DOKTORI DISSZERTÁCIÓ

LEFT DISLOCATION IN OPTIMALITY THEORY

BALOGHNÉ NAGY GIZELLA

2013

Eötvös Loránd Tudományegyetem
Bölcsészettudományi Kar

DOKTORI DISSZERTÁCIÓ

BALOGHNÉ NAGY GIZELLA

LEFT DISLOCATION IN OPTIMALITY THEORY

BALRA KIHELYEZÉS AZ OPTIMALITÁSELMÉLETBEN

Nyelvtudományi Doktori Iskola,
vezetője Dr. Bárdosi Vilmos CSc., egyetemi tanár

Angol Nyelvészet Program,
vezetője Dr. Varga László DSc., egyetemi tanár

A bizottság tagjai:

elnök: Dr. Giampaolo Salvi DSc., egyetemi tanár

titkár: Dr. Szécsényi Krisztina, PhD.

további tagok: Dr. Alberti Gábor DSc., egyetemi tanár

Dr. Hordós Marianna, PhD.

Dr. Czeglédi Csaba, CsC., főiskolai tanár

Bírálók:

Dr. Bartos Huba, PhD., egyetemi docens

Dr. Surányi Balázs PhD., egyetemi docens

Témavezető: Dr. Mark Newson, PhD., egyetemi docens

Budapest, 2013

CERTIFICATE OF RESEARCH

By my signature below, I certify that my ELTE PhD dissertation, entitled

Left Dislocation in Optimality Theory

is entirely the result of my own work, and that no degree has previously been conferred upon me for this work. In my dissertation I have cited all the sources (printed, electronic or oral) I have used faithfully and have always indicated the origin.

Date: Budapest, 16 May, 2013

Signed: ……

Table of Contents

List of abbreviations

ACC	accusative case
adj	adjunct feature
$arg_{(1/2/3)}$	argument feature
CL	clitic
C-PRT	contrast particle
D_{nom}	nominal domain
D_{prag}	pragmatic domain
D_{pred}	predicate domain
D_{temp}	temporal domain
D_{wh}	interrogative domain
DAT	dative case
[def]	definiteness feature
NOM	nominative case
nom	nominal domain marker
[nom]	nominal feature
[num]	number feature
[pass]	passive feature
[perf]	perfect feature
PFX	verbal prefix
prag	pragmatic domain marker
[prag]	pragmatic feature
[progr]	progressive feature
PRT	particle
R	root conceptual unit (Root)
REFL-CL	reflexive clitic
temp	temporal domain marker (abbreviated to ‘t’)
[temp]	temporal feature
[$tense_m$]	matrix tense feature
TNS	tense
TOP	topic

1. Introduction

Left Dislocation (LD) is a phenomenon which was already present in Old English and has persisted ever since: compare the OE example in (1) and the more recent one from a campaign speech of the President of the United States in (2). These examples demonstrate defining characteristics of the phenomenon: it contains a fronted nominal expression which is represented clause-internally by a resumptive pronoun.

(1) **Se** **awyrigeda** **deofol** syððan **he** ðone frumsceapenan man beswac.
that cursed devil after he that first-created man deceived

syððan he hæfde anweald ofer ungelyfedum mannum.
afterwards he had control over unbelieving men

(Traugott 2007)

(2) *And then I think about Michelle's mom, and the fact that* ***Michelle's mom and dad, they*** *didn't come from a wealthy family.* ***Michelle's dad, he*** *worked a blue-collar job at the sanitary plant in Chicago. And* ***my mother-in-law, she*** *stayed at home until the kids got older. And she ended up becoming a secretary, and that's where she worked at most of her life, was a secretary at a bank.*

(Obama 2012)

The phenomenon has attracted attention from the early generative times on (Ross 1967, Rodman 1974), into the Government and Binding theory of the 1980s (Vat 1981, Altmann 1981) and extends into the present, in the Minimalist Framework (e.g. Grohmann 2000a,b; 2003). Presumably, one of the reasons for this attention lies in the fact that LD seems to be hard to fit in a structure-based framework for various reasons. Many previous analyses have sought answers to the question of the status of the dislocated item, whether it is to be regarded as clause-internal or external; furthermore, concerning its origin, whether it has been base-generated in the initial position or movement has taken place from a clause-internal argument position. Another problem for the structural approach concerns the form of the resumptive, which always bears the appropriate case assigned by the predicate but does not always match in case with the dislocated noun phrase. Moreover, mostly in Germanic languages, there is a possible variation in the form of the pronoun, as it may be realised by a personal pronoun or a demonstrative.

One of the aims of the present work is to show that the applied optimality-theoretic framework of Syntax First Alignment (SFA), which does not presuppose hierarchical structure and operates with a restricted set of universal constraints, is able to provide an alternative to structural approaches and can deliver answers the above questions. By concentrating on a specific linguistic phenomenon from a contrastive perspective, the optimality theoretic system will also be developed and extended. Therefore, apart from the detailed description of the language-specific facts about Left Dislocation in English, German and Hungarian, a fair amount of time has to be devoted to the introduction of the syntactic model. It has to be admitted that the present system is still in the making; in that respect, it cannot compete with the vast body of generative literature. Nevertheless, if it can prove to be powerful enough to handle selected issues, like topicalisation, LD and wh-movement, and their combinations, then this exploratory investigation can be said to have been successful.

The dissertation has the following structure. In Chapter 2, I provide a working definition of Left Dislocation and a brief overview of the structures which have been called as such in the literature. A foretaste of the analysis is also given before the description of the data. Due to the close connection of LD to topicalisation, it is necessary to treat both phenomena from a pragmatic perspective as well, as this establishes the grounds for applying pragmatic features in the analysis. After describing the language specific properties of LD types, the syntactic literature will be overviewed, with an eye on the difficulties that the accommodation of LD in the generative framework has caused.

In Chapter 3, the notion of alignment and the alignment-based optimality-theoretic system (SFA) will be introduced, including the elements (conceptual units or features) it operates with, the types of possible constraints (precedence/subsequence, adjacency, faithfulness) and the effects of their combinations. Then, I will touch upon the theoretical issue of modelling argument structure, and the language specific basic word orders are discussed to provide a foundation for the analysis of further structures. Furthermore, to be able to handle issues of nominal expressions, the grammatical and pragmatic features constituting nouns, pronouns and more complex nominal expressions will be laid down, relying on research conducted in Distributed Morphology.

Chapter 4 will focus on the detailed analysis of Topicalisation and Left Dislocation in the languages under discussion, i.e. in English, German and Hungarian. I will argue for a more refined notion of topic for the syntax and represent different degrees of topicality by employing pragmatic features in the analysis. I claim that topicalisation and LD derive

from similar inputs with differences only in the pragmatic features involved, which then result in different orderings of the features. The topic of the second part of the chapter is vocabulary insertion concerning the nature of the resumptive pronoun and the case of the dislocated item.

Finally, in Chapter 5, I attempt to extend the analysis to a different type of LD (which I will call 'repair-strategy LD'), found in wh-interrogatives. My aim is twofold: first, to give an appropriate account of 'wh-movement' in the Syntax First Alignment framework, also taking ordering variations in multiple questions into consideration and the distinction between embedded and matrix interrogatives. Second, to demonstrate that the system can also derive another type of LD different from the pragmatic-based type, triggered by syntactic factors; or to be precise, the system can correctly choose between the surfacing of topicalisation or LD in a given syntactic environment.

Chapter 6 closes the dissertation. After summarizing the main points of the analysis regarding Left Dislocation, I also comment on the applicability of the system based on alignment and the ordering of input features.

First and foremost I wish to thank my supervisor Mark Newson for the priceless discussions and careful proofreading of the thesis, and his seminars on Optimality Theory, which determined my linguistic interests. I would also like to express my heartfelt gratitude to Professor László Varga, the head of the doctoral programme for his support throughout the years.

Many people have helped in the formation of the presented ideas by commenting on previous analyses, through discussions and in PhD classes. I wish to thank them all: Professor István Kenesei, Marianna Hordós, Lajos Marosán, Balázs Surányi, Veronika Kniezsa, Pál Szemere, Szilárd Szentgyörgyi.

I owe a great deal to the supervisor of my German thesis, Dr. Attila Péteri for raising thought-provoking questions and for giving me the opportunity to cooperate in an OTKA project on a contrastive study of interrogative structures. I remember with gratitude Professor Vilmos Ágel's lectures on German syntax, which constituted a milestone in my linguistic orientation towards clausal syntax.

The present dissertation has benefited a great deal from comments of the audiences of the Manchester Postgradual Conference in Linguistics, the LingDok conferences in Szeged and the conference 'An der Grenze zwischen Grammatik und Pragmatik' in

Budapest, where I had the privilege to receive comments from Professor Heinz Vater and Professor Hans Altmann.

Of course, I thank my fellow students at the PhD programme for the great years and my colleagues at the Department of Foreign Languages at the Faculty of Primary and Pre-school education, especially Éva Márkus, Head of Department, for her understanding.

Furthermore, I have to mention my friends who deserve a special thank-you for their emotional support and for always being there when I needed them.

I owe my deepest gratitude to my family: my parents and sisters, and my husband for their constant encouragement and patience, which made the completion of the dissertation possible. I dedicate this work to them.

Chapter 2. Presenting the subject of analysis

In this introductory chapter, my aim is to define Left Dislocation and sketch the main points of the analysis in advance, before turning to the pragmatic grounding, which I take to be vital for the understanding of the phenomenon. After that, the formal characteristics of Left Dislocation will be given a detailed description, and types will be set up, focussing on the three languages which will be in the centre of analysis, that is, English, German and Hungarian. The last main part presents an overview of the existing syntactic analyses of the phenomenon. Although the dissertation argues for an optimality theoretic system that is based on linear order instead of hierarchical structure and assumes late insertion of vocabulary items, the works reviewed are couched within transformational theories, including the Minimalist Programme and earlier approaches too. The theoretical framework of the present study will be presented at length in the following chapter.

2.1. A working definition for Left Dislocation

The main purpose of this section is the delimitation of the area of study, and to arrive at a definition of Left Dislocation (LD) which is not too vague to allow syntactic analysis, and yet does not ignore pragmatic facts either. In order to arrive at the most appropriate definition and description of the structures in question, I will review several influential works on LD. These include purely descriptive approaches as well as those not entirely syntactically-oriented.

Not all structures described as Left Dislocation will be taken as such from a syntactic perspective; nevertheless, mention will be made of the differences in definitions and the range of constructions which have been identified as LD for the sake of completeness.

Geluykens (1992) offers a more pragmatically oriented than syntax-based approach and adopts a definition of LD which differs from the one aimed at in the present work. It starts with a definition from Quirk et al. (1985:1310) to give an approximation which will suffice for our introductory purposes as well: ‘a noun phrase is positioned initially and a reinforcing pronoun stands “proxy” for it in the relevant position of the sentence’. Three basic parts of an LD are identified: the dislocated phrase, labelled the Referent (REF); the main clause, the Proposition (PROP); and the pronominal element in the clause, the Gap

(GAP), which can fulfil a variety of functions in the proposition, i.e. agent, locative, part of an argument, etc. However, this description holds only for 'prototypical' LDs.

(1) ***Steve, he*** likes beans.

(2) ***This cupboard***, Steve put the beans ***there***.

(3) ***Steve,*** I like ***his*** mother. (ibid. p. 20)

An LD with a prepositional phrase as referent is considered less 'prototypical', even if this PP is inherited from the clause:

(4) ***In this cupboard***, Steve put the beans ***there.***

More interestingly, variations on the above constructions with an introductory PP ((5)-(7)) are also grouped together with LDs:

(5) *As for Steve, he* likes beans.

(6) *With regard to Steve, he* likes beans.

(7) *So far as Steve is concerned, he* likes beans.

These do not strictly qualify as LDs from a syntactic point of view, as the PP in the initial position cannot be inserted in the main clause instead of the resumptive. However, the semantic approach followed in the analysis allows more flexibility. Geluykens argues that 'LD can only be adequately characterized on a semantic level' (1992:19): 'The REF consists of a semantically fully specified referent; this referent is coreferential with the pronominal gap, the latter being a semantically minimal referent' (ibid., p. 26). This coreferentiality is taken to be the distinguishing feature of LD semantically. Certain structures – although they look similar to the examples in (5-7) – are distinguished from LD on the basis of strict coreferentiality, as their REF is not coreferential with the GAP (8) or is more general semantically than the GAP (9).

(8) *As far as I'm concerned*, London is nice. (ibid. p. 22)

(9) *As for London*, Trafalgar Square is nice. (ibid. p. 21)

The latter example and similar constructions are also mentioned by Lambrecht (2001) under the term 'unlinked topics' (p. 1057-1060) – according to his definition, they satisfy the criteria for a dislocation construction, in that the phrases in question appear in a

derived or 'abnormal position'. In this work it is proposed that the link between the dislocate and the clause is purely pragmatic, the semantic relation being often a semantic frame.

(10) *As for education*, John prefers Bertrand Russell's ideas.
Topic Comment (ibid. p. 1058)

(11) *Tulips*, do you have to plant *new bulbs* every year?

(12) [*Sakana* wa] *tai* ga oisii. Japanese
fish TOP red snapper SUBJ delicious
'Fish, red snapper is delicious.'

The sentence type in (11) – with a preposed NP not belonging to the '*as for'* construction – is also categorized as LD in Pérez-Guerra and Tizón-Couto (2009:32-33). In their treatment of the phenomenon, LD is defined as a sentence-initial nonvocative constituent (i) which is felt to be detached by a pause from the rest of the clause and (ii) is either syntactically or semantically related to the rest of the clause. Here, again, no syntactic link or ability of integration in the clause is presupposed for Left Dislocation, contrary to our proposed definition. Such structures are called 'Loose Aboutness Left Dislocation' (Riemsdijk 1997:4), where a 'weaker, purely semantic form of aboutness suffices', as in (13).

(13) *This paper*, I'm going crazy. (Pérez-Guerra & Tizón-Couto 2009:32)

It must have become clear by now that unlinked topics and other dislocation types with a purely semantic connection between the dislocate and the main clause or a nominal constituent of the main clause will not be in the centre of our attention (i.e. examples (5) to (13)), as the dislocated item does not originate from the main clause it is attached to, i.e. they cannot be derived from an input in which the dislocated item is connected to the predicate of this clause. Therefore, more restrictive criteria are needed.

To get closer to our intentions, we should consider the following definition of LD from Lambrecht (2001:1050), in which it is already made clear that the dislocated item must originate from the clause it is attached to.

> *'A dislocation construction (also called detachment construction) is a sentence structure in which a referential constituent which could function as an argument or*

adjunct within a predicate-argument structure occurs instead outside the boundaries of the clause containing the predicate. [...] The role of the denotatum of the dislocated constituent as an argument or adjunct of the predicate is represented within the clause by a pronominal element which is construed as coreferential with the dislocated phrase.'

The criteria of dislocation are listed as follows: (i) extra-clausal position of a constituent, (ii) possible alternative intra-clausal position, (iii) pronominal coindexation, (iv) special prosody.

However, as Lambrecht mentions later, it is not necessary that all criteria apply in the case of an instance of LD, the only necessary criterion is (i). Even (iii) is considered optional, although it would be problematic to differentiate between LD and syntactic topicalisation in the absence of a resumptive pronoun in certain constructions, like (14). The examples given for such languages include Turkish and Chinese, and the argumentation is mainly based on facts about Right Dislocation.[1] In the Chinese example, the dislocated item is preceded by a vocative.

(14) [*Romi-lar*]$_i$, ø$_i$ deli. Turkish
'These Romans, they are crazy.'

(15) [shushu], [*zhèi jiǎndāo*]$_i$, zěnme ø$_i$ liǎng bàn le? Chinese
uncle this scissors how-come two half PERF
'Uncle, this pair of scissors, how come it is in two pieces?'

(Lambrecht 2001:1065)

In the present work, I intend to define LD rather as a construction with an *obligatory* alternative intra-clausal position of the dislocated constituent signalled by a resumptive pronoun, in order to avoid the complications and confusion it causes when contrasting LD with syntactic topicalisation.

On the basis of Molnár (1998) it can be added that the 'special prosody' requirement is restricted to contrastive topics, thus it is rather a criterion of contrastiveness than of dislocation. It will also be shown that the pause between the dislocated item and the

1 Lambrecht's justification for the postulation of RD in Turkish can be summarised as follows: being a strict verb-final language, postverbal arguments must be dislocated – the same line of reasoning is followed in the case of Japanese dislocations.

rest of the clause is not present in all structures, thus it cannot be taken as a constituting feature of the phenomenon, but rather as a distinguishing feature.

The most detailed – largely – descriptive analysis of LD-related constructions in German was conducted by Altmann (1981). It differs from Geluykens' study in its grammatical orientation: morphological, syntactic and prosodic features are taken into consideration for the characterization of the various structures.

Altmann (1981: 46-47) defines dislocation in general by summarizing a 'group of features' of such constructions that are present to varying degrees in different subtypes. This is clearly a much wider grouping than needed for the present study, as Altmann counts – apart from Left and Right Dislocation – vocative NPs, parenthetic structures, and afterthoughts as dislocations as well. However, it is of interest which traits are considered among the five defining features.

First, dislocation structures are formally elliptical clauses, which need an adjacent main clause to gain a semantic-pragmatic interpretation.

The second feature is that dislocated items are connected to a preceding or following clause in varying degrees (concentrating on LD, the 'following clause' is relevant here). The features of this syntactic relationship may be the following: (i) corresponding morphological marking; (ii) word order features, which are different from the word order of clauses without dislocation; (iii) intonation: there might be short pauses between dislocate and clause and the dislocated element has no intonation contour independent from the host clause.

Third, dislocated constituents do not have a function in the clause they belong to: a corresponding pronoun or another NP inside the clause bears the function; hence, they are regarded by Altmann as non-obligatory elements of the structure. From our point of view, this claim is untenable, as the dislocated item will be claimed to have a discourse function to fulfil.

The fourth feature is that, as constituents in the German clause normally do, dislocates do not fill syntactic fields alone (i.e. the pre-field, middle field and post-field, defined on the basis of the parts of the verbal complex), but they might belong to a field, like Left Dislocation, which is considered as attached to the pre-field. Generalizing this observation to other languages it can be stated that LD does not usually modify the word order of the main clause it belongs to.

The last feature of dislocation structures lies in the fact that they are placed regularly on the left or right boundary of a clause, whereas some types might be

parenthetically embedded inside a clause. The latter remark is of less importance for us, as it clearly refers to vocative structures.

Using a combination of the criteria of Altmann and Lambrecht enables us to delimit the types of constructions to be called LD in what follows. Although I intend to define LD based on mainly formal syntactic criteria, I reject Altmann's judgement on LD material being 'non-obligatory' on pragmatic grounds. The idea that LD fulfils a discourse function in a sentence will be sustained throughout this dissertation; moreover, the major triggers that call LD into being are also believed to be discourse-functional in nature. The syntactic distinguishing features of any kind of LD are laid down as the following: (i) an element which is part of the input occupying a clause-initial position; (ii) the appearance of a coreferential resumptive pronoun, which can take up various positions and can show up in different lexical forms.

2.2. The subject of analysis and a way to interpret the facts

In this section, I review the syntactic properties of topic-promoting constructions cross-linguistically. As my aim is to establish a connection between topicalisation and Left Dislocation, the former structure is also presented. There are two major criteria which distinguish LD-constructions, both language-internally and cross-linguistically: (i) the connectedness of the dislocated phrase, (ii) the position and nature of the resumptive pronoun. On the basis of these, two main types of LD will be posited: in some languages both occur, in others only one type. Here I attempt to take a quick look at these main types,[2] and present the main ideas behind the analysis afterwards.

2.2.1. Syntactic topicalisation

Generally speaking, syntactic topicalisation involves the fronting of a phrase functioning as the topic of the sentence. However, there exist two main, syntactically distinguishable types of this construction with respect to the position of the fronted element. English (16)-(17) instantiates the construction type where the topic is 'adjoined to the clause', i.e. precedes the subject and no inversion takes place. The other possible position for a topic is

[2] A detailed description of the language-specific constructions will follow in section 2.4 of the present chapter.

a preverbal position, immediately followed by the finite verb, as the German structure in (18) shows.

(16) ***The police***, he mistrusts.

(17) ***Mary***, John likes.

(18) ***Den Toyota*** will Johann kaufen.
the$_{ACC}$ Toyota wants Johann buy
'The Toyota, Johann wants to buy.'

2.2.2. Hanging Topic Left Dislocation

The distinguishing characteristics of the Hanging Topic Left Dislocation (HTLD) construction are that the fronted phrase stands in default case, regardless of its function in the clause, while the resumptive pronoun bears the appropriate case or has a preposition if required by the subcategorization properties of the main verb.

There is only a loose connection between the dislocated element and the rest of the clause: first, the dislocated item bears nominative case, regardless of the function of the resumptive in the main clause. Second, the resumptive appears in a sentence-medial position, and is mostly represented by a personal pronoun, as in the English example in (19). The German sentence in (22) shows dislocation of an accusative argument with an in situ personal pronoun. In Spanish, the full form of the personal pronoun appears in argument position (23), as opposed to a clitic.

(19) ***Old Sandy Patterson,*** ooh I want to see ***him*** now, I wonder if he's in today.
(Hidalgo 2002)

(20) And ***heavy METAL$_i$, it$_i$***'s NOISY.

(21) Well, ***MY car$_i$, it$_i$***'s an eighty SIX. (Gregory&Michaelis 2001)

(22) ***Der Hans***, laut Maria wird ***ihn*** *anscheinend* keiner unterstützen.
the$_{NOM}$ H. according to M. will him$_{ACC}$ apparently no one support
Hans, according to Mary no one will support him (Frey 2000)

(23) ***Juan***, no me acuerdo ***de él.***
Juan not CL(1st sg.) remember of him
Juan, I don't remember him (Zagona 2002)

2.2.3. Contrastive Left Dislocation

For the second, clearly distinguishable type of LD I will use the term 'Contrastive Left Dislocation' (CLD), in accordance with the literature on Germanic languages. The significant characteristics of the construction are that: (i) the resumptive appears as a demonstrative pronoun, e.g. an appropriate form of '*der, die, das'* in German (24 and 25), '*az*' in the Hungarian examples (26 and 27), and the demonstrative pronoun '*tu*' in Czech (28) and (ii) the resumptive agrees with the left dislocated phrase in number and case, and also in gender in languages with grammatical gender. If the dislocated phrase is a PP argument, the resumptive also bears the same preposition, as in (25).

(24) ***Den Hans***, ***den*** mag jeder.
the$_{ACC}$ Hans that$_{ACC}$ likes everyone$_{NOM}$
Hans, everyone likes him.

(25) ***Mit dem Hans, mit dem*** spreche ich nicht mehr.
with the$_{DAT}$ Hans with that$_{DAT}$ talk I not any longer
To Hans I don't talk any longer. (Nolda 2004:8)

(26) A macskákat, azokat szeretem.
the cats$_{ACC}$ that$_{PL,ACC}$ I like
Cats, I like them.

(27) ***A Péterrel, azzal*** Mari szívesen elmenne kirándulni a hétvégén.
the Peter-with it-with Mary with pleasure pfx-go$_{cond}$ on an excursion the weekend-on
Peter, Mary would go on an excursion with him in the weekend.

(28) ***Tu červenou tašku, tu*** si koupila Jana. Czech
that red bag$_{ACC}$ that$_{ACC}$ REFL-CL bought Jana
That red bag, Jana bought it. (Sturgeon 2005: 158)

The position of the pronoun also deserves attention: clearly, it is not in its argument or base position in any of the examples. Rather it is fronted to the preverbal position, which is the landing site of syntactic topics in all three languages presented. This seems to be a significant finding, which serves as an important support for the featural theory of topics developed in the next chapter.

In short, the main characteristics of CLD are the following: case, number (and gender, where relevant) agreement of the dislocated phrase and the resumptive and the pronoun standing in the syntactic topic position.

2.2.4. The basics of the analysis

Looking at expressions with Left Dislocation (29a) from one side, the string bears resemblances to syntactic topicalisation (29b). It contains a fronted nominal item with a topical interpretation; moreover, the item clearly belongs to the domain of the predicate as it functions as one of its arguments or adjuncts.

(29) a. ***That man***, I saw ***him*** in the office yesterday.
b. ***That man***, I saw in the office yesterday.

On the other hand, the presence of the resumptive disturbs this picture. An anaphoric relationship holds between the dislocate and the resumptive, as though they were members of different clauses, compare (30).

(30) I know *that man.* I saw *him* in the office yesterday.

In mainstream generative literature much attention is devoted to the differences between LD and syntactic topicalisation. Before starting with the presentation of the proposed analysis, some of these differences will be reviewed to highlight further properties of LD.

It is striking that LD, in contrast to syntactic topic fronting, shows no sensitivity to islands. In the following examples from German and English, the symbol '_' indicates which position the dislocated item is associated with.

(31) TOP: Adjunct islands
a. **Den Peter*, Hans geht in die Kneipe, bevor er _ trifft.
the Peter Hans goes to the pub before he meets
b. **Peter*, Hans goes to the pub before he meets _.

(32) TOP: Complex NP islands
a. **Peter*, Maria hasst das Gerücht, dass die Mafia _ geholfen hat.
Peter M. hates the rumour that the Mafia helped has
b. **Peter*, Mary hates the rumours that the Mafia _ helped.

(33) HTLD: Adjunct islands

a. *Peter*, Hans geht immer in die Kneipe, bevor er **ihn** trifft.

Peter Hans goes always to the pub before he him meets

b. *Peter*, John always goes to the pub before he meets **him**.

(34) HTLD: Complex NP islands

a. *Peter*, Maria hasst das Gerücht, dass die Mafia **ihm** geholfen hat.

Peter Maria hates the rumour that the Mafia him helped has

b. *Peter*, Mary hates the rumours that the Mafia helped **him**.

(Shaer&Frey 2003:472, examples slightly altered to fit the present purposes)

As a second point, LD is a main clause phenomenon, whereas topics can show up inside embedded clauses, as the following examples demonstrate.

(35) a. If *these problems* we cannot solve, there are many others that we can tackle immediately.

b. While *around this time last year* Mary was writing her book, her children were staying with her mother. (Haegeman 1991:160)

(36) weil *den Studenten* seine Mutter zu sehr verwöhnt hat

since the-acc student-acc his mother too much spoiled has

(Grewendorf 2009:76)

Another striking characteristic of LD is that it can easily override fairly basic word order regularities of a given language. This can be well observed in a strict verb-second language as German, where the appearance of a hanging topic, or even more of them, does not have an effect on the grammaticality of the clause. Also, argument topicalisation in an interrogative clause and out of an NP island is rendered grammatical if it is realized by LD instead of syntactic fronting.

(37) ***Der Alex$_i$, seine Mutter$_j$, den Wagen$_k$, den$_k$*** hat ***sie$_j$ ihm$_i$*** gestern geschenkt.

the Alex his mother the car that has she him yesterday given

'Alex, his mother, the car, yesterday she gave (it) to him.'

(Grohmann 2003:185)

(38) ***Jean Piaget***, what's the point of having a book ***about him*** around?

(Geluykens 1992:47)

These facts seem to suggest that the dislocated item stands in a looser connection to the rest of the clause. Moreover, as its clause-internal position is taken by an overt resumptive pronoun, it no longer acts as a constituent dependent on the predicate.

A left dislocated phrase cannot appear inside a non-root clause, i.e. it cannot be embedded, but it can move an argument out of one, as in (39). This again supports the assumption that the LD is external to both clauses.

(39) ***Dieser Film***, als ich ***den*** sah, war ich noch ein Kind.
this$_{nom}$ film when I that$_{acc}$ saw was I yet a child
(Lambrecht 2001:1025)

The above suggests that Left Dislocation might be defined as movement to a clause-external position, in other words, movement to the outside of the domain of the predicate. We have also seen that the distinguishing feature of LD is the insertion of a resumptive element. Based on these assumptions, syntactic and pragmatic motivations will be looked for, which account for the appearance of the resumptive in Left Dislocation constructions.

The main syntactic reason why a resumptive occurs in LD is to replace the missing argument syntactically, i.e. resumptives function as grammatical place-holders, as the dislocated phrase is not present in the clause, and thus it violates phrase structure constraints. We can observe that there is thus a division of labour between the dislocated phrase and the resumptive: the phrase bears lexical information, whereas the pronoun embodies the grammatical-inflectional features, e.g. case, number, gender. In (39) '*dieser Film'* bears a default nominative case, whereas the corresponding pronoun is in the accusative.

However, the syntactic motivation alone could not derive resumptive insertion; it would simply not place the dislocated element too far away from the matrix clause. Thus, there has to be a pragmatic reason, as well, which splits the original phrase into a dislocated element and a resumptive and opts for LD instead of syntactic topicalisation in certain environments. Although resemblances can be found between the pragmatic functions of topicalisation and LD, the latter is clearly a more marked device of foregrounding.

As will be argued, topics vary regarding their predictability, and in connection with this, regarding their prominence. These differences have syntactic consequences as well:

this is demonstrated by the topic continuity scale, which has been set up on the basis of Givón (1983:359) and Brown (1983:320).

(40) The topic continuity/predictability scale

zero	>	unstressed/ clitic pronoun	>	stressed/ independent pronoun	>	definite NP	>	Y-movement (syntactic topicalisation)	>	Left Dislocation

What the scale demonstrates is that increased prominence and unpredictability correlate with stronger syntactic marking: while absolutely predictable topics are expressed by weak forms, i.e. by zero marking and pronouns, less continuous topics are represented by syntactically marked fronting structures. This observation is of importance as it demonstrates that prominent and new, fairly unpredictable topics receive syntactic marking, thus they will have to be incorporated into a fuller theory of topicalisation in syntax.

As a basis for the present analysis, supported by studies in the field of pragmatics, I claim that LD is a device to handle new topics: as newness is traditionally associated with the focus function, and topics tend to refer to familiar information, the co-occurrence of the newness and the topic feature causes a certain degree of tension that can be resolved by creating an output form in which the two features are placed on distinct items. In other words, one of the items introduces the new referent (preferably the dislocated expression because of its referentiality), whereas the second one, i.e. the resumptive (RP), can be assigned topicality and refer back to the fronted expression. Topicality is assumed to be the aboutness feature [about] in the example, which will be argued to be the defining characteristic of topics cross-linguistically.

(41) ***Jon,*** I don't like ***him.***
X_i [RP_i]
[new], semantic information [about], grammatical information

The feature or features born by the resumptive are responsible for its form and position as well. Moreover, assuming the extraclausal status of the dislocated item serves as evidence for the non-embeddability of Left Dislocation.

Naturally, a great number of questions arise in connection with the tenability of the above assumptions: is there any evidence for the resumptive bearing a discourse feature? How is the splitting of features that originally belonged to the same input element made

possible, and once it is possible, how can it be constrained? What kind of factors can account for the cross-linguistically varying forms and positions of the pronoun? The answers to these questions constitute the focal points of the analysis.

The main tenets of the syntactic framework can also serve as answers to many arising problems. The principles and notions of Syntax First Alignment, as presented in Newson (2008, 2010), are intended to be applied in the analysis.

> *'Our approach is crucially based on the idea of "late vocabulary insertion", in which the syntax manipulates abstract pre-vocabulary elements and these are spelled out by their phonological exponents only after their syntactic arrangements have been decided.'*
>
> (Newson&Szécsényi 2012:5)

From this point of view, contrary to standard assumptions, the input is regarded as a set of conceptual units (CUs) instead of lexical items. Vocabulary insertion follows only after the evaluation of the ordering of CUs. The CUs come in two types: they either bear semantic descriptive content, in which case they are referred to as roots, or they embody functional-relational or discourse-related information, like argumenthood, agentivity or topicality.

The model works with alignment constraints that position elements of an input in relation to each other. This way, the notion of 'phrase' becomes unnecessary, as the grouping of elements follows from the constraint hierarchy. Apart from precedence and adjacency requirements, faithfulness constraints will be posited, which ensure the preservation of input items.

In such a system, features which are related to each other in the input can be split up if there exist principles which are strong enough to have this effect. This way, the resumptive should not be looked at as item which has been arbitrarily inserted by the syntax.[3] Thus, output vocabulary items are regarded as the spellout of one or more features, which might be roots which comprise descriptive content or alternatively, functional-relational or discourse features alone.

[3] This operation would be highly problematic, as insertion of non-input material would result in an infinite candidate set.

2.3. Topicalisation and the function of Left dislocation from a pragmatic perspective

2.3.1. Topicality

The reason that makes it crucial to discuss the question of topicality, the functions of topicalisation and topic types among others is that Left Dislocation is closely linked to topicalisation. This is not saying that it functions as a similar device from a pragmatic point of view, but it is important to note that the resumptive pronoun appears in topic position in LD-constructions of some languages and the role of the dislocated item is strongly related to topicality.

É. Kiss's (2007) account is an example for the structural definition of topic, according to which 'topic and the focus represent two distinct, optionally filled structural positions in the left periphery of the Hungarian sentence associated with logical rather than discourse functions' (p.78). Another definition by É. Kiss implies a givenness feature of topics, i.e. that they have to represent old information, which is already given in the context. According to this definition, the main function of the topic is foregrounding: this shows that topicalisation reflects some kind of prominence.

(42) The topic function

The topic foregrounds an individual (a person, an object, or a group of them) from among those present in the universe of discourse as a subject of the subsequent predication. (É. Kiss 2002:9)

A comparable account is given in Gécseg and Kiefer (2009), who review the topic notion applied in the analysis of Hungarian and compare it to the topic notion in other types of languages. The authors claim that the term 'logical subject' compared to 'topic' seems to be more appropriate when speaking of Hungarian clause structure. The main argument for this is that the topic status of a constituent does not depend on the discourse context. Instead, it is defined merely sentence-internally, as opposed to topics proper – the authors seem to have the pragmatic definition of givenness or familiarity topic in mind, not the aboutness notion.

Gécseg & Kiefer distinguish three types of languages on the basis of their basic syntactic structure. English and standard French are argued to have a 'grammatical subject – grammatical predicate' articulation; Hungarian (and Polish, too) displays a 'logical

subject – logical predicate' structure, where 'theme' might also be used synonymously with 'logical subject', as opposed to the 'topic-comment structure' of colloquial French. Despite these differences, both topics and logical subjects appear to share a common ground: aboutness. In addition to this, topics in the narrower sense have to be assumed as well.

However, it has to be noted that most typically the English subject has topical features in the majority of cases. If this is not the case, certain repair strategies are applied, such as subject Left Dislocation, when introducing a new subject. Consider the following example, where the subject should function as a weak topic, but it introduces a new, formerly not mentioned entity ('*my friend'*):

(43) Janice P. says (Mar 30, 2010 9:20 PM)

I was beginning to think that nothing in this article was going to apply to me (because, except for broccoli, I can't eat or don't like most of the things listed). But, then, I got to wild salmon. Now, that's my kind of food! After I read this article, ***my friend, she*** *told me that salmon is a big factor in the "Perricone Prescription", which is supposed to help slow the aging process. I will get some tomorrow. Thanks for the info.*

(Source: http://www.care2.com/greenliving/5-foods-every-woman-should-eat-more-of.html?&page=5, seen on: 01.03.2010, emphasis added)

To arrive at a better understanding of topicality, I find it helpful to review pragmatically-oriented approaches as well, as they look at the structure of utterances from a different aspect and treat discourse functions in a more detailed way than syntactic analyses. Of course, a certain degree of generalization is necessary in the syntax to capture structural parallels. However, in the case of discourse functions, a more refined characterization is needed, as the well-established topic-focus or topic-comment partitions do not seem to be appropriate to cover all cases and account for tendencies like frequency of topicalisation structures. More precisely, I aim to identify a group of discourse features which will make an account of syntactic topicalisation possible that reflects the usage and frequency of topicalisation in the languages under discussion.

From the perspective of the notion of Balanced Information Distribution (BID, Doherty 2005), it is more appropriate to deal with a hierarchy of information values than with a binary opposition of given/new information. Doherty works with an importance

scale of information, with the following values: information of high, lower, lowest relevance, represented by the numbers: 1 2 3. Given information, i.e. given in the immediately preceding context, is of lowest relevance; resumed information, which is already mentioned but not immediately given, is higher on the importance scale. New information and contrastive focus represent highest relevance. The ideal ordering of these values is argued to be 2 3 1, which points to the fact that fronted topics represent resumed rather than given information, givenness being a feature of non-prominent topics. The functions of a topic are seen as establishing contrastive or partitive discourse relations and discourse linking – in my opinion, this can be subsumed under the terms contrast and aboutness. Doherty also claims that adjunct topicalisation serves primarily the latter purpose, i.e. discourse linking.

In many cases, the terms 'topic' and 'focus' are used as denoting opposite notions. However, it is important to see them from a wider perspective of information structure tiers in order to understand that the relations of discourse functions and levels of information structure are more complex than standard syntactic literature suggests.

According to Molnár (1991), there are three levels of communicative structuring, i.e. an utterance can be viewed from three different pragmatic aspects: from the aspect of presentation, from that of the sender/speaker and from that of the recipient/hearer. On the level of presentation, an utterance is structured into a topic and a comment part; from the speaker's perspective it consists of background and focus, and on the recipient's side it is built up from a theme and a rheme. From this it follows that there is not necessarily a one-to-one relationship between the discourse functions on different levels. But there is interaction and overlap between tiers and notions, which means, among other things, that the functions of topic and focus do not necessarily exclude each other.

Molnár also claims that the term 'newness', used extensively in connection with focus, needs a new interpretation, as foci are not always 'new' in the discourse, and, on the other hand, new topics seem to exist as well. Moreover, prominence and highlighting are not necessarily parallel with focussing (Molnár 1998)[4]. The following example demonstrates both points made above: the focussed phrases – focus referring to a function on the speaker's side – represent thematic, i.e. old information from the recipient's perspective.

[4] C.f. Givón (1983), who also mentions prominent topics

(44) Q: Warum hast du dich bei Eva nicht entschuldigt?

'Why haven't you apologised to Eva?'

A: [SIE]$_{\text{Thema=Fokus}}$ hat [MICH]$_{\text{Thema=Fokus}}$ beleidigt!

she$_{nom}$ *has me*$_{acc}$ *offended*

'SHE offended ME.' (Molnár 1998:108, glosses added)

Geluykens (1992) seeks a definition of topicality, givenness, and recoverability in connection with left dislocation constructions. He remarks that defining givenness is problematic, as it can refer to both the hearer's and speaker's knowledge, general background knowledge or knowledge arising from the context. Thus, he rather sticks to the term 'recoverability', i.e. information which is derivable from the discourse context (ibid. p.12). Note that this is also a scalar notion. The topicality of an item is defined as its occurrence in the subsequent discourse (ibid. p.16).

This view is also supported by Givón's (1983) Topic Continuity, which measures the topic status according to its values in the context and establishes degrees of topicality from weak to strong (or prominent) topics. Topics vary regarding their newness or predictability, and in connection with these, regarding their prominence. These differences will be shown to have syntactic consequences as well.

2.3.2. The functions of Left Dislocation

After looking at topicality, it is also helpful to overview the pragmatically oriented literature of Left Dislocation, including comparative analyses of LD-types and topicalisation on the one hand, and comparisons of the meaning of LD in English, German and Hungarian on the other, as these findings will serve as the basis for the discourse-oriented features intended to be used in the final OT analysis. To get a full picture of the characteristics of LD in general and of different LD types, it is necessary to view the function of the dislocated phrase not only in the actual sentence where it occurs but also its function in the previous and preceding clause, and in the discourse context. Among the accounts that deal with LD from a discourse-functional point of view, let me highlight first the main concepts that are considered to be connected to this construction.

2.3.2.1. The most influential pragmatic studies: Geluykens (1992) and Prince (1997, 1998, 1999)

Geluykens (1992) establishes the two main functions of LD as (i) referent-introduction and (ii) expressing contrastiveness. He summarizes that on an abstract level, these two can be subsumed under the notion of 'highlighting'; the term is used to avoid the notion 'foregrounding' which implies movement.

Referent introductory LD comes into being as a result of an interactional process: the introduction of the referent by the fronted item (REF) and the establishment of the referent by the proposition. Between these, the act of acknowledgement by the hearer takes place, represented by an intervening pause (or even by an intervening turn, but I leave aside such examples in the present study). The reason why such a procedure is applied lies in the non-recoverable status of the referent from the immediately preceding discourse.

The second functional type, contrastive LDs might involve explicit or implicit contrast; contrastiveness can also involve a sense of newness, where 'new' is defined, following Taglich (1984), as 'whatever is presented by the speaker to the hearer as particularly deserving of attention' (ibid. 42).

The major point Prince (1997, 1998, 1999) maintains in her papers is that we should attempt a more refined view of LD to show that its function cannot be equated with topicalisation. Firstly, 'simplifying' LDs are mentioned: their common feature being that their referents are new in the discourse – the main function of such constructions is to remove a new referent from a position that is not appropriate for new entities, such as the subject position or part of a possessive structure.

(45) *Everybody talk about it all the time. Especially* ***Aunt Katherine up here***$_i$*, that's all me and* ***her***$_i$ *talk about – what they done to us. My father and mother sold their land out.* (Prince 1998:285)

'Poset' LDs have a set-inference triggering function. Partially-ordered set ('poset') relations include *is-a-part-of* or *is-a-subtype-of* relations. The LD 'instructs the receiver that this entity is in a relevant poset relation to something already in the discourse-model' (Prince 1997:125).

(46) She had an idea for a project. She's going to use three groups of mice.

a. **One**, she'll feed **them** mouse chow, just the regular stuff they make for mice.

b. **Another**, she'll feed **them** veggies.

c. And **the third** she'll feed junk food. (Prince 1997:124)

Prince discusses the issue whether the notion of poset or that of the contrast is more basic, and concludes that poset relations will be preferred in her account. However, I do not fully agree that the partially-ordered set relation is more basic than the relation of contrast. Moreover, it seems to me that all the examples that demonstrate the 'poset' relationship are in fact contrastive: they pick out a member of a set; this member is then automatically contrasted with the others in the same set. Prince (1998: 349) also admits this: 'an inference of contrast may arise when alternate members of a set […] are discussed' but adds 'it is no way directly induced by the Left-Dislocation construction'. I do not see how one is able to distinguish between 'real' and indirectly induced functions of a construction. Instead of supplying further arguments Prince refers the reader to a former paper (1981) where contrastivity is discussed. Unfortunately, the focus is on topicalisation there instead of LD, and the only argument for the superiority of the poset-relationship to contrastivity involves a topic structure not demonstrating this type of relationship. Prince argues, on the basis of only one example of topicalisation – as all the others can be regarded contrastive – that it excludes a contrastive reading:

(47) 'I have a recurring dream in which ... I can't remember what I say. I usually wake up crying. <u>This dream</u>, I've had maybe three, four times.'

(Terkel 1974: 118, cited in Prince 1981: 252)

This example contains a topic which is already evoked in the discourse[5], whereas the argument in the latter paper (1998) concerns the poset relationship and argues against its inherent contrastiveness. As this point is not supported adequately, it will not be pursued here. Thus, I will take contrastiveness as a crucial feature of one group of LDs, as in Geluykens (1992).

Thirdly, 'resumptive pronoun' LDs are listed: their role is to save an otherwise ungrammatical clause with an island violation. Although different types of structures are

[5] The hypothesis about topical NPs mentions two possibilities: 'The NP in TOP must represent either an entity that is evoked in the discourse or else one that is in a salient set-relation to something already in the discourse.' (Prince 1981: 253)

brought up as examples in the paper, LD in wh-questions can be viewed as an instance of correcting an island violation. From a pragmatic point of view, this last type does not bear a distinct function but rather neutralizes the contrast between topicalisation and LD.

(48) GC: 'You bought Anttila?'
EP: 'No, this is Alice Freed's copy.'
GC: a. '***My copy of Anttila***$_i$ I don't know who has ***it***$_i$.'
b. *? *'My copy of Anttila*$_i$ I don't know who has [e]$_i$.'

A recent corpus-based study, applying Centering Theory, identifies a fourth type in addition to Prince's categories, the 'Unexpected Subject Left Dislocation' (Manetta 2007: 1034). The main tenet of Centering Theory relates to the linking of utterances in the discourse: they have a backward-looking center and one or more forward-looking centers, which link them to preceding and the following utterances. The fourth type of LD is applied if the most prominent forward-looking center of an utterance does not correspond to the subject of the next utterance, i.e. the transition is not as expected. In these cases, the LD item enters an unexpected relationship in the utterance.

What is common in the most approaches dealing with LD is the assumption that this construction has a connection to topicality but conveys an additional layer of meaning in contrast to it. As Gregory & Michaelis (2001:28) summarize on the basis of analysing conversation data from the Switchboard corpus:

> *'In the case of LD […] the referents of the preclausal NPs are in general (1) not previously mentioned and (2) continue as topics. Thus, both criteria used to identify the topic-establishing function are met for the set of all LDs. Neither criterion is met for TOP. These facts strongly suggest that the LD pattern is used to establish new topics, while the TOP pattern is not.'*

2.3.2.2. Differences between LD types

Apart from general characteristics, many accounts of LD focus on the properties that distinguish the two main types of LD, namely Hanging Topic Left Dislocation and Contrastive Left Dislocation. Moreover, studies about cross-linguistic comparison of the types are also of interest for the purposes of the present study.

2.3.2.2.1. Hanging Topic Left Dislocation (HTLD)

In many German-based approaches it is claimed that English LD formally and functionally corresponds to German HTLD (Frey 2004a,b; Grohmann 2000, Nolda 2004, Shaer & Frey 2003). Frey (2004b) also argues that the discourse function of the HT in German is to mark the introduction of a new discourse topic referent or a shift of discourse topic.

In a recent study of both LD and Right Dislocation, Averintseva-Klisch (2006) takes the discourse topic change function of HTLD as basic. Following Portner (forthcoming) LD can be claimed to be a 'separate performative', i.e. it has additional expressive content. Such content is not part of the compositional meaning of a sentence, but can be added to it as new dimensions to the meaning. One distinguishing feature of separate performatives is that they are semantically non-embeddable. This non-embeddability of separate performatives is demonstrated below: in the example, the phrase '*my new neighbour'* is not part of what Felix is saying; it can only be contributed to speaker of the matrix sentence.

(49) As Felix said, Amir, *my new neighbour*, is from Israel.

(Averintseva-Klisch 2006:21)

The expressive meaning of English LD, which can be extended to German HTLD, can be summed up as follows: 'speaker's mental representation of X is active (in a given world)', that is, its function is to activate the mental representation of the referent. Right Dislocation and German HT share the feature of marking the referent of the NP as the discourse topic referent, the difference being that HT always marks a new topic, whereas RD maintains the existing one or marks a new one for the following discourse. The expressive meaning of LD is that "the speaker signals that he is starting to talk about X" (Averintseva-Klisch 2006: 23).

From the above, the important observation follows that a sentence with or without dislocation has the same truth conditions, as it does not change the compositional meaning of an utterance; the difference lies in the explicit marking of topicality for the following discourse segment. This delivers an answer to the claim that in many contexts (I experienced this especially in Hungarian) an LD-structure is interchangeable with a simple non-LD clause, without changes in grammaticality and semantic appropriateness in the actual context. The function of LD seems to be to add an extra dimension to the pragmatic meaning of the utterance, namely explicit signalling of the new discourse topic.

2.3.2.2.2. Right dislocation - pragmatically

To round up the discussion of HTLD, a short note is in order here about the pragmatic status of a related structure, Right Dislocation, and its possible connections to left dislocation.

According to traditional analysis (e.g. Altmann 1981) the only function of RD is disambiguation of a former pronominal reference, and nothing more. A recent study (Averintseva-Klisch 2006) has shed light on its other possible uses, which also highlight its connections to its parallel construction, LD. Averintseva-Klisch argues for two distinct types of RD: (i) RD proper, which is of interest for us because of its discourse function and (ii) afterthought RD (AT).

From a structural point of view, the two constructions differ considerably. Right Dislocation proper (50)-(51) acts as prosodically and syntactically being part of the host sentence, there is strict morphological agreement between pronoun and dislocated phrase, and the latter does not constitute a separate intonational unit. Moreover, no subordinative clause or optional additions can intervene between the pronoun and the RD phrase, thus it sits in a fixed position. Afterthought RD,(52-53) on the other hand, is an "orphan", i.e. it is not an integral part of its host sentence. Additional material between the clause (Host) and AT is possible; its position can also vary within the host sentence.

(50) „Der Taifun", rief Lukas dem Kapitän zu. „Da ist er!" Ja, da
"The typhoon!" called Lukas the captain to. "Here is he!" Yes, here
war er, (*ich meine / *also / *tatsächlich) der Taifun.
*was he (*I mean / *that-is / *really) the typhoon.* (ibd. p. 18)

(51) (Dieser Peter!) Ich kann ihn$_i$ nicht leiden, den Peter$_i$.
(This Peter!) I can him$_{ACC}$ not suffer the$_{ACC}$ Peter (ibd. p. 18)
I can't stand him, Peter.

(52) Dann ist sie weggelaufen, | (ich meine / also) LIsa.
then is she run-away (I mean / that-is) Lisa.
Then she ran away, (I mean) Lisa.

(53)	Und dann passierte	das Unglück$_i$,	(ich meine)	dieser schreckliche
	and then happened	the misfortune$_{NEUTR}$	(I mean)	[this terrible
	Autounfall$_i$.			**AT**
	traffic-accident]$_{MASC}$.			

And then the misfortune happened, (I mean) this terrible accident.

(ibid. p.17)

Right Dislocation adds a separate performative, an 'expressive meaning', to the semantics of the sentence. This performative is defined as follows: 'the speaker (of the host sentence) signals that he is (further on) going to talk about X' (ibid.p.19), with X being the referent of the right dislocated NP, i.e. RD marks a discourse referent as being the 'theme' for the following discourse segment. On the other hand, AT stands for explicit clarification of unclear reference.

2.3.2.2.3. Contrastive Left Dislocation

According to Shaer and Frey (2003), integrated LDs, realized by Contrastive Left Dislocation (CLD) in German, are 'links', i.e. they promote an aboutness-topic. They refer to Birner and Ward's (1998: 20) notion of a 'link', which is described as 'linguistic material representing information which stands in a contextually licensed [partially ordered set] relation with information evoked in or [inferable] from the prior context, and serves as a point of connection between information presented in the current utterance and the prior context.' In Hinterwimmer and Repp (2010), 'relevance' instead of 'aboutness' is claimed to be the distinguishing characteristic of German (contrastive) Left Dislocation.

Another interesting observation about HTLD and CLD[6] is that both can signal topic shift, with the following restrictions: CLD always maintains the discourse topic, whereas HTLD alters or refers to it. What is special regarding the function of CLD is that it can signal a change in the sentence topic. 'The referent of the [C]LDed phrase has been introduced in previous discourse or stands in a cognitive salient relation to an already introduced discourse referent.' (Frey 2004:15)

Salience characterizes referents which are most prominent/most accessible at that point in the discourse, i.e. can be more readily referred to by pronominal forms. Moreover, a degree of salience can directly influence the choice of the pronoun as well. Kaiser (2006) has shown experimentally that topics are more salient in the following discourse than foci; in addition, both topics and foci are more salient than neutral elements.

[6] CLD is called 'German Left Dislocation (GLD) ' in Frey 2004.

Alexopoulou and Kolliakou (2002) also introduce the notion of ’linkhood’ to distinguish between topicalisation and LD. The link-focus-tail ordering of clauses collapses the aspects of the topic-comment and the ground-focus structure, and through this a finer characterisation of discourse roles is achieved. The examples in (54) illustrate the possible combinations of the three discourse notions.

(54) a. The president has a weakness.
[$_F$ He hates chocolate.] *all-focus*
b. Tell me about the people in the White House. Anything I should know?
The **president** [$_F$ hates chocolate.] *link-focus*
c. You shouldn't have brought chocolates for the president.
[$_F$ He hates] chocolate. *focus-tail*
d. And what about the president? How does *he* feel about chocolate?
The **president** [$_F$ hates] chocolate. *link-focus-tail*
(Vallduví & Engdahl 1996, cited in: Alexopoulou & Kolliakou 2002:209)

Greek topicalisation and Clitic Left Dislocation (CLLD) are contrasted, and the authors conclude that only the latter can signal a link in the discourse. Referential differences between topics and LDed phrases are also traced back to the differences in function: the latter have a specific interpretation even if they are indefinite, i.e. preceded by an indefinite article. A similar observation is made about LD in German as well (Altmann 1981): it can turn an indefinite NP to an expression with (definite or) generic meaning. Moreover, similar Hungarian examples can also be found, in defining context types.

(55) ***Ein/*Irgendein Mädchen, das*** darf nicht drei Tage ‘rumlaufen
a$_{NOM}$/any$_{NOM}$ girl that$_{NOM}$ is-allowed not three days run around
mit ‘m großen Loch im Ärmel. (Altmann 1981:209)
with a$_{DAT}$ big hole in the sleeve
A girl, she should not run around for three days with a big hole in her sleeve.

(56) ***Egy anya, az*** mindig figyel a gyermekeire.
a mother$_{NOM}$ that$_{NOM}$ always pays attention to her children
A mother, she always pays attention to her children.

It is argued that links highlight a special case of anaphora called ‘non-monotone anaphora’, when the discourse referents of the two members exhibiting an anaphoric relationship are not the same.

(57) Hendriks & Dekker's Non-Monotone Anaphora Hypothesis
Linkhood [...] serves to signal non-monotone anaphora. If an expression is a link, then its discourse referent Y is anaphoric to an antecedent discourse referent X, such that $X \not\subseteq Y$. (cited in Alexopoulou & Kolliakou 2002:218)

This formulation allows for two cases. First, the previously introduced set is larger. That is, Y functions a subset of this. Such a relationship is called *subsectional anaphora*, and is illustrated in (58). In one of the readings of the second sentence, the subject ‘*the cats’* can refer to a subset of ‘animals’, in this case it qualifies as subsectional anaphora.

(58) John fed the animals. *The cats* were hungry.

The other possible case is when the two sets do not intersect, i.e. they are connected as *relational anaphora*, exemplified by (59). ‘*The fathers’* can refer either to the basketball players or to the fathers of the players’ – this latter case, when the two sets do not have common members but stand in a certain relationship to each other, is seen as relational anaphora.

(59) Ten guys were playing basketball in the rain. *The fathers* were having fun.

The expression of this function, as we would expect from pragmatic functions, is not a unique feature of Greek clitic LD. In German, a similar meaning can be conveyed by CLD constructions. The latter construction, as opposed to a neutral structure (60b) or HTLD, is the best way to formulate the sentence, if ‘Otto’ is meant to be one of the children in question.

(60) Context: Die Kinder hatten ihren ersten Ferientag.
(The children had their first day of holiday.)

a. ***Der Otto, der*** wollte Fußball spielen.
the$_{NOM}$ Otto, that$_{NOM}$ wanted football play

b. Der Otto wollte Fußball spielen. (Frey 2001:430)
the$_{NOM}$ Otto wanted football play

Molnár (1998) remarks about contrastive topics cross-linguistically that they exhibit features of foci as prominent preverbal constituents. As discussed earlier, the two notions do not exclude each other as they belong to different levels of communication. The author proposes that focus and newness be defined on a new ground. One reason for this is that topic cannot be distinguished from focus on the basis of the given-new contrast, as anaphoric elements can constitute foci, too, for instance (cf. example (44), p.17). Newness should not refer only to referential status 'but also to different types of relations', i.e. making 'new' choice among 'old' relations. In this sense, contrastive topics, including CLD, can be defined as 'new'. This view will be maintained in the present analysis as well.

In conclusion, the generalization can be made that Hanging Topics with looser connection to the clause tend to mark a new topic or signal breaks in the discourse. By comparison, the referent of Contrastive LD is less 'new' than that of HTLD, but it has additional pragmatic meaning compared to simple topicalisation, like discourse linking, establishing a relationship to an already mentioned item, or expressing contrast. In my understanding, the common ground for all these functions is placing a referent in a new relationship. It remains to be seen whether the two main pragmatic types also receive a grammatical reflex in the analyzed languages.

2.4. The language-specific formal properties of Left Dislocation

Apart from their expressive meanings, it is also of importance to distinguish LD types language-specifically. This can be done on the basis of word order facts, position, case and form of resumptive. It will also be observed whether more than one LD type can be found in a language from a purely formal point of view, and if not, to which type of LD bears more resemblance to the language-specific one. These findings can then be related to possible pragmatic meanings.

2.4.1. English in detail

It is generally assumed that there exists only one type of LD construction in English, as the following examples taken from Hidalgo (2002) demonstrate:

(61) a. ***Ingeborg, she'***s doing nineteenth century.
b. ***That guy***, is ***he*** a friend of yours?
c. ***That trunk,*** put ***it*** in the car!

The English LD consists of a dislocated NP and a personal pronoun as resumptive. In (61a) and (b) , the subject is left dislocated, thus the resumptive appears in the subject position; in the third case, the LD phrase would have object function in the main clause, thus the resumptive appears in the object position, postverbally. From, these and the following data, we can conclude that the resumptive element stays *in situ* in LD in English. Concerning the form of the resumptive element, it is a personal pronoun in the majority of cases. However, examples taken from a corpus (Geluykens 1992) demonstrate that demonstrative pronouns can occasionally show up as resumptives of LD.

(62) ***The*** – what do you call it – ***cricket commentary***, there was a manuscript of **that**.
(ibid. p.41)

(63) Well, you see, ***the later history***, Miss Stamp's been doing ***this*** with us.
(ibid. p.48)

Because of the poor inflectional system of English, we cannot make assumptions about the case of the dislocated phrases on the basis of these data. However, dislocated personal pronouns behave interestingly in this respect:

(64) Garfield: What do spiders do for fun?

