we concluded that the discourse features [WH], [CONTR], [TOP] and [FOC] cannot be checked within the possessive construction because the DP does not contain any CPs, ContrPs, TopPs and FocPs. However, this chapter examines some possessive constructions which are claimed to be discourse related in the literature: ‘possessor doubling’,⁹⁵ pro-drop, possessor extraction and the alternation of pre- and postnominal possessors. Making use of the DP-structure proposed in chapter 3 and the mechanism of feature percolation in chapter 4, an account of their exact function and how they are derived will be given. It will also be shown that, in the three languages we examine, these constructions may have different functions.

5.1. ‘Possessor doubling’

We should start the discussion with ‘possessor doubling’ because our observations in connection with this type of construction will be the basis of the description of pro-drop and possessor extraction in German.

5.1.1. What is ‘possessor doubling’?

According to the traditional analysis (such as Weise (1902)), the constructions in (234)-(236) are ‘possessor doubling’ constructions which are possessive DPs containing two possessors. One of the possessors is realised as a pronoun and the other one as a non-pronominal DP, but importantly these two possessors are coreferential. In addition, traditionally these constructions are assumed to serve the purpose of giving emphasis to the possessor.

(234) *des* *Vaters* *sein -Ø* *Haus*
the-MASC.SG.GEN father-MASC.SG.GEN his -NEUT.SG.NOM house-NEUT.SG.NOM
‘the father’s house’

⁹⁵ The quotation marks are used because in the course of the discussion of this construction it will turn out that this term is inadequate and misleading.

agreement suffix realised on the possessum. This implies that the constructions in (234) and (235) must be treated separately from (236) because the Hungarian construction contains a ‘pronominal possessor’ additionally to the agreement suffix. Therefore, it can be assumed that in (236) the ‘pronominal possessor’ has a different function than that of its German counterpart in (234) and (235).

First, the German constructions will be examined, and it will be explained why it is not a good idea to term them ‘possessor doubling’ constructions. Then, we will deal with Hungarian constructions like (236).

5.1.2. Is ‘possessor doubling’ discourse related?

Weise (1902) states that, in ‘possessor doubling’, the non-pronominal possessor is emphasised. So, these constructions ensure that the possessor is prominent. Interpreting Weise’s claim it can be said that in these constructions the possessor should be [FOC] and/or [CONTR]. To test this, some informants speaking Southern German dialects were asked to decide which question(s) the utterance *Dem Vater sein grünes Haus.* is an appropriate answer to:

- (238) A: *Wessen grünes Haus ist schön?*
 whose green house is beautiful
 ‘Whose green house is beautiful?’
- B: [_{DP} *Dem Vater sein grünes Haus.*]
 the father-FOC
 ‘The father’s green house.’

- (239) A: *Ist das grüne Haus der Mutter schön?*
 is the green house the mother beautiful
 ‘Is the mother’s green house beautiful?’
- B: *Nein.* [_{DP} *Dem Vater sein grünes Haus.*]
 no father-CONTR-FOC
 ‘No. The father’s green house.’

(240) A: *Welches Haus des Vaters ist schön?*
 which house the father is beautiful
 ‘Which house of the father is beautiful?’

B: [_{DP} *Dem Vater sein grünes Haus*].
 the father-TOP
 ‘The father’s green house.’

The native speakers accepted both (238) and (239) as a possible dialogue, so Weise’s assumption may be true. However, the problem is that the informants also report that (240) is equally good. In contrast to (238) and (239), in (240) the possessor is neither [FOC] nor [CONTR], i.e. it is a plain topic, which is not prominent at all. This indicates that these constructions do not ensure any specific discourse status for the possessor.

In the Hungarian sentences in (241)-(242) the word order does not indicate the presence of [TOP], [FOC] or [CONTR]. So, in this language ‘possessor doubling’ is not discourse related.

(241) [_{DP} *A nőknek*]_i *eltűnt* [_{DP} *t_i az ő kalapjuk*].
 the women-EDGE disappeared the their hat
 ‘The women’s hat disappeared.’

(242) *Állítólag eltűnt* [_{DP} *a nőknek az ő kalapjuk*].
 allegedly disappeared the women-EDGE the their hat
 ‘Allegedly, the women’s hat disappeared.’

In conclusion, Weise’s (1902) approach seems to be wrong and these constructions have nothing to do with discourse functions.

5.1.3. ‘Possessor doubling’ as a DP

(234)-(236) show that ‘possessor doubling’ can be of different forms. In (234) both the pronominal and the non-pronominal possessors are prenominal and they are in the genitive. In (235), however, the non-pronominal possessor is marked as [EDGE]. In (236) the Hungarian pronominal possessor is in the nominative position [Spec, I_{nom}P], whereas the non-pronominal EDGE-possessor is in [Spec, DP]. Nevertheless, it must have moved through [Spec, I_{nom}P], too, because it also bears nominative, as proposed in chapter 3.

Before we go on with our discussion, we have to be sure about the DP-status of ‘possessor doubling’ constructions, i.e. that they are really DPs. For this the V2 nature of German

provides us with evidence. As demonstrated in (243), matrix declarative clauses allow only one constituent to precede the finite verb.

- (243) a. [*Das kleine Mädchen*] *geht* [*nach Hause*].
the little girl go to home
'The little girl goes home.'
- b. [*Nach Hause*] *geht* [*das kleine Mädchen*].
- c. **[Das kleine Mädchen] [nach Hause] geht*.
- d. **[Nach Hause] [das kleine Mädchen] geht*.

With this in mind, consider (244):

- (244) [*Dem Vater sein Gesicht*] *verzog sich schmerzlich*.
the father his face flinched itself painfully
'The father made a painful face.'

In (244) the 'possessor doubling' construction precedes the verb, so it must be one constituent.

The constituency of the Hungarian construction is tested with the help of focussing. In (245) the bracketed 'possessor doubling' construction is in the position between the verb *látta* and the elements *nem csak* which is a typical focus position ([Spec, FocP]) in Hungarian.

- (245) *Kati nem csak [a nőknek az ő kalapjukat] látta*.
Kati not only the women-EDGE the she hat-POSS-SG-3.PL-ACC saw
'It was not only the women's hat which Kati saw.'

In conclusion, the tests in (244) and (245) show that 'possessor doubling' constructions must be analysed as single DPs. However, this is exactly what causes severe problems.

5.1.4. The problem

The fact that the constructions in (234)-(236) are single DPs poses many problems for those who assume that these DPs host two coreferential possessors. Only three are mentioned here: the semantic restrictions in connection with referential noun possessums, case assignment to the possessor and agreement. We will consider these in turn.

In the present dissertation it is proposed that the possessive affix in *n* introduces the possessor.⁹⁷ In chapter 3 it was concluded that a referential noun possessum tolerates only one possessor in the DP. So, there is only one [Spec, nP] position into which the possessor can be merged, and hence there should only be one possible possessor.

The second and the third problems, i.e. the case of the possessor and the nominal agreement patterns are closely related, so they are discussed together. In chapter 3 it was concluded that prenominal possessor DPs must move to [Spec, I_{nom}P] to receive case and to check off the agreement features in I_{nom} (so that they can agree with the possessum). The possessor needs case so that it can be interpreted as a possessor at LF. However, the problem is that although there is only one I_{nom}P in the structure, there are two possessors in (234)-(236). Hungarian provides evidence for the assumption that there is only one I_{nom}.

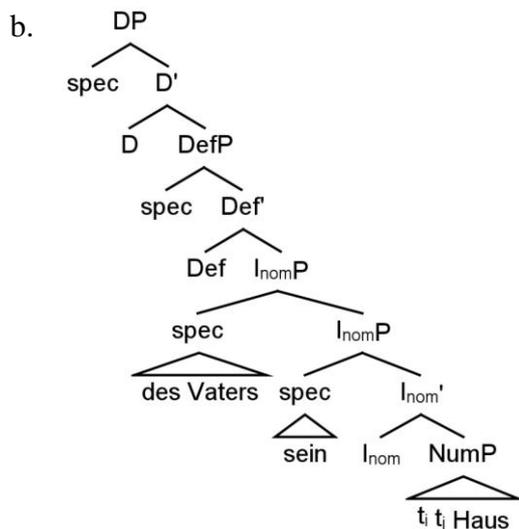
- (246) a. *a nőknék az ő könyv-e-i-k*
the woman-PL-NOM-EDGE the she-NOM book-POSS-PL-3.PL
‘the women’s books’
- b. **a nőknék az ő könyv-e-i-k-ek*
the wommn-PL-NOM-EDGE the she-NOM book-POSS-PL-3.PL-3.PL
‘the women’s books’

In (246b) there are two I_{nom}Ps. One is headed by the agreement suffix associated with the non-pronominal possessor *a nőknék*, and the other one with the pronoun *ő*. Hence, the possessum bears two agreement suffixes *-k* and *-ek*. Although both of the possessors are in a [Spec, I_{nom}P] where they are marked nominative and where they can check off the features of the inflectional suffix, (246b) is ungrammatical. Only (246a) is well-formed in which there is only one nominal inflectional phrase.

Based on Chomsky’s (1995) Bare Phrase Structure, some versions of the Minimalist Program assume the existence of multiple specifiers. The syntacticians working in frameworks allowing multiple specifiers might propose the following structure:

- (247) a. *des Vaters sein Haus*
the-MASC.SG.GEN father-MASC.SG.GEN his house
‘the father’s house’

⁹⁷ Remember, this affix can be phonologically realised in Hungarian, however, in German it is covert.



The problem with (247b) is that it cannot represent the difference between specifiers and adjuncts. Therefore, the present dissertation rejects it. Moreover (247b) suggests that it is possible to case mark two non-pronominal possessors in [Spec, I_{nom}P] which would give rise to DPs such as (248). However, constructions like (248) are severely ungrammatical in all of the languages under discussion.

- (248) **Peters Inkens Haus*
 Peter-GEN Inken-GEN house
 ‘Peter’s Inken’s house’

A further problem concerns the order of the possessors. Why does the full DP precede the pronoun?⁹⁸

All in all, it is not a good idea to postulate two I_{nom}P layers or two [Spec, I_{nom}P] positions in the DP. As a result, it is advisable to look for an alternative analysis of ‘possessor doubling’ constructions.

5.1.5. Alternative analyses

There are a lot of alternative analyses of ‘possessor doubling’ in the literature. Lindauer (1995) and Löbel (1996), for instance, propose that there are no pronominal possessors in

⁹⁸ One might think that this is easily accounted for with the help of binding theory: the other order would give rise to Principle C violation. However, if binding theory were in operation in these cases, we would not expect a pronominal element in the second position, but a reflexive. Consequently, we had to claim that certain conditions of the binding theory appear to be inoperable. But then this weakens any binding theory account of the ordering of the possessors: why would some conditions be inoperable and not others?

German. Instead, they attribute an adjectival status to these elements. However, it can be proposed that pronominal possessors cannot be taken to be adjectives because they substitute DPs and adjectives do not:

- (249) *Peters Auto* ~ *sein Auto* *~ *rotes Auto*
 Peter-GEN car his car red car
 ‘Peter’s car’ ‘his car’ ‘red car’

Consequently, Lindauer’s (1995) and Löbel’s (1996) approach is not adequate for the reanalysis of ‘possessor doubling’.

Demske (2001), Sternefeld (2006) and Georgi and Salzmann (2011) observe that pronominal possessors and determiners are in complementary distribution in German. That is why they assume that the ‘pronominal possessors’ are in D. However, in chapter 3 it was shown that it is not the pronominal possessors which are in complementary distribution with determiners but their agreement elements in I_{nom} . In chapter 3 it was also concluded that in German determiners are spelled out in D and pronominal possessors in [Spec, I_{nom} P]. Hence, the present dissertation rejects the analysis of pronominal possessors as D heads.

The substitution test in (249) suggests that the elements we termed ‘pronominal possessors’ in (234)-(236) are DPs. However, this might be problematic given the argumentation in this dissertation. In what follows, an attempt to solve the problem on the assumption that pronominal possessors are resumptives will be presented. Although resumptives are DPs, they behave more like traces. Hence, they might not pose the problems that other pronouns do.

5.1.5.1. ‘Possessor doubling’ as resumption

In chapter 3 (footnote 19) it was hinted at that in Hungarian in 3.PL there seems to be a mismatch of the number features on the possessor and the possessum.

- (250) a. *a fiú-k kalap-ja-i-Ø*
 the boy-PL hat-POSS-PL-3.SG
 ‘the boys’ hats’
 b. **a fiú-k kalap-ja-i-k*
 the boy-PL hat-POSS-PL-3.PL
 ‘the boys’ hats’

The possessive DPs in (250) contain a [3.PL] non-pronominal possessor. The possessum cannot bear the 3.PL nominal agreement suffix *-k* (see (250b)) but it is associated with the 3.SG ending *-Ø* (cf. (250a)) If we take a closer look at the 3.PL line in the inflectional paradigm in (251), we can see that here this phenomenon does not affect the agreement morpheme but the pronominal possessor *ő*. In *az ő kalapjaik* the possessum bears the 3.PL suffix *-k*, however, the possessor is embodied by the [3.SG] pronoun *ő* instead of the [3.PL] *ők*.

