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Donostia San Sebastián
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LIST OF ABBREVIATIONS

In this book the following abbreviations appear:

1, 2, 3	first, second, third person
A	adjective
ABL	ablative case
ABS	absolutive case
ACA	djunct Condition
ACC	accusative case
ACI	Accusativus-cum-Infinitivo
ADESS	adessive case
adj	adjectivizer
adv	adverbial suffix
Adv	adverb
AGR	agreement
ALL	allative case
AP	adjectival phrase
A-position	argument position
APS	anaphora possessiva suffix
ARG	argument(al)
Art	article
ATP	argument taking predicate
AUX	auxiliary verb
C	consonant
Card	cardinality
CaseP	case phrase
CAUS	causalis case
CAUSAT	causative suffix
CNPC	Complex Noun Phrase Constraint
Com	pcomplementizer
COND	conditionalis suffix
Conv	converb
CP	complementizer phrase
CRP	Case Resistance Principle
DAT	dative case
DCI	Dativus-cum-Infinitivo
def	definite conjugation
DELAT	delative case
Dem	demonstrative pronoun
DP	determiner phrase
d-pronoun	demonstrative pronoun
dual	dualis
E	expression
ECP	Empty Category Principle
ELAT	elative case
EPP	Extended Projection Principle
ERG	ergative case
ESS	essive case
ext	external argument
F	Focus
FORM	formalis case
GEN	genitive case
GF	grammatical function
HMC	Head Movement Constraint
ILL	illative case
IMP	imperative suffix
indef	indefinite conjugation
INESS	inessive case
INFI	infinitive
Infl	inflection
INSTR	instrumental case
int	internal argument
IP	inflectional phrase
LAT	lative case
LCS	Lexical Conceptual Structure
LF	Logical Form
LOC	locative case
LS	Lexical Structure
N	nominal
NEG	negative particle
nom	nominal
NOM	nominative case
NOMI	nominalization suffix
NP	nominal phrase
npAGR	agreement in NP
NP-Dem	demonstrative construction of NP
obj	object

P	preposition/postposition
part	participle
PAS	Predicate Argument Structure
pass	passive
PASS	passive suffix
past.part.	past participle
perf	perfectivity marker
PERF	perfect tense
PF	Phonetic Form
pl	plural
POT	potentialis suffix
PP	prepositional/postpositional phrase
ppAGR	agreement in PP
PP-Dem	demonstrative construction of PP
pres	present
pres.part.	present participle
pron	pronominal
PS	Phrase Structure
Q	quantifier
REC	reciprocal suffix
refl	reflexive pronoun
REFL	reflexive suffix
rel	relativizing suffix
S	sentence
SCO	Strong Crossover
SENSC	Sentential Subject Condition
s	singular
SOV	subject object verb
Spec	Specifier
ST	Split Topicalization
subj	subject
SUBJ	subjunctive suffix
SUBL	sublative case
SUPER	superessive case
SVO	subject verb object
T	Topic
TERM	terminative case
THAP	-Assignment Parameter
tr	transitive
TRANS	translative case
UG	Universal Grammar
UTHAC	Unmarked -Assignment Convention
V	verb
VM	verbal modifier
VP	verbal phrase
W	word
WCO	Weak Crossover
Wh	question word
WhIC	Wh-island Condition

0. INTRODUCTION

1. The Goal of this Thesis

In this thesis, I would like to defend the hypothesis that Hungarian is a *configurational* language. There has been much discussion in recent years concerning the question whether Hungarian is a configurational language or not. It is my contention, however, that on the basis of empirical evidence presented in this study, Hungarian phrase structure has a configurational core. In this chapter, I will first present an overview of the model of grammar serving as the theoretical framework of this study. After that, I will briefly summarize the content of the following chapters.

In this study, the achievements and goals of the generative research program will be adopted.[1] I will follow a modular approach to the grammar of natural language as has been defended in a so-called Government and Binding paradigm (cf. Chomsky 1981 and subsequent literature). The phenomena in language fall out from the interaction of different subcomponents of the grammar, i.e. 'modules'. Chomsky (1981: 5) distinguishes the following subcomponents:

(1) a. Lexicon
    b. Syntax {(a) categorial component, (b) transformational component}
    c. Phonetic Form (PF)
    d. Logical Form (LF)

(2) a. Bounding theory
    b. Government theory
    c. θ-theory
    d. Binding theory
    e. Case theory
    f. Control theory

In the following, I will briefly describe the 'content' of these subcomponents (see, for details Chomsky 1981). Furthermore, I will indicate in which chapter(s) they play a role.

The lexicon specifies the abstract morphophonological structure of each lexical item and its syntactic features, including its categorial and subcategorization features. In chapter three, I will take up some questions related to the organization of the lexicon in general and the lexicon of Hungarian in particular.

(1) By this I mean generative grammar in its widest possible sense, that is, also including linguistic models as Lexical Functional Grammar, Generalized Phrase Structure Grammar, Relational Grammar, etc. (cf. Van Riemsdijk 1982 for a discussion of constructive pluralism). I will use formal definitions such as *government, governer, governee, c-command, adjacent, sister,* etc. only in an intuitive sense, unless specified otherwise. See for these definitions: Aoun and Sportiche (1982), Chomsky (1975; 1981; and subsequent literature) and Higginbotham (1985b).

Syntax exist of two components. The categorial rules specify the hierarchical organization of heads and their complements. This rule system is called *X'-theory* (cf. Jackendoff 1977). The principles of X'-theory play an important role in chapter two, and chapter seven in which the phrase structure of Hungarian and the structure of the maximal projections PP and NP will be determined.

The transformational component has been reduced to one single scheme move α. The application of move α maps D-structure (a combination of the lexicon and the categorial component) onto S-structure. This level of representation is interpreted in its turn by PF, 'surface structure' and LF, the level of representation specifying the 'logical form' of sentences.

Principles of the subcomponents in (2) have the status of *axiomata* in the theory. *Bounding theory* specifies locality constraints on seemingly unbounded dependencies or 'long distance' relations. I will return to the principles of bounding theory in chapter six in which unbounded Wh-strategies in Hungarian will be discussed.

The central concept of *government theory* is the structural relation between the head of a construction and categories dependent on it. Because of the fact that the concept of 'government' is the fundamental notion of the framework, it will be present throughout this study.

θ-*theory* determines the assignment of θ-roles such as agent, theme, goal, beneficiary, and so on. The relation between principles of θ-theory and syntax will be focussed on in chapter three where I will examine some of the properties of the lexicon in Hungarian.

Binding theory specifies the relation of anaphors, pronouns, names and bound variables to possible antecedents. I will rely on the principles of binding theory in chapter five when I analyze the syntactic behavior of referential items in Hungarian.

Case theory determines the assignment of abstract Case and its morphological realization. Thoughout this study, I will often refer to the notions of abstract and morphological case, and to the distinction between structural and lexical or 'inherent' case.[2] The reason for this is that Hungarian has an extensive case system (cf. Antal 1961b). I will return to Case and its surface realization more extensively in chapter three, and chapter five.

Control theory determines the potential for reference of the abstract 'invisible' subject of infinitival complements. I will take the principles of control theory into account in the analysis of Hungarian infinitival complements in chapter five.

Although I will adopt the Government and Binding paradigm outlined above, I will present empirical evidence for a possible simplification. It will be argued that two of the modules are superfluous. In chapter four, I will demonstrate that the transformational component, more specifically move α, can be dismissed with as a separate component of the grammar. The phenomenon of split constituents in Hungarian and in other languages as well, such as Warlpiri and German, cannot be accounted for in terms of move α. Further, in chapter six I will argue on the basis of Wh-strategies in Hungarian that the level of representation referred to as LF is

(2) I will indicate abstract Case by upper case, and I will indicate morphological or surface case by lower case.

superfluous. It is not necessary to invoke a different level than S-structure in order to account for the syntactic properties of quantifiers (cf. Haïk 1984), and Rullman 1988 for a similar conclusion). Instead, I will refer to the subcomponent of the grammar which deals with this as *quantification theory.* Note, however, that this module, unlike the LF component of standard generative grammar, does not employ independent syntactic principles such as licensing conditions for empty categories (cf. Chomsky's 1981 Empty Category Principle, ECP).

The idea that a linguistic system is construed as a system of rules and representations that can be factored into independent but interacting subsystems had the following consequences, among others. Firstly, it has made possible the study of *language typology* from a formal point of view. Secondly, it has stimulated the study of hitherto badly analysed languages.

(I) The *parametrization* of the modules is an initial step towards adressing the question of language typology, i.e., towards providing a hypothetical answer to the following question. How can typological differences between languages be classified? Some of these differences look trivial such as the order of head and complement, others are quite complex and intricate such as the presence or absence of parasitic gaps or split constituents in the particular grammars of languages. In this study, I will propose the following parameters with respect to Hungarian. The strength of the governor I, the *IP-parameter* (cf. chapter two), a parameter which specifies the relation between the lexicon and syntax in terms of θ-roles, i.e. the *θ-Assignment Parameter* (cf. chapter three), the *Pro-drop Parameter* (cf. chapter four), *±move Wh* (cf. chapter six), and the *Head Parameter* (cf. chapter seven).

Since Chomsky (1981) different types of languages have been studied in a generative framework. Consider, for example, the typology of *fixed word order* languages versus *free word order* languages, defining the latter, roughly, as languages allowing scrambling of their constituents through the sentence without affecting its meaning drastically (cf. Ross 1967). Languages belonging to this type are, for example, Warlpiri, Basque, Georgian, Dutch, German, Japanese, Korean, Turkish and also Hungarian, whereas languages with a fixed word order are for example English, and Navajo. The differences between fixed and free word order languages have been attributed to the *Configurationality Parameter* (cf. Chomsky 1981): 2.8.; and chapter one for an extensive discussion. In chapter five, I will argue on the basis of empirical evidence from Hungarian that it is unnecessary to set Configurationality Parameters.