Spider: Well, ***me, I*** like to read.

Garfield: Knock yourself out.

(http://www.garfield.com/comics/vault.html?yr=1997&addr=970606, 1997-06-60)

The resumptive item that is coreferent with the dislocated pronoun functions as subject in (64), so there is no motivation for the dislocated phrase to show up in accusative case. Therefore, it is justified to say that the dislocated pronoun stands in some kind of a default case here. Further examples with personal pronouns are listed in Ross (1967:120), which also support this observation.

(65) a. *Me,* I like beer.

b. *Him,* they let him go yesterday.

c. *Us,* we'll go together.

d. *Them,* they can't stand each other.

In the examples,, case matching in (b) is due to the fact that the resumptive stands in the accusative due to its object status. Therefore, it can be concluded that there is no obligatory case matching between the dislocate and the resumptive in the case of English LD.

Regarding word order, LD is most common in matrix declaratives, however, it can also occur in imperatives, where simple topicalisation would be unacceptable, and also in wh-questions.

(66) ***These carrot squares***, eat t***hem*** up!

**These carrot* squares eat up! (Rodman 1974:439)

(67) ***Jon***, when have you seen ***him***?

It is also noted that LD is a 'root phenomenon' or 'root transformation'. According to this, LD cannot appear in an embedded context. In contrast, LD out of an embedded clause is possible, as in (68) and (69) . The resumptive stays in its original argument position inside the embedded clause, while the dislocated item appears outside of it.

(68) ***Those piranhas***, I halved my best time for the 400 freestyle when I saw ***them***.

(Rodman 1974:35)

(69) ***My father***, that ***he***'s lived here all his life is well known to the cops.

(Riemsdijk 1997:2)

Generally, dislocation of arguments is the most common type of LD in English; however, it is possible to left dislocate other items as well, for instance prepositional phrases or predicative adjectives.

(70) **In this cupboard**, Steve put the beans **there**.

(71) **Ugly**, all of us just feel like **that** sometimes. (Bon Jovi 1997: *Ugly* lyrics)

Although multiple topicalisation of arguments is disallowed in English, the combination of topicalisation and dislocation of arguments yields a grammatical result. As the examples below illustrate, the fronted items obey a special ordering: the left dislocated expression precedes the topic, while the reverse order is ungrammatical (72c). This might be explained by the fact that a dislocated item is less 'connected' to the clause than other constituents. In addition, multiple LD of arguments also yields an incorrect result.

(72) a. *John*, Mary$_i$, ***he*** likes t$_i$.

b. * *John*, *Mary*, ***he*** likes ***her***.

c. * Mary$_i$, *John*, ***he*** likes t$_i$.

(Lasnik & Saito 1992:78, cited in Grohmann 2003)

Finally, it is worth mentioning the prosodic characteristics of LD. In syntactic treatments of the phenomenon, the question of intonation remains rather in the background. However, there is one feature which is mentioned in most analyses, namely the absence or presence of a pause between the dislocated element and the rest of the clause. In languages in which more types of LD can be found, this is the distinguishing feature between free or hanging dislocation structures and contrastive ones.

A detailed corpus-based account of the prosody of LD can be found in Geluykens (1992), with two foci of analysis: (i) the intonation of LDs and (ii) the prosodic boundary between the 'referent' (i.e. the fronted phrase in Geluykens's terms) and the rest of the clause. As already mentioned, two basic variants of LD are distinguished in Geluykens (1992) on the basis of their function: referent-introducing ones, which serve to accommodate a new referent in the discourse and non-referent introducing ones with various functions, the most significant being the expression of contrastiveness.

Regarding intonation, the general tendency for referent-introducing LDs is that their first part ends in a falling tone, whereas the dislocated parts of the other types typically exhibit a rising contour, i.e. rise, fall-rise or fall+rise (p.106-108). The pragmatic meaning of these contours is explained as follows: in referent-introducing LDs (which are very similar to hanging topic LDs syntactically), the fronted phrase represents an utterance on its own, thus it is has falling intonation; in other types of constructions, the rising tone expresses non-finality, both syntactic and interactional.

Concerning the prosodic boundary between the dislocated phrase and the clause, there is also a fairly clear-cut difference between the two main LD-types: an intervening pause can be found in almost all cases of referent-introducing LDs, due to the interactional nature of referent establishment, e.g. waiting for the hearer's acknowledgement. On the other hand, the absence of a pause is characteristic of non-referent-introducing LDs, in the case of which the main function of the LD is not the introduction of a referent but the expression of the speaker's own intention that does not require acknowledgement by the hearer.

To sum up, it is of importance that Geluykens observes a nearly direct relationship between pragmatic and prosodic features of LDs with different function. Thus there seem to be coincidences in different components of the grammar. In my view, this could well serve as a justification for establishing two types of LD in English as well. Although they are not distinct syntactically, the above pragmatic and prosodic pieces of evidence support their existence.

2.4.2. German

For German, it is necessary to distinguish between two main types of Left Dislocation structure on morphological and syntactic grounds, 'Linksversetzung' or Contrastive Left Dislocation on the one hand, and 'Hanging Topic Left Dislocation' or 'Freies Thema' on the other.

2.4.2.1. Left dislocation type 1, 'Linksversetzung'

(73) ***Die Brigitte*** →, ***die*** kann ich schon gar nicht leiden↓.[7]

the B. that$_{fem}$ can I (particles) not bear

Brigitte, I can't stand her at all. (Altmann 1981:48, glosses added)

In the construction exemplified in (73) a constituent of the relevant clause, an NP or a PP, is located in front of the clause. This is followed by a coreferential demonstrative pronoun which precedes the finite verb. No introductory phrase is allowed to be combined with the initial constituent, but parenthetical expressions can intervene between this phrase and the following pronoun. The latter should match the dislocated constituent in case, number and gender. In the case of PPs, the pronoun has to bear the same preposition, or, in certain cases, the preposition+pronoun sequence can be substituted by '*da*'.

Concerning intonation, there is no sentential pause between the dislocate and the proform. The fronted constituent bears thematic accent, whereas the resumptive is mostly unaccented. In the case of a contrastive interpretation, both elements bear a contrastive accent. The dislocated phrase ends with a 'progredient' or sustained intonation pattern, i.e. it is not independent. These observations along with certain syntactic facts point to the conclusion that the fronted element, together with the pronoun, occupies the prefield of the German clause ('Vorfeld'), which normally can only be filled with one constituent. Coordinating conjunctions always precede the dislocated phrase. Pragmatically, such a construction is mainly used for highlighting the theme of an utterance ('Thematisierung').

The demonstrative pronoun has to stand in the prefield of the sentence, even in the case of imperative clauses, where the norm is the verb-first word order. An imperative structure with V-first order is shown in (74); the CLD item together with the resumptive can precede the verb, in contrast to all other constituents.

[7] Intonation is marked following the original notation of Altmann (1981). The symbol '→' indicates progredient intonation, the symbol '↓' falling, whereas '↑' marks rising intonation.

(74) *Nimm* den Schirm ruhig mit!
take the$_{ACC}$ umbrella calmly with
Feel free to take the umbrella with you!

(75) ***Den blauen Schirm, den*** *nimm* ruhig mit!
the$_{ACC}$ blue umbrella that$_{ACC}$ take calmly with
The blue umbrella, feel free to take it with you!

(Altmann 1981: 113, glosses added)

Concerning this type of left dislocation, Eisenberg (1989:412) remarks, without defining other types, that dislocated constituents might appear between the conjunction and 'Vorfeld' (pre-field): the defining characteristics of this construction type is the presence and fronting of an anaphoric pronoun. Structures, in which the demonstrative stays in situ, are of dubious grammaticality, see (77). Grewendorf (2003) operates with such examples, which casts doubt on the acceptability of his results.

(76) Denn den Stern, **den** hat Irene ihm gezeigt heute morgen.
because the star$_{ACC}$ that$_{ACC}$ has Irene him$_{DAT}$ shown today morning
Because the star, Irene has shown it to him this morning.

(77) ??Denn den Stern, Irene hat ihm **den** gezeigt.
because the star$_{ACC}$ Irene has him$_{DAT}$ that$_{ACC}$ shown

(Eisenberg 1989:412; glosses added)

Finally, it has to be added that Lipták (2010) mentions that a contrastive LD structure in German contains an emphatic operator (focus, negation, quantifier), similarly to Hungarian.

2.4.2.2. Left dislocation type 2, 'Freies Thema' or 'Hanging topic'

In many cases the only distinguishing feature between the Hanging Topic and the preceding construction is intonation. The fronted constituent can be followed by a clause which itself allows the standard word order variation. The fronted constituent can be referred to by a variety of elements in the main clause: not only personal and demonstrative pronouns but full NPs may occur, as long as the resumptive is pragmatically relevant/related to the dislocate. Conjunctions follow the 'free theme'. According to

Altmann (p. 50), parenthetical expressions may not intervene between dislocate and clause, which points to the fact that they do not form a clause by themselves, as parentheticals are only allowed to appear in between clauses. Morphologically, the hanging topic bears mostly nominative case (hence the Latin term 'Nominativus pendens'), but may inherit its case from an element in the preceding clause. This may give rise to accidental case matching between dislocate and resumptive.

(78) Wie beurteilt man bei euch den Professor?
'How do they judge the$_{ACC}$ professor'
Den Professor↑? Sie loben ***ihn***.
'The$_{ACC}$ professor? They praise him$_{ACC}$'

There is always a clear sentential pause following the HT, the HT itself can have falling or rising intonation, i.e. it has an independent intonation pattern. These characteristics allude to the fact that HTLD is less integrated in the following clause, it has something of a sentential value. Altmann (1981) mentions as pragmatic functions: 'thematization', or more precisely change of theme, thematic alternatives or reintroduction of an already mentioned theme.

Shaer (2009) refers to the two types of LD as N-class (non-integrated) and I-class (integrated) structures. His account is of importance for our purposes as it involves a cross-linguistic comparison. According to this, German hanging topics and English Left Dislocation are grouped under the heading 'N-class structures', whereas German contrastive LD and English syntactic topicalisation are regarded as belonging to integrated structures. The position of Hungarian LD is at first glance among the I-class structures, but the above comparison is based mainly on syntactic facts.

As for the combination possibilities of HTLD, topicalisation and a dislocated item can appear in the same structure, as in English, as demonstrated in (79). In such cases, only Hanging Topics are possible, as in the case of CLD both the demonstrative resumptives and the syntactic topic targets the same preverbal position that can be filled only once per clause.

(79) ***Dieser Kandidat,*** einen Arschtritt sollte man ***dem/ihm*** geben.
this$_{NOM}$ candidate a kick-in-the-ass should one that$_{DAT}$/him$_{DAT}$ give
This candidate, a kick in the ass, one should give him.

(Grohmann 2000:167)

2.4.2.3. Adjunct PP Left Dislocation in German

In most accounts of Left Dislocation, only structures with fronted arguments are considered, although there are many instances of adjunct Left Dislocation cross-linguistically (cf. the Hungarian example (92d) with '*ott*' as a locative resumptive, Section 2.4.3.). In German, almost all types of PP adjuncts can be resumed by the adverbial 'da', originally meaning 'there'. Altmann (1981) also mentions it as being 'a universal pronoun'. These dislocated adjunct PPs are best characterized as 'frame-setting modifiers'.

There exist other types of resumption options for prepositional expressions: human referents are normally resumed by a preposition-personal pronoun combination or by a preposition followed by a demonstrative in the case of CLD; nonhuman items are taken up by a composite adverb formed by *da(r)-* and the preposition .

(80) a. Mit dem Hans, **mit dem** würde ich nicht ins Kino gehe.
with the$_{DAT}$ Hans with that$_{DAT}$ would I not in cinema go
b. Der Hans, ich würde **mit ihm** nicht ins Kino gehen.
the$_{NOM}$ Hans I would with him$_{DAT}$ not in cinema go
(With) Hans, I would not go with him to the cinema.

(81) Mit dem Flugzeug, wir fliegen ***damit*** auf die Azoren.
with the$_{DAT}$ airplane we fly that-with to the$_{ACC,PL}$ Azores
By plane, we fly to the Azores.

According to a corpus study examining adjunct PPs, '*da*' is generally preferred over adverbials or prepositions with a demonstrative; the preferred position of '*da*' is in the prefield of the German sentence (i.e. preverbally) as opposed to a sentence-internal position (Salfner 2006), although both patterns are attested as the following examples illustrate:

(82) **In unserem Garten**, **da** stehen drei Apfelbäume.
in our garden 'da' stand three apple-trees
In our garden, there stand three apple trees.

(83) **An der Ostsee**, manche Leute machen **da** mehrmals im Jahr Urlaub.
at the East Sea some people make 'da' more than once per year holiday
By the Baltic Sea, some people spend their holiday there more than once a year.

2.4.2.4. Prosodic facts

After reviewing the German data form a syntactic and morphological perspective, prosodic facts should also be mentioned as they function as a distinguishing feature of LD types. Altmann (1981) delivers a prosodic analysis of German dislocation structures, making use of three basic intonation patterns: falling, rising and 'progredient' (p. 185), i.e. progressive or sustained, an intonation of continuation. This latter pattern signals incomplete utterances, as it does not contain a tone syllable or a sentence accent (although it contains a syllable with an accent stronger than the others), and its function lies in pointing to the following utterance to complete the utterance both syntactically and semantically. Postulating the latter intonation type obviously seems necessary to be able to describe German LD – in Geluykens (1992) this aspect is dealt with in terms of the absence or presence of a tone unit boundary.

According to Altmann (1981), German contrastive LD ('Linksversetzung' in his terminology) has strict intonational rules to obey. He remarks that the facts that appear in the literature on the intonation of LD refer almost exclusively to Hanging Topic LD and are therefore not exhaustive. First of all, the dislocate shows 'progredient' intonation, with a possible rise after the nuclear accent (TONSILBE). There is a clear pause (SATZPAUSE) between the dislocate and the previous clause, whereas the pause between dislocate and its own clause might be totally absent. This results from the following: the intonational pattern of the fronted phrase fits into the main clause; the following resumptive bears no accent and a thematic accent sentence-initially is not unusual in German. Neither the dislocate nor the resumptive can bear primary accent, similarly to topics:

(84) M e i n e m B r u d e r→, d e m geht's gut↓. (Altmann 1981: 194)
my$_{DAT}$ brother that$_{DAT}$ goes it well
My bother, he's fine.

Hanging Topics, as they have sentential status, can bear falling, and in one case rising intonation, if the Hanging Topic is formulated as a question. There is a clearly definable pause between the dislocated element and the main clause, whereas the pause between the dislocate and the previous clause can be minimal, when the speaker takes up a referent from the previous clause, i.e. on the case of continuing the theme ('Themenübernahme/ Themenfortführung'). As an independent expression, a Hanging Topic can bear primary accent which is always weaker than the primary accent of the following clause; Altmann explains this through pragmatic considerations. A contrastive accent – and, of course, a contrastive reading – is unacceptable with this construction.

Instances of accented topics, which also include LDs with prominent dislocated parts, are also analysed in depth by Molnár (1998) with respect to their intonational features. In the following examples, italics indicate prenuclear accent, block capitals mark the constituent with nuclear accent, i.e. the focus in these cases.

(85)	*Die*	*Brigitte,*	die	kann	ich	schon	GAR	nicht	leiden.
	the$_{F, ACC}$	Brigitte	that$_{F, ACC}$	can	I	already	really	not	bear

(86) *Der neue Roman von Grass*, den würde ich NICHT empfehlen.
the$_{NOM}$ new novel by Grass that$_{ACC}$ would I not recommend

(Molnár 1998: 93)

In clauses with prominent topics, we find two prosodic peaks: the first one is on the topic which consists of a tonal rise and the second, where the nuclear accent falls on the focus, is realized by a fall (ibid. p.92).

It is also observed that a pitch accent is a characteristic feature of prominent topics and was assumed to 'indicate some type of focussing' (Molnár 1998:159), though this relationship might be less direct, and the pitch accent can simply have the function of segmenting the given sentence, i.e. to mark the topic-comment structure of the utterance and highlight certain constituent intonationally. Although Molnár admits that pitch accent corresponds to a variety of semantic and pragmatic functions, it seems to me that there is a common ground, i.e. discourse prominence, which connects these diverse functions.

As Molnár's study is not limited to dislocation constructions, it includes other constructions that serve to express contrastive topicality, e.g. PP-preposing, topicalisation, hanging topic and I-topicalisation. Cross-linguistic connections between the occurrence of

certain syntactic constructions are made, but only to a limited extent: only syntactic topicalisation structures are listed as English examples, whereas both types of LD occur among the German ones; for Hungarian, again, only elements qualifying as syntactic topics are dealt with. The reason for this might be that the author wished to include only the most prototypical examples, but it does not justifies ignoring cross-linguistically similar structures.

2.4.3. Hungarian

The status and characteristics of LD are less than clear when we turn our attention to Hungarian. As mainstream theoretical concepts include the topic-comment structure of Hungarian sentences, and 'topic' vs. 'focus' being the two most frequently mentioned notions, not much attention is devoted to LD as a separate phenomenon in such an environment, i.e. in the majority of cases it is treated as a way of contrastive topicalisation, the resumptive being optional or omittable.

The only account which comes up with a categorization comparable to studies of LD in other languages is Lipták's (2009) paper. This starts out from the assumption that LD is one of the three subtypes of topics, these being (syntactically marked/fronted) topics, left dislocated elements and contrastive topics (Lipták 2001). As for LD, two types are mentioned, one being more frequent in usage. We will discuss this type first.

Lipták identifies one type of LD as 'Contrastively used left dislocation'. As for intonation, this is characterised by a special rising tone followed by a demonstrative resumptive pronoun that bears the case of the dislocated element or simply a pause . Thus, it also involves cases where there is no resumptive present, which is clearly different from the conception pursued here. The feature that distinguishes contrastive topics from contrastive LD is either the missing rising intonation or the lack of the resumptive , according to Lipták.

(87) **Péter** (**az**) AJÁNDÉKOT kapott Maritól. (Lipták 2009: 419)
Peter$_{NOM}$ that$_{NOM}$ present$_{ACC}$ got Mary-from
Peter (, he) got a present from Mary.

Further characteristics of the construction, which are also applicable to our narrower definition of LD, include that only one dislocated item is allowed per clause; the dislocatum can be preceded by other topics and it precedes quantifiers and foci. LD most

typically occurs in sentences containing an operator. Lipták's claim that dislocated items can be universal quantifiers and that they do not need to be referential expressions is only true for contrastive items fronted by syntactic topicalisation.

Lipták terms the second type of LD 'Non-contrastively used left dislocation'. Similarly to the former type, the dislocate in a non-contrastive LD expression is followed by a case-marked demonstrative element. What sets this type apart from contrastive LD is the missing rising tone intonation. In accordance with my assumptions, Lipták also relates this use with Prince's (1998) 'simplifying use' of LD, to refer to discourse-new referents.

(88) Erre **Péter,** **az** fogta magát és elszaladt.
then Peter$_{NOM}$ that$_{NOM}$ took himself$_{ACC}$ and away.run
Then Peter, he got up and ran away. (Lipták 2009:420)

In this second case, it is necessary to mention that structures with personal pronouns – analogously with Hanging Topic constructions in German and English – also seem to exist in Hungarian, illustrated by (89) and (90):

(89) a. ***A Péter, ő*** TEGNAP vizsgázott.
the Peter$_{NOM}$ he$_{NOM}$ yesterday exam-took
b. ***A Péter, ő*** tegnap már levizsgázott.
the Peter$_{NOM}$ he$_{NOM}$ yesterday already PFX-exam-took

(90) ***A következő fellépőnk,***(*audible pause*) ***ő*** egy igazi világutazó ...
The next presenter-our$_{NOM}$ he$_{NOM}$ a real world-traveller
Our next presenter, he is a real world traveller.
(Péter Felméri in the television programme Showder Klub, 2010 October)

These expressions are clearly non-contrastive, presentational structures, they introduce a new topic and in the majority of cases mark a persistent topic, i.e. the speaker goes on to talk about the dislocated item in question.

In such constructions, the dislocated item is felt to be followed by a relatively longer pause, e.g. in the case of hesitation, it is more likely that the resumptive used is going to be a personal pronoun. Another property of such constructions is that the dislocated item and the pronoun frequently occur in nominative case. This results in case

matching so it cannot be taken as a clearly HT-like construction, only from the perspective of pragmatic meaning and usage.

In Lipták (2010), it is claimed that no HT-like constructions are attested in Hungarian. Lipták argues against the existence of Hanging Topics in Hungarian on the basis of cross-linguistic comparison to Italian, as Hungarian LD is recursive which HT in Italian is not. This argument is defective from various aspects: first, multiple Hanging Topics can often appear cross-linguistically, as attested in German, which shows that Italian must be rather an exception in this respect. Second, the examples Lipták uses to demonstrate recursive Hungarian LD are rather like multiple topicalisation constructions, which are quite frequent in this language.

In Lipták's 2010 account, the above categorization of LD types in Hungarian is no longer maintained. Instead, topics are grouped into Ordinary, i.e. non-contrastive, and Contrastive types, where the latter group is divided into further subcategories: Left Dislocation, involving implicit contrast and contrastive topics, involving explicit contrast.

In the following, I try to sort out the properties that characterise LD proper in the sense of the analysis which we will elaborate on in the coming chapters. Hungarian LD is defined along the following lines: (i) optional stress and (fall)rise intonation; (ii) the resumptive is optional. The resumptive has to agree with the argument it represents in Case, and also in deictic features (if the topic contains a proximate demonstrative like '*ennek a fiúnak, ennek/*annak'*). As mentioned in Kálmán (2001) as well, a dislocated item, functioning as a Contrastive Topic, must have an associate, which means that it might be followed by other topical material, but it is obligatorily followed by a stressed preverbal operator, like a quantifier, verum focus or negation.

The other subgroup under Contrastive Topics, contrastive topics (as a subcategory of Contrastive Topics, italicized in the example) are argued to appear with contrastive particles (boldface) and thus express explicit contrast.

(91) Anna regényt olvas, *novellát* **viszont** nem.
Anna novel$_{ACC}$ reads short-story$_{ACC}$ C-PRT not
Anna reads novels but short stories, she doesn't.

The examples which Lipták uses to highlight the difference of interpretation between the two structures (p.181) are not especially revealing. The LD example appears without a resumptive; the clause with the contrastive topic also contains a particle '*viszont*'. This

does not really show that the first structure is an LD, because its interpretation is different from the other, which is perhaps purely the result of the insertion of the particle which expresses explicit contrast.

Left-dislocation is also treated in the Kenesei et al. (1998:173) Hungarian grammar, where it is categorized as another instance of leftward movement, alongside topicalisation. They claim that a coreferential pronominal or adverbial which appears in the same case as the dislocated element is a distinctive feature of the construction. Although the possible usage of the third person singular personal pronoun ('*ő*' for 'he' or '*she*' in (92a) and (c)) for humans is mentioned here, its choice is ascribed to dialectal differences.

(92) a. Anna, **az/*ő*** olvasta a könyvet.
Anna it[8]/she$_{NOM}$ read$_{PAST}$ the book$_{ACC}$
As for Anna, she's read the book.
b. A könyv-et, **az-t** Anna olvasta.
the book$_{ACC}$ it$_{ACC}$ Anna read$_{PAST}$
As for the book, Anna has read it.
c. Péter-nek, **an-nak/neki** Anna olvasta fel a könyv-et.
Peter$_{DAT}$ it$_{DAT}$ Anna read$_{PAST}$ out the book$_{ACC}$
As for Peter, it was Anna that read out the book to him.
d. A szobá-ban, **ott** Anna olvas.
the room-in there Anna reads
As for the room, Anna is reading there.

A dislocated element does not need to be the first element in the clause: 'an item apparently left-dislocated can be preceded by another one that was not, indicating that the term "left-dislocation" may very well be a misnomer' (ibid. p. 174). In the following example, a topic constituent precedes the dislocated item:

(93) Anna a könyvet, **az-t** a szobá-ban olvasta.
Anna the book$_{ACC}$ that$_{ACC}$ the room-in read$_{PAST}$
The book, Anna read it in the room (but there is/may be some other item that she read at some place other than the room.)

[8] Kenesei et al. (1998) use the translation '*it*' of the Hungarian pronoun '*az*'.

About the interpretation or function of LD Kenesei et al. state that the construction involves some kind of contrast with an explicit or implicit item, but it is not the only means of expressing contrast. The following example illustrates this claim, where the contrastive topic appears after another topic.

(94) Anna *könyvet* nem olvas (de novellát igen).
Anna book$_{ACC}$ not reads but short-story$_{ACC}$ yes
Anna doesn't read books (, but she does read short stories).

The idea that topicalisation and LD are interchangeable, or at least, that topicalisation can replace LD is maintained here as well: 'It is often the case that the constituent to be interpreted as contrasted carries a specific rising pitch and is followed by a short pause. In this case the coreferential pronominal does not occur' (ibid. p.174).

Similarly to Lipták's observations, the following embedding facts are laid down in Kenesei et al. (1998). Kenesei et al. observe that LDs in Hungarian can appear in subordinate clauses, a fact that clearly sets them apart from HT constructions. However, the environments for embedding are restricted: in contrast to topicalisation (95b), LD is possible only inside complement clauses and not adjunct clauses,.

(95)

a * Amikor ***a hallgató***, ***az/ő*** leadta a kulcsot, a portás megkönnyebbült.
when the student$_{NOM}$ that/he$_{NOM}$ PFX-gave the key$_{ACC}$ the porter was-relieved

b. Amikor a kulcsot a hallgató leadta, a portás megkönnyebbült.
when the key$_{ACC}$ the student$_{NOM}$ PFX-gave the porter was-relieved
'When the student handed him the key, the porter was relieved.'

(96)

a. A portás azt mondta, hogy ***a hallgató, az*** tegnap nem adta le
the porter that said that the student$_{NOM}$ that$_{NOM}$ yesterday not gave PFX
a kulcsot.
the key$_{ACC}$
The porter said that the student, he didn't hand him the key yesterday.

b. A portás tudja, hogy (tegnap) ***a kulcsot, azt*** a hallgató (tegnap)
the porter knows that yesterday the key$_{ACC}$ that$_{ACC}$ the student yesterday
nem adta le a portán.
not gave PFX the reception-at
The porter knows that the key, the student didn't handed in at the reception.

The possibility of extracting items from subordinate clauses for topicalisation is also mentioned here. If we extend the examples, the same is true for left dislocation: the sentences in (97) demonstrate dislocation of an element from an infinitival complement, whereas (98) shows the topicalisation of an object from a finite complement clause (note that the latter structure is highly restricted).

(97) a. **A könyvet, azt** ANNA akarja felolvasni Péternek a kertben.
the book$_{acc}$ that$_{acc}$ Anna wants pvp-read-to Peter-to the garden-in
The book, it is Anna who wants to read it out to Peter in the garden.
b. **A kertben, ott** ANNA akarja felolvasni Péternek a könyvet.
the garden-in there Anna wants pvp-read-to Peter-to the book$_{acc}$
In the garden, it is Anna who wants to read out the book to Peter there.
c. **A könyvet, azt** Anna fel akarja olvasni Péternek a kertben.
the book$_{acc}$ that$_{acc}$ Anna pvp wants read-to Peter-to the garden-in
The book, Anna wants to read it out to Peter in the garden. (no focus)
d. Anna **a könyvet, azt** fel akarja olvasni Péternek a kertben.
Anna the book$_{acc}$ that$_{acc}$ pvp wants read-to Peter-to the garden-in
The book, Anna wants to read it out to Peter in the garden.

(98) **A könyvet** Anna azt mondta, hogy felolvassa Péternek.
the book$_{ACC}$ Anna it$_{ACC}$ said that PFX-reads Peter$_{DAT}$
The book, Anna said that she would read it to Peter.

The sentence in (97c) is judged as infelicitous by Kenesei et al. (1998), as it is assumed that Hungarian LD has always a contrastive meaning, thus it must be followed by focus and ordinary topics should precede it. My own intuitions differ and indeed, for me at least, (97c) is a telling example for the non-contrastive use of the construction.

In Kálmán (2001) instances of left dislocation are treated under the heading 'Contrastive Topic' ('Kontrasztív topik', p.37). They differ from normal topics in that they

allow for a wider range of displaced elements, e.g. they do not necessarily denote an individuum – again, this observation holds only for contrastive topics without resumption, compare the examples (a), (b) and (d) on the one hand, and (c) on the other, where only the items with specific reference can be resumed by the demonstrative pronoun '*az*'.

The examples demonstrate contrastive topics that could function as 'normal' topics with falling intonation, too. Here, they receive a rising intonation and an additional meaning of implicit contrast with other alternatives.

(99) a. [$_{KT}$ /János] (, ő/az) \nem jött meg.[9]
John$_{nom}$ he/that$_{nom}$ not came PFX
John, he didn't arrive/come.

b. [$_{KT}$ /Máriát] (, őt/azt) \meglátogattam.
Mary$_{acc}$ she/that$_{acc}$ PFX-visited
Mary, I visited (her).

c. [$_{KT}$ /Két fiú] [F \kedden] jött meg.
two boys Tuesday came PFX
As for two boys, they came on Tuesday.

d. [$_{KT}$ A /sátorban] (, ott) [F \Péter] aludt. (ibid. p. 37-38, glosses added)
the tent-in there Peter slept
In the tent, Peter slept (there).

It is worth looking at Kálmán's tests for identifying contrastive topics: insertion of a coreferential pronoun must be possible, if the item in question is a referential expression, a verb or an adjective. This test reflects an important difference between syntactic contrastive topicalisation and LD (in Hungarian and elsewhere, too): LD is more restricted than the fronting of a contrastive topic. Second, this test demonstrates that LDs can have a contrastive reading, but it does not prove that all LDs are contrastive.

A widely discussed area in Hungarian linguistics, which is taken up in Kálmán (2001) as well, is the contrastive topicalisation of quantified items. From our point of view, this issue is of minor relevance, as quantified phrases cannot take part in an LD construction, as they are nonspecific or non-D-linked; because of this feature, they will not be assumed to be topical in the present analysis, i.e. they are contrastive structures but do not show topical behaviour.

[9] The following notation is taken over from Kálmán (2001): 'KT' stands for contrastive topic, 'F' for focus. The symbol '/' marks rising intonation, whereas '\' marks falling intonation.

From a pragmatic point of view, both functions of LD seem to exist in Hungarian, i.e. referent-introduction and expressing contrastiveness. However, the form of the two cannot be so clearly distinguished from a grammatical-descriptive point of view. In those cases when left dislocation is used with a contrastive meaning, it can be obviously preceded by other topics in the preverbal domain. It is exactly these examples which are brought up when arguing for the non-LD-like characteristics of Hungarian LD. It must not be forgotten however, that contrastively left dislocated phrases with a directly following resumptive can also be preceded by Hanging Topics in German, for instance.

The following examples are meant to illustrate that the referent-introducing function is made use of in Hungarian as well. These dislocated items cannot be easily preceded by others.

(100) (És) az Ildi anyukája, **ő** minden nap főz otthon.
and the Ildi's mother she every day cooks at home
And Ildi's mum, she cooks at home every day.

(101) Context: Tiszta szappanopera az élet a munkahelyemen.
Life at my workplace is like a soap-opera.
Az egyik munkatársam, **az** egyfolytában a szerelmi életéről mesél.
the one college-my that all the time the love-his life-about tells
One of my collegues, he talks about his love life all the time.

(102) És a jelentkezési lapot, **azt** kitöltötte már Orsi?
and the application form$_{acc}$ that$_{acc}$ in-filled already Orsi
And the application form, has Orsi already filled it in?

(reconstructed spoken examples)

Mention has to be made of the (im)possibility of multiple LD. In Kenesei et al (1998) it is claimed that only one element can undergo LD in Hungarian, in contrast to the other languages under discussion, demonstrated by the following example.

(103) *Anna a könyvet, **ő/az azt** a szobá-ban olvasta.
Anna the book$_{ACC}$ she it$_{ACC}$ the room-in read$_{PAST}$

A similar sentence but with different alternative positions for the resumptives is brought up in Lipták (2010: 177). This example is clearly ungrammatical if both resumptives are meant to be pronounced.

(104) /Anna (?az) / hétfőn (?akkor) PÉTERREL találkozott.
Anna$_{NOM}$ that$_{NOM}$ Monday-on then Peter-with met

According to my own grammaticality judgements, clauses with multiple dislocations seem to be a possible but not too frequent option. I cannot make a clear statement about the ordering of the resumptives: preferences are indicated by question marks.

(105) A Marit a Péter**,** **őt** **az** **/ ő** **azt** **/?az** **őt**
the Mary$_{ACC}$ the Peter$_{NOM}$ she$_{ACC}$ that$_{NOM}$ / he$_{NOM}$ that$_{ACC}$ / he$_{NOM}$ that$_{ACC}$
biztosan meg fogja hívni.
surely PFX will invite

(106) A földrajztanár a legutolsó vizsgázónak, ?**annak az /** **annak ő /**
the geography teacher the last examinee$_{DAT}$ that$_{DAT}$ that$_{NOM}$ that$_{DAT}$ he$_{NOM}$
ő **annak /** ?**az** **neki** ötöst adott.
he$_{NOM}$ that$_{DAT}$ he$_{NOM}$ him$_{DAT}$ five$_{ACC}$ gave

(107) Bélus a biciklijét a szomszédlánynak, **ő** **azt** **neki** egy hétre
Belus$_{NOM}$ his bicycle$_{ACC}$ the neighbour.girl$_{DAT}$ he$_{NOM}$ that$_{ACC}$ her$_{DAT}$ for a week
szívesen kölcsönadná.
with pleasure would-lend

These structures sound grammatical, with the restriction that the adjacent pronouns must vary in form, i.e. they cannot be all realized by demonstratives.

An additional property which is generally attributed to LDs of the Hanging Topic type, is the possible distance between dislocate and resumptive. In contrast to the judgement in Lipták (2010: 180), the following string is a possible option in Hungarian.

(108) ***Péternek,*** Zsuzsi ***annak*** EGY KÖNYVET adott.
Peter$_{DAT}$ Zsuzsi that$_{DAT}$ a book$_{ACC}$ gave

Further examples with resumptives and topics in the preverbal position reveal that it is reasonable to assume that the resumptives occupies a position identical with topics. Sentence (109) contains a simple LD with the subject in argument position. In (110) and (111), the subject is topicalised: the resumptive can either precede or come after the

topicalised item, so it can freely intermingle with topics, which suggests that it also functions as such. In all Hungarian examples in (109)-(112), the preverbal prefix of the predicate remains directly in front of the predicate, which demonstrates that there is no focus in the clause, thus the preceding items must be topics.

(109) *Pétert,* ***azt/őt*** meghívta Mari.
Peter$_{ACC}$ him/that$_{ACC}$ invited Mary

(110) *Pétert,* ***azt/őt*** Mari$_{T}$ meghívta.
Peter$_{ACC}$ him/that$_{ACC}$ Mary invited

(111) *Pétert,* Mari$_{T}$ ***azt/őt*** meghívta.
Peter$_{ACC}$ Mary him/that$_{ACC}$ invited

(112) a. *A matekot,* általában ***azt*** nem szeretik a hallgatók.
the maths$_{acc}$ usually that$_{ACC}$ not like the students

b. *A matekot,* ***azt*** általában nem szeretik a hallgatók (,de a pszichológiát igen).
the maths$_{acc}$ that$_{ACC}$ usually not like the students
Maths, student usually don't like it, but psychology, they do.

The dislocate and the resumptive are intonationally closer in (112b), which might be an indication that there are two types of LD in Hungarian as well. On the contrastive reading (as in (112b)), it is more appropriate if the dislocated element and the resumptive are not separated. A longer pause is felt after the LDed item if resumptive and fronted items are not adjacent. LD, in certain cases, involves contrast, but in other functions, such as referent introduction or the foregrounding of a new referent, it does not.

On the basis of the discussion above, it will be claimed throughout this work that two types of LD constructions are present in Hungarian. From a syntactic point of view, the difference between them is not entirely identical with the HTLD–CLD distinction but, at the same time, they are able to fulfil distinct discourse-functional roles. I claim that what surfaces as the same structure, can result from different underlying feature combinations. Moreover, I do not wish to include cases of fronted items without a resumptive in the discussion of LD.

The reason why I will be treating Hungarian LD with resumption differently from contrastive topics lies first and foremost in their distribution. There are featural differences between the two constructions: quantifiers, i.e. nonspecific expressions, are able to

function as contrastive topics, which is disallowed for LD both in Hungarian and cross-linguistically, i.e. stricter restrictions apply as for the properties of the left dislocated item.

2.4.4. Summary

The detected differences in intonation, word order and morphological features of LD to topicalisation and between LD-types have led to various stipulations about the underlying syntactic structure of left dislocation. Reviewing the linguistic literature on this topic will be the subject of the next section.

2.5. The syntactic treatment of LD in mainstream generative grammar

The aim of this section is to explore general tendencies in the treatment of dislocation constructions in recent, non-OT generative literature and also to present early accounts of the phenomenon. Although their line of thought will definitely be not followed in the present analysis, it is worth exploring the various ideas developed to overcome the difficulties LD imposed on a generative framework and the work reviewed here will serve as a background to the proposals developed later in this thesis. Moreover, further syntactic differences between Hanging Topics and Contrastive LD deserve our attention as well.

The question of whether LD is derived by movement or base-generation is not directly relevant to the kind of optimality-theoretic approach we will adopt, as this postulates only two levels of representation: input and output, where the input consists of an unordered set of semantic and pragmatic features and statements about their relations, and the output is a number of ordered strings generated from the input material. However, the ways of answering this question, i.e. the issue of structurally differentiating between LD-types, might give clues to an OT analysis as well.

2.5.1. Standard generative analyses of LD – (Materials on Left Dislocation (1997))

2.5.1.1. van Riemsdijk: Left Dislocation

Van Riemsdijk (1997) argues against a movement analysis, as first proposed by Ross (1967). Ross draws a parallel between Topicalisation and LD, one being a ‘chopping’, the

other a ‘copying’ rule, and as a result, sets up the rules for the two related transformations as in (113) . The difference lies in the output of the rules: instead of a null element at the base position of the topicalised NP, LD has an overt proform, while both transformations involve the movement of an NP to the left.

(113) a. Topicalization

	X -	NP -	Y	
	1	2	3	$_{opt}$⇨
2#	[1	0	3]	

b. Left Dislocation

	X -	NP -	Y	
	1	2	3	$_{opt}$⇨
2#	[1	2+Pro	3]	

Van Riemsdijk puts forward the following arguments for a base-generation analysis for LD. Firstly, it is observed that epithets can also be used instead of a resumptive pronoun. As such NPs have a full lexical meaning, they cannot be taken as transformationally introduced like pronouns and clitics.

(114) Marie, *dat wijf* vermoord ik nog eens
‘Mary, *that shrew* I will kill some day’ (Riemsdijk 1997:14)

(115) John, Mary doesn’t like *that little bastard*. (Cinque 1997:100)

A second argument concerns reflexives and reciprocals, which cannot be left dislocated because they cannot function as antecedents; the same is true for idiom chunks. It is argued that the reason for the ungrammaticality of dislocated reflexives and reciprocals lies in the fact that there is no NP on their left that they can relate to. However, this position holds only if one pursues a base-generation analysis.

(116) a. *Himself*$_i$, he has never treated *him*$_i$.
b. *Zichzelf*, *die* heeft hij nog nooit getrakteerd.
him he

Thirdly, in verb-second languages, such as Dutch and German, no movement can produce a structure that violates the verb-second criterion. LD, in contrast, seems to go against this and hence a syntactic movement analysis is problematic.

(117) ***Den Hans, den*** kenne ich nicht.
the$_{ACC}$ Hans, that$_{ACC}$ know I not

(118) ***Mijn zuske***, ik geloof niet dat **ze** haar paper al heeft ingelevert
my sister, I think not that she her paper already has given in

Following Emonds (1970), van Riemsdijk observes that only one fronting operation per clause is allowed. However, it is possible for LD to occur in a wh-question, which is regarded as the result of a wh-movement operation.

(119) ***Jan,*** waar heb ja ***die*** gezien? (van Riemsdijk 1997:4, translation added)
John where have you that seen

2.5.1.2. Jan Vat (1981/1997): Left Dislocation, Connectedness and Reconstruction

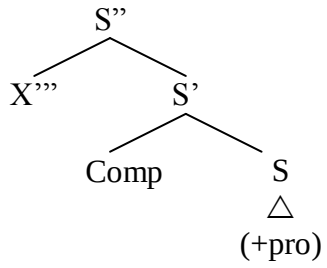
For Vat (1981 and 1997), the basic question of dislocation, as in many other generative treatments, concerns the derivation of the structure: whether it comes about by the base-generation of the dislocate or by movement. Vat defines the term "connectedness phenomena" thus: there is an anaphoric relationship between the dislocated phrase and the pronoun in argument position, and therefore the interpretation of 'John' in the following is connected to the pronoun.

(120) ***John,*** I admire ***him***.

Such phenomena 'have to do with lexical anaphors (reflexives and reciprocals), idiomatic expressions, pronouns, quantifiers and scope, and case' (Vat 1997: 68). Vat first points out that not all LD types exhibit connectedness: in the majority of cases, it can be found in CLD, whereas it is absent in HTLD constructions. He states that the two constructions clearly differ with respect to a number of other phenomena, including the use of embedded reflexives and reciprocals, crossover phenomena, binding relations, the relative scopes of multiple quantifiers (in the case of HTLD only the wide scope reading of the dislocated expression is available, whereas in other cases it is ambiguous), and case agreement. The last two points can be accounted for if we posit that a HTLDed phrase is outside of the clause boundary.

Vat proceeds from Chomsky's (1977, cited in Vat 1997) analysis of HTLD, in which the dislocated element is base generated under S", while the pronoun sits in argument position under S.

(121)



The difference between the two types of LD is explained through the different ways of deriving the two constructions: a hanging topic is argued to be base generated in its surface position (under S"), whereas the CLD phrase and the d-pronoun are generated as sisters in an argument position (under S), from which they are moved to their final positions by Vergnaud-raising. The two elements move together to COMP by wh-movement (under S'). After that, the X'''-node (the lexical phrase) is raised to a position under S", whereas the d-pronoun remains in COMP.

2.5.1.4. Grewendorf (2003)

Grewendorf's (2003) account discusses only instances of Contrastive LD, based mainly on German data comparing it to CLLD in Italian, arguing for a movement based analysis.

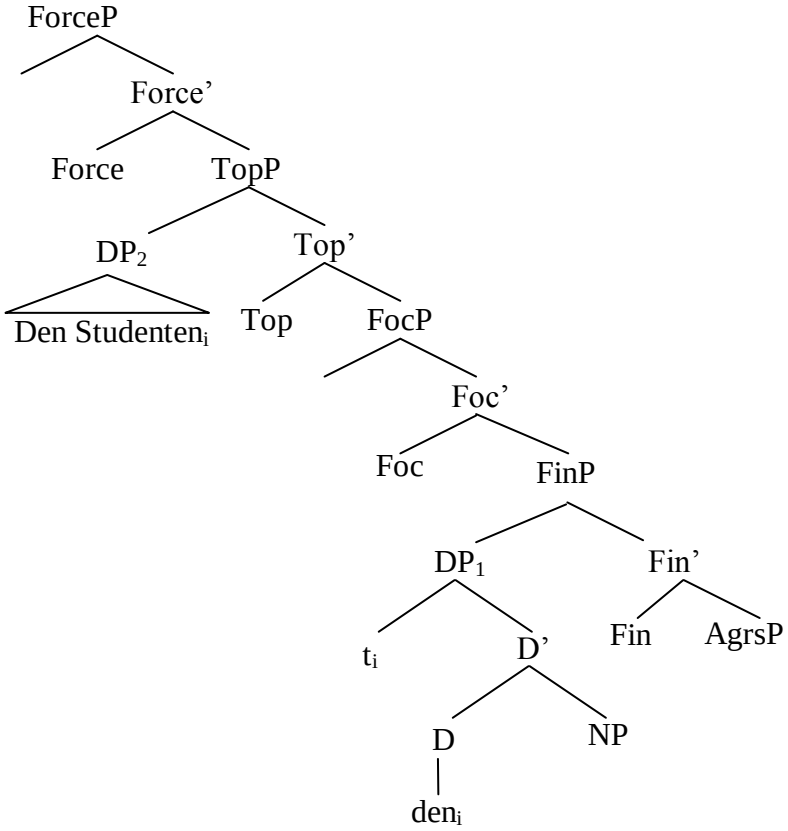
This analysis is based on Vat's Vergnaud-raising analysis, originally applied to relative clauses. The main idea behind this account is that the to-be left dislocated phrase and the resumptives are base generated as a complex phrase. Differently from Vat, Grewendorf's complex phrase is not made up of two independent phrases but they form a 'Big DP', where the D-pronoun functions as head and the LD item as specifier, thus an agreement relationship holds between them. Such a constellation also accounts for case matching between the items.

Following Rizzi's split-C structure, it s assumed that the big DP first moves to [Spec, Fin], which is triggered by the EPP feature of Fin^0. However, as LD is different from Topicalisation, the derivation does not stop at this point, but the DP in the specifier of the big DP moves to [Spec, TopP]. This movement is triggered by the Topic feature in the head of TopP and the corresponding Topic feature on the DP.

(122) a ***Den Studenten, den*** hat Maria geküsst.

the student$_{ACC}$ that$_{ACC}$ has Maria kissed

b



2.5.2. Grohmann (2000a,b; 2003)

Grohmann's views on LD are articulated in a number of papers, his dissertation (2000b) and the monograph 'Prolific Domains' (2003). These analyses all have in common a minimalist perspective and a structural movement/non-movement account for the differences between dislocation types, among which clitic left dislocation (ClLD) is also treated.

Grohmann (2003) starts by distinguishing three types of LD constructions: contrastive left dislocation, clitic left dislocation and hanging topic left dislocation. He compares these to syntactic topicalisation and argues that the former two types of LD are derived by movement, whereas HTLD is a construal, i.e. it involves the base-generation of the dislocate. He concludes that CLD and ClLD, apart from minor differences, stand very close to each other and resemble topicalisation structurally, whereas HTLD must be a distinct construction.

Originally in order to define anti-locality effects, Grohmann (2000b) sets up three areas of clause structure: the θ-domain, the φ-domain and the ω-domain (123) :

(123) The concept of Prolific Domains (ΠΔ)

i. θ-*domain:* the part of the derivation where theta relations are created.(*v*P > VP)

ii. φ-*domain:* the part of the derivation where agreement properties are licensed.

(TP > NegP > ModP > AspP)

iii. ω-*domain:* the part of the derivation where discourse information is established.

(CP > TopP > FocP > TopP > FP)

(Grohmann 2000: 282)

(124) *Prolific Domain* (working hypothesis)

A Prolific Domain ΠΔ is a contextually defined part of the computational system

i. which provides the interfaces with the information relevant to the context and

ii. which consists of internal structure, interacting with derivational operations.

(ibid. 283)

Contrastive LD is analysed in the following way: the to-be contrastively dislocated phrase moves from the φ-domain to TopP in the omega-domain, which is a possible movement, but afterwards it has to move forward to CP. This step would count as a violation of Domain Exclusivity, defined below in (126), as the CLD phrase would be present twice in the omega-domain, as shown in (125c').

(125) a. V-domain: [*v*P ich [*v*' mag [VP [V' ~~mag~~ **diesen Satz**]]]]

b. T-domain: [TP ich mag [φP **diesen Satz** ~~mag~~ [besonders [*v*P]]]]

c. C-domain I: [TopP **diesen Satz** mag [TP]]

c'. C-domain II: [CP **diesen Satz** [TopP **diesen Satz** ➲ **den** mag [TP]]]

(Grohmann 2000a)

(126) Condition on Domain Exclusivity (CDE)

An object O in a phrase marker must have an exclusive Address Identification AI per Prolific Domain ΠΔ, unless duplicity yields a drastic effect on the output.

i. An AI of O in a given ΠΔ is an occurrence of O in that ΠΔ at LF.

ii. A drastic effect on the output is a different realization of O at PF.

(Grohmann 2000b: 61)

To avoid a violation of Domain Exclusivity, an element can be represented by two phonetically distinct copies. Thus, the lower copy of the CLDed phrase is spelled out as a resumptive to save the situation. On the other hand, the resumptive is considered as a base-generated argument in Hanging Topic constructions (Grohmann 2003:214).

(127) a. [CP **YP** [CP **XP** [CP C [TopP *d*-/*p*-**RP** V … [TP … RP … [*v*P … (RP) …]]]]]]
b. [CP **YP** [CP **XP** [CP C [TopP ZP V … [TP … *d*-/*p*-**RP** … [*v*P … (RP) …]]]]]]
(ibid. p. 209)

Grohmann remarks of the position of the left dislocated phrase in HTLD that evidence shows that it is situated outside of the clause: 'The XP, on the other hand, has a "quasi-sentence-external" character: (i) it does not have to be present, (ii) it tends to be root-related, and (iii) it cannot be preceded by anything else.' (ibid. p.177) Therefore a Hanging Topic is assumed to be base generated in [Spec, CP], in the position where a contrastive LD moves to and the resumptive pronoun is the merged argument in the structure. In case of multiple LD, the hanging topics are adjoined to CP, this also accounts for their ordering relative to CLD.

The difference between HTLD and CLD derives from the fact that the resumptive pronouns are introduced in different domains: the ω- vs. φ-domain. Structurally, a possible position for the CLDed phrase is [Spec, CP], above a topic phrase, which hosts the resumptive, in the sense of Rizzi's split CP analysis. On the other hand, HTLDed elements are adjoined to CP, and not moved to this position, as contrastively dislocated ones are moved to their relevant positions. CLD comes about by Copy Spell Out: 'two non-distinct copies of one element occur within the same Prolific Domain, and in order to rescue Exclusivity, the lower copy had to be spelled out.' (Grohmann 2003: 179)

The weakness of the analysis lies in the feature assumed to be responsible for Contrastive LD. We find no elaboration of the feature, due to which a topic structure evolves to a CLD by further movement of the topicalised phrase (ibid. p.179). It is mentioned that the feature F is associated with topicality, but it remains a question how it triggers two successive movements.

2.5.3. Boeckx and Grohmann (2005): Left Dislocation in Germanic

It is a universal property of Germanic languages that they display two structurally different types of Left Dislocation, but the fullest paradigm is found in German. Unlike in many other analyses in the generative and specifically the minimalist framework, a unified approach towards CLD and HTLD constructions is aimed at in a recent study by Boeckx and Grohmann (2005). This should receive attention here, as my goal is somewhat similar to theirs in that respect.

A view that is to be questioned – and to be discussed later – is that Boeckx and Grohmann equate Germanic CLD to English syntactic topicalisation, regarding English as a language which lacks the syntactic means to formally express Contrastive LD. Although the second part of the observation might hold, it is pragmatically untenable to claim that topicalisation, contrastive topicalisation and contrastive LD share the same functions, as extensively discussed above.

The starting point of Boeckx and Grohmann's analysis is to distinguish between four varieties of dislocation structures, attested in German, on the basis of position and case: the authors take only those structures as Contrastive LDs in which there is case matching between the dislocate and the resumptive pronoun, and the latter occupies a 'high', i.e. fronted, position; all other structures are categorized as Hanging Topic LDs.

In spite of island and binding data, it is proposed that movement underlies both LD constructions. To demonstrate this, the probe-goal checking model of Chomsky is used, and the following basic relations are defined: (i) *Match*, holding of two items that share the same feature; (ii) *Agree*, a long-distance feature-checking relationship between two elements and (iii) *Move*, demanding that the goal move to the specifier of the probe. It is pointed out that *Agree* is not necessary for movement to take place, in contrast to *Match* and *Move*.

In the case of HTLD, the following movement structure is given (128), in which the dislocated phrase has moved away from the resumptive pronoun – its associate –, without agreeing with it: this explains the properties of HTLD, i.e. case-mismatch and absence of island-effects and reconstruction.

(128) $NP_i \ldots [_{TP} \ldots [_{DP}\ RP\ [<NP_i>]] \ldots]$

CLD structures, on the other hand, come about by Copy Spell Out (129), described earlier: the lower copy of the moving dislocated phrase is spelt out as the RP, which also explains case matching and the high occurrence of the d-pronoun, as Copy Spell Out is only possible if movement is too local.

(129) NP_i (…) [<NP_i> ➲ RP] … [$_{TP}$ … <NP_i> …]

Although the analysis seems promising, it is not clearly motivated why the resumptive appears at all or under which considerations it can be base-generated in HTLD structures. It clearly has to be base-generated according to the authors' assumptions as they regard HTLD as a case of stranding. The appearance of the resumptive is explained by syntactic demands in CLD. Moreover, the nature of the feature which plays a role in the relations Match and Agree, is not mentioned, so it stays obscure what triggers the movement of the dislocated phrases in either structure. The issue of the exact position of the dislocated NPs is left unexplained, as well.

The strongest argument brought up in favour of the movement account of HLTD is the fixed order of resumptive d-pronouns in the Middle Field of the clause, as opposed to the free variation of demonstratives in other structures (Boeckx & Grohmann 2005:15-16). In my approach, their fixed position is explained by two factors: first, they act as syntactic arguments thus they have to follow the canonical order of arguments; second, they all bear a weak topic feature (and no other discourse features, as the [new] feature is placed on the hanging topic), thus, there can be no ordering variation among them on pragmatic grounds, either. In other structures, the ability of the demonstratives to bear a range of discourse features may cause variation in their ordering, which might appear to be 'free'.

2.5.4. Sturgeon (2006): Contrastive LD in Czech

In Sturgeon's approach (2006), the view discussed in the previous section is rejected and the resumptive is argued to appear because of phonological reasons, i.e. that it occupies a position which is associated with a prosodic rise. To realise this, an overt element is needed. Moreover, in the latter approach the syntactic movement of the dislocated phrase receives pragmatic grounding: the CLD phrase also moves in two steps, similarly to other minimalist assumptions, but the first movement is triggered by a contrastive topic feature, the second by a topic feature.

In the first step, the to-be CLDed item moves to [Spec, IP] to check the EPP feature of I^0 and the CT (contrastive topic) feature. Above this functional level, a TopP is assumed the head of which contains a T feature associated with familiarity. The DP moves from [Spec,IP] to [Spec, TopP] in order to value the uninterpretable T feature of the Top head.

The explanation of why the moved item is spelt out at two different positions – which cannot be considered a usual option – is given in terms of phonological rules. On the one hand, the rule of 'Pronounce highest' requires the highest element of a chain to be spelt out; on the other hand, [Spec, IP] is associated with phonetic content as well, in the form of an intonational rise, which needs an overt item to be able to be realized. The reason why this second copy has a reduced form instead of a full DP comes from the Economy of Pronunciation principle, which is also responsible for the non-pronunciation of traces.

The main merit of this latter analysis is that it assumes that the left-dislocated item originates from a single input phrase, the resumptive being a spell-out of a trace. This view will be supported in the present analysis, too, as it enables us to treat LD in a parallel way to other fronting operations. In addition, pragmatic facts are also included in the syntactic description. In spite of these advantages, the insertion of the resumptive will be looked at quite differently in the present work; as I will argue later, it surfaces as the spellout of a bundle of grammatical and discourse features which become separated from the dislocated item because of pragmatic reasons. Although prosodic facts have been and will be mentioned in connection with LD, they will not be taken as triggers for syntactic processes.

2.5.5. The orphan analysis of HTLD (Shaer & Frey 2003, Shaer 2009)

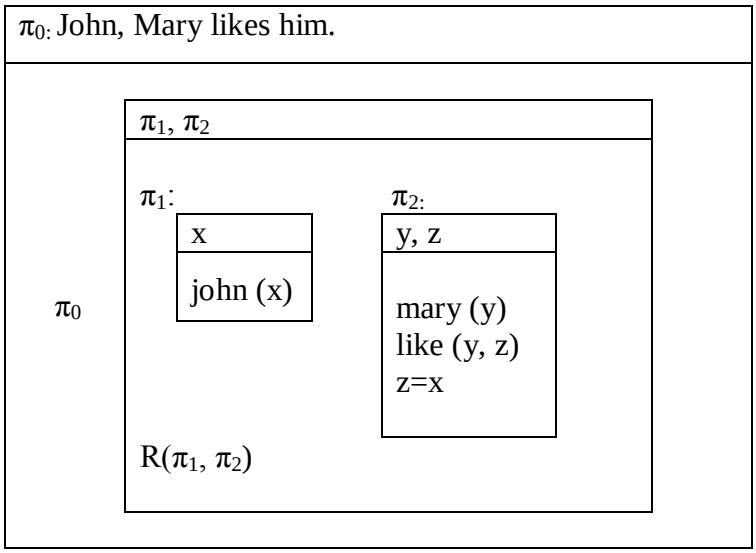
This last analysis is dealt with in a separate section due to its unique orientation. Although most of the analyses reviewed rely heavily on minimalist assumptions, the outcome of this investigation points to a model which is able to incorporate discourse-related information as well. The term 'orphan' coined by Haegemann (1991) refers to 'phrases that are not part of the same phrase structure as their host sentences' (Shaer&Frey 2003:367), and is used to describe Hanging Topics.

Hanging Topics are independent from the clauses they are attached to, only a discourse relation holds between them, as the dislocate and the resumptive behave as a noun and a coreferent pronoun in two distinct sentences. The authors discuss characteristics of the construction which support an orphan analysis, for instance that the dislocate functions as a distinct prosodic unit; the relative formal and positional independence of the resumptive from the dislocated item; island and binding facts.