(251)

Nominal inflection in Hungarian	
1.SG	<i>az én kalap-ja-i-m</i>
2.SG	<i>a te kalap-ja-i-d</i>
3.SG	<i>az ő kalap-ja-i-Ø</i>
1.PL	<i>a mi kalap-ja-i-nk</i>
2.PL	<i>a ti kalap-ja-i-tok</i>
3.PL	<i>az ő kalap-ja-i-k</i>

The agreement pattern exhibited by non-pronominal possessors can be considered to be an instance of allomorphy because both the possessor and the possessum can be marked as [3.PL] when they embody two independent DPs in a sentence:

- (252) a. *A fiúknak eltűnt a kalapjuk.*
 the boy-**PL**-NOM-EDGE disappear-PAST-3.SG the hat-POSS-SG-**3.PL**
 ‘The boys’ hat disappeared.’
- b. *A fiúknak eltűnt a kalapja.*
 the boy-**PL**-NOM-EDGE disappear-PAST-3.SG the hat-POSS-SG-**3.SG**
 ‘The boys’ hat disappeared.’

Another argument for handling the phenomenon in (250) as an instance of allomorphy is provided by Szili (2011: 45). According to her, colloquial Hungarian compensates this inconsistency, given the fact that utterances such as (253) can be heard more and more often.

- (253) *Az embereknek sok gondja van.*
 the man-**PL**-NOM-EDGE lot problem-POSS-SG-**3.SG** be-3.SG
 ‘People have a lot of problems.’

Although the possessor is [3.PL] in (253), the possessum receives a [3.SG] ending. This means that the mismatch is preserved in the CP, too.

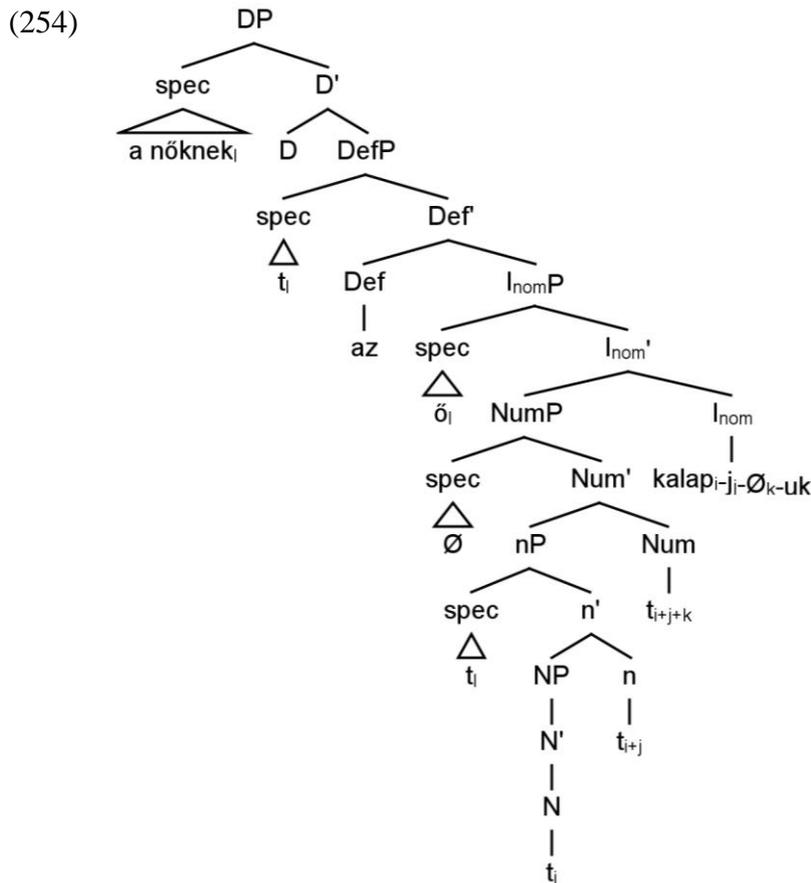
A way out of the problem caused by this inconsistent agreement pattern in 3.PL in Hungarian can be offered by the resumption analysis. According to Norde (1997), the elements in question, which are traditionally assumed to be pronominal possessors, have to be analysed as resumptive pronouns. Doron (1982) and McClosky (1990) propose that resumptive pronouns are more like traces than pronouns because they can be in the bottom-most position in an A'-chain. Kayne (1981) argues that resumptive pronouns are the realisations of traces.

Based on this approach, it can be proposed that in (254) the non-pronominal EDGE-possessor *a nőnek* moves from [Spec, nP] to [Spec, I_{nom}P] for case and to check off the agreement features in I_{nom}. Then, it lands in [Spec, DP] where it receives the Edge-marker *-nek*.⁹⁹ The resumptive pronoun in turn is the Spell-Out form of the possessor's trace in [Spec, I_{nom}P]. It is spelled out as *ő* (in a nominative form) because nominative is the default case in Hungarian (Puskás 2000: 180) (and in Hungarian the possessors get nominative in [Spec, I_{nom}P] anyway).

⁹⁹ In Hungarian 'possessor doubling' constructions the non-pronominal possessor must always be [EDGE]:

(I) *a nőnek* *az ő* *kalapjuk*
the woman-PL-NOM-EDGE the she-NOM hat-POSS-SG-3.PL
'the women's hat'

(II) **a nők* *az ő* *kalapjuk*
the woman-PL-NOM the she-NOM hat-POSS-SG-3.PL
'the women's hat'



Den Dikken (1999) also claims that ‘possessor doubling’ in Hungarian should be analysed as resumption, although he works with a different structure. His ideas support our assumptions.

(255) *a nők kalapja*
 the woman-PL-NOM hat-POSS-SG-3.SG
 ‘the women’s hat’

(256) *A nőknek eltűnt a kalapja.*
 the woman-PL-NOM-EDGE disappear-PAST-3.SG the hat-POSS-SG-3.SG
 ‘The women’s hat disappeared.’

(257) *A nőknek eltűnt a kalapjuk.*
 the woman-PL-NOM-EDGE disappear-PAST-3.SG the hat-POSS-SG-3.PL
 ‘The women’s hat disappeared.’

Den Dikken (1999) argues that in (255)-(257) the alternation of the forms *kalapja* and *kalapjuk*, i.e. the allomorphy in third person plural, is due to the availability of the resumptive strategy by some speakers:

- (258) a. *a nőknek az ő kalapjuk*
 the woman-PL-NOM-EDGE the she-SG hat-POSS-SG-3.PL
 ‘the women’s hat’
- b. *a nőknek a pro kalapjuk*
 the woman-PL-NOM-EDGE the she-SG hat-POSS-SG-3.PL
 ‘the women’s hat’

(den Dikken 1999: 165)

For the speakers who accept (258a), (257) is also grammatical because (257) is derived in the same way as (258b). In (258a) the resumptive pronoun *ő* (in [Spec, I_{nom}P]) triggers the presence of the I_{nom} ending *-juk* on the possessum. (258b) has the same structure but in this case the resumptive pronoun is realised as *pro*, which also triggers the form *-juk* in I_{nom}.¹⁰⁰

On the other hand, speakers who do not accept (258a) use (256) with the allomorph *-ja* on the possessum which is associated with 3.PL non-pronominal possessors (see (255)). As den Dikken (1999) claims, for these speakers the resumptive strategy is not available. This means that the presence of the resumptive depends on the dialect a speaker speaks. In those dialects which allow resumption the phonologically realised and unrealised resumptives seem to be in free variation.

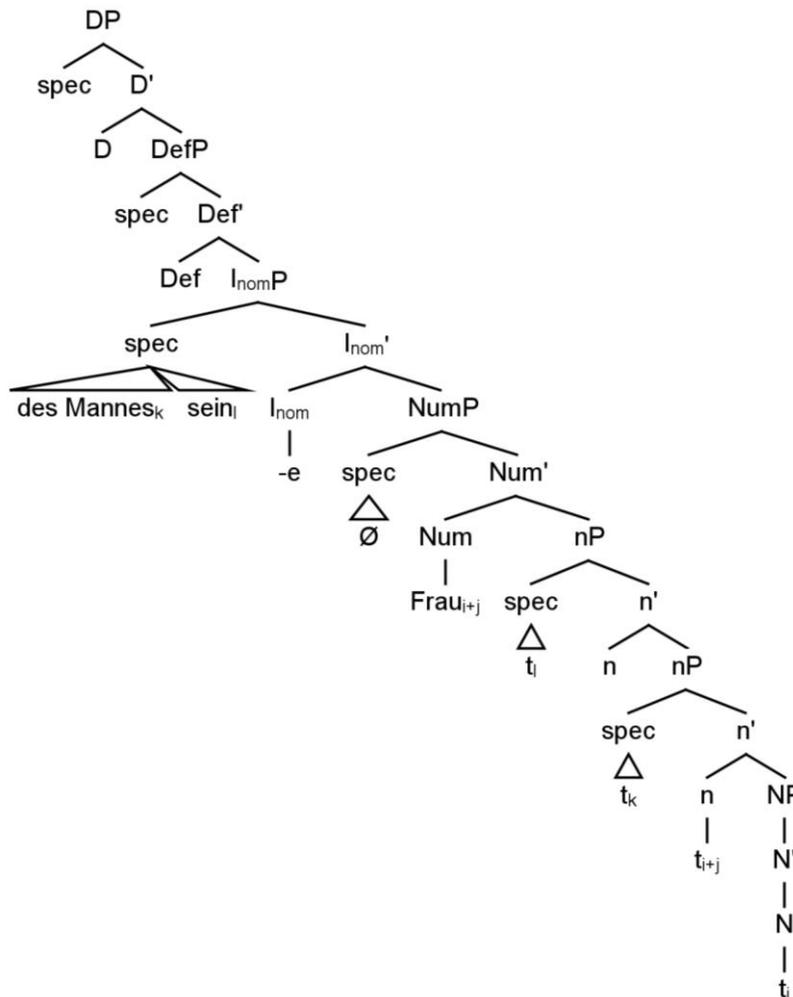
(258) shows what function ‘possessor doubling’ has in Hungarian: governing allomorphy in the 3.PL. This suggests that resumption is an appropriate analysis of Hungarian ‘possessor doubling’ constructions.

At this point we turn back to German ‘possessor doubling’ constructions. We hypothesise that in (259) *sein* constitutes the resumptive pronoun in [Spec, I_{nom}P], but the co-referent non-pronominal non-EDGE possessor *des Mannes* should also be in [Spec, I_{nom}P]. The non-pronominal possessor cannot be in [Spec, DP] because it is not [EDGE].¹⁰¹ As proposed earlier, the DP can only contain one I_{nom}P layer and one [Spec, I_{nom}P], so in (259) it is impossible to host the resumptive pronoun and the non-pronominal possessor.

¹⁰⁰ As the resumptive pronoun triggers a given type of agreement suffix in I_{nom}, it must be in [Spec, I_{nom}P]. So, it can be ruled out that it spells out the trace in [Spec, nP].

¹⁰¹ Remember that in German [Spec, DP] is available only for EDGE-possessors. (Section 3.4.2.1.)

(259) *



The resumptive *sein* must be in [Spec, I_{nom}P] because the agreement suffix *-e* in I_{nom} amalgamates with it. Thus, it is not a way out of the problem to assume that the resumptive pronoun spells out the trace in [Spec, nP]. If the resumptive pronoun was in [Spec, nP] the agreement suffix would have to undergo a downward movement from I_{nom} which is disallowed.

All in all, it can be said that the resumptive pronoun analysis cannot handle the German data. Nevertheless, it works very well in the case of Hungarian as in this language the non-pronominal possessor must be [EDGE] in ‘possessor doubling’ constructions.

To conclude, as we did not manage to establish the exact structure and function of the German ‘possessor doubling’ construction with the help of the resumption analysis, we have to provide another solution.

5.1.5.2. ‘Possessor doubling’ as a DP containing a possessive linker

The discussion above suggests that we need to reconsider the structural status of the element which is traditionally analysed as a pronominal possessor in German. Many syntacticians propose that this element is an inflectional head.¹⁰² For instance, Lühr (2002) comes to this conclusion based on Principle C violations, Olsen (1989) based on agreement patterns and the mechanism of nominal pro-drop, Strunk (2005) based on Principle B violations and constituency tests like (244) and Weiß (2006) based on redundancy.