Another typological split which has received much attention in recent years, is the distinction between languages with *rich and poor morphology.* We may define a language with rich morphology, roughly, as a language in which the person and number features of referential expressions are indicated by the inflectional morphology on the verb. It has been observed that in languages with rich morphology referential expressions may be omitted but not in languages with poor morphology. The first type includes languages such as Italian, Hungarian, and Warlpiri, among others, whereas the latter type includes languages such as English and Dutch. The difference in omissibility of pronominals in rich and poor morphology languages has been incorporated into the grammar as the *Pro-drop Parameter* (cf. Rizzi 1981: 1986

for detailed discussion). In chapter seven, I will demonstrate that the *Pro*-drop Parameter is also operative in connection with other inflected lexical items in Hungarian such as postpositions, nouns, and case markers.

(II) The modular approach to grammar has led to the discovery of a number of new phenomena in various languages, and it has become possible to study some phenomena in greater depth like for example long distance anaphors, transitivity alternations, 'split' or 'discontinuous' expressions, abstract lexical items like non-overt pronouns, and parasitic gaps, the behavior of quantified expressions, and so on. Furthermore, our knowledge of several languages which have hardly been studied so far has increased tremendously in recent years. A language which comes to mind as an instance of this, is, *Hungarian.* Although it would certainly be too early to assign Hungarian the predicate of a well-studied language, there has been an enormous effort to study all sorts of subcomponents and principles of Hungarian syntax.[3] The most important topics include, among others, the syntax of verbal modifier-verb projections, quantifier puzzles, the structure of (possessive) NPs and PPs, restructuring phenomena, the role of levels of representation, questions of word order, the status of the VP-projection, the syntax and semantics of Focus, the omissibility of pronominal elements, predication, types of unbounded dependencies (Topicalization, Wh-strategies), the Lexical Structure, the system of aspect, the system of auxiliaries, questions of reference, and the definiteness effect.

Let us now turn to a summary of the most important claims of this thesis.

Chapter one presents an introduction of the *configurationality* issue in general and its relation to the syntax of Hungarian. This chapter will serve as a background for the discussion in this study.

Chapter two elaborates on the phrase structure of Hungarian. I will argue that Hungarian is an *SOV*-language. This means that 'object-verb' is the basic order of the VP in Hungarian (cf. chapter five, for arguments that Hungarian has a VP). I will further argue that the governor *C,* unlike *I,* is *strong* in Hungarian. If a governor is strong, it must always be filled lexically. A consequence of a strong C, is, that the finite verb moves to this position. Hence, we derive the following hypothesis:

(3) *V-movement hypothesis for Hungarian*
V moves to C

Hungarian has a fixed position for Focus. The Focus position must be left-adjacent to the finite verb. A concomitant of (3) is that the structural Focus position is identified as the Spec of CP. Consequently, Wh-phrases are in the [Spec, CP] position in Hungarian as well, not unlike what we find in other languages. Another property of phrase structure in Hungarian is the following:

(4) CP is *recursive* within CP

(3) This research has been carried out both inside Hungary and outside Hungary. An Aspects-type of generative grammar was elaborated in volume VI of *Általános Nyelvészeti Tanulmányok* (Studies in General Linguistics), Budapest, 1969. Until É. Kiss (1978) this line of research was not represented in Hungary. The reason for this was probably the fact that the small group of Hungarian researchers did not find inspiration in the linguistic literature which was available at that time. This was based mainly on English, a language with fixed word order (cf. Szabolcsi 1985).

This ability of the CP accommodates the "stacking" of quantifiers preverbally, and topicalization phenomena. Further, it will play a prominent role in the analysis of long Wh-movement (cf. chapter six).

Chapter three concentrates on principles of the lexicon and principles which mediate between the lexicon and syntactic structure. The *Unmarked* θ*-Assignment Conventions* in the sense of Carter (1976), which belong to the latter type, will play an important role:

(5) *Unmarked* θ*-Assignment Conventions*
   a. The theme role is assigned to the object grammatical function
   b. The agent role is assigned to the subject grammatical function

The rules in (5) specify the assignment of θ-roles to arguments of basic, i.e. morphologically underived, verbs. Languages vary depending on the rigidity with which the rules in (5) are applied. In Hungarian, a nominative-accusative language, the rules in (5) apply unrestrictedly. This has two consequences for its grammar. Firstly, it presupposes a subject-predicate partitioning of the sentence. Secondly, if the rules in (5) apply whenever possible, then, it follows that syntactic transitivity alternations in Hungarian, that is NP-movement in the sense of Chomsky (1981), are absent. Before we can do so, I will first outline the structure of the lexical entry.

The lexical entry of a predicator contains a Lexical Conceptual Structure (LCS), roughly the dictionary meaning of a lexical item, a θ-grid which specifies the number and the entities belonging to the set of θ-roles, a Lexical Structure (LS) which represents the subcategorization properties of the verb, and a case frame which specifies the lexically selected inherent cases. The relation between the θ-grid and LS is determined by mapping conventions such as in (5). The introduction of the structure of the lexicon is necessary for a discussion of transitivity alternations in Hungarian. I will claim that transitivity alternations in Hungarian, such as Middle Verbs, Unaccusatives, Passivization, Ergatives, and Raising Predicates are in contrast to their equivalents in English which may be derived syntactically, *lexical* in nature. This difference between English and Hungarian will be attributed to a parameter in terms of the rules in (5).

Chapter four discusses the status of the *Projection Principle* in Hungarian syntax. The Projection Principle is a guiding principle of the grammar. It specifies the relation between the lexicon and syntax. Informally, it says that lexical information once selected in the lexicon must be recoverable in syntax. If it turns out that the Projection Principle is universally valid, it would have the effect of restricting the number of available grammars tremendously. Throughout this study, I will adopt the following intuitive version of the Projection Principle formulated in Chomsky (1981: 39):

(6) Representations at each syntactic level (i.e., LF, and D- and S-structure) are projected from the lexicon, in that they observe the θ-marking properties of lexical items

I will demonstrate that the Projection Principle holds in Hungarian grammar. The strongest evidence comes from the presence of non-overt elements in syntax which fill argument positions of the verb. It will be shown that Hungarian possesses

non-overt pronouns and Wh-traces. Both types of empty categories are argument holders to which a θ-role and Case is assigned. Another area from which it can be observed that the Projection Principle in Hungarian is operative, is the syntactic realization of θ-related lexically determined case. The following phenomena, including the system of personal pronouns, complex verb constructions, embedded clause formation and Left Dislocation, demonstrate that inherently selected case must be realized in syntax. Furthermore, split constituents in Hungarian may appear only under very specific syntactic and semantic conditions. In fact, an NP may only be split if a predication relation holds between the split parts. From this it follows that even though both parts could qualify as a verbal argument only one of them takes the argument position. This supports the idea that the Projection Principle is subject to a biuniqueness condition.

Chapter five focusses on the question whether Hungarian phrase structure has a hierarchical ordening or not. The empirical evidence will provide support for the following hypothesis:

(7) Hungarian phrase structure is *configurational*

A corollary of (7) is that Hungarian possesses a VP-node. É. Kiss (1987a: 36) argues that subject-object asymmetries are absent from Hungarian grammar. According to É. Kiss, the subject and the object have the same distribution and are identically affected by syntactic operations. I will put forward empirical evidence indicating that *subject-objectv* asymmetries are present in the grammar of Hungarian. They show up in various modules of the grammar such as the lexicon, control theory, binding theory, θ-theory, quantification theory, and Wh-module. These subject-object asymmetries, then, support the hypothesis in (7). It is obvious that in view of overwhelming evidence for this claim, it is highly unmotivated to assign Hungarian sentence structure a non-configurational phrase structure.

I agree with É. Kiss that some subject-object symmetries appear in Hungarian where asymmetries occur in English. However, there are two kinds of subject-object symmetries. Firstly, there are subject-object symmetries which appear in unambiguously configurational languages such as Dutch or Frisian as well. This involves the distribution of sentence adverbs, the absence of some VP-rules, the lack of that-trace effects, the syntax of idiomatic expressions, compositional θ-assignment and Binding Principle C symmetries. Hence, instead of relaxing X'-theory or government theory, it rather must be concluded that these tests do not qualify as legitimate VP-tests. Secondly, there are subject-object symmetries which also appear in uncontroversial configurational languages such as Dutch or Frisian, but they have a somewhat different shape in in those languages than in Hungarian. These subject-object symmetries include the lack of the superiority effects and the topicalization of universal quantifiers. I will attempt to demonstrate how subject-object symmetyries may arise in a configurational phrase structure. It will be suggested that these symmetries fall out from the interaction of the categorial component with independent modules such as government theory, X'-theory, and bounding theory.

Chapter six discusses strategies to form *embedded Wh-questions* in Hungarian. These different strategies provide empirical evidence for the *Correspondence Hypothesis:*

(8) *Correspondence Hypothesis*
Whenever there is a syntactic reflex of the assignment of (wide) scope, the dependency involved and overt long Wh-movement obey the same conditions on bounding and government

Long Wh-movement in Hungarian is subject to *locality* conditions and it proceeds *successive cyclicly.* Therefore, I will conclude that this phenomenon in Hungarian is constrained by general conditions which restrict this phenomenon in other languages as well. Furthermore, I will demonstrate that Hungarian possesses an alternative strategy to overt long Wh-movement, the so-called *mit*-strategy. This type of Wh-strategy displays the same conditions on government and bounding as long overt Wh-movement. This provides support for the Correspondence Hypothesis. As a consequence, the status of LF as a separate subcomponent of the grammar becomes questionable.