Under Minimalist assumptions, orphans are not regarded as part of the numeration of the host sentence. An orphan is associated with its clause via merger, but no c-command relation holds between it and its resumptive, which explains substantial differences in comparison with topicalisation and CLD constructions. It is also mentioned that orphans do not 'occupy a fixed position in a tree' (ibid. p.496). This concept seems hard to fit into the Minimalist Framework; however, it bears resemblance to the concept of HT pursued in the present study.

The authors (p. 392) mention Segmented Discourse Representation Theory (SDRT), which has a means to represent how sentences are linked to form a discourse (Narration, Elaboration, Explanation) – therefore, this theory is able to capture relations between independent clauses. HTLD structures are modelled on the basis of the relationship of two distinct sentences, where an NP appears as a pronoun in the second clause. Although such a representation seems appealing, the most relevant question, i.e. 'the identity of the discourse relation that pairs these two syntactic units', remains unsolved in the paper.

(130)



The authors conclude about N-class (i.e. 'non-integrated') items[10] that 'these dislocates are independent of their host sentence at every point of the derivation' (Shaer&Frey 2003: 393). Although I agree with most of the evidence listed, these merely support the observation that the dislocated phrase in HTLD-like structures is no longer an obligatory member of the host clause syntactically. They say nothing about the numeration or input, where it originated – these are stipulations that are based on the tenets of the adopted framework.

2.5.6. Summary of the overview of syntactic analyses

As has been demonstrated, LD has been an acknowledged phenomenon from the earliest times of generative grammar, analysed with an emphasis on resumption and the origin of the left-dislocated item and the pronoun referring to it. Although many of the procedures presuppose a transformational way of thinking, certain aspects of these analyses, including the loose attachment of a Hanging Topic to the rest of the clause and the topical position of resumptives in contrastive LD will be taken up and further exploited in the present study. To my knowledge, no analysis of LD has been put forward yet in Optimality Theory, therefore no such account could be reviewed here; related phenomena will be dealt with in the next chapter, which aims at presenting the adopted OT-based framework among others.

[10] Non-integrated items are opposed to I-class, i.e. integrated, items. Topicalisation, for instance, counts as an integrated structure due to the syntactic relationship of the fronted item and the rest of the clause.

2.6. Conclusion

After reviewing the current definitions of Left Dislocation, our subject of investigation, the decision has been made considering mainly syntactic reasons that constructions with an initial nominal expression and a coreferential resumptive inside the clause will be referred to as Left Dislocation. Pragmatically, the discourse function of LD is concluded to be the promotion of a new, unexpected topic. Universally, two clearly distinguishable variants of LD exist, Hanging Topic Left Dislocation and Contrastive Left Dislocation. Although these types can be clearly identified only in German by syntactic-morphological means, it has been shown on the basis of pragmatic and prosodic facts that they presumably also exist in English and Hungarian.

As the syntactically most intriguing features of LD, the generative literature has been reviewed concentrating on the following topics: the displacement of the nominal item occasionally accompanied by that of the pronoun, the status of the resumptive, and the relationship or connectedness of the dislocated item to the rest of the clause. It will be demonstrated that a structureless and feature-based theory can offer a better alternative to in handling these issues.

It will be argued that the appearance of the resumptive is not equivalent to the insertion of a non-input item, but is the spell-out of certain grammatical and discourse features that become separated from the left dislocated nominal expression. By losing some of its features, the fronted item is less tightly attached to the sentence as other clause members, which serves as a reason for its unique behaviour as opposed to other fronted items. As a further step towards exploring the identity of left dislocated expressions, the features that constitute a nominal expression will be described in the next chapter.

Chapter 3. An alignment-based model

The aim of the present chapter is to provide an introduction to Alignment Syntax (Newson 2004) and the Syntax First Alignment (SFA) system proposed by Newson (2010, 2013), the basic tenets of which will serve as the framework of the analysis. Alignment Syntax is an optimality theoretic model, which means that it works with violable constraints, where cross-linguistic differences between languages are expressed by different rankings of the constraints in the Evaluation component of the grammar. Thus, it 'shifts the burden from the theory of operations (Gen) to the theory of well-formedness (H-eval)' (Prince & Smolensky 1993/2002:5).

The main advantages of an alignment-based approach are seen as its non-hierarchical organization, which brings with itself a simple, generalized and universal constraint system consisting of only alignment and faithfulness requirements, and the idea of 'Late insertion', according to which phonological exponents spell out strings of sub-lexical features which are organised by the syntax. After presenting the basic principles and constraint types, I attempt the modelling of argument structure in different languages; basic and embedded word orders and the role of the verbal prefix will be discussed in English, German and Hungarian. As the splitting of an input feature bundle[11] that could also surface as a nominal expression is one of the main arguments of this dissertation, I will explore the features or conceptual units which constitute nominal items spelt out as nouns and pronouns.

3.1. Former frameworks in OT syntax using alignment

Before going into details about Syntax First Alignment Syntax, I will review several OT analyses that already made use of the notion of alignment, and are therefore of interest to us. The notion of 'Generalized Alignment' stems from McCarthy and Prince (1993) applied in connection with phonological phenomena, where it was understood as the alignment of a certain edge of a category to another edge of a category which contains the former; this formulation entails a phrasal perspective.

[11] The word 'bundle' referring to groups of features does not involve any kind of structure or pre-syntactic ordering of input items; it is used merely as a descriptive term.

(1) Generalized Alignment

$$\text{Align}(\text{Cat1}, \text{Edge1}, \text{Cat2}, \text{Edge2}) =_{def}$$

$$\forall\ \text{Cat1}\ \exists\ \text{Cat2 such that Edge1 of Cat1 and Edge2 of Cat2 coincide.}$$

Where

$$\text{Cat1}, \text{Cat2} \in \text{PCat} \cup \text{GCat}$$

$$\text{Edge1}, \text{Edge2} \in \{\text{Right}, \text{Left}\}$$

(ibid. p.2)

The terms PCat and GCat stand for prosodic and grammatical categories – thus, alignment can be seen here as a formal means of connecting morphological and phonological processes and of defining 'the relations between categories belonging to different hierarchies' (ibid. p. 63).

With specific reference to the syntactic application of alignment, we can exemplify this through the contributions made in the OT-LFG approach and Grimshaw's modelling of phrase structure. These approaches both have in common that they base their analyses on an underlying X-bar-conforming structure, in which alignment can only order elements within and in relation to structural categories.

In the OT-LFG framework, Sells (1999), Sells (2001), Choi (2001a,b), Morimoto (2001) and Costa (2001), among others, we find a combination of a hierarchical and a discourse-oriented model of syntax. In the introduction to his book, Sells (2001) mentions two different types of alignment constraints that are employed in OT syntax: positional alignment constraints and precedence constraints. Positional alignment defines the position of an element in a certain structural domain, e.g. left vs. right, or first vs. last (WH-LEFT or TOPICFIRST). Precedence constraints define the position of two elements relative to each other (WH>V, A PRECEDES B). In many alignment constraints, reference is made to discourse structure, e.g. TOPICFIRST (Costa 1998). The alignment of Prominence and Newness to left or right edges of a clause is mentioned by Choi (2001).

In Choi (2001), a third type of alignment constraint emerges, ABUTMENT, which demands proximity of opposite, rather than identical, edges. The result is that a phrase aims to be directly adjacent to its host, without preference of the left or right side. The constraint is meant to account for the positioning of elements which are 'head-attracted', i.e. which prefer adjacency to their verbal or nominal head, instead of an edge of a phrase, e.g. focus and negation or relative pronoun and possessor, respectively.

Specifically for syntax, Grimshaw (1998: 9-12) defines further types of constraints in addition to the original markedness and faithfulness types developed for phonology. Structural constraints 'regulate basic syntactic structure', e.g. obligatory element constraints. There are also constraints against movement, which have economy effects, like STAY. Some constraints control mapping between syntactic structure and certain contents, e.g. OPSPEC that states that operators appear in specifier positions. Last but not least, alignment constraints require certain elements 'to appear at the "edge" of a domain', (Grimshaw 1998: 12) like HDLFT: 'a head is leftmost in a projection' (ibid. 23).[12]

In a later account, Grimshaw (2001) states that economy effects should follow from the constraints themselves, in such a way as to make economy constraints, like STAY, *trace, *STRUC, unnecessary. She proposes the following alignment constraints for the derivation of basic phrase structures (2-4). The alignment constraints replace economy constraints as, the more complex structure is projected, the more alignment violations will be incurred.

(2) HEADLEFT (HDLFT) Every X-zero is at the left edge of an X-max.
More precisely: Align (X-zero, Lft, XP, Lft)

(3) SPECIFIERLEFT (SPECLFT) Every specifier is at the left edge of an X-max.
More precisely: Align (Spec, Lft, XP, Lft)

(4) COMPLEMENTLEFT (COMPLFT) Every complement is at the left edge of an X-max.
More precisely: Align (Comp, Lft, XP, Lft)

(T1) The domain-specific alignment constraints (the ranking is not fixed)

	SPECLFT	HDLFT	COMPLFT
[Spec H Comp]		*	**
[Spec Comp H]		**	*
[H Comp Spec]	**		*
[Comp H Spec]	**	*	

As shown in (T1), regardless of the ranking of the alignment constraints, a three-element projection violates them collectively three times as only one element can satisfy its alignment conditions completely, one element must be one place removed from satisfying its alignment conditions and the last element must be two place removed from its optimal

[12] Sells (1999), based on Kayne's antisymmetry claim that clausal structure is right branching, argues against symmetrical alignment constraints that come in pairs.

position. If an element is missing from a phrase, it reduces the number of alignment violations. However, it does not mean that a phrase with empty positions will always be favoured over a phrase with filled positions, because the obligatory element constraints prevent this (like OB-HEAD, OB-SPEC, demanding the obligatory appearance of a head or specifier, respectively).

The above presented models look upon phrase structure from a dual perspective: on the one hand, the hierarchical tree structure is maintained as a basis and the boundaries of phrases mark important points in the structure and are referred to in constraints; on the other hand, more and more references are made to the positions of elements relative to each other and to the edges of clauses, which represents more of a linear perspective. In sum, the above accounts are theoretically complex in that they assume both a hierarchical and linear order and impose regulations on both. Alignment Syntax, on the other hand, supports a unified linear treatment of ordered expressions – in this respect, it is simpler than theories that involve an additional hierarchical structure and therefore preferable unless it can be shown that this degree of complexity is necessary.

3.2. The present system

The theoretical background of the present thesis relies to a large extent on Newson (2010, 2013), and incorporates ideas about the form of constraints from Newson and Maunula (2006). First, the basic notions of a theory that operates without lexical items in the input and uses conceptual units (CUs) instead will be sketched. CUs are sub-lexical semantic based elements which input to the syntax. Thus this framework shares the lexicon-free approach of Distributed Morphology[13] and Nanosyntax, described below, where 'feature' is used as an equivalent term for CU.

> *Nanosyntax [...] departs from the consensus that "syntax projects from the lexicon". Syntax projects from single features and nothing else. Single features are merged together [...], eventually attaining the size of a morpheme, a word and a phrase. Syntax doesn't build on morphemes, it builds morphemes.*
>
> (Starke 2009:6)

[13] For further arguments against Lexicalism see Marantz (1997).

CUs with descriptive semantic content are the elements which have to receive direct realisations in the output, bearing lexical information; they can also be called 'roots' or root conceptual units (RCUs) as in Newson and Szécsényi (2012). Another type of CU, also termed 'features' in the present paper, fall into two basic types in my understanding, i.e. grammatical and discourse-functional[14]. They are either realised as part of a root exponent or by a distinct form in the case of regular morphology; or they are realised separately, embodying only grammatical information in this case, as pronouns, auxiliaries, articles; or grammatical information enriched with discourse-relevant content, e.g. demonstratives.

The framework adopts certain principles form Distributed Morphology (Halle & Marantz 1994), one is 'Late Insertion', i.e. the post-syntactic insertion of vocabulary items.

> *'The terminal nodes [...] are complexes of semantic and syntactic features but systematically lack all phonological features. [...] Vocabulary Insertion (VI) adds phonological features to the terminal nodes, but it does not add to the semantic/syntactic features making up the terminal nodes.'* (ibid. p.275)

The Distributed Morphology adoption of the Subset Principle, which states that the vocabulary item which is to be inserted at a particular position should be the one which is associated with the largest subset of the features of the particular position, is questioned in Newson and Szécsényi (2012). From this perspective, insertion is not possible if the item carries a feature that is not present in the structure, i.e. if it is overspecified with respect to some feature. Newson (2010) and Newson and Szécsényi (2012) point out that the insertion of dummy elements poses problems for this. As auxiliaries are clearly marked for root content in addition to the grammatical-functional features they represent, they are overspecified with respect to this. It will therefore be assumed that lexical insertion proceeds rather on a Superset Principle basis, similarly to the assumptions of Nanosyntax: the chosen vocabulary item is the one associated with the smallest superset of those features to be spelled out.

In former OT accounts, it has generally been assumed that the input contains 'predicate-argument structure, lexical items, information and illocutionary features, level of argument prominence, as well as familiar functional features (tense, aspect, and so on)' (Legendre 2001:20). This view, as has already become clear, will not be followed here.

[14] They appear as functional CUs or FCUs in Newson and Szécsényi.

The Input according to Alignment Syntax contains the semantic information which is relevant for interpretation (Newson & Maunula 2006:22). It is universal, contains semantic, functional and discourse information and references to argument structure, but does not contain information which is language specific, e.g information about case and argument-case mappings.

More specifically, the input does not contain actual lexical items, but conceptual units and features (mainly grammatical-functional) and 'a specification of the semantic relationships between them: which roots are associated with which functional CUs etc.' (Newson 2010:13). Root CUs are expressed by independent vocabulary items, functional ones are either realized together with a root, for example in the form of suffixes, or appear on their own as auxiliaries or pronouns, etc. I assume that resumptives fall in the same category from this point of view – there is a good reason to believe that they are only part of the semantically-based input as functional CUs, no different from those connected to a nominal root.

It follows from the above that roots are not specified for word class; the choice of the vocabulary item depends on the functional CUs associated with a root. In (5a), example feature combinations are shown with their possible spellout forms: a noun with the definite article, a tensed verb, and an adjective respectively; in b., sample representations of functional words are listed: a tense auxiliary and a personal pronoun. The functional CUs to be applied will be established by the end of the chapter.

(5) a. $\underbrace{\text{[definite]}}_{\textit{the}}\underbrace{\text{Root[argument]}}_{\textit{cat}}$, $\underbrace{\text{Root[tense]}}_{\textit{cooked}}$, $\underbrace{\text{Root[positive]}}_{\textit{funny}}$

b. $\underbrace{\text{[tense]}}_{\textit{do/did}}$, $\underbrace{\text{[3}^{\text{rd}}\text{ person][singular][feminine][argument]}}_{\textit{she/her}}$

The realization of grammatical features can happen through word forms, suffixes, clitics or pronouns – what the latter have in common is that they embody purely grammatical information (similar to Newson and Szécsényi's treatment (2012) of auxiliary verbs). The common feature of verbal auxiliaries and 'nominal auxiliaries' is that they are realized differently across languages. The universal input in (6) is realised in various ways cross-linguistically, as (7) demonstrates.

(6) Input[15]: [see$_{1,2}$][present][1st person][singular]
argument$_1$: [1st person][singular]
argument$_2$: [2nd person][singular]

(7) *I see you.*

Ich	*seh-e*	*dich.*	German
I$_{nom}$	see$_{1st\ sing.}$	you$_{acc}$	
Te	*veo.*		Spanish
you$_{acc}$	see$_{1st\ sing.}$		
Lát-lak.[16]			Hungarian
see $_{1st\ sing.subject;\ 2nd\ sing.\ object}$			

3.2.1. Domains

As mentioned above the input is a set of roots and functional conceptual units, related to one another by dependency relations. This set is then ordered in the syntactic component of grammar and evaluated by alignment and faithfulness constraints. In Gáspár (2005) and Newson and Maunula (2006) the notion of domain is introduced to establish relationships among items which share some property determined by the input. It has to be made clear that domains are not structural units like phrases in the sense that they are not necessarily super- or subordinated to one another. Moreover, they are not manipulated by syntactic rules, only their members. They are not necessarily continuous strings either: elements of different domains may intermingle with one another, e.g. the elements of the argument and the temporal domain in a clause (corresponding to arguments of the predicate and verbal elements in the output form) as in display (8). For further arguments for the establishment of domains see Newson (2013).

(8) a. arg *temp* R *temp* arg arg (I *have given* John a book.)
b. wh-arg *temp* arg R *temp* arg (What *have* you *given* to John?)

In the present work, following Newson (2010, 2013) the temporal, the argument and the predicate domain will be identified as notions to which constraints can refer and which are related by the similarities of their CUs or by input dependency relations. In

15 This sample input is given for presentational purposes only. The exact representation of the input including the forms of nominal and verbal CUs will be finalized by the end of the present chapter.
16 The above structures are meant with normal intonation and without focused or contrastively topicalised elements.

addition, the nominal domain will also be introduced which unites the grammatical-functional features related to nominal expressions.

(9) The temporal domain[17], $\mathbf{D_{temp}}$: contains the functional CUs around a verbal root, i.e. tense, aspect, voice, expressed by the CUs [tense], [perfect], [progressive] and [passive].[18]

(10) The argument domain, $\mathbf{D_{arg}}$: contains the arguments associated with the same predicate in the input, i.e. [arg_1], [arg_2], [arg_3].[19]

(11) The predicate domain, $\mathbf{D_{pred}}$: contains the predicate together with the arguments and adjuncts associated with it in the input. Members of the predicate domain include the members of the temporal domain of the given predicate and [arg] and [adj] CUs dependent on the predicate.

(12) The nominal domain, $\mathbf{D_{nom}}$: contains the CUs definiteness, number, person and an argument or adjunct feature.

Furthermore, to arrive at a more precise account of topicalisation, a distinction will be made between the central part of the predicate domain and the domain in its entirety, as proposed by Newson and Maunula (2006). This can be formulated as in (13) and (14). Central adjuncts can be defined as ones more closely connected to and contribution to the meaning of the predicate.

(13) The central predicate domain, $\mathbf{D_{centr}}$: stands for the central predicate domain, which contains the root with the temporal CUs, the argument CUs and the central adjunct CUs.

(14) The peripheral predicate domain, $\mathbf{D_{pred}}$: the predicate domain, which contains all input CUs belonging to the predicate, bearing [temp], [arg], [$adj_{central}$] and [$adj_{peripheral}$] features.

Domain members will be marked using indexes, referred to as Domain Markers, on the relevant CUs, as in (15). The import of Domain Markers will become clear later on in this chapter when we see that under certain circumstances an element may lose its domain membership.

[17] Newson (2013) calls this the Inflection domain.

[18] The particular members of the temporal domain and their ordering regularities will be discussed language-specifically in Section 3.4. on underlying word orders.

[19] The questions of how roots get associated with argument CUs and how the argument CUs are differentiated are the topic of Section 3.3.

(15) [$tense_{temp}$] [$perfect_{temp}$] [$progressive_{temp}$][$passive_{temp}$]

As the above definitions imply, roots will not be taken as members of a domain, as they are not inherently marked for word-class, i.e. they cannot be taken as nominal or temporal elements but certain constraints will ensure that they stay inside or adjacent to the relevant domain.

In the course of the analysis, it will be shown that a particular item may be forced to leave its original domain to satisfy higher ranked conditions. In such cases, the deletion of the element's Domain Marker will be considered as an option. To restrict such cases, faithfulness constraints will be posited which ensure the preservation of input relationships, in other words, constrain the deletion of domain markers.

This last issue leads us to the next building block of our SFA system, i.e. to the constraints which evaluate outputs.

3.2.2. The nature of the proposed constraints

After introducing the system which works with features and roots constituting the input, let us now turn to the issue of the syntactic component. The function of the syntax is to impose an ordering on the input string. This process makes use of three basic relationships which are said to hold between CUs: precedence, subsequence and adjacency (Newson & Szécsényi 2012:10). The constraints evaluate the positions of the elements of the input in relation to one another. This way, the notion of 'phrase' becomes unnecessary, as the grouping of elements follows from the constraint hierarchy.

Newson and Maunula (2006) propose precedence and adjacency constraints instead of introducing different types of violations to constraints, like the 'big star' violations as in Gáspár (2006).[20] Here, I combine this model with the items of a non-lexicon-based alignment theory. The alignment constraints laid out in the present thesis come in two types: precedence constraints of the form x Ꝑ y ('x precedes y') or x Ꞙ y ('x follows y'), and adjacency constraints like x Ⱥ y ('x is adjacent to y'). Throughout the dissertation, the following types of alignment constraints will be employed (16-19).

[20] In the work cited, two types of alignment constraint violation are assumed: 'small star' violations occur if an item appears on the preferred side of the host but not adjacent to it; if the item is placed on the dispreferred side, it counts as a 'big star' violation, which is worse than any number of small star violations.

(16) X ₱ Y: ‘x’ precedes the CU ‘y’. Violated by the reverse order.

X ₱ D: the CU ‘x’ precedes a domain. Violated if any member of the relevant domain precedes ‘x’.

(17) X ₣ Y: ‘x’ follows ‘y’. Violated by the reverse order.

X ₣ D: the CU ‘x’ follows a domain. Violated by any member of the domain that follows ‘x’.

Precedence and subsequence constraints are violated when an item is not placed on the preferred side of its host. Precedence to domain constraints are exemplified by (T2). If we take the precedence constraint X ₱ D as an example, in the optimal candidate a., the feature x precedes all members of the domain, represented by the letters ‘d’. The more domain members precede the target ‘x’, the more violations are incurred. Thus, in the case of such constraints, it will be assumed that multiple violations are worse than violation by one item, and this can be reflected by the number of stars as well.

(T2) The evaluation of an input by a domain-precedence constraint

	X ₱ D
☞ ***a.*** x d d d	
b. d x d d	*
c. d d x d	**
d. d d d x	***

Apart from these, anti-alignment constraints are also posited that order a CU in relation to the domain.[21] These constraints have the additional function of placing elements inside domains, as the descriptions of (18) and (19) include.

[21] Although anti-alignment constraints referring to features are logically also possible, they do not differ from simple precedence or subsequence constraints, i.e. X *₱ Y is equivalent to X ₣ Y. The situation is different with domains.

(18) X *P D: ‘x’ cannot precede a domain. Violated if the element ‘x’ precedes every member of the domain.

(19) X *F D: ‘x’ cannot follow a domain. Violated if the element follows every member of the domain.

The import of employing these types of constraints is that their combination with the corresponding alignment constraint is able to produce second position effects. The following pair of schematic constraints demonstrates this.

(20) X *P D: feature x cannot precede the domain. Violated if x precedes every member of domain D.

(21) X P D: feature x precedes the domain. Violated by every member of domain D which precedes x.

The effects of the X *P D > X P D ordering are exemplified by tableau (T3), using the same notation as in tableau (T2). Candidate a. is ruled out first, as the relevant feature is located in first position which is explicitly banned by the higher anti-precedence constraint. All the other strings satisfy the anti-precedence constraint, so the decision is passed over to the precedence requirement. This chooses candidate b. as the winner, as this is the expression in which the CU ‘x’ is located nearest to the initial position (apart from candidate a., which does not compete any more). [22]

(T3) The second position effect

	X *P D	X P D
a. x d d d	*!	
☞ ***b.*** d x d d		*
c. d d x d		**!
d. d d d x		***!

In addition to alignment constraints, adjacency constraints of the form X A Y will be employed, stating that the feature ‘x’ has to be adjacent to the feature ‘y’, regardless of

[22] The reverse ordering of the constraints blocks the effect of the anti-alignment constraint X *P D, i.e. expressions with the feature *x* in the initial position will be assessed as optimal.

their order. I take adjacency violations as gradient ones. Therefore, only proper adjacency will be taken as constraint satisfaction if the target and the host are both CUs, the number of intervening elements between a host and a target are regarded as the degree of violation of adjacency. Another possibility would be the adjacency of a CU to a domain, where the adjacency of the feature to one of the edges of the domain is meant. This formulation of adjacency will be significant in the analysis of the nominal and pragmatic domains, introduced in Section 3.4. of this chapter and elaborated in Chapter 4 in the discussion of Left Dislocation.

3.2.2.1. Calculating distance in complex expressions

When ordering CUs within a domain counting the distance between elements seems to be straightforward. However, the picture becomes complicated when distinct domains are related to each other or a domain is related to a CU that is not a member of the relevant domain. Viewing such cases in isolation, i.e. omitting complexities might help, but one has to keep in mind that a feature does not stand alone in the majority of cases but is bundled together with a group of related features.

Two constraint types can be defined, on the bases of the above considerations. First, CU to CU alignment, between CUs which are located within the same domain, where both the host and the target are single items: in such cases all intervening CUs count when the structure is assessed by the constraint. Second, CU to domain or domain to CU constraints are different in nature, as they define the relationship of a domain and a domain-external item. The target CU is normally surrounded by other CUs belonging to the same domain, i.e. sharing the same domain marker with the target CU, like the target X_A in the example (22). Intuitively these do not count as violations of the constraint, only items that are not coindexed either with the relevant domain or the relevant CU.

(22) a. $[CU_A][\mathbf{X}_A][CU_A]\ [CU_B][CU_B]$

b. X_A **P** D_B

The status of roots deserves attention, too. In the present system, there are explicit constraints referring to them and ordering them relative to single CUs or domains. There are yet other constraints which refer to domains and domain members; it will be assumed throughout that the roots themselves do not count as parts of a domain, although they are

ordered relative to them. For instance, the predicate domain is made up of [argument], [adjunct] and [temporal] features associated with a root, though not the root itself, as discussed earlier. In the following example (23) two inputs are presented, the difference between them being the feature composition of the first argument: in a., it contains a root, whereas in b. it is made up of functional CUs (which will surface as a pronoun). The point is that whether or not a root is present should not make any difference to how the argument assessed by constraints, e.g. the position of the [tense] feature should be regarded as second, as only one member of the predicate domain precedes it, i.e. [arg_1], irrespective of other types of features and Roots this CU is associated with.

(23) a. R[arg_1] *[tense] R [progressive]* R[arg] R[arg]
b. [1st person, singular][arg_1] *[tense] R [progressive]* R[arg] R[arg]

3.3. Arguments and argument structure

Up to now, the notation of the [arg] CU has been applied for presentational purposes. It is time to discuss how the argument labels are distributed and on what basis it is possible to differentiate between arguments, maintaining the structureless property of the theory and the semantic nature of the input. What seems to be of great interest is the choice of the first argument [arg_1], as this receives special status in the alignment regularities defining the word order of clauses. In this section, a first approximation of a theory of argument structure will be attempted mainly on the basis of Grimshaw (1990), which is compatible with the SFA system and can serve as a basis for further analyses. The main merit of this approach to argument structure is seen in that: (i) it combines the thematic and aspectual structures of predicates; (ii) the resulting argument hierarchy utilised by the syntactic component is blind to thematic roles and it operates only with basic relation of prominence and (iii) subjecthood is defined on the basis of argument-structural prominence.

A thematic hierarchy is not sufficient to account for the syntactic mapping of event structure, although the argument structure of a predicate is a reflection of its lexical semantics. Grimshaw demonstrates this using the *fear*- and *frighten*-classes verbs, which show that it is not always the thematically higher argument which becomes realised as subject. Based on the thematic hierarchy in (24) Grimshaw demonstrates that the *fear* class behaves as expected, with the experiencer surfacing as subject and the theme as object,

whereas for the *frighten* class, contrary to expectation, the theme is subject and the experiencer object.

(24) (Agent (Experiencer (Goal/Source/Location (Theme))))

a. They fear/hate/admire thunder.

b. Thunder frightens/disturbs them.

The schematic representation in (25) demonstrates the two verb classes:

(25) a. (x (y))[23]
Exp Theme

b. (y (x))
Theme Exp

This and other phenomena point to the fact that another dimension should be taken into account to establish the 'structure representation over which relations of prominence are defined' (ibid. p.3). Out of the main localist, aspectual and causal approaches to events, as summarized by Levin and Rappaport (2005), Grimshaw's analysis includes the aspectual dimension, relying on the aspectual conceptualisation of event structure by Dowty (1979) and Vendler (1954). She remarks that 'prominence relations are jointly determined by the thematic properties of the predicate and the aspectual properties of the predicate' (ibid. p.11). As shown in the structural representation in (26), 'the event structure breaks down events into aspectual subparts' (ibid. p. 36), and the relationship of the arguments to the subevents will determine their prominence in the aspectual dimension.

(26) event

activity state/change of state

The Cause argument has a standard representation in this analysis: it is always associated with the first sub-event, which is causally related to the second subevent. Generally, it can be said that an argument which participates in the first subevent in an event structure is more prominent than an argument which participates in the second sub-event (ibid. p. 26).

[23] The notation in a. is sufficient to reflect prominence relations (e.g. agent, goal, theme). However, for maintaining comprehensibility, I will include theta-role labels, similarly to Grimshaw (1990).
a. (x (y (z)))

In the present system, argument prominence will be marked on argument CUs in the input by numerals, e.g. arg_1, arg_2, arg_3. The most prominent argument is the one associated with the first subevent; the degree of prominence for further arguments depends on their thematic role.

If the aspectual analysis of the first sub-event involves more than one argument, the argument which is associated only with the first subevent will count as more prominent than one which is associated with both sub-events, e.g. in the case of '*break*', the theme is part of the second subevent as well, thus the agent will be more prominent aspectually. This result is achieved in Grimshaw (1990) by indexing arguments with the number of sub-event it appears in (1, 2) and the choosing the argument indexed with just '1' as most prominent. Thus, the Cause argument will receive number '1', and lower arguments will be marked by '2, 3' etc., as in (27).

(27) *break* (x (y))

Agent	Theme	thematic dimension
Cause		aspectual dimension
1	2	

However, there are predicates which are not complex or do not include a Cause. For example, '*work*' consists of only one sub-event, as in (28). The argument engaged in the activity is in the first sub-event, thus it counts as maximally prominent, too.

(28) event
activity

Grimshaw claims that the aspectual hierarchy is able to determine which argument becomes realised as subject: the aspectually most prominent argument is the subject. This analysis provides a more straightforward definition than Dowty's Agent Proto Roles (1987, p. 527).

(29) Proto-Agent entailments (contributing properties for Agent Proto-role):

a. volitional involvement in the event or state

b. sentience (and/or perception)

c. causing an event or change of state in another participant

d. movement (relative to the position of another participant)

(e. exists independently of the event named by the verb)

In the display below, the event structures of possible predicate types can be compared. It is important to mention the function of brackets, as they indicate subevents, thus the difference between an unergative and an unaccusative verb is captured in terms of which subevent the argument belongs to. In the case of unergatives (e.g. *run, talk*), the argument is part of the first subevent denoting an activity, while with unaccusatives, the argument is part of a lower subevent which stands for a change of state or being in a certain state (e.g. *fall, die*), as only an event denoting an activity can function as the first subevent, therefore it is left empty in the representation. These differences are relevant for the syntax as well, as only verbs with arguments taking part in the first subevent can undergo passivisation, for instance. The distinction between psychological states (*fear*-type verbs) and psychological causatives (*frighten*-type verbs) is also reflected by this analysis[24].

(30) Transitive agentive: (Agent (Theme))
1 2

Ditransitive: (Agent (Goal (Theme)))
1 x x

Unergative: (Agent)
1

Psychological state: (Exp (Theme)
1 2

Psychological causative: (Exp (Theme))
2 1 (Grimshaw 1990:41)

3.3.1. Aspectual types and Event CUs

It is still a question how event structure, together with argument structure, can be represented in the present model, which does not assume the existence of a lexicon: without a lexicon, how can the event and argument structures associated with a given predicate be introduced into the syntactic system? Here I sketch the outline of how this might be achieved without a traditional lexicon. As this will play no major role in the analysis of LD, the sketch will not be elaborated.

[24] Grimshaw (1990) uses ‘x’ to denote arguments not associated with the first subevent and which are therefore automatically not considered prominent.

Suppose we assume predicate-type elements, similar to current structural approaches in which elements of event structure appear as light verbs, as part of the input. These event CUs would then be associated with particular arguments, thus accounting for argument differences.

To establish the most appropriate form and number of event CUs to be applied, I will review approaches in the literature regarding event structure; here, I attempt to combine Dowty's (1979) and Pustejovsky's (1991) systems, but also keep the advantages of Grimshaw's (1990) representation.

We start with Dowty's (1979) event types (pp. 123-125) which are represented by the presence of various operators[25].

(31) Dowty's event types (summary on the basis of Pustejovsky 1991)

States	**Activities**	**Achievements**	**Accomplishments**
	DO	BECOME	CAUSE + BECOME
no external change	external change; homogenous description; have an agent	external change; homogenous description, no agent	external change; heterogeneous description; have an agent
know, believe, have, desire, love, understand	*run, eat, walk, swim, push a cart, drive a car*	*notice, fall asleep, recognize, find, reach, die, lose*	*draw a circle, build a house, paint a picture, recover from illness*

One problem with trying to utilise Dowty's system in the present one is that his operators (DO, CAUSE, BECOME, etc.) do not correspond to the idea of 'atomic predicates' as they have either the status of a sentential operator or a connective. Moreover the combination of these operators does not always correspond to single verbs but to bigger structures or even combinations of verbs (e.g. *begin to build a house*, *force x to build a house*, etc.).

These event types are decomposed into subevents in Pustejovsky (1991), with the basic elements of event structure, ACT, CAUSE, BECOME being more like predicates in as much as they are associated with various arguments. For example, he analyses the difference between Accomplishments and Achievements as the presence of agentivity,

[25] Accomplishments are heterogeneous, as they include both a process and an endpoint; the other types either have an endpoint or express a process, but never have the two together.

brought about by the presence of an ACT sub-event which introduces the agent. We might represent the distinction between Accomplishments and Achievements as follows:

(32) Accomplishments: CAUSE(ACT(agent, theme) BECOME(theme)) - Root (*John closed the door*.)

Achievements: BECOME(theme) - Root (*Mary died*.)

Here we follow Pustejovsky's analyses (p. 58, 60). Note that he assumes that one argument can be associated with more than one sub-event: for *John closed the door* it is claimed that some action involving *John* and *the door* causes *the door* to undergo a change. It can be assumed that the root provides the basic content of the predicates. In this particular example, the root identifies the state that the theme acquires, i.e. 'closed'. In other cases, the root might provide the details of the kind of activity undertaken. Note that the root itself takes no arguments, but is instead associated with the event CUs that do.

I will assume that verbs involving mental activity, like *know, desire* etc., grouped under 'States' in the cited approaches, actually involve the event CU ACT; the difference with respect to physical activities like *run, sweep*, etc. lies in the arguments associated with them, as demonstrated in (33). The meaning of the activity event CU could be subsumed as 'volitional activity', which includes mental activities as well.

(33) a. act(agent) - Root (*work*)

b. ACT(EXP, THEME) - Root (*know*)

c. ACT(EXP) - Root (*dream*)

I will further take the condition in (34) to be operative.

(34) THE ARGUMENT-PER-SUBEVENT CONDITION: There must be at least one argument XP in the syntax per subevent in the event structure.

(Levin & Rappaport 2005:115)

Below I provide a sample analysis of some of the aspectual types of verbs recognised by Dowty (1979).

(35) Event structures

Activity/Unergatives:	ACT(AGENT) - Root	*Mary ran*
State or change of state predicates:	STATE(THEME) - Root	*Mary exists*
	BECOME(EXP) - Root	*Mary died*
Psychological state:	ACT(EXP, THEME) - Root	*Mary fears dogs*
Psychological causative:	CAUSE(STATE(THEME), ACT(EXP)) - Root	*The lightning frightens them*
Causative:	CAUSE(ACT(AGENT), ACT(EXP)) - Root	*Mary frightens the kids*
Causative/transitive agentive:	CAUSE(ACT(AGENT), BECOME(THEME)) - Root	*Mary pushed the cart*
Ditransitive agentive:	CAUSE(ACT(AGENT, THEME), BECOME(THEME, LOC)) - Root	*Mary gave John the car*

The input will be constructed from these types of CUs, each associated with a particular root and one or more arguments. Typically they will be arranged close to the root and therefore be spelled out with it. However, it may be possible that some may 'escape' the root and be spelled out independently. Newson (2010) provides such an analysis for the periphrastic causative, for example.

As event CUs play little role in the main topic of this thesis, Left Dislocation, I will not consider them further and will largely ignore them in what follows.

3.3.2. Case assignment

Case phenomena are only an issue in connection to Left Dislocation in terms of the Case agreement between the dislocate and the resumptive that is found in some cases of LD. In order to be able to say something about this, a rudimentary theory of Case is needed. In this section I will sketch the outlines of such a theory of Case, although it is not my intention to develop it fully and complex issues such as ECM and inherent Case will not be accounted for.

I start with the simplified assumption that the nominal element which displays nominative Case is the one associated with [arg_1]. It is therefore important to determine which argument will be associated with the [arg_1] feature in the input. As we have seen above, the argument marked for the first subevent will be the first argument syntactically. If no argument qualifies on these grounds, one of the remaining argument will function as subject, as in the case of unaccusatives. In passives, it is the theme/patient argument which

is the chosen subject cross-linguistically: therefore, I assume that the thematically lowest argument is paired with the [arg_1] CU in the absence of an activity-marked argument (c.f. the unaccusative '*arrive*' with a location argument).

Grimshaw's complex representation of both thematic structure and aspectual status is shown in (36), complemented by the process of passivisation, which involves the deletion of the external argument.

(36) Argument structure representations with passivisation

a. *give* ($Jon_{1,act}$ ($Garfield_2$ ($lasagne_3$))) ⇨ *is given*$_{pass}$ (- ($Garfield_1$ ($lasagne_2$)))
1 x x x x

b. *frighten* (($Garfield_1$ ($thunder_{2,act}$)))
x 1

c. *fear* ($Garfield_{1,act}$ ($thunder_2$)) ⇨ *is feared*$_{pass}$ (- ($thunder_1$))
1 x x

d. *arrive* (($Odie_1$)) ; *arrive* (($London$($Odie_1$)) .
x x x

e. *work* ($Jon_{1,act}$)
1

Thus, it can be achieved that there is always one argument of a predicate which is associated with the [arg_1] feature.

In the course of Vocabulary insertion, the root associated with this argument feature receives nominative case in the analysed languages.[26] This might be achieved by having the nominative form of a vocabulary item contextually restricted to a local [arg_1] feature. Roots which have nominal CUs around them, i.e. are associated with a nominal domain, but no argument, will be spelled out by the form associated with default case, which is language-specific. This assumption will gain significance in Chapter 4, when dealing with case-related properties of left-dislocated items and their corresponding resumptives.

In sum, the marking of argument status will take place the following way: on the basis of event structure, the argument which is part of the first subevent will be assigned the [arg_1] feature. Other arguments will be associated with an argument feature on the basis of their status in the thematic hierarchy, i.e. [arg_2] or [arg_3]. The minimal representation of an argument will be a root followed by a directly adjacent argument CU.[27].

[26] Of course, different vocabulary insertion rules would apply in ergative languages.

[27] More discussion of the ordering of nominal features will follow in Section 3.5. Adjuncts should also bear a functional feature which makes it possible to identify which root they modify, i.e. whether they modify the predicate, thus function as constituents of a clause or they belong to a dependant of the predicate like a noun or adjective

The main advantage of the presented view on argument structure is as follows: If information about thematic and aspectual structure is included in the input, and arguments are assigned a special feature (the argument CU) which connects them to the predicate semantically as well, it makes direct reference to Case in the input unnecessary, which contributes to the universality of inputs and sustains its semantic nature. On the basis of lexical-semantic structure and argument features, the correct case is assigned to arguments (as in Lee 2001) when inserting output items from the Vocabulary, after the syntactic ordering of input features.

3.3.3. The order of arguments

In addition to the above considerations on argument structure, evidence from several languages seems to point to the fact that the relative order of arguments does not depend on the position or the featural makeup of the predicate. Rather, there is a language-specific hierarchy that the arguments follow, independent of the position of the predicate. For instance, a well-known example for this state of affairs would be German, where the finite verb (set in boldface in the examples) has radically different positions in matrix and embedded clauses. However, the order of the arguments (nominative, accusative and dative, the most common combination in the language) is constant[28].

(37) a Peter **hat** seiner Schwester gestern das Buch gegeben**.**
Peter has his$_{dat}$ sister yesterday the$_{acc}$ book given

b Peter **gab** seiner Schwester gestern das Buch.
Peter gave his$_{dat}$ sister yesterday the$_{acc}$ book

(38) a Ich weiß, dass <u>Peter</u> <u>seiner Schwester</u> gestern <u>das Buch</u> gegeben **hat**.
I know that Peter his$_{dat}$ sister yesterday the$_{acc}$ book given has

b Ich weiß, dass Peter seiner Schwester gestern das Buch **gab.**
I know that Peter his$_{dat}$ sister yesterday the$_{acc}$ book gave

To reflect the constant order of arguments in the unmarked case, a group of precedence constraints can be posited, which is functional in both English and German among the analyzed languages.

[28] If no extra discourse features are present, which might of course lead to divergent word orders.

(39) ARG_1 ₱ D_{ARG}: the [arg_1] CU precedes the argument domain. Violated by any member of the argument domain that precedes [arg_1].

ARG_2 ₱ D_{ARG}: the [arg_2] CU precedes the argument domain. Violated by any member of the argument domain that precedes [arg_2].

ARG_3 ₱ D_{ARG}: the [arg_3] CU precedes the argument domain. Violated by any member of the argument domain that precedes [arg_3].

Apart from their internal ordering, the predicate, represented by the verbal root, is presumably ordered in relation to the arguments as well. The relationship of this root and the temporal features surrounding it is also an issue which determines basic word order of the verbal complex. These will be the topics for the next section.

3.4. Underlying word orders

In this section, the presumed basic word orders of the three analysed languages will be laid out, i.e. that of English, German and Hungarian. First, the ordering of the verbal root and the temporal CUs, responsible for the form of the finite verb or verbal complex, is presented. Second, it is also essential to deal with the arrangement of the arguments with respect to the verbal root, before starting an analysis of a construction that changes this underlying order. This is clearly language-dependent and may be observed in basic structures like declaratives and embedded clauses. When necessary, differences between matrix and embedded orders will be discussed as well.

3.4.1. English basic word order

The relevant CUs referring to verbal and temporal elements, as proposed for English in Newson (2010), are [tense] [perfect] [passive] and [progressive]. The ordering in (40) is captured by the constraint set in (41) and (42), which contains an ordered set of precedence constraints relative to the temporal domain. The constraints function as follows: if one or more of the verbal features are not present, the corresponding constraints become irrelevant, and the decision is passed over to the lower ranked ones.

(40) *has* *been* *being* *done*

[tense] [perfect] [progressive] Root[passive]

(41) [TENSE] ℙ D_{TEMP}: the [tense] CU precedes the temporal domain. Standard violation conditions.

[PERF] ℙ D_{TEMP}: the [perfect] CU precedes the temporal domain.

[PROGR] ℙ D_{TEMP}: the [progressive] CU precedes the temporal domain.

[PASSIVE] ℙ D_{TEMP}: the [passive] CU precedes the temporal domain.

(42) [TENSE] ℙ D_{TEMP} > [PERF] ℙ D_{TEMP} > [PROGR] ℙ D_{TEMP} > [PASS] ℙ D_{TEMP}

The position of the root among the temporal CUs is defined as being second to last, as indicated by (40). This constellation can be achieved by the combination of an anti-alignment and a domain-precedence constraint. Thus, regardless of the other members of the temporal domain, the root will always take second-to-last position and be spelled out with the functional CU on its right in the output.

(43) ROOT 𝔽 D_{TEMP}: the root follows its associated temporal domain.

ROOT *𝔽 D_{TEMP}: the root cannot follow its associated temporal domain.

Thus, combining the temporal domain alignments with the root alignments in a tableau gives us the correct results for the structure of English verbal complex. In (T4), the most complex case is presented but if one or more of the temporal CUs are missing, their corresponding constraints are satisfied vacuously.

(T4) The order of the temporal items

Candidates:
a. [tense][perfect][progressive]Root[passive]
b. [tense][perfect]Root[progressive][passive]
c. [tense]Root[perfect][progressive][passive]
d. [tense][perfect][passive]Root[progressive]
e. [tense][progressive][perfect]Root[passive]
...

	ROOT *Ƒ D_{TEMP}	ROOT Ƒ D_{TEMP}	[TENSE] Ꝑ D_{TEMP}	[PERF] Ꝑ D_{TEMP}	[PROGR] Ꝑ D_{TEMP}	[PASS] Ꝑ D_{TEMP}
☞a.		*		*	**	***
b.		**!		*	**	***
c.		**!*		*	**	***
d.		*		*	***!	**
e.		*		**!	*	***
…						

In this tableau, the first three candidates demonstrate the positioning of the root by the two highest ranked constraints: if the root is not in the second to last position, ROOT Ƒ D_{TEMP} is violated more than is necessary. The last two candidates, in conjunction with the winning candidate (a), demonstrate the ordering of the temporal domain members by the final four constraints. Any deviation from the winning order results in at least one of the higher ranked constraints being violated more than it is by the optimal candidate.

A second question concerns the position of the temporal domain as a whole: in matrix declaratives, it follows the subject while other arguments follow it. In English, *arg1* D_{temp} *arg2 arg3* seems to be the right ordering. The question is whether this ordering is to be achieved by constraints which directly position the temporal domain with respect to the argument domain, as in (44a) or whether the temporal domain is positioned with respect to the argument domain indirectly through its alignment to the root, the root being positioned with respect to the argument domain by constraints as in (44b).

(44) a. D_{temp} *Ꝑ D_{arg} > D_{temp} Ꝑ D_{arg}
b. ROOT *Ꝑ D_{ARG} > ROOT Ꝑ D_{ARG}

However, if we consider inversion structures, it becomes clear that in do-support contexts there are cases when only the verbal root is second in the argument domain, see (45). The tense feature, representing the temporal domain, is displaced to fulfill higher requirements. Therefore, to describe the general **arg_1 Root arg_2 arg_3** ordering, I will opt for the form of the constraint in (44b), which defines the position of the verbal root in relation to the argument domain.

(45) Whom did Jon **give** the apple?
[tense] arg_1 Root arg_2

If we observe further structures like the ones in (46), it will become obvious that the precedence of the subject in relation to the verbal root is a requirement which is never violated. Other verbal elements like auxiliaries may precede the subject, but they are regarded as the manifestations of functional CUs like tense or aspect. The other arguments are able to switch sides, e.g. with topicalisation, question formation etc.

(46) *a. Do I **look** like a low-fat cat?*
*b. Who **care**s?*
*c. How can I **eat** when I'm consumed with guilt?*
*d. I **wash**ed my underwear with my new red sweater and **turn**ed it all pink!*
*e. The man is **screw**ing in a light bulb.*
*f. I'm going to have to **get up.***

This regularity should also be included in the constraints referring to the relative position of the verbal root and the argument domain.

(47) ROOT *P ARG$_1$: the root cannot precede the first argument. Violated if the root precedes [arg$_1$].

(48) ROOT P D$_{ARG}$: the root has to precede the argument domain. Violated if a member of the argument domain precedes the root.

Of course, the question arises, if it is not an overcomplication of the constraint system to include the constraint in (47), instead of the more general ROOT *P D$_{ARG}$. However, if we bear in mind that topics may also appear at the front of the argument domain, the situation is not so straightforward any more. For instance, we face a problem in case of a non-subject argument topic, highlighted in boldface in (49), with question marks indicating the possible positions of the temporal domain. The fronted topic is also part of the argument domain, as it bears an argument feature. The above two constraints would place the predicate immediately after the topic in such cases, which is obviously not the right word order in English (but would do well for German).

(49)

[topic][arg$_2$]	?	[arg$_1$]	?	[arg$_3$]
topic		subject		non-subject argument

The generalization that would capture this situation and an unmarked declarative sentence as well, must be formulated in terms of the first argument: what is true for both cases is that the first argument precedes the verbal root, i.e. (47). ROOT *P D$_{ARG}$ is made

redundant by the more specific ROOT *P ARG1, so it has no visible effect if it is ranked lower than its more specific counterpart.

The constraints referring to the matrix tense feature will do the rest of the work: they determine the position of an independent tense CU in relation to wh-items and contrasted items. Basically, the same type of second-position constraint pairs will be employed, which will only differ from the above in their domain specification. For instance, tense-second in a question is going to be defined as second in the interrogative domain, i.e. in the domain of an interrogative-marked predicate. The emergence of *do*-support and the lack of it will be discussed in detail in Chapter 5.

3.4.1.1. A general note on roots

As the present theory operates with roots that are not specified for word class, i.e. they are the carriers of purely semantic information, what environment a root occurs in becomes quite important for vocabulary insertion, i.e. next to an argument CU or among temporal CUs; the first root is very likely to be spelt out by a noun, the second with a verbal form. In spite of this, roots themselves cannot be viewed as members of the argument or the temporal domain; what counts are the CUs with which a root is associated in the input. Therefore, roots have to be kept together with their associated CUs and be ordered with respect to them. We will see an example for this for the German temporal domain in the next subsection, but the constraints operate in other constraint systems, as well.

To achieve this aim, I propose adjacency constraints which preserve the original associations of certain roots with certain features. Given the different behaviour of nominal and verbal bundles in this respect, I assume that there has to be two distinct adjacency requirements for the nominal and the temporal features. Note that the symbols [NOM] and [TEMP] refer to classes of features, i.e. [NOM] is the class feature for definiteness, number and argumenthood; whereas [tense], [prog], [perf] and [pass] are all [TEMP] features. Pragmatic features will be grouped together in a similar way in Section 3.5.5.

(50) [NOM] A ROOT: nominal features have to be adjacent to the root they are associated with. Violated by an element which is not coindexed with the members of the nominal domain and is located between a nominal CU and the relevant root.

(51) [TEMP] A ROOT: the temporal CU(s) have to be adjacent to the root they are associated with in the input. Violated by an element which is not coindexed with

the members of the temporal domain and is located between a temporal CU and the relevant root.

These constraints will gain significance in the following chapters, in the discussion of subject-auxiliary inversion, topicalisation, left dislocation and question formation.

3.4.2. German embedded clauses

Although two different word orders have to be accounted for in German, I take the embedded verb-final word order as the unmarked one, following standard assumptions. One reason for this being that the verbal root favours the clause-final position not only in embedded clauses (52), but also with analytic verb forms (53): in such structures, the finite part of the verb takes second position, whereas the non-finite parts, including the verbal root, are situated clause-finally.

(52) Ich weiß, dass Jon einen Artikel **geschrieben** hat / **schrieb.**
I know that Jon a paper written has/ wrote

(53) Jon **hat** in zwei Monaten einen Artikel **geschrieben**.
Jon has in two months a paper written

(54) Possible verbal patterns in a German embedded clause

a. mach-t / mach-te
Root+tense (simple present or simple past)
b. gemacht hat, gekommen ist
Root as past participle, perfect, tense
c. gemacht hatte, gekommen war
Root as past participle, perfect, tense
d. gemacht worden ist
Root as past participle, passive, perfect, tense

The most complex temporal domain is presented below, where the ordering of temporal CUs can be best observed.

(55)	*gemacht*	*worden*	*ist*
	PRTC-make-PRTC	become-PRTC	is
	Root[passive]	[perfect]	[tense]

In German no auxiliary appears in simple present and preterite forms, i.e. in these cases only the tense feature is attached to the verbal root. This is true not only in declarative clauses but in matrix questions as well, i.e. in cases when *do*-support would be available in English.

(56) Hans schenk**t**/schenk**te** seiner Mutter Blumen.
Hans give-as-present-**PRST/PAST** his$_{dat}$ mother flowers

(57) Was schenk**t**/schenk**te** Hans seiner Mutter?
what give-as-present Hans his mother$_{dat}$

Differently from English, the progressive aspect is not expressed through verbal inflection in German; simple present and simple past are used to express progressive aspect too and additional adverbs and the context serve to clarify the intended aspectual meaning. However, the tense morpheme is more complex at times: in the simple past, it consists of the past tense marker *–te-* followed by agreement suffixes expressing person and number, as shown in (58a). However, with strong verbs past tense is reflected by – minimally – a vocalic change in the verbal stem, followed by person suffixes (58b). As the present analysis is only indirectly concerned with issues of verbal morphology, for simplicity I will treat tense and agreement as one feature in the following, although I am aware of this being a simplification of the actual facts.

(58) a. mach-te, mach-te-st, mach-te-n
b. *spr**a**ng, spr**a**ng-st, spr**a**ng-en* (infinitive: *springen*)

In the following step, I present the group of constraints that define the relative order of verbal features among themselves (59). The constraints function in the same way they did for English with each only being operative in the case that the relevant CU is present. In the simplest case, the lexical root is followed by the tense morpheme and spelt out together with it. Of course, it is another issue, where the whole verbal complex is placed. The ranking in (60) will be shown to be able to derive the correct strings in German.

(59) ROOT ℙ D_{TEMP}
[PASSIVE] ℙ D_{TEMP}
[PERFECT] ℙ D_{TEMP}
[TENSE] ℙ D_{TEMP}

(60) ROOT ℙ D_{TEMP}> [PASS] ℙ D_{TEMP}> [PERF] ℙ D_{TEMP}> [TENSE] ℙ D_{TEMP}

Tableau (T5) demonstrates how the precedence constraints can choose the right ordering. Candidate a., corresponding to the output form '*gemacht worden ist*' is optimal as the root and the passive CU both satisfy their relevant constraints by being at the front of the temporal domain and the next lower ranked constraint is minimally violated as the perfect is in the second position. This amounts to the optimal satisfaction of the constraints. Note that the two highest ranked constraints can be satisfied fully as the root is not part of the domain. Thus it can precede the domain without placing any domain member in front of the other domain members. The passive CU completely satisfies its constraint as it is the first member of the domain and therefore is not preceded by any other member. The remaining constraints are necessarily violated. As a brief demonstration that a. is the best possible candidate, we consider two other candidates. Candidate b. fails early because of the non-initial position of the verbal root, though the members of the temporal domain are ordered similarly to the optimal candidate and hence show the same violation patterns as a.. Candidate c has the root first, as with the optimal candidate, but reorders the members of the temporal domain. As promised, this candidate does worse that the optimal one on the lower three constraints.

(T5) Clause-final, unmarked order of verbal features in German

	ROOT ℙ D_{TEMP}	[PASS] ℙ D_{TEMP}	[PERF] ℙ D_{TEMP}	[TENSE] ℙ D_{TEMP}
☞ a. Root[passive][perfect][tense]			*	**
b. [passive]Root[perfect][tense]	*!		*	**
c. Root[perfect][tense][passive]		**!		*

The next issue is to discuss the position of the whole temporal domain: in an embedded environment, the verbal complex is the final element in the string, as shown schematically in (61). It does not only follow arguments[29] but also adjuncts and all other possible material belonging to the input of the string. Thus, the position of the verbal

[29] The basic ordering of arguments in German is taken to be *subject > indirect object > direct object > prepositional object* according to Meinunger (2000), but the relative position of IO and DO varies depending on the verbal meaning. This also points to the fact that the criteria for the ordering of arguments are more preferable based on the thematic relations than on grammatical case.

domain has to be defined in relation to the predicate domain, which contains all the CUs that are associated with a given predicate in the input. In (62).

(61) arg_1 arg_2 adj arg_3 Root temp temp

(62) ROOT F D_{PRED}: the root associated with the predicate domain follows it. Violated if a member of the predicate domain precedes the root.

However, as the position of the root is defined here in relation to the predicate domain which contains the temporal domain as well. This means that the temporal CUs following the root, as in (61), will violate this subsequence constraint to different degrees depending on their number. Therefore, it will become crucial to rank the constraint in (62) under ROOT P D_{TEMP} to obtain the right position of the verbal root, i.e. not absolutely clause-final, as in candidate c. of (T6), which would be favoured by the root-predicate domain ordering requirement. The effect of this constraint is to rule out expressions in which non-temporal CUs also follow the verbal root, as in candidate b. with a postverbal argument.

(T6) The position of the root in German

	ROOT P D_{TEMP}	ROOT F D_{PRED}
☞a. arg arg R temp temp		**
b. arg R temp temp arg		***!
c. arg arg temp temp R	*!	

3.4.2.1. Matrix word order in German

In this section I will argue that the matrix verb-second is the result of further constraints on matrix and non-neutral clauses (like questions, topic or focus structures), and involve reference to the tense feature of non-embedded clauses. In Newson (2013) the presence of the complementizer is enlisted to account for embedded word order, by virtue of the temporal nature of the complementizer, which is able to satisfy [TENSE] P D_{ARG}. Here, I argue rather for the assumption that being dependent or independent is a characteristic of the tense feature and not the complementizer.

One reason to doubt the assumption that the complementiser plays a role in determining the final position of the verbal root in subordinate contexts is that its presence

does not necessarily produce verb-last word order, as the following examples from Antomo (2012b) demonstrate. The 'embedded V2' phenomenon in 'clauses that express at-issue content' (Antomo 2012b:1) is argued to be related to the expression of semantic and pragmatic differences, like 'reason for the speaker's attitude or a speech act modification' (ibid, 2012a:49).

(63) a. Sam ist sehr mager, <u>weil</u> er nur Salat **isst.**
Sam is very skinny because he only salad eats
Sam is very skinny because he only eats salad.
b. Sam ist sehr mager, <u>weil</u> er **isst** nur Salat.
Sam is very skinny because he eats only salad

(64) Jenny studiert in Athen, <u>weil</u> sie **mag** griechisches Essen.
Jenny studies in Athens because she likes Greek food.