So, in the DPs in (234) and (235) there is a possessum, a non-pronominal possessor and a free nominal inflectional morpheme, which Strunk (2005) terms ‘possessive linker’, which encodes overt agreement between the non-pronominal possessor and the possessum.

- (260) [DP[DP *dem* Vater] *seine* Katze]
 the-MASC-SG father-MASC-SG [MASC-SG]-FEM-SG-NOM cat-FEM-SG-NOM
 ‘the father’s cat’

Being inflectional elements, possessive linkers are taken to be dummies occupying I_{nom} and they are tasked with spelling out the nominal features of the possessor and the possessum.¹⁰³

In (260) *seine* spells out the [MASC][SG] features of the possessor and the

¹⁰² In some languages similar phenomena can be observed in the CP. According to Deen (2006), in Nairobi Swahili the agreement features on the verb are spelled out as pronoun-like agreement heads which are incorporated by the verb. In (I) this agreement head is the bold *-a*.

- (I) *Juma a -na -kimbi-a*
 Juma 3.SG-PRES-run -IND
 ‘Juma is running.’

(Deen 2006: 225)

¹⁰³ The possessive linker can be realised in many ways depending on the feature bundle it spells out:

- (I) *der Frau ihre Katze*
 the woman-FEM.SG [FEM.SG]-FEM.SG.NOM cat-FEM.SG.NOM
- (II) *des Kindes sein Hund*
 the child-NEUT.SG [NEUT.SG]-MASC.SG.NOM dog-MASC.SG.NOM
- (III) *der Männer ihre Kinder*
 the man-MASC.PL [MASC.PL]-NEUT.PL.NOM child-NEUT.PL.NOM
- (IV) *des Kindes seinen Hund*
 the child-NEUT.SG [NEUT.SG]-MASC.SG.ACC dog-MASC-SG-ACC

However, as (262) shows, possessive linkers can also be zero morphemes.

(262) a. *des* *Vaters* *Haus*
the-MASC.SG.GEN father-MASC.SG.GEN house
'the father's house'

b. *Peters*¹⁰⁵ *Haus*
Peter-GEN house
'Peter's house'

(263) a. *das* *Haus* *des* *Vaters*
the-NEUT.SG.NOM house-NEUT.SG.NOM the-MASC.SG.GEN father-MASC.SG.GEN
'the father's house'

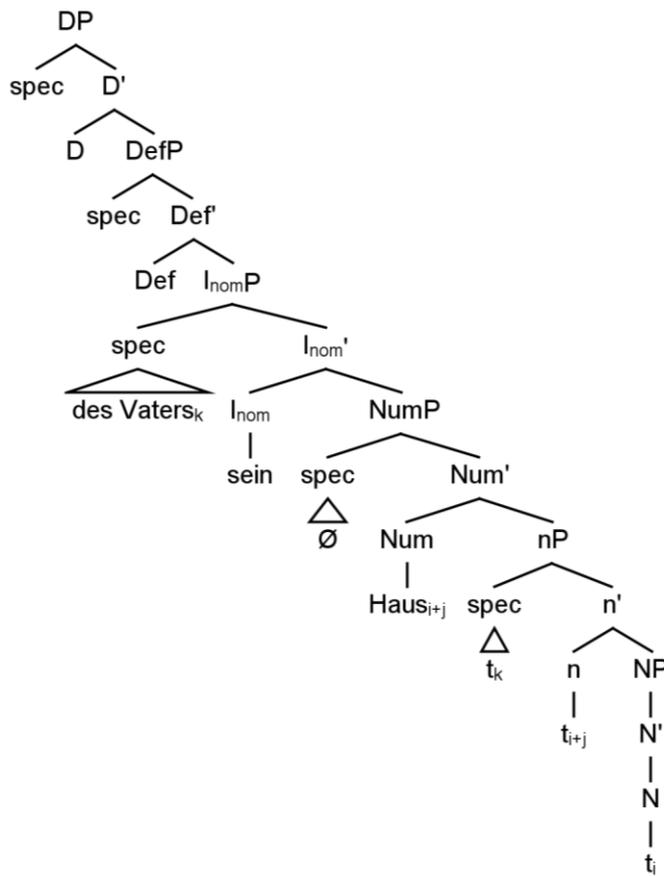
b. *das* *Haus* *von dem* *Vater*
the-NEUT.SG.NOM house-NEUT.SG.NOM of the-MASC.SG.DAT father-MASC.SG.DAT
'the father's house'

In order to illustrate the proposed structure, (265) represents the derivation of (234) which is repeated here as (264).

(264) *des* *Vaters* *sein* *Haus*
the-MASC.SG.GEN father-MASC.SG.GEN [MASC.SG]-NEUT.SG.NOM house-NEUT.SG.NOM
'the father's house'

¹⁰⁵ According to Teuber (2000), the formal invariability of genitive case on German proper names can be explained with the help of the syntactic structure of these DPs. He claims that case assignment does not take the gender features of proper names into consideration because they are not associated with (overt) articles in standard German. Hence, the genitive is marked invariantly with *-s* in such cases on N.

(265)



The present dissertation proposes the solution to the problems raised in section 5.1.4. that in German the possessor is doubled only seemingly and the elements in (234) and (235) which are traditionally analysed as a pronominal possessor are better to be regarded as possessive linkers.¹⁰⁶ Possessive linkers are similar to the Hungarian agreement suffixes in that they are also phonologically realised inflectional elements in I_{nom} . The difference between them is that the possessive linkers are free, whereas the Hungarian affixes are bound morphemes.

As possessive linkers are not DPs, they do not need any case and they do not have to be merged in to [Spec, nP]. Thus, the proposed analysis does not have case and interpretation related problems. Nevertheless, the question arises how it is possible that in (249) the element *sein* substitutes the DP *Peters* if it is not a pronoun. Section 5.2.2. provides an answer to this question.

¹⁰⁶ As mentioned earlier the present dissertation adapts Strunk's (2005) possessive linker approach. However, it is important to point out a crucial difference between his structure representation and the analysis presented in this thesis. Namely, Strunk (2005) considers possessive linkers to be elements in D but the diagrams in the present dissertation represent them in I_{nom} . Nevertheless, Strunk (2005) argues as well that possessive linkers mark agreement relation between the possessor and the possessum.

The possessive linker analysis is not applicable to Hungarian for the obvious reason that in this language I_{nom} is occupied by agreement suffixes. Thus, it cannot host a further possessive linker which would be superfluous in the system because their task (i.e. the embodiment of overt agreement between the possessor and the possessum) is carried out by the agreement suffixes. In addition, the possessive linker approach could not give an explanation as to why there is an alternation of agreement suffixes in the 3.PL for some speakers.¹⁰⁷

In sum, in Hungarian ‘possessor doubling’ should be analysed as resumption, whereas in German these constructions are better to be described as DPs containing a possessive linker. In these two languages these phenomena are associated with agreement, and as concluded based on (238)-(242), in themselves they have nothing to do with indicating discourse relations.

5.2. Nominal pro-drop

In chapter 2 the notion of nominal pro-drop was already introduced. Now, in the light of the discussion in chapter 4, its analysis will be reconsidered. Some Hungarian data open the discussion.

5.2.1. Pro-drop in the Hungarian possessive DP

A pivotal characteristic of agreement in Hungarian is the pro-drop phenomenon. This means that in Hungarian the agreement morphology on the verb can license the covert pronominal subject, see (266). The pronominal subject is phonologically realised only if it is focussed or bears contrast.

(266) *pro_i megesz-em_i a pizzát.*
 1.SG eat-1.SG the pizza
 ‘I eat the pizza.’

In Hungarian, pro-drop applies not only in the verbal domain but in the possessive DP, too. In the case of neutral constructions, i.e. where the possessor is not associated with focus or

¹⁰⁷ If we consider the agreement suffixes to be possessive linkers, we can say that all Hungarian possessive structures contain a possessive linker. Given this type of reasoning, the only difference between German and Hungarian is the morphological status of the possessive linker: German possessive linkers are free morphemes, whereas their Hungarian counterparts are bound. From this point of view, Hungarian ‘possessor doubling’ is really ‘possessor tripling’ and hence is different to what we see in German.

contrast, pro-drop applies in all cases just like in the CP. In other words, in such cases the pronominal possessor must be phonologically empty and it is the nominal agreement suffix on the possessum which licenses it. This is shown in (267).

(267) [DP *a* [Inom *pro*_i *ház -a -i -m*_i]]
 the 1.SG house-POSS-PL-1.SG
 ‘my houses’

(268)-(270) show that the possessor is realised in its full form (as *én* in these cases) only if it is prominent, i.e. if it is [FOC] and/or [CONTR]. Otherwise it has to be dropped.

(268) A: [DP *Kinek az autója*] *tűnt el?*
 who-WH the car disappeared
 ‘Whose car disappeared?’

B: [DP *Az én / *pro*_i *autó-m*_i] *tűnt el.*
 the I-FOC car-POSS-SG-1.SG disappeared
 ‘It was my car which disappeared.’

(269) [DP *Péter Mercedes*] *lerobbant,*
 Peter Mercedes broke down
 [DP *az én / *pro*_i *Mercedes*_i] *pedig állítólag eltűnt.*
 the I-CONTR-TOP Mercedes on the other hand allegedly disappeared
 ‘Peter’s Mercedes broke down. My Mercedes, on the other hand, allegedly disappeared.’

(270) a. *Eltűnt* [DP *az *én / pro*_i *autóm*_i].
 disappeared the I car
 ‘My car disappeared.’

b. *Ideges vagyok, mert* [DP *az *én / pro*_i *autóm*_i] *állítólag eltűnt.*
 stressed am-I because the I-TOP car allegedly disappeared
 ‘I am stressed because my car allegedly disappeared.’

Taking a closer look at (271) it can be observed that it is true only if the possessor’s discourse feature set is the strongest in the possessive DP.

- (271) A: *A Mercedesed és Géza Toyotája állandóan lerobban.*
 ‘Your Mercedes and Géza’s Toyota keep breaking down.’
- B: *De szerdán kivételesen nem ez történt. Géza Toyotája és [DP *az én / a pro_i Hondám_i] robbant le.*
 I-CONTR-TOP Honda-CONTR-FOC
 ‘But on Wednesday, exceptionally, it was not the case. It was Géza’s Toyota and my Honda which broke down.’

In (271) the bracketed possessive DP consists of a contrastive topic possessor and a contrastive focus possessum. As in B’s second sentence the pre-verb follows the verb, it can be said that the possessive DP is a contrastive focus in the CP. This means that it inherited the discourse feature set of the possessum. So, this time it is not the possessor’s feature set which is the most dominant. Hence, it is obligatorily a *pro* despite of the fact that it is [CONTR], and would therefore be expected to surface otherwise.

5.2.2. Pro-drop in the German possessive DP

The pro-drop nature of Hungarian has inspired some syntacticians, Olsen (1989), Delsing (1998) and Strunk (2005) among others, to assume that some Germanic languages display this phenomenon, too. The next section discusses whether German exhibits pro-drop in possessive DPs.

5.2.2.1. Are there any pronominal possessors in German?

The analysis of German ‘possessor doubling’ as a DP containing a possessive linker raises the question whether there exist pronominal possessors in this language. Olsen (1989)’s parallelism drawn between the Hungarian agreement suffixes and German possessive linkers inspired her analysis that pro-drop operates not only in the Hungarian DP but in German, too. Based on this, Delsing (1998) proposes the same:

- (272) a. *des Vaters sein*
 the-MASC.SG.GEN father-MASC.SG.GEN MASC.SG-[NEUT.SG.NOM]
Haus
 house-NEUT.SG.NOM
 ‘the father’s house’

The answer to this question is that it is not *sein* which represents *Peter*. It is the empty pronoun *pro*:

- (276) a. *Peter sein Auto*
 b. *pro_i sein_i Auto*

As a consequence, in standard German the possessive linker is manifested by a zero morpheme, if the prenominal possessor is non-pronominal, see (277a). If the prenominal possessor is pronominal, the possessive linker is overt, cf. (277b).

- (277) a. *Peters* \emptyset *Auto*
 Peter-MASC.SG-GEN [MASC.SG]-NEUT.SG.NOM car-NEUT.SG.NOM
 ‘Peter’s car’
- b. *pro* *sein* *Auto*
MASC.SG-GEN [MASC.SG]-NEUT.SG.NOM car-NEUT.SG.NOM
 ‘his car’

In sum, Olsen’s (1989) pro-drop analysis solves the problem concerning the structure of ‘possessor doubling’ constructions and it may answer some questions about German DPs which are traditionally analysed as phrases containing a pronominal possessor.

5.2.3. The discourse relatedness of pro-drop

As a final step in the discussion of nominal pro-drop we must answer the question whether it is discourse related. For this, in the case of German, it has to be examined whether DPs containing a possessive linker have a discourse specific function apart from marking agreement. In section 5.1.2. we concluded that these constructions only mark agreement. So, in sum, it can be said that in German pro-drop is not discourse related, whereas in Hungarian it is.