Chapter seven investigates the syntax of the PP in Hungarian. The PP has two striking properties. Firstly, it is a *head-final* category. Secondly, the PP may contain a realization of person-number inflection (AGR). These properties have the following implications for the syntax of Hungarian. The fact that maximal projections such as the PP, and NP are head-final suggest that Hungarian is specified with respect to the Head Parameter as 'head last', each lexical head follows its complement. This implies that the underlying order of the VP-node, for example, is 'object-verb'. Furthermore, the PP gives insight into the *syntactic* role of AGR. In Hungarian, we can distinguish two types of postpositions, inflected (dressed) Ps, and uninflected (naked) ones. It appears that the two types of PPs have their own syntactic properties concerning X'-theory, Case theory, binding theory, and the *Pro*-drop Parameter. These differences thus coincide with the presence or absence of AGR. Hence, by comparing dressed PPs with naked ones, we can isolate the syntactic properties of AGR.

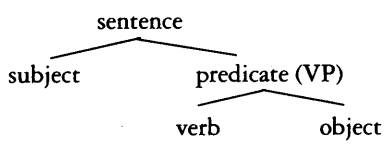
1. THE CONFIGURATIONALITY ISSUE

In this chapter, I will introduce the *configurationality* issue in general (cf. section 1.1.), and discuss this question with respect to Hungarian in particular (cf. section 1.2.).[1]

1.1. On Configurationality in General

Before going into details, let me first sketch in short the *core problem* of the configurationality issue. In many languages there is direct evidence for a special grammatical relation of *subject* and a different one of *object.* Syntactic rules may apply to a combination of the object and verb but not to a combination of the subject and verb. Compare, for example, the VP-rules, such as VP-preposing and VP-deletion, in English. Languages with such rules are said to display subject-object *asymmetries.* The appearance of subject-object asymmetries in a particular language is considered as evidence for the different positions of the subject and the object in the structure of the sentence in that language. If we abstract away from surface word order variation, this may be represented in the following tree diagram:

(1)



In some languages, there seems to be little or no evidence available for this subject-predicate partitioning of the sentence. Subject-object asymmetries seem to be missing in these languages. The question arises whether these languages still differentiate subjects and objects in a fundamental way.

While generative grammarians had taken it for granted that in English there is a syntactic VP-node, and had devised a series of constituency tests to show that there is a subject-predicate partitioning of the sentence, some linguists discovered that the

(1) See also the introduction of Marácz and Muysken (1989) for a historical overview of the configurationality debate, discussion of some proposals, and methodological questions concerning configurationality.

tests did not carry over easily to non-Indo-European languages. Arguments for a VP-node were hard to come by in those languages. An example of this is Hinds (1974) who argued that there was no reason to assume a VP-constituent for Japanese.[2]

Similarly, syntacticians found it difficult to reconcile the considerable freedom of word order in some languages with the mechanism of phrase-structure rules. It was assumed that phrase-structure rules generated ordered strings of elements only. An example is Staal's (1967) work on Sanskrit.[3] Staal argued that the order of subject, verb and object was completely free in Sanskrit, and he proposed to replace the formalism of ordered trees of Chomsky (1965; 1977) by that of 'wild' or unordered trees. These trees indicated to what constituent a given element belongs but not the order of elements within that constituent. Note that Staal did maintain a VP-node in Sanskrit. Staal's proposal was, however, not a theoretical improvement, because as Chomsky (1965: 123-127) argued, set-systems are equivalent to concatenation-systems.[4]

The main impulse for work on configurationality came in the late seventies, when Ken Hale discovered that aboriginal Australian languages such as Warlpiri were hard to classify in terms of typological notions current until then. He observed that Warlpiri allows an extremely free word order, that is, any ordering of constituents will yield a grammatical sentence. The only restriction on word order in that language is that the auxiliary verb (Aux) must be in second position:

(2) Kurdungku ka maliki wajilipinyi
child-ERG Aux-pres dog-ABS chase-nonpast
Maliki ka kurdungku wajilipinyi
Maliki ka wajilipinyi kurdungku
Wajilipinyi ka kurdungku maliki
Wajilipinyi ka maliki kurdungku
Kurdungku ka wajilipinyi maliki
'The child is chasing the dog.'
(Hale 1981: 1)

Hale (1981) observed further that the extreme freedom of word order is not only restricted to the verbal arguments but may also involve constituents which are a single semantic unit corresponding to NP in English. Note that the parts of the phrase *two small children* in Warlpiri is an instance of a 'split' constituent. Compare:

(3) *Kurdujarrarluk* kapala maliki wajilipinyi *witajarrarlu*
child-dual-ERG Aux-pres-dual dog-ABS chase-nonpast small-dual-ERG
Maliki kapala *kurdujarrarlu* wajilipinyi *witajarrarlu*
Witajarrarlu kapala maliki wajilipinyi *kurdujarrarlu*
(etc., any order with Aux in second position)
'The two small children are chasing the dog.'
(Hale 1981: 1)

(2) In those days even some reseachers of Germanic languages did not assume a VP. See, for example, the treatment of V-raising in Dutch by Evers (1975).

(3) See also Šaumjan and Soboleva's (1963) study on free word order in Russian. They argued that the phrase marker of Russian could be captured more easily by an unordered set-system instead of a concatenation-system.

(4) Chomsky (1965: 123-127) acknowledges, however, that freedom of word order cannot be captured in terms of the theory of transformations at that time.

Combining the insights of Šaumjan and Soboleva (1963), Staal (1967), and Hinds (1974), Hale (1981; originally written in 1978) proposed to capture these observations by defining the basic syntactic structures of Warlpiri by the following minimal rule:

(4) $E \rightarrow W^*$

This rule states that in Warlpiri expressions (E) are formed by stringing words (W) together. Hale, unlike for example Staal in Sanskrit, did not assume the presence of a syntactic VP-node in the phrase-structure of Warlpiri.

In Hale (1980), the typological distinction between free and fixed word order languages conformed to the formalism of X'-theory as outlined in Chomsky (1970) and developed in Jackendoff (1977). The X'-scheme generates the following endocentric rules:

(5) a. $X'' \rightarrow \ldots X' \ldots$
b. $X' \rightarrow \ldots X \ldots$ (where X is N, V, ...)

According to Hale (1981), some languages employ both (5a) and (5b) for the realization of their endocentric categories, the *configurational* languages, whereas the syntax of *non-configurational* languages contains only rule (5b). Rule (5b) expresses three things: (i) Each endocentric category has a head, (ii) the order of modifiers is free, and (iii) constituents are 'flat' in that there is no intermediate structure between a head and its maximal projection.[5]

Hale (1982) suggested that the difference between configurational and non-configurational languages is not only restricted to fixed versus free word order. Rather, there is a clustering of so-called non-configurational properties. Hale listed the following 'diagnostics':

(6) a. 'Free' word order
b. The use of split or discontinuous constituents
c. Free or frequent *pro*-drop
d. The lack of NP-movement
e. Lack of expletive elements (like *it, there,* etc.)
f. Use of a rich case-system
g. Complex verb words
h. The lack of VP-rules (like VP-preposing, VP-deletion, etc.)
i. The lack of ECP-effects[6]

Hale argued that some of these properties (such as the lack of standard ECP-effects and *pro*-drop) could be derived by assuming that in non-configurational languages, i.e. languages with one-prime categories, the notion government, defined as a relation between a head and its direct sister, is absent. It turned out, however, that this list of diagnostics could not characterize the type. Languages classified as non-

(5) Rule (5b) may also specify the relative order of heads and complements. For example, the fact that heads in Japanese are category-final can be expressed as follows (Japanese was analysed at that time as a non-configurational language, see Hale 1980 and Farmer 1980):
(i) $X' \rightarrow \ldots X$
(6) Diagnostic (6i) has been added by Huang (1982).

configurational displayed at most only a subset of these properties. For example, Hungarian and Japanese, which were characterized in the literature as non-configurational, do not possess a 'strong' Aux-node such as Warlpiri, or Navajo (cf. 6g). Furthermore, established configurational languages such as Italian or Dutch may also display a subset of the non-configurational characteristics. For example, Italian has 'free' word order, free or frequent *pro*-drop, and lack of ECP-effects with long Wh-movement (cf. Rizzi 1982). Dutch exhibits 'free' word order, *pro*-drop with non-referential expressions, lack of VP-rules, and lack of ECP-effects with long Wh-movement (cf. Koster 1986). Hence, it became less clear what the 'proper' diagnostics of a non-configurational language were.

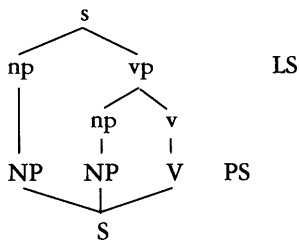
In the course of this study, I will demonstrate that Hungarian displays a subset of the diagnostics of non-configurationality, and that these phenomena may be accounted for *without* assuming a non-configurational phrase-structure for its syntax. It will be argued that they may be attributed to independently motivated principles of UG and properties of Hungarian. 'Free' word order is not so free after all. More and more phenomena have been found which restrict freedom of word order. Hungarian has even neutral word orders (cf. chapter two). Overt expletives are lacking but there is some evidence that non-overt expletives may be present (cf. chapter four). Some VP-rules such as VP-preposing may apply under specific circumstances in Hungarian as well (cf. chapter five). The occurrence of split constituents is heavily restricted both syntactically and semantically in Hungarian (cf. chapter four). Free or frequent *pro*-drop falls under the *Pro*-drop Parameter (cf. chapter four). The lack of NP-movement follows from the way θ-roles are related to syntactic structure in Hungarian (cf. chapter three). The lack of standard VP-rules such as VP-deletion is due to the syntactic properties of I in Hungarian (cf. chapter five). Finally, the lack of ECP-effects with long Wh-movement is dependent on the fact that the minimal maximal domain of the subject in Hungarian happens to coincide with that of the object, namely the CP (cf. chapter five).