I will therefore assume that the tense feature is differentiated on the basis of its matrix or embedded nature.

But is it justified to differentiate between the tense feature in matrix and embedded structures? One reason to differentiate between matrix and embedded tense in the input is that the nature of the tense morpheme has an effect on vocabulary insertion. For instance, the form of an embedded tense feature is often not only determined by its own properties but also by the tense in the corresponding matrix clause. Thus, the vocabulary makes a distinction between the 'dependent' and 'independent' features in the course of lexical insertion as well and therefore these must be marked differently in the input.

The idea is similar to Grimshaw's (1998) notion of constraint families. One of the aims of this paper was to replace the complex PURE-EP[30] constraint (formulated as PROJPRIN in Grimshaw 1995) with a group of general and primitive constraints. The phenomenon that has to be accounted for is the different behaviour of matrix and subordinate clauses with respect to inversion. Grimshaw solves this problem by breaking down each of the constraints[31] that are responsible for inversion, or the lack of it, to three subtypes that refer to the three different types of projections, i.e. to matrix, to extended and to all projections. These groups are called constraint families.

[30] Pure Extended Projection: 'No movement takes place into the highest head of a subordinate extended projection.' (Grimshaw 1998: 20)

[31] Inversion structures violate HD-LFT, thus, to derive inversion in matrix clauses, the ranking should be OB-HD >> HD-LFT. The reverse ranking, i.e. HD-LFT >> OB-HD, derives structures with a filled specifier but without inversion, like embedded wh-clauses.

(65) The OB-HD family:

A matrix projection has a head (OB-HD/mtx)

An extended projection has a head (OB-HD/exp)

A projection has a head (OB-HD)

(66) The HD-LFT family:

A head is leftmost in a matrix projection (HDLFT/mtx)

A head is leftmost in an extended projection (HDLFT/exp)

A head is leftmost in its projection (HDLFT) (Grimshaw 1998: 23)

Matrix clauses count as matrix and extended projections. Subordinate clauses are extended projections and the general constraints are valid for all projections. It should become clear on the basis of the above that matrix inversion structures are obtained by ranking OB-HD/mtx which forces the head position of the highest matrix clausal extended projection to be filled above HD-LFT/mtx which is violated by such a condition as the head follows the specifier and hence is not the leftmost element of the clause. The lack of inversion in embedded contexts is derived by the ranking HD-LFT/exp>>OB-HD/exp, as a missing head vacuously satisfies the constraint which prescribes a leftmost position for a head in a projection.

The above analysis is of some relevance to the present system, as – although without a hierarchical approach and the assumption of phrasal structure–, I arrive at the same conclusion, i.e. derivation of matrix and embedded verbal positions require different orderings of certain constraints. However, this problem will be solved by making a distinction between the independent and dependent tense feature, i.e. between [tense] and [$tense_{matrix}$], the latter standing for a tense feature in a non-embedded clause.

(67) $\text{TENSE}_{\text{MATRIX}}$ *P D_{PRED}: the matrix tense CU cannot precede the predicate domain. Violated if [$tense_m$] precedes every member of the predicate domain.

(68) $\text{TENSE}_{\text{MATRIX}}$ P D_{PRED}: the matrix tense CU has to precede the predicate domain. Violated by members of the predicate domain that precede the tense CU.[32]

[32] For reasons of space, the constraints will appear in shortened form in tableaux, as TENSE_M *P D_{PRED} and TENSE_M P D_{PRED}, respectively.

In (T6), a preliminary analysis of a matrix declarative is presented with a root associated with the passive, perfect and tense features (e.g. a verbal complex like *ist ... gebaut worden/ 'has been built'*). The problem is that while the constraints referring to the matrix tense are able to filter out candidate c., with a tense-last order, the temporal domain ordering constraints select the wrong candidate as most optimal, one in which the lexical verb is fronted in a complex verbal domain instead of a fronted auxiliary.

(T6) Matrix declaratives in German

a. arg_1 [$tense_t$] arg arg R[$passive_t$][$perfect_t$]
b. arg_1 [$tense_t$] R[$passive_t$][$perfect_t$] arg arg
c. arg_1 arg arg R[$passive_t$][$perfect_t$][$tense_t$]
d. arg_1 R[$tense_t$] arg arg [$passive_t$][$perfect_t$]
e. arg_1 R[$tense_t$][$passive_t$][$perfect_t$] arg arg

	$TENSE_M$ *~~P~~ D_{PRED}	$TENSE_M$ ~~P~~ D_{PRED}	ROOT ~~P~~ D_{TEMP}	ROOT ~~F~~ D_{PRED}	[PASS] ~~P~~ D_{TEMP}	[PERF] ~~P~~ D_{TEMP}	[TENSE] ~~P~~ D_{TEMP}
a.		*	*!	**	*	**	
b.		*	*!	****	*	**	
c.		**!***		***		*	**
☹ d.		*		*****	*	**	
☹ e.		*		*****	*	**	

A way to overcome the problem is to assume that as the matrix [tense] CU appears not to behave like a member of the predicate domain any more, it somehow escapes the domain. Technically, this can be achieved by allowing the tense to lose its marker which connects it to the temporal domain. If the system enables the deletion of indexes, it should also be constrained to avoid its excessive application. The general form of the relevant faithfulness constraint is given in (69), while the specific formulation concerning the temporal domain is as (70), which will be employed here.

(69) FAITH (DM): violated by an input domain marker which is not in the output.

(Newson 2013)

(70) FAITH (DM_{TEMP}): violated by an input temporal domain marker which is absent in the output. Abbreviated as $FAITH_{TEMP}$ in tableaux.

The new tableau (T7) assessing candidates with deleted indexes can handle the situation adequately. Candidate a., the winning string has exactly the same ordering as

candidate b. without index deletion on the matrix tense. Therefore, b, fails on the requirement that the root precedes the temporal domain, as the matrix tense precedes the root. In a., by contrast, the fronted tense feature no longer counts as part of the temporal domain (represented by its deleted **t**-index as opposed to other temporal CUs). Therefore the root does not need to precede it and the ordering of the clause-final verbal complex is not affected by it, either. Candidate c, in which the whole temporal domain is fronted to second position fares worse on the constraint which demands the final position of the verbal root (ROOT ⊲ D_{PRED}). Candidate d. with correct embedded word order and faithfulness to the temporal domain marker fails on the high TENSE$_M$ ⊲ D_{PRED}.

(T7) German matrix declarative with index deletion of the matrix tense CU[33]

a. arg_1 [**tense**] arg arg R[$passive_t$][$perfect_t$] (*... ist ……. gebaut worden*)
b. arg_1 [**$tense_t$**] arg arg R[$passive_t$][$perfect_t$]
c. arg_1 [**tense**] R[$passive_t$][$perfect_t$] arg arg
d. arg_1 arg arg R[$passive_t$][$perfect_t$][**$tense_t$**]
e. arg_1 R[**tense**] arg arg [$passive_t$][$perfect_t$]
f. arg_1 [**tense**] arg arg [$passive_t$][$perfect_t$]R

	$TENSE_M$ *Ꝑ D_{PRED}	$TENSE_M$ Ꝑ D_{PRED}	ROOT Ꝑ D_{TEMP}	FAITH TEMP	ROOT Ꝟ D_{PRED}	ROOT Ⱥ [TEMP]	[PASS] Ꝑ D_{TEMP}	[PERF] Ꝑ D_{TEMP}	[TENSE] Ꝑ D_{TEMP}
☞a.		*		*	**		*	*	
b.			*!		**				
c.		*		*	***!*		*	*	
d.		**!***			***			*	**
e.		*		*	***!	*	*	*	
f.			**!	*				*	

A special case should also be looked at, namely the position of the finite tense and the root in simple tenses, where the temporal domain consist of only the tense CU. In such cases, the root does not remain in clause-final position but precedes the matrix tense and they are spelt out as one vocabulary item. To rule out the separated tense morpheme and the root in matrix clauses, no extra constraint needs to be introduced: the adjacency requirement between the members of the temporal domain and the verbal root is sufficient to handle this situation. In such cases, no index deletion is necessary, as the temporal domain consists of only one member, which must be placed in second position.

[33] There seem to exist cases and languages in which the temporal domain is able to change its basic position as a whole. The following examples from Márkus (2012) demonstrate a dialect of German spoken in Hungary, in which the elements of the verbal complex (indicated by boldface) tend to stay adjacent to one another even in second position.

(1) in zooberen Blooz **hobi nęegeto** i di K^hastn (*Eine saubere Bluse habe ich hineingetan in den Kasten.)*
the clean blouse have-I PFX-done in the box
A clean blouse, I put in the box.

(2) ir e Mainet **zain** **getseətigt** di Piadn *(In einem Monat sind gezeitigt die Birnen.)*
in a month are timed the pears
In a month the pears are ripe.

(3) **å ist gepriat** ti Eprai (*An ist gebrannt die Einbrenne.*)
PFX is burnt the thickening
The thickening is cought in the pan.

In such systems, temporal index deletion must be generally banned. Moreover, these sentences also give a hint that the temporal CUs also tend to be adjacent to one another, i.e. a constraint [TEMP] Ⱥ [TEMP], might be at work, apart from the already posited ROOT Ⱥ [TEMP], which demands proximity of the verbal root to the temporal CUs. A similar constraint referring to the nominal domain ([NOM] Ⱥ [NOM]) will be applied in Chapter 5 in connection with Left Dislocation.

(T8) German matrix declarative in simple present or simple past (preterite)

a. arg_1 R[$tense_t$] arg arg
b. arg_1 [$tense_t$] arg arg R
c. arg_1 arg arg R[$tense_t$]
d. arg_1 R[tense] arg arg
e. arg_1 [tense] arg arg R

	TENSE$_M$ *P D_{PRED}	TENSE$_M$ P D_{PRED}	ROOT P D_{TEMP}	FAITH TEMP	ROOT F D_{PRED}	ROOT A [TEMP]	[TENSE] P D_{TEMP}
☞a.		*			***		
b.		*	*!			*	
c.		**!*			*		
d.		*		*!	***		
e.		*		*!			

Candidate a. in the above table is chosen as most optimal: it fulfills the tense-second requirement and the precedence of the root in the temporal domain, represented by the [tense] CU. Note that, as the root is not a member of the predicate domain, its presence does not upset the second position in this domain of the tense. The same structure with index deletion, candidate d., fails on faithfulness conditions. In other words, the same constraints which forced the deletion of the Domain Marker in the previous example deny this possibility in this case and hence accounts for the 'second position' of the verbal root. Candidate e. with a deleted tense feature and a stranded root fares better on Root F D_{pred} than the winning candidate, as the root is clause final. It also has not violated the higher requirement on the precedence of the root in the temporal domain (ROOT P D_{TEMP}), as is the case with the comparable candidate b., as the temporal domain does not exist due to index deletion. However, the higher ranked faithfulness constraint ensures that this candidate is suboptimal.

3.4.2.2. German prefixes

To get a full picture of German word order, mention has to be made of verbal prefixes. Generally, these come in two types: inseparable prefixes, which are meaningless preroot syllables and which can never be separated from the verbal root – their presence or absence makes no difference in the syntactic analysis – and separable prefixes which affect the word order of sentences. In those cases where the verbal root is sentence-final, the prefix is

attached to its left, as the examples for embedded (71) and matrix orders (72a) show; boldface indicates the members of the temporal domain and the prefix is highlighted by underlining. In root-second environments the prefix stays in the final position (72b).

(71) a. dass Peter damit ***<u>an</u>gefangen hat*** EMBEDDED
that Peter that-with begun has
...that Peter has begun with it.

b. dass die Tür schnell ***<u>auf</u>gemacht worden ist***
that the door quickly PRF-made become(pass) is
...that the door has been opened quickly.

(72) a. Peter ***hat*** das Fenster ***<u>auf</u>gemacht.*** MATRIX
Peter has the window PFX-made
Peter has opened the window.

b. Peter ***mach**t/**mach**te* das Fenster ***<u>auf.</u>***
Peter makes/made the window up/on (PREFIX)
Peter opens/ed the window.

(73) Wann ***fäng**st* du endlich mit dem Lernen ***<u>an</u>***?
when start you finally with the learning PREFIX
When do you start learning at last?

It is reasonable to assume that the prefix is not part of the temporal domain, as it is different from other temporal CUs in nature. However, it is related to the temporal domain as it carries aspectual, perfective meaning and its presence may affect the argument structure of a predicate. Therefore, the verbal prefix will appear as a functional CU in the analysis of German and Hungarian

Concerning its position, it remains clause-final in simple tenses, when the root and the tense feature are located in second position, obeying a root—temporal CU adjacency requirement. In other cases it is positioned after all arguments and adjuncts of the predicate domain, preceding the temporal domain. That the position of the prefix is best defined relative to the temporal domain and not the root is also supported by infinitival constructions, such as the one in (74), where the prefix is not adjacent to the root but precedes the infinitival marker '*zu*'.

(74) auf***zu***machen

PREFIX-to-make

to open

The above situation can be best captured by the pair of constraints in (75) and (76). The higher constraint, which demands the precedence of the prefix in the temporal domain, is respected in all cases but one: if the temporal domain consists of only the tense CU and is located in the second position in a matrix clause. As higher ranked constraints demand the second position of the tense, they will rule out the case when it is preceded by the prefix. The second requirement will be fulfilled in such cases, i.e. the prefix will be clause-final. In more complex verbal domains the second constraint will be violated by one to three times, depending on the number of temporal CUs present.

(75) [PREFIX] **P** D_{TEMP}: the verbal prefix precedes the temporal domain. Violated by every member of the temporal domain that precedes the prefix.

(76) [PREFIX] **F** D_{PRED}: the verbal prefix follows the predicate domain. Violated by every member of the predicate domain that follows the prefix.

The constraints on the prefix are integrated into the hierarchy containing the constraints on argument and temporal domain order in (T9).

(T9) Embedded clause with prefixed verb

a. arg arg arg ***Prefix*** Root [passive] [perfect] [tense] (***auf****gemacht worden ist*)
b. arg arg arg Root [passive] [perfect] [tense] ***Prefix***
c. arg ***Prefix*** [tense] arg arg Root [passive] [perfect]
d. arg arg arg Root ***Prefix*** [passive] [perfect] [tense]
e. arg arg arg Root [passive] ***Prefix*** [perfect] [tense]

	ROOT **P** D_{TEMP}	ROOT **F** D_{PRED}	ROOT **A** [TEMP]	PFX **P** D_{TEMP}	PFX **F** D_{PRED}	PASS **P** D_{TEMP}	PERF **P** D_{TEMP}	TENSE **P** D_{TEMP}
☞a.		***			***		*	**
b.		****!		***			*	**
c.	*!	**			*****	*	**	
d.		****!	*		***		*	**
e.		****!		*	**		*	**

(T10) A prefixed verb in present perfect (matrix clause)

a. arg_1 [tense] arg arg ***Prefix*** R[$perfect_t$] *(… hat … aufgemacht)*
b. arg_1 ***Prefix***[tense] arg arg R[$perfect_t$] *(…. auf hat … gemacht)*
c. arg_1 [tense] arg arg R[$perfect_t$] ***Prefix*** *(… hat… gemacht auf)*
d. arg_1 [tense] arg arg R ***Prefix*** [$perfect_t$] *(…hat … machen ge-auf-t)*

	$TENSE_M$ *~~P~~ D_{PRED}	$TENSE_M$ ~~P~~ D_{PRED}	ROOT ~~P~~ D_{TEMP}	ROOT ~~F~~ D_{PRED}	ROOT ~~A~~ [TEMP]	PFX ~~P~~ D_{TEMP}	PFX ~~F~~ D_{PRED}	PERF ~~P~~ D_{TEMP}	TENSE ~~P~~ D_{TEMP}
☞a.		*		*			*		
b.		**!		*			****		
c.		*		**!		*			
d.		*		**!	*		*		

The next table shows the most problematic case with respect to the position of the prefix, i.e. when it is detached from the verbal complex. Here the temporal domain sits in second position, while the prefix is clause-final, as represented by candidate a.

(T11) A prefixed verb in a matrix declarative in simple present or simple past

a. arg_1 R[$tense_t$] arg arg Prefix (… macht/ machte … **auf**)
b. arg_1 [$tense_t$] arg arg Prefix-R (… tense … **auf**machen)
c. arg_1 Prefix-R[$tense_t$] arg arg (… **auf**machte …)
d. arg_1 arg arg Prefix R[$tense_t$] (… **auf**machte)
e. arg_1 R[$tense_t$]Prefix arg arg

	$TENSE_M$ *~~P~~ D_{PRED}	$TENSE_M$ ~~P~~ D_{PRED}	ROOT ~~P~~ D_{TEMP}	ROOT ~~F~~ D_{PRED}	ROOT ~~A~~ [TEMP]	PFX ~~P~~ D_{TEMP}	PFX ~~F~~ D_{PRED}
☞a.		*		****		*	
b.		*	*!		*		
c.		**!		***			***
d.		****!		*			*
e.		*		****		*	**!

3.4.3. Hungarian

For Hungarian, the verb-initial order is considered to be basic in a neutral sentence without emphasis on any of the arguments: 'The lexical core of the predicate in Hungarian is a verb phrase. It is assumed to be verb initial, with the arguments following the verb in an arbitrary order' (É. Kiss 2002:27). Principles on discourse functions are responsible for the side-switching of arguments. We posit (77) to capture the verb–argument ordering. When

relating the arguments and the predicate, it can be observed that in clauses without discourse-marked elements, the verb precedes all arguments in the default case.

(77) ROOT **P** D_{ARG}: violated by every member of the argument domain which precedes the root associated with the temporal domain.

In present and past tense, the ordering of the tense feature and the verbal root is straightforward, as the bound tense morpheme attaches to the right side of the root. In unmarked cases, the preverbal prefix is located to the left of the root (78); it is treated here as a feature of perfectivity as in É. Kiss (2002), but, as we assumed for German, it not part of the temporal domain. In inversion structures, the tensed verb switches sides with the verbal prefix, as in (79).

(78)	János$_{top}$	el-	men-t.
	John	away-	go-PST
	[topic]	Prefix	Root[tense]
(79)	PÉTER	men-t	el
	PETER	go-PST	away
	[focus]	Root[tense]	Prefix

Constraints (80)-(84) reflect the above observations. The root-tense ordering is achieved by (80). The ranking of the adjacency constraints is important: in cases when both the root and the prefix precede the tense morpheme, the root is the closer of the two. The adjacency requirement of the prefix is also fulfilled, when it follows the finite verb.

The adjacency requirement concerning the verbal root and the temporal domain is not an *ad hoc* constraint but is present in other languages as well, as has been demonstrated for German. As I do not intend to go into unnecessary details regarding the temporal domain in this thesis, I will mention it only in connection with cases when its function is apparent.

(80) ROOT **P** D_{TEMP}: the verbal root precedes the temporal domain.

(81) ROOT **A** [TEMP]: the root is adjacent to the elements of the temporal domain.

(82) PREFIX **P** D_{TEMP} : the prefix precedes the temporal domain.

(83) PREFIX **A** D_{TEMP}: prefix is adjacent to the temporal domain.

(84) ROOT ℙ D_{TEMP} > ROOT 𝔸 [TEMP] > PREFIX ℙ D_{TEMP} > PREFIX 𝔸 D_{TEMP}

To capture the [Predicate Argument Argument] word order in Hungarian, it has to be assumed that the feature borne by the highest argument (i.e. 'subject') does not play any role, otherwise we would expect a special post verbal position for this argument, which does not seem to be the case. In earlier accounts, this has been achieved by ranking both leftward and rightward placement constraints above FAITH, which results in the deletion of the 'subject feature', as in Gáspár (2005) and Newson and Maunula (2006). As I am not assuming such a feature, this analysis cannot be adopted here. In fact, the whole argument domain in Hungarian does not seem to be ordered, as the postverbal order of arguments is free. Therefore, I will assume that the argument alignment constraints are equal ranked, as in (85).[34]

(85) ARG_1 ℙ D_{ARG}, ARG_2 ℙ D_{ARG}, ARG_3 ℙ D_{ARG}

In the table below, the working of both the constraints on the ordering of the temporal and argument domains will be demonstrated. As the evaluation of candidates a-c. shows, all orderings of the three arguments incur a total of three violations.[35] In d., the preverbal subject violates the precedence of the temporal domain; the string e. is rendered suboptimal because the prefix does not precede the verb. Of course, the latter situation might occur elsewhere, but there has to be a higher demand which makes the [tense] CU appear more to the left. Candidate f. demonstrates that the adjacency of the root to temporal items is more important the adjacency of the prefix to the temporal domain, i.e. ROOT 𝔸 [TEMP] >> PREFIX 𝔸 D_{TEMP}.

[34] The unordered nature of the argument domain has been explained in various way even within OT syntax, e.g. by feature deletion as in Gáspár (2005), which would correspond to the deletion of their domain marker in the present theory. Issues of the learnability of unordered constraints also arise, although a number of arguments have been brought up for its feasibility and against it in OT literature.

[35] The argument domain constraints will not be represented in other tableaux, as they do not affect the evaluation.

(T12) Hungarian basic word order (without discourse-prominent items or operators)[36]

a. *Prefix* R[tense] arg_1 arg_2 arg_3
b. *Prefix* R[tense] arg_1 arg_3 arg_2
c. *Prefix* R[tense] arg_3 arg_2 arg_1
d. arg_1 *Prefix* R[tense] arg_2 arg_3
e. R[tense] *Prefix* arg_1 arg_2 arg_3
f. R *Prefix* [tense] arg_1 arg_2 arg_3

	ROOT P D_{ARG}	ROOT P D_{TEMP}	ROOT A [TEMP]	PREFIX P D_{TEMP}	PREFIX A D_{TEMP}	ARG_1 P D_{ARG}	ARG_2 P D_{ARG}	ARG_3 P D_{ARG}
☞a.					*		*	**
☞b.					*		**	*
☞c.					*	**	*	
d.	*!				*		*	**
e.				*!			*	**
f.			*!				*	**

3.5. The features belonging to a nominal root

Apart from the set-up of argument features surrounding the predicate root and playing part in the ordering of items within a clause, the features at play in connection with roots that will be spelt out as nouns should also be considered and what contribution they make to the final form of the structure. There are numerous features in this category, for instance number, definiteness, animacy, demonstrativeness; negative polarity or operatorhood as well as argument or adjunct status, which secures the semantic-functional connection to the predicate.

Setting up relevant nominal features is also of importance when accounting for pragmatic or semantic restrictions: In Chapter 2 Section 2.4., summarizing the main characteristics of various LD structures cross-linguistically, mention has been made of the restrictions on topicality. From the point of view of the present system, the locus of modelling such restrictions must be in the input: the features they stand in connection with are all connected to the interpretation of the nominal concept in question, like specificity, definiteness, animacy, etc.

[36] As in other OT analyses, dotted lines in tableaux indicate equal ranking.

The conditions of the assignment of syntactically relevant features need to be encoded in the input in those cases where the availability of a feature depends on the meaning of the root or its inherent features.

3.5.1. Featural typologies

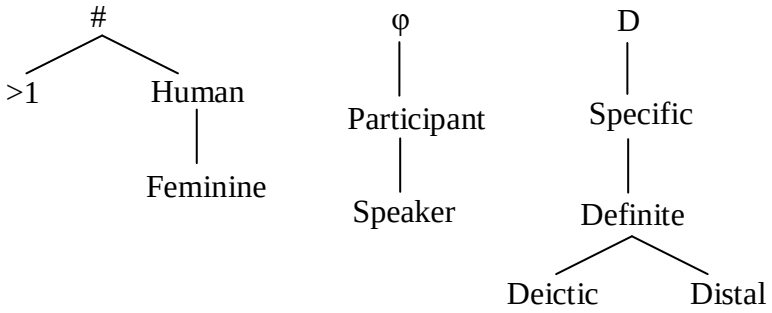
Cowper and Hall (2002, 2009) study nominal features cross-linguistically and specifically in English within the framework of Distributed Morphology. Their original system will be reviewed and altered at points, where theoretical differences demand, and to accommodate cross-linguistic differences between English on the one hand, and German and Hungarian on the other. What is significant in their approach is that they set up feature geometries and do not represent features as unordered bundles.

Featural typology also existed in traditional generative grammar. +/- values of features have been widely used in phonology and morphology. In syntax binary valued features have most typically been used for determining the characteristics of parts of speech. However, there are other ways of thinking of features, represented also in Newson (2010), though not stated explicitly. Features appear there and in many works on Distributed Morphology as privative features: either present or absent, rather than differently valued (+ or -).

According to Cowper and Hall (2009), a distinction is made between types of features on the basis of whether their absence is of importance: the absence of certain ('head') features is meaningful, whereas that of dependent ('adjunct') features is not. The advantages of this can be incorporated into the system in the form of rules of entailment. Depending on their status, features are organized into hierarchies or 'feature geometries': the appearance of the higher feature is the condition of the appearance of a dependent feature. One obvious advantage of the terms used to describe features lies in their rather semantic nature: assigning them to input structures would not alter the originally non-grammatical descriptions (see also the review Harley and Ritter 2002, p. 37-38 of the present work).

In the following, I review the network of nominal features and then proceed to comment on cross-linguistic alternations, as the presented model was originally designed to capture the English facts. In (86) Cowper and Hall's feature geometries are presented.

(86)



(Cowper & Hall 2006:2)

The symbol # stands for 'individuated', i.e. basically denotes count nouns; the absence of the feature means that the nominal expression in question is to be interpreted as a mass noun. The symbol >1 stands for plural, it is semantically dependent on 'individuated'; if a nominal is count and this feature is absent, it means that it will be interpreted as singular[37].

The features on D can be interpreted as follows: 'Specific' alone stands for a wide-scope indefinite, its absence results in a narrow-scope indefinite. The function of the definiteness feature is clear; its absence marks an indefinite noun. The category 'Deictic' characterizes a noun or pronoun related to the deictic centre, the absence of Deictic simply stands for the notion non-deictic. To further differentiate among demonstratives, 'Distal' is to be interpreted as far or backgrounded, its absence can either mean proximal or neutral – of course, this entails that the proximal form is used in a neutral context, which might not be true in other languages.

As for the person feature, the abstract basic φ feature on the top of the hierarchy is associated with third person, which can further be marked for being human, for gender and plural. 'Participant' stands for second person and 'Speaker' for first person with number distinction. On the basis of the above, Cowper and Hall (2006:3) provided the following featural descriptions of English determiners and pronouns:

[37] In Cowper & Hall (2009) a further feature is added, which is however not directly relevant for our purposes: 'CL', i.e. classified, is also dependent on # but it is relevant in languages with classifiers, without grammatically marked number.

(87) English vocabulary items spelling out nominal features

a. Determiners:

a(n)	D, #	*this*	Specific	THIS	Deictic
the	Definite	*these*	Specific, >1	THESE	Deictic, >1
Ø	D	*that*	Distal	THAT	Deictic, Distal
		those	Distal, >1	THOSE	Deictic, Distal, >1

b. Pronouns (which additionally spell out Case):

I, me	Speaker, Human	*it*	φ
you	Participant, Human	*he, him*	φ, Human
we, us	Speaker, >1, Human	*she, her*	φ, Feminine
		they, them	φ, >1

A distinction should also be made between nominal items used as arguments and ones used as predicates. The absence of the D or the φ feature (standing for full nouns and pronouns roughly) turns a noun into a predicate, whose person and number (and other grammatical) features are neutralized.

In the present system, as sketched for argument structure above, the D feature corresponds to either the [argument] or [adjunct] feature, depending on the status of the noun. The difference between a full noun or nominal expression and a pronoun, which depends on D or φ in Cowper and Hall (2009), is encoded by the presence or absence of an immediately preceding and adjacent Root. The [argument] feature can fulfil the same function as a bound φ feature: in case of anaphoric pronouns and resumptives, it establishes a connection to the Root and its features. In case of a non-anaphoric pronoun, the string consist of grammatical specificational features like number, gender, person and the argument feature, which is responsible for spelling it out in the appropriate case. The following example structures demonstrate full nouns in general (88), anaphoric pronouns (89) and a free pronoun (90), respectively.

(88) Root[arg]; Root[adjunct]

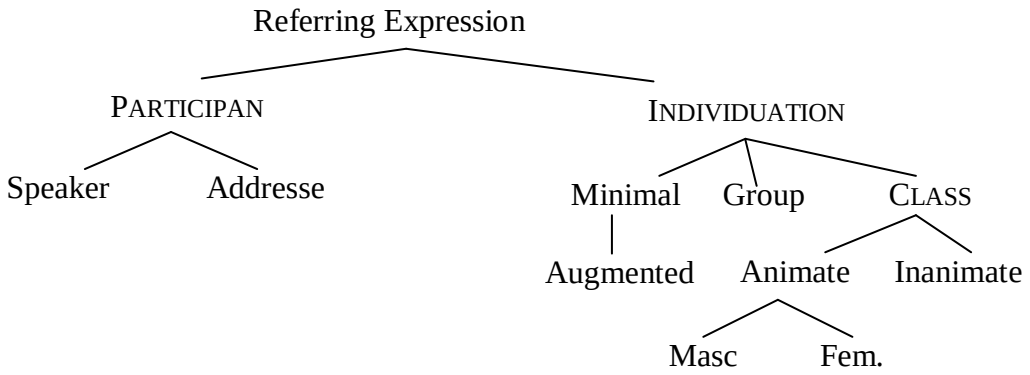
(89) [arg]+ possible discourse features

(90) [Human][arg_1] ↔ *he*

A similar account is presented by Harley and Ritter (2002), with a more restricted set of features. Here, the conceptual nature of categories is more striking. The term

PARTICIPANT refers to person, INDIVIDUATION to number (minimal=singular; group=plural), and the dependent category CLASS encodes gender.

(91)



(Harley&Ritter 2002: 25)

According to the authors, their hierarchy is able to account for Greenberg's universals concerning nominal categories and acquisition facts. This is why CLASS is not a distinct category but a dependent of INDIVIDUATION: only languages with number categories and number agreement have also gender categories and gender agreement (Greenberg's universal 32 and 36). However, gender is again connected to animacy, which is not the case with languages encoding grammatical gender.

A further point worth mentioning is that in the languages under discussion, the human–nonhuman distinction seems to be of greater relevance both syntactically and morphologically than the animate–inanimate one. Phenomena that can be brought up to support this observation include pronominal forms referring to human beings vs. Nonhumans, prepositional adverbs vs. adverb and pronoun sequences in German: *darüber-über ihn* and distinct 3rd person forms in Hungarian for human and nonhuman referents: *ő-az*.

3.5.2. Language-particular feature geometries

3.5.2.1. Notation, symbols

As already touched upon in the previous section, the semantic content carried by a word is represented by a root, abbreviated to 'R' in complex strings. A root is not specified for word class; the surrounding functional features are responsible for determining its syntactic behaviour and its realisation in vocabulary insertion. Thus, roots carry only semantic information.

Functional CUs can refer to grammatically relevant information, like argumenthood or plurality, or to discourse-related notions like topicality or contrastiveness. Functional features are shown in square brackets, e.g. [arg] standing for the argument feature or [def] for 'definiteness'.

The symbol ↔, used in the vocabulary, indicates that an exponent is given for the ordered set of features, i.e. it is demonstrated how a feature string surfaces after vocabulary insertion. For instance, a string containing the features 'human', 'feminine' and 'first argument' and lacking a semantic root, will be spelt out by the feminine singular personal pronoun in nominative case:

(92) [human] [fem] [arg_1] ↔ *she*

To take another example with a noun in the output, an expression containing a lexical root 'CAT' and the features 'deictic', 'distal', 'plural' an 'argument' will have the form inserted from the vocabulary as shown in (93).

(93) [deictic] [distal] [>1] R [arg] = *those cats*

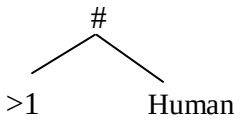
3.5.2.2. The number and gender features

In German, similarly to English, there is also a three-way distinction in gender and a two-way distinction in number, where gender gets neutralized. However, all nouns bear grammatical gender which does not correspond to natural sex. Thus, deriving non-neutral gender from the feature 'Human' is not the appropriate solution for German. Instead, it would be an option to apply the notion 'Masculine', as it is indeed the default gender when referring to human beings. Neutral gender may also be considered as unmarked but only when referring to objects, but animate nouns can also be neutral, e.g. *das Mädchen, das Baby*.

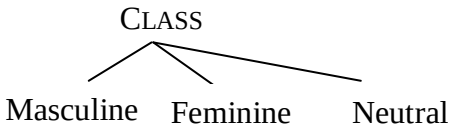
Mass nouns in German are used without articles in the most cases, but they do have a specific gender and are able to appear with a determiner, e.g. when premodified. But even if a mass noun appears without a determiner, its gender might be important, e.g. to determine the form of its attribute (neutral suffix on the adjective: '*kühl**es** Bier'* cool beer, feminine: '*warm**e** Milch'* warm milk). All this points to the conclusion that gender seems to be present in the internal structure of the root, 'gender is not an inherent feature of determiners and [that] it is marked on them only as a result of agreement, "concord" more

specifically'. Thus gender is 'a noun-classificatory feature', part of a noun's lexical entry (Panagiotidis 2002:193). As a result, it is not dependent either on the human feature or on individuation in German, and presumably in all other languages with a grammatical gender system. However, gender is neutralized in plural.

(1)

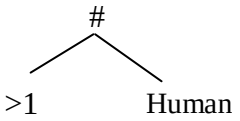


(2)



For Hungarian, on the other hand, the schema has to be altered in the following way, entirely omitting gender specifications from the featural makeup of nominal expressions:

(3)



As for the person-features, no change is necessary, but the feature combinations for personal pronouns will look differently. Both for German and Hungarian, where all persons are expressed through different lexical forms, the distinction in second person would correspond to the combinations in (97).

(97) [Participant] [Human] ↔ German '*du*', Hungarian '*te*' (2nd person singular)
[Participant][>1] [Human] ↔ German '*ihr*', Hungarian '*ti*'(2nd person plural)

Moreover, there is human/non-human distinction also in the plural in Hungarian, thus only one general form, like '*they*' in English, does not suffice. Note that the form used for non-human plural items in the third person corresponds to the form of the neutral demonstrative (i.e. the distal one in Hungarian).

(98) [>1] [Human] [arg] ↔ *ők* ('they', human)
[>1] [arg] ↔ *azok* ('they', non-human)

Definiteness is also an important aspect when considering the features that have an effect on the output form of a nominal expression, as it influences the morphological form

of the expression (type and presence of an article) and its syntactic behavior. As definiteness is reflected by articles and pronouns which precede the noun in the output form, I assume that the relevant feature is ordered in front of the nominal root, as shown in (99) and (100). Moreover, it can also have an effect on the output form of the predicate in languages like Hungarian. This might be captured by a vocabulary entry which specifies the 'objective/ definite inflection' of transitive verbs in the presence of a definite object. The first type of inflection is best considered to be the default case, so if no other conditions apply, these forms are inserted.

(99)	Megvesz<u>ek</u>	valamit/ $egy_{indefinite}$ ruhát.
	$I\text{-}buy_{indefinite\ inflection}$	something/ a dress
(100)	Megvesz<u>**em**</u>	$a_{definite}$ ruhát.
	$I\text{-}buy_{definite\ inflection}$	the dress

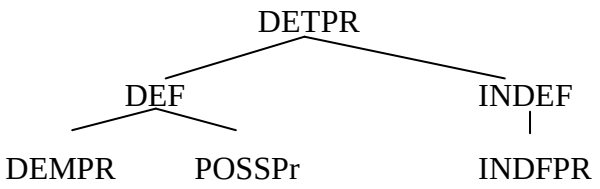
3.5.2.3. Referentiality

It becomes clear immediately one looks at the features connected to referentiality that a different feature hierarchy is needed both for German and Hungarian, as in German, there is a three-way distinction among demonstratives, which is shown in (101).

(101)	*der/die/das* (neutral);	*dieser/diese/dieses* (proximal);	*jener/jene/jenes* (distal)
	[deictic]	[deictic, proximal]	[deictic, distal]

Demonstratives belong to the larger category of determinative pronouns ('*Determinativpronomina'*, Eisenberg 1996:198) (the other pronouns listed are personal, relative and interrogative), which can be syntactically subclassified into definite and indefinite pronouns on the basis of their featural makeup. The group of possessive pronouns is most closely related to demonstratives, sharing the definiteness feature.

(102)



Although the base forms of demonstratives in German are identical with those of the definite article, they differ in their inflectional forms in genitive (*der, des* - as opposed to: *deren, dessen*) and dative plural (*den* vs. *denen*). However, demonstratives are formally identical with relative pronouns: still, they can be distinguished in the context on the basis of their syntactic behavior, i.e. word order regularities (relative pronouns are followed by embedded word order).

In Hungarian, only a two-way distinction between demonstratives can be found as shown in (104). However their relationship is different from the English situation, as the distal pronoun seems to serve as the default; it also functions as a correlate (103). In addition, in cases referring to non-human referents when the personal pronoun would be used in German and English ('*it*'), Hungarian uses '*az*' as the neutral form.

(103) **Azt** mondta, hogy … János **arra** gondolt, hogy…
that$_{ACC}$ said.he that John that-on thought that…

(104) *ez, az* (this, that)

Moreover, if the pronouns are combined with a noun, an obligatory definite article appears both in singular and plural, and, of course, in all inflected forms.

(105) *ez* ***a*** *ház,* *ezek* ***a*** *házak;* *azoknak* ***a*** *macskáknak*
this$_{NOM}$ the house$_{NOM}$ these$_{NOM}$ the houses$_{NOM}$ those$_{DAT}$ the cats$_{DAT}$

The above is not a unique situation in Hungarian: articles appear with other pronouns like possessives, as the table in (106) demonstrates possible combinations.

(106) Schematic order of Hungarian premodifiers

<table>
<tr><td>External demonstrative</td><td rowspan="2">Definite article</td><td rowspan="2">Nominative Possessive NP</td><td rowspan="2">Attribute</td><td rowspan="3">NOUN</td></tr>
<tr><td>Dative Possessive NP</td></tr>
<tr><td>Quantifier</td><td>Internal demonstrative</td><td>Numeral</td><td>Adjective</td></tr>
</table>

(Kenesei et al. 1998:102)

If a demonstrative is connected to a root, i.e. the feature [deictic] or any of its subfeatures appear in the candidate set associated with a root, then its output form is '*ez a'/'az a'* and relevant inflected forms of the two; if, on the other hand, it is associated with

an argument or adjunct feature, its output form will be '*ez'/'az'*. An alternative option could be to posit that the definiteness feature can only be associated with lexical nouns, i.e. roots. Once this feature is present, it always has a separate form in the output, i.e. the definite article '*a/az'*. Given that independent demonstrative pronouns (i.e. ones without a noun) do not spell out a root, the definiteness feature is not attached to them, thus the definite article cannot appear.

(107) [def] (>1) ROOT arg_x [discourse features]

(108) [deictic, distal] ROOT arg_x [discourse features]

This imposes a further question as to where the Number feature is to be located. In the languages under discussion, number marking, which is understood as plural marking, is located morphologically after the nominal stem in the most cases. However, number marking appears on determiners as well, which in turn appear prenominally.

Facts about Hungarian seem to support the preroot position of [>1], i.e. the feature of plural marking. As described also in É. Kiss (2002:152), 'Hungarian noun phrases can be supplied with either a (suffixal) plural marker or a numeral – but not both'; the two cases are exemplified in (109), the glosses indicate the presence (a.) and absence (b.) of the plural marker on the noun. In generative terms, this is explained by a filter which disallows the spelling out of the [+plural] feature on the head if the specifier of a Numeral Phrase is filled. Plural nouns get associated with the plural affix in the Num head via morphosyntactic merger (Bartos 1999: 25).

(109) a. a macská**k**
the cat-**s**

b. a **két** macska
the **two** cat

In the present system, this state of affairs is a consequence of different spellout possibilities of the plural feature [>1], which is not realised by an independent lexical item but is always spelled out with other items. If no numeral is present, the plural feature is spelled out with the noun in the form of an affix. In the other case, it is fused with the numeral and they are spelt out together.

Thus, for the time being, I will assume that together with the other nominal features such as specificity, definiteness and gender, the feature denoting number, if present, will

cluster with the above features in an immediate pre-root position. This way, the post-root position will be reserved for the argument or adjunct features, which might be followed by further discourse specifications.

(110) a. [def] Root [arg] (= '*the cat'*, for instance)
b. [def] [>1] Root [arg] (= '*the cats'*)
(111) [#, def] Root [arg][about] (= '*the cat'*, for instance)

This seems to be a welcome option from the point of view of determiners as well: in the ideal case, the pre-root features are spelt out together as an article, a possessive or a demonstrative pronoun.

3.5.3. Discourse features

In line with the above ordering of functional and semantic features of nominal elements, it is also important to think about the organization of discourse-oriented features, as they play a central role in the present analysis. First I review the relevant pragmatic features and in Section 3.4.5 the constraints referring to their ordering will be established.

3.5.3.1. Aboutness

Based on the pragmatic notion of topicality, I assume the existence of a general topic feature, which does not necessarily have a syntactic reflex. In line with pragmatic considerations as discussed in Section 2.3.1. of Chapter 2, this feature will be called 'aboutness' as this concept is a common features of all types of topics as opposed to 'givenness'.

Specificity and referentiality have been the most frequently mentioned formal features of the topic in syntax-related accounts: 'The specificity requirement associated with the Hungarian topic only means that its referent must exist in the universe of discourse' (É. Kiss 2007:71). As observed by many, specific indefinites are also able to function as topics. If we order the [about] feature under Specificity, which in turn is dependent on the D feature responsible for referentiality, we can account for both requirements. However, [referential] can be taken to be an inherent property of Roots (corresponding to lexical meaning).

(112) REFERENTIALITY
|
SPECIFICITY
|
ABOUTNESS

3.5.3.1.1. The case of Spanish direct object clitics: evidence for the existence of [about]

The following section serves as presentation of evidence for the direct effect of the weak topic feature. In Spanish, topicalisation of arguments always involves a clitic; such structures are mostly referred to as Clitic Left Dislocation (ClLD), which differs from syntactic topicalisation in that it does not only involve the fronting of an argument but also the presence of a clitic corresponding to the grammatical properties of that argument preverbally. [38]

(113) **El periódico** **lo** compró Juan.
the paper CL_{ACC} bought Juan (Zagona 2002)

A basic fact in Spanish crucial to the understanding of the phenomenon is that the indirect object clitic appears on a grammatical basis. Regardless of the position or appearance of an indirect object argument, it is always present in the structure when the argument structure of the predicate contains it. However, the direct object clitic (i) is compulsory if no explicit direct object is present; (ii) appears when the direct object is 'topicalised', i.e. fronted; (iii) might appear with postverbal lexical direct objects as well, see (114). Moreover, if the accusative argument is realized as a strong pronoun postverbally, the clitic is also obligatory, as shown in (115). If an argument is expressed by a strong pronoun in a language, where it could possibly have been left out as well, this suggests that the pronominal argument has a special discourse function, and is present to carry extra meaning or emphasis.

[38] It is to be noted that ClLD is a more language-particular device of topic promotion than the other constructions, as it is instantiated only in Romance languages that have clitics in their inventory of vocabulary items. In my opinion, the above strongly suggest that ClLD and Topicalisation in Spanish are actually the two sides of the same phenomenon; LD being a distinct structure both syntactically and pragmatically.

(114) Juan **lo** leyó **el libro**.
Juan $CL_{ACC,M}$ read the book
Juan read the book.

(115) ***Ø/Lo** vi **a él**. (Belloro 2007)
'I saw him.

In Spanish HTLD constructions with a fronted nominal expression and a postverbal strong pronoun, the clitic appears as well, although the argument status of the dislocated item is already represented by the strong personal pronoun[39].

(116) **Juan, lo** vimos **a él** en la fiesta.
Juan $CL_{ACC,M}$ saw him at the party
Juan, we saw him at the party. (Zagona 2002:221)

Taking a look at the other side of the coin, it can be observed that certain types of nouns resist clitic doubling, for example quantified phrases and non-specific indefinites. In addition, clitics are impossible both with preverbal and postverbal focalized nouns, like in the example (117) with preverbal focus. It is striking that these properties cover the set of non-topical elements.

(117) ESOS tomates (*los) compró María
those tomatos CL_{PL} bought Maria
It was those tomatoes that Maria bought. (ibid. p.251)

According to Belloro (2007), the availability of the clitic stands in connection with the specificity or accessibility of the noun; Arregi (2003) also mentions 'specific and referential' as the features of a clitic-doubled noun. In turn, these descriptions seem to coincide with that of a topic.

My assumption can be summed up as follows: the clitic-doubled noun bears a topicality feature, an aboutness-marking, which indicates that it is not new in the discourse, but taken up again or stands in a part-whole relationship with an entity in the preceding discourse. The presence of a weak topic feature triggers the appearance of the clitic. The

[39] 'The accusative marker, the preposition *a*, is found only with specific, animate noun phrases, so that strictly speaking a noun phrase like the male proper name *Juan* has a nominative–accusative case marking system, while the inanimate noun phase *el libro* 'the book' has a neutral case marking system.' (Dryer & Haspelmath 2011)

reason why it cannot be identified as a strong topic marker is that direct object clitics can also appear with postverbal phrases, which apparently have not undergone syntactic fronting. In constructions like HTLD and ClLD additional features trigger further displacement, but the reviewed cases – topicalisation, HTLD, presence of a postverbal personal pronoun – all have in common that the accusative clitic on the verb is a reflex of the aboutness feature of the theme/patient argument.

3.5.3.2. Contrast

At first sight, the contrast feature seems to be a dependent feature whose appearance is conditioned by the presence of an aboutness or newness feature, appearing as a contrastive topic or a contrastive focus.

(118)

SPECIFICITY	NEWNESS
|	|
ABOUTNESS	CONTRAST
|	
CONTRAST	

In Hungarian, aboutness topics have to be referential and specific and so Left Dislocation constructions, too. However, as a large body of syntactic literature on topics agree, Contrastive Topics in the usual sense, i.e. without resumption, need not be referential, as in (119), and even non-specific indefinites and quantifiers can have this function.

(119) Húszan$_{CT}$ befférnek a terembe, negyvenen$_{CT}$ viszont nem.
twenty fit into the room forty but not
Twenty (people) fit into the room, but not forty.

Aboutness topicality presupposes specificity. If we look at contrastive topics, a widely analysed topic of the generative literature on Hungarian, the above condition is more lax: indefinites, which would not qualify as proper aboutness topics can nevertheless appear contrastively. The specificity condition still applies to indefinites; however, even nonspecific items like the preverbal prefixes '*fel*'-'*le*' (up-down) can be used contrastively.

Therefore, it might be reasonable to assume that the feature responsible for contrastiveness adds an aspect of meaning to the noun which makes it possible to bear the aboutness feature. A similar idea occurs in É. Kiss (2007) and Gyuris (2009), following Szabolcsi (1983:73): 'contrast is a means of individuation, i.e., non-individual denoting expressions are understood as distinct semantic objects if they are contrasted'.

Hinterwimmer and Repp (2010) observe, on the basis of comparing topicalization, German Contrastive LD (called 'GLD' in their terminology) and Hanging Topic constructions, that contrastive items are not necessarily topics. It is demonstrated that German LD is subject to a referentiality constraint, similarly to Hungarian. But 'parallel structures (without GLD) – the prime case of contrastive topics – happily accommodate non-referential phrases as "contrastive topics"' (ibid. p.9). The highlighted phrases are meant to be instances of contrastive topics, and the clause is both grammatically and pragmatically well-formed. The structure is impossible with Left Dislocation.

(120) The school trip to the farm was very popular with the kids. (Context)

Mehr als 15 Kinder wollten Ponyreiten und **mehr als 10** wollten Hühner füttern.
more than 15 kids wanted pony.ride and more than 10 wanted chickens feed
More than 15 kids wanted to ride on a pony and more than 10 kids wanted to feed the chickens. (ibid. p.13)

Quantifiers in Hungarian cannot take part in LD either, which is claimed to be a means of denoting contrastive topics (Lipták 2010). These assumptions are clearly contradictory – why are certain topics accessible for LD and others are not? Another option would be to claim that in these cases, the contrast feature is combined with something else than the topic feature. This 'quantifier feature' enables the appearance of the contrast CU but does not make it topical.

In Spanish, we find similar phenomena to those in Hungarian. In certain contexts, left dislocation of '*algo' ('something')* is possible, but only without a clitic (Cinque 1990 cited in Arregi 2003:1). This can be interpreted as an example of a contrast feature without the aboutness CU, as the lack of the clitic indicates. This supports the option that a contrastive reading can be added to quantifiers, i.e. the contrast feature can also pair up with a quantifier feature and they achieve a topicalisation-like word order.[40]

[40] Further evidence for the latter assumption will be presented in section 5.3. of Chapter 5.

(121) Algo, Juan sí (*lo) comió.
something Juan yes it ate
Something, Juan did eat.

Thus, on the basis of the above, I will assume that contrast is a dependent feature which presupposes the presence of an aboutness or newness feature, or alternatively, a feature associated with quantifiers. For our present purposes, its dependence on the pragmatic features (aboutness and newness) will be of importance, as represented in (118) at the beginning of the section.

3.5.3.3. Newness

Treating topicality, focus and contrast as privative features is also supported in Neeleman et al. (2009:52), where the elements [topic], [focus] and [contrast] appear. Here, I intend to use the newness feature, [new], to mark the focus function. According to É. Kiss (2007) the focus in Hungarian does not always denote new information: answers to questions can be contrastive topics or stay in situ.[41] Molnár (1998) observes, when comparing the communicative tiers theme-rheme and background-focus, that focus cannot be equated with new information. In the case of so-called 'thematic focus' (Molnár 1998:63), the newness of the focus lies in the new relation it enters in the actual sentence.

(122) Q: Warum hast du dich bei Eva nicht entschuldigt?
Why haven't you apologised to Eva?
A: [SIE]$_{\text{Thema=Fokus}}$ hat [MICH]$_{\text{Thema=Fokus}}$ beleidigt!
she$_{\text{NOM}}$ has me$_{\text{ACC}}$ offended
SHE offended ME. (Molnár 1998:108, glosses added)

Frey (2005) observes the following fact about focused phrases in German: in answers to questions, narrow-focus elements are more acceptable in situ than in a fronted position, as the sentences in (123) demonstrate.

[41] However, she arrives at the conclusion that answers do not function as foci in the above cases.

(123) Wo hat euer Direktor studiert?

Where did your boss study?

a. Unser Direktor hat **in Polen**$_F$ studiert

our boss has in Poland studied

b. ?**In Polen**$_F$ hat unser Direktor studiert

in Poland has our boss studied (ibid. p.9, glosses added)

If fronted, they acquire a contrastive interpretation and therefore are less felicitous as answers to a specific question. Frey argues that Ā-movement of a phrase in the prefield position automatically triggers a contrastive interpretation, regardless of the pragmatic status of the item. As the above counts as a pure information question, without former preliminaries like the implication of a set to choose from, the fronting of the focus is not entirely grammatical. This state of affairs also points to the fact that contrastivity strongly correlates with preposing, and the focus function alone might only trigger phonological emphasis.

3.5.3.4. The relationship of the discourse features

It is clear that topical items have to bear the D or definiteness feature, i.e. function as arguments or adjuncts and not as predicates. If we go further down the feature hierarchy, specificity constitutes the second requirement for items taking part in any kind of left dislocation or topicalisation. I will take aboutness as the defining feature of topics in general. As recent studies of Gécseg and Kiefer (2009) and Gécseg (2004) point out, the familiarity or aboutness concept of topics is a language-particular parameter. For Hungarian it is true rather that the topic acts as a logical subject, which does not entail the givenness requirement. Second, aboutness in itself will not necessarily have any syntactic reflex; this way, it stands closer to the pragmatic topic notion and allows for a arriving at more insightful generalizations.

Aboutness can be further combined with a following [contrast] feature, which results in contrastive or strong topics. These types of topics have typically syntactic reflexes cross-linguistically, as oppose to the above.

Apart from newness and aboutness, which are independent of other discourse features, it has been argued in 3.4.3.2. that the contrast CU can only be inserted into nominal domains if it accompanies another discourse feature.

As regards foci, there has to be a stronger requirement that such features appear in the vicinity of lexical roots, as foci denote new information in many cases, compared to topics, which can be represented by pronouns as well, if their referent is already given. The newness feature can also appear together with contrast, resulting in a noun with contrastive focus reading.

Newness and aboutness stand in contrast to each other; for this reason, it will be assumed that they cannot appear connected to the same nominal root, i.e. they cannot be part of the same nominal domain. If this nevertheless happens, the CUs have to be syntactically separated which involves displacement and deletion of nominal domain markers as well. This assumption will serve as the basis for the modelling of Left Dislocation. About the exact output form of the resumptive pronoun and the syntactic role of discourse features more detail will be added in Chapter 4, after the proposed analysis of the different constructions labelled as Left Dislocation.

3.5.4. Ordering of CUs within the nominal domain

As a summary and theoretical analysis of the above discussion about features involved in the formation of the nominal domain, I present here groups of constraints that are able to derive the order of CUs within this domain. The schematic ordering sketched in (124) can be achieved by the precedence constraints in (125)-(130), ranked in the order of their presentation.

(124) [def][num] Root [arg][about/new][contrast]

(125) DEF ℙ D_{NOM}: the definiteness CU precedes the nominal domain. Violated by members of the nominal domain that precede [def].

(126) NUM ℙ D_{NOM}: the number CU precedes the nominal domain. Violated by members of the nominal domain that precede [num].

(127) ARG ℙ D_{NOM}: the argument CU precedes the nominal domain. Violated by members of the nominal domain that precede [arg].

(128) D_{NOM} ℙ D_{PRAG} the nominal domain precedes the pragmatic domain. Violated if any member of the pragmatic domain precedes any member of the nominal domain.

As has been discussed above, both the aboutness and newness CUs count as independent discourse features, which normally do not appear together within a structure. On the basis of their equal status as discourse features they will be marked as members of the pragmatic domain which has to follow the nominal domain.

Moreover, it is unnecessary to include a precedence constraint on the contrast feature: as the result of the other requirements and because of its close attachment to a host (an aboutness or newness feature), its position falls out logically from the system.

The insertion of the nominal root among the features deserves attention as well. To avoid an output which does not correspond to a given input, an argument feature is only spelt out together with a root if the root immediately precedes it. Otherwise the argument feature is taken to be an independent unit spelled out by its own vocabulary item, e.g. a personal pronoun functioning as focus or as a weak topic. Moreover, all relevant discourse features have to follow the nominal root in order to be able to spelt out together: this assumption is supported by the fact that discourse-related features – as opposed to grammatical features – are never spelt out on their own, they are in need of a host. The position of numerals and determiners relative to the root suggests the alignment as in (130).

(129) a. ROOT ℙ [ARG]: the root precedes the argument feature. Violated if the corresponding [arg] CU precedes its root. Similarly: ROOT ℙ [ADJ].

b. ROOT ℙ D_{PRAG}: the root precedes the pragmatic CU. Violated if any of these CUs precedes the root.

c. ROOT ℙ ARG, D_{PRAG}: shorthand for the above two constraints in tableaux.

(130) a. ROOT 𝔽 [DEF]: the root follows the definiteness CU. Violated if the [def] CU follows the root.

b. ROOT 𝔽 [NUM]: the root follows the number CU. Violated if the [num] CU follows the root.

c. ROOT 𝔽 DEF, NUM: shorthand for the above two constraints in tableaux.

Apart from precedence and subsequence constraints, adjacency requirements are also employed. As already shown for the temporal domain, there has to exist requirements that demand that CUs originally related in the input stay next to one another in the output string as well; a root related to one domain, e.g. the temporal domain, should also not

surface among CUs of another kind, i.e. of a nominal domain. For this reason, it is also argued in Newson (2013) that adjacency requirement are needed to keep domains together, or put differently, to keep features related in the input together.

For the temporal domain, a rather general requirement has been given. I assume that adjacency constraints should exist for all elements of a domain, which is true for the nominal domain as well. Here I would like to highlight those constraints which might play a role in the positioning of the members of a LD structure and can receive empirical justification as well.

In many cases, not only full nouns but pronouns are topical as well, they are very likely to be weak topics: as their referents have already been mentioned, they can be realised as pronominal forms. Thus, the aboutness feature is most likely not connected to a Root but rather an argument feature, as pronouns as output items are the spellout forms of grammatical CUs and an aboutness CU without a Root. On the other hand, the ideal position for the other pragmatic CU, newness, is also after an argument CU following a nominal root; therefore the two features conflict in the rare case when both are present in the input, associated with the same root. These observations are reflected in the form of the constraint in (131) as well, which is best satisfied if only one of the pragmatic CUs is present.

(131) D_{PRAG} **A** [ARG]: the pragmatic domain is adjacent to the argument CU. Violated by CUs that intervene between any of the pragmatic features and [arg].

On the other hand, new items are more likely to be expressed by nouns than by pronouns. This constraint is never fully satisfied, except for in LD situations, as an argument or adjunct feature always intervenes between the [new] CU and the root.

(132) [NEW] **A** ROOT: the newness CU has to be adjacent to a nominal root. Violated by CUs intervening between [new] and the corresponding root.