The motivation behind German pro-drop might be the gradual demise of genitive because of which I_{nom} is losing its ability to assign overt case to the prenominal possessor. In order to mark possession German started to use agreement and postnominal dative. As only proper names can receive overt genitive in [Spec, I_{nom} P], it can be hypothesised that the other prenominal possessors are preferred to be realised as *pro* than bearing only a zero genitive morpheme.

5.3. Possessor extraction

In chapter 3 it was shown that English is not a possessor extraction language. However, in Hungarian it is possible to extract the possessor from the possessive DP, and according to Gavrusseva (2000), German DPs which contain a possessive linker allow this operation, too. As proposed in chapter 3, the prerequisite for possessor extraction is the EDGE-marking on the possessor, which is associated with the [Spec, DP] position. In Hungarian and in German the EDGE-morphology is homophonous with the dative. The possessor gets the EDGE-morphology from D in [Spec, DP], then it leaves the possessive DP.

This section focuses on the exact motivation behind possessor extraction. The previous chapter dealt with cases when the possessive construction inherited the strongest feature set associated with one of its elements: the possessor, the possessum, a determiner, an adjective or a quantifier. In such constructions the possessive DP checks its inherited discourse features in the appropriate specifier position in the sentence. And it is very important to note that the possessive DP hosts the possessor DP in these cases. However, in Hungarian and in southern German dialects it is also possible that the discourse feature set of the possessor does not take part in the competition described in chapter 4 but it is checked separately from the set the rest of the possessive DP inherits. The separate feature checking of the possessor and the rest of the possessive DP can take place if the possessor is extracted from the possessive DP. Thus, these two DPs take part in topic-focus relations on the CP level separately from each other.¹⁰⁸

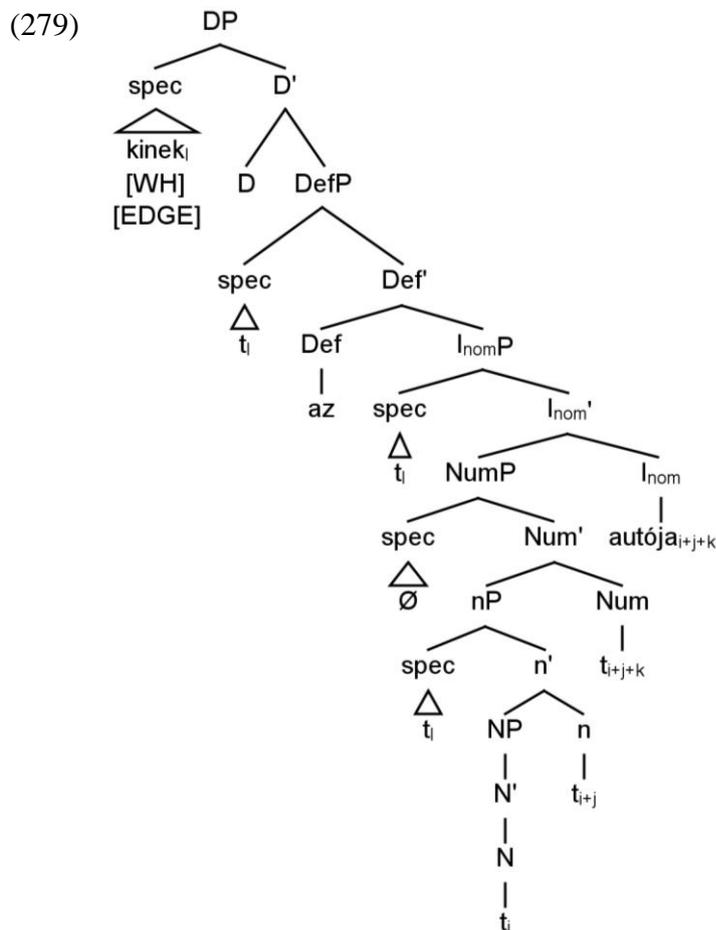
First, the mechanism of possessor extraction is illustrated on Hungarian data, see (278). Then, the analysis will turn to German.

- (278) *Kinek_i t_{unt} el [DP t_i az autója]?
whose-WH-EDGE disappeared the car
'Whose car disappeared?'*

(278) contains a wh-possessor *kinek*. As shown in (279) this possessor and the possessum *autó* form one possessive DP in earlier steps of the derivation *kinek az autója*. As discussed, the constituents cannot check their discourse features in the DP because there are no CPs, ContrPs, TopPs and FocPs in the DP. So, the most dominant feature set has to percolate up

¹⁰⁸ In this respect, the lack of possessor extraction resembles wh-pied-piping and possessor extraction is similar to the lack of wh-pied-piping. Wh-pied-piping was described in section 4.3.

onto the topmost DP so that the DP can check these features against an appropriate head in the sentence.



However, in contrast to the structures examined so far, in (278) the features associated with the possessor do not percolate to the topmost DP of the possessive construction. Instead of this, they remain on the possessor DP. In order for these features to be checked the possessor has to leave the possessive DP. As discussed in chapter 3 the escape hatch for the possessor is the [Spec, DP] position where it is marked for Edge with the suffix *-nek*. After getting this morpheme the possessor can be extracted from the possessive DP and can take part in topic-focus relations separately from the rest of the possessive DP.

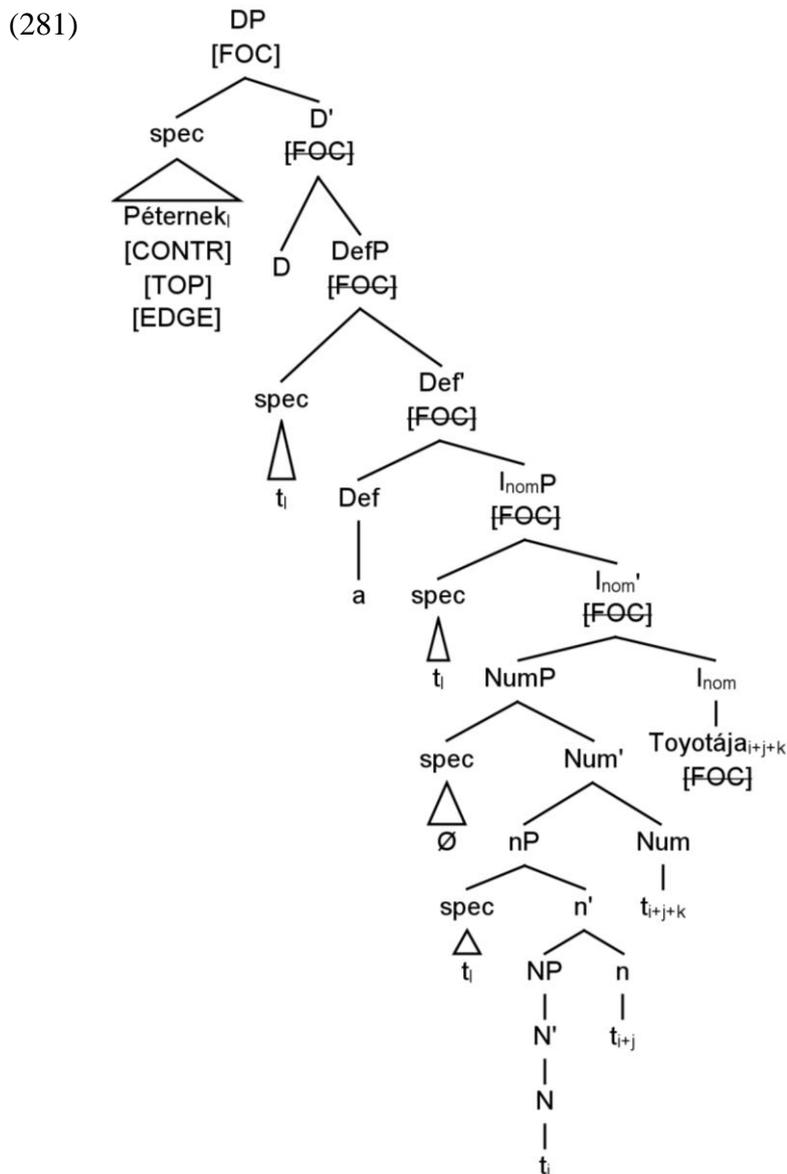
As a second step, we must examine what happens to the rest of the possessive DP after feature percolation. Does the extracted possessor block the percolation of the features hosted on the other constituents in the possessive DP? For this, we should analyse (280).

(280) A: *Képzeld, tegnap betörték Péterékhez.*
 imagine yesterday broke in Peter's-to
 'Just imagine, Peter's house was broken into yesterday.'

B: *Tényleg? És miket vittek el tőlük?*
 really and what took away from them
 'Really? And what did the burglars take away?'

A: *Ágnes ékszereit vitték el,*
 Agnes jewels took away
 [_{DP} Péternek]_i pedig állítólag [_{DP} t_i a Toyotája] tűnt el.
 Peter-CONTR-TOP as for allegedly the Toyota-FOC disappeared
 'Agnes' jewels were stolen and Peter's Toyota has allegedly disappeared.

In (280), A's second turn is the focus of discussion. In the second clause *Péter* is an extracted possessor which formed a possessive DP together with *Toyotája*. This is depicted in (281).



The possessor *Péternek* is extracted from the possessive DP, so the most dominant feature set [CONTR][TOP] does not take part in the competition prior to feature percolation. Hence, the possessive DP inherits [FOC] from the possessum. Consequently, the possessive DP *t_i a Toyotája* checks this discourse feature in [Spec, FocP], and the possessor DP *Péternek* checks its own feature set ([CONTR][TOP]) in [Spec, TopP] and [Spec, ContrP] in the clause.¹⁰⁹

(282)-(284) show that possessor extraction is optional in Hungarian. At this point we should focus our attention on the possessive constructions uttered by speaker B.

(282) A: [_{DP} *Kinek*]_i *tűnt el* [_{DP} *t_i az autója*]?
 whose-WH-EDGE disappeared the car
 ‘Whose car disappeared?’

B: [_{DP} *t_i Az autója*] [_{DP} *Péternek*]_i *tűnt el*.
 the car-TOP Peter-FOC-EDGE disappeared
 ‘Peter’s car disappeared.’

(283) A: [_{DP} [_{DP} *Kinek*] *az autója*] *tűnt el*?
 whose-WH-EDGE the car disappeared
 ‘Whose car disappeared?’

B: [_{DP} [_{DP} *Péternek*] *az autója*] *tűnt el*.
 Péter-FOC-EDGE the car-TOP disappeared
 ‘Peter’s car disappeared.’

(284) A: [_{DP} [_{DP} *Kinek*] *az autója*] *tűnt el*?
 whose-WH-EDGE the car disappeared
 ‘Whose car disappeared?’

B: [_{DP} [_{DP} *Péter*] *autója*] *tűnt el*.
 Péter-FOC car-TOP disappeared
 ‘Peter’s car disappeared.’

All of these dialogues are semantically equivalent.¹¹⁰ In (282) possessor extraction applies. The [FOC] feature of the possessor does not take part in the competition prior to feature percolation. As a result, the extracted possessor moves to [Spec, FocP] to check [FOC] against Foc. As [FOC] does not compete with [TOP] on the possessum, [TOP] is entitled to

¹⁰⁹ Of course, a focus possessor can also be extracted out of the possessive DP. However, it is enough to show the mechanism of possessor extraction on only one discourse function.

¹¹⁰ It seems that the form answers take is often influenced by the form of the question (Mark Newson personal communication). So, this variation can be explained by the tendency that question-answer pairs show parallel structures.

percolate to the possessive DP which moves to [Spec, TopP] to check this feature. In (283) and (284) the possessor and the possessum form one constituent, i.e. the possessor is not extracted from the possessive DP. In these sentences the possessor's [FOC] wins the competition over the possessum's [TOP]. As a result, the possessive DP inherits [FOC] from the possessor and moves to [Spec, FocP] to check it.

Given this type of reasoning, possessor extraction seems to be an optional mechanism in Hungarian, and it is applied if the speaker wants his utterance explicitly to encode the discourse function of the possessor and the possessum, at the same time.¹¹¹

Similarly to Hungarian, in southern German dialects there are two ways for the possessor to check its discourse features. On the one hand, the possessive DP can inherit its feature set if it is the most dominant one in the construction. In this case, these features percolate to the possessive DP on which they are checked in the CP against an appropriate head.

(285) A: *Wessen jüngste Tochter studiert Jura?*
 whose youngest daughter studies law
 'Whose youngest daughter studies law?'

B: *Ich denke, dass Jura*
 I think that law-TOP
 [_{DP} *dem Arzt* *seine jüngste* *Tochter*] *studiert.*
 the doctor-FOC-EDGE LINKER youngest-TOP daughter-TOP studies
 'I think it is the doctor's youngest daughter who studies law.'