The modular approach to grammar narrowed the distinction between the grammars of configurational and non-configurational languages. It initiated the search for *subject-object asymmetries* in non-configurational languages. A reasonable hypothesis, then, was that evidence for subject-object asymmetries would turn up in the modules of the grammar. Hale (1983) discovered subject-object asymmetries within the domain of binding theory (reflexive-reciprocae binding) and control theory in Warlpiri. Notice that after the discovery of subject-object asymmetries in non-configurational languages the term 'non-configurational' was no longer a particularly appropriate one. Therefore, the configurationality puzzle shifted from the problem of free word order to the following question. How is the cluster of *both* subject-object symmetries (see, for example (6h), the lack of VP-rules) and subject-object asymmetries in the grammar of a particular language to be accounted for? An initial answer to this question was suggested in Chomsky (1981).

Chomsky assumed that all languages are configurational at Lexical Structure (LS), a subpart of D-structure, which is an abstract, mobile structure representing the hierarchical organization of a predicator and its direct arguments, but not at the overt categorial representation, called Phrase Structure (PS). This latter representation was

assigned a flat structure in non-configurational languages. As a consequence, the phrase marker of a sentence in a non-configurational language was represented at each level of representation as a dual non-isomorphic syntactic structure. Consider:

(7)



Chomsky related the dichotomy between LS and PS in non-configurational languages and the isomorphicity between LS and PS in configurational languages to a parametrization of the Projection Principle. He hypothesized that in non-configurational languages the Projection Principle holds only at LS, i.e. 'Assume a Grammatical Function (GF)', whereas in configurational languages it holds of the pair (LS, PS). This approach accounted for some of the properties of non-configurational languages.

Free word order was handled by free lexical-insertion and base-generation at PS, subject-object symmetries were attributed to PS, the representation where the subject and object are equally prominent, and subject-object asymmetries were attributed to LS, where a hierarchical division of the arguments of the verb is made. Chomsky's parameter *Assume GF* has been elaborated in more detail by Hale (1983), Mohanan (1983) and Zubizarreta and Vergnaud (1982).[7]

Note that a relaxation of the Projection Principle led to an *anomaly* in the theory of UG. Firstly, Chomsky (1981) redefined the core of the generative research program. The theory of phrase-structure grammars was eliminated from the theory of UG, and was replaced by new core principles such as the Projection Principle. By parametrizing the Projection Principle, Chomsky created an internal conflict in this research program. Secondly, note that a representation like (7) is not a reduced phrase marker in the sense of Lasnik and Kupin (1977), because not every pairs of nodes dominates or precedes the other in a single phrase marker. Chomsky (1982: 14) states: "It should be clear that the theory of phrase-structure has no standing as a component of UG". From this, we may conclude that there is no theoretical objection against representations like (7). This would, however, imply that the theory of reduced phrase markers should be given up. Certainly, an undesirable step.

In reaction to such rather radical proposals, other researchers working in the generative tradition have proposed to account for cases of apparent free word order with mechanisms that remain much closer to the standard assumptions of generative grammar. In these approaches to the configurationality puzzle, researchers tried to account for this typological split by parametrizing a subcomponent of the grammar.

(7) This idea of double representation led also to the extensive study of the formal properties of phrase markers. See Zubizarreta and Vergnaud (1982), Higgingbotham (1985), and Speas (1986).

Stowell (1981) suggests that relaxing the adjacency condition on Case-assignment has the effect of allowing for free word order. In fixed word order languages, the object, for example, has to remain next to the verb because in those languages Case-assignment requires adjacency. If the object were anywhere else, it would not be Case-marked, leading to an ungrammatical result. Consequently, if there is no adjacency requirement on Case-assignment in a language, the order of elements can be much freer.

Van Riemsdijk (1982) interprets Hale's observations on Warlpiri in terms of the difference between the syntactic representations most familiar to us and phonological representations. Warlpiri clauses would have no tree structure but they would be organized phonologically. They would be subject to adjacency conditions of phonology rather than those of syntax.

In Saito (1982) and much related work, the assumption is made that in a free word order language such as Japanese the phrase-structure rules create a VP-node and ordered constituents, but that the possibility of freely adjoining constituents to the clause they are part of has the effect of allowing free word order.

Jelinek (1983) and Speas (1986) provide empirical evidence against a parametrization of the Projection Principle. They argue that even in Warlpiri and Navajo, the Projection Principle is satisfied by fully referential clitic pronouns that serve as verbal arguments. Therefore, they conclude that the Projection Principle is satisfied at all levels of representation even in non-configurational languages. Note that such a theory is in fact a notational variant of a theory which assumes a VP-node and the application of adjunction rules. The linking of 'dislocated' NPs in non-A-positions to the clitic pronouns in the A-positions of Aux is equivalent with the binding of A-positions by NPs which are in non-A-positions by the application of adjunction.[8]

Kuroda (1987) has proposed the Forced Agreement Parameter in order to derive the main typological differences between English and Japanese:

(8)

	English	Japanese
Visible Wh-movement	+	-
Scrambling	-	+
Topic-prominence	-	+

The Forced Agreement Parameter states that complements and heads in English, unlike in Japanese, must display agreement. As a consequence, the subject NP in [Spec, IP] in English, contrary to Japanese, must agree with the head of IP, i.e. I(nfl). The presence of an NP in this position blocks movement from the [Spec, VP] to the [Spec, IP] in English. Hence, the lack of scrambling in that language. In Japanese, on the other hand, nothing prevents the movement of an NP from [Spec, VP] to [Spec, IP]. This yields, then, scrambling in Japanese.

In sum, it seems to me that the configurationality puzzle consists of the study of the internal structure of the clusters of subject-object asymmetries and symmetries,

(8) Such a state of affairs happens more often as Chomsky (1981: 346) notes: "It is quite possible that alternative approaches that appear superficially to be quite different may fall together, when the proper level of abstraction is identified and clarified."

their relation and their position in a theory of UG. The focus of research has shifted from the superficial diagnostics of (6) towards the position of these clusters in a theory of UG. There are two possibilities to approach these questions:

Scenario I

The asymmetries are taken as the unmarked cluster, that is, they are generated by the subcomponents and principles of UG. The presence of this cluster in a particular grammar is taken as an indication that all languages are configurational, and consequently have a VP-node. This represents the *null-hypothesis,* because of the existence of established configurational languages such as English. The puzzle for proponents of this position can be phrased as follows: How is the cluster of symmetries covered in a theory of UG?

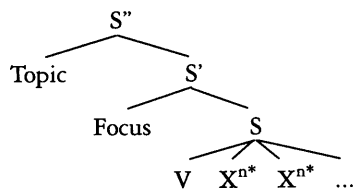
Scenario II

The cluster of symmetries is the unmarked one in the sense that it is generated by the phrase-structure of a particular language. This option is problematic from the point of UG. In the light of the existence of uncontroversially configurational languages it is rather *ad-hoc.* The questions to answer for proponents of this position are the following: What is the position of the cluster of symmetries in a theory of UG, and how is the cluster of asymmetries to be accounted for in the grammar of a particular language?

1.2. Configurationality and the Grammar of Hungarian

Much work in Hungarian syntax deals with the position of Hungarian with respect to the Configurationality Parameter. As we will point out in the next chapter, Hungarian allows 'free' word order. This, taken together with the absence of the most direct evidence for a configurational phrase-structure, has led some researchers to classify Hungarian as a non-configurational language. This position has been most clearly defended in the studies of É. Kiss (cf. É. Kiss 1981a, and subsequent literature). According to É. Kiss, the propositional part of the sentence is flat. She distinguishes between non-A-positions hierarchically ordered on the 'periphery' of the sentence (Topic, and Focus) and A-positions in S, and claims that move-α affects arguments by shifting them to any of the two peripheral positions in (1):

(1)



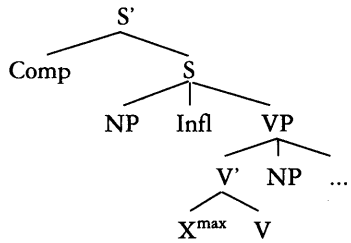
Topic may contain several maximal major categories, while Focus is restricted to a single constituent. Furthermore, the phrases in S may be scrambled. This structure lacks a VP-constituent. Hence, the subject and object have the same distribution

structurally. This hypothesis lead to the discovery of subject-object symmetries in Hungarian where in English asymmetries appear (cf. É. Kiss 1982a). These subject-object symmetries occur in several modules, like X'-theory (position of sentence adverbs, and absence of VP-rules), Wh-module (the lack of superiority effects), and quantification module (Topicalization of universal quantifiers). I will return in chapter five to an extensive discussion of subject-object symmetries and their position in Hungarian syntax. Note that the approach just discussed has a somewhat crude empiricist flavor.[9]

This approach supposes that hypotheses about how to cover variation in word order and the presence of subject-object symmetries should spring directly out of the way the data initially look to the investigator. É. Kiss proposes to account for the properties of Hungarian by postulating a special type of phrase structure, namely, the one depicted in (1). Since languages like English lack variation in word order and subject-object symmetries, they are assumed to have a quite distinct grammar (cf. É. Kiss 1982a; 1987c).

An alternative configurational approach to Hungarian syntax in line with scenario I above has been proposed in Horvath (1981; 1986a).[10] Horvath regards Hungarian as having a basic SVO-order and exhibiting much of the configurational character of, say, English in the operation of NP-movement, and hierarchical clause structure. A D-structure like (2) must be affected by various instances of move-α, including movement to Comp, Topicalization, Subject Postposing (a VP-adjunction rule), downgrading movement, scrambling, movement in LF, and so on in order to produce all the possible varieties of strings of constituents:

(2)



The X^{max} under V' provides for various preverbal constituents in neutral sentences such as verbal prefixes, determinerless nouns, predicative adjectives, and so on, and is vacated if some other constituent of the sentences is to occupy that position. This constituent will then receive Focus-interpretation at LF. Although the assumption of a VP-node represents the null-hypothesis and is thus preferred over the more impressionistic approach, Horvath's elaboration faces several problems. Elsewhere, I

(9) Gazdar et al. (1983: 5) refer to this type of approach as 'neo-empiricism'.