Last but not least, the constraint in (133) ensures that in input contrastive items, the [contrast] CU stays adjacent to its host (aboutness or newness), i.e. the two relevant features will not be separated in the course of syntactic ordering. It has an effect in all of the analysed languages. Moreover, another case has to be considered as well, when the contrast feature is associated with both pragmatic CUs in the input (resulting in Left Dislocation). In such cases, either the general form of the constraint applies and other

constraints make the choice on the position of [contrast]; or the contrast prefers to stay together with the aboutness feature to form a strong topic in each case when an aboutness CU is present, if the more specific form (134) is ranked higher.

(133) [CONTR] ≪ [PRAG]: the contrast feature is adjacent to one of the pragmatic features. Violated if the contrast CU is not adjacent either to [new] or [about].

(134) [CONTR] ≪ [ABOUT]: the contrast feature is adjacent to the pragmatic CU [about]. Violated if other CUs intervene between the contrast CU and [about].

The first tableau (T13) demonstrates the evaluation of a nominal item with an aboutness feature (candidates a-d.) and of one with a newness feature (candidates e-g.). The high ranking of the first constraint ordering the nominal and pragmatic domains with respect to each other is motivated by the requirement that the newness and the aboutness CUs cannot be adjacent; this will be discussed in the next chapter as a trigger for deriving Left Dislocation. The ranking of the nominal domain constraints derive the [def]>[num]>[arg] order; D_{PRAG} ≪ [ARG] places the pragmatic feature after the nominal domain, whereas the two root-constraints choose the right position for the nominal root. The newness-root adjacency has to be ranked under both the constraints which order the nominal CUs within the domain and the constraints referring to the root to ensure that in the presence of an argument (or adjunct) CU, [new] will never be adjacent to the root; nevertheless, the function of NEW ≪ ROOT will emerge in LD-structures, see Chapter 4.

(T13) The nominal domain

a. [def_{nom}][num_{nom}]Root[arg_{nom}][$about_{prag}$]
b. [num_{nom}][def_{nom}]Root [$about_{prag}$][arg_{nom}]
c. [num_{nom}][def_{nom}]Root [arg_{nom}] [$about_{prag}$]
d. [def_{nom}][num_{nom}] [arg_{nom}][$about_{prag}$]Root
e. [def_{nom}][num_{nom}]Root[arg_{nom}][new_{prag}]
f. [def_{nom}][num_{nom}]Root[new_{prag}][arg_{nom}]
g. Root[def_{nom}][num_{nom}] [arg_{nom}][new_{prag}]

	D_{NOM} P D_{PRAG}	DEF P D_{NOM}	NUM P D_{NOM}	ARG P D_{NOM}	D_{PRAG} A [ARG]	ROOT F NUM, DEF	ROOT P ARG, D_{PRAG}	NEW A ROOT
☞a.			*	**				
b.	*!	*		**				
c.		*!		**				
d.			*	**			**!	
☞e.			*	**				*
f.	*!		*	**				
g.			*	**		*!		*

The next tableau (T14) models the structure of a contrastive topic. The ideal position for the contrast feature is the one following the pragmatic CU, i.e. [about]. In candidate b., the contrast CU intervenes between the argument CU and the pragmatic domain, which incurs a violation. The non-adjacency of the contrast and the aboutness CUs render the string in c. suboptimal because of both [CONTR] A [PRAG] and [CONTR] A [ABOUT]. Here, the ordering of these two constraints does not make any difference in the evaluation; their decisive effect will be made clear in Chapter 4 on evaluating LD structures and in Chapter 5, in assessing interrogative structures with topics. Finally, candidate d. fails because the pragmatic domain precedes an element of the nominal domain.

(T14) Nominal bundle with a contrastive topic marker

a. [def_{nom}][num_{nom}]Root[arg_{nom}][$about_{prag}$][contr]
b. [def_{nom}][num_{nom}]Root[arg_{nom}][contr][$about_{prag}$]
c. [def_{nom}][num_{nom}]Root[contr][arg_{nom}][$about_{prag}$]
d. [def_{nom}][num_{nom}]Root[$about_{prag}$][arg_{nom}][contr]

	D_{NOM} P D_{PRAG}	DEF P D_{NOM}	NUM P D_{NOM}	ARG P D_{NOM}	D_{PRAG} A [ARG]	CONTR A PRAG	CONTR A ABOUT	ROOT F NUM, DEF	ROOT P ARG, PRAG
☞a.			*	**					
b.			*	**	*!				
c.			*	**		*!	*		
d.	*!		*	**		*	*		

3.6. Summary: The main properties of the proposed system

In order to close the discussion of the proposed framework and the nature of conceptual units I review the main tenets of the applied framework. The constraints of Syntax First Alignment operate over sets of input features which include roots and functional CUs and the domains formed by them; vocabulary insertion takes place only after the syntactic evaluation of output candidates. The argument structure of predicates is represented by their event and aspectual structure; on the basis of these, particular Roots are assigned numbered argument features, which affect both their syntactic ordering and the Case they receive during Vocabulary insertion.

Basic word orders emerge as a result of the ordering of the arguments among themselves, the ordering of the CUs belonging to the temporal domain and the position of the verbal root in relation to the argument domain and the temporal domain. Second position phenomena have gained importance in the setting up of the language-specific hierarchies, both in the modelling of embedded and matrix word order.

My second aim has been to elaborate on the theory of features and expand it to the nominal domain to be able to describe pronouns, nouns and more complex nominal strings. Apart from the basic properties of a noun like definiteness and number, which may have reflexes in the form of determiners and in the morphology of the root, argument and adjunct features are also posited to account for Case and to mark the nominal root as part of the predicate domain. Moreover, pragmatic features that mark topics and foci cannot be left out from the analysis. Including them in the featural makeup of nominal bundles has several advantages: for instance, it enables a more detailed treatment of structures involving the discourse-related displacement of nominal items, e.g. topicalisation and left dislocation.

To sum up, it has been argued that a system which is able to derive basic language-specific word orders and their discourse-driven variations on the basis of constraints that are linearly ordering the building blocks provided by the input is a promising one. Based on basic word order facts laid down here, the constraints and orderings resulting in topicalisation and Left Dislocation will be explored in the next chapter.

Chapter 4. Left Dislocation in Alignment Syntax

The aim of the present chapter is to derive syntactic topicalisation and Left Dislocation constructions in an alignment-based OT framework, with examples taken from English, German and Hungarian. It will be argued that there is a pragmatic motivation for LD, namely that topics cannot introduce new referents in the discourse. If an input element contains both a newness and a topic-related feature, i.e. [about], these have to be realised on different elements for the structure to be grammatical. For this and for syntactic reasons as well, a resumptive is inserted into the structure. The position of the resumptive will also be the subject of discussion: as it is supposed to bear the [about] feature, it can surface in the syntactic topic position in topic-prominent languages.

Both syntactic fronting and left dislocation are variants of syntactic topicalisation strategies, as discussed in the Chapter 2. It follows that, in order to derive the relevant syntactic structures, a more detailed marking of topics in the input is necessary, which will be put forward in Section 4.4.1. and 4.4.3. The constructions chosen depend to a great extent on pragmatic conditions: increased unpredictability or newness correlates with dislocation; prominence or contrastivity correlates with preposing. After introducing the constraints and accounting for topicalisation patterns, the two main types of LD will be captured in optimality theoretic terms. As a related issue, vocabulary insertion concerning the output form of the resumptive pronoun will be dealt with in Section 4.6.4.

4.1. A typology of topic promoting syntactic constructions

For ease of exposition, a short recapitulation of the main syntactic and pragmatic properties of the relevant structures is presented below in table form, In the following sections we will provide the details of the optimality theoretic analysis.

(1)	**Syntactic topicalisation**	**Hanging Topic Left Dislocation**	**Contrastive Left Dislocation**
position	fronted; no change in basic word order (English, Hungarian); or induces inversion (German)	fronted; no word order change inside the clause	fronted; syntactic topicalisation of resumptive
fronted item	case as appropriate to function	default case	case as appropriate to function
resumptive	- n.a. -	personal pronoun, in argument position	demonstrative pronoun, fronted

4.2. The position of the dislocated phrase and the resumptive

In Chapter 2 several arguments were discussed which support the differences between the position of a syntactic topic and a left dislocated item and the loose connectedness of the dislocated item to the rest of the clause. Some of these arguments will be recapitulated here; in addition, it will be shown that the resumptive targets the syntactic topic position in cases when it is not left in situ.

As has been demonstrated, no other element can precede a left dislocated element. Moreover, if there is also a topicalized phrase in the same clause, the LD occupies a position further removed from the highest maximal projection than the syntactic topic, as in (2) and (3).

(2) **John**, Mary$_{TOP}$, **he** likes.

(3) *Mary$_{TOP}$, **John, he** likes.

The arguments from German concerning the absence of the argument feature from the dislocated item also support the claim of the extra-clausal position of the hanging topic. In (4), the initial hanging topics occupy a position that is further removed from the predicate domain, or alternatively, form a unit which enters into a coordination-like relationship with the matrix clause. In (4), sentence a. contains three hanging topics, which can be seen from their in situ resumptive pronouns; in spite of the strict verb-second

character of German, this structure with multiple dislocated items is permissible, as is clause b., in which the last fronted item, '*den Wagen*', is contrastively left dislocated. However, no other ordering of hanging and contrastive topics is grammatical, as (5) demonstrates. This also shows, apart from the unique position of hanging topics in relation to the clause, that contrastive topics have a closer attachment to their host sentences.

(4) a. *Der Alex*$_i$*, der Wagen*$_j$*, seine Mutter*$_k$, gestern hat ***sie***$_k$ ***ihm***$_i$ ***den***$_j$ geschenkt.
b. *Der Alex*$_i$*, seine Mutter*$_j$*, den Wagen*$_k$*,* ***den***$_k$ hat ***sie***$_j$ ***ihm***$_i$ gestern geschenkt.
Alex, his mother, the car, yesterday she gave it to him.

(5) a. * Der Alex$_i$, **den Wagen**$_j$, seine Mutter$_k$, **den**$_j$ hat **sie**$_k$ **ihm**$_i$ gestern geschenkt.
b. * ***Dem Alex***$_i$*, der Wagen*$_j$*, seine Mutter*$_k$*,* ***dem***$_i$ hat ***sie***$_k$ ***ihn***$_j$ gestern geschenkt.
Alex, the car, his mother, she gave it to him yesterday. (Grohmann 2003)

For Czech, another crucial argument for the looser attachment of the hanging topic is presented by Sturgeon (2006). It is observed that 'the left dislocated element does not participate in the calculation for second position clitics' (ibid. p.56). This is demonstrated by (6), where the second position reflexive clitic *si* (REFL-CL) follows the demonstrative and not the left dislocated element, indicating that the LD item has not been 'counted' as an element of the clause.

(6)	Petr,	ten	**si**	koupil	chleba	v krámě.
	Petr$_{NOM}$	that$_{NOM}$	REFL-CL	bought	bread	in store

Petr, he bought bread at the store.

Left Dislocation can appear in a structure with a focus, preceding it, while the reverse order is ungrammatical.

(7) My friends$_i$, FIFTY SIX HUNDRED DOLLARS they$_i$ raised.

(Lambrecht 2001:1067)

A left dislocated phrase cannot appear inside a non-root clause, i.e. it cannot be embedded, but it can be moved from an argument position of a subordinate clause, as in (8).This again supports the assumption that the LD is external to both clauses.

(8) **Dieser Film**, als ich **den** sah, war ich noch ein Kind.
this$_{NOM}$ film when I that$_{ACC}$ saw was I yet a child
This film, when I saw it, I was still a child.

(Lambrecht 2001:1025)

The second point, namely the resumptive sits in the topic position, is supported by German and Hungarian data. In German expressions containing CLD, which can be distinguished from HTLD by the matching cases of the dislocated item and resumptive pronoun, the demonstrative resumptive occupies a position directly left-adjacent to the finite verb. This counts as a position for subjects or strong topics in German.

(9) *Mit dem Hans,* ***mit dem*** spreche ich nicht mehr.
with the$_{DAT}$ Hans with that$_{DAT}$ talk I not any longer
To Hans I don't talk any longer. (Nolda 2004:430)

The Hungarian sentences in (10) and (11) contain LDs with a topical subject: the resumptive can either precede or come after the topicalised item, so it can freely intermingle with topics. This fact suggests that it also functions as such. In all examples, the preverbal prefix of the predicate remains directly in front of the predicate, which is an indication that there is no focus in the clause, thus the preceding items must be topics. For comparison, a focus structure is presented in (12), which shows the immediately preverbal position of the focussed object, with the verbal prefix located postverbally.

(10) Pétert, **azt/őt** Mari$_{T}$ meghívta.
Peter$_{ACC}$ him/that$_{ACC}$ Mary$_{NOM}$ PFX-invited

(11) Pétert, Mari$_{T}$ **azt/őt** meghívta.
Peter$_{ACC}$ Mary$_{NOM}$ him/that$_{ACC}$ PFX-invited

(12) PETERT hívta meg Mari.
Peter$_{ACC}$ invited PFX Mary$_{NOM}$

4.3. The motivation for Left Dislocation in OT terms

The above analysis of LD has shown that Left Dislocation might be defined as ‘movement’ to an absolutely clause-initial position, in words consistent with the present framework, positioning to the left of the predicate domain. We have also seen that the distinguishing feature of LD is the insertion of a resumptive element. Based on these assumptions, syntactic and pragmatic motivations will be looked for to account for the appearance of the resumptive in Left Dislocation constructions.

A syntactic motivation alone could not derive resumptive insertion; it would simply place the dislocated in an initial position. Thus, there has to be a pragmatic reason, which splits the original nominal item into a dislocated element and a resumptive. The basis of this 'splitting' might be the following discourse principle, already mentioned in Chapter 2 when discussing the pragmatic criteria of LD:

(13) *Lambrecht’s Principle of Separation of Reference and Role:*
'Do not introduce a referent and talk about it in the same clause'
(Lambrecht 1994:185)

The LD sentence pattern allows the introduction of a new referent in a position which is loosely connected to the rest of the expression, and, after being introduced, it can be referred to in the main clause. The result is that a discourse-new referent acts as given in the main clause. 'Therefore, LD in this case appears as an optimizing device: its function is to place an otherwise unqualified referent in the role reserved for topics' (Gregory & Michaelis 2001:1675).

To capture this pragmatic observation formally, in an earlier account (Nagy 2008), an anti-alignment constraint was made use of ([ABOUT]*A[NEW]), which was appropriate for cases where two elements should not be next to each other or should be further removed from each other. Such a constraint is violated if the relevant elements or features are adjacent to each other in a structure. This might be appropriate for Hanging Topic LD, where the resumptive and the dislocate are removed from each other. However, the situation is less clear-cut with Contrastive LD attested in German and Hungarian, or with HTLD of a subject in English, in which both the dislocated element and the resumptive are clause-initial and the corresponding output vocabulary items stay next to each other.

A more appropriate solution in alignment terms which covers all types of Left Dislocation ordering is proposed here on the basis of pragmatic facts. According to Lambrecht's Principle, the most ideal case pragmatically is if the nominal root plus argument feature sequence is followed by one of the pragmatic features, i.e., 'aboutness' or 'newness', where the pragmatic CU is directly adjacent to the argument CU. To rule out a string in which both pragmatic features follow the same Root plus argument sequence, I posit a fairly high alignment constraint which demands that the pragmatic domain, made up by [about] and [new], be adjacent to [arg]. This is best satisfied if the pragmatic domain consists of only one member, as otherwise there would always be at least one violation of it.

(14) D_{PRAG} A [ARG]: the pragmatic domain is adjacent to the argument CU. Violated by every member of the pragmatic domain which is not adjacent to the argument CU.

If this constraint is ranked higher than the faithfulness constraint which militates against the deletion of the pragmatic domain marker, then it will be satisfied by the deletion of the domain index of either the aboutness or the newness feature. Therefore, a corresponding faithfulness constraint has to be assumed to limit the deletion of pragmatic indexes. Positing the constraint in (15) will result in the deletion of the domain marker on [new] or [about] as a result of the nominal domain constraints. Moreover, it would be superfluous to get rid of the index on both [new] and [about], thus only the index of [new] will be deleted as [about] has higher adjacency requirements to fulfil.

(15) FAITH(DOMAIN $MARKER_{PRAG}$): the pragmatic domain marker cannot be deleted. Violated by underparsed pragmatic indexes.

The ordering of the rest of the CUs related to the nominal domain in an LD construction will follow automatically from the system presented in Section 3.5. of Chapter 3: The lower-ranked constraints on the nominal domain, information structure and topic fronting will choose the right candidate, i.e. the one which contains [new] in a fronted position without the pragmatic index and aboutness keeping the pragmatic index, following the argument feature. The details of which index or indexes become deleted and how this

affects the nominal item will be dealt with in Section 4.6.3. concerning the derivation of LD and in Section 4.6.4. discussing the spellout of the resumptive pronoun.

The main syntactic reason why a resumptive occurs in LD is to replace the missing argument syntactically, i.e. resumptives function as grammatical place-holders, as the dislocated phrase is not present in a position required for it by basic phrase structure constraints. We can observe that there is thus a division of labour between the dislocated item and the resumptive: the fronted element bears descriptive content, whereas the pronoun embodies the morphological-grammatical features, e.g. case, number and gender, corresponding to the argument CU. In (16) *'dieser Film'* bears nominative case, whereas the corresponding pronoun is in the accusative.

(16)	***Dieser Film,***	als	ich	***ihn***	sah, war ich	noch	ein Kind.
	this$_{NOM}$ film	when	I	it$_{ACC}$	saw was I	yet	a child

In terms of features, an assumption which expresses this state of affairs is that the HT-dislocated phrase becomes dissociated from its argument feature, i.e. this feature appears on the resumptive together with the grammatical markers; because of index deletion, the root and the newness feature are not associated with the argument feature, therefore they cannot bear the relevant case. This allows the dislocated item to apparently 'move out' of the clause boundaries as in (16). At the same time, other fronted elements become 'less sensitive' to its presence, i.e. a dislocated argument can appear freely to the left of a fronted wh-phrase. In many respects, the dislocated item starts to behave like a peripheral adjunct or an element not part of the predicate's domain.

This non-integrated behaviour has been treated in depth in the relevant literature, as has been discussed in Section 2.5 of Chapter 2, although mainly in the structural framework of generative syntax, where there were considerable difficulties integrating the phenomenon in the theory of hierarchical clause structure. This issue and the emergence of the resumptive pronoun will be looked at more closely after the presentation of the relevant constraints and the modelling of topicalisation.

4.4. Constraints regulating LD and topicalisation

4.4.1. Constraints on feature bundles

In the course of the analysis I will employ the following discourse-oriented features, as discussed in Chapter 3/Section 3.5., in addition to the syntactic 'argument' features: aboutness, newness and contrast[42]. 'Aboutness' is the pragmatic topic feature. An element marked as such will not necessarily be fronted in all types of languages. For instance, I will argue that in English and German only prominent, i.e. 'stronger' or more emphasized topics, become syntactically marked. In Hungarian, on the other hand, it seems that syntactic topic promotion is a less marked operation (Gécseg (2004), Gécseg&Kiefer (2009) – see discussion in Chapter 2, Section 2.3.1.).

'Newness' (Choi 2001b) is a typical feature of foci, whereas topics are usually non-new. It appears to me that the notion of 'newness' covers both pragmatic roles such an element can play, similarly to the pragmatic function discussed in section 3.5.3.3., on the basis of Molnár (1998): (i) an element is unknown, mostly for the hearer, in the discourse or taken up again after a pause; (ii) an element has features of a focus: it is highlighted in the context, intended to be prominent, as it appears in a new relation.

Contrastivity stands for a kind of prominence, too, which combined with topicality leads to (stronger) syntactic marking of the topic (see Section 2.3. for pragmatic details). The term *contrastive topic* 'includes frame- or discourse-setting, implicational and partial topics' (Féry 2006: 6), the common ground of these varying functions being that its interpretation implies a choice from a set of alternatives.

Starting out from the assumption that the discourse function of an input element is represented as a feature or a set of features, the following bundles of discourse features seem to be possible. The features are unary, with the presence or absence of a CU modelling the general structure of languages: a given string is less complicated if it consists of less CUs.

[42] Referred to as 'prominence' elsewhere (Choi 2001b, Nagy 2008a).

(17) Combination possibilities of discourse features

[new] ([contrast])	⇨	discourse-new element or focus
[about] ([contrast])	⇨	discourse-old element or topic
[new] [about] ([contrast])	⇨	new topic, typically surfacing as LD
absence of discourse features	⇨	neutral element

It is important to mention that the aboutness and newness features are independent, i.e. they can appear independently of the other discourse features; however, the contrast feature appears to be bound, it does not have an interpretation on its own, only in combination with the aboutness or newness features, i.e. as prominent/contrastive topic or focus.[43]

The crucial point in the case of Left Dislocation is that the [about, new] combination, according to the principle of separation of role and reference, is ruled out as a possible syntactic string. If a feature combination within a domain is impossible, a possible repair strategy is the deletion of the domain index of one of the CUs. As a consequence, the features will be rearranged, i.e. realized as two different output bundles corresponding to a single input bundle. Another option, the complete deletion of a discourse-oriented CU, will not be considered as possible in the present system due to its rather more radical unfaithfulness.

As phenomena involving the discontinuous realization of nominal domains are quite infrequent in the examined languages, high ranked faithfulness constraints should be posited to minimize its occurrence. In the previous chapter, it was demonstrated that index deletion of verbal CUs is also possible, more frequently than in case of nominal domains. Thus, the freedom to split up verbal and nominal feature bundles varies even intra-linguistically; thus it is descriptively superior to posit more specific constraints to regulate them, placed at different positions in the constraint hierarchy. The requirement in (18) refers to index deletion in nominal domains. In our account, this will refer mainly to the argument feature and the constraint will be highest ranked to ensure that LD will be derived by the deletion of pragmatic domain markers and not of those belonging to the nominal domain.

[43] This principle is not realized as a principle on input structures, as this would add extra mechanisms to the system. Instead, the idea that semantically defective inputs give rise to competition and ultimately 'grammatical outputs' is pursued here. The optimal outputs selected for semantically defective inputs are deemed unacceptable due to their uninterpretability rather than their syntactic ill-formedness.

(18) FAITH(DOMAIN MARKER$_{NOM}$): input nominal indexes has to be preserved. Violated by an input nominal domain marker which is not present in the output. (Abbreviated to FAITH$_{NOM}$ in tableaux.)

The adjacency of elements within a domain should also be ensured; up to now, a general form of such a constraint has been mentioned in connection with the temporal domain, although it is obvious that the adjacency requirement holds for the members of each domain, otherwise functional CUs belonging to different roots could be mixed up in the output string. In the case of LD, when index deletion becomes necessary, the adjacency of the rest of the domain should be ensured; in addition, in case of discourse CUs triggering movement, e.g. [contrast] leading to topicalisation, it should not be a welcome option that the functional CU undergoes fronting alone, stranding the rest of the nominal domain. The adjacency constraint described here refer not only to the root but to the features constituting the nominal domain.

(19) [NOM$_i$] $\mathbb{A}$ [NOM$_i$]: the CUs of the nominal domain should not be separated but located next to one another, i.e. they have to be adjacent to the nominal domain.

When developing a system based on abstract linguistic units, the question of insertion must be touched upon as well. For the sake of economy of evaluation, it is assumed that insertion of non-input material cannot take place at all; every lexical item, which surfaces in the output must be the reflex of at least one CU contained in the input.

It has been discussed earlier that [arg] features might appear in an input structure on their own, i.e. without an associated root. Most likely, they are going to be spelled out as pronouns by vocabulary insertion in such cases. Now, it is crucial to consider how the vocabulary insertion mechanism can differentiate between independent argument features and those associated with a nominal root, to avoid cases in which the root and the argument are substituted as a noun+pronoun sequence without good reason.

To avoid unclear cases for vocabulary insertion, it might be assumed that the [arg] feature will only be spelt out together with the root if it comes immediately after it, i.e. no other features intervene. This is achieved by formulating the vocabulary entry of nominal roots so that they include an argument feature immediately following the root CU. If the argument feature is non-adjacent to a root, it will therefore not be able to be spelled out by the root's exponent and must be spelt out independently. As argued in Chapter 3, a

pronoun is the realisation an argument feature without a lexical root and hence the situation in which a root is not immediately followed by its argument feature will result in the use of a 'resumptive pronoun'. All relevant discourse features, as other functional ones, have to follow the nominal root in order to be able to be spelt out together. The conditions for this requirement to be met is assured by the constraints on nominal domains formulated in Chapter 3, ROOT ℙ [ARG] > ROOT ℙ $D_{PRAG.}$ These constraints will appear in tables in an abbreviated form as ROOT ℙ [ARG][PRAG].

Up to now, it has only been mentioned that the dislocated phrase is placed to the edge of the main clause. It has to be accounted for why it is the left edge in these cases. Earlier it was assumed that this is because the dislocated phrase bears new information and the resumptive pronoun takes its reference from the dislocated phrase, i.e. an antecedent—pronoun relationship holds between them and specific referential content has to precede the pronoun so that the pronoun can refer back to it (Nagy 2008b). Nevertheless, following pragmatic principles, a more general condition can be formulated, i.e. new information typically aims at prominent positions or to precede old information. Thus, the newness-constraint can be put as in (20) below.

(20) [NEW] ℙ D_{PRED}: the newness CU precedes the members of the predicate domain. Violated by every member of the predicate domain that precedes [new].

This constraint will be relatively low ranked, under the general constraints on word order (argument domain, subject and temporal domain constraints). As the pragmatic domain marker of the newness feature is deleted because of its clash with the aboutness CU, this constraint can be fulfilled at no extra cost by the left dislocated item, Root[new], as it is disconnected from the predicate and the argument domains. Another constraint regarding the nominal domain is the adjacency of the newness feature to the root, which cannot be fully satisfied under normal circumstances, as at least an argument or adjunct feature intervenes.

(21) [NEW] 𝔸 ROOT: the newness feature has to be adjacent to its associated root.[44] Violated by intervening CUs between the newness feature and the root.

[44] Of course, there are instances of focussed pronouns which are not excluded by the above constraint. If the newness feature is associated with a non-root feature like [arg] or to person, number etc. features in the input, all candidates will vacuously satisfy this condition and hence the constraint will be inoperable in

Concerning the aboutness feature, it can be observed that not only full nouns but pronouns can also function as weak topics in many cases: as has already been mentioned, weak topics can be realised as pronominal forms. Partly to capture this generalisation, I propose the constraint in (22), which demands adjacency between the aboutness and the argument CUs.

(22) [ABOUT] $\mathfrak{A}$ [ARG]: the aboutness CU is adjacent to a corresponding argument CU. Violated by CUs intervening between [arg] and [about].

(23) [CONTRAST] $\mathfrak{A}$ [ABOUT]: the contrast CU has to be adjacent to aboutness. Violated by CUs intervening between the two features.

The constraint on the adjacency of the aboutness and contrast features ([CONTRAST] $\mathfrak{A}$ [ABOUT]) demands a unified treatment of contrastive topics, as the relevant CUs will not drift away from each other, even if other associated features have been split for some reason. This requirement is going to be significant in English topicalisation, German Contrastive LD and, to a lesser extent, in Hungarian.

4.4.2. The 'landing site' of topicalisation

It is important to identify the host that certain topic-marked items try to precede. In former alignment syntax accounts including Gáspár (2005) and Nagy (2006), both the position of the topic and the subject has been defined in relation to the predicate, for example: 'topic precedes predicate', 'topic is adjacent to predicate'. In Gáspár (2005) and Newson and Maunula's (2006), a new type of relation emerges, precedence in a domain[45],. In addition to this however, these accounts still made use of the topic-predicate precedence and adjacency constraints, thus the model did not become much simpler.

Indeed, it seems that in case of topicalisation the target, i.e. [ABOUT], tends to precede the predicate and all of its dependents, i.e. it aims at absolute precedence within the 'clause'. Applying the notions of SFA, this domain can be best identified as the predicate domain, as opposed to the argument and temporal domains discussed so far.

this case.

[45] Defined as 't1P: topic is first in the predicate domain'.

Topicalisation is also possible inside an embedded clause, thus it can be argued that the domain affected by topicalisation is the predicate domain containing the CUs of the topic. Long topicalisation, as opposed to long wh-movement, is more constrained and has more in common with epenthetic phenomena than movement out of a real embedded clause[46].

A further perspective of looking at fronting phenomena is the possibility of displacing multiple items of the same kind. Our target languages differ in this respect: multiple topicalisation is allowed in Hungarian and in English, whereas only single topic fronting is attested in German.

If we formulate the topicalisation constraint as 'topic precedes the predicate domain', e.g. TOPIC ≺ D_{PRED}, it would front all topic-features, along with any nominal elements for which there is an alignment condition, as the constraint is one concentrating on the feature itself. Thus it will assess every topic-feature with respect to its position. The second option is to look at the situation from the perspective of the domain. The constraint D_{PRED} ≻ TOPIC assesses the position of the predicate domain and is satisfied if the domain is preceded by one relevant feature, regardless of how many features of the same kind are present in the input expression.

It will be shown, following the discussion of the discourse-functional CUs that trigger topicalisation, that the combination of one of the above constraints with the constraints deriving basic and matrix word order is sufficient to model topicalisation cross-linguistically. Furthermore, the same type of constraint variation will also be exploited in the discussion of interrogative structures in Chapter 5.

4.4.3. The topic features

The last issue we will attend to prior to giving the details of the analysis concerns the features of a syntactic topic. It is well-known that syntactic topicalisation is a rather marked option in English, a clearly subject-prominent language. The situation is similar in the case of German. Translated into terms of features, a discourse topic has to be prominent, i.e. more marked or emphasized, to become a syntactic topic. I claim therefore that the features required for topic fronting in these languages will be both [about] and [contrast], as presented in the previous chapter. In Hungarian, on the other hand, topicalisation is less marked pragmatically, as Hungarian word order is primarily organized

[46] The question of the host domain will be discussed in depth in connection with interrogatives in Chapter 5.

on the basis of discourse requirements rather than functional features. This topic-prominent aspect of Hungarian is to be reflected in the assumption that the [about] feature alone will be enough for triggering syntactic topicalisation.

At first, this might seem to require a complex constraint for English and German which forces something marked for both topic and contrast to be fronted:

(24) English and German (strong topic constraint)

[ABOUT]&[CONTR] ℙ D_{PRED}

However, this complication is simply avoided under the assumption that it is only the contrast feature that requires fronting:

(25) English and German (strong topic constraint - revised)

[CONTR] ℙ D_{PRED}

This works precisely because the contrast feature is mostly dependent on the other pragmatic features and does not appear by itself. Thus a contrastive topic, as it is marked for contrast, will be forced to front. Whether the non-contrastive topic fronts depends entirely on the ranking of the more general constraint, requiring topics of any kind to be fronted:

(26) [ABOUT] ℙ D_{PRED}

We might term this the 'weak topic constraint' as it militates for the fronting of both prominent (contrastive) and non-prominent topics. Clearly this constraint is ranked in a high position in Hungarian, this language demonstrating weak topic fronting. For English and German, the constraint is more lowly ranked as weak topics are generally not fronted in these languages. However, there is independent evidence for the working of the weak topic constraint in German. It has been observed that there is a sentence-medial topic position for weaker elements, the existence of which it is argued for in Meinunger (2000) and Frey (2000).

'In the middle field of the German clause, directly above the base position of sentential adverbials (SADVs), there is a designated position for topics: all topical phrases occurring in the middle field, and only these, occur in this position.'

(Frey 2000:5)

Sentences (27) and (28) demonstrate this point. In (27) '*der nette Kerl*' functions as a givenness topic determined by the context; therefore, it has to precede the adverbial in italics to sound correct. In (28) evidence of cataphoric pronouns is demonstrated ('*sein*' in our example). They also signal topicality in the sense that the have to relate to a topic, which means that the dative object '*Hans*' has to be topical for the sentence to be grammatical. This interpretation is only possible in a., where the item precedes the sentence adverbial '*glücklicherweise*'.

(27) Context: In unserer Firma ist Hans$_1$ sicherlich der beliebteste Kollege.

In our company, Hans is certainly the most popular colleague.

a. Jedoch wird der nette Kerl$_1$ *leider* die Firma bald verlassen.

however will the$_{NOM}$ nice guy unfortunately the company soon leave

However, the nice guy will unfortunately leave the company soon.

b. #Jedoch wird *leider* der nette Kerl$_1$ die Firma bald verlassen.

(ibid. p.15)

(28) a. Sein$_1$ Vater wird dem Hans$_1$ *glücklicherweise* bei dem Vorhaben helfen.

his$_{NOM}$ father will the$_{DAT}$ Hans fortunately with the$_{DAT}$ project help

Fortunately, his father will help Hans with the project.

b. *Sein$_1$ Vater wird *glücklicherweise* dem Hans$_1$ bei dem Vorhaben helfen.

(ibid. p. 8)

If the [ABOUT] ℙ D_{PRED} constraint is ranked under the constraint on the first argument and the ones defining the second position of the matrix verb, the precedence constraint can still have the effect of putting an [about] marked argument first post-verbally among the other arguments and adjuncts, and can be made partly responsible for the phenomenon of scrambling. This seems to be an emergence of the unmarked effect: it shows that the weak topic constraints are not unnecessary in the constraint hierarchy of a language that fronts only prominent topics.

Further evidence for the fact that the [contrast] feature is able to trigger movement is found in Neeleman et al. (2009). The authors list differences between A-Scrambling and Ā-Scrambling and observe that only contrastive elements, regardless of being topic or focus, can take part in Ā-scrambling, i.e. syntactic fronting.

In Frey's study (2007) of the strategies for filling the German prefield, we find similar results. Among other things,[47] it is argued that one way of filling the preverbal position is 'by Ā-movement, which goes together with a contrastive interpretation of the moved item' (ibid. p.1) This leads to the following claim:

> *'Our findings show that contrast also has an independent status in German since, e.g., a topical or a focal element necessarily becomes a contrastive topic or contrastive focus, when positioned in the prefield by true Ā-movement.'* (ibid. p.12)

4.4.4. Topicality of adverbials

A note is required about the treatment of adverbials in this analysis. In Kenesei et al. (1998:176) it is remarked that adverbs of time and place are easy to topicalise. The same situation holds in German and English, too. In novels, the vast majority of fronted topics are adverbs of time and place, fulfilling a frame-setting function.[48] However, adverbs of manner and frequency can only be topicalised if they carry a sense of contrast, i.e. restrictions apply to them.

In accounting for the final position of Finnish post verbal arguments with respect to certain adjuncts but not others, Newson & Maunula (2006) draw a distinction between central and marginal adjuncts parallel to Haegeman's (2003) distinction between central and peripheral adverbial clauses and the opposition between restrictive and non-restrictive relatives[49]. A similar distinction is also made in Jackendorff (1977) between what he terms 'X′' adjuncts' and 'X″' adjuncts'.

It is clear that arguments belong to the central elements of a clause, whereas there is variation in this respect among adjuncts: certain adverbials modify the predicate (e.g. Kenesei's manner adverbials clearly belong to this category), others give non-salient

[47] The two other ways of filling the prefield is by base-generation of certain adverbials and by Formal Movement of the highest element of the middle field. The second option may correspond to the strategy of weak topicalisation described here.

[48] On the basis of analysing approx. 20 pages from *Sting (2003): Broken Music* and *Jonathan Franzen (2001): Corrections*.

[49] This distinction will also play a role in Chapter 5 in connection with the combination possibilities of topicalisation and interrogative structures.

information, thus their meaning counts as marginal (e.g. adverbials with a frame-setting function). Thus, it seems reasonable to assume that marginal adjuncts are easier to remove from the predicate domain which explains their more frequent topicalisation.

4.5. The language-specific rankings for topicalisation

In this section, an analysis of syntactic topicalisation in English, German and Hungarian will be put forward within a feature-based alignment system. The main purpose of the section is to show that with the use of alignment constraints referring to argument structure and discourse relations, it is possible to arrive at a model that is able to capture differences in single vs. multiple topicalisation, topic strength or prominence and reflect frequency and markedness facts. To represent the underlying language-specific word orders, we will apply the rankings developed in the previous chapter.

4.5.1. English

The main characteristics of English topicalisation to be accounted for, schematically represented in (29), can be summed up as follows: (i) the subject is always immediately preverbal, i.e. the verbal root is second in the argument domain; (ii) the subject is preceded by the topic(s). Furthermore, a CU-domain ordering is to be employed (30), as this constraint ensures that (iii) multiple topicalisation is possible in English.

(29) (top) $top_{arg/adj}$ arg_1 D_{temp} arg_2 arg_3

(30) [CONTRAST] ≺ D_{PRED}: the contrast CU has to precede the predicate domain. Violated by elements of the predicate domain that precede [contrast].

Before presenting the tableau, certain assumptions have to be made clear in connection with calculating violations. It is assumed that the target CUs are sensitive to their own nominal domain membership, i.e. the same way as the parts of the temporal domain are coindexed, the members of the nominal domain can also receive such marking. Thus, for the target CU, i.e. [contrast] in our case, features coindexed with itself do not count as precedence violations, for instance the coindexed argument feature, which is presumably located in front of ‘contrast’ in the nominal domain. The example string in (31) represents

a nominal expression bearing strong topic marking, i.e. both the [about][contrast] CUs. In sum, although the argument feature precedes [contrast], such instances will not be taken as violations as the two features are members of the same domain, and the constraint in question (CONTR ⊽ D_{PRED}) refers to a CU–domain relationship.

(31) $[def_{nom}]_i$ Root $[arg_{nom}]_i$ $[about_{nom}]_i$ $[contrast]_i$

The constraints in (T1) are able to define the exact position of the topic: it can neither be left *in situ*, as in d., nor can it be preceded by the subject (d., e.), as this violates the constraint that places the topic in front of the predicate domain. Inversion is also banned: sentence c. is ruled out, as the subject is in a post-root position, violating ROOT *⊽ ARG_1.[50]

(T1) Topicalisation of an argument (e.g. *To Jon, Garfield showed the mouse.*)

Candidates[51]: a. $arg_2[about_{prag}]$[contrast] arg_1 R[$tense_t$] arg_3
b. arg_2[about][contrast] R[$tense_t$] arg_1 arg_3
c. arg_1 R[$tense_t$] arg_2[about][contrast] arg_3
d. arg_1 arg_2[about][contrast] R[$tense_t$] arg_3
e. [contrast]arg_2[about] arg_1 R[$tense_t$] arg_3

	CONTR ⊽ D_{PRED}	ROOT *⊽ ARG_1	ROOT ⊽ D_{ARG}	[TEMP] ⊼ ROOT	ARG_1 ⊽ D_{ARG}	ARG_2 ⊽ D_{ARG}	ARG_3 ⊽ D_{ARG}
☞a.			**		*		**
b.			**	*!	*		**
c.		*!	*		*		**
d.	*!***		*			*	**
e.	*!		**			*	**

Argument topicalisation is a relatively marked structure in English. Normally, the subject is chosen in a way that it acts like a discourse topic, linking the relevant sentence to the pragmatic context. If we find fronted structures, these are mostly adverbial and

[50] This constraint introduced in Section 3.4.1. of Chapter 3 accounts for the second-position effect of the verbal root inside the argument domain but it is more specific than in German as it explicitly bans the verbal root to appear in front of the subject which has been shown to be a restriction which holds for all clauses in English. It is argued that the ROOT *⊽ D_{ARG} is still present in the hierarchy of English, as constraints are believed to be universal, but is ranked under the present constraint.

[51] In this and the following tableaux I will be using the notation of grouping CUs between spaces for ease of legibility. It merely reflects the assumed result of vocabulary insertion if the expression were to be optimal.

prepositional phrases functioning as adjuncts, producing more frequent and less marked structures.[52]

(32) *In a drawer behind the counter* Mr. Braidford keeps sets of guitar strings.

(33) *At home* we have an album of Julie London's [...].

(Sting 2003:60-61)

Because of their naturalness, frequency and lack of special intonation, I assume that these structures demonstrate topicalisation of weaker topics, something which could be characterized by the [about] CU alone. Moreover, they do not appear to be contrastive, either, which further supports the assumption that they are associated with aboutness only.

Concerning the ranking of the weak topic constraint (26), it must be lower than the argument ordering constraints, reflecting the requirement that only strong topic arguments (contrastive) undergo displacement. The results are as follows: a feature bundle containing only an aboutness discourse feature is fronted only if the item does not bear an argument feature as well. Adjuncts do not violate the ordering of arguments, thus their fronting can be less 'costly'.

(T2) Adjunct vs. argument topicalisation in English[53]

Candidates (adjunct topic): a. adj[about] arg_1 R[tense] arg_2 arg_3
b. arg_1 R[tense] arg_2 arg_3 adj[about]

Candidates (argument topic): c. arg_2[about] arg_1 R[tense] arg_3
d. arg_1 R[tense] arg_2[about] arg_3

	ROOT *P ARG_1	ROOT P D_{ARG}	[TEMP] A ROOT	ARG_1 P D_{ARG}	ARG_2 P D_{ARG}	ARG_3 P D_{ARG}	[ABOUT] P D_{PRED}
☞a.		*			*	**	
b.		*			*	**	*!
c.		*		*!		**	
☞d.		*			*	**	*

[52] These findings are stated as a result of a small-scale informal analysis of scientific and literary texts in English and Hungarian: *Baráth Katalin (2010): A fekete zongora; Maczák Ibolya (2009): Elorzott szavak; Geluykens (1992): From Discourse process to grammatical construction; Sting (2003): Broken Music,* and *Jonathan Franzen (2001): Corrections.*

[53] As no contrast feature is present in the structures under discussion, I leave out the corresponding constraints from the following tableau for the sake of clarity.

As demonstrated, with the constraint regarding the aboutness feature ranked lower than the general argument placement constraints, weak argument topics will never undergo fronting in English, as they do in Hungarian.

4.5.2. German

4.5.2.1. Verb-second with syntactic topicalisation

In accordance with the strict verb-second character of German, either the subject or the topic precedes the finite verb, and only one topic is allowed to be fronted.

(34) a. arg_1 *tense*$_{matrix}$ arg_2 arg_3 (D_{temp})
b. $top_{arg/adj}$ *tense*$_{matrix}$ arg_1 arg_2 arg_3 (D_{temp})

As discussed in Chapter 3 concerning basic word order, the constraint pair which forces the finite tense CU in a matrix clause to be dislocated from the temporal domain and appear in second position has the form and ranking as in (35). A deeper analysis of the verbal complex and its differences compared to English will follow later.

(35) $\text{TENSE}_{\text{MATRIX}}$ *P D_{PRED} > $\text{TENSE}_{\text{MATRIX}}$ P D_{PRED}

It has been stipulated in Chapter 3 that the tense feature loses its marker which connects it to the temporal domain, as it appears to be behaving differently from the other domain members. The corresponding constraint which disfavours unnecessary index deletion is repeated here as (36).

(36) $\text{FAITH}_{\text{TEMP}}$: indexes of the members of the temporal domain cannot be deleted. Violated by an input temporal domain marker which is absent in the output.

4.5.2.2. Strong topics and subjects

The verb-second ordering with topicalisation might point to the fact that the subject feature is underparsed when there is a topic in the clause, as has been analysed in earlier OT accounts, e.g. in Gáspár (2005) and Nagy (2008). However, this analysis cannot account

for the immediately post-verbal position of the subject (set in boldface in the examples) with a fronted topic (37a.), focus (b.) or wh-item (c.). If the subject feature were simply missing from these structures or the argument domain marker had been deleted, nothing would distinguish the first argument from the other arguments; hence its position would be less fixed.

(37) a. Die Birnen$_{TOP}$ kaufte **ich** im Bioladen.
The$_{PL}$ pear$_{PL}$ bought I in+the$_{DAT}$ bio-shop
b. Mit JÖRG ist **Susi** ins Kino gegangen.
With Jörg has Susi to+the cinema gone
c. Mit wem ist **deine Schwester** ins Kino gegangen?
With whom$_{DAT}$ has your sister to-the cinema gone

Even if there are more topic-marked phrases, only one will surface as the syntactic topic, as multiple topicalisation is not attested in German. This can be achieved through the relatively high ranking of the domain–CU type precedence constraint, i.e. D_{PRED} **F** [CONTRAST], which is satisfied if one contrast feature precedes the predicate domain, regardless of the presence of more contrast features. In tableaux, I will use the abbreviated form D_{PRED} **F** CONTR.

In (T3) assessing argument topicalisation, the winning candidate (a.) satisfies the contrast constraints by placing the relevant feature in front of the predicate domain; moreover, it has the least number of violation of TENSE$_M$ **P** D_{PRED} as the tense feature is located in the second position preceded only by the nominal domain containing the contrast feature; candidate d. achieves the same result on TENSE$_M$ **P** D_{PRED}. Note that in calculating violations within the predicate domain, only the domain members [arg], [adj] and [temp] count, the evaluation is blind to all other CUs. In contrast, candidate b. shows English-type topicalisation, which fails on the same tense placement constraint. Candidate c. exhibits embedded verb-final order, thus fails on the matrix constraint, whereas in the last example the topic is left in situ, violating the high domain–CU constraint, D_{PRED} F CONTR.

(T3) German topicalisation (‘*Den Ball*$_{TOP}$ *gebe ich dem Kind.*’)

Candidates: a. arg_2[about][contrast] R[$tense_t$] arg_1 arg_3
b. arg_2[about][contrast] arg_1 [$tense_t$]R arg_3
c. arg_2[about][contrast] arg_1 arg R[$tense_t$]
d. arg_1 R[$tense_t$] arg_2[about][contrast] arg_3

	D_{PRED} F CONTR	$TENSE_M$ *P D_{PRED}	$TENSE_M$ P D_{PRED}	D_{TEMP} F D_{PRED}	ROOT A [TEMP]	ROOT P D_{TEMP}	ARG_1 P D_{ARG}	ARG_2 P D_{ARG}	ARG_3 P D_{ARG}
☞a.			*	*			*		**
b.			**!	*		*	*		**
c.			**!*				*		**
d.	*!		*	*				*	**

The following evaluation shows the hypothetical input when two arguments bear the contrast feature. Although each string satisfies the requirement that the clause is preceded by the contrast feature, candidate b. with the multiple topicalisation fails on the tense-second constraints, as it contains the matrix tense in third position. Candidate c. with the second contrast feature switching sides with the subject fails on the argument ordering constraints, similarly to candidate d.

(T4) German matrix declarative with two contrast-marked items

Candidates: a. arg_2[contrast] R[$tense_t$] arg_1 arg_3[contrast]
b. arg_2[contrast] arg_3[contrast] R[$tense_t$] arg_1
c. arg_2[contrast] R[$tense_t$] arg_3[contrast] arg_1
d. arg_3[contrast] R[$tense_t$] arg_1 arg_2[contrast]

	D_{PRED} F CONTR	$TENSE_M$ *P D_{PRED}	$TENSE_M$ P D_{PRED}	D_{TEMP} F D_{PRED}	ARG_1 P D_{ARG}	ARG_2 P D_{ARG}	ARG_3 P D_{ARG}
☞a.			*	*	*		**
b.			**!	*	**		**
c.			*	*	**!		**
d.			*	*	*	**!	

4.5.2.3. Weak topics

On the basis of corpus studies, Doherty (2005) concludes that German word order is pragmatically determined in contrast to English. In this section we argue that the topicalisation of non-arguments – like adverbs of time and place among others – is less ‘costly’ and therefore more frequent in German than topicalisation of argument material.

Moreover, the standard subject–finite verb order has to be preserved in constructions where there is either no topic or a weak topic (i.e. lacking a [contrast] feature).

Before starting with the analysis, a crucial difference to English clause structure has to be pointed out. In German, the verbal root is located in the final position, not only in embedded contexts but sometimes in matrix ones as well, if the verbal complex consists of more than one temporal CU. Therefore, it is not adequate in German to define the position of the first argument with respect to the root, as the subject has a relatively stable position clause-initially in both matrix and embedded clauses, whereas the finite part of the verbal complex radically switches positions. To ensure that the initial position of the subject will not be disturbed by weak topic arguments, the ranking in (38) is necessary. This will enable the fronting of an adjunct bearing the [about] feature, as its precedence does not interfere with the ordering of the argument domain.

(38) ARG_1 ℙ D_{ARG} > [ABOUT] ℙ D_{PRED}

Tableau (T5) demonstrates that adjunct topicalisation, which is a common means of sentence organization in German, is achieved by fronting a weaker topic than in the case of argument topicalisation. This set of constraints, including ARG_1 ℙ D_{ARG} is ranked lower than the alignment constraints referring to [contrast], thus they do not affect the outcome of contrastive topicalisation.

(T5) Fronted weak adjunct topic

Candidates: a. adj[about] [tense] arg_1 arg_2 arg_3 R[perf]
b. arg_1 [tense] adj[about] arg_2 arg_3 R[perf]
c. arg_1 [tense] arg_2 arg_3 adj[about] R[perf]

	TENSE_{M} *ℙ D_{PRED}	TENSE_{M} ℙ D_{PRED}	ARG_1 ℙ D_{ARG}	[ABOUT] ℙ D_{PRED}	ARG_2 ℙ D_{ARG}	ARG_3 ℙ D_{ARG}	ADJ 𝔽 D_{ARG}
☞a.		*			*	**	***
b.		*		**!	*	**	**
c.		*		**!**	*	**	

By contrast, the following table stands here to demonstrate that the proposed constraints are not too lax or permissive to allow greater variation than attested in a language. If the input string lacks an aboutness feature, as the candidates in (T6), the word order constraints are able to choose the subject-first candidate c. as winner. The constraint

responsible for the ordering of adjuncts, [ADJ] ₣ D_{ARG}, rules out an unnecessarily topicalised (candidate a.) or fronted adjunct (candidate b.).

(T6) Structures without an aboutness or contrast feature

Candidates: a. adj [tense] arg_1 arg_2 arg_3 R[perf]
b. arg_1 [tense] adj arg_2 arg_3 R[perf]
c. arg_1 [tense] arg_2 arg_3 adj R[perf]

	TENSE$_M$ *₱ D_{PRED}	TENSE$_M$ ₱ D_{PRED}	ARG$_1$ ₱ D_{ARG}	[ABOUT] ₱ D_{PRED}	ARG$_2$ ₱ D_{ARG}	ARG$_3$ ₱ D_{ARG}	ADJ ₣ D_{ARG}
a.		*			*	**	**!*
b.		*			*	**	**!
☞ c.		*			*	**	

In the last tableau of this section, we demonstrate that the weak topic constraint does have some effect on the ordering of arguments in the 'middle field'. While this feature cannot derive their preverbal fronting by itself, it makes a difference in argument ordering in the post-finite domain. In the tableau candidate b. is selected as optimal as in this arg_1 occupies the initial position as it is subject, but arg3 occupies a more advanced position within the argument domain due to its topic status.

(T7) Weak argument topic (e.g. 'Ich habe *dem Hans* gestern das Buch geliehen.')

Candidates: a. arg_3[about] [tense] arg_1 arg_2 R[perf]
b. arg_1 [tense] arg_3[about] arg_2 R[perf]
c. arg_1 [tense] arg_2 arg_3[about] R[perf]

	TENSE$_M$ *₱ D_{PRED}	TENSE$_M$ ₱ D_{PRED}	ARG$_1$ ₱ D_{ARG}	[ABOUT] ₱ D_{PRED}	ARG$_2$ ₱ D_{ARG}	ARG$_3$ ₱ D_{ARG}
a.		*	*!		**	
☞b.		*		**	**	*
c.		*		***!	*	**

The last evaluation also formalises Frey's (2000, 2004) observation concerning sentence-medial weak topics, mentioned in Section 4.4.3. If the weak argument topic is more to the left in the post-verbal domain, i.e. it precedes as many arguments and adjuncts as it can, the precedence constraint [ABOUT] ₱ D_{PRED} is better satisfied. This serves as an

explanation why weak argument topics in German are placed above other material in the middle field.

This constraint ranking also predicts the following state of affairs: if the second argument is in the initial position because of its contrastiveness, and therefore arg_1 is in a post-verbal position, then the weak topic status of arg_3 has no effect on the order of arguments in the middle field as it is more important for arg_1 to precede the argument domain than it is for the weak topic to precede the predicate domain. This prediction is in line with the German facts: in cases when the subject is post-finite, it is necessary for it to be the first in the middle field, as the example sentence in (T8) in brackets demonstrates, which corresponds to candidate a. in the tableau. Candidate b. with the weak topic arg_2 preceding the subject fails on the subject–first constraint $\text{ARG}_1 \mathbf{P} \text{D}_{\text{ARG}}$. Candidate c. corresponds to the basic order of arguments (arg_1>arg_2>arg_3) but, obviously, there are higher requirements to fulfil, for instance the precedence of a contrastive topic.

(T8) A strong and a weak nonsubject argument topic
(e.g. '***Das Buch*** habe ich *dem Hans* gestern geliehen.')

Candidates: a. arg_3[about][contr] [tense] arg_1 arg_2[about] R[perf]
b. arg_3[about][contr] [tense] arg_2[about] arg_1 R[perf]
c. arg_1 [tense] arg_2[about] arg_3[about][contr]

	D_{PRED} **F** CONTR	TENSE$_{\text{M}}$ *P D_{PRED}	TENSE$_{\text{M}}$ P D_{PRED}	ARG$_1$ P D_{ARG}	[ABOUT] P D_{PRED}	ARG$_2$ P D_{ARG}	ARG$_3$ P D_{ARG}
☞a.			*	*	***	***	
b.			*	**!	**	**	
c.	*!		*		*****	*	*

4.5.3. Hungarian

The template in (39) represents the ordering relations in a Hungarian topicalisation structure. The temporal domain is not affected by the fronted topic(s), i.e. no inversion occurs, as the prefix is located preverbally in such expressions.

(39) (top) top Prefix-D_{temp} arg_1 arg_2 arg_3

As already discussed, a simple aboutness feature is enough to front a topic in Hungarian due to the language's discourse configurational nature: [ABOUT] ₱ D_{TEMP} is prominent here. To achieve multiple movement, all the relevant aboutness CUs have to be ordered in relation to the predicate domain, i.e. the CU-relative-to-Domain version of the constraint is needed, in contrast to single fronting achieved by the Domain-relative-to-CU ordering. Therefore it is important to rank [ABOUT] ₱ D_{TEMP} higher than D_{TEMP} ₣ [ABOUT].

As the argument ordering constraints do not play a role in the evaluation, they are left out from tableaux – what is important is the functioning of the ROOT ₱ D_{ARG} requirement, which places the predicate before the arguments in the default case and is able to measure deviations from the basic order.

The relevant Hungarian expressions are shown in tableau (T9), which includes two distinct evaluations of single and multiple topicalisation structures. Candidates a., b. and c. all contain an argument topic, i.e. a feature bundle containing the [about] and [arg_2] CUs. Candidate b. fails because no higher constraint demanded inversion of the tense and the prefix, thus the expression violates the constraint according to which the prefix has to precede the temporal items (PREFIX ₱ D_{TEMP}). Candidate c. lacks aboutness-fronting which violates the highest constraint.

The second part of the tableau demonstrates how the CU–domain precedence constraint can derive multiple fronting. In case of more about-marked nominal bundles, only one of them can achieve the initial position, the others incur violations as they are preceded by it. Nevertheless, the best option is still multiple fronting, as aboutness features further away from the edge of the predicate domain violate the aboutness constraint to a greater extent. For instance, candidate f., in which the second topic stays in postverbal position incurs more violations, as both the fronted topic and the temporal domain precede it, in contrast to candidates d. and e., in which the second topic is only preceded by the other topic, i.e. one item.

(T9) Hungarian topicalisation

Candidates for single topicalisation:

a. arg_2[about] Prefix R[tense] arg_1 arg_3
b. arg_2[about] R[tense] Prefix arg_1 arg_3
c. Prefix R[tense] arg_2[about] arg_1 arg_3

Candidates for multiple topicalisation:

d. arg_2[about] adj[about] Prefix R[tense] arg_1 arg_3
e. arg_2[about] adj[about] R[tense] Prefix arg_1 arg_3
f. adj[about] Prefix R[tense] arg_2[about] arg_1 arg_3

	[ABOUT] ~~P~~ D_{PRED}	ROOT ~~P~~ D_{ARG}	ROOT ~~P~~ D_{TEMP}	ROOT ~~A~~ [TEMP]	PREFIX ~~P~~ D_{TEMP}
☞a.		*			
b.		*			*!
c.	*!				
☞d.	*	*			
e.	*	*			*!
f.	**!				

4.5.3.1. Combinations of a contrastive and a normal topic

As both contrastive and non-contrastive topics occupy a preverbal position in Hungarian, the question arises as to thier ordering in the preverbal field. Both the sentences below are more acceptable with the second noun uttered with contrastive intonation, despite the difference in thier thematic interpretation. So simple topics tend to precede contrastive ones[54].

(40) Péter$_{top}$ Zsuzsival$_{CTop}$ szívesen elmenne a bálba.
Peter$_{NOM}$ Zsuzsi-with gladly PFX-go-would the ball-to
With Zsuzsi, Peter would gladly/willingly go to the ball.

[54] For Kálmán (2001) the order of contrastive and weak topics is not fixed preverbally:
i) [$_T$ János] [$_{KT}$ a /levest] [\megette (, de a húst nem).
John$_{top}$ the soup$_{CTop}$ PFX-ate but the meat not
ii) [$_{KT}$ A /levest] [$_T$ János] [\megette (, de a húst nem).
the soup$_{CTop}$ John$_{top}$ PFX-ate but the meat not (ibid. p.38, glosses added)
(T = topic, KT = contrastive topic, / and \ = rising and falling intonation, respectively)
To me, ii) sounds rather unnatural, but is better if the second topic receives some stress, indicating that it also receives a contrastive reading. This would be consistent with the analysis presented here as this imposes no ordering on two contrastive topics.