In (285) B utters the possessive DP *dem Arzt seine jüngste Tochter* which contains a topic possessum *Tochter* ([TOP]), a topic adjective *jüngste* ([TOP]) and a focus possessor *dem Arzt* ([FOC]). As stated it is the feature set [FOC] which is the most dominant among these three, so the possessive DP inherits this. Hence, the whole possessive construction will be a focus in the sentence, checking its inherited feature set against a Foc head. The subject possessive DP follows the topic object in the subclause which indicates that *dem Arzt seine jüngste Tochter* is in [Spec, FocP].

It is also possible to extract the possessor from the German possessive DP. Hence, it is possible for the possessor and the possessum to take part in topic-focus relations in the CP separately from each other. In this case, the possessor's features do not compete with the

¹¹¹ The possessor must be extracted in Hungarian if it is an edge marked pronoun or if the matrix D is covert and indefinite (see footnote 23 in chapter 3).

features of the other elements in the possessive DP. Instead of this the possessor leaves the possessive DP and checks its own features in the CP.

(286) A: *Welches Haus von dem Mann ist schön?*
 which house of the man is beautiful
 ‘Which house of the man’s is beautiful?’

B: [_{DP} *Dem Mann*]_i *ist* [_{DP} *t_i sein rotes Haus*] *schön*.
 the man-TOP-EDGE is LINKER red-FOC house-TOP beautiful
 ‘It is the man’s red house which is beautiful.’

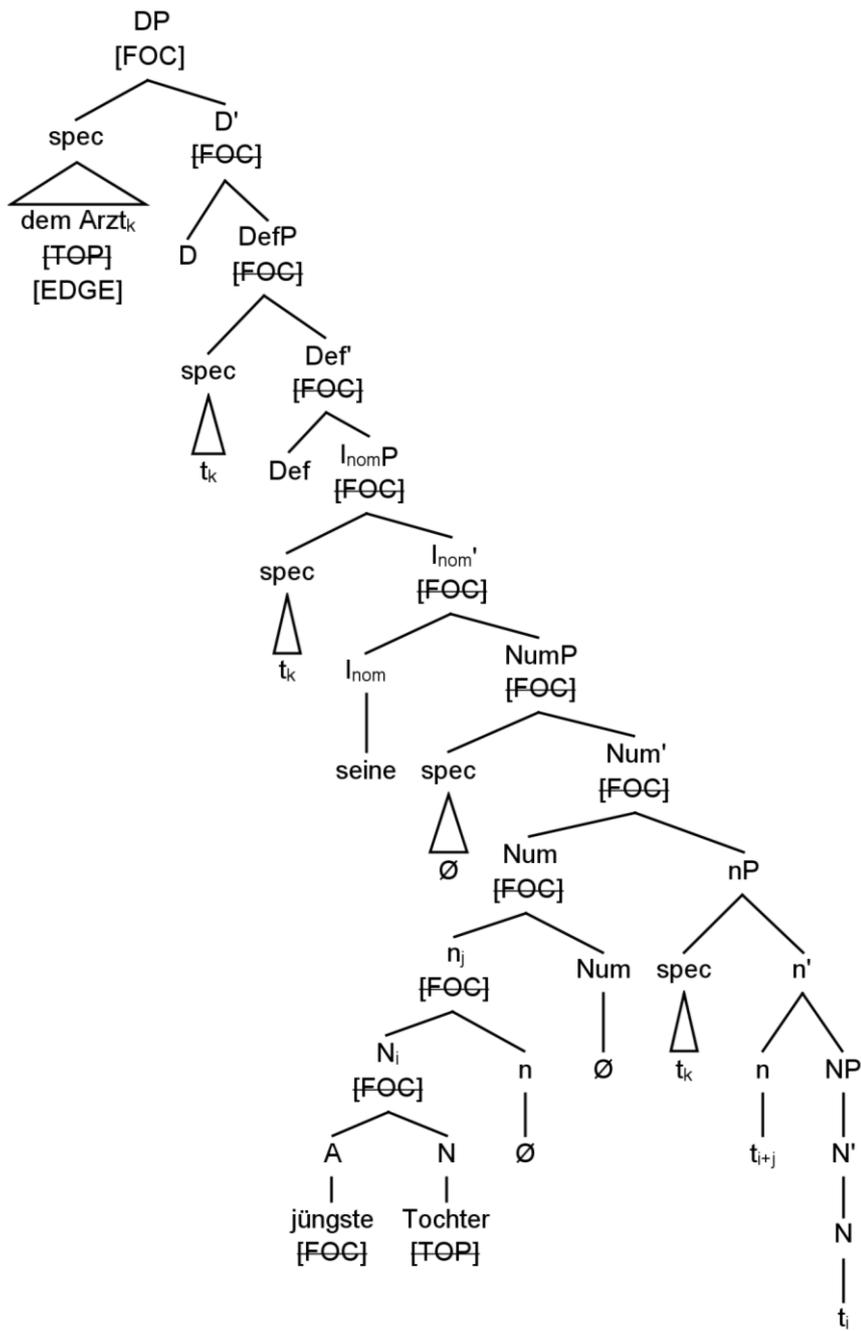
In B’s answer the possessor *dem Mann* was extracted from the possessive DP and its feature set does not take part in the competition prior to feature percolation. This means that in this example the topic possessor retains its [TOP] feature set which it checks against Top independently of the rest of the possessive DP. Consequently, in the rest of the possessive DP only the feature sets of the possessum *Haus* and the adjective *rotes* compete. As the [FOC] of the adjective dominates over the [TOP] of the possessum, the rest of the possessive DP *t_i sein rotes Haus* inherits the feature of the adjective, so it moves to [Spec, FocP].

(287) displays a dialectal question. This piece of data indicates that not just in Hungarian but in the southern German dialects, too, it is possible for the extracted possessor to check the [WH] feature in the CP independently of the rest of the possessive DP.

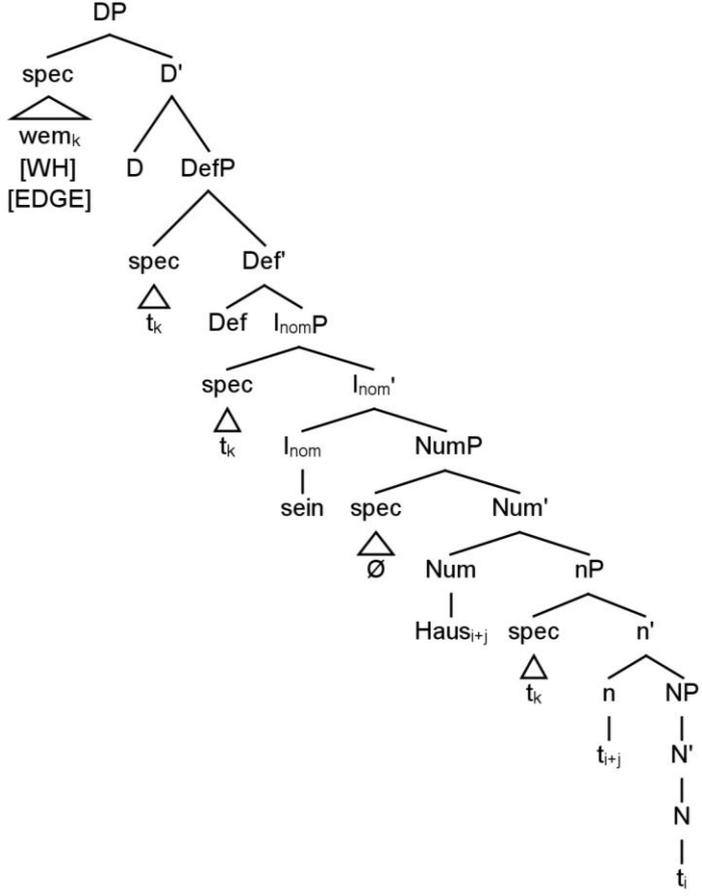
(287) [_{DP} *Wem*]_i *ist* [_{DP} *t_i sein Haus*] *schön?*
 whose-WH-EDGE is LINKER Haus beautiful
 ‘Whose house is beautiful?’

For the sake of completeness, (288) and (289) give a structural representation of the DPs in (285) and (287) respectively:

(288)



(289)



All in all, we can regard possessor extraction to be a discourse feature driven mechanism in Hungarian and in some Southern German dialects. It enables the speakers to encode the discourse function of both the possessor and the possessum into the CP if both of them convey relevant information.¹¹²

5.4. The alternation of pre- and postnominal possessors

This section aims at describing the alternation of pre- and postnominal possessors with special attention to the discourse related motivation behind this phenomenon. In chapter 3 it was claimed that in the Hungarian possessive DP there is only one case position: the prenominal [Spec, I_{nom}P]. So, in this section it is not necessary to deal with this language. The same can be said about German, too, because in this language it is only the realisation of I_{nom} which governs the alternation of pre- and postnominal possessors. Consequently, this section examines English data exclusively.

Traditionally, the force behind the alternation of pre- and postnominal possessors is regarded to be very complex in English. The factors motivating this phenomenon can be associated with three dimensions: animacy, discourse function and the realisation of I_{nom}.

¹¹² Hole (2004) and Mayer (2012) assume that ‘Pertinenzdativ’ (see (I)) is also an instance of possessor extraction. This phenomenon is not discussed in this dissertation.

- (I) *Ich wasche mir die Hände.*
 ‘I wash my hands.’

Furthermore, Szabolcsi (1994) argues that Hungarian possessive sentences are also derived with the help of possessor extraction:

- (II) *Péternek_i van [DP t_i egy új autója].*
 Peter-NOM-EDGE is a new car-POSS-SG-3.SG-NOM
 ‘Peter has a new car.’

Some researchers propose that German and English possessive sentences are also derived by means of possessor extraction and the English *have* and the German *haben* can be decomposed as *be/sein* + P, see (III) and (IV) respectively. Den Dikken (1997) also represents the view that the incorporation of a preposition into *be* gives rise to *have*. As the present dissertation does not deal with these constructions, it does not take stance regarding this analysis.

- (III) [DP *Peter*]_i *hat* [DP t_i *ein neues Auto*].
 Peter has a new car
 ‘Peter has a new car.’

- (IV) [DP *Peter*]_i *has* [DP t_i *a new car*].

According to descriptive grammars (such as Huddleston and Pullum (2002)) animacy influences the realisation of the possessor in the following way. If a possessor is animate, it occupies the prenominal position, cf. (290). However, inanimate possessors are postnominal, see (291).¹¹³

(290) *the cat's ear*

(291) *the leg of the table*

Rosenbach (2002) defines the second dimension of this variation as the discourse status (newness) of the possessor. As (292) shows, discourse new possessors are postnominal. However, discourse old possessors are prenominal, as in (293).

(292) *A meeting of Overeaters Anonymous will take place at the home of Agnes Levy.*

(293) *What: A birthday party
Who: For Amy Lindsay
When: 2:00 on Saturday afternoon
Where: Amy's house*

(Deane 1992: 203)

In (292) the possessor *Agnes Levy* is discourse novel, so it is realised postnominally. In (293) *Amy* is introduced into the discourse before the possessive DP *Amy's house* is presented. Therefore, in this case the possessor is discourse old, so it surfaces in the prenominal position.

(292) shows that these two requirements governing the relative position of the possessor and the possessum are in interaction with each other. In (292) the possessor *Agnes Levy* is animate, so it should occupy the prenominal position. However, its newness overrides this requirement and forces it into the postnominal position. (294) and (295) show that the relation between the newness and the animacy of the possessor is not that simple.

(294) A: *Do you store Peter's potatoes in room 1?*
B: *No, **John's potatoes** I store there.*

¹¹³ There are some exceptions to this tendency:

- (I) *the eye of the tiger*
- (II) *the ship's funnel*

- (295) A: *Have the governments revitalised the economies of both the euro-area and the non-euro area?*
 B: *The governments have revitalised **the economies of the euro-area** but the economies of the non-euro area they have not revitalised yet.*

In (294) the bold possessive DP contains an animate contrastive focus possessor and a topic possessum. Based on (292) we concluded that the effect of the [FOC] feature of the possessor dominates over the requirement set by its animacy. Therefore, we would expect the bold possessor in (294) to be postnominal. However, *John* is prenominal. The bold DP in (295) hosts an inanimate topic possessor. Although based on our observations in connection with (293), we would expect a prenominal possessor in this construction, the possessor is spelled out postnominally. Hence, in (294) and (295) animacy seems to override the requirements of the newness of the possessor.