(10) In the literature, there are other pairs of competitive analysis concerning the configurational status of one and the same language. For example, a configurational versus non-configurational analysis has been proposed by: Eguzkitza (1986), Ortiz de Urbina (1986), and Salaburu (1985) versus Abaitua (1985), Azkarate et al. (1981), and Rebuschi (1985) for Basque; Den Besten (1982), Fanselow (1987), Koster (1986), and Webelhuth (1985) versus Halder (1985; 1986), Sternefeld (1984), and Tappe (1982) for German; Saito and Hoji (1983) versus Farmer (1980), Farmer et al. (1986), and Hale (1980) for Japanese; and Choe (1985) versus Yang (1982; 1984) for Korean.

have attempted to demonstrate that some of her actual tests on subject-object asymmetries suffer from empirical and theoretical shortcomings (cf. Marácz 1988a).

The following tests are incomplete, including the distribution of sentence adverbs, Quantifier Float, VP-deletion, and the distribution of bound pronouns (Weak Crossover effects). Other tests make the wrong predictions under the theoretical assumptions adopted by Horvath, like Subject Postposing as an instance of VP-adjunction, mixed configurational categories, Quantifier Float, and Weak Crossover effects (WCO). I will return to a more extensive discussion of these VP-tests and their theoretical consequences in the sections 4.6., 5.3., and 5.4.

An initial justification for the approach dictated by the null-hypothesis came from the observations made in Horvath (1981: 210) and É. Kiss (1982). They noted that subject-object asymmetries in Hungarian occur in the domain of WCO and reflexive binding. Since then the list of subject-object asymmetries has rapidly grown, involving various other modules of the grammar. I will catalogue these subject-object asymmetries in chapter five. The problem of Hungarian syntax became not only how to account for variation in word order but also how to account for a cluster of subject-object asymmetries and symmetries in the grammar?

Following Chomsky's (1981) suggestions on configurationality, some of these questions were tackled in Marácz (1986a). A serious disadvantage of the approach to assign the phrase marker of a sentence a dual representation (cf. 1.1.(7)), is, as I pointed out above, that it involves a drawback from a theoretical point of view. It leads to an relaxation of the theory of UG.[11] On the other hand, this hypothesis stimulated the following lines of research. Firstly, it initiated the search for subject-object asymmetries in Hungarian. Secondly, it made it necessary to reconsider the question of the mapping between LS and PS. These lines of research led to the discovery of other subject-object asymmetries in the domain of binding theory unambiguously showing that subject and object have a different distribution in Hungarian as well.

Elsewhere (cf. Marácz 1987c), I have proposed that the mapping of LS onto PS in Hungarian has the following four properties (cf. Koster 1987):

(3) a. Obligatoriness b. Biuniqueness
c. Identity d. Locality

Obligatoriness is supported by the fact that all lexically selected verbal arguments are present at surface structure. Hence, no lexically selected arguments may be lost during the derivation. The relation between LS and PS is biunique, that is, each argument at LS corresponds to exactly one constituent at PS. The relation between LS and PS is subject to an identity requirement involving either structural positions or morphological markers. Furthermore, the relation between LS and PS obeys a general locality constraint, i.e., the PS-constituent (or its place holder) appears in the domain of the verb whose LS contains the argument to which it is related. An approach which assumes that the mapping between LS and PS is restricted by the

(11) Compare also Horvath (1987) for this point.

properties in (3) is a notational variant of the theory which falls under scenario *I* of the preceding section. In that case, the VP-node remains *visible* at all levels of representation. In chapter four, I will discuss the mapping between LS and syntax in more detail and the status of the Projection Principle in Hungarian.

Although I think that enormous progress has been made in recent years, a number of empirical and theoretical questions concerning the syntax of Hungarian remain controversial. A more careful examination than hitherto is, in my view, required to account for freedom of word order, the properties of phrase-structure, and the parallel presence of clusters of subject-object asymmetries and symmetries. In the chapters to follow, I wish to make a modest contribution with respect to the settlement of these questions. The grouping of phenomena and their analysis is motivated by the theory of UG outlined in the introduction. It is my hope that this study will contribute to the definite solutions of the puzzles discussed above, and so will yield a deeper insight into the structure of Hungarian and the structure of UG.

2. THE PHRASE STRUCTURE OF HUNGARIAN

In the following sections, I will develop a theory for the *phrase structure* of Hungarian. Recently, some generalizations on word order in Hungarian have been observed. In section 2.1., I will discuss these generalizations. Furthermore, in section 2.2., these generalizations will serve as the basis for a theory of Hungarian phrase structure.

2.1. Descriptive Generalizations on Word Order in Hungarian

Hungarian has traditionally been regarded as a free word order language.[1] This freedom of word order is, however, only restricted to the sentential clause. As I will demonstrate below, other maximal projections, like NP and PP, have a fixed word order. In this section, I will consider some phenomena that are related to the question of word order. These phenomena have in common that they put restrictions on the sentential *word order* variation involving (*A*) the neutral word order, (*B*) linear restrictions on complex verb constructions, (*C*) the fixed Focus-position, (*D*) the position and interpretation of quantifiers, and (*E*) linear and hierarchical restrictions on maximal projections other than the clause. Let us consider (*A*) first.

(A) In the literature on Hungarian word order, there is no general agreement on the question whether Hungarian has a *neutral* sentence-order. The position that Hungarian lacks a neutral word order has been defended in É. Kiss (1981a; and subsequent literature), whereas Kiefer (1967), Horvath (1981; 1986), and Kálmán et al. (1986) hold the opposite view. It seems to me that the position in the latter references is the correct one. Hence, I will assume that Hungarian has a neutral sentence-order, namely, SVO. Let us consider, however, the position of É. Kiss first.

É. Kiss claims that the sentence has no neutral order, and that the only fixed part is constituted by the verb (cf. É. Kiss 1987: 39). The postverbal constituents may be scrambled around freely. In preverbal position, É. Kiss distinguishes two consecutive

(1) The following studies on word order in Hungarian have been undertaken by, among others, Ackerman and Komlósy (1983), Deák (1988), Dezső (1965), Horvath (1986a), Hunyadi (1985), Kálmán (1985a; 1985b), Kálmán et al. (1986), Kenesei (1985c; 1986b), Kiefer (1967; 1970), É. Kiss (1986b; 1987a), and Pléh (1982).

types of categories associated with different structural positions: An unstressed constituent, anda constituent immediately preverbal bearing primary stress. She presents the following taxonomy of word order variation in a transitive sentence (' indicates primary stress, *János* 'John', *Máriát* 'Mary-ACC', *szereti* 'loves'):

(1)

I	*II*	*III*	*IV*
János	'Máriát	szereti	
János Máriát		'szereti	
Máriát	'János	szereti	
Máriát János		'szereti	
János		'szereti	Máriát
	'János	szereti	Máriát
Máriát		'szereti	János
	'Máriát	szereti	János
		'Szereti	János Máriát
		'Szereti	Máriát János

(É. Kiss 1987: 39)

É. Kiss (1987: 39) claims further that this grouping of the complements has also a semantic-communicative function. The constituents in position *I* present the information which is known both to the speaker and hearer. According to her, these constituents possess Topic (T) function. Therefore, she calls this position the Topic-position. The constituent in position *II* bears primary stress, and it displays a fall in pitch. É. Kiss claims that this constituent is not only phonologically but also semantically the most prominent constituent of the sentence. It is the so-called Focus (F) of the sentence. Therefore, she calls this the Focus-position.[2]

Contrary to É. Kiss, Kiefer (1967), Horvath (1981; 1986), and Kálmán et al. (1986) claim that sentences with a neutral order do exist in Hungarian. The order in such sentences is *SVO*. Kálmán et al. (1986: 130), for example, distinguish the following two types of sentences in Hungarian: (*i*) *Corrective* sentences, and (*ii*) *neutral* sentences. The first type coincides with the sentence type É. Kiss has studied. Kálmán et al. (1986: 132) claim that "In every Hungarian corrective sentence there is what we refer to as an 'eradicating stress', i.e., a main stress that is not necessarily stronger than a normal stress, but which 'eradicates' all subsequent stresses, and thus, cannot be followed by any more main stresses". So, according to Kálmán et al. sentences with a single main stress may appear in Hungarian but they have a rather marked status. The unmarked order is represented by the sentence type which they call *neutral*. This type of sentence has no single prominent stress, and displays a 'level-prosody' pattern from an intonational point of view. Kálmán et al. claim that in corrective sentences all orders are possible, although there is a difference in interpretation associated with the various orders. Neutral sentences, on the other hand, allow only an SVO-order.[3] Compare the corrective sentences in (2) with their neutral counterpart in (3) (' indicates normal stress):

(2) There are a number of studies on the Focus-position in Hungarian including, among others, Farkas (1986), Hetzron (1966), Horvath (1976, 1986a), Hunyadi (1981b; 1981c), Jékel (1984), Kiefer (1967; 1981; 1986), É. Kiss (1981a; 1981b; 1981d; 1986b; 1987a), Kenesei (1985c; 1986b), Komlósy (1982a; 1986), and Szabolcsi (1980; 1981b; 1981c; 1983d).

(3) See for discussion of intonational and stress patterns in Hungarian: Kálmán (1985a; 1985b), Kálmán and Kornai (1985), Kenesei and Vogel (1986; 1987), É. Kiss (1987a), Komlósy (1986), Nádasdy (1985), Prószéky (1985), and Varga (1979; 1981a; 1981; 1983; 1985).