(41) Zsuzsival$_{top}$ Péter$_{CTop}$ szívesen elmenne a bálba.
Zsuzsi-with Peter$_{NOM}$ with pleasure PFX-go-would the ball-to
Peter, he would go the the ball with Zsuzsi gladly.

In addition to the weak topic constraint, a further ordering requirement is needed to account for this regularity:

(42) [ABOUT] ~~P~~ [CONTR]: the 'about' CU precedes the 'contrastive' CU. Violated if [CONTR] precedes [ABOUT].

This constraint can hold domain-internally or between elements of different domains. Therefore a contrastive topic marked element will appear with the topic feature preceding the contrastive feature and a weak topic will precede a contrastive topic.

(T10) Hungarian clause with a contrastive and a weak topic

Candidates: a. Péter$_{Top}$ Zsuzsinak$_{CTop}$ odaadja az ajándékot.
[arg$_1$][about] [arg$_3$][about][contr] PFX-R[tense] [def]R[arg$_2$]
Péter$_{nom}$ Zsuzsi$_{dat}$ PFX-give the present$_{acc}$

b. Zsuzsinak$_{CTop}$ Péter$_{Top}$ odaadja az ajándékot.
[arg$_3$][about][contr] [arg$_1$][about] PFX-R[tense] [def]R[arg$_2$]

	[ABOUT] ~~P~~ D_{PRED}	[ABOUT] ~~P~~ [CONTR]	ROOT ~~P~~ D_{ARG}	ROOT ~~P~~ D_{TEMP}	PREFIX ~~P~~ D_{TEMP}
☞a.	*		**		
b.	*	*!	**		

4.5.4. Conclusion

It has been demonstrated that an alignment system based on linear constituent order is capable of modelling both basic and pragmatically determined word orders of several languages. Moreover, a parallel has been drawn between pragmatic weight and complexity of featural structure: in a language with discourse-based word order like Hungarian, one feature is sufficient to trigger topicalisation, whereas in languages in which topicalisation is more marked, only additional input material can result in syntactic fronting.

4.6. The analysis of Left Dislocation

4.6.1. Split elements in OT

A question central to our analysis is the formal treatment of the dislocated phrase and the corresponding resumptive pronoun, or to put it more generally, the treatment of single input elements which are realised as multiple elements in the output. A relatively new contribution by Grimshaw (2006), accommodated in her original alignment system based on traditional hierarchical positions of phrase structure, deals with chains in a very similar fashion to split elements, which makes it relevant to the present study.

It is claimed that all chains are unfaithful, but not because of an explicit ban on movement (like STAY in former accounts, e.g. Grimshaw 1997) but because they realise a single input element as multiple items. However, a high-ranked constraint (OBSPEC in passives or WHLEFT in questions) can prefer the otherwise suboptimal candidate. Two constraints have to be highlighted here: UNIQUE (GRIMSHAW 2006: 102), which is meant to control splitting, and is violated if an element of the input has multiple correspondents in the output. Second, the constraint IDENT, which is satisfied if every element of the output is identical in feature F to its input correspondent, thus it is violated by candidates with multi-member chains and non-identical chain members. Presumably, an LD expression would incur violations to both requirements in Grimshaw's system. Although, as many other constraints in this paper, the constraint does not receive full justification, the main advantage of the account is that the constraints are able to derive economy effects, without postulating an explicit economy principle.

The present analysis argues for almost the opposite approach, taking the multiple appearance of what appears to be a single element to be the realisation of different input elements which under other circumstances would be realised by a single vocabulary exponent. Formulated in a strictly alignment-based model, the demand for integrity might be that an element be aligned with the features which are dependent on it in the input. For nominal elements, these are the argument or adjunct feature and the discourse features.

4.6.2. The constraints relevant for LD and their orderings

There are three crucial issues which the present analysis has to deal with. First, two different inputs can result in LD: a lexical item with [new] and [about] features or one bearing [new], [about] and [contrast] features. It will be demonstrated that in some cases

there will be differences in the outputs as well, depending on the analysed language. Second, the position of the resumptive pronouns is also of interest. We will see that the topic constraints come into play in determining the position of a topic-marked resumptive. Third, investigating the feature combinations of resumptives and the available pronouns in a given language will shed light on the descriptive facts about the choice of the resumptive pronoun.

The constraint which triggers LD is the adjacency requirement of both the aboutness and the newness feature to the argument CU (43). As both must follow the argument feature, obeying a higher-ranked constraint, the best solution remains the deletion of one of their pragmatic domain indexes.[55] To prevent unmotivated index deletion, the faithfulness constraint in (44) is posited.

(43) D_{PRAG} ⊲ [ARG]: the pragmatic domain is adjacent to the argument CU. Violated by every member of the pragmatic domain which is not adjacent to the argument CU.

(44) FAITH(DOMAINMARKER$_{PRAG}$): the pragmatic domain marker cannot be deleted. Abbreviated to FAITH$_{PRAG}$ in tableaux.

The constraints responsible for ordering the members of the nominal domain have been discussed in the preceding Chapter 3, section 3.5. Here, only those will be repeated for ease of exposition that play a role in the evaluation of LD. Generally, it can be stated that a root always precedes the corresponding [arg] feature and its discourse features. This can be taken to be as fairly high-ranked requirement because such a principle is true in the case of normal nominal constructions without a split as well.

(45) ROOT ⊲ [ARG] > ROOT ⊲ D_{PRAG}

The general ordering constraints will do the job of displacing the item subject to LD: as it is separated from its argument feature, it acts as an item that is not connected to the verbal root or other arguments, thus it will be assigned a position which violates basic word order constraints to the least extent – i.e. to a peripheral position, outside of the clausal domain. The constraint which ensures that this will be the left peripheral position

[55] As the deletion of input CUs is impossible in our system, the clash between the newness and aboutness features is not solved by deleting one of the CUs.

refers to the newness feature, as in (46), together with (47). Recall that under normal circumstances the newness CU could never be directly adjacent to the root; in the case of LD, however, as the argument CU is separated from the root, this constraint can be fulfilled, see (48). The association of the root with [new] in turn places the dislocated item to a clause-initial position.

(46) [NEW] P D_{PRED}: the 'new' CU is the first element of the predicate domain. Violated by every member of D_{PRED} which precedes [NEW].

(47) [NEW] A ROOT: the newness CU has to be adjacent to the root.

(48) Root[new] ... [arg][about]

Along with previous faithfulness constraints already introduced, the constraint in (49) will be posited. It appears that nominal elements rarely, if ever, escape the nominal domain and hence we will assume that this constraint dominates all other constraints affecting the formation of LD and the ordering within the nominal domain.

(49) FAITH(DOMAIN $MARKER_{NOM}$): input nominal indexes have to be preserved. Violated by an input nominal domain marker which is not present in the output. (Abbreviated to $FAITH_{NOM}$ in tableaux.)

Last but not least, in (50) the constraint is listed which demands the proximity of the features involved in contrastive topics, i.e. does not let the contrast and the aboutness feature drift away from each other. This will be important in the analysis of contrastive LD in German and Hungarian. Moreover, the English facts will prove that its more general form, referring to the pragmatic CUs in (51) can also influence the output.

(50) [CONTRAST] A [ABOUT]: the aboutness and contrast CUs has to be adjacent to each other. Violated by CUs intervening between the two features.

(51) [CONTRAST] A [PRAG]: the contrast CU has to be adjacent to one of the pragmatic features, i.e. to the newness or the aboutness CU. Violated if the [contrast] feature is not adjacent to any of the pragmatic features.

In sum, the ranking of the constraints relevant for the emergence of LD is presented below, as it will be assumed to be operative in the three analysed languages. If D_{PRAG} **A** [ARG] dominates the faithfulness constraint referring to the pragmatic domain marker, the situation will be solved by deleting the domain marker of the newness feature which results in LD.

(52) $FAITH_{NOM}$ > D_{PRAG} **A** [ARG] > $FAITH_{PRAG}$ >> [NEW] **P** D_{PRED}

Such a ranking, if placed dominant enough in the hierarchy, will derive Left Dislocation in any given language. If there is a language which never makes use of resumptives, then it could be derived by placing the faithfulness constraints highest, which would ban index deletion and discontinuous realisation of members of a nominal domain under any circumstances.

4.6.3. The language-specific rankings

4.6.3.1. English — resumptive in situ

In English, there is only one possible pattern for LD, with the resumptive in argument position. This means that the LD structure will be the same regardless of the fact whether the input feature bundle of the to-be dislocated phrase is [new][about] or [new][about][contrast]. First, let us consider the case with the combination of [new][about].

For clarity's sake, a tableau is presented first which contains the constraints relevant for LD (set in bold face) together with the constraints regulating the ordering of nominal features within a domain, discussed in Chapter 3. This time I am only concentrating on the ordering of the nominal and pragmatic features connected to a feature bundle with a nominal root taking part in Left Dislocation; in the next tableau, the complete expression containing LD will be evaluated.

The 'prag' index indicates that the item is part of the pragmatic domain and is aligned with respect to it. Similarly, the 'nom' index is used to represent items which are part of the nominal domain relevant for LD and whose domain markers have not been deleted.

This first table contains a rather large number of candidates in order to be able to discuss and demonstrate the greatest variety in the ordering of the nominal and pragmatic CUs and the corresponding nominal root.

The first lot of candidates (a-e.) have in common that the pragmatic domain index on [new] is deleted, i.e. they show up the desired result to satisfy D_{PRAG} **A** [ARG], with certain ordering variations. Candidate b fails because the newness CU does not precede others and is non-adjacent to the Root. In candidates c. and d., a pragmatic CU precedes the nominal domain which violates the domain ordering constraint D_{NOM} **P** D_{PRAGM}. Candidate e. (together with d.) demonstrates that pragmatic CUs cannot precede the nominal root.

Second, in candidates f-h., the other pragmatic domain marker, i.e. the one on [about] is absent. This variation violates the $FAITH_{PRAG}$ constraint to the same extent as the previous candidates. However, the lower conditions on the position of [new] are left unfulfilled by these candidates.

In the last three candidates, no deletion of the pragmatic domain marker has taken place, and hence they satisfy the faithfulness requirement of the pragmatic domain marker. The absolutely faithful candidate i. violates the adjacency requirement. Although candidate j. fulfils this, it fails on the higher constraint which demands the precedence of the nominal domain over the pragmatic domain. Finally, candidate k**.** shows that the adjacency constraint cannot be fulfilled by freeing the argument feature from the nominal domain. After its function has been demonstrated the $FAITH_{NOM}$ constraint will be left out from further tableaux, as it is taken to be observed by all candidates.

(T11) Splitting of the nominal domain

Candidates: a. Root[new] [arg_{nom}][$about_{pragm}$]
b. Root [arg_{nom}][$about_{pragm}$] [new]
c. Root[$about_{pragm}$][arg_{nom}][new]
d. [new]Root [$about_{pragm}$] [arg_{nom}]
e. [new]Root [arg_{nom}] [$about_{pragm}$]

f. Root[new_{pragm}][arg_{nom}][about]
g. Root[arg_{nom}][new_{pragm}][about]
h. Root[about] [arg_{nom}][new_{pragm}]

i. Root[arg_{nom}][$about_{pragm}$][new_{pragm}]
j. Root[$about_{pragm}$][arg_{nom}][new_{pragm}]
k. Root[new_{pragm}] [arg][$about_{pragm}$]

	FAITH NOM	D_{NOM} ℙ D_{PRAG}	D_{PRAG} 𝔸 [ARG]	FAITH PRAGM	ROOT ℙ ARG, PRAG	[NEW] 𝔸 ROOT	[NEW] ℙ D_{PRED}
☞a.				*			
b.				*		*!	*
c.		*!		*		**	*
d.		*!		*	*		
e.				*	*!		
f.		*!		*			
g.				*		*!	*
h.				*		*!*	*
i.			*!			**	*
j.		*!				**	*
k.	*!						

The next tableau lists complete clauses containing LD. For ease of exposition, a possible sentence after vocabulary insertion[56] is given for each output string. Candidate a. with a left dislocated root and newness feature and an in situ argument and aboutness feature is selected as winner. The superficially similar candidate f. is rendered suboptimal because of the different distribution of the pragmatic CUs. Candidate c. fails on the in situ newness feature. Candidate d. with the fronted resumptive and candidate e. with syntactic topicalisation both fail on the verb-second word order constraint: the fronted argument CUs violate it to a greater extent than a fronted item with deleted pragmatic domain index. The reason for this lies in the violation patterns of the $ROOT_V$ ℙ D_{ARG}: the dislocated items in candidates a. and f. do not include an argument feautre, so they do not violate this

[56] The rules for pronoun insertion will be discussed in Section 4.6.4.

constraint, in contrast to structure where the [arg] feature is fronted along with others which are related in the input.

(T12) English LD, features of the dislocated phrase: [new] and [about]

Candidates:

a. John_{new}, I_{arg1} hate $\text{him}_{\text{about}}$
R[new] [speaker][arg_1] R[tense] [$\text{arg}_{2\text{nom}}$][$\text{about}_{\text{pragm}}$]

b. I hate $\text{him}_{\text{about}}$ John_{new}
[speaker][arg_1] R[tense] [$\text{arg}_{2\text{nom}}$][$\text{about}_{\text{pragm}}$] R[new]

c. I hate John_{new} $\text{him}_{\text{about}}$
[speaker][arg_1] R[tense] R[new] [$\text{arg}_{2\text{nom}}$][$\text{about}_{\text{pragm}}$]

d. John_{new} $\text{him}_{\text{about}}$ I_{arg1} hate
R[new] [$\text{arg}_{2\text{nom}}$][$\text{about}_{\text{pragm}}$] [speaker][$\text{arg}_1$] R[tense]

e. $\text{John}_{\text{new, about}}$ I_{arg1} hate.
R[$\text{arg}_{2\text{nom}}$][$\text{new}_{\text{pragm}}$][about] [speaker][$\text{arg}_1$] R[tense]

f. $\text{John}_{\text{about}}$ I hate $\text{him}_{\text{arg,new}}$
R[about] [speaker][arg_1] R[tense] [$\text{arg}_{2\text{nom}}$][$\text{new}_{\text{pragm}}$]

	D_{NOM} **P** D_{PRAG}	D_{PRAG} **A** [ARG]	$\text{FAITH}_{\text{PRAG}}$	ROOT **P** [ARG, PRAG]	ARG_1 **P** ROOT	ROOT_{V} **P** D_{ARG}	ARG_1 **P** D_{ARG}	[NEW] **A** ROOT	ARG_2 **P** D_{ARG}	[NEW] **P** D_{PRED}
☞ a.			*			*			*	
b.			*	*!*		*			*	*
c.			*			*			*	*!
d.			*			**!	*			
e.			*			**!	*	*		
f.			*			*		*!*+	*	*

The second possible input resulting in LD is a lexical item bearing not only [new] and [about] features but also [contrast]. If the [about] and [contrast] features were both placed on the resumptive, that would trigger the syntactic topicalisation of this element, which is not the case for English. Thus, for English, it appears that [new] and [contr] are realised on the fronted root, while [about] and [arg] are realised by the resumptive pronoun, see (53). In that case the resumptive remains in the position favoured by the argument alignment constraints.

(53) R[new][contr] [speaker][arg_1] R[tense] [arg_2][$about_2$]
$John_{new,\ contrast}$ I_{arg1} hate $him_{arg2,\ about}$

As has been established in Section 3.5.3.2. of Chapter 3, contrast functions as an additional discourse feature which is dependent on the presence of aboutness or newness. For this reason and because of the pragmatic nature of the CU, I will assume that the contrast CU aims to be adjacent either to [about] or [new] – it has to be borne in mind that most typically only one of the pragmatic features is present in an expression. With the constraint ranking in (54), we can derive the right results: in case of LD, the contrast feature will pair up with newness, whereas it will stick to [about] in a contrastive topicalisation environment. Moreover, it is irrelevant in expressions with LD where the aboutness CU is located in relation to [contrast], once the latter is adjacent to [new] – this state of affairs also needs to be reflected in the form of the constraint [CONTRAST] **A** [PRAG]. Note that the formulation of the constraint does not refer to the pragmatic domain, but to the pragmatic features themselves, no matter if they remain faithful to their domain index or not.

(54) [CONTRAST] **A** [PRAG] > [CONTRAST] **A** [ABOUT]

Candidates a. on the one hand, and candidates c. and d. on the other, demonstrate the alternatives for the distribution of the pragmatic features in (T13). Candidate a. is optimal. In c. and d., as the [about] feature is fronted along with the [contr] feature, i.e. topic fronting of the resumptive has taken place, there is an extra violation of the verb placement constraint (ROOT **P** D_{ARG}). In addition, candidate b., which has the same output ordering of CUs as the winning candidate with the exception of the contrast CU which stays with [about] postverbally, violates the contrast-fronting requirement, as does candidate e. with all elements of the nominal and pragmatic domain positioned by the optimal satisfaction of the argument constraints.

(T13) English LD; features of the dislocated phrase: [new], [about] and [contrast]

Example output: *Jon, I hate him.*

Candidates: a. **R[new][contr]** [speaker][arg_1] R[tense] **[arg_{2nom}][$about_{pragm}$]**
b. **R[new]** [speaker][arg_1] R[tense] **[arg_{2nom}][$about_{pragm}$][contr]**
c. **R[new][contr] [arg_{2nom}][$about_{pragm}$]** [speaker][arg_1] R[tense]
d. **R[new] [arg_{2nom}][$about_{pragm}$][contr]** [speaker][arg_1] R[tense]
e. [speaker][arg_1] R[tense] **R[new] [arg_{2nom}][$about_{pragm}$][contr]**

	D_{NOM} **P** D_{PRAG}	D_{PRAG} **A** [ARG]	$FAITH_{PRAG}$	[CONTR] **P** D_{PRED}	[CONTR] **A** [PRAG]	ROOT **P** [ARG, PRAG]	ARG_1 **P** $ROOT_V$	$ROOT_V$ **P** D_{ARG}	ARG_1 **P** D_{ARG}	ARG_2 **P** D_{ARG}	NEW **P** D_{PRED}	[CONTR] **A** [ABOUT]
☞a.			*					*		*		****
b.			*	*!				*		*		
c.			*					**!	*			*
d.			*					**!	*			
e.			*	*!				*		*	*	

In connection with the separation of the aboutness and contrast features, the question arises why this method is not made use of in the case of syntactic topicalisation in English, i.e. how is the constraint hierarchy able to handle this state of affairs with the newly proposed constraints. The high faithfulness condition imposed by $FAITH_{NOM}$ and $FAITH_{PRAG}$ ensure that no unmotivated index deletion will come about. As D_{PRAG} **A** [ARG] is already satisfied by a strong topic in which the argument CU is directly followed by the aboutness CU, no index deletion is required; thus, unfaithful structures will be suboptimal.

In demonstration that the constraints relevant for LD do not interfere with the obtained results for syntactic topicalisation, a tableau for topicalisation is repeated here, completed with the newly presented constraints on LD. As expected, candidate a. is selected as winner, as it violates neither faithfulness (as opposed to candidate c.), nor the adjacency of the contrast CU to a pragmatic feature, i.e. to [about] in this specific case. Candidate b. with a dislocated item bearing the contrast feature fails precisely on this latter constraint. The in situ contrastive topic in candidate d. fails on the contrast-precedence requirement.

(T14) English topicalisation revisited

Example output: *Jon, I hate.*

Candidates: a. **R[arg$_{2nom}$][about$_{pragm}$][contr]** [speaker][arg$_1$] R[tense]
b. **R[contr]** [speaker][arg$_1$] R[tense] **[arg$_{2nom}$][about$_{pragm}$]**
c. **R[contr][about]** [speaker][arg$_1$] R[tense] **[arg$_{2nom}$]**
d. [speaker][arg$_1$] R[tense] **R[arg$_{2nom}$][about$_{pragm}$][contr]**

	D_{NOM} **P** D_{PRAG}	D_{PRAG} **A** [ARG]	$F_{AITH_{PRAG}}$	[CONTR] **P** D_{PRED}	[CONTR] **A** [PRAG]	ROOT **P** [ARG, PRAG]	ARG_1 **P** $ROOT_V$	$ROOT_V$ **P** D_{ARG}	ARG_1 **P** D_{ARG}	ARG_2 **P** D_{ARG}	[CONTR] **A** [ABOUT]
☞a.								**	*		
b.					*!			*		*	*
c.			*!					*		*	
d.				*!				*		*	

4.6.3.2. German — two main patterns

The aim of the analysis here is to derive the two different LD constructions attested in German, represented here by two prototypical examples below. In this section, I concentrate on deriving the position of the resumptive; analyses of the form and case of the resumptive pronoun, connected to vocabulary insertion, will follow in section 4 of this chapter.

(55) **Der** **Jörg,** ich hasse **ihn.** Hanging Topic Left Dislocation
the$_{NOM}$ Jörg I$_{NOM}$ hate him$_{ACC}$.

(56) **Den** **Jörg,** **den** hasse ich. Contrastive Left Dislocation
The$_{ACC}$ Jörg that$_{ACC}$ hate I$_{NOM}$

Tableau (T15) contains the analysis of (55) with the resumptive in situ. The situation is fairly similar to English, Candidate a. wins, with the separated [new] and [about] features and involving index deletion on the newness CU. The fronting of the dislocated item to an immediately preverbal, topic-like position in candidate b. incurs a violation of the matrix tense constraints. The tense feature precedes the predicate domain

in such a case, because the argument, adjunct and temporal CUs are part of the predicate domain[57]. The reason why this option is considered here is that this position would be the optimal one in case of syntactic topicalisation. The 'in situ' R[new] item is ruled out by the pragmatic requirement of 'new items first' (NEW ℙ D_{PRED}). The unnecessary topicalisation of the resumptive (d.) is disfavoured by the subject-precedence constraint. Candidate e. fails because of a non-optimal distribution of the nominal features due to the non-adjacency of newness to the nominal root.

(T15) German Hanging Topic LD; features of the dislocated bundle: [new] and [about]

Example output: *Jörg*$_{new}$, *ich*$_{arg1}$*hasse ihn*$_{about.}$

Candidates: a. R[new] [speaker][arg_1] R[$tense_m$] [arg_{2nom}][$about_{pragm}$]
b. R[new] R[$tense_m$] [speaker][arg_1] [arg_{2nom}][$about_{pragm}$]
c. [speaker][arg_1] R[$tense_m$] R[new] [arg_{2nom}][$about_{pragm}$]
d. R[new] [arg_{2nom}][$about_{pragm}$] R[$tense_m$] [speaker][arg_1]
e. R[about] [speaker][arg_1] R[$tense_m$] [arg_{2nom}][new_{pragm}]

	D_{NOM} ℙ D_{PRAG}	D_{PRAG} 𝔸 [ARG]	FAITH PRAG	$TENSE_M$ *ℙ D_{PRED}	$TENSE_M$ ℙ D_{PRED}	ARG_1 ℙ D_{ARG}	NEW 𝔸 ROOT	ARG_2 ℙ D_{ARG}	NEW ℙ D_{PRED}
☞ a.			*		*			*	
b.			*	*!				*	
c.			*		*			*	*!
d.			*		*	*!			
e.			*		*		*!	*	*

The second type of structure emerges when the to-be dislocated phrase bears an additional contrast feature, illustrated by the canidates in (T16). Here, the role of the constraint ranking [CONTRAST] 𝔸 [ABOUT] > [CONTR] 𝔸 [PRAGM] emerges, which was the opposite for English: there, it was equally optimal for the contrast CU to be located next to [about] or [new]. Ranking the specific form higher reflects that it is more important for the contrast CU to be located next to [about], if such a feature is present in the input.

This will ensure that in German contrastive LD the resumptive appears in the syntactic topic position, as in the output ordering of candidate a. In candidate c., which was the winning structure in the case of English, the [about] and the [contrast] features are separated, violating the high ranked [ABOUT] 𝔸 [CONTRAST]. Candidate b. with the

[57] Moreover, the pragmatic domain feature of the dislocated item, which connects it to an argument, is also deleted.

English type *topic-subject-predicate* order deserves our attention as well, particularly with regard to the position of the finite verb. As the subject precedes the predicate, it incurs an extra violation of TENSE$_M$ ℙ D$_{PRED}$, in contrast to the verb-second structure of candidate a. An 'in situ' contrast CU is eliminated by the high-ranked D$_{PRED}$ 𝔽 [CONTR]. In candidate e., the pragmatic index of [about] has been deleted and becasue of this the newness CU stays close to [arg], which in turn violates the low-ranked adjacency of nominal root and [new].

(T16) German Contrastive LD, features of the dislocated item: [new], [about] and [contr]

Example output: *Den Jörg$_{new}$, den$_{about, contr}$ hasse ich.*

Candidates: a. R[new] [arg$_{2nom}$] [about$_{pragm}$][contr] R[tense$_m$] [speaker][arg$_1$]
b. R[new] [arg$_{2nom}$] [about$_{pragm}$][contr] [speaker][arg$_1$] R[tense$_m$]
c. R[new][contr] [speaker][arg$_1$] R[tense$_m$] [arg$_{2nom}$][about$_{pragm}$]
d. R[new] [speaker][arg$_1$] R[tense$_m$] [arg$_{2nom}$][about$_{pragm}$][contr]
e. R[contr][about] [arg$_{2nom}$][new$_{pragm}$] R[tense$_m$] [speaker][arg$_1$]

	D$_{NOM}$ ℙ D$_{PRAG}$	D$_{PRAG}$ 𝔸 [ARG]	FAITH$_{PRAG}$	D$_{PRED}$ 𝔽 [CONTR]	[CONTR] 𝔸 [ABOUT]	[CONTR] 𝔸 [PRAG]	TENSE$_M$ *ℙ D$_{PRED}$	TENSE$_M$ ℙ D$_{PRED}$	ARG$_1$ ℙ D$_{ARG}$	NEW 𝔸 ROOT	ARG$_2$ ℙ D$_{ARG}$	NEW ℙ D$_{PRED}$
☞ a.			*					*	*			
b.			*					**!	*			
c.			*		*!	*		*			*	
d.			*	*!				*			*	
e.			*					*	*	*!		

Aligning the aboutness and contrast features explains a number of facts about German Contrastive LD. First, the form of the resumptive reflects that it bears a strong topic feature: it is a demonstrative pronoun which can receive intonational highlighting in other contexts, as opposed to the weak personal pronoun in HTLD. Second, the fact that the dislocate bears the same case as the resumptive and does not appear in default case as with HTLD might have to do with the fact that the fronted item and the resumptive are not far removed from each other and the closeness of the argument feature can result in case matching. The issue will be discussed in Section 4.6.4.1. concerning vocabulary insertion.

(57) Den Jörg, den hasse ich.

R [new] [arg] [about][contr]

[argument (case)]

Moreover, the rule that only one CLD is allowed per clause, whereas multiple HTLD is attested, follows from the resumptive bearing the [about][contr] features, i.e. acting as topic, as only one fronted topic per clause is possible, as the constraint D_{PRED} ₣ CONTR ensures, whereas hanging topics do not count as strong topics and not even as members of the predicate domain, having their domain marker deleted. Thus there are more of them possible within the same candidate. Another reason for the possibility of multiple fronting with HTLD and CLD that the resumptive does not have to be fronted to the single topic position in case of HTLD, as it bears only a weak topic feature [about].

4.6.3.3. Hungarian — resumptive in topic position

As mentioned in the discussion of the data (Section 1), Hungarian displays only one LD pattern: the resumptive pronoun, which can either be a personal pronoun or, more commonly, a stronger demonstrative pronoun (forms of '*az*'), appears in the syntactic topic position. This can be easily explained by the assumption that in Hungarian the [about] feature alone is responsible for topic fronting, as demonstrated in (T17).

The topic and general ordering constraints assess both candidates as optimal, which contain the elements of the nominal domain in a fronted position, i.e. candidates a. and d. The former also satisfies the low-ranked newness-root adjacency requirement, thus it is selected as winner. The HTLD-like ordering of candidate b. with the topical resumptives in situ violates the dominant weak topic fronting constraint ABOUT ₱ D_{PRED}. Candidate c. with the resumptive preceding the dislocated lexical item fares worst in the evaluation, in line with expectations, as the nominal domain is preceded by the pragmatic domain in the fronted bundle.

(T17) Hungarian LD, features of the dislocated phrase: [new] and [about]

Example output: *Bélát*$_{new}$ *azt*$_{about}$ *utálja Mari.*

Candidates: a. R[new] [arg$_{2nom}$][about$_{pragm}$] R[tense] R[arg$_1$]
b. R[new] R[tense] R[arg$_1$] [arg$_{2nom}$][about$_{pragm}$]
c. [arg$_{2nom}$][about$_{pragm}$] R[new] R[tense] R[arg$_1$]
d. R[about] [arg$_{2nom}$][new$_{pragm}$] R[tense] R[arg$_1$]

	D_{NOM} ℙ D_{PRAG}	D_{PRAG} 𝔸 [ARG]	FAITH PRAG	ABOUT ℙ D_{PRED}	ROOT ℙ D_{ARG}	ROOT ℙ D_{TEMP}	ROOT 𝔸 [TEMP]	NEW 𝔸 ROOT	NEW ℙ D_{PRED}
☞ a.			*		*				
b.			*	*!					
c.	*!		*		*				*
d.			*		*			*!	

As far as interpretation is concerned, LD serves to promote either a simple new topic or a contrastive topic, which will surface in Hungarian as the same structure syntactically. However, because of the difference in interpretation and prosody, I assume that the [ABOUT] 𝔸 [CONTR] constraint is operative here as well, analogously to German Contrastive LD, although, of course, it does not make any difference in the surface word order. The high [ABOUT] 𝔸 [CONTR] selects candidate a. as the winner in (T18). Candidate b. is ruled out because of the 'in situ' resumptive, which violates the topic constraint, and c. because of the disfavoured distribution of the discourse features. In candidate d., no feature deletion has taken place, satisfying FAITH$_{PRAG}$, though the candidate violates the adjacency of the pragmatic features to [arg] condition.

(T18) Hungarian contrastive LD; features: [new], [about] and [contrast]

Example output: *Bélát*$_{new}$, *azt*$_{about}$ *utálja Mari.*

Candidates: a. R[new] [arg$_{2nom}$][about$_{pragm}$][contrast] R[tense] R[arg$_1$]
b. R[new] R[tense] R[arg$_1$] [arg$_{2nom}$][about$_{pragm}$][contr]
c. R[new] [contr][arg$_{2nom}$][about$_{pragm}$] R[tense] R[arg$_1$]
d. R[arg$_{2nom}$][about$_{pragm}$][contr][new$_{pragm}$] R[tense] R[arg$_1$]

	D_{NOM} ℙ D_{PRAG}	D_{PRAG} 𝔸 [ARG]	FAITH PRAG	ABOUT ℙ D_{PRED}	CONTR 𝔸 ABOUT	ROOT ℙ D_{ARG}	ROOT ℙ D_{TEMP}	ROOT 𝔸 [TEMP]	NEW ℙ D_{PRED}
☞ a.			*			*			
b.			*	**!					
c.			*	*	*!	*			
d.		**!				*			

4.6.4. Accounting for the different forms of the resumptives

According to Newson (2010) and based on assumptions of Distributive Morphology, the insertion of Vocabulary items is carried out under some notion of 'best fit' for a given bundle of features. The feature bundle resulting in a pronounced personal pronoun is a bundle of functional-features like argumenthood, gender and number. The choice whether a pronoun is spelt out with an overt vocabulary item also depends on the feature specifications of verbs in a given language: if verbal morphology already contains specifications for the grammatical properties of the subject and possibly of objects as well, then the information encoded by neutral personal pronouns, i.e. by those not bearing discourse-related features, appears on the verb, in the form of suffixes, thus making the appearance of weak pronouns redundant (cf. the Hungarian and Spanish examples).

(58) a. El- vitt- em.
PFX-took-past-1st sg. subject, 3rd sg.object
'I took it.'

b. Construyeron un puente.
built-3rd pl. a bridge$_{nom}$
'They built a bridge.' (Zagona 2002:7)

In the case of LD, the pronoun is not a simple grammatical word but bears discourse features as well, e.g. an aboutness feature, and most importantly, in contrastive LD, a definiteness or demonstrative feature, in the form of the [contrast] feature. This section serves to clarify two main issues in connection with vocabulary insertion: (i) the presence or absence of case matching between the resumptive and the dislocated part of the nominal domain; and (ii) the choice between the personal pronoun and the demonstrative, touching upon topics such as the referential properties of the personal pronoun (e.g. the choice between personal pronouns and reflexives in general and its implications for the structure of HTLD).

4.6.4.1. The question of case matching between the resumptive and the dislocate

There have been various approaches to the issue of case matching or its absence with LD constructions in the syntactic literature, the most common assumption being that the to-be dislocated noun and the resumptive are inserted as one complex element in the structure and their case matching is due to this original connectedness. Absence of case matching, on the other hand, is explained by the base-generation of the dislocated item in a high, non-argument position. Here, I intend to argue for the claim that the possibility of case-matching depends on the language-specific distance and direction of agreement inside the nominal domain.

In German contrastive LD and in Hungarian LD, we find case matching: these are the instances when the dislocated item and the resumptive are closer to each other, the resumptive being in a fronted topic position. In German HTLD and English LD, no case matching is attested and in these cases the resumptive sits in argument position and hence is often further removed from the dislocated element.

However, proximity to the nominal domain cannot be the only cause of case matching. English subject left dislocation has to be mentioned as a counterexample, as in this special case, the dislocate and the resumptive are placed next to each other and in spite of this, there is a clear mismatch, with the dislocated item standing in default accusative case and the subject in nominative.

(59) ***Me, I*** ask. *etc.*

In the present model, these facts will be derived from the process of vocabulary insertion, more specifically from the 'scope' of the argument feature and insertion specifications of nouns and pronouns. To explore these ideas, let us review the related facts in the analysed languages.

In German and Hungarian, demonstratives and determiners are able to agree in case with the corresponding noun, as the examples in (60) and (61) show. In Hungarian, case markers appear both on the demonstrative and the noun, in German it is attested only in the plural dative (61b), otherwise the noun cannot bear case suffixes.

(60) ez-**t** a kutyá-**t**

this$_{ACC}$ the dog$_{ACC}$

this dog

(61) a. d**e-n** groß-en Hund

the$_{ACC}$ big$_{ACC}$ dog

the big dog

b. mit dies-**en** ziemlich groß-en Hund-e**n**

with these$_{PL,DAT}$ fairly big$_{PL,DAT}$ dog$_{PL,DAT}$

with these fairly big dogs

What both structures demonstrate is that the argument feature which is located after the nominal root, e.g. in a nominal bundle like [def][num]Root[arg], is able to affect the form of non-adjacent elements as well, such as the spellout of the definiteness and the deictic features. One way to encode this would be in the vocabulary specifications of determiners and demonstratives, that the selection of a particular form is sensitive to non-adjacent argument features. The vocabulary entry in (62) shows that the spell-out of the combination of a singular, deictic and a gender CU in German, which might have the forms *dieser, diesen, diesem, dieses*, is decided by a non-adjacent argument feature (indicated by the points in brackets before [arg]), which encodes case specification. In a full-fledged nominal domain containing a Root CU as well, the argument feature is never directly adjacent to the pre-root definiteness and deictic features, i.e. long-distance case matching must be possible inside the nominal domain in German. The contextual restriction in (62) refers to the closest possible argument (or adjunct) feature, i.e. the insertion mechanism first locates the preroot features that can be spelt out as one vocabulary item then looks for the next argument feature to obtain information about case. To be more specific, the possible 'distance' for case matching is a configuration in which no CUs which are marked as being members of different domains intervene.

(62) [deictic][masculine][#] ↔ **diesen** / _____ (...) [arg$_2$]

In contrast, case agreement of pre-root elements and the noun is not possible in English. Of course, the question arises whether it is possible at all to witness the effect of the argument feature in English. The answer is positive, if we look at the form of personal pronouns, which can express nominative and another case, which surfaces if the pronoun is

not associated with the first argument feature: these are cases when it is associated with an argument feature different from [arg_1] or with an adjunct feature or with nothing. To take a specific example, the difference between the insertion of the first person pronouns '*I*' and '*me*' is demonstrated in (63). The second case (b) serves to define the default case with an elsewhere condition; that is why the specification of the environment is not given. In a., the environment in which the vocabulary item '*I*' is inserted for the [speaker] CU is defined as one in which the CU is immediately adjacent to the [$argument_1$] feature.

(63) a. [speaker] ↔ '**I**' / __[arg_1]
b. [speaker] ↔ **'me'**

In sum, the above examples point to the fact that only direct left-adjacency to the argument CU can trigger case-marking in English, whereas it is possible inside the whole nominal domain in German and Hungarian, i.e. root and functional CUs, which are part of the same nominal domain, can intervene between the argument feature and the affected CUs. Thus, the insertion properties of items associated with the argument feature are different cross-linguistically, which stands in connection with case matching phenomena in LD constructions.

Turning to the situation in subject LD, the most intricate case for case assignment, the featural structure of a dislocated pronoun and its resumptive looks like (64a). Because of the [NEW] & ROOT requirement, the argument feature is not directly adjacent to the pronoun feature [speaker] or to the nominal Root (64b), thus, the default case for pronoun insertion becomes effective, repeated here as (64b), together with the more specific condition for nominative case assignment (65a). The latter condition (a) does not hold here, as the $argument_1$ feature and the Root or person/number feature should be directly adjacent. As a result, the default case will be assigned.

(64) a. [**speaker**] [new] [**arg_1**][about]
b. **Root** [new] [**arg_1**][about]

(65) a. [speaker] ↔ '**I**' / __[arg_1]
✓ b. [speaker] ↔ **'me'**

In other cases of Hanging Topic LD in English, the distance between the root and the argument feature is even bigger, as several other nominal and verbal CUs and roots

intervene, which makes case matching impossible. The situation is the same with German, as unrelated nominal features intervene between the root or determiner and the relevant argument feature.

A defining characteristic of contrastive LD is the adjacency of the dislocated item and the pronoun. Let us observe how this affects the insertion mechanism in German and Hungarian. As has been argued for, case matching is possible at greater 'distances' in the above languages than in English; this fact can be reflected by the lexical specification of determiners and roots as in the following Hungarian examples, in the form of specified environments (66). The same template is assumed for German.

(66) a. ROOT ↔ *kutyát* /_ (...) [arg_2]
[deictic][distal][#] ↔ *azt* / _ (...) [arg_2]

The condition for case matching, if the feature and the root are not directly adjacent, again, is that no other intervening item which bears a different domain marker can be present, as in the sample featural representation (67), which surfaces as a dislocated nominal item and a fronted resumptive.

(67) [$deictic_{nom}$][$distal_{nom}$][#]Root[new] [$\mathbf{arg_{2nom}}$][about]
a kutyát azt
the dog_{ACC} $that_{ACC}$

Using a German example, I repeat here the assumed output order of a contrastively left dislocated item and its adjacent resumptive (68). The circumstances do not substantially differ from that in a nominal domain without a split (69), the only difference is that the newness feature intervenes between the root and its argument CU. As intervening items belonging to different domains do not block case-matching under the circumstances given above, the argument CU can influence the form of the definite article in the dislocation structure as well.

(68) **[def]** **Root**[new] [$\mathbf{arg_2}$][$about_2$][$contr_2$]
'den *Hans* *den'*
the_{ACC} Hans $that_{ACC}$

(69) **[def]** **Root**[**arg$_2$**][about$_2$][contr$_2$]

'den Hans'

the$_{ACC}$ Hans

It has to be mentioned that differently from English, nominative serves as default case in German and Hungarian. This information can be included in the Vocabulary being language-specific. McFadden (2006) also demonstrates the default status of nominative in German similarly to other languages like Arabic, Russian and Icelandic, and in contrast to English. He takes the position that extra features are at work if the non-default case has to be inserted; the emergence of the default case is viewed as lack of specification: 'Default case is not the case that is assigned when other cases fail but the actual lack of case' (ibid. p. 7). This is similar to the assumption made in the present account, i.e. the lack of an argument CU results in default case assignment, as Case is determined by the [arg] CU.

To sum up the discussion, it has been shown that dissociation of the root and the argument feature in LD expressions has different consequences cross-linguistically. Based on the agreement relationships observed inside nominal domains, the relevant vocabulary insertion templates have been exemplified. The choice of the type of the inserted pronoun will serve as the main topic of the next section.

4.6.4.2. Personal pronoun or demonstrative?

If in situ, the spelling out of the aboutness plus argument feature corresponds to a weak personal pronoun, as in the case of weak topics. The fronted resumptive in German and Hungarian is realised as a demonstrative pronoun, neutral for distance: this points to the fact that there is an extra discourse feature at work, which has been called 'contrastive' in the above analysis. The appearance of the contrast feature contributes to the formation of a strong topic.

The personal pronoun has the same morphological features as its demonstrative counterpart, they only differ in the 'strength' feature: the personal pronoun is always weak, thus it can never occupy an accented position; the demonstrative, as it also functions as the definite article, has both a weak and a strong form. Clearly, personal pronouns must be specified for fewer features; in case of demonstratives, there is an extra (contrast) meaning.

It is important to mention the notion of ‘deixis’ which is a particular function of the class of pronouns, pointing to an item in the communicative situation (Eisenberg 1989).

In my view, contrast entails a deictic meaning in the sense that contrasting something either explicitly or implicitly with another item involves an act of pointing to the item(s) under consideration. Translated in terms of input features, if a resumptive is realized as a demonstrative pronoun, then it must happen due to a presence of an extra discourse feature like [deictic] or [contrast]. This corresponds to the observed facts that the presence of the contrast feature triggers a deictic interpretation both in German and Hungarian, which is exemplified in (70):

(70) [arg_1][$about_1$][$contr_1$] ↔ ‘*der*’ / ‘*az*’
that$_{NOM}$

In Hungarian, we are faced with a special case, as personal pronouns appear only in marked cases. In line with this, there are no in situ resumptives like in the other attested languages. One reason for this is that the aboutness feature alone triggers topicalisation, thus the pronoun is fronted along with the dislocated item. This has of course an effect on the form of the resumptive: most likely, it is a demonstrative pronoun of the form ‘*az*’ (‘that’). In some cases an accented personal pronoun (like ‘*ő*’=’he/she’) is used – although mostly in self-correctional contexts, when the speaker tries to avoid the usage of the demonstrative referring to a person, which is considered by many as being ‘against the norm’. Moreover, even the use of the personal pronoun can be regarded as a marked option in Hungarian, especially in nominative and accusative, as these pronouns can also be incorporated in the verbal inflection in the unmarked case. It also has to be noted that in case of inanimate referents, the form of the personal pronoun is ‘*az*’, which coincides with the demonstrative. Therefore the vocabulary item gives no clues about the underlying features in this case. In the case of animate referents, there is a tendency to use the personal pronoun if the function of LD is closer to referent-introduction than to contrast. Many examples obtained from everyday usage speak for this.

(71)	Péter,	***ő***	tegnap	vizsgázott.
	Peter$_{NOM}$	he$_{NOM}$	yesterday	exam-took

Peter, he took the exam yesterday.

In connection with English, it must be noted that the resumptive is never associated with the contrast CU, as argued for earlier in the analysis, as in (72): a. is schematic representation of the nominal items involved in a non-subject contrastive LD, whereas b. shows subject LD involving a contrast CU, where the dislocated item and the resumptive are located next to each other in the output. This corresponds to the observation that the relevant form of the personal pronoun is inserted from the vocabulary as the resumptive, not a demonstrative, as only the pragmatic features following a root or an argument CU can be spelt together with it. This way, the argument CU surfacing as the resumptives is never associated with [contrast] in English LD structures.

(72) a. Root[new][contr] .... [arg][about]
b. Root[new][contr] [arg][about] ...

Bosch & Umbach (2007) make interesting observations about the reference of German pronouns, some aspects of which are relevant for supporting the contrastive interpretation of demonstratives. They remark on the insufficiency of earlier approaches to the interpretation options of personal and demonstrative pronouns, where the generalisations about the possible referents of pronouns were made on the basis of grammatical function, e.g. personal pronouns tend to refer to subjects, as the most common assumption. The authors show that referential properties are rather linked to information structure, and possible correlations with grammatical functions are the result of the pairing of typical grammatical positions with discourse roles, like the subject–topic relation.

> *'The preferred referents of personal pronouns are discourse topics which are – under an assumption of referential continuity of discourse – the most expectable referents. Demonstrative pronouns choose their referents in contrast to the currently most expectable referent [...].'* (Bosch&Umbach 2007:50)

The function of demonstratives lies in pointing out elements, which are to be found in the immediately preceding utterance, but have not been functioning as topics there, i.e. they are less expectable than topics, therefore require an extra effort to count as established and be referred to with a pronoun. The following examples are given in support of the above observation.

(73) a. Peter$_i$ wollte mit Paul$_k$ Tennis spielen. Doch **er$_{\{i,k\}}$** war krank.
Peter wanted with Paul tennis play but he$_{personal\ pronoun}$ was ill
b. Peter$_i$ wollte mit Paul$_k$ Tennis spielen. Doch **der$_k$** war krank.
Peter wanted with Paul tennis play but that$_{demonstrative}$ was ill.

(74) a. Peter$_i$ wilde met Paul$_k$ gaan tennissen. Maar **hij$_{\{i,k\}}$** was ziek.
Peter wanted with Paul go tennis but he$_{personal\ pronoun}$ was ill
b. Peter$_i$ wilde met Paul$_k$ gaan tennissen. Maar **die$_k$** was ziek.
Peter wanted with Paul go tennis but that$_{demonstrative}$ was ill

The above German (73) and Dutch (74) examples illustrate the tendency of demonstratives to refer to the closest possible antecedent, or to put differently, the most salient referent. A possible definition and the relationship of salience and pronoun usage are formulated as follows by Masharov (2008:14-15):

> *'This notion of salience in language and discourse [...] is sometimes used interchangeably with focus, accessibility, prominence, activation, retrievability, availability, etc. In any case, the cognitive status of a referent described in these terms is assumed to partly determine the anaphoric form used to access that referent.'*

The disambiguation function of demonstratives is also mentioned in the descriptive grammar of Dreyer–Schmitt (2009:215). They are used instead of possessives, which are related to personal pronouns, in cases when a gender-specific possessive is judged ambiguous in a context, i.e. it has more possible antecedents of the same gender. This is demonstrated in (75b), where '*sein Freund'* (*his friend*) could refer to both '*Direktor*' and '*Sohn*'. Again, the demonstrative is able to refer to the item closer to it.

(75) a. Heute besuchte uns unser Direktor mit seinem Sohn$_i$ und **dessen$_i$** Freund.
today visited us our director with his son and that$_{gen}$ friend
b. Heute besuchte uns unser Direktor$_i$ mit seinem Sohn$_j$ und **seinem$_{i/j}$** Freund.
today visited us our director with his son and his friend

4.6.4.2.1. Residual issues

4.6.4.2.1.1. Further differences between personal pronouns and demonstratives

Some peculiarities of personal and demonstrative pronouns, which are less closely connected to the contrastive—non-contrastive distinction between them, are worth mentioning here. Their further referential properties come to light, when the clause contains quantified expressions as well. Due to the nature of the resumptive element, different binding relations are established. If the resumptive of LD is a demonstrative pronoun (d-linked), the dislocated phrase can be bound by an element inside the matrix clause. If it is a personal pronoun, on the other hand, binding is impossible. The results are the same in German and Hungarian, with comparable English facts.

In (76), the structure with a demonstrative, the meaning of the utterance can be summed up as '*each person would give a loan to his/her consultant'*; i.e. '*everybody*' in the main clause is able to bind '*his consultant'*. In (77), however, the interpretation allows only the following form: '*there is only one consultant (someone's consultant), whom everybody would give a loan*'.

(76)	A témavezetőjének,	**annak**	mindenki	szívesen	kölcsönadna	pénzt.
	his$_{DAT}$ supervisor	that$_{DAT}$	everybody$_{NOM}$	willingly	loan-give	money$_{ACC}$
(77)	A témavezetőjének,	**neki**	mindenki	szívesen	kölcsönadna	pénzt.
		him$_{DAT}$				

Thus, the differences in interpretation are not due to differences in structural positions and derivations, as the word orders of the examples are identical. The nature of the resumptive pronoun constitutes the only difference between the pairs of clauses. Although in English only one structure is attested with LD, it can be contrasted with topicalisation, where binding seems to be possible.

(78) *His supervisor*, everybody would give a loan *to him*.

(79) *To his supervisor*, everybody would give a loan.

Reconstruction data from German show that contrastive LD allows bound variable readings of pronouns. The possessive pronoun '*seinen*' is coreferential with (bound by) '*jeder*' in (80). Compare this with (81), where coreference is impossible and '*ihn*' refers to someone else's best friend. If the demonstrative resumptive is located in the middle field, we obtain the same interpretation with binding, as with (80).

(80) *Seinen$_i$ besten Freund,* ***den*** sollte <u>jeder$_i$</u> gut behandeln.
his$_{ACC}$ best friend that$_{ACC}$ should everyone$_{NOM}$ well treat
His$_i$ best friend, everyone$_i$ should treat well.

(81) *Sein$_i$ bester Freund, jeder$_{j/*i}$* sollte ***ihn*** gut behandeln.
his$_{NOM}$ best friend everyone$_{NOM}$ should him$_{ACC}$ well treat
His$_i$ best friend, everyone$_j$ should treat him well. (Grohmann 2000: 160)

(82) *Seinen$_i$ besten Freund,* <u>jeder$_i$</u> sollte ***den*** gut behandeln.
his$_{ACC}$ best friend everyone$_{NOM}$ should that$_{ACC}$ well treat
His$_i$ best friend, everyone$_i$ should treat well.

The above facts have been widely used in mainstream generative literature to draw conclusions about structural positions and the clause-internal vs. clause-external position of the dislocated item, and, connected to these assumptions, about base-generation vs. movement of dislocated items. It turns out that the presented interpretational differences only depend on the form of the resumptive pronoun, i.e. whether it is realized by a personal pronoun or a demonstrative, regardless of their position within the clause.

The solution to the explanation of this phenomenon must lie in the featural makeup of personal and demonstrative pronouns. To reflect the above regularities, one could think of the solution that demonstratives can be equipped with a [dependent] feature which allows binding, whereas personal pronouns always lack this feature; the functional CU might also be called [(non-)fixed reference], as the personal pronoun is apparently able to refer only to a non-variable referent. Of course, this might be underspecified in the input feature bundle spelt out as the pronoun, e.g. in regular LD or contrastive LD when the choice between the two pronouns is made rather on the basis of the presence or absence of the [contrast] feature. However, when a certain meaning is intended by the speaker, i.e. (80) or (81), then the choice is made on the basis of the presence of the distinguishing CU. It appears then that the presence of this reference determining CU is more important for

vocabulary choice than the presence of the [contrast] feature, which can be encoded in the vocabulary entries of the pronouns.

4.6.4.2.1.2. Topics associated with contrastive particles in Hungarian

The group of Contrastive Topics in the narrow sense is defined in Lipták (2010), as a subcategory of Contrastive Topic. As already discussed in Section 2.4.3. of Chapter 2, these topics are associated with a 'contrast particle' (C-PRT), which include *ugyan, viszont, pedig, meg*; their intonation and formal requirements – no resumption is required – do not differ from ordinary topics. According to Lipták (2010) they are to be treated as a separate category, as they express obligatory explicit contrast.

(83) Anna *regényt* olvas, *novellát* **viszont** nem.
Anna novel-ACC reads short.story-ACC C-PRT not
Anna reads novels; short stories, on the other hand, she does not read.
(ibid, p. 181)

The analysis from such constructions follows naturally from our feature-based system. I claim that it is not these topics themselves that are different from ordinary ones but their combination with the particle does diverge from the norm. As they seem to be 'normal' topics on their own, the feature they bear inherently must correspond to aboutness. In my view, the contrastive reading comes from the additional particle: thus, it is reasonable to assume that this element is endowed with a contrast CU and the combination of the two results in the contrastive topic reading.

Note that this structure is unique in the analysis, as the two features in question are associated with different roots in the input. Of course, the question arises what can be taken as the exact meaning of a particle, as they are quite difficult to define in contrast to other lexical items such as verbs, nouns, adjectives and adverbs. It might well be that they are made up of functional features and the clausal environment determines their actual form[58].

The ordering of the topic and particle is produced as the result of the feature alignment constraints. First, it can be observed that the two items are always adjacent, no intervening material sounds natural in such sentences, as (84) demonstrates.

[58] See Lipták (2010) on distributional behaviour of contrast particles.

(84) *Anna* elolvasta a könyvet, *Péter* (*tegnap) ***pedig*** megnézte a filmet.
Anna PFX-read the book, Peter (*yesterday) C-PART PFX-saw the movie

This state of affairs is accounted for by the constraint that requires adjacency of the aboutness and contrast features, i.e. [ABOUT] **A** [CONTR]. In Section 4.6.3.3., it only has been hypothesized that, due to the similarity of Hungarian LD to German Contrastive Left Dislocation, the Hungarian constraint hierarchy should also contain it in a high-ranked position. The above expressions deliver direct evidence for the working of this adjacency constraint.

Second, the nominal expression is always followed by the contrast-bearing particle not vice versa, i.e. the features come in an [about] > [contrast] order. Again, this is as expected, given the general distribution of the contrast feature in relation to the nominal and pragmatic domain.

4.6.4.2.1.3. A note on LD with epithets

Although my primary aim is to analyse LD constructions in the narrow sense, i.e. those with explicit resumptives pronouns, a note is in place here about LD sentences where the dislocated nominal item is anaphorically related to another full nominal group, an epithet. These constructions (85) have often served to demonstrate the base-generation model of LD, as the two items apparently cannot be related by movement. However, it is also possible to derive these structures in the present model: it might be assumed that the dislocated item and the resumptive noun are introduced in the input as an apposition (e.g. '*John, the idiot'*). This appositional structure is then split up in a way that the more specific part is fronted and the more general one refers back to it.

(85) a. *Tulips,* do you have to plant *new bulbs* every year?

b. *UJohn,*	ngi-yi-thand-a	ngempela	*leyo*	*ndoda.*	Zulu
John1a	1stSG-OC9-like-FV	really	DEM9	man9[59]	

John, I really like that man.' (Zeller 2004: 3)

Riemsdijk (1997) brings up examples against the derivability of LD with epithets from appositional structures. The sentences in the a-examples contain the appositions which are then split in the b-examples and result in incorrect utterances.

[59] Numbers indicate noun declension classes and nominal agreement.

(86) a. Ik heb mijn vriend, de burgermeester van amsterdam gisteren nog gesproken.
I have my friend, the mayor of Amsterdam only yesterday talked to.
b. ****Mijn vriend***, ik heb ***de burgermeester van Amsterdam*** gisteren nog gesproken.

(87) a. Men neemt Trager, een bekende Amerikanaanse strukturalist, in Nederland
One takes Trager, a well-know American structuralist, in Holland
niet serieus.
not seriously
b. ****Trager***, men neemt ***eein bekende Amerikaanse strukturalist*** in Nederland niet serieus. (ibid. 17)

However, the referential values of the nominal expression and the appositive noun do not correspond to that of a dislocated expression and a resumptive or an epithet. It can be stated for resumptives, they are less referential than the preceding dislocated expression; the same is true for epithets. They normally have the form of a qualifying expression (*the idiot*) or a noun expressing the gender of the fronted nominal expression (*the guy*), as in (88)-(89). The feature distribution in epithet LD is assumed to be the same as in LD with pronominal resumption, as indicated in (89).

(88) ***Der Hans*** – ich kenne *diesen Kerl* seit langem.
the$_{NOM}$ Hans I know this$_{ACC}$ guy since long
Hans – I know this guy for a long time.

(89) ***Der Hans***, ich kann *den Idioten* nicht leiden.
[new] [arg][about]
the$_{NOM}$ Hans I can the$_{ACC}$ idiot not suffer
Hans, I cannot bear the idiot.

Thus, epithet LD can be derived from split appositions, where certain referential requirements relating the members have to be observed. If the epithet is too specific, the structure will not have a valid interpretation when its first member is left dislocated.

4.7. Summary

The aim of this chapter has been to present an analysis of the main subject of the dissertation, i.e. Left Dislocation, in an OT system based on alignment and Late Insertion of vocabulary items. After presenting the relevant alignment and faithfulness constraints, language-specific rankings for topicalisation has been set up, on the basis of which the system has been extended to cover LD constructions in the three languages under discussion. Apart from the surface ordering of CUs, I also turned to the issue of vocabulary insertion, especially in connection with the resumptive in dislocation expressions.

It can be stated that the combination of the constraints on nominal feature bundles and those referring to clausal word order is able to account for the variation in LD types cross-linguistically, regarding the position of the dislocate, the resumptive and the finite verb as well.

The differences in the form of the resumptive are argued to be based on two factors: (i) the presence of the [contrast] feature on the bundle containing the argument CU forces a demonstrative interpretation, i.e. in cases when the resumptive pronoun is fronted, it will be most likely to be spelt out with a demonstrative form; (ii) case matching between the resumptive and the fronted lexical item is connected to the language-specific 'distance' of case assignment: in English, only immediate adjacency to the argument CU results in case matching, whereas [arg] has a greater 'scope' in German and Hungarian, in which case matching with fronted resumptive pronouns is attested.

In conclusion, the system has proven to be effective in assessing phenomena related to topicalisation and discourse relations. In the next chapter, the analysis will be extended to interrogative expressions. I investigate the regulations underlying wh-interrogatives and, secondly, the occurrence of Left Dislocation in wh-domains, where I will argue that the triggers for its emergence are distinct from the pragmatic condition on new topic promotion.