In sum, it seems that our observation in connection with (292)-(293) and (294)-(295) are contradictory. This may suggest that it is not the animacy and the [TOP]/[FOC] nature of the possessor which define the relative position of the possessor and the possessum. If we take a closer look at the data in (290)-(295), we can observe that it is the realisation of I_{nom} that has an effect on this word order alternation. As proposed in chapter 3, if I_{nom} is occupied by an agreement morpheme associated with a determiner (D) the possessor must be postnominal (cf. (291), (292) and (295)). Nevertheless, if I_{nom} hosts an inflectional element associated with possessors (e.g. 's), the possessor is spelled out prenominally (cf. (290), (293) and (294)). (296) and (297) provides further evidence for this assumption.

- (296) A: *Is the ship ready?*
 B: *Not yet. This funnel of the ship is not working.*

(297) *the ship's funnel*

In (296) *this* is associated with an abstract inflectional element in I_{nom} which disallows the presence of another one in this position. So, the possessor cannot get case in [Spec, $I_{nom}P$]. Hence, (296) contains a discourse old postnominal possessor even if based on footnote 113 and the discussion of (293) it should be spelled out prenominally. By contrast, in (297) the 'Saxon Genitive' morpheme in I_{nom} case marks the possessor in the prenominal [Spec, $I_{nom}P$] position.

All in all, the alternation of pre- and postnominal possessor in English cannot be taken to be a discourse related phenomenon.

5.5. The ‘double genitive’ construction in English

Our analysis of the alternation of pre- and postnominal possessors cannot be complete without the examination of the ‘double genitive’ construction in English which is supposed to contain a postnominal possessor. (298) displays such a construction.

(298) *some books of Peter’s*

Traditionally it is assumed that the (postnominal) possessor *Peter* in (298) is marked as genitive twice: with the ‘Saxon Genitive’ morpheme and the preposition *of*. However, there is a problem with this approach. Just as in the case of ‘possessor doubling’, the source of the problem in (298) is the misleading term ‘double genitive’ construction. In the discussion of the case marking of the possessor in chapter 3 (section 3.5.2.) it was shown that *of* is not a case manifestation. It is a preposition which assigns accusative to the postnominal possessor. In addition, in chapter 3 (footnote 53), in the description of the syntax of the enclitic ‘s, it was demonstrated that the ‘Saxon Genitive’ morpheme in I_{nom} is not a case morpheme either, but it does assign case (which is phonologically unrealised) to the prenominal possessor in [Spec, $I_{\text{nom}}P$].

Given this type of reasoning, it can be seen that the term ‘double genitive’ is syntactically inadequate. In order to gain an insight into the mysteries of the construction in (298) we should examine its syntax and semantics.

5.5.1. The ‘double genitive’ construction as partition

Based on Asarina (2009), the present thesis argues for a parallelism between the DP in (298) and the partitive DP in (299).

(299) *some of Peter’s books*

The parallelism we assume has semantic and syntactic components which are closely interrelated. However, it must be noted that there are also syntactic differences between (298) and (299) but these are semantically motivated.

As a first step, we must examine the semantic similarities between (298) and (299). The tests will make use of a simple possessive DP with a postnominal possessor as the control of the constructions examined. Asarina (2009) observes that both the partitive construction and the ‘double genitive’ construction show Barker’s (1998) Anti-Uniqueness Effect. In contrast to these, the possessive DP with a postnominal possessor does not. This means that the former two constructions cannot be combined with a definite article without being modified by a relative clause.

(300) a. **Jane met the [one of her lawyer’s sons].*

b. *Jane met the [[one of her lawyer’s sons] who is going to London].*

(301) a. **Jane met the [son of her lawyer’s].*

b. *Jane met the [[son of her lawyer’s] who is going to London].*

(302) a. *Jane met the [son of her lawyer].*

b. *Jane met the [[son of her lawyer] who is going to London].*

(Asarina 2009: 2)

(300) and (301) demonstrate the Anti-Uniqueness Effect as it applies to partitive and ‘double genitive’ constructions. As both (302a) and (302b) are well-formed, it can be concluded that simple possessive DPs with a postnominal possessor are not sensitive to this phenomenon.

The property of being strictly partitive is another semantic aspect which draws a parallelism between the partitive and the ‘double genitive’ construction and at the same time draws a borderline between them and possessive DPs with a postnominal possessor. According to Asarina (2009), in the case of the first two constructions the referent of the whole DP must be the subset of the referent of the DP which is the complement of the preposition *of*. However, this requirement is not valid in the case of the third construction type.

(303) # *I saw* [_{DP} *two of* [_{DP} *my lawyer’s eyes (which are blue)*]].

(304) # *I saw* [_{DP} *two/the eyes of* [_{DP} *my lawyer’s (which are blue)*]].

(305) *I saw* [_{DP} *the eyes of* [_{DP} *my lawyer (which are blue)*]].

(based on Asarina 2009: 2)¹¹⁴

In (303)-(305) *eyes* is chosen to be the possessum because normally everybody has two eyes. The referent of both of the matrix DPs in (303) and (304) are two eyes. However, the complement DP of the preposition *of* must refer to more than two eyes, hence the oddity. These examples illustrate the strictly partitive nature of these two construction types. Example (305) containing a DP hosting a simple postnominal possessor is not problematic in this respect because strict partitiveness is not part of its meaning.

Citing Storto (2000), Asarina (2009) also points out a difference between partitive and ‘double genitive’. This is the problem of the contextually available readings. Storto (2000) states that in a particular context the partitive construction has an extra potential meaning to what the ‘double genitive’ construction has. This is shown in (306).

(306) *Yesterday John and Paul were attacked by (different) groups of dogs.*

A: ... *Unfortunately, some of John’s dogs were pit bulls.*

B: ... *Unfortunately, some dogs of John’s were pit bulls.*

(Storto 2000: 501)

In (306a) the partitive construction expresses that there were some pit bulls among the dogs which attacked John. In contrast to this, in (306b) the ‘double genitive’ DP does not have this meaning. It expresses pure possession, i.e. that among the dogs John owned there were some pit bulls, too.

In sum, the first two observations suggest that the ‘double genitive’ construction is some kind of a partitive construction. Nevertheless, the third observation suggests that this is not so. Asarina (2009) explains that this conflict can be put down to some syntactic differences which have a significant influence on the semantics of these constructions even if these two DP types show mostly syntactic similarities. In (306), for instance, both of the DPs contain the quantifier *some*, the preposition *of*, the possessum *dogs*, the possessor *John* and an empty NP.

¹¹⁴ Asarina (2009) uses the possessum *parents*. But if somebody’s parents are divorced and have new partners, we can talk about four parents. So, there is no direct reference to a particular number of parents. That is why the possessum is changed to *eyes*.

However, this empty NP has a different structural status in the two constructions. This is the syntactic difference which is responsible for the establishment of the different set of contextually available readings in the case of (306a-b).

Asarina (2009) describes the partitive construction in (307a) syntactically as (307b).

- (307) a. *(two) of John's dogs*
b. (two) \emptyset_{NP} [_{ofPART} [John's dogs]]

In (307b) the partitive PP is the complement of the head of the empty NP. This means that the partitive preposition *of* is tasked with forming the semantic relationship between the possessive DP *John's dogs* and the empty NP. Thus, the set of the empty NP's referents is the subset of the set comprising the reference of the possessive DP: $[\emptyset_{NP}] \subset [\text{John's dogs}]$. This means that the entity denoted by \emptyset_{NP} is one of the dogs owned by John.

Asarina (2009) proposes the syntactic structure (308b) for the analysis of the 'double genitive' construction in (308a). In contrast to the syntactic structure associated with the partitive construction in (307b), here the empty NP is part of the possessive DP. In other words, the possessive DP is elliptic. In this case the set of the referent of *dogs* is the subset of the set comprising the reference of the elliptic possessive DP *John's \emptyset* : $[\text{dogs}] \subset [\text{John's } \emptyset_{NP}]$. So, the dogs are part of the group of all the entities owned by John.

- (308) a. *dogs of John's*
b. dogs [_{ofPART} [John's \emptyset_{NP}]]

This discussion of (307) and (308) argues for the validity of the idea that the 'double genitive' construction is a type of partitive construction because both of them express that an entity belongs to a group. Given this type of reasoning, the preposition *of* expresses partitiveness in the constituent *of John's*, so it does not have any role in case-marking the possessor. Thus, it can be concluded that it is not the same *of* as we can find in possessive DPs in which the possessor is postnominal. In (308a) the possessor gets its case from the 'Saxon Genitive' morpheme in the elliptic possessive DP and the preposition *of* case marks the whole possessive DP.

It should be mentioned that Lyons (1985) raises some counterevidence for handling the ‘double genitive’ construction as a type of partitive construction.

First, if a partitive construction is introduced by a demonstrative, it must include a relative clause as opposed to a ‘double genitive’, which need not:

- (309) a. *Those of the houses that were sold are in good condition*
b. **Those of the houses are in good condition*
c. *Those houses of yours that were sold are in good condition*
d. *Those houses of yours are in good condition*

(Lyons 1986: 127)

However, it can be pointed out that (309a) cannot be compared to (309c) and (309b) cannot be compared to (309d) because *those* does not have the same status in the respective sentences. In (309c-d) *those* is a demonstrative determiner but in (309a-b) it is used as a pronoun. However, non-quantifier determiners such as *the* or *those* cannot usually be used as pronouns. By contrast, quantifier determiners can be used as pronouns. Hence, all of the sentences in (309) would be grammatical with *some*:

- (310) a. *Some of the houses that were sold are in good condition*
b. *Some of the houses are in good condition*
c. *Some houses of yours that were sold are in good condition*
d. *Some houses of yours are in good condition*

In (310a-b) *some* forms a partitive construction with *the houses* regardless of whether this DP includes a relative clause or not. (310c-d) behave in the very same way. *Some houses* forms a partitive construction with the elliptic possessive DP *yours* and it does not matter whether it is followed by a relative clause or not. Therefore, the ungrammaticality of (309b) can be put down to the characteristics of demonstratives and not to the constructions.

The second argument Lyons (1986) brings against treating ‘double genitive’ constructions as partitives is that the PP contained in the partitive construction can be preposed, whereas that in the ‘double genitive’ cannot, see (311):

- (311) a. *Of the students, many are no longer here*
 b. *Of our books, one was stolen*
 c. *Of those linguists, a group remained*
 d. **Of ours, a friend had already arrived*
 e. **Of John's, some students were waiting*
 f. **Of mine, those books are boring*

(Lyons 1986:127)

However, it can be argued that these observations do not conclude against handling 'double genitive' constructions differently from partitives. (311d-f) are ungrammatical because the elided noun in the possessive DPs precedes the overt noun:

- (312) $[_{PP} \text{ of } [_{DP} \text{ John's } \textit{students}]]_i \textit{ some students } t_i \textit{ were waiting.}$

Elision can be regarded to be a PF operation taking place after movement. An element can be elided only if it is preceded by an overt element which has the same reference. (312) does not contain *students* before the deletion site. As a result, the content of the elided noun cannot be reconstructed from the context. On the other hand, in (311a-c) the partitive *of* moves together with the overt noun:

- (313) $[_{PP} \text{ of } [_{DP} \textit{ the students}]]_i \textit{ many students } t_i \textit{ are no longer here}$

In (313) the overt noun precedes the elided noun at PF. Consequently, its content can be reconstructed. Therefore, the difference between (311a-c) and (311d-f) is not that 'double genitive' constructions are not partitive.

Finally, Lyons (1986) proposes that (314a) is not synonymous with (314c), neither is (314b) with (314d). (314a) implies that there exist not just one friend but more, and (314c) does not, i.e. the friend visited could be the only friend. Similarly, (314b) picks out some books from a larger set but (314d) has nothing to say about whether there exist more books or only the ones stolen.

- (314) a. *I'm going to stay with one of my friends*
 b. *Some of my books have been stolen*
 c. *I'm going to stay with a friend of mine*
 d. *Some books of mine have been stolen*

(Lyons 1986:127)

However, it can be said that it is not the construction which is responsible for this difference but the set of determiners used. In the case of (314a) and (314c) *a* vs. *one* is the source of the semantic difference, and by (314b) and (314d) the use of the partitive *some* and the indefinite *some* respectively.

All in all, it can be stated that Lyons' (1986) arguments do not provide evidence against handling 'double genitives' as partitives.

Based on the argumentation above it can be concluded that the term 'double genitive' is misleading in the analyses of DPs like *some books of John's* because it is inadequate on syntactic and semantic grounds. The discussion showed that this DP does not contain a postnominal possessor but the preposition *of* encodes partitive meaning. The complement of this P is an elliptic possessive DP.

5.6. Chapter summary

This chapter has examined some constructions and operations which are traditionally analysed as discourse related phenomena. First, 'possessor doubling construction' was examined which can be found in some dialects of German and Hungarian. It was argued that in Hungarian 'possessor doubling' should be analysed as resumption which does not have any special discourse related function. It is simply an agreement phenomenon used by some speakers.