(2) a. 'Péter 'megvárta Marit a klubban
Peter perf-waited Mary-ACC the club-INESS
'Peter DID wait for Mary at the club.'
b. 'Péter 'Marit várta meg a klubban
'It is Mary that Peter waited for at the club.'
c. 'Péter 'várta meg Marit a klubban
'There has been an occasion when Peter waited for Mary at the club.'
d. 'Péter a 'klubban várta meg Marit
'It is at the club that Peter waited for Mary.'
e. 'Péter várta meg a klubban Marit
'It was Peter who waited for Mary at the club.'
f. 'Péter várta meg Marit a klubban
'It was Peter who waited for Mary at the club.'
(Kálmán et al. 1986: 131)

(3) a. 'Péter 'megvárta 'Marit a 'klubban
Peter perf-waited Mary-ACC the club-INESS
'Peter waited for Mary at the club.'
b. *'Péter 'Marit 'várta 'meg a 'klubban

I will consider this distinction to be observationally *adequate.* Therefore, following Kiefer (1967), Horvath (1981; 1986), and Kálmán et al. (1986), I will assume the following descriptive generalization on the *neutral* word order in Hungarian sentences:

(4) The neutral order is *SVO*

In the next section, I will argue that this order is derived from the underlying *SOV*-order by V-movement. Let us now consider the position of verbal modifiers in the sentential clause.

(*B*) Ackerman and Komlósy (cf. Ackerman 1984; 1987a, Ackerman and Komlósy 1983, and Komlósy 1985) observe another restriction on sentential word order in Hungarian. According to Ackerman and Komlósy, verbal *modifiers* must appear left-adjacent to the finite verb in neutral order. In such instances, the verbal modifier and the verb constitute a complex verb (cf. section 4.4.). The group of verbal modifiers which has this property is categorially rather heterogeneous and includes, among others, verbal prefixes[4] (cf. (5a)), determinerless complements of the verb (cf. (5b)), and predicative adjectives and nominals (cf. (5c)). Consider:

(5) a. Mari *be* dobta a labdát a tóba
Mary into threw-AGR3sg the ball-ACC the lake-ILL
'Mary threw the ball into the lake.'
b. János *fát* vágott az erdőben
John wood-ACC cut-AGR3sg the forest-INESS
'John was wood-cutting in the forest.'
(Ackerman 1984: 66)
c. *Beteg* lett
sick became
'He became sick'

These sentences support the following generalization on the position of verbal modifiers in their neutral order:

(4) See Kiefer (1982) for the role of verbal prefixes in the aspectual system of Hungarian.

(6) Verbal modifiers precede the finite verb in their neutral order

Note that the neutral order with a determinerless object is SOV (cf. (5b)). However, this is only an apparent violation of (4). In section 5.3.1., I will argue that such cases fall under the phenomenon of Noun-Incorporation which is conditioned by the absence of the definite or indefinite article. Let us now turn to a discussion of the syntax of Focus.

(C) Hungarian syntax is constrained by a fixed position for *Focus*-interpretation. With Kiefer (1967), among others, I will assume the following descriptive rule for this phenomenon:[5]

(7) The Focus-position is left-adjacent to the finite verb

That rule (7) is indeed operative in Hungarian may be observed from the *Inversion* between the verb and the verbal modifier when a constituent, apart from verbal modifiers themselves, is focussed. Focussed NPs and verbal modifiers are in complementary distribution.[6] Compare the minimal pair (3a) versus (2b), here repeated as (8a) and (8b):

(8) a. 'Péter *'meg* várta 'Marit a 'klubban
Peter perf-waited-AGR3sg Mary-ACC the club-INESS
'Peter waited for Mary at the club.'
b. 'Péter 'Marit várta *meg* a klubban
'It is Mary that Peter waited for at the club.'

In the neutral (8a), the verbal modifier, the prefix *meg* 'perfectivity marker', precedes the verb, whereas in (8b) in which the accusative NP is focussed, it must be postponed.

Other NPs with quantificational content trigger also Inversion. Wh-phrases in Hungarian occupy the Focus-position, because they must be left-adjacent to the finite verb. As a consequence, with Wh-questions the verbal modifier has to be postponed:

(9) a. *Ki *meg* látta Marit? b. Ki látta *meg* Marit?
who perf- saw-AGR3sg Mary-ACC 'Who did notice Mary.'
('Who did notice Mary.')

These sentences support the following descriptive generalization on the position of *Wh-phrases:*

(10) Wh-phrases appear in the Focus-position

É. Kiss (1981b: 189) lists some other NPs with quantificational content which have to appear in Focus-position obligatorily involving, among others, constituents

(5) This descriptive statement is incorporated into a formal approach by É. Kiss (1981) and Horvath (1986). É Kiss puts this restriction into her phrase structure rules of Hungarian, while Horvath assumes that each Hungarian verb is associated with a Focus-feature which is assigned to the maximal projection to the left of the verb under strict local government.

(6) É. Kiss (1981b) refers to the category of verbal modifiers as 'reduced' complements. According to É. Kiss, reduced complements are in Focus. On the other hand, Ackerman and Komlósy (1983) point out, correctly in my view, that although verbal modifiers and focussed constituents are in complementary distribution, this does not imply that the verbal modifiers occupy the Focus-position in their neutral order.

modified by a negative particle, or by *csak* 'only'. Consequently, they also trigger Inversion between a finite verb and a verbal modifier. Compare:

(11) a. *Nem János meg látta Marit
not John perf- saw-AGR3sg Mary-ACC
('Not John did notice Mary.')

b. Nem János látta *meg* Marit?
'Not John did notice Mary.'

(12) a. *Csak János *meg* látta Marit
only John perf- saw-AGR3sg Mary-ACC
('Only John did notice Mary.')

b. Csak János látta *meg* Marit?
'Only John did notice Mary.'

Hence, Inversion is captured by the following generalization:

(13) Focussing triggers Inversion between the finite verb and its verbal modifier

Let us consider now the position of quantified expressions in Hungarian.

(*D*) Quantifiers prefer a position to the *left* of the finite verb (see, for example Hunyadi 1981a, among others).[7] So, not only focussed NPs have to be to the left of the finite verb but in fact any constituent with a quantificational content. Kenesei (1986) regards these phenomena as subcases of the same restriction on word order in Hungarian. According to Kenesei, elements with a quantificational content, such as negated NPs, inherent quantifiers, Wh-phrases, focussed NPs, and so on, occupy a "field" to the left of the verb. Kenesei distinguishes the following four fields in the Hungarian sentence:

(14)

Initial Field	*Quantifier Field*	*Verb*	*Postverbal Field*
non-operators (i.e. 'Topics', existential *Q*, downgraded universal *Q* (Kenesei 1986: 148)	*even/no*-phrases > negation > universal *Q* > only-phrase/ Wh-phrase/ Focus		non-operators, *no*-phrases/ universal *Q*, existential *Q*, *even*-phrase

In (14), the slant lines stand for a disjunctive relationship and the 'greater than' ('>') sign for a strict left-to-right order. Kenesei claims that the order of constituents is rather free in the Initial Field and the Postverbal Field but that it displays a linear ordering in the Quantifier Field. Furthermore, he observes that scope-interpretation is a function of linear order. Kenesei postulates the following ad-hoc descriptive device to capture scope-readings:[8]

(15) Given quantifiers Q_1 and Q_2 where Q_1 precedes Q_2, Q_1 has scope over Q_2

(7) There is a lively discussion in this area of Hungarian grammar. The outcome of this debate might have important consequences for theories on the relation between syntax and semantics. Compare, among others, Bánréti (1982), Hunyadi (1981a; 1981b; 1984; 1985; 1986a; 1986b; 1987), Kenesei (1985b; 1985c; 1986b; 1987; to appear) Kiefer (1981; 1986), É. Kiss (1986b; 1987a), Marácz (1985a; 1986a), Ruzsa (1986), Szabolcsi (1980; 1981b; 1981c; 1983d; 1986a; 1986b), and Varga (1980).

(8) (14) does not cover several scope-readings. For example, a stressed universal quantifier in the Postverbal Field may have scope over a quantified expression in the Quantifier Field (' indicates stress). Compare:

(i) Csak Jánost szereti 'mindenki
only John-ACC loves everyone
'For every x, only for y=John, x loves y'
*'Only for y=John, for every x, x loves y'

Observe that the scope-readings in (16) are covered by (15):

(16) a. Mindenki csak Máriát szereti
everyone only Mary-ACC loves
'Everyone is such that he loves only Mary.'
*'Only Mary is such that everyone loves her.'
b. Csak Máriát szereti mindenki
*'Everyone is such that he loves only Mary.'
'Only Mary is such that everyone loves her.'

Kenesei notes some further restrictions in the Quantifier Field. For example, Wh-phrases cannot be preceded by any NP with quantificational content other than another Wh-phrase. This is illustrated in the following pair:

(17) a. *Mit/*valakit/*mindenkit/*egy férfit/*csak téged* ki
what-ACC/someone-ACC/everyone-ACC/a man-ACC/only you-ACC who
látott?
saw-AGR3sg
'Who saw what?'
b. Ki *mit* látott *valakit/mindenkit/egy férfit/csak téged?*
'Who saw what/someone/everyone/a man/only you?'
(Kenesei 1986: 153)

In order to make this descriptive generalization more explicit, Kenesei (1986: 153) formulates schemes which have the effect of restricting rule (15):

(18) *[S NP_1[-Wh]...NP_2[+Wh]] where NP_2 is in the scope of NP_1

Summarizing, quantifiers in Hungarian appear preferably "stacked" to the left of the finite verb (cf. (14)). Their scope-interpretation is determined by the linear order in which they appear in the sentence (cf. (15)). This may further be restricted by the content of the quantifiers (cf. (18)). It goes without saying that both the position and the interpretation of quantifiers heavily constrain the freedom of word order.

Let us consider now the word order in maximal projections other than the sentential clause.