Chapter 5. Left Dislocation in interrogative clauses

This chapter serves to extend the analysis of Left Dislocation to matrix interrogatives. It will be demonstrated how the 'repair strategy' function of LD works in questions in which syntactic topicalisation would be ungrammatical. This difference in function will be reflected by the feature combination of the dislocated item; however, the same set of constraints laid down in the previous chapter, augmented by the constraints referring to the interrogative feature, is able to derive the correct results.

My aim in this chapter is to demonstrate that LD can also surface in an environment different from the one which is induced by the pragmatic principle on new topics. By presenting a different strategy which also results in LD in the output form, the applicability of the constraint system established so far can be tested.

The outline of the chapter is as follows. First, general issues about single and multiple fronting and finite verb positions will introduce the topic. Then, the language-specific analyses will follow, concentrating first on wh-movement, then integrating topicalisation or LD, respectively, into the picture. I will also touch upon the status of embedded and matrix wh-structures in the subsection on English clauses. Treating multiple wh-fronting briefly, I construct a hypothesis on the possible connections between wh-marking and weak topicality. Connected to the issue of adjunct types, which will come into view in the analysis of English, I will reflect on the ability of certain adjuncts to take part in Left dislocation which leads to further insights on the featural makeup of nominal bundles.

5.1. Aims of the analysis

5.1.1. Deriving single and multiple wh-fronting with alignment constraints

First, let us turn to interrogative structures containing one interrogative item (a question word or a nominal expression containing a question word) characterized by the presence of the [wh] feature. Two substantial issues arise in connection with wh-structures which will be considered in the analysis. The first one concerns the proper form of the constraints in order to be able to derive both single and multiple wh-fronting languages, and connected to

this, the exact nature of the domain with respect to which the [wh] feature is aligned. Let us turn to the latter issue first.

If we consider matrix interrogatives, the domain to which the [wh] feature is aligned is clearly what has been called the predicate domain, comprising the temporal domain, argument and adjunct CUs belonging to the predicate. However, wh-items are able to appear as parts of bigger domains than the predicate domain they are part of, cf. the examples in (1). In both cases, the wh-marked item belongs to the embedded predicate domain, but precedes the higher matrix predicate domain.

(1) a. ***Who*** do you think *drank all the wine*?
b. ***What*** did John hope *Bill had seen*?

It seems that the wh-item is not only first its own predicate domain but it can precede more inclusive domains. This stands clearly in connection with the ability of the wh-item to take scope over other elements. Thus, we can preliminary define the wh-domain as follows.

(2) The interrogative domain (shorthand: D_{wh}): contains the wh-feature and the elements in its scope, i.e. the predicate, its arguments and adjuncts.[60]

Naturally, the question arises how this domain is to be identified, without resorting to additional assumptions about structure or introducing new theoretical terminology that complicate the system. Newson (2000) argued that while Alignment Syntax does not allow the possibility of defining an 'interrogative clause', it seems reasonable to assume that marking the semantic head of the clause, the predicate, as interrogative would serve the same purpose. Predicates which take 'clausal complements' are associated in the input with other predicates as one of their arguments. In the input for (1a), for example, *think* is associated with *drink* as an argument. As some verbs subcategorize for declarative and others for interrogative complements, it follows that the marking for declarative and interrogative will fall on the argument predicate. By extension, we can also assume that the matrix predicate can also be marked so.

[60] Looking at the nature of the domain in question from a wider perspective, it could also be called the 'operator domain', as operators generally define a scope domain.

This way, the interrogative domain can be defined as the predicate domain of a predicate marked as 'wh' semantically. This will involve a wh-indexing of the interrogative domain, i.e. similarly to the members of a predicate domain, the dependents of the predicate including the argument and adjunct features, together with the CUs of the temporal domain, will be marked for belonging to the interrogative domain.

When dealing with English in detail, the positing of a further domain becomes necessary, i.e. that of the central predicate domain as opposed to the extended predicate domain. The reason for this distinction lies in the different behaviour of central and peripheral adverbials with respect to topicalizability. A similar state of affairs has been observed in Finnish as well (Newson & Maunula 2006). As this distinction does not affect the analysis of German and Hungarian with respect to our subject of investigation, this distinction will not be dwelt on in their analysis.

After having defined the interrogative domain, the forms of the wh-constraints need our attention. A crucial issue is whether they are powerful enough to derive different language types with respect to wh-fronting. In former optimality theoretic literature, the account of Ackema and Neeleman (1998) had a similar aim. They propose the constraints in (3)-(4). Q-SCOPE is responsible for multiple wh-fronting, as the criterion is defined from the point of view of the wh-item, whereas the other constraint, Q-MARKING, is formulated from the perspective of the clause, from which results that it can be fulfilled by a single wh-item as well.

(3) Q-SCOPE: '[+Q] elements must c-command VP at surface structure.'

(4) Q-MARKING: 'A question must be overtly Q-marked.'

(Ackema & Neeleman 1998: 16-17)

The same effect could also be achieved by alignment constraints, similarly to Baloghné Nagy (2013). The most straightforward idea would be to posit a wh-precedence constraint of the form demonstrated in (5).

(5) [WH] ⊲ D_{WH}: the [wh] CU precedes the interrogative domain. Violated by every member of the interrogative domain which precedes [wh].

This formulation corresponds to the idea of Q-SCOPE, because it would front all nominal domains containing the wh-feature, as the constraint is one concentrating on the feature itself; thus it will assess every wh-feature with respect to its position. This form of

the constraint is presumably operative in languages with multiple wh-movement, such as Hungarian.

Another option is to look at the situation from the perspective of the predicate domain: in case of an interrogative predicate, its domain has to be preceded by a [wh] feature, or in other words, it has to follow a [wh] feature. Here, the constraint focuses on the position of the predicate domain, which means that the requirement is satisfied if the domain is preceded by one relevant feature, regardless of the fact how many such features are present in the string.

(6) D_{WH} **F** [WH]: the interrogative domain has to be preceded by a wh-feature. Violated when no [wh] CU precedes the interrogative domain.

The second question concerns the position of the finite tense in matrix interrogatives. In all of the languages in question the wh-phrase is directly adjacent to a verbal element in a matrix clause, either to the lexical verb or to an auxiliary. Although inversion is not restricted to interrogative structures, this phenomenon deserves our attention, too. I propose the existence of a constraint which forces the finite tense CU in a matrix clause to be dislocated from the temporal domain and appear in second position.

The matrix tense constraints are assumed to be ordered as in (7), which, again, derives a second-position phenomenon, similarly to the constraints referring to the matrix tense CU and the predicate domain in German declaratives in Section 3.4.2.1. of Chapter 3. The matrix [tense] feature must be as close to the front of the wh-predicate domain as possible, but it cannot precede it. This way, the matrix [tense] CU loses its adjacency to the rest of the temporal domain in the majority of cases.

(7) $TENSE_{MATRIX}$ ***P** D_{WH} > $TENSE_{MATRIX}$ **P** D_{WH}

On the basis of the above, it can be stipulated that the tense feature sometimes loses its marker which connects it to the temporal domain, as it appears to be behaving differently from the other domain members. We therefore need a specific faithfulness constraint to prevent the excessive deletion of temporal domain markers in the same vein as we proposed faithfulness constraints against the deletion of nominal domain markers in chapter 4. The specific formulation of faithfulness concerning the temporal domain is given as (8).

(8) FAITH(DM$_{TEMP}$): violated by an input temporal domain marker which is absent in the output. (Abbreviated as FAITH$_{TEMP}$ in tableaux.)

In section 5.2., we will briefly review the question of whether one of the wh-constraints and the three constraints on verb-second can derive the desired structures in the languages under discussion, i.e. (i) inversion in matrix wh-clauses with the exception of subject questions in English; (ii) uniform verb-second in German; (iii) side-switching of the tensed verb and the verbal prefix in Hungarian interrogatives; (iv) single vs. multiple wh-fronting.

5.1.2. Interaction of wh-fronting with topicalisation and Left Dislocation

Another fact in connection with wh-interrogatives concerns the position of the wh-item: it prefers to be first in a clause in English and German, whereas it can be freely preceded by one or more topics in Hungarian. However, the conditions on this initial position are not uniform in English and German, either. In the former, a peripheral adjunct functioning as a topic, e.g. (11), can come in front of a wh-item, but topicalized arguments cannot. In German, no other element can precede the wh-item except for a left-dislocated one, which is also possible in English. I argue that the reason for the emergence of LD in English and German questions is that the wh-phrase demands to come in front of all the elements of the interrogative domain, i.e. the interrogative predicate, its arguments and adjuncts, which means that it aims to precede all [arg], [adj] and temporal features. The resumptive saves the situation by representing the missing argument in situ, while the fronted phrase is dislocated from the clause domain and is not regarded as part of the predicate domain.

In the following state of affairs (9)-(10), LD acts as a repair strategy with argument topicalisation in English. In the (a.) examples, the expression is rendered ungrammatical by D$_{WH}$ F WH, which demands that the interrogative domain be preceded by a wh-CU, as an argument, which is part of the predicate domain, precedes the wh-item. In the other case, the argument has been left dislocated. As observed earlier, LD frees the fronted element from its argument features, which are then, along with the morphological features, placed on the resumptive occupying the argument position, thus allowing the high ranked D$_{WH}$ F WH to be satisfied. In contrast, a wh-structure with a topicalised temporal adjunct is

listed as well in (11) to demonstrate its grammaticalty. It seems that adjuncts are allowed to precede the predicate domain in an interrogative clause in contrast to arguments.

(9) a. *$\boldsymbol{John_{arg}}$, who has seen?

b. ***John***, who has seen $\boldsymbol{him_{arg}}$?

(10) a. ****Those petunias***, what did Joan do with?

b. ***Those petunias***, what did Joan do ***with them***?

(Rodman 1974, cited in Altmann 1981:147-148)

(11) ***During the holidays***$_{\text{TOP}}$, what will you write?

The German facts concerning wh-questions diverge from the English ones in that no other element can precede a clause-initial wh-element, apart from dislocated phrases in HTLD constructions. We find similar restrictions in Dutch (13) (Dutch examples from van Riemsdijk (1997:4) with glosses added).

(12)	a. ***Gestern**,	wo	hast	du	Johann	gesehen?
	yesterday	where	have	you	John	seen
	b. ***Johann,**	wo	hast	du	gesehen?	
	John	where	have	you	seen	
	c. ***Johann***,	wo	has	du	***ihn***	gesehen?
	John	where	have	you	him	seen
(13)	a. ****Jan***	waar	heb	ja	gezien?	
	John	where	have	you	seen	
	b. **Jan**,	waar	heb	ja ***die***	gezien?	
	John	where	have you that		seen	

These and the above examples point to the fact that constraints of different strength need to be operative language-specifically. The difference between the above regularities will be captured by defining two types of interrogative domain, parallel to the two types of predicate domain established by Newson and Maunula (2006), i.e. the central and peripheral domains. The details will follow in section 5.2.1., during the discussion of English questions.

To mention Hungarian, wh-precedence constraints are the lowest ranked here in comparison to the other two languages. Arguments and adjuncts can precede wh-phrases

but only if they are obliging a higher ranked requirement, e.g. topicalisation; other cases will be assessed by the wh-precedence constraints.

In those languages which make use of repair strategy LD, it is always the topical item which undergoes splitting (indicated by boldface) as in the schematic representation (14a), never the wh-item, which could be considered as a possibility (14b).

(14) a. **R[contr]** *[wh]arg* tense arg_1 **arg[about]**

b. **[wh]** *R[arg][about][contr]* tense arg_1 **arg**

This regularity can be accounted for by an alignment constraint referring to the adjacency of the interrogative feature and the nominal domain. It has to be a higher-ranked requirement than the constraints which aim at keeping together the CUs forming a nominal expression functioning as topic, e.g. [CONTR] ≪ [ABOUT]. Note that because of the surface morphological form of interrogative items, I will assume that the [wh] CU precedes the nominal domain.

(15) [WH] ≪ D_{NOM}: the [wh] feature is adjacent to the nominal domain. Violated by elements which intervene between the [wh] feature and the edge of the nominal domain.

The next section demonstrates how the different hierarchical rankings of the constraints yield different, language-specific effects.

5.2. The language specific rankings in detail

5.2.1. English

The following schemas represent the English interrogative word orders, with possible topics, with respect to the fact how they deviate from the basic word order; the grey background indicates declarative word order as the default one, as has been set up earlier.

(16) a. top_{adj} **wh** *tense* arg_1 D_{temp} (arg_2 arg_3)

b. top_{adj} **wh**$_{arg1}$ D_{temp} (arg_2 arg_3)

For a declarative matrix clause, no distinct word order had to be set up from the basic order. However, if we also consider clauses containing wh-operators, the position of the matrix tense feature has to be defined, similarly to German matrix structures. The matrix tense CU has to be second in the interrogative domain, which can be achieved by the following pair of constraints ordered as in (19), which is responsible for the second-position effect.

(17) TENSE_M *Ꝑ D_{WH}: violated if the matrix tense feature precedes every member of the interrogative domain.

(18) TENSE_M Ꝑ D_{WH}: violated by every member of the interrogative domain that precedes the matrix tense CU.

(19) TENSE_M *Ꝑ D_{WH} > TENSE_M Ꝑ D_{WH}

In English, two different patterns emerge in matrix interrogatives. Non-subject questions involve inversion, i.e. the [tense] CU becomes dislocated from the temporal domain and is placed between the wh-item and the first argument. As is well known, we find a different pattern in subject questions, where the tense feature stays together with the temporal domain and the root, following the subject.

To derive the former construction, the evaluation of an adjunct matrix wh-question is presented in (T1). Only candidates a. and b. with a [wh] feature in the initial position satisfy the wh-constraint. Candidate b. fares worse on TENSE_M Ꝑ D_{WH}, as one more item, apart from the [wh] CU, precedes the matrix tense.

(T1) Matrix wh-interrogative

Candidates: a. wh [$tense_m$] arg_1 ...
b. wh arg_1 [$tense_m$] ...
c. arg_1 [$tense_m$] wh ...
d. [$tense_m$] wh arg_1 ...

	D_{WH} ~~F~~ WH	$TENSE_M$ *~~P~~ D_{WH}	$TENSE_M$ ~~P~~ D_{WH}	ROOT *~~P~~ ARG_1	ROOT ~~P~~ D_{ARG}
☞ a.			*		*
b.			**!		*
c.	*!		*		*
d.	*!	*		*	

The second issue which has to be discussed concerns the status of the [$tense_m$] feature in English. In the analysis of German matrix clauses (Section 3.4.2.1. of Chapter 3), it has been noted that the tense radically changes positions from the last to second position in the predicate domain, and from the final to the first position in the temporal domain; moreover, it becomes detached from the temporal domain. This state of affairs was derived by deleting the temporal domain marker of the matrix tense CU which violated faithfulness. But a candidate with a deleted temporal domain marker on [$tense_m$] fares better on the constraints assessing the ordering within the temporal domain. This option has to be considered for English as well.

To test the necessity of the index deletion of [$tense_m$], candidates with or without index deletion are compared in (T2). The [tense] CU is not part of the temporal domain in candidates b., d. and e., thus the temporal index of [tense] is deleted in these instances. Candidate b. which has the same surface order than the winning candidate a. differs only in the faithfulness violation from the winner. This reflects the fact that the internal order of the temporal CUs does not change with inversion in English: as always, the [tense] CU is the first in the domain. Candidate c. with a continuous temporal domain, without inversion, fails because of the low position of [tense]; candidate d. which has the whole temporal domain in second position is assessed suboptimal, as the verbal root precedes the subject.

Candidate e. represents the extreme case when all temporal domain indexes are deleted: this satisfies both the constraints on *root—temporal domain* subsequence and those on *temporal CU—temporal domain* precedence, as they are satisfied vacuously. This

demonstrates the necessity of the faithfulness constraint as well and its higher positioning than the above mentioned constraints.

(T2) Inversion and deletion of the temporal domain index on [tense$_m$][61]

Candidates: a. wh [tense$_t$] arg$_1$ [perfect$_t$]Root[progressive$_t$]
b. wh [tense] arg$_1$ [perfect$_t$]Root[progressive$_t$]
c. wh arg$_1$ [tense$_t$] [perfect$_t$]Root[progressive$_t$]
d. wh [tense][perfect$_t$]Root[progressive$_t$] arg$_1$
e. wh [tense] arg$_1$ [progressive]Root[perfect]

	TNS$_M$ *P D$_{WH}$	TNS$_M$ P D$_{WH}$	ROOT *P ARG$_1$	ROOT P D$_{ARG}$	ROOT *F D$_{TEMP}$	FAITH TEMP	ROOT F D$_{TEMP}$	TNS P D$_{TEMP}$	PERF P D$_{TEMP}$	PROG P D$_{TEMP}$
☞a.		*		*			*		*	**
b.		*		*		*!	*			*
c.		**!		*			*		*	**
d.		*	*!	*		*	*			*
e.		*		*		***!				

As the next step, I attempt to model an argument question, and reflect on the differences in the evaluation compared to the former case in (T1). Argument questions are understood as instances when a root associated with a non-subject argument feature also bears the interrogative feature, i.e. the featural makeup of the interrogative item is like [wh]R[arg$_2$].

A predicate with three arguments, with the second argument functioning as an interrogative item, is chosen for the evaluation in (T3). The mechanism is similar to the one in (T1). What has to be observed here is that the basic ordering among the elements of the argument domain is not observed, thus an expression with the violation of the highest argument precedence, ARG$_1$ P D$_{ARG}$, is able to win. As the argument constraints are lower ranked than those on the wh-CU, it will be more important to observe the wh-precedence than argument order.

[61] For clarity's sake, the 'm' index indicating 'matrix' on the [tense] feature will not be represented here, only the presence or the absence of the temporal domain marker, abbreviated to 't'.

(T3) A non-subject argument question

Candidates: a. [wh]arg_2 [$tense_t$] arg_1 [$perf_t$]R[$progr_t$] arg_3
b. [wh]arg_2 arg_1 [$tense_t$][$perf_t$]R[$progr_t$] arg_3
c. [wh]arg_2 [$tense_t$][$perf_t$]R[$progr_t$] arg_1 arg_3
d. arg_1 [$tense_t$][$perf_t$]R[$progr_t$] [wh]arg_2 arg_3

	D_{WH} F WH	TENSE$_M$ *P D_{WH}	TENSE$_M$ P D_{WH}	ROOT *P ARG_1	ROOT P D_{ARG}	ARG_1 P D_{ARG}	ARG_2 P D_{ARG}	ARG_3 P D_{ARG}
☞a.			*		*	*		**
b.			**!		*	*		**
c.			*	*!	*	*		**
d.	*!		*		*		*	**

It has to be demonstrated that the system can also account for the lack of inversion in English subject interrogatives. The winning candidate a. in (T4) has the wh-item in first position followed by the continuous temporal domain. Candidate b. containing a detached tense morpheme fails because one more argument precedes the temporal CUs, thus violating ROOT P D_{ARG} to a greater extent than the winning candidate.

(T4) Subject question in English

Candidates: a. [wh]arg_1 [$tense_t$][$perf_t$]R[$progr_t$] arg_2 arg_3
b. [wh]arg_1 [$tense_t$] arg_2 [$perf_t$]R[$progr_t$] arg_3

	D_{WH} F WH	TENSE$_M$ *P D_{WH}	TENSE$_M$ P D_{WH}	ROOT *P ARG_1	ROOT P D_{ARG}	ARG_1 P D_{ARG}	ARG_2 P D_{ARG}	ARG_3 P D_{ARG}
☞a.			*		*		*	**
b.			*		**!		*	**

Although the above ranking successfully derives the right CU ordering for subject and non-subject questions, a note is in place here concerning Vocabulary insertion. Given the two strings (20) with a complex temporal domain, the tense feature is spelled out by a separate vocabulary item in both cases (‘*have*’), the Root is only spelled out together with the functional CU following it, as established in Newson (2010).

(20) a. non-subject question: [wh]arg_2 **[$tense_t$]** arg_1 **[$perf_t$]R[$progr_t$]** arg_3

b. subject question: [wh]arg_1 **[$tense_t$][$perf_t$]R[$progr_t$]** arg_2 arg_3

A more intricate case is matrix question in simple present or past (21), in which the temporal domain consists of only a [tense] CU. As has been shown in Section 3.4.1. of Chapter 3, their basic order in a matrix clause is R[$tense_m$] as a result of the interaction of the second-to-last constraints on the verbal root (ROOT *F D_{TEMP} > ROOT F D_{TEMP}). In non-subject interrogatives, the tense feature is separated from its Root, thus it has to be spelled out by a separate vocabulary item.

(21) a. non-subject question: [wh]arg_2 **[$tense_t$]** arg_1 **R** arg_3

b. subject question: [wh]arg_1 **R[$tense_t$]** arg_2 arg_3

The possibility that the tense CU and the root are spelled out by two separate vocabulary items and produce an output like '*Who did eat the lasagne?*' in a subject question like the one in (21b), is banned by the 'Theorem: biggest wins', adopted from Nanosyntax (Starke 2009: 3). The principle prefers the insertion of vocabulary items which cover bigger chunks of syntactic structure over those which spell out smaller bundles. Thus, inserting '*ate*' in our example would be preferred over '*did eat'*.

5.2.1.1. Embedded questions

Up to now, only matrix clauses have been mentioned in connection with wh-fronting. However, nominal items associated with the [wh] CU can show up in embedded clauses as well, associated with a wh-marked embedded predicate: in such cases, the constraints on matrix tense with regard to the wh-domain are inoperative, i.e. vacuously satisfied, as the interrogative domain does not contain a matrix tense feature.

An embedded clause with and without inversion is presented in (T5). We can observe the emergence of a low-ranked adjacency constraint, which is necessarily violated in matrix clauses. The constraint [TEMP] A ROOT, introduced in Chapter 3 together with its nominal counterpart, similarly to Newson (2013), ensures the members of the temporal domain are grouped together around the root associated with them. Basically, this constraint is violated if non-temporal elements intervene between the verbal Root and the

members of the temporal domain. Until now, its effect has been presupposed but the constraint has not been represented in tableaux.[62] As all other orders are the same, the adjacency constraint chooses the candidate (a.) which does not split up the temporal domain, which is unnecessary here in the absence of higher-ranked tense-second constraints.

(T5) Embedded question (e.g. (*She asked) when he had lend you the money.*)

Candidates: a. wh arg_1 [$tense_t$]Root[$perfect_t$] arg_2 arg_3

b. wh [$tense_t$] arg_1 Root[$perfect_t$] arg_2 arg_3

	D_{WH} **F** WH	ROOT *P ARG_1	ROOT **P** D_{ARG}	ROOT *F D_{TEMP}	FAITH TEMP	ROOT **F** D_{TEMP}	TNS **P** D_{TEMP}	PERF **P** D_{TEMP}	[TEMP] **A** ROOT
☞a.			*			*		*	
b.			*			*		*	*!

A second possibility also has to be considered: If the wh-item originates from the subordinate clause but the matrix clause is interrogative, the interrogative element ends up in the initial position of the matrix clause. For the sake of clarity, I indicated the members of the matrix interrogative domain with boldface in the candidates of (T6) to show what the different types of constraints 'see'. The fronted [wh] CU is considered as being part of both domains: it originates from the embedded predicate domain but by virtue of its wh-feature it becomes also a member of the matrix interrogative domain. The embedded predicate domain functions as the second argument of the matrix predicate. For a more precise representation of violations, the cells are split up: the first half of a cell refers to the violations incurred by the matrix clause, the second half to the ones of the subordinate clause. The matrix tense constraints refer only to the matrix domain, all others refer to both domains.

[62] Although this constraint can be decisive in matrix contexts as well, e.g. if the temporal CUs, apart from [$tense_m$], were detached from the root, as in the example (1). Here, all the requirements on the ordering of temporal items and the root with respect both to the temporal and the argument domain are met, compare with the correct ordering in (2).
(1) arg_1 **[tense][perf]R** arg_2 **[progressive]** arg_3
(2) arg_1 **[tense][perf]R[progressive]** arg_2 arg_3

As already mentioned, both clauses are interrogative-marked here, therefore both of them have to be preceded by the [wh] CU; this requirement is not met by candidate c., in which the wh-item precedes only the embedded clause. Candidates a. and b. only differ in the presence of inversion in the embedded predicate domain. Candidate a. with the continuous temporal domain will be chosen as in the previous tableau.

(T6) Matrix question with a non-subject wh-item from a subordinate clause

Candidates:								
a.	whom	**do**	**you**	**think**	he	will	lend	money
	[wh]arg_2	**$tense_m$**	**arg_1**	**R**	arg_1	tense	R	arg_3
b.	whom	**do**	**you**	**think**	will	he	lend	money
	[wh]arg_2	**$tense_m$**	**arg_1**	**R**	tense	arg_1	R	arg_3
c.	**you think**		whom		he	will	lend	money
	arg_1 R $tense_m$		[wh]arg_2		arg_1	tense	R	arg_3

	D_{WH} F WH		TNS$_M$ *P D_{WH}	TNS$_M$ P D_{WH}	ROOT *P ARG$_1$		ROOT P D_{ARG}		ARG$_1$ P D_{ARG}		ARG$_2$ P D_{ARG}		ARG$_3$ P D_{ARG}		[TEMP] A ROOT	
☞a.				*			*	**		*	*			**	*	
b.				*			*	**		*	*			**	*	*!
c.	*!			*			*	**		*	*			**	*	

To complete the picture, a similar structure should also be assessed in which the extracted wh-item functions as subject in the embedded clause, because of the special, seemingly finite-first word order within the embedded clause, as in candidate a. of (T7). However, as the fronted wh-subject is still part of the domain of the predicate '*lend*', it satisfies the relevant constraints on the position of arg_1. In candidate b., the second argument has been fronted but together with the fronted subject, they incur more violations on the *verbal root—argument domain* precedence constraint.

(T7) Matrix question with a subject wh-item from an embedded clause

Candidates:								
	a. who	**do**	**you**	**think**	will	lend	you	money
	[wh]arg_1	**$tense_m$**	**arg_1**	**R**	tense	R	arg_2	arg_3
	b. who	**do**	**you**	**think**	you	will	lend	money
	[wh]arg_1	**$tense_m$**	**arg_1**	**R**	arg_2	tense	R	arg_3

	D_{WH}	TNS_M	TNS_M	ROOT		ROOT		ARG_1		ARG_2		ARG_3		[TEMP]	
	F	***P**	**P**	***P**		**P**		**P**		**P**		**P**		**A**	
	WH	D_{WH}	D_{WH}	ARG_1		D_{ARG}		D_{ARG}		D_{ARG}		D_{ARG}		ROOT	
☞a.			*			*	*			*	*		**	*	
b.			*			*	**!			*	*		**	*	

To sum up, it has been demonstrated that both matrix and embedded interrogative clauses can be correctly assessed by the proposed alignment system. In the next step, the interactions of the wh- and topicalisation constraints will be observed.

5.2.1.2. Topicalisation and Left dislocation in English questions

A regularity has been observed in English that fronted wh-elements cannot be preceded by argument domain members, e.g. if one thinks about the case of argument topicalisation. However, a wh-interrogative might be preceded by a syntactically fronted adjunct in certain cases. Thus, the behaviour of nominal items is not uniform in the case of topicalisation in interrogatives but depends on their argument or adjunct status. This raises the question of how this state of affairs can to be reflected in the analysis – presumably not in the form of the topic constraint but by defining the wh- and predicate domains more precisely.

The constraints for LD relevant here are repeated in (22) from Section 4.4.1. of Chapter 4. In the case of LD in questions the triggers for splitting are different, as no clash between discourse features occurs. Rather two relatively highly ranked fronting requirements are fulfilled at the same time with the least cost. The same set of constraints combined with the constraints assessing topicalisation (repeated here in (23) from Chapter 4) is applicable here.

(22) $FAITH_{NOM}$ > D_{NOM} **P** D_{PRAG} > D_{PRAG} **A** [ARG] > $FAITH_{PRAG}$

(23) [CONTRAST] **A** [PRAG], D_{PRED} **F** [CONTR], [CONTR] **P** D_{PRED}

The wh-constraints are then to be combined with the above to achieve the language-specific orderings. However, the situation is not so straightforward, looking at the English facts. As the examples in (24) indicate, arguments are banned from appearing as syntactic topics in a question, whereas adjuncts do not seem to behave uniformly in this respect.

(24) a. **John*, when did you meet?
b. **Quickly*, whom did you give the book?
c. *Last week*, whom did you give the book?

A possible idea would be to assume that the difference lies here in the nature of the adjuncts[63]: intuitively, the adjunct in the example (24b) is more closely connected to the predicate in that it contributes to its meaning; in the other case, the temporal adjunct only adds extra information concerning the circumstances of the event expressed by the predicate. We might assume that Newson and Maunula's (2006) distinction between central and peripheral predicate domains is of relevance here.

(25) $\mathbf{D_{centr}}$: stands for the central predicate domain, which contains the temporal CUs, the argument CUs and the central adjunct CUs associated with the root.
(26) $\mathbf{D_{pred}}$: the predicate domain, which contains all input CUs belonging to the predicate, bearing [temp], [arg], [$adj_{central}$] and [$adj_{peripheral}$] features.

Turning to wh-interrogatives, following the above considerations, I will define the central wh-domain and the extended wh-domain similarly to the types of the predicate domain, to account for the topicalisation patterns in questions. The central wh-domain contains the arguments and central adjuncts of the wh-marked predicate, and it will be indicated by $D_{WH\text{-}C}$ in tableaux; the extended interrogative domain (D_{WH}) contains the arguments and both types of adjuncts, i.e. central and peripheral, of the wh-marked predicate. To account for the possibility of adjunct topicalisation in interrogatives, the following ranking is proposed (27). By ranking the contrast-fronting constraint under the wh-constraint referring to the smaller central wh-domain, peripheral adjuncts will be able

[63] I take arguments as the primary, in the most cases obligatory dependents connected to the predicate. Secondary arguments (defined e.g. in Hedberg&DeArmond 2009), e.g. locatives, are grouped together with adjuncts due to their syntactic behaviour.

to precede an interrogative expression without violating the two high requirements. The absolute wh-precedence is not left out of the hierarchy, either, its main function is to rule out items fronted without a pragmatic reason.

(27) $D_{WH\text{-}C}$ **F** [WH] > [CONTR] **P** D_{PRED} > D_{WH} **F** [WH]

It should not be forgotten that Left Dislocation has to be banned in expressions with a fronted peripheral adjunct: the lower wh-constraint cannot be satisfied by splitting the topical adjunct into dislocated and resumptive parts. Therefore, the constraints which regulate the nominal split must dominate the general D_{WH} **F** [WH] but be ranked under $D_{WH\text{-}C}$ **F** [WH], as this latter condition should always be fulfilled. In addition, the faithfulness constraint must dominate the constraint on topic fronting ([CONTR] **P** D_{PRED}) as discussed earlier in Section 4.4.3. of Chapter 4, to avoid the emergence of LD instead of syntactic topicalisation in declaratives.

(28) $D_{WH\text{-}C}$ **F** [WH] > D_{NOM} **P** D_{PRAGM} > D_{PRAG} **A** [ADJ][64] > $FAITH_{PRAG}$ >
[CONTR] **P** D_{PRED} > D_{WH} **F** [WH]

In the first tableau (T8), topicalisation of an adjunct marked peripheral item in a matrix interrogative will be demonstrated using the above constraints. The fronted expression bears the CUs [about] and [contrast]. In such cases, no LD is necessary as a repair strategy: the higher wh-constraint is only sensitive to argument features and central adjuncts. To show the restrictive force of the system, candidates d-f. are also included to represent expressions with incorrect left dislocation of the peripheral adjunct.

Candidates a-c. stand for syntactic topicalisation variants. The winning candidate a. satisfies both the higher wh-precedence constraint referring to the central predicate domain and the contrast-precedence constraint, although it cannot satisfy the constraint which defines the absolute precedence of the wh-CU (D_{WH} **F** WH). Candidate b. with verb second violates the first wh-constraint, as a temporal element precedes the wh-item. The last topicalisation structure (c.) contains the wh-item and the topic in the reverse order as the

[64] This constraint corresponds to D_{PRAG} **A** [ARG], which is operative in nominal expressions functioning as arguments. For adjuncts, its counterpart D_{PRAG} **A** [ADJ], becomes relevant, which demands that the pragmatic domain be adjacent to an adjunct CU.

winning candidate: this violates contrast-precedence, as the wh-item counts as part of the predicate domain and it precedes the [contrast] CU.

As for the expressions with LD, candidate d. satisfies all the wh- and topic-constraints, but it fails on the adjacency requirement on the contrast feature.[65] In candidates e. and f., the aboutness CU has been fronted along with the contrast CU. In e., remaining faithful to its domain marker disturbs the order within the nominal domain; candidate f. fails on faithfulness, as the pragmatic index of [about] has been deleted.

(T8) Peripheral adjunct topicalisation in a question

Example surface form: *Last week*, whom did you give the book?

Candidates:
a. **R[adj$_{nom}$][about$_{pragm}$][contrast]** [wh]arg$_2$ [tense$_t$] arg$_1$ R arg$_3$
b. R[adj$_{nom}$][about$_{pragm}$][contrast] [tense$_t$] [wh]arg$_2$ arg$_1$ R arg$_3$
c. [wh]arg$_2$ R[adj$_{nom}$][about$_{pragm}$][contrast] [tense$_t$] arg$_1$ R arg$_3$
d. **R[contrast]** [wh]arg$_2$ [tense$_t$] arg$_1$ R arg$_3$ **adj**$_{nom}$ **[about$_{pragm}$]**
e. **R[about$_{pragm}$][contrast]** [wh]arg$_2$ [tense$_t$] arg$_1$ R arg$_3$ **adj**$_{nom}$
f. **R[about][contrast]** [wh]arg$_2$ [tense$_t$] arg$_1$ R arg$_3$ **adj**$_{nom}$

	D$_{WH\text{-}CENTR}$ ≻ WH	D$_{NOM}$ ≻ D$_{PRAGM}$	D$_{PRAG}$ ≻ [ADJ]	FAITH$_{PRAGM}$	CONTR ≻ D$_{PRED}$	CONTR ≻ [PRAG]	D$_{WH}$ ≻ WH	TENSE$_M$ *≻ D$_{WH}$	TENSE$_M$ ≻ D$_{WH}$	ROOT *≻ ARG$_1$	ROOT ≻ D$_{ARG}$	ARG$_1$ ≻ D$_{ARG}$	ARG$_2$ ≻ D$_{ARG}$
☞ a.							*		**	*	**	*	
b.	*!						*		*	*	**	*	
c.					*!				**	*	**	*	
d.						*!			*	*	**	*	
e.		*!	*						*	*	**	*	
f.				*!					*	*	**	*	

After demonstrating the topicalisability of adjuncts, let us turn to the question of argument topicalisation, which is banned in interrogative domains, where only left dislocation of an argument is possible. To account for this, the same constraint set is applied as in the previous case and as with the evaluation of LD, enriched with the

[65] Note that this distribution of the nominal and pragmatic CUs will be the most optimal with a topicalised argument, i.e. the [CONTR] ≻ [PRAGM] constraint is not inviolable, either.

wh-precedence constraints. It has already been mentioned that the triggers for LD are distinct from those described in the discussion of LD. Here, the main function of the separation of the contrast feature from the argument CU is to ensure that the high wh-precedence constraint, i.e. $D_{WH\text{-}CENTR}$ **F** WH, is satisfied, which is only possible if no argument or central adjunct feature precedes the wh-item.

(29) $D_{WH\text{-}C}$ **F** WH > CONTR **P** D_{PRED} > D_{WH} **F** WH

The relative ordering of the topic and the wh-constraints shown above can also account for the emergence of LD with a nominal item associated with [about][contrast]. As no argument feature can precede the wh-CU, and as this wh-requirement is located higher than the faithfulness and ordering constraints referring to the nominal domain, the best option will be the separation of the [contrast] CU from the argument CU, as this way both of the most dominant alignments can be fulfilled. The LD of an object argument in an interrogative expression is demonstrated in (T9) below.

(T9) LD of an argument in an interrogative clause

Example surface form: ***Jon**, when are you seeing **him**?*

Candidates: a. ***R [contr]*** wh [tense] [participant][arg_1] R[progr] ***[arg_{2nom}][$about_{pragm}$]***
b. R[contr][about] **wh** [tense] [participant][arg_1] R[progr] [arg_{2nom}]
c. R[contr] [$about_{pragm}$] **wh** [tense] [participant][arg_1] R[progr] [arg_{2nom}]
d. R[arg_{2nom}][$about_{pragm}$][contr] **wh** [tense] [participant][arg_1] R[progr]
e. R[contr] [tense] **wh** R[progr] [participant]arg_1 [arg_{2nom}][$about_{pragm}$]
f. **wh** [tense] [participant][arg_1] R[progr] R[arg_{2nom}][$about_{pragm}$][contr]

	$D_{WH\text{-}C}$ ⊣ WH	D_{NOM} ⊣ D_{PRAGM}	D_{PRAG} ⊣ [ARG]	$FAITH_{PRAGM}$	CONTR ⊣ D_{PRED}	CONTR ⊣ [PRAG]	D_{WH} ⊣ WH	$TENSE_M$ *⊣ D_{WH}	$TENSE_M$ ⊣ D_{WH}	ARG_1 ⊣ D_{TEMP}	ROOT ⊣ D_{ARG}	ARG_1 ⊣ D_{ARG}	ARG_2 ⊣ D_{ARG}
☞ a.						*			*	*	*		*
b.				*!					*	*	*		*
c.		*!	*						*	*	*		*
d.	*!								**	*	**	*	
e.	*!					*		*		**	*		*
f.					*!				*	*	*		*

The constraints are able to derive the emergence of the dislocation pattern as shown in (T9). As it is more important that the wh-item precedes all argument features than keeping together arguments features and their roots, the wh-precedence constraint is satisfied by dissociation of the argument feature from the [contrast]-marked root. Although candidates b. and c. also represent LD, their feature distribution is suboptimal to the winning candidate a.

The syntactic topicalisation structure (without resumption) in d., which would be the correct output in the absence of the wh-item, fails, as an argument precedes the wh-item. The in situ contrastive topic in candidate f. violates CONTR ⊣ D_{PRED}, although it satisfies all the other constraints that aim at keeping together the nominal and pragmatic domains.

5.2.2. German questions

In German, there is a strict verb-second word order in all matrix clauses. Structurally, the main characteristics of German main clauses can be summed up in transformational terms as follows (on the basis of Haider 1993): (i) the finite verb undergoes obligatory movement in matrix clauses, (ii) the specifier position of the projection, to the head of which the verb moves, must be filled in all cases, (iii) this preverbal specifier position is open for several types of phrases, i.e. for a subject, a topic or a wh-phrase. These data point to the fact that the wh-item also competes for the position adjacent to the matrix finite verb. From this follows that the fronting of only one wh-item will be tolerated; moreover, the presence of a fronted wh-item bans syntactic topicalisation.

(30) a. embedded order: $arg_1\ arg_2\ arg_3\ D_{temp}$
b. matrix clauses: $arg_1\ \ tense_m\ \ arg_2\ arg_3\ (D_{temp})$
$top\ \ tense_m\ \ arg_1\ arg_2\ arg_3\ (D_{temp})$
$wh\ \ tense_m\ \ arg_1\ arg_2\ arg_3\ (D_{temp})$

5.2.2.1. Matrix interrogatives

As already shown for syntactic topicalisation, all matrix clauses in German exhibit a verb-second order, therefore the general ordering of constraints referring to the matrix tense feature, repeated in (31), must also be applicable in the case of interrogative clauses. The domain, in which the [$tense_m$] CU aims to be second, is defined as the predicate domain, as the verb-second phenomenon is not restricted to the interrogative domain.

(31) TENSE_M *P D_{PRED} > TENSE_M P D_{PRED}

Similarly to topicalisation, only one wh-marked item is allowed to appear clause-initially in interrogative structures as well. This means that the right formulation of the relevant constraint has to be a domain–feature relationship, i.e. that the interrogative domain has to be preceded by one [wh] feature. Moreover, it suffices to refer to the more general interrogative domain, as opposed to the central interrogative domain mentioned in connection with the analysis of English questions. To reflect this, the two interrogative constraints are assumed to be ordered as in (32) for German, with the result that the effect of the more specific lower constraint becomes neutralized.

(32) D_{WH} ℱ [WH] > $D_{WH\text{-}C}$ ℱ [WH]

The functioning of the wh-placement, matrix tense alignment, faithfulness and argument ordering constraints can be observed in (T10), containing a German matrix interrogative. Cases in which the [wh] CU is preceded by other predicate-related CUs (candidates f. and g.) are immediately ruled out by the highest wh-precedence constraint.

In candidate a., the tense feature is dislocated from the temporal domain and its index becomes deleted. This way the rest of the temporal domain still follows the argument domain, thus ROOT ℱ D_{PRED} is satisfied. Candidate b. with no deleted domain marker, which has the same ordering of CUs as candidate a., loses on ROOT ℱ D_{PRED}, as does clause c., in which the temporal domain sticks together. Candidate d. illustrates the embedded word order, ruled out by the constraint $TENSE_M$ ℙ D_{PRED} demanding a higher position for [$tense_{matrix}$]. The root has been associated with the high tense instead of the rest of the temporal domain in candidate e.: this violates the root-domain adjacency.

(T10) German matrix interrogative clause[66]

Candidates: a. [wh]arg_2 **[tense]** arg_1 arg_3 R[$passive_t$][$perfect_t$]
b. [wh]arg_2 **[$tense_t$]** arg_1 arg_3 R[$passive_t$][$perfect_t$]
c. [wh]arg_2 **[tense]** R[$passive_t$][$perfect_t$] arg_1 arg_3
d. [wh]arg_2 arg_1 arg_3 R[$passive_t$][$perfect_t$]**[$tense_t$]**
e. [wh]arg_2 R**[tense]** arg_1 arg_3 [$passive_t$][$perfect_t$]
f. [**tense]** [wh]arg_2 arg_1 arg_3 R[$passive_t$][$perfect_t$]
g. arg_1 [**tense]** [wh]arg_2 arg_3 R[$passive_t$][$perfect_t$]

	D_{PRED} **F** WH	$TENSE_M$ ***P** D_{PRED}	$TENSE_M$ **P** D_{PRED}	ROOT **P** D_{TEMP}	ROOT **F** D_{PRED}	ROOT **A** [TEMP]	$FAITH_{TEMP}$	[PASS] **P** D_{TEMP}	[PERF] **P** D_{TEMP}	[TENSE] **P** D_{TEMP}	ARG_1 **P** D_{ARG}	ARG_2 **P** D_{ARG}	ARG_3 **P** D_{ARG}
☞a.			*		**		*		*		*		**
b.			*	*!	**			*	**		*		**
c.			*		4*!		*		*		*		**
d.			5*!		3*				*	**	*		**
e.			*		5*!	*	*		*		*		**
f.	*!	*			**		*		*		*		**
g.	*!		*		**		*		*			*	**

5.2.2.2. LD in German questions

Syntactic topicalisation is disallowed in German matrix interrogatives, but LD, or more precisely, HTLD is possible, presumably because the dislocated topic in such cases occupies a position external to the predicate domain, and this way the initial position of the wh-element within the clause in secured.

The following tableau contains the evaluation of a string with both a [wh] and a [contrast] CU associated with distinct nominal domains. The difference between the first two candidates lies in the position of the aboutness feature: the more faithful option is the separation of [contr] and [about] in this case, contrary to syntactic topicalisation, as the corresponding argument CU is located in a low position and is able to keep its pragmatic

[66] In cases of multiple violations of constraints in excess of 2, I indicate here the number or amount of violations by digits.

domain index. In candidate b, the pragmatic marker of [about] has been deleted, therefore it fails on faithfulness; the more faithful candidate c. fails on the nominal domain ordering requirement, as being part of a pragmatic domain, it precedes its corresponding nominal domain. Finally, in candidate d. both the topic and the wh-item is fronted without resumption, which violates the high wh-precedence, because an [arg] feature, which counts as part of the predicate domain, precedes the wh-item.

To consider another theoretically possible case which has not been mentioned before, the last two candidates are added. They both exhibit a left dislocated wh-item, i.e. one in which the [wh] and the adjunct feature are realised discontinuously. To rule out this option, a high adjacency constraint [WH] **A** D_{NOM} (discussed in Section 5.1.2.) is assumed to be operative here and in the other analysed languages as well, which bans the separation of a bundle containing the wh-feature. Candidate e. with a dislocated wh-item and a fronted topic and candidate f. with both of its prominent items dislocated fails on this high-ranked condition, which leaves us with the only possibility of left dislocating the topical bundle.

(T11) LD as a repair strategy in an interrogative clause containing a topic[67]

Example surface form: ***Der Hans***, wo habt ihr ***ihn*** gesehen?

Candidates:
a. **R[contrast]** [wh]adj_{nom} R[$tense_t$] arg_1 **arg_{2nom}[$about_{pragm}$]** arg_3
b. **R[about][contrast]** [wh]adj_{nom} R[$tense_t$] arg_1 **arg_{2nom}** arg_3
c. **R[$about_{pragm}$][contrast]** [wh]adj_{nom} R[$tense_t$] arg_1 **arg_{2nom}** arg_3
d. **R[arg_{2nom}][$about_{pragm}$][contrast]** [wh]adj_{nom} R[$tense_t$] arg_1 arg_3
e. [wh] R[arg_{2nom}][$about_{pragm}$][contrast] R[$tense_t$] arg_1 arg_3 adj_{nom}
f. R**[contrast]** [wh] arg_1 R[$tense_t$] arg_2 arg_3 adj_{nom}

[67] The CUs belonging to nominal bundles with left dislocated parts are highlighted for the sake of clarity.

	D_{PRED} **F** [WH]	[WH] **A** D_{NOM}	D_{NOM} **P** D_{PRAGM}	D_{PRAG} **A** [ARG]	$FAITH_{PRAGM}$	D_{PRED} **F** [CONTR]	CONTR **A** ABOUT	$TENSE_M$ ***P** D_{PRED}	$TENSE_M$ **P** D_{PRED}	ROOT **P** D_{TEMP}	ROOT**F** D_{PRED}	ROOT **A** [TEMP]	ARG_1 **P** D_{ARG}	ARG_2 **P** D_{ARG}
☞a.							*		*		4*			*
b.					*!				*		4*			*
c.			*!	*					*		4*			*
d.	*!								**		3*		*	
e.		*!							*		4*		*	
f.		*!					*		*		4*			*

5.2.2.2.1. Contrastive LD is not possible in wh-questions

In Chapter 3, two distinct types of LD have been derived related to different input feature combinations on the nominal expression. Hanging Topic LD would be unproblematic to derive in a wh-expression (33); however, Contrastive LD with a fronted resumptive cannot surface in an interrogative structure (34). This raises the question whether the employed constraint set is capable of modelling this state of affairs.

(33) *Der Johann*, wer hat *ihn* heute schon gesehen?
the$_{NOM}$ John who has him$_{ACC}$ today already seen

(34) **Den Johann* *den* wer hat heute schon gesehen?
the$_{ACC}$ John him$_{ACC}$ who has today already seen

In the case of CLD in German, the fronted phrase and the corresponding resumptive stay next to each other as the result of the topic requirement in German; this also means that the noun–resumptive cluster bears the argument feature (the manifestation of which is that they share the same case), thus the argument feature would precede the wh-item which would lead to ungrammaticality. As expected, contrastive Left Dislocation is banned in interrogative structures in German.[68]

[68] For a different state of affairs, see Hungarian, Section 5.2.3.2. of this chapter.

Apart from the [about][contrast] combination in an interrogative structure, there exists theoretically another possibility which might lead to LD in a wh-clause, i.e. an input containing a nominal expression marked as [new][about][contrast], in which the CU combination in itself would trigger Contrastive LD in a declarative clause. To consider this possibility, the ordering of the constraints referring to the internal order of a nominal expression is repeated here for expository purposes (35); in addition, it has to be assumed that all of them are relatively high-ranked in the overall hierarchy, containing the constraints which refer to the structure of bigger domains.

(35) $\textsc{Faith}_{\textsc{nom}} > \textsc{D}_{\textsc{nom}}$ ℙ $\textsc{D}_{\textsc{pragm}} > \textsc{D}_{\textsc{prag}}$ 𝔸 [ARG] > $\textsc{Faith}_{\textsc{pragm}}$ >
ROOT ℙ [ARG, PRAGM] > [NEW] 𝔸 ROOT

The reason for believing this is that the alignment constraints refer to individual CUs or CUs and domains: placement of an [arg] CU has an effect on the whole nominal expression this CUs is part of, and in the majority of cases, CUs being part of nominal expressions do not get out of their domain to obey CU-domain alignment, but the other features associated with [arg], for instance, stay together with it; if a CU becomes fronted, the whole nominal domain associated with it follows it, like in syntactic topicalisation. Therefore, ordering of the items within the nominal domain has priority over constraints referring to bigger and more complex domains like the predicate domain.

The original order set up for LD in the previous chapter worked with a lower-ranked NEW 𝔸 ROOT for English and the constraint has not been included in the German tableaux, after its main function has been demonsrated for English LD. With the same low position as with English, the evaluation would choose the string with a fronted contrastive topic and an in situ newness feature as winner (36a), which would be identical in surface word order with the correct candidate with a left dislocated new topic and a fronted wh-item.

(36) a. **R[about][contrast]** [wh]adj R[tense_t] arg_1 **arg_{2nom}[new_{pragm}]** arg_3
b. **R[new][contrast]** [wh]adj R[tense_t] arg_1 **arg_{2nom}[about_{pragm}]** arg_3

However, if we wished to maintain uniformity in the form of the resumptive, the second structure should be regarded as winner (36b). To achieve this, the position of the

constraint referring to the newness feature and the corresponding root (NEW ≫ ROOT) has to be rethought, and has to be placed high enough in the overall hierarchy for German, without altering its status in the subhierarchy referring to the nominal domain shown in (35). It goes without saying that this change to the system does not affect either the default ordering of nominal items or the results of LD evaluation reached in the previous chapter, as NEW ≫ ROOT is located under the dominant D_{NOM} ≫ D_{PRAGM}, D_{PRAG} ≫ [ARG], $FAITH_{PRAGM}$ which ban splitting up and maintain the *nominal domain–pragmatic domain* order within a nominal expression. The only difference this positioning makes is in the assessment of a new contrastive topic in a wh-clause. From the four possible orderings corresponding roughly to the same surface word order with dislocation (candidates a., b., c., f.), candidate a. is chosen, which meets our expectations best. The featural makeup of the resumptive corresponds to that of an in situ personal pronoun (whereas the status of candidate f., for instance, would be highly problematic, as it contains a contrastively topicalised pronoun postverbally).

In line with the linguistic data, contrastive LD with a fronted resumptive, represented by candidate e., is rendered suboptimal by the constraint set, because a predicate domain member, i.e. [arg_2], precedes the interrogative domain. The same is true for candidate d., representing a syntactic topicalisation structure.

(T12) New topic LD in an interrogative clause, features of the dislocated item: [new][about][contr]

Candidates:
a. **R[new][contrast]** [wh]**adj**$_{nom}$ R[tense$_t$] arg_1 **arg_{2nom}[about$_{pragm}$]** arg_3
b. **R[about][contrast]** **[**wh]**adj**$_{nom}$ R[tense$_t$] arg_1 **$arg_{2nom[}$new$_{pragm]}$** arg_3
c. **R[new][about$_{pragm}$][contrast]** **[**wh]**adj**$_{nom}$ R[tense$_t$] arg_1 **arg_{2nom}** arg_3
d. **R[arg_{2nom}][about$_{pragm}$][contrast][new]** [wh]**adj**$_{nom}$ R[tense$_t$] arg_1 arg_3
e. **R[new][contrast]** **arg_{2nom}[about$_{pragm}$]** [wh]adj$_{nom}$ R[tense$_t$] arg_1 arg_3
f. **R[new]** [wh]**adj**$_{nom}$ R[tense$_t$] arg_1 **arg_{2nom}[about$_{pragm}$][contr]** arg_3

	D_{PRED} **F** [WH]	D_{NOM} **P** D_{PRAGM}	D_{PRAG} **A** [ARG]	$FAITH_{PRAGM}$	D_{PRED} **F** [CONTR]	[NEW] **A** ROOT	CONTR **A** ABOUT	$TENSE_M$ ***P** D_{PRED}	$TENSE_M$ **P** D_{PRED}	ROOT **P** D_{TEMP}	ROOT **F** D_{PRED}	ROOT **A** [TEMP]	ARG_1 **P** D_{ARG}	ARG_2 **P** D_{ARG}	NEW **P** D_{PRED}
☞a.				*			*		*		4*			*	
b.				*		*!			*		4*			*	*
c.		*!	*	*					*		4*			*	
d.	*!			*		*			**		3*		*		
e.	*!			*					**		3*		*		
f.				*	*!				*		4*			*	

In sum, it has been shown that through the interaction of the interrogative, topicalisation and nominal domain constraints, the right candidate has been selected as winner in an intricate case.

5.2.3. Hungarian questions

In Hungarian, being a multiple wh-fronting language, the functioning of the type of wh-constraint which refers to every [wh] CU in a string, i.e. WH **P** D_{PRED}, will be assumed. One of the fronted wh-items, the only one in single questions, is immediately preverbal. This position differs from the preverbal position of the topic, as the examples (37) and (38) below demonstrate. The wh-item aims to be closer to the verbal stem bearing the tense feature, forcing the preverbal prefix to appear in postverbal position.

(37) Az ajándékot$_{topic}$ **oda-adta** Zoli a gyerekeknek.
the present$_{ACC}$ PFX-gave Zoli$_{NOM}$ the child$_{PL\text{-}DAT}$

(38) Mit$_{wh\text{-}item}$ **adott oda** Zoli a gyerekeknek?
what$_{ACC}$ gave PFX Zoli$_{NOM}$ the child$_{PL\text{-}DAT}$

This side switching of the verbal prefix happens in operator contexts, e.g. in wh-questions and focus structures. Thus the [tense] CU has to receive a special ordering in relation to the interrogative or operator domain. Here, it is not necessarily a second

position phenomenon which is to be achieved, for instance in the case of multiple wh-items. Still, the constraint ordering ensures that the wh-items will precede the finite verb.

The tableau (T13) assesses a single argument wh-question in Hungarian with a prefix verb. As the equally ordered argument ordering constraints do not play a role in the evaluation, they are left out from the tableau – concerning argument order, only the ROOT_V **P** D_{ARG} requirement is regarded as important, as it places the predicate before the arguments in the default case and is able to measure deviations from the basic structure.

The tense-precedence constraint rules out both candidate b., in which the prefix is preverbal and candidate d. with a preverbal subject in addition to the preverbal wh-item. Candidate c. with verb-initial word order loses on [TENSE] ***P** D_{PRED}, as the tense precedes the whole predicate domain in this case. The matrix tense can be placed closest to the front of the predicate domain if it switches sides with the prefix, as in candidate a.

(T13) Hungarian single question

Candidates: a. [wh]arg_2 R[tense] Prefix arg_1 arg_3
b. [wh]arg_2 Prefix R[tense] arg_1 arg_3
c. R[tense] Prefix [wh]arg_2 arg_1 arg_3
d. [wh]arg_2 arg_1 R[tense] Prefix arg_3

	[WH] **P** D_{WH}	[TENSE] ***P** D_{WH}	[TENSE] **P** D_{WH}	ROOT **P** D_{ARG}	ROOT **P** D_{TEMP}	ROOT **A** [TEMP]	PFIX **P** D_{TEMP}	PFIX **A** D_{TEMP}
☞a.			*	*			*	
b.			**!	*				
c.		*!					*	
d.			**!	*			*	

For the sake of completeness, I include the same evaluation, but this time with a non-prefix verb to demonstrate that in the absence of the prefix, the other constraints referring to the temporal domain are able to handle the situation.

(T14) Single argument wh-question in Hungarian (with a non-prefix verb)

Candidates: a. [wh]arg_2 R[tense] arg_1 arg_3
b. R[tense] [wh]arg_2 arg_1 arg_3
c. [wh]arg_2 arg_1 R[tense] arg_3
d. [wh]arg_2 [tense]R arg_1 arg_3

	[WH] ₱ D_{WH}	[TENSE] *₱ D_{WH}	[TENSE] ₱ D_{WH}	ROOT ₱ D_{ARG}	ROOT ₱ D_{TEMP}	ROOT ₳ [TEMP]
☞a.			*	*		
b.		*!				
c.			**!	*		
d.			*	*	*!	

As already discussed, the language-specific property of whether all or only one wh-phrase fronts the clause can be derived by the dominance of a feature-domain or a domain feature precedence constraint. In (T15) the working of the wh-precedence constraint can be witnessed through the evaluation of a Hungarian multiple question. The requirement that all [wh] features should come in front of the predicate domain is best fulfilled by candidates a. and c., in which the two features precede all other items. Nevertheless, [WH] ₱ D_{PRED} can never be fully satisfied if the string contains two or more [wh] CUs, as all of them count as part of the argument domain, i.e. if one wh-item precedes the other, it counts as a violation. In spite of this, multiple fronting is still assessed as the best option, as in other cases (candidates b., d., e.) the interrogative CUs are located further away from the initial position, which can be measured by the wh-precedence constraint due to its gradient nature.