In southern German dialects 'possessor doubling' can also be conceived of as an overt agreement operation between the possessor and the possessum. For marking agreement overtly these dialects use possessive linkers in I_{nom} . However, in itself the special word order pattern associated with possessive linkers is not motivated by any discourse features.

In southern German dialects nominal pro-drop goes hand in hand with possessive linkers. Namely, in these dialects third person possessors alternate with *pro* and pro-drop operates obligatorily in all the other persons. If pro-drop operates, the phonologically unrealised possessor is licensed by the possessive linker in I_{nom} just like the agreement suffixes license the *pro* possessor in Hungarian.

In German pro-drop is not motivated by discourse features. In contrast, the Hungarian pronominal possessor has to be dropped except for the cases when it is associated with the most dominant discourse feature set (containing [CONTR] and/or [FOC]) in the possessive DP.

Possessor extraction is also strongly related to possessive linkers in the southern German dialects because in German only DPs containing a possessive linker and an [EDGE] possessor allow this operation. In Hungarian it is always possible to extract the possessor out of the possessive DP. It is important to highlight that in both languages it is a prerequisite for possessor extraction that D marks the possessor [EDGE] in [Spec, DP]. The aim of possessor extraction is that it makes it possible for the possessor and the rest of the possessive construction to take part in CP-level topic-focus relations independently of each other. In order for this to happen, the syntactic sub-features of the possessor's discourse features do not compete with the other feature sets before feature percolation because the possessor's syntactic sub-feature set is checked off separately in the CP.

The alternation of pre- and postnominal possessors in English is not driven by the [TOP]/[FOC] feature of the possessor. This word order variation is caused by the different realisations of I_{nom} which is discussed in chapter 3.

We found that the constructions which are traditionally analysed as 'double genitive' DPs have nothing to do with postnominal possessors. They represent a type of partitive construction in which the preposition *of* is responsible for the partitive interpretation and the complement of this P is an elliptic possessive DP.

All in all, it can be proposed that this chapter found only two phenomena which are driven by discourse features: pro-drop in the Hungarian possessive DP and possessor extraction from German DPs (containing a possessive linker and an [EDGE] possessor) and from Hungarian DPs.

Chapter 6

Conclusion

6.0. Introduction

The aim of this dissertation has been to propose a uniform structure for the analysis of possessive DPs in English, German and Hungarian which is also capable of accounting for the differences between these languages. Based on this structure, the thesis also intended to give an alternative description of the behaviour of discourse features which runs into fewer problems than the Split-DP account.

In what follows, I briefly summarise the most important findings regarding the structure of the possessive DP and the behaviour of the discourse features [WH], [CONTR], [TOP] and [FOC]. Next, I recapitulate on the observations made with respect to possessive constructions which are traditionally associated with a special discourse function. Finally, some concluding remarks are made.

6.1. The structure of the possessive DP

Similarly to the CP, the DP is assumed to consist of lexical and functional projections. In the possessive DP the lexical projections are NP and nP. The possessum is merged in to N and n hosts the possessive morpheme which introduces the [Spec, nP] position into which the possessor is merged. The functional projections are NumP, I_{nom}P, DefP and DP. Num is responsible for hosting features regarding the number of the possessum. The role of I_{nom} lies in the case marking of the possessor and making agreement between the possessor and the possessum possible. Finally, Def encodes definiteness and D deictic features.

The following table summarises which positions the different constituents occupy in the English, German and Hungarian possessive DP at Spell-Out.

(315)

	<u>The structural place of the constituents in the possessive DP</u>		
	English	German	Hungarian
possessor	<ul style="list-style-type: none"> • prenominal: [Spec, I_{nom}P] • postnominal: [Spec, nP] 	<ul style="list-style-type: none"> • prenominal: [Spec, I_{nom}P] • postnominal: [Spec, nP] • on the Edge: [Spec, DP] 	<ul style="list-style-type: none"> • prenominal: [Spec, I_{nom}P] • on the Edge: [Spec, DP]
possessum	<ul style="list-style-type: none"> • Num 	<ul style="list-style-type: none"> • Num 	<ul style="list-style-type: none"> • I_{nom}
adjective	<ul style="list-style-type: none"> • [_N A, N] 	<ul style="list-style-type: none"> • [_N A, N] 	<ul style="list-style-type: none"> • [_N A, N]
quantifier	<ul style="list-style-type: none"> • X⁰: D • X^{max}: [Spec, NumP] 	<ul style="list-style-type: none"> • X⁰: D • X^{max}: [Spec, NumP] 	<ul style="list-style-type: none"> • X^{max}: [Spec, NumP]
demonstrative	<ul style="list-style-type: none"> • D 	<ul style="list-style-type: none"> • D 	<ul style="list-style-type: none"> • D
possessive linker	<ul style="list-style-type: none"> • none 	<ul style="list-style-type: none"> • I_{nom} 	<ul style="list-style-type: none"> • none
Saxon Genitive	<ul style="list-style-type: none"> • I_{nom} 	<ul style="list-style-type: none"> • none 	<ul style="list-style-type: none"> • none
wh-elements	<ul style="list-style-type: none"> • same as non-wh 	<ul style="list-style-type: none"> • same as non-wh 	<ul style="list-style-type: none"> • possessor: [Spec, DP] • not the possessor: same as non-wh

6.2. Discourse features

The fact that DPs can take up the discourse function of one of their constituents implies that [WH], [CONTR], [FOC] and [TOP] are not checked within the DP. This suggests that there are no C, Contr, Foc or Top heads inside the DP, against which these features could be checked. So, in the present dissertation it is assumed that the discourse features hosted by the different constituents compete with each other, the winning set percolating up to the DP. As a result, the DP inherits the most dominant feature set and behaves in the CP accordingly. This happens after the whole phase has been built but before it is spelled out.

It was found that all constituents in the DP have an equal chance to pass on their discourse feature set to the DP: the syntactic status of the original host does not affect the outcome of the competition between the feature sets taking place before percolation. Only the hierarchy [WH] > [CONTR] > [FOC] > [TOP] governs which feature set is chosen to be the winner.

But, importantly, features of the different constituents compete and percolate in sets, not individually.

The winning set's syntactic sub-features percolate until they reach the phase boundary, i.e. the maximal projection of the DP. According to the analysis presented in this dissertation, feature percolation is a copy-delete operation proceeding from node to node in a step by step fashion. This means that at every step a new copy of the syntactic sub-features is created and the copy on the lower node is immediately deleted. After feature percolation, the DP is spelled out and later undergoes movement to the left periphery of the CP to check the inherited syntactic sub-features against a C, Contr, Top or Foc head.

On the other hand, the semantic and phonological sub-features do not compete or percolate. They stay on their original host element and they do their job at the interfaces. As LF has access to the semantic sub-features, it is always clear what discourse function a given element plays even if its syntactic sub-feature loses the competition. PF maps stress and intonation onto the DP based on the phonological sub-features.

6.3. Extending feature percolation to other syntactic phenomena

An advantage of the feature percolation approach is that, unlike the Split-DP account, it does not need to stipulate two separate discourse feature sets (a verbal and a nominal one). In addition, it can also explain, for instance, why the possessive DP occupies the focus position in the clause if it is only the adjective modifying the possessum which is interpreted as a focus.

Moreover, with the help of cyclic feature percolation it is also possible to account for other syntactic phenomena in a uniform way. The analysis is applicable to the description of pro-drop in Hungarian and possessor extraction in Hungarian and in Southern German dialects.

The motivation behind Hungarian nominal pro-drop can be described by virtue of the competing feature sets. The present dissertation describes possessor extraction as a subcase of feature percolation in which the discourse feature set of the possessor does not take part in the competition prior to percolation.

6.4. Concluding remarks

The analysis provided in this dissertation is not complete as several issues have had to be left open for future research. For instance, the exact structural place of adjectives has to be defined more carefully and the precise nature of the CP-level movements to the specifiers of C, Top, Foc and Contr need to be observed in more detail. In addition, it would also be worth examining whether other features percolate and which XPs can be their destination. Nevertheless, the dissertation has achieved the aims set by the research.

Partly, the aim of this thesis was to set up a uniform structure for the analysis of English, German and Hungarian possessive DPs which is also able to account for the differences between these languages. On the whole, the structure presented here seems capable of describing a wide range of data. Nevertheless, the primary aim was to show that discourse oriented phenomena in connection with possessive constructions can be approached more effectively if we abandon the Split-DP analysis for the sake of feature percolation because it can account for a wider range of data and it does not stipulate vacuous movements inside the DP which are motivated by a double set of discourse features. All in all, in terms of the analysis of discourse features the present dissertation seems to offer a more explanatory approach than the Split-DP account.

Appendix

Appendix 1: The Hungarian DP

A) Percolation of [TOP]

- (I) A: *Látod azt a két fehér autót Péter háza előtt?*
see that the two white car Peter house in-front-of
'Can you see those two beautiful white cars in front of Peter's house?'
- B: *Képzeld, [DP azt a két fehér autót] állítólag a fiának vette.*
imagine that-TOP the two-TOP white-TOP car-TOP allegedly the son-DAT bought
'Just imagine, he allegedly bought those two white cars for his son.'

In (I) in B's subordinate clause the bracketed DP seems to occupy the topic position because it is directly followed by the adverb *állítólag* and it is not contrasted with anything. So, it can be assumed that the DP inherited [TOP] from the demonstrative *azt* or the quantifier *két* or the adjective *fehér* or the noun *autót*.

B) Percolation of [FOC]

- (II) A: *Melyik kalapot vegyem meg szerinted?*
which-WH hat buy-SUBJ pre-verb in-your-opinion
'Which hat do you think I should buy?'
- B: *Szerintem [DP ezt a kalapot] vedd meg.*
in-my-opinion this-FOC the hat buy-IMP pre-verb
'I think you should buy this hat.'

In B's answer, the demonstrative *ezt* carries the new information, yet the whole DP sits in the focus position causing pre-verb verb inversion. Therefore, it can be proposed that the [FOC] feature of the demonstrative percolated onto the whole DP. In the following dialogues the bold constituents (N, QP and the possessor DP) pass on their [FOC] feature to the DP.

- (III) A: *Melyiket vegyem meg szerinted?*
which-WH buy-SUBJ pre-verb in-your-opinion
'Which do you think I should buy?'
- B: *Szerintem [DP a **kalapot**] vedd meg.*
in-my-opinion the **hat-FOC** buy-IMP pre-verb
'I think you should buy the hat.'

(IV) A: *Hány kalapot vegyek meg szerinted?*
 how many-WH hat buy-SUBJ pre-verb in-your-opinion
 ‘How many hats do you think I should buy?’

B: *Szerintem [DP öt kalapot] vegyél meg.*
 in-my-opinion **five-FOC** hat buy-IMP pre-verb
 ‘I think you should buy five hats.’

(V) A: *Kinek a kalapját vegyem meg szerinted?*
 whose-WH the hat buy-SUBJ pre-verb in-your-opinion
 ‘Whose hat do you think I should buy?’

B: *Szerintem [DP Mari kalapját] vedd meg.*
 in-my-opinion **Mary-FOC** hat buy-IMP pre-verb
 ‘I think you should buy Mary’s hat.’

C) Percolation of [CONTR]

In (VI) the behaviour of contrastive wh-elements is discussed. (VI) contains a possessive DP *kinek a Mercedese* ‘whose Mercedes’ hosting a contrastive wh-possessor.

(VI) Context: A and B are talking about their colleague, Péter. Péter has a Mercedes. A knows that yesterday a Mercedes was stolen and he wrongly assumes that it was Péter’s.

A: *Hallottad, hogy Péter Mercedese eltűnt?*
 heard that Peter Mercedes disappeared
 ‘Have you heard that Peter’s Mercedes disappeared?’

B: *Nem tűnt el. Csak elvitte a nyaralójához.*
 not disappeared only took the weekend house-to
 ‘It did not disappear. He just took it to his weekend house.’

A: *De akkor [kinek a Mercedese] tűnt el?*
 but then whose-WH-CONTR the Mercedes disappeared
 ‘But then whose Mercedes disappeared?’

A’s final question in (VI) contains the possessive DP *kinek a Mercedese*. Here the possessor *kinek* is marked as [WH][CONTR]: it asks for a piece of information and at the same time it contrasts it with *Péter*. From the relative order of the verb and the pre-verb it can be concluded that the possessive DP has inherited the feature [WH]. In addition, as the presence of the contrastive phrase *de akkor* indicates, A contrasts the stolen Mercedes with that of

Peter's, so the DP *kinek a Mercedese* is contrastive. Therefore, it can be assumed that in (VI) the [WH] and the [CONTR] features percolated together to the possessive DP.

(VII) A: *Három Toyota eltűnt.*
 three Toyota disappeared
 'Three Toyotas disappeared.'