(*E*) In general, maximal projections other than the sentential clause are *head-final.* Within a single maximal projection complements precede their heads. Therefore, we may formulate the following descriptive generalization on the relative order of complement and head:

(19) Endocentric categories are head-final

Observe, for example, that an NP, a PP, and a participle construction, which is an NP in Hungarian, have their head on the right periphery:[9]

Furthermore, scope is not determined by word order with the existential quantifier *valaki* 'someone':

(ii) *Valakit mindenki szeret*
someone-ACC everyone loves
'For every x, for some y, x loves y'
'For some y, for every x, x loves y'

It is easy to see that the first reading is not predicted by rule (15). From these examples, I conclude that (15) can be overridden by phonological and lexical factors. This implies also that it does not give a complete picture in itself of scope-assignment in Hungarian (cf. Hunyadi 1981a and Kenesei 1986 for suggestions).

(9) Studies on the NP include, among others, Dezső (1967; 1971; 1982a), Gaál (1978), Kenesei (1985e), Kornai (1985), Szabolcsi (1981a), and Tompa (1968). For discussion of the PP compare Marácz (1983; 1984; 1985c; 1986c), Papp (1963), and Sebestyén (1965). In chapter seven, I will return to the structure of NPs and PPs in more detail.

(20) a. A piros *ház*
the red house
'The red house.'

b. A ház *mögött*
the house behind
'Behind the house.'

c. A sarkon álló *ház*
the corner-SUPER stand-pres.part. house
'The house which stands at the corner.'

Observe that (19) holds only for endocentric categories which are a projection of the expansion of their heads. Furthermore, from (19) it follows that maximal projections are *left-branching.*

Let us consider another example of an endocentric category in Hungarian, the possessive NP.

Szabolcsi (1981a) has observed that this construction displays two variants. A variant in which the possessor NP is marked nominatively, and a variant in which the possessor NP appears with the dative case. In both constructions, the possessor NP precedes the noun-possessed, the head of the possessive NP. The noun-possessed bears an person-number agreement (glossed as npAGR).[10] Compare:

(21) a. A fiú háza
the boy house-npAGR3sg
'The house of the boy'

b. A fiúnak a háza
the boy-DAT the house-npAGR3sg
'The house of the boy'

Szabolcsi (1981a) has observed some further syntactic differences between these variants.

(*i*) The definite article a(z) invariably precedes the nominative possessor NP (cf. (21a)), whereas it invariably follows the dative possessor NP (cf. (21b)).

(*ii*) The nominative possessor may not be separated from the head noun. The dative possessor, on the other hand, may scramble freely around in the sentence. Consider:

(22) a. *A *fiú* leégett [*t* háza]
the boy down-burned house-npAGR3sg
'The house of the boy burned down.'

b. A *fiúnak* égett le [*t* a háza]
the boy-DAT burned down the house-npAGR3sg
'The house of the boy burned down.'

From this minimal pair, Szabolcsi concludes that the dative possessor NP, unlike the nominative possessor NP, does not have to be in construction with its noun-possessed.

(*iii*) Wh-phrases may only occur as a dative possessor NP:

(23) a. *A *ki* vendége
the who guest-npAGR3sg

b. *Kinek* a vendége
who-DAT the guest-npAGR3sg
'Whose guest'

The question arises what happens when a right-branching category is embedded in a left-branching endocentric category? This can only happen if Hungarian had

(10) See for studies of the Hungarian possessive NP, among others, Biermann (1985), Gaál (1978), De Groot (1983b), Kenesei (1985e), Kornai (1984; 1985), Mel'cuk (1973), and Szabolcsi (1981a; 1984; 1986c; 1986d; 1986e; 1986g; 1987c).

right-branching exocentric categories. Kenesei (1984) argues that relative clauses are such. Compare:

(24) a. [NP NP [CP ...]] b. [NP A fiú [CP aki a sarkon áll]]
the boy who the corner-SUPER stands
'The boy who is standing at the corner.'

Consider now the output of embedding a relative clause in a possessive NP (cf. (25)), or PP (cf. (26)):

(25) a. *[[NP A fiú [CP aki a sarkon áll]] köpenye]
the boy who the corner-SUPER stands cloak-npAGR3sg
b. [[NP A sarkon álló fiú] köpenye]
the corner-SUPER stand-pres part boy cloak-npAGR3sg
'The cloak of the boy who was standing on the corner.'

(26) a. *[PP [NP A ház [CP amely a sarkon áll]] mögött]
the house which the corner-SUPER stands behind
b. [PP [NP A sarkon álló ház] mögött]
the corner-SUPER stand-part.pres. house behind
'Behind the house on the corner'

These sentences demonstrate that in left-branching endocentric categories no right-branching categories may appear. In the grammatical variants, the relative clause has been transformed into a left-branching category by an adjectivizing strategy. This category is headed by the present participle which modifies the complement of the noun-possessed or postposition. With respect to the possessive NP, there exists another strategy to save configuration (25a), namely, by marking the possessor NP with dative case:

(27) [NP A fiú*nak* [CP aki a sarkon állt]] véres volt [*t* a köpenye]
the boy-DAT who the corner-SUPER stood bloody was the cloak-npAGR3sg
'The cloak of the boy who was standing at the corner was bloody.'

Recall, however, that a dative possessor NP may be scrambled out of its possessive NP yielding a discontinuous constituent. This suggests that generalization (19) holds if and only if the head and its complement are in construction. Therefore, a dative possessor NP, which is separated from its noun-possessed, may head a right-branching structure.

Recapitulating, in this section I have discussed the following descriptive generalizations on word order in Hungarian:

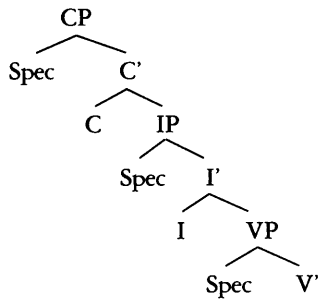
(28) a. The neutral order is *SVO* (cf. (4))
b. Verbal modifiers precede the finite verb in their neutral order (cf. (6))
c. The Focus-position is left-adjacent to the finite verb (cf. (7))
d. Wh-phrases appear in the Focus-position (cf. (10))
e. Focussing triggers Inversion between the finite verb and its verbal modifier (cf. (13))
f. Quantifiers are stacked preverbally (cf. (14))
g. Given quantifiers Q_1 and Q_2 where Q_1 precedes Q_2, Q_1 has scope over Q_2 (cf. (15))
h. Endocentric categories are head-final (cf. (19))

In the next section, I will rely heavily on these descriptive generalizations in the development of a theory for the phrase structure of Hungarian.

2.2. Theory

In this section, I will present a theory for the *phrase structure* of Hungarian. Following Chomsky (1986a), I will assume that the categorial component of the grammar universally generates the following phrase structure:

(1)



Let us consider then how the descriptive generalizations of the preceding section fit into (1).

2.2.1. Hungarian is an *SOV-language*

In chapter five, I will argue on the basis of various subject-object asymmetries that Hungarian has a VP-node. The next question to anwer is what the basic order of this category is.

Recall that endocentric categories in Hungarian are head-final (cf. 2.1.(28h)) and that these categories may not contain right-branching substructures. This implies that the general directionality of branching in Hungarian is leftward in its endocentric projection. Therefore, I propose the following uniformity condition on the directionality of branching of X'-categories:

(1) *Uniformity Condition on Branchingness of X'-Categories*
Endocentric categories are left-branching in Hungarian

This principle is due to a core principle of the X'-component which generates only right- or left-branching categories in a particular language (cf. Stowell 1981).

The following phenomena also illustrate that (1) is operative in Hungarian.

(*I*) Apart from NP and PP, the VP is head-final as well, although in contemporary Hungarian (Hungarian is historically an SOV-language (cf. Bárczi et al. 1978) the OV-order does not surface in finite sentences for reasons having to do with V-movement (see the next section for discussion). However, constructions with non-finite verbs, like participle constructions, are unambiguously head-final (cf. 2.1.(25b) and 2.1.(26b)).

(*II*) Left-branching categories may not contain right-branching substructures, as the ungrammaticality of 2.1.(25a) and 2.1.(26a) indicates. Hungarian employs seve-

ral adjectivizing strategies to circumvent this type of embedding. For example, by inserting 'dummy' verbal participles (cf. the case of embedded relative clauses discussed in 2.1.(25a) and 2.1.(26a)) or by adjectivization with the suffix *-i* (cf. also Laczkó 1985 and section 7.2.1.).

Nominalization is also an instance of the former strategy. The verbs *átkel* 'cross over' and *tartoz* 'belong to' may be nominalized by suffixing of *-ás/és* (NOMI). *Átkel* subcategorizes for an NP with a lexical superessive case (cf. (2a)) and *tartoz* subcategorizes for a lexical allative case (cf. (3a)). Nominalizations with *-ás/és* are instances of passivization (cf. chapter three):

(2) a. NP átkel a hídon
NP cross-AGR3sg the bridge-SUPER
'NP crosses over the bridge.'
b. [NP [NP az átkelés] [NP a hídon]]
the cross-NOMI the bridge-SUPER
'The crossing over the bridge'

(3) a. NP tartozik a csoporthoz
NP belong-AGR3sg the group-ALL
'NP belongs to the group.'
b. [NP [NP a tartozás] [NP a csoporthoz]]
the belong-NOMI the group-ALL
'The belonging to the group'

The (b)-phrases demonstrate that a nominalized verb may take an NP to its right. This NP is case-marked similarly as the NP-complement of the unmodified alternant in the (a)-phrases.