(T15) Multiple wh-interrogative with optional orders (Hungarian)

Candidates: a. wh [wh]arg_2 R[tense] arg_1 arg_3
b. wh R[tense] [wh]arg2 arg_1 arg_3
c. [wh]arg_2 wh R[tense] arg_1 arg_3
d. wh R[tense] arg_1 [wh]arg_2 arg_3
e. R[tense] wh [wh]arg_2 arg_1 arg_3

	[WH] Ꝑ D_{WH}	[TENSE] *Ꝑ D_{WH}	[TENSE] Ꝑ D_{WH}	ROOT Ꝑ D_{ARG}	ROOT Ꝑ D_{TEMP}	ARG_1 Ꝑ D_{ARG}	ARG_2 Ꝑ D_{ARG}	ARG_3 Ꝑ D_{ARG}
☞a.	*		**	*		*		**
b.	**!*		*			*		**
☞c.	*		**	*		*		**
d.	**!*		*				*	**
e.	**!*	*				*		**

Having achieved this, the next topic concerns the internal makeup of multiple questions, more precisely, which factors have an effect on the ordering of multiple wh-items in a fronted cluster, and on what grounds it is decided which of them is fronted in a single-movement type language.[69] Interestingly, the ordering principles regarding multiple wh-items may be similar in languages with single and multiple fronting strategies, i.e. the cross-linguistic differences regarding these principles do not coincide with the single vs. multiple movement line of division.

5.2.3.1. 'Optional' orders in multiple questions

This section touches upon the issue of seemingly optional orders in wh-questions, but broadens the perspective from Hungarian to the other analysed languages. It was felt to be more appropriate to handle this question in one section rather than scattered around in the individual sections on language-specific facts.

In spite of the strict superiority of wh-subjects in English, other wh-items seem to be freer in their relative ordering, as the following examples demonstrate.

(39) a. What did Jon say to whom?
b. To whom did he say what?

[69] The description of the data relies on Rudin's (1988) exhaustive study on multiple wh-movement.

(40) a. When will you do what?

b. What will you do when?

It goes without saying that in languages without superiority effects, we also find similar variation, including wh-subjects, as in the German (41) and Hungarian (42) examples.

(41)	a. Wen	hat wer	gesehen?
	who_{ACC}	has who_{NOM}	seen
	b. Wer	hat wen	gesehen?
	who_{NOM}	has who_{ACC}	seen
(42)	a. Mit	mikor csinálsz?	
	what_{ACC}	when do-SG2	
	b. Mikor	mit	csinálsz?
	when	what_{ACC}	do-SG2
	c. Hova	ki	mikor utazott?
	where	who_{NOM}	when travelled

This state of affairs needs further investigation as well, as optionality is not frequent in language; thus, the word order variants should perhaps not be regarded as equal in meaning. Moreover, the present constraint set developed for the description of basic word order would render the variant as optimal which stands closest to the basic argument order, other orders would count as suboptimal.

This is demonstrated by the following tableau containing a multiple interrogative, in which both of the wh-items function as arguments, represented as $[\text{wh}]\text{arg}_2$ and $[\text{wh}]\text{arg}_3$. On the basis of its grammaticality, candidate e. should be assessed optimal, as well, but loses on the argument ordering constraints, as a lower argument is fronted than in sentence a.

(T16) Multiple question in English

Candidates: a. [wh]arg_2 [tense] arg_1 R[perf] [wh]arg_3
b. [wh]arg_2 [wh]arg_3 [tense] arg_1 R[perf]
c. [wh]arg_2 arg_1 [tense] R[perf] [wh]arg_3
d. [wh]arg_3 [tense] arg_1 R[perf] [wh]arg_2

	D_{WH} F [WH]	$TENSE_M$ *P D_{WH}	$TENSE_M$ P D_{WH}	ARG_1 P D_{TEMP}	ROOT P D_{ARG}	ARG_1 P D_{ARG}	ARG_2 P D_{ARG}	ARG_3 P D_{ARG}
☞a.			*	*	*	*		**
b.			**!	*	*	**		
c.			**!		*	*		*
d.			*	*	*	*	*!	

Newson (2013) suggests that a fronted wh-item loses its argument domain membership, i.e. its domain marker is deleted. This way, it does not violate the argument ordering constraints but still belongs to the clause, i.e. to the predicate domain. Although this view at first seems promising as a solution to the problem, it faces considerable difficulties in actual fact, as tableau (T17) demonstrates. The relevant faithfulness constraint concerning the indexes of the argument domain is abbreviated as FAITH(ARG-I), and is ranked below the constraint that demands the precedence of the first argument over others. Unfortunately, the fronting of the lower argument in candidate d. remains suboptimal to candidate a. with a fronted [arg_2] as the deletion of indexes only reduces the number of violations of argument 3 alignment compared to the former tableau (T16).

(T17) English multiple question with argument domain marker deletion

Candidates: a. [wh]arg_2 [tense] arg_1R[perf] [wh]arg_3
b. [wh]arg_2 [wh]arg_3 [tense] arg_1R[perf]
c. [wh]arg_2 arg_1 [tense] R[perf] [wh]arg_3
d. [wh]arg_3 [tense] arg_1 R[perf] [wh]arg_2

	D_{WH} F [WH]	TNS_M *P D_{WH}	TNS_M P D_{WH}	ARG_1 P D_{TEMP}	RT P D_{ARG}	ARG_1 P D_{ARG}	FAITH (ARG-I)	ARG_2 P D_{ARG}	ARG_3 P D_{ARG}
☞a.			*	*	*		*		*
b.			**!	*	*		**		
c.			**!		*		*		*
d.			*	*	*		*	*!	

Another possible solution to this problem would be to consider on what other basis nominal items are ordered. It might be hypothesized that the fronted wh-item, and the first wh-item in multiple-fronting languages like Hungarian, has a topical character and therefore bears the weak topic feature, i.e. [about]. Imrényi discusses the structure of multiple interrogatives in Hungarian from a cognitive perspective, and calls the first of two wh-items in a Hungarian clause '*topikkérő*' (Imrényi 2012:156), i.e. '*topic elicitator*', based on answer patterns of multiple questions. He claims that the structure of a question anticipates the structure of the answer,[70] in the case of multiple questions, the answer to the first wh-item functions as the topic of the clause, whereas the answer to second one functions as focus. These observations are translated in terms of alignment in (43). The coindexation on the CUs indicates that the relevant features have to be in the same nominal expression, i.e. they are not adjacent just by chance.

(43) $[WH_i][ABOUT_i]$ P [WH]: the feature combination [wh][about] precedes a [wh] feature that is not coindexed with an aboutness feature. The features [wh] and [about] have to belong to the same nominal domain, i.e. must be coindexed.

In English, the constraint should be located under ARG_1 P D_{ARG} as in (T18), to ensure that a wh-subject is not affected by it, i.e. will always be the fronted one in multiple structures. Out of the two grammatically correct candidates from the previous tableau, the constraint chooses the one in which the about-marked interrogative item is fronted.

[70] A 'kérdések szerkezete gyakran megelőlegezi a válaszmondat szerkezetét'. (Imrényi 2012:156)

(T18) Multiple argument questions in English

Example output: a., c. *What* has Jon been saying *to whom*?

b., d. *To whom* has Jon been saying *what*?

Candidates: a. [wh]arg2[about] [tense] arg1 [perf]R[progr] [wh]arg3
b. [wh]arg3 [tense] arg1 [perf]R[progr] [wh]arg2[about]
c. [wh]arg2 [tense] arg1 [perf]R[progr] [wh]arg3[about]
d. [wh]arg3[about] [tense] arg1 [perf]R[progr] [wh]arg2

	D_{WH} **F** WH	TNS_M ***P** D_{WH}	TNS_M **P** D_{WH}	ARG_1 **P** D_{TEMP}	ROOT **P** D_{ARG}	ARG_1 **P** D_{ARG}	**[WH$_i$] [ABOUT$_i$] P [WH]**	ARG_2 **P** D_{ARG}	ARG_3 **P** D_{ARG}
☞a.			*	*	*	*			**
b.			*	*	*	*	*!	**	*
c.			*	*	*	*	*!		**
☞d.			*	*	*	*		**	*

In German, differently from English, [WH$_i$][ABOUT$_i$] **P** [WH] overrides all the argument ordering constraints. This way it can account for the wh-object > wh-subject order in example (41) above. The hierarchy with the constraints regulating wh- and argument order is presented in (44).

(44) D_{WH} **F** WH> **[WH$_i$][ABOUT$_i$] P [WH]** > ARG_1 **P** D_{ARG}> ARG_2 **P** D_{ARG}> ARG_3 **P** D_{ARG}

(T19) German multiple interrogative clause (topic marking on an object wh-item)

Candidates: a. [wh]arg$_2$[about] R**[tense$_t$]** [wh]arg$_1$ arg$_3$
b. [wh]arg$_1$ R**[tense$_t$]** [wh]arg$_2$[about] arg$_3$
c. [wh]arg$_2$[about] [wh]arg$_1$ R[**tense$_t$]** arg$_3$
d. [wh]arg$_1$ [wh]arg$_2$[about] R**[tense]** arg$_1$ arg$_3$

	D_{PRED} **F** WH	$TENSE_M$ ***P** D_{PRED}	$TENSE_M$ **P** D_{PRED}	ROOT **P** D_{TEMP}	ROOT **F** D_{PRED}	ROOT **A** [TEMP]	$FAITH_{TEMP}$	[WH$_i$][ABOUT$_i$] **P** [WH]	ARG_1 **P** D_{ARG}	ARG_2 **P** D_{ARG}	ARG_3 **P** D_{ARG}
☞a.			*		**				*		**
b.			*		**			*!		*	**
c.			**!		*				*		**
d.			**!		**			*		*	**

Although the above problem does not arise in Hungarian, as it has been assumed that the argument constraints are equally ordered, the insertion of the wh-topic constraint helps to reflect interpretational differences, i.e. that different orderings correspond to inputs with distinct discourse-functional interpretation.[71] This is illustrated by the tableau below containing two syntactically correct alternatives, in which the [WH$_I$][ABOUT$_I$] **P** [WH] constraint prefers the precedence of the proto-topical wh-item in candidate a.

(T20) Multiple wh-question in Hungarian with a topic-marked wh-item

Candidates: a. [wh][about] [wh]arg$_2$ R[tense] Prefix arg$_1$ arg$_3$
b. [wh]arg$_2$ wh[about] R[tense] Prefix arg$_3$

	[WH] **P** D_{WH}	**[WH$_I$] [ABOUT$_I$] P [WH]**	[TENSE] *P D_{WH}	[TENSE] **P** D_{WH}	ROOT **P** D_{ARG}	ROOT **P** D_{TEMP}	ROOT **A** [TEMP]
☞a.	*			**	*		
b.	*	*!		**	*		

[71] In principle, optional ordering can also be possible, if neither of the wh-elements were topic marked.

As a concluding remark, it must be noted that a conceptually superior solution is also thinkable in assessing multiple wh-structures with a topical wh-item. For English and Hungarian it is striking that the position of the constraint which places topical wh-items in front of non-topical ones ([WH$_{I}$][ABOUT$_{I}$] ₱ [WH]) in relation to other constraints in the hierarchy is similar to the one on weak topics ([ABOUT] ₱ D$_{PRED}$). This means that positing an extra constraint on topical wh-items seems to be unnecessary at least in these two languages, as the other constraints can account for this type of variation. However, the situation is more problematic for German, where the superiority of the first argument has been assumed in declaratives, which cannot be overridden by weak argument topics. In questions, on the other hand, superiority can be left unobserved, which necessitated a higher wh-topic constraint than the constraint on weak aboutness topics, which was ranked under the precedence of [arg$_1$]. Thus, I opted for applying the specific [WH$_{I}$][ABOUT$_{I}$] ₱ [WH] in each language-particular ranking, although it has only in German a decisive role in the present analysis.

5.2.3.2. Absence of repair strategy LD in Hungarian interrogatives

Turning back to Hungarian, the combination possibilities of topicalisation and wh-structures has to be investigated here, as well. It can be observed that even simple topics can precede the wh-element in Hungarian (45), thus it follows naturally that both the left dislocated item and its resumptive precedes it as in (46), the latter being endowed with an aboutness feature which marks simple fronted topics in Hungarian. As multiple topicalisation is allowed as well, it also makes the combination of LD and topicalisation, even with wh-fronting possible, as the example (47) shows.

(45)	**Ubul**	*kivel*	ment	el	moziba?	
	Ubul$_{NOM}$	who-with	went	away$_{PFX}$	cinema-to	
(46)	**A Péter**,	**az**	*kivel*	ment el	moziba?	
	the Peter	that$_{NOM}$	who-with	went away$_{PFX}$	cinema-to	
(47)	**A Péter,**	**az**	tegnap$_{TOP}$	*kivel*	ment el	moziba?
	the Peter	that$_{NOM}$	yesterday	whom$_{with}$	went away$_{PFX}$	cinema-to

In Hungarian, resumption with LD is not made use of in wh-contexts if the fronted item bears only an [about] or [contr] and [about] features, as simple fronting topicalisation is possible in such contexts because a topic, or even more topics, can co-occur with wh-elements. Presumably the alignment of the wh-element to the verb is considered more important than the absolute first position of the question word or phrase.

However, it is possible to integrate LD in an interrogative structure, as the examples show, and even to combine it with topicalisation. The trigger for LD in such cases is not the concurrent fulfilment of the high-ranked wh- and topic-constraints but the pragmatic requirement of separating the newness and aboutness features of a newly introduced topic, as laid down in the preceding chapter.

Regarding interrogatives, multiple input wh-items can all be fronted in Hungarian; in addition, one of them (or the only wh-feature in single questions) is immediately preverbal. This position differs from the preverbal position of the topic, as the examples (48) and (49) below demonstrate. The wh-item aims to be closer to the verbal stem bearing the tense feature, the preverbal prefix is forced to appear in a postverbal position.

(48)	Az ajándékot	**odaadta**	Zoli	a gyerekeknek.
	the present$_{ACC}$	PFX-gave	Zoli$_{NOM}$	the children$_{PL, DAT}$
(49)	Mit	**adott oda**	Zoli	a gyerekeknek?
	what$_{ACC}$	gave PFX	Zoli$_{NOM}$	the children$_{PL, DAT}$

Apart from verb positions, what also has to be accounted for by the constraint set is the impossibility of the emergence of LD as a repair strategy with argument topicalisation in a question. This state of affairs can be achieved by ranking all faithfulness constraints higher than the fronting constraints (referring to the [wh] and the [about] CU, i.e. FAITH$_{NOM}$, FAITH$_{PRAGM}$) and the adjacency requirement which demands the proximity of the [wh] feature to the nominal domain ([WH] $\mathbb{A}$ D$_{NOM}$), as in (T21).

(T21) Topicalisation in a string containing the [wh] feature

Example output: Zsuzsinak mit adott oda Péter?
Zsuzsi$_{DAT}$ what$_{ACC}$ gave PFX Peter$_{NOM}$

Candidates: a. R[arg$_{2nom}$][about$_{pragm}$] [wh]arg$_{3nom}$ R[tense] *Prefix* arg$_1$
b. [wh]arg$_{3nom}$ R[arg$_{2nom}$][about$_{pragm}$] R[tense] *Prefix* arg$_1$
c. ***[wh]*** R[arg$_{2nom}$][about$_{pragm}$] R[tense] *Prefix* arg$_1$ ***arg$_{3nom}$***
d. R***[about$_{pragm}$]*** [wh]arg$_{3nom}$ R[tense] *Prefix* arg$_1$ ***arg$_{2nom}$***
e. R***[about]*** [wh]arg$_{3nom}$ R[tense] *Prefix* arg$_1$ ***arg$_{2nom}$***

	FAITH$_{NOM}$	[WH] ~~A~~ D$_{NOM}$	D$_{NOM}$ ~~P~~ D$_{PRAGM}$	D$_{PRAG}$ ~~A~~ [ARG]	FAITH$_{PRAGM}$	ROOT ~~P~~ [ARG, PRAG]	ABOUT ~~P~~ D$_{PRED}$	[WH] ~~P~~ D$_{WH}$	[TENSE] *~~P~~ D$_{WH}$	[TENSE] ~~P~~ D$_{WH}$	ROOT ~~P~~ D$_{PRED}$	ROOT ~~P~~ D$_{TEMP}$	PREFIX ~~P~~ D$_{TEMP}$
☞a.								*		**	**		*
b.							*!			**	**		*
c.		*!								*	*		*
d.			*!	*						*	*		*
e.					*!					*	*		*

Below, I also present a tableau (T22) which contains the pragmatically grounded split of a nominal expression within an interrogative clause to demonstrate that the emergence of this combination is made possible by the constraint hierarchy.

(T22) LD in an interrogative expression, CUs involved in LD: [new][about]

Example output: ***Az Ubult,*** ***azt*** <u>*ki*</u> *veszi* *komolyan?*
the Odie$_{ACC}$ that$_{ACC}$ who$_{NOM}$ takes seriously

Candidates: a. **R[new] [arg$_{2nom}$][about$_{pragm}$]** [<u>wh]arg$_1$</u> R[tense] R
b. R[new] [wh]arg$_1$ R[tense] [arg$_{2nom}$][about$_{pragm}$]
c. R[arg$_{2nom}$] [about$_{pragm}$][new] [wh]arg$_1$ R[tense]
d. [wh]arg$_1$ R[new] [arg$_{2nom}$][about$_{pragm}$] R[tense]

	D_{NOM} **P** D_{PRAGM}	D_{PRAG} **A** [ARG]	$FAITH_{PRAGM}$	ROOT **P** [ARG, PRAG]	ABOUT **P** D_{PRED}	[WH] **P** D_{WH}	NEW **A** ROOT	[TENSE] ***P** D_{WH}	[TENSE] **P** D_{WH}	ROOT **P** D_{PRED}	ROOT **P** D_{TEMP}	NEW **P** D_{PRED}
☞a.			*			*			**	**		
b.			*		*!*				*	*		
c.			*			*	*!		**	**		
d.			*		*!				**	**		*

5.3. On some central adjuncts: reasons why they are not eligible for LD

In the discussion of English, the different behaviour of central and peripheral adjuncts[72] with respect to syntactic topicalisation in an interrogative expression has emerged. I therefore took the position that the first priority of wh-items is precedence of the central predicate domain of the interrogative predicate; absolute precedence is ranked lower and could be violated by topicalisation of a peripheral adjunct.

What was not dwelt on previously was the fact that for most of the so-called central adjuncts, which cannot be syntactically topicalised in a question, there exists no repair strategy either, as they are unable to take part in LD, as the example in (50) demonstrates.

(50) * ***Quickly***, who opened the door (*that way)*?

[72] Classes of adjuncts according to Huddleston & Pullum (2012):

i) manner and means adjuncts	*He played his hand foolishly.*
ii) act-related adjuncts	*Foolishly, I opened the door.*
iii) locational adjuncts	*Put it near the window now.*
iv) temporal adjuncts	*Put it near the window now.*
v) degree adjuncts	*It was totally unintelligible.*
vi) adjuncts of cause and result	*It's there to be used.*
vii) concessive adjuncts	*It's outside, although it doesn't get much sun.*
viii) conditional adjuncts	*It'll do better if it gets some sun.*
ix) domain adjuncts	*Artistically, it was a real success.*
x) modal adjuncts	*In all probability you don't want to hear this.*
xi) evaluative adjuncts	*Fortunately no one was hurt.*
xii) speech act-related adjuncts	*Frankly, my dear, I don't give a damn.*
xiii) connective adjuncts	*This, however, would turn out to be bad advice*

Kenesei (1998) also observes for Hungarian that adverbs behave differently with respect to topic fronting. Adverbs of time and place 'that make specific reference' (ibid. p. 176) or frame and scene setting adverbials (Surányi 2010:164) can be easily topicalised, as supported by the examples in (51).

(51) a. 1986-ban Anna sok könyvet olvasott.
1986-in Anna many book$_{ACC}$ read
In 1986, Anna read many books.
b. A szobában Anna sok könyvet olvasott.
the room-in Anna many book$_{ACC}$ read
In the room, Anna read many books.

On the other hand, 'adverbials of frequency, manner, etc., are nonspecific and can occur in initial positions only if they carry a sense of contrast' (ibid.), i.e. they cannot take part in weak topicalisation, driven by the [about] feature, only in contrastive topicalisation, triggered by [contrast]. The reason why these categories are brought up to demonstrate the point might lie in their typically non-referential meanings.

(52) a. *Gyorsan* Anna olvasta el a könyvet.
fast$_{ADV}$ Anna read PFX the book$_{ACC}$
Anna was the one that read the book fast (…but there may have been someone else who read it slowly).
b. **Kereken* Anna mondta meg az igazat.
forthright Anna said PFX the truth$_{ACC}$ (ibid.)

Spanish expressions allowing clitic doubling also seem to pattern similarly (Arregi 2003:1). The sentences below show that the appearance of a clitic is only possible if the corresponding items have a referential meaning, which is sometimes possible with quantifiers as well, as in (53b). However, the only possible way of topicalising the indefinite quantifier '*algo*' (meaning '*something*') is with a contrastive reading and without a clitic, as (55) shows. Belloro (2007:132) also concludes 'that accusative doubling in Spanish is used to mark accessible referents'.

(53) a. Estos libros, Juan **los** leyó ayer.
these books Juan them read yesterday
These books, Juan read yesterday.
b. Algunos libros, Juan **los** leyó ayer.
some books Juan them read yesterday
Some books, Juan read yesterday.

(54) *Algo, Juan **lo** leyó ayer.
something Juan it read yesterday
Something, Juan read yesterday.

(55) Algo, Juan <u>sí</u> (*__lo__) comió.
something Juan yes it ate
Something, Juan did eat.

In German, adjuncts are also able to undergo Left Dislcoation, accompanied by resumption by the adverb '*da*' (narrow meaning: *there*; broad meaning comprises: *there, then, that way* etc.). As shown by Fritzsche (2005)/Salfner (2006), the ability of the peripheral adjuncts to take part in LD is connected to referentiality. As the examples show, although not explicitly stated, all preposed adjuncts have specific reference. The author remarks that PPs undergoing LD generally share a frame-setting function, which means that they are peripheral and, in line with the above observations, that they have to be referential.

(56) a. Auf dem Tisch, **da** stapeln sich die Bücher.
on the$_{DAT}$ table DA pile PR-REFL the$_{NOM}$ books
b. In der Küche, **da** schält Otto die Kartoffeln.
in tthe$_{DAT}$ kitchen DA peels Otto$_{NOM}$ the$_{ACC}$ potatoes
c. Mit dem Hammer, **damit** zerschlägt er die Scheibe.
with the hammer THAT-WITH smashes he$_{NOM}$ the$_{ACC}$ pane
d. An der Ostsee, manche Leute machen **da** mehrmals im Jahr Urlaub.
by the Baltic See some people do DA more-than-once in year holiday

As has been argued in Chapter 3, the association of the root with an aboutness feature presupposes that the root is also associated with a referentiality or specificity CU. Precisely the central adjuncts in question are not possible topics from the point of view of

referentiality. In spite of this, their fronting via syntactic topicalisation is permitted in declaratives, presumably due to the contrast feature, as evidence from different types of languages supports it. In interrogatives, on the other hand, the structure cannot be ameliorated even by the addition of a resumptive.

These facts suggest that certain adjuncts are incapable of bearing the [about] feature, and this apparently also bans their appearance in a LD construction. What is different here on the level of CUs than in the case of legitimate types of LD? It seems to be the featural makeup of the resumptive: in other cases of LD, it has been argued that it is a combination of an argument or adjunct feature with an aboutness feature. The following patterns sum up the possible distribution of the nominal and pragmatic CUs in Left Dislocation structures with new topics (57) and with repair strategy LD in questions (58). What is common in all of these structures is the featural makeup of the resumptive, consisting of an argument and an aboutness CU.

(57) a. R[new] ... [arg][about]
b. R[new][contr] ... [arg][about]
c. R[new] [arg][about][contr]
(58) R[contr] ... [wh] ... [arg][about]

In the case of nonreferential fronted items, the aboutness CU is missing, thus what remains is a bare argument or adjunct feature, dissociated from its root and the preroot CUs. As we have not been confronted with such an instance in the previous analyses, it might be the case that an argument or adjunct feature on its own, without further coindexed CUs preceding or following it is a banned option. Being non-referential, no anaphoric relationship can be established on semantic grounds between the fronted item and the resumptive, thus the stranded CU is too underspecified. Formally, it means that no resumptive can be inserted in such cases which leads to the failure of the expression on semantic interpretation as an element of the predicate domain is left unrealized. Thus, it appears to be an appropriate generalization that the reason why certain items resist LD lies in their feature structure; a stranded argument or adjunct feature unaccompanied by the weak topic feature cannot be interpreted by vocabulary insertion and nothing (or an inappropriate vocabulary item) will be inserted, which in turn results in the failure of the expression to be interpreted by the semantic component.

5.4. Conclusions

This analytical chapter has shed light on the possibility of the emergence of Left Dislocation in a situation distinct from new topic introduction. It has been argued that a simultaneous high ranking of the wh-precedence and topic-precedence constraints is able to trigger LD in wh-contexts, as both the [wh] feature and the [contrast] feature aim at preceding all other CUs of the type [arg], [adj] and [temp].

By ranking the [wh]—nominal domain adjacency high and, at the same time, ranking the contrast-precedence requirement under the faithfulness to pragmatic markers, it has been achieved that wh-marked items will not be left dislocated, and, furthermore, LD will not be assessed more optimal than syntactic topicalisation if the input only contains the [contrast][about] feature combination.

I employed two types of wh-precedence constraints referring to CU—domain and domain—CU relationships, which are able to derive single and multiple wh-fronting alike. Moreover, the formulation of the constraints is parallel to the two types of contrast-precedence, which adds desirable symmetry to the system.

Apart from deriving the appropriate wh-interrogatives, the system can correctly assess in which cases can a topic marked bundle surface as a syntactic topic and when it appears as a dislocation. Moreover, the ban on Contrastive LD in German questions has also been accounted for, which demonstrates the restrictive power of the system.

Chapter 6. Summary and conclusions

The presented optimality-theoretic system has been able to reach the aims that have been set, i.e. the modelling of Left Dislocation and syntactic topicalisation with the use of alignment and faithfulness constraints. Although it does not assume a level of hierarchical representation, the optimality-theoretic framework has been able to account for a wide range of phenomena.

Left Dislocation is defined as a construction involving a fronted nominal expression with an *obligatory* alternative intra-clausal position of the dislocated constituent signalled by a resumptive pronoun, i.e. with a syntactic relationship between the dislocated item and the corresponding pronoun. After presenting the subject of analysis in the target languages (English, German and Hungarian), the pragmatic literature on dislocation constructions and issues connected to topicality has been reviewed in detail to provide a reliable foundation for defining the particular pragmatic features taking part in Left Dislocation. Chapter 3 presented the optimality-theoretic framework, Syntax First Alignment, and as a demonstration of the functioning of the system, basic word orders including matrix and embedded phenomena have been discussed cross-linguistically. It is worth highlighting the treatment of second-position phenomena established in Newson (2010) and applied here to account for the position of the verbal root in relation to the temporal domain, and for the placement of the matrix tense in relation to the elements of the predicate domain. It has to be noted that the nominal features established in Chapter 3 are not claimed to reflect an exhaustive and detailed analysis of the nominal domain, their sole function is to cover the range of phenomena relevant for the present analysis.

In Chapter 4, the central research question of the emergence of Left Dislocation has been investigated, with an eye on the form of the resumptive pronoun. The next chapter extended the analysis to interrogative structures. In the following, I sum up the main findings and advantages of the analysis presented in these analytical chapters.

On the basis of pragmatic facts, it has been established that a more refined notion of topicality reflected in feature complexity can have certain import for the syntax as well. The possible combinations of the pragmatic features (1) yield different syntactic reflexes cross-linguistically: a. and b. stand for weak and strong topics, whereas c. and d. represent input combinations which can result in LD.

(1) a. [about]

b. [about][contrast]

c. [about][new]

d. [about][new][contrast]

Establishing weak and strong topic constraints, i.e. referring to the aboutness and the contrast features respectively, has proved to be a welcome option. In line with the principle that constraints in Optimality Theory are assumed to be universal, it has been shown that both types of constraints are operative in all three languages. English adjunct topicalisation, German weak topicalisation and reordering in the middle field have been argued to be the effect of the weak topic constraint referring to aboutness.

The inclusion of pragmatic aspects in the study also helped in identifying the main trigger for LD, i.e. the clash between incompatible discourse features which is resolved by domain marker deletion on newness. This step frees a part of the nominal expression from the domain, which explains its exceptional behaviour in LD. The distribution of the pragmatic features is shown in (2) and (3) with a contrast feature. Depending on the position of the pronoun, two patterns are available in each case.

(2)	a. **R[new]** arg_1 [tense] .... **arg[about]**	*English, German*
	b. **R[new] arg[about]** arg_1 [tense]	*Hungarian*
(3)	a. **R[new][contr]** arg_1 [tense] .... **arg[about]**	*English*
	b. **R[new] arg[about][contr]** arg_1 [tense]	*German, Hungarian*

Another substantial strength of the analysis is its ability to derive different type of topic fronting devices from uniform inputs, which differ only in the pragmatic features assigned to particular nominal domains. This is a substantially simpler assumption than deriving syntactic Topicalisation and Left Dislocation from radically different inputs, e.g. in the Minimalist approach hypothesizing the generation of topicalised phrases in argument position vs. the base-generation of dislocated phrases, or even deriving Contrastive LD and HTLD differently along the lines of movement vs. base-generation.

As a consequence of the featural makeup of the input, the resumptive appears in the structure as the spell-out of grammatical-functional and discourse features, i.e. as a combination of an argument or adjunct CU with an aboutness and optionally a contrast feature. This way, the appearance of the resumptive pronoun is not something unexpected,

as it does not involve the insertion of new, non-input material. Concerning the form of the resumptive pronoun chosen during Vocabulary insertion, the [contrast] feature has been identified as the reason for the insertion of demonstrative pronouns; in cases when the argument CU is adjacent to an [about] feature, the bundle is spelled out as a personal pronoun. Vocabulary templates have also been set up which could derive the appropriate case for the fronted item (default case or case-matching with the resumptive).

Finally, the system has been tested on its further applicability by an attempt to account for interrogative clauses and the combination of topicalisation and LD with wh-structures in Chapter 5. Most importantly, it has been demonstrated that LD can also result from a different necessity than a solely pragmatic condition. The trigger for 'repair strategy LD' is identified as a clash of two high precedence requirements involving strong topics and wh-marked elements. To satisfy both, the topical item is dislocated from the relevant predicate domain of the interrogative predicate, which enables both the interrogative and the topical expression to precede the domain formally.

Symmetrically to the formulations of the contrast-fronting constraints, which differ in their direction of alignment ([CONTR] **P** D_{PRED} vs. D_{PRED} **F** [CONTR]), the evaluation of wh-interrogatives could also be modelled by similarly positing a CU–domain ([WH] **P** D_{WH}) and a domain–CU alignment (D_{WH} **F** [WH]), accounting for single and multiple wh-fronting.

While many details remain to be worked out, for instance, a more detailed theory of Case assignment, a thorough treatment of LD out of embedded clauses and intricate details of multiple question formation, Syntax First Alignment has proved to be a promising framework for modelling cross-linguistic variation and can offer an alternative for syntactic frameworks based on hierarchical structure.

7. Bibliography

Ackema, Peter and Ad Neeleman (1998): WHOT? In: Pilar Barbosa, Danny Fox, Paul Hagstrom, Martha McGinnis, David Pesetsky (eds.): *Is the Best Good Enough? Optimality and Competition in Syntax*. Cambridge, Massachusetts: MIT Press. 15-35.

Alexopoulou, Theodora, Dimitra Kolliakou (2002): On Linkhood, Topicalization and Clitic Left Dislocation. In: *J. Linguistics* 38 (2002), 193-245. Cambridge University Press.

Altmann, Hans (1981): *Formen der "Herausstellung" im Deutschen: Rechtsversetzung, Linksversetzung, Freies Thema und verwandte Konstruktionen*. Tübingen: Max Niemeyer.

Anagnostopoulou, Elena, Henk van Riemsdijk, Frans Zwarts (eds.) (1997): *Materials on left dislocation*. Amsterdam: John Benjamins.

Antomo, Mailin (2012a): Interpreting embedded verb second. Causal modifiers in German. *Proceedings of ConSOLE XVII, 2012, 27-51*. Available at: <http://www.sole.leidenuniv.nl>

Antomo, Mailin (2012b): Projective meaning and the licensing of Embedded Root Phenomena. *Proceedings of ConSOLE XIX, 2012, 1-23.* Available at: <http://www.sole.leidenuniv.nl>.

Arregi, Karlos (2003): Clitic Left Dislocation is Contrastive Topicalization. In: Proceedings of the 26th Annual Penn Linguistics Colloquium, *Penn Working Papers in Linguistics* 9.1:31-44.

Averintseva-Klisch, Maria (2006): The 'separate performative' account of the German Right Dislocation. In: Christian Ebert & Cornelia Endriss (eds.): Proceedings of the Sinn und Bedeutung 10, 10th annual meeting of the Gesellschaft für Semantik 2005. Zentrum für allgemeine Sprachwissenschaft, Berlin. *ZAS Papers in Linguistics*, Volume 44, 6 2006.15-29.

Baloghné Nagy, Gizella (2013): Wh-questions in Syntax First Alignment. In: Péter Szigetvári (ed.): *{VL}lxx: Papers presented to {L}ászló {V}arga on his 70th birthday.* Budapest: Department of English Linguistics, Eötvös Loránd University. <http://seas3.elte.hu/vllxx>

Bartos, Huba (1999): Morfoszintaxis és interpretáció: a magyar inflexiós jelentségek szintaktikai háttere. PhD Dissertation. Budapest: ELTE.

Belloro, Valeria A. (2007): Spanish Clitic Doubling: A Study of the Syntax-Pragmatics Interface. PhD Dissertation. Buffalo: State University of New York.

Birner, Betty & Gregory Ward 1998. *Information Status and Noncanonical Word Order in English.* Amsterdam: Benjamins.

Boeckx, Cedric, Kleanthes K. Grohmann (2005): Left dislocation in Germanic. In: Werner Abraham (ed.): *Focus on Germanic Typology*. Berlin: Akademie-Verlag, 131-144.

Bosch, Peter, Carla Umbach (2007): Reference Determination for Demonstrative Pronouns. *ZAS Papers in Linguistics* 48, 2007: 39 – 51.

Boskovic, Zeljko (1999): On multiple feature checking. In: David Samuel Epstein and Norbert Hornstein (eds.): *Working Minimalism*. Massachusetts: MIT Press. 161-188.

Cann, Ronnie, Tami Kaplan, Ruth Kempson (2005): Data at the Grammar-Pragmatics Interface: the case of resumptive pronouns in English. *Lingua* 115: 1551-1577.

Choi, Hye-Won (2001a): Phrase structure, information structure and resolution of mismatch. In: Peter Sells (ed.): *Formal and empirical issues in optimality theoretic syntax*. CSLI Publications: Stanford, California. [Series in constraint-based lexicalism]

Choi, Hye-Won (2001b): Binding and Discourse Prominence: Reconstruction in ”Focus” Scrambling. In: Geraldine Legendre, Jane Grimshaw and Sten Vikner (eds.): *Optimality-theoretic Syntax.* Cambridge, Mass.: MIT Press. 143-170.

Chomsky, Noam (1977): ‘On WH-Movement’. In: Akmaijan, A. Culicover, P. and T. Wasow (eds.): *Formal Syntax*. New York.

Cinque, Guglielmo (1997). ‘Topic’ Constructions in Some European Languages and ‘Connectedness’. In: Anagnostopoulou, van Riemsdijk, Zwarts (eds): *Materials on Left Dislocation.* 93-119.

Cowper, Elizabeth, Daniel Currie Hall (2002): The syntactic manifestation of nominal feature geometry. In: Proceedings of CLA, published by Cahiers Linguistiques de l'UQAM. Available at: <http://homes.chass.utoronto.ca/~cowper/CLA02.pdf>

Cowper, Elizabeth, Daniel Currie Hall (2006): Argumenthood, pronouns, and nominal feature geometry. Handout. Presented at the ‘Workshop on Determiners’, Winnipeg, November 25, 2006.

Cowper, Elizabeth and Daniel Currie Hall (2009): Where – and what – is number? Presented at the 2009 annual meeting of the Canadian Linguistic Association, Carleton University, Ottawa, May 2009. To appear in the *Proceedings of CLA*. Available at: <http://homes.chass.utoronto.ca/ ~cowper/CowperHall2009.pdf>

Costa, Joao (2001). The Emergence of the Unmarked Word Order. In: Geraldine Legendre, Jane Grimshaw, Sten Vikner (ed.): *Optimality-theoretic Syntax*. Cambridge, Mass.: MIT Press. 170-204.

Doherty, Monika. 2005. Topic-worthiness in German and English. *Linguistics 43*: 181-206.

Dryer, Matthew S., Martin Haspelmath (eds.) (2011): *The World Atlas of Language Structures Online*. Munich: Max Planck Digital Library. Available online at http://wals.info/. Accessed on 08-28-2012.

É. Kiss, Katalin. 2002. *The syntax of Hungarian*. Cambridge: Cambridge University Press.

É. Kiss, Katalin. 2007. Topic and Focus: Two Structural Positions Associated with Logical Functions in the Left Periphery of the Hungarian Sentence. In: Interdisciplinary Studies on Information Structure 6. / Caroline Féry, Gisbert Fanselow, and M. Krifka (eds.): *The Notions of Information Structure*. 69–81.

Eisenberg, Peter (1998): *Grundriss der deutschen Grammatik*. Band 1: Das Wort. Stuttgart.

Féry, Caroline (2006): The prosody of topicalisation. ROA 774–0905. <http://roa.rutgers.edu>

Frey, Werner (2000): Über die syntaktische Position der Satztopiks im Deutschen. In: K. Schwabe et al. (eds): Issues on Topics. *ZAS Papers in Linguistics* 20, 12/2000. 137-172.

Frey, Werner (2001a): On some dislocation constructions in German and English. Zentrum für Allgemeine Sprachwissenschaft, Typologie und Universalienforschung (ZAS), Berlin. <http://www.zas.gwz-berlin.de/?publications_zaspil>

Frey, Werner (2001b): Notes on the syntax and pragmatics of German Left Dislocation. *ZAS Papers in Linguistics*, Volume 25, 12/2001: 423-449.

Frey, Werner (2004a): Notes on the syntax and the pragmatics of German left dislocation. In: Horst Lohnstein & Susanne Trissler (eds.), *The syntax and semantics of the left periphery*, 203-233. Berlin: Mouton de Gruyter.

Frey, Werner (2004b): A medial topic position for German. *Linguistische Berichte 198*. 153-190.

Frey, Werner (2005): Pragmatic properties of certain German and English left peripheral constructions. *Linguistics 43*: 89-129. (Also available at: http://www.zas.gwz-berlin.de/ fileadmin/mitarbeiter/frey/PragmProperties.pdf)

Frey, Werner (2006): Contrast and movement to the German prefield. In: Valéria Molnár & Susanne Winkler (eds.): *The architecture of focus*. 235-264. Berlin: Mouton de

Gruyter.

Fritzsche, Fabianne (2005): Präpositionalphrasen an der linken Peripherie: Überlegungen zu ihrer Syntax und Semantik. Magisterarbeit. Humbold-Universität zu Berlin.

Gáspár, Miklós (2005): Coordination in Optimality Theory. PhD dissertation. ELTE Budapest.

Gécseg, Zsuzsanna (2004): Topik és logikai alany a magyar mondatban. Talk presented at the 7th International Congress on Hungarian Linguistics (VII. Nemzetközi Magyar Nyelvtudományi Kongresszus), Budapest. Available at: <www.nytud.hu/NMNyK/eloadas/gecseg.rtf>

Gécseg, Zsuzsanna, Ferenc Kiefer (2009): A new look at information structure in Hungarian. *Natural Language and Linguistic Theory* 27, 583-622. Available at: <http://www.ucl.ac.uk/psychlangsci/research/linguistics/Events/Gecseg-Kiefer2009>

Geluykens, Ronald. 1992. *From discourse process to grammatical construction. On left-dislocation in English*. Amsterdam/Philadelphia: John Benjamins Publishing Company.

Givón, Talmy. 1983. *Topic Continuity in Discourse. A Quantitative Cross-Linguistic Study*. Amsterdam/Philadelphia: John Benjamins Publishing.

Gregory, Michelle L., Laura A. Michaelis (2001) Topicalization and Left-Dislocation: A Functional Opposition Revisited. *Journal of Pragmatics* 33: 1665-1706.

Grimshaw, Jane (1990): *Argument Structure*. Cambridge: MIT Press [Linguistic Inquiry Monographs 18].

Grimshaw, Jane (1995): Projection, Heads and Optimality. ROA-68. Rutgers Optimality Archive. <http://roa.rutgers.edu>

Grimshaw, Jane (2001): Economy of structure in OT. ROA-434. Rutgers Optimality Archive. <http://roa.rutgers.edu>

Grimshaw, Jane (2006): Chains as Unfaithful Optima. In: *Wondering at the Natural Fecundity of Things: Essays in Honor of Alan Prince*. Linguistics Research Center, University of California, Santa Cruz. Paper 6. 96-110.

Grohmann, Kleanthes (2000a): Copy Left Dislocation. *WCCFL 19 Proceedings*, ed. Billerey and Lillehaugen. 139-152. Somerville, MA: Cascadilla Press.

Grohmann, Kleanthes K. (2000b): *Prolific Peripheries: A Radical View from the Left*. Doctoral dissertation, University of Maryland, College Park.

Grohmann, K. (2000c): A movement approach to contrastive LD. *Rivista di Grammatica Generativa* 25, 3-65.

Grohmann, Kleanthes K. (2003): *Prolific Domains: On the Anti-Locality of Movement Dependencies*. John Benjamins, Linguistik Aktuell/Linguistics Today 66. Chapter 4. (accessed on 10 July 2008) <http://www.ling.umd.edu/grohmann/chapter4.pdf>

Gutiérrez-Bravo, Rodrigo (2002): Structural Markedness and Syntactic Structure: A Study of Word Order and the Left Periphery in Mexican Spanish. Doctoral dissertation. University of California, Santa Cruz.

Haegeman, Liliane (1991): Parenthetical Adverbials: The Radical Orphanage Approach. In: S. Chiba et al. (eds.): *Aspects of Modern English Linguistics*. Tokyo: Kaitakusha. 232-254.

Haegeman, Liliane (2003): Topicalisation, CLLD and the left periphery. Available at: http:/ling.auf.net/lingBuzz/000016.

Haegeman, Liliane (2006): *Thinking syntactically. A guide to argumentation and analysis*. Oxford: Blackwell.

Halle, Morris, Alec Marantz (1994): Some key features of Distributed Morphology. *MIT Working Papers in Linguistics* 21, 275-288. (Also available at: http://www.ai.mit.edu/projects/ dm/bp/Halle-Marantz1994.pdf.)

Harley, Heidi, Elizabeth Ritter (2002): Structuring the bundle. A universal morphosyntactic feature geometry. In: Horst J. Simon, Heike Wiese (eds.): *Pronouns: Grammar and representation.* John Benjamins: Amsterdam/Philadelphia. 23-41.

Hedberg, Nancy and Richard C. DeArmond (2009): On Complements and Adjuncts. Snippets 19. 11-12. Long version. Available at: <http://www.sfu.ca/~hedberg/Snippets_ long_revised.pdf>

Hidalgo, Raquel (2002): Establishing Topic in Conversation: A Contrastive Study of Left-Dislocation in English and Spanish. *clac 11/2002*, Universidad Complutense de Madrid. Available at: <http://www.ucm.es/info/circulo/no11/hidalgo.htm>

Hinterwimmer, Stefan, Sophie Repp (2010): Topics (?) in the Left Periphery. Presentation at the *2. Internationaler Workshop des SFB 632 'Informationsstruktur'*. Universität Potsdam: July 2010. Available at: <http://amor.cms.hu-berlin.de/~h0444n0b/pages/ download/Hinterwimmer &Repp_2010_SFB%20632_A2_Handout.pdf >

Imrényi, András (2012): A magyar mondat viszonyhálózati modellje. PhD Dissertation. Budapest: Eötvös Loránd University.

Jackendoff, Raymond (1977): *X-bar Syntax*. MIT Press: Cambridge, Mass.

Kaiser, Elsi (2006): Effects of topic and focus on salience. In: Christian Ebert & Cornelia Endriss (eds), *Proceedings of Sinn und Bedeutung 10*, ZAS Working Papers in Linguistics vol. 44, 139-154, Berlin.

Kálmán, László (ed.) (2001): *Magyar leíró nyelvtan: Mondattan I. [Descriptive grammar of Hungarian: Syntax I]*. Budapest: Tinta Könyvkiadó. Available at: <http://budling.nytud.hu/~kalman/arch/konyv01.pdf>

Kenesei, Istvan, Robert M.Vago, Anna Fenyvesi (1998): *Hungarian*. Taylor & Francis Routledge, London. [Descripitve Grammars]

Lambrecht, Knud (1994): *Information structure and sentence form: Topic, focus, and the mental representations of discourse referents*. Cambridge: CUP.

Lambrecht, Knud (2001): Dislocation. In: Martin Haspelmath et al. (eds.): *Language Typology and Language Universals. An International Handbook*. Vol. 2. Berlin: de Gruyter. 1050-1078.

Lee, Hanjung (2001): Optimization in Argument Expression and Interpretation: A Unified Approach. Doctoral Dissertation. Stanford University. ROA 461-0801. Rutgers Optimality Archive. <http://roa.rutgers.edu>

Legendre, Géraldine (2001): Introduction to Optimality Theory Syntax. In: Legendre et al (eds.): *Optimality-Theoretic Syntax*, 1-27.

Levin, Beth, Malka Rappaport Hovav (2005): *Argument realization.* Cambridge: CUP.

Lipták, Anikó, Luis Vicente (2006): Pronominal doubling under topicalisation. Available at: <http://www.ling.auf.net/lingBuzz/000247>

Lipták, Anikó (2010): The structure of the topic field in Hungarian. In: Paola Benincà, Nicola Munaro (eds): *Mapping the left periphery. The carthography of snytactic structures*, Volume 5. Oxford: Oxford University Press. 163-201.

McCarthy, John, and Alan Prince (1993): Generalized alignment. In: G. Booij and J. van Marle (eds.), *Yearbook of Morphology*, Vol. 6, 79–153. Dordrecht: Kluwer.

McFadden, Thomas (2006): Default case and the status of compound categories in Distributed Morphology. Write-up of talk given at PLC 30, February 24th, 2006, published in the conference proceedings. Available at: <http://babel.ucsc.edu/ ~hank/mrg.readings/ mcfadden_06_Default_case.pdf>

Manetta, Emily (2007): Unexpected Left Dislocation: an English Corpus Study. *Journal of Pragmatics* 39 (5). 1029–1035. Available at: <http://www.uvm.edu/~emanetta/ UnexpectedLeftDislocation.pdf>

Marantz, Alec (1997): No escape from syntax: Don't try morphological analysis in the privacy of your own Lexicon. Proceedings of the 21st Annual Penn Linguistics Colloquium: *Penn Working Papers in Linguistics* 4: 2, ed. Alexis Dimitriadis et.al. 201-225. Available at: <ftp://ling.upenn.edu>

Márkus Éva (2013): Die deutsche Mundart von Deutschpilsen/ Nagybörzsöny. Unpublished habilitation thesis. Budapest: Eötvös Loránd University.

Masharov, Mikhail (2008): Reference Resolution and Discourse Salience. PhD Dissertation. University of Rochester, New York.

Meinunger, André (2000): *Syntactic aspects of topic and comment*. Amsterdam: John Benjamins.

Molnár, Valéria (1991): *Das TOPIK im Deutschen und Ungarischen.* (Lunder germanistische Forschungen 58). Stockholm: Almqvist och Wiksell.

Molnár, Valéria (1998): Topic in Focus. On the Syntax, Phonology, Semantics and Pragmatics of the So-Called "Contrastive Topic" in Hungarian and German. *Acta Linguistica Hungarica* 45. 1-2. 89-166.

Morimoto, Yukiko (2001): Verb Raising and Phrase Structure Variation in OT. In: Peter Sells (ed.): *Formal and Empirical Issues in Optimality Theoretic Syntax*. CSLI Publications: Stanford, California. 129-225.

Müller, Gereon (2002): Harmonic alignment and the hierarchy of pronouns in German. In: Horst J. Simon, Heike Wiese (eds.): *Pronouns: Grammar and representation*. Linguistik aktuell; Bd.52. John Benjamins: Amsterdam/Philadelphia. 205-233.

Nagy, Gizella Mária (2006): Multiple questions in English, German and Hungarian. In: Varga László (ed.): *The Even Yearbook 7*. Budapest: Department of English Linguistics, Eötvös Loránd University. <http://seas3.elte.hu/delg/publications/even>

Nagy Gizella Mária (2008a): A balra kihelyezés optimalitáselméleti megközelítése. In: *LingDok* 7. Nyelvész-doktoranduszok dolgozatai. Szegedi Tudományegyetem, Nyelvtudományi Doktori Iskola. 123-141.

Nagy, Gizella (2008b): Left Dislocation in Alignment Syntax. In: *Proceedings of the 16th International Postgraduate Conference in Linguistics.* Manchester: Department of Linguistics and English Language, The University of Manchester. 81-94.

Nagy, Gizella (2009): Linksversetzung in der Optimalitätstheorie – Informationsstrukturelle Merkmale in der Syntax. In: Rita Brdar-Szabó, Elisabeth Knipf-Komlósi, Attila Péteri (szerk.): *An der Grenze zwischen Grammatik und Pragmatik*. Peter Lang Verlag, Frankfurt am Main. 293-303.

Neeleman, Ad, Elena Titov, Hans van de Koot, and Reiko Vermeulen (2009): A Syntactic Typology of Topic, Focus and Contrast. In: J. Van Craenenbroeck (ed.): *Alternatives to Cartography*. Studies in Generative Grammar series. Mouton de Gruyter. 15-51. Available at: <http://www.phon.ucl.ac.uk/home/reiko/A_syntactic_typology_of_topic_focus_and_contrast-July08.pdf>

Newson, Mark (2004): Deforestation in Syntax. In: Varga László (ed.): *The Even Yearbook 6*. Budapest: Department of English Linguistics, Eötvös Loránd University. 135-148. <http://seas3.elte.hu/delg/publications/even>

Newson, Mark, Vili Maunula (2006): Word order in Finnish: whose side is the focus on? In: Varga László (ed.): *The Even Yearbook* 7. Budapest: Department of English Linguistics, Eötvös Loránd University. 1-35. <http://seas3.elte.hu/delg/publications/even/2008.html>

Newson, Mark (2010): Syntax first, words after: a possible consequence of doing Alignment Syntax without a lexicon. In: Varga László (ed.): *The Even Yearbook 9*. Budapest: Department of English Linguistics, Eötvös Loránd University. 1-47. <http://seas3.elte.hu/delg/publications/even/2010.html>

Newson, Mark (2013): What you can do with a domain and why they are not phrases. In: Péter Szigetvári (ed.): *{VL}lxx: Papers presented to {L}ászló {V}arga on his 70th birthday*. Budapest: Department of English Linguistics, Eötvös Loránd University. <http://seas3.elte.hu/vllxx>

Nolda, Andreas (2004): Topics Detached to the Left: On Left Dislocation, Hanging Topic and Related Constructions in German. *ZASPIL - ZAS Papers in Linguistics*, Volume 35, 12/2004. 423-449.

Obama, Barack (2012): Remarks by the President at a Campaign Event. Carnegie Mellon University, Pittsburgh. July 06, 2012. Available at: <http://www.whitehouse.gov/the-press-office/2012/07/06/remarks-president-campaign-event-0>

Panagiotidis, Phoevos (2002): Pronominal nouns. In: Horst J. Simon, Heike Wiese (eds.): *Pronouns: Grammar and representation*. Linguistik aktuell; Bd.52. John Benjamins: Amsterdam/Philadelphia.183-205.

Peters, Yvonne, Wim Peters (2000): The Treatment of Adjectives in Simple: Theoretical Observations. In *Proceedings of LREC* (2nd International Conference on Language Resources and Evaluation). The Institute for Language and Speech Processing (ILSP), Athens.

Prince, Alan, Paul Smolensky (2002*). Optimality Theory. Constraint Interaction in Generative Grammar*. ROA Version. <http://roa.rutgers.edu>

Prince, Ellen (1981): Topicalisation, Focus Movement, and Yiddish-Movement: a Pragmatic Differentiation. In: D. Alford et al.: *Proceedings of the Seventh Annual Meeting of the Berkeley Linguistics Society*. 249-264.

Prince, Ellen, Gregory Ward (1991): On the topicalization of indefinite NPs. *Journal of Pragmatics*15, 8, 167-178.

Prince, Ellen (1997): On the functions of LD in English discourse. In: Kamio, A. (ed.): *Directions in functional linguistics.* Philadelphia/Amsterdam: John Benjamins. 117-44. Available at: http://www.ling.upenn.edu/papers/faculty/ellen_prince/dusseldorf.pdf.bin

Prince, Ellen (1998): On the limits of syntax, with reference to Left-Dislocation and Topicalization. In: Peter Culicover and McNally, L. (eds.): *Syntax and semantics.* Vol. 29. The limits of syntax. New York: Academic Press. 281-302.

Prince, Ellen (1999): How not to mark topics: 'Topicalization' in English and Yiddish. In: *Texas Linguistics Forum.* Austin: University of Texas. Chapter 8. Available at: <http://www.ling. upenn.edu/papers/faculty/ellen_prince/texas.ps>

Pustejovsky, James (1991): The Syntax of Event Structure. *Cognition* 41 : 47–81. Elsevier.

Repp, Sophie (2011): Relevance Topics. In: Reich, Ingo *et al.* (eds.), *Proceedings of Sinn & Bedeutung 15*, 483-498. Universaar – Saarland University Press: Saarbrücken, Germany. Available at: <http://amor.cms.hu-berlin.de/~h0444n0b/pages/download/ Repp_sub15.pdf >

van Riemsdijk, Henk (1997): Left Dislocation. In: Anagnostopoulou, van Riemsdijk, Zwarts (eds): *Materials on Left Dislocation*. 1-13.

Rudin, Catherine (1988): On multiple questions and multiple wh-fronting. *Natural Language and Linguistic Theory* 6: 445-501.

Sabel, Joachim (2001): Deriving multiple head and phrasal movement: The Cluster Hypothesis. *Linguistic Inquiry* 23: 532-545.

Salfner, Fabienne (2006): Semantics of Left-dislocated Prepositional Phrases. In: Proceedings of the First Central European Student Conference in Linguistics, Hungarian Research Institute for Linguistics. Available at: <http://www.nytud.hu/cescl/ proceedings/Fabienne_Salfner_CESCL.pdf>

Sells, Peter (1999): Constituent Ordering as Alignment. In: S. Kuno et al. (eds.): *Harvard Studies in Korean Lingusitics* 8.

Shaer, Benjamin, Werner Frey (2003): 'Integrated' and 'Non-Integrated' Left-peripheral Elements in German and English. In: *ZAS Papers in Linguistics* 35, 465-502. <http://amor.rz.hu-berlin.de/~h0594bbb/pdf-files/2004-Shaer-Frey-ZAS-PIL.pdf>

Snider, Neal (2005): A Corpus Study of Left Dislocation and Topicalization. http://www.stanford.edu/dept/linguistics/qp-fest/2005/abstracts/AbstractSnider.pdf

Speyer, Augustin (2003): Competing Constraints on Vorfeldbesetzung in German. In: Claudia Maienborn, Werner Frey, Benjamin Shaer: *Proceedings of the Dislocated Elements Workshop*, ZAS Berlin, November 2003, Volume 35, 12 2004. Available at: <http://www.zas.gwz-berlin.de/fileadmin/material/ZASPiL_Volltexte/zp35/zaspil35-speyer.pdf>, seen on: 19.01.2009. 519-541.

Starke, Michal (2009): Nanosyntax - A short primer to a new approach to language. In: Peter Svenonius, Gilliam Ramchand, Michal Starke & K. T. Taraldsen (eds.): *Nordlyd* 36.1, 1–6. Tromsø: CASTL. Available at: <http://www.ub.uit.no/baser/nordlyd>

Sting (2003): *Broken music.* New York: The Dial Press.

Sturgeon, Anne (2006): The syntax and pragmatics of contrastive topic in Czech. Santa Cruz: University of California. PhD Dissertation. Available at: <http://annesturgeon.com/ dissertation.html>

Surányi, Balázs (2010): Freedom of Word Order and Domains for Movement: A flexible syntax of Hungarian. Academic doctoral dissertation Budapest.

Traugott, Elizabeth (2007): Old English left-dislocations: Their structure and information status. *Folia Linguistica* 41(3-4): 405–441.

Vat, Jan (1997): Left Dislocation, Connectedness and Reconstruction. In: Anagnostopoulou, van Riemsdijk, Zwarts (eds): *Materials on Left Dislocation*. 67-93.

Vieri Samek-Lodovici (1999): The Internal Structure of Arguments: Evidence from Italian Nominalization-based Complex Predicates. Fachbereich Sprachwissenschaft, Universität Konstanz, Arbeitspapier 102. Available at: <http://ling.uni-konstanz.de/pages/publ/PDF/ ap102.pdf>

Zagona, Karen (2002): *The Syntax of Spanish.* Cambridge Syntax Guides. Cambridge: CUP.

Zeller, Jochen (2004): Left Dislocation in Zulu. Ms. Available at: <http://www.jzeller.de/ pdf/LDZuluSep04.pdf>