B: [*Két Toyota*] *tűnt el (nem három).*
 two-CONTR-FOC Toyota-TOP disappeared (not three)
 'Two Toyotas disappeared (not three).'

In (VII) the bracketed DP consists of a topic N *Toyota* and a contrastive focus QP *két* 'two'. The noun is a topic because A has introduced it into the discourse earlier. The quantifier, on the other hand, is a contrastive focus because it is the essence of B's correction. The DP inherits the features of the QP as shown by its behaviour as a contrastive focus in the CP. It requires a verb pre-verb word order (*tűnt el*) and it is also possible to insert the corrective phrase *nem három* 'not three' into the sentence which makes the contrastive interpretation even more intense. This suggests that in (VII) both [CONTR] and [FOC] percolated from the QP onto the DP.

D) Competition between [WH] and [FOC]

(VIII)ⁱ Context: B knows that A knows that somebody's Toyota disappeared and surmises that he doesn't know that somebody's Mercedes disappeared and so uses the question to pass on this information.

A: *Kinek a Toyotája tűnt el?*
 whose the Toyota disappeared
 'Whose Toyota disappeared?'

B: [*Kinek a Mercedese*] *tűnt el?*
 whose-WH the Mercedes-FOC disappeared
 'Whose Mercedes disappeared?'

In (VIII) B's bracketed DP consists of a [WH] possessor *kinek* and a [FOC] possessum *Mercedese*. The inverted order of the verb and the pre-verb (*tűnt el*) is not enough to decide if the possessive DP inherited [WH] or [FOC] because both of these features require this word order. However, the illocutionary force of the sentence demonstrates that the DP *kinek a*

ⁱ This test dialogue was constructed based on Mark Newson's comment.

Mercedese is a wh-element. Consequently, it seems that [WH] percolated from the possessor but [FOC] stayed on the possessum because it is impossible for a wh-element to be [FOC]. Wh-elements ask for new information but they do not embody new piece of information.

E) Competition between [WH] and [CONTR][TOP]

(IX) Context: A knows that yesterday two cars were stolen: a Toyota and a Mercedes. B only knows about the disappearance of the Mercedes.

A: *Most hallottam, hogy eltűnt egy Mercedes és egy Toyota.*
 Now heard that disappeared a Mercedes and a Toyota
 ‘I have just heard that a Mercedes and a Toyota disappeared.’

B: *Igen, hallottam a Mercedesről én is.*
 yes heard the Mercedes-about I too
 [*Kinek a Toyotája*] *tűnt el?*
 whose-WH the Toyota-CONTR-TOP disappeared
 ‘Yes, I have heard about the Mercedes, too. Whose Toyota disappeared?’

In (IX), B’s utterance contains the bracketed possessive DP *kinek a Toyotája*. In this context the possessor is [WH] and the possessum is [CONTR][TOP] (i.e. a contrastive topic). The inverted pre-verb verb order suggests that the possessive DP has inherited the feature [WH]. In addition, the possessive DP defines the force of the clause as interrogative. However, B’s turn cannot contain any contrastive elements and it is not possible for the adverb *állítólag* to follow the possessive DP, so it seems that the possessive DP is not marked as [CONTR] or [TOP]. Hence, it can be argued that the possessive DP *kinek a Toyotája* is a non-contrastive wh-element because it inherited the [WH] feature of the possessor.

Appendix 2: The German DP

A) Percolation of [FOC]

(X)-(XIII) show that discourse features may also percolate from [Spec, I_{nom}P] (from the prenominal possessor), from [Spec, nP] (from the postnominal possessor), from the QP in [Spec, NumP] and from the N-adjunct adjective. So, it can be concluded that similarly to Hungarian, the structural status of the host constituent does not have an effect on feature percolation.

- (X) A: *Wessen Tochter hat die Fischsuppe gekocht?*
 whose daughter has the fish soup cooked
 ‘Whose daughter cooked the fish soup?’
- B: *Ich denke, dass die Fischsuppe [DP **Peters** Tochter] gekocht hat.*
 I think that the fish soup Peter-FOC daughter cooked has
 ‘I think it was Peter’s daughter who cooked the fish soup.’
- (XI) A: *Wessen Tochter hat die Fischsuppe gekocht?*
 whose daughter has the fish soup cooked
 ‘Whose daughter cooked the fish soup?’
- B: *Ich denke, dass die Fischsuppe [DP die Tochter **der Chefin**] gekocht hat.*
 I think that the fish soup the daughter the boss-FOC cooked has
 ‘I think it was the boss’s daughter who cooked the fish soup.’
- (XII) A: *Wie viele Kollegen von Peter haben Fischsuppe gekocht?*
 how many colleagues of Peter have fish soup cooked
 ‘How many colleagues of Peter’s cooked fish soup?’
- B: *Ich denke, dass Fischsuppe [DP **zwei** Kollegen von Peter] gekocht haben.*
 I think that fish soup two-FOC colleagues of Peter cooked have
 ‘I think two colleagues of Peter’s cooked fish soup.’
- (XIII) A: *Welche Tochter von Peter hat diese Fischsuppe gekocht?*
 which daughter of Peter has this fish soup cooked
 ‘Which daughter of Peter’s cooked this fish soup?’
- B: *Ich denke, dass diese Fischsuppe [DP Peters **ältteste** Tochter] gekocht hat.*
 I think that this fish soup Peter oldest-FOC daughter cooked has
 ‘I think it was Peter’s eldest daughter who cooked this fish soup.’

B) Percolation of [TOP]

- (XIV) A: *Inken ist sehr begabt. Diese Fischsuppe ist super.*
 Inken is very talented this fish soup is super
 ‘Inken is very talented. This fish soup is super.’
- B: *[DP Inkens Fischsuppe] möchte ich auch kosten.*
 Inken-TOP fish soup-TOP would-like I also taste
 ‘I would also like to taste Inken’s fish soup.’

In (XIV), in B's possessive DP *Inkens Fischsuppe* both the possessor *Inken* and the possessum *Fischsuppe* are marked as [TOP] because A introduced both of them earlier in the discourse without contrasting them with anybody or anything. As the object possessive DP can precede the finite verb in this declarative clause, it can be concluded that the possessive DP itself is [TOP], too.

C) Percolation of [CONTR]

(XV) Context: A and B are reading a newspaper and they are talking about a photo provided as an illustration to an article.

A: *Siehst du diesen Mann hier?*
 see you this man here
Die Presse hat diesen Minister von Herrn Groß schon lange kritisiert.
 the press has this minister of Mr Groß already long criticised
 'Can you see this man here? The press has criticised this minister of Mr Groß for a long time.'

B: *Nein. [DIESEN Minister von Herrn Groß] hat*
 no this-CONTR-FOC minister-TOP of Mr Groß-TOP has
die Presse kritisiert, nicht aber diesen.
 the press criticised not but this
 'No. It is THIS minister of Mr Groß whom the press criticised, and not that one.'

In B's observed possessive DP *DIESEN Minister von Herrn Groß* the possessor *Herrn Groß* and the possessum *Minister* are discourse old. However, the demonstrative *diesen* is a contrastive focus which B uses to correct A's false assumption. In the section dealing with the German CP (section 4.7.) it was proposed that in matrix declarative clauses contrastive foci can precede the finite verb which has to fill in the second position. This is the word order pattern we can see in (XVB). In addition, it is possible to insert the corrective phrase *nicht aber diesen* to the clause. Consequently, it seems that [CONTR] and [FOC] percolated from the demonstrative sitting in D to the possessive DP. Therefore, it behaves as a CP-level contrastive focus.

D) The hierarchy of discourse features

(XVI) Context: B knows that A knows that somebody's Toyota disappeared and surmises that he doesn't know that somebody's Mercedes disappeared and so uses the question to pass on this information.

A: *Weißt du wessen Toyota die Verbrecher gestohlen haben?*
know you whose Toyota the criminals stolen have
'Do you know whose Toyota the criminals stole?'

B: *Weißt du [wessen Mercedes] die Verbrecher gestohlen haben?*
know you whose-WH Mercedes-FOC the criminals stolen have
'Do you know whose Mercedes the criminals stole?'

(XVII) Context: We are at a cooking contest where people can compete with each other in two categories: onion soup and fish soup. A and B are not jury-members, so they do not know who exactly participate.

A: *Diese Zwiebelsuppe und diese Fischsuppe sind super!*
this onion soup and this fish soup are super
'This onion soup and this fish soup are super!'

B: *Ja, die Zwiebelsuppe ist wirklich gut. Aber was meinst du,*
Yes the onion soup is really good but what think you
[_{DP} wessen Fischsuppe] wir vorher gegessen haben?
whose-WH [fish soup]-CONTR-TOP we earlier eaten have
'Yes, the onion soup is very good. But whose fish soup do you think we ate earlier?'

These German data are equivalent to the data we discussed in relation to Hungarian and demonstrate parallel results.

Appendix 3: The English DP

A) The discourse status of the host does not have an impact on percolation

(XVIII) A: *Have the governments revitalised the economies of both the euro-area and the non-euro area?*

B: *The governments have revitalised the economies of the euro-area, but [_{DP} the economies of **the non-euro area**] they have not revitalised yet.*

(XIX) Context: Two farmers (A and B) are talking. B has a big store house. For some money their neighbours can also store their vegetables there.

A: *Do you store Peter's potatoes and carrots in this room?*

B: *I store Peter's potatoes here, but [DP his **carrots**] I store over there.*

(XX) Context: Two farmers (A and B) are talking. B has a big store house. For some money their neighbours can also store their vegetables there.

A: *Do you store Peter's old and new potatoes in this room?*

B: *I store Peter's old potatoes here, but [DP his **new** potatoes] I store over there.*

(XXI) Context: Two farmers (A and B) are talking. B has a big store house. For some money their neighbours can also store their vegetables there.

A: *Do you store all of the boxes in this room?*

B: *I store two boxes here, but [DP **three** boxes] I store over there.*

B) Percolation of [CONTR] and [FOC] as a set

(XXII) A: *Did you say that you wouldn't store your carrots in Bill's store and your cabbage in Peter's store?*

B: *I said that, in Bill's store, [DP my **potatoes**] I wouldn't store.*

In (XXII) the fronted bracketed possessive DP must follow the fronted contrastive topic *in Bill's store* which means that it is a contrastive focus. This suggests that the possessive construction inherited both [CONTR] and [FOC] from the possessum.

C) Competition between [CONTR][TOP] and [FOC]

(XXIII) Context: Two farmers (A and B) are talking. B has a big store house. For some money their neighbours can also store their vegetables there. In this village the farmers grow only vegetables, so B knows that A does not know that Bill grew apples.

A: *Was this a good year for Peter and Bill?*

B: *Yes, it was.*

A: *What vegetables of Peter's do you store in this room?*

- B: a. *His potatoes. And [DP Bill's apples] I store in the other room.*
b. **His potatoes. And it is [DP Bill's apples] that I store in the other room.*

In B's second turn, the possessor *Bill* is a contrastive topic because it is discourse old and it is contrasted to *Peter*. The possessum *apple* is [FOC]. As this possessive DP can be fronted (see (XXIIIa)), it can be assumed that it bears [CONTR]. However, (XXIIIb) shows that the possessive DP cannot be clefted in this context which suggests that it is not a focus. Consequently, *Bill's apples* inherited the discourse feature set of the possessor, while the percolation of [FOC] from the possessum is suppressed.

D) Competition between [WH] and [CONTR][TOP]

(XXIV) Context: Two farmers (A and B) are talking. A has a big store house whose rooms can be rented.

A: *My store house is full of potatoes and carrots this year.*

B: *I can see there a lot of potatoes. And [DP whose carrots] do you store here?*

In this case B uses the possessive DP *whose carrots* consisting of a wh-possessor and a contrastive topic possessum. The possessor is taken to be non-contrastive because there is not any other possessor in the dialogue related to which it could be interpreted contrastively. However, the possessum is marked as [CONTR] as it does stand in a contrastive relation with *potatoes*. The possessive DP *whose carrots* stands in front of the inverted auxiliary in an interrogative clause and it is not contrasted with the *potatoes*. Hence, in (XXIV) the bracketed

DP inherited the discourse feature set of the wh-possessor. So, it seems that [WH] dominates over [CONTR].

E) Competition between [WH] and [FOC]

(XXV) Context: B knows that A knows that Bill stores somebody's potatoes and surmises that he doesn't know that Bill stores somebody's carrots and so uses the question to pass on this information.

A: *Whose potatoes does Bill store in his store house?*

B: [_{DP} *Whose carrots*] *does Bill store in his store house?*

The bracketed DP in B's turn contains a wh-possessor and a [FOC] possessum. This possessive construction underwent wh-movement and so precedes the inverted auxiliary. So, it can be argued that this DP inherited [WH] from the possessor. The percolation of [FOC] is, however, suppressed because, as discussed, it is impossible for an element to be [WH] and [FOC] at the same time.

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