The following examples show that the insertion of adjectivers, like the verbal participles *való* 'being' of the verb *van* 'be' and *történő* 'happening' of the verb *történik* 'happen', may transform the right-branching structures in the (b)-phrases into left-branching structures. (*Való* is a stative present participle and *történő* is a dynamic present participle):

(4) a. [NP a hídon *történő* átkelés]
the bridge-SUPER happen-part cross-NOMI
'The crossing over the bridge'
b. [NP a csoporthoz *való* tartozás]
the group-ALL be-part belong-NOMI
'The belonging to the group'

Another strategy to create left-branching structures is by adjectivization with the suffix *-i* (adj). Consider the following phrases:

(5) a. [NP [NP a lány] [NP Budapestről]]
the girl Budapest-DELAT
'The girl from Budapest'
b. [NP [NP a folyó] [PP a híd alatt]]
the river the bridge under
'The river under the bridge'
c. [NP [NP János kémkedése] [PP a főnök után]]
John spy-NOMI-npAGR3sg the boss after
'John's spying upon the boss'

In the above phrases, a (possessive) NP takes an NP (cf. (5a)) or a PP (cf. (5b) and (5c)) to its right. These phrases may be turned into left-branching categories by suffixing the latters with the adjectivizer *-i* :

(6) a. [NP a [NP budapest]$_i$ lány]]
the Budapest-adj girl
'The girl from Budapest'

b. [NP a [PP híd alatt]$_i$ folyó]]
the bridge under-adj river
'The river under the bridge'

c. [NP Jánosnak [PP a főnök után]$_i$ kémkedése]
John-DAT the boss after-adj spying-NOMI-3npAGR
'John's spying upon the boss'

Laczkó (1985) reports that the types of adjectivization in (4) and (6) are quite common and that they are preferred over their right-branching counterparts.

The cross-category generalization in (1) has far-reaching implications for the phrase structure of Hungarian. As I pointed out above, the VP is underlyingly *OV*. This implies that Hungarian is an *SOV*-language. Furthermore, the VP cannot contain right-branching substructures. Therefore, Horvath's (1981, 1.6.3.) argument for a right-branching V" based on Emonds' restriction on surface recursion, must be rejected on conceptual grounds (cf. Ackerman 1984). Let us now consider how the neutral *SOV*-order is covered (cf. 2.1.(28a)).

2.2.2. *V-movement and the IP-parameter*

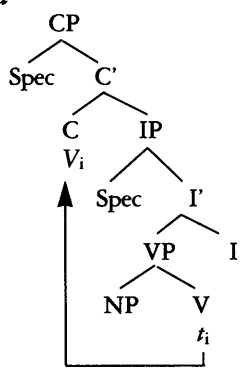
I will assume that the neutral *SVO*-order is derived from the underlying *SOV*-order, analogously with the rule which yields the V-second effect in Germanic languages. In these languages, the verb is in final position in embedded clauses, but it is in the second position in root clauses.

Let us consider an example of V-second in Dutch:

(1) a. Jan dacht dat Peter hem gisteren *opbelde*
John thought that Peter him yesterday up-phoned
b. Peter *belde* hem gisteren *op*
Peter phoned him yesterday up

In (1a), the verb *opbellen* 'to phone up' is in its base-generated position in the embedded sentence. In (1b), on the other hand, the finite verb appears in the second position of the root clause and it leaves its particle stranded in base-generated position. It has been argued that V-second is derived by V-movement in root clauses (cf. Koster 1975, Thiersch 1978, Haider and Prinzhorn 1986, and Platzack 1982, among others). V-second yields the following configuration:

(2) *V-second*



Note that the *C* position acts as the landing site for the moved finite verb. The question is then what triggers V-movement.

Koster (1986) argues that this has to do with the status of C in Germanic languages. According to Koster, the governors I and C have different properties from ordinary lexical governors. Henceforth, I will refer to them as *functional* governors.

Normally, lexical governors, like V, N, P, or A, determine a syntactic minimal maximal *domain,* i.e. VP, NP, PP and AP, and control a *Case-position.* Functional governors do not always display these properties.

The projections of these governors, CP and IP, are auxiliary projections to VP. This entails, among other things, that the local domain of categories governed by V is not necessarily VP but may be CP, for example. Lexical governors assign argument status to the NPs they govern, unlike the functional governors. Neither C, nor I assigns a θ-role to any NP. I is usually assumed to be associated with nominative Case, but C does not even need to assign Case.

Because of this dichotomy between lexical governors on the one hand and functional governors on the other hand, Koster argues that the CP- and IP-projections should not be treated on a par with the projections of lexical governors. Lexical governors are always *strong* in the sense that they determine a projection, and may control a Case-position. However, the 'strength' of functional governors may vary. C or I can be strong or weak. With Koster (1986), I will hypothesize that the strength of governors is defined as in (3a), and that strong governors have the syntactic properties in (3b):

(3) a. A governor is strong if it can be *lexically* filled, otherwise it is weak
b. A strong governor determines a *projection,* and controls a *Case-position*

Furthermore, I will hypothesize that at least one of the functional governors must be strong. This is probably due to the requirement that a clause must be complete functionally. Outside the VP, there must be a position available for the external argument, the subject. This can only be guaranteed if either CP or IP is present. This implies then the following:

(4) Either *C* or *I* is a *strong* governor

So in order to determine the strength of a governor, we must check whether there is independent lexical material available to fill the position of that governor. Let us consider the strength of the functional governors in the Germanic languages.[11]

In all Germanic languages, C is strong because these languages possess lexical complementizers. As a consequence, all these languages realize a CP-projection, at least in embedded clauses. What, on the other hand, is the strength of I? It is generally assumed that I is lexically filled in English by auxiliary verbs, like *do,* modal verbs, such as *can* or *may* (cf. Steele 1981).[12] Hence, it is strong in English. If it is strong, I creates its own domain, namely IP, and it assigns nominative Case to the

(11) In this chapter, I will restrict myself to Dutch, English, Frisian, and German. See for a discussion of V-movement in Scandinavian Koster (1986) and Platzack (1982; 1987), among others.

(12) Koster (1986) observes two apparent exceptions to the claim that I is always lexically filled in English.

subject. In the other Germanic languages, however, there are no independent lexical items for the I-position available. Hence, I is weak. This yields the following parameter:

(5) *IP-parameter*
a. I is strong in English; b. I is weak in Dutch, Frisian, and German

Let us consider some implications of the IP-parameter for the syntax of these languages.

Both C and I are weak in the root clauses of the other Germanic languages, because they remain lexically unfilled. Note that this state of affairs violates principle (4). How do these languages escape this conflict?

Following Koster (1986), I will assume that movement of V to C turns C into a strong governor, for C gets lexically filled by the moved verb. This yields the V-second effect. Hence, there seems to be a tight relation between V-movement and the strength of the governor in which it lands. V-movement is triggered by a strong governor. The question, then, is why V-to-C movement does not occur in English.

V-to-C movement must proceed stepwise, as required by Chomsky's (1986a) *Head Movement Constraint* which I will define as follows:

(6) *Head Movement Constraint* (HMC): An X^0 may move into a Y^0 that governs it

Because of (6), V must first move to I before it can reach C. In English, I cannot function as an extraction-site for V-to-C movement, since I is always filled lexically. As a consequence, C remains unfilled in English root clauses.[13] Note, however, that this does not violate (4). So V-to-C movement applies only under the following conditions:

(7) V-to-C movement applies if and only if C is strong and I is weak

Let us now determine the strength of the functional governors in Hungarian. In Hungarian, there are no independent lexical items, such as auxiliaries or modals in English, to fill I. Hence, I is weak. C, on the other hand, is strong, for Hungarian possesses lexical complementizers, like *hogy* 'that'. Hence, we derive the following:

(8) a. *C* is a strong governor, and; b. *I* is a weak governor in Hungarian

---

(i) Sentences without I-fillers, like (ia):
(i) a. They beat horses
b. They do not beat horses
Koster argues, however, that in the D-structure representation of (ia), I is filled with *do*, similar to its negative counterpart (ib). Do is, however, deleted at S-structure in (ia).

(ii) C must sometimes be filled by the movement of I:
(ii) a. *[$_{CP}$ What [$_{IP}$ he has done?]]
b. [$_{CP}$ What has$_j$ [$_{IP}$ he t_j done?]]
These sentences show that Wh-movement to [Spec, CP] triggers I-to-C movement. This is probably due to the requirement that a position in a projection is only available if the head of this projection is lexical or a trace of a lexical item.

(13) Except for the case of Subject-Aux Inversion. With this phenomenon, C is filled by the movement of I to C. See note 12(ii) and section 5.4.3.1. for discussion of I-to-C movement in English root clauses.

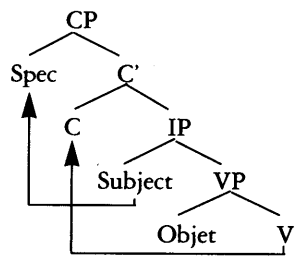
Observe that the functional governors have precisely the same strength in Hungarian as in Dutch, Frisian, or German. If V-to-C movement in these languages is triggered by a strong C and not blocked by a weak I (cf. (7)), then it follows that V-to-C movement applies in Hungarian as well. Hence, this yields the following hypothesis:

(9) *V-movement Hypothesis for Hungarian: V* moves to *C* in finite sentences

Below, I will argue that V-movement is 'generalized' in Hungarian. It does not only apply in root clauses but also in embedded clauses. This is allowed because, as I will attempt to demonstrate, CP is recursive within CP. Let us first consider some empirical evidence for (9).

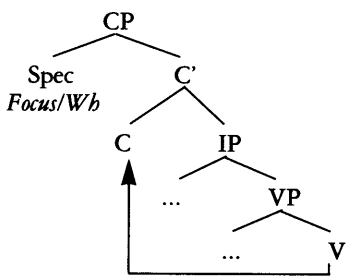
(I) The fact that the neutral order in Hungarian is *SVO* indicates that (9) is operative. The application of V-movement to the underlying *SOV*-order and movement of the subject to the [Spec, CP] position yields an *SVO*-order (cf. 2.1.(28a)). This is depicted in the following diagram:

(10)



(II) If V-to-C movement results in a V-second effect in Germanic languages, then we expect such an effect in Hungarian as well. A property of Hungarian which resembles V-second is the adjacency requirement on the Focus-position (cf. 2.1.(28c)). Recall that Focus must be left-adjacent to the finite verb. Let us interpret this requirement as the Hungarian manifestation of V-second. Hence, a sentence with a filled Focus-position has the following configuration:

(11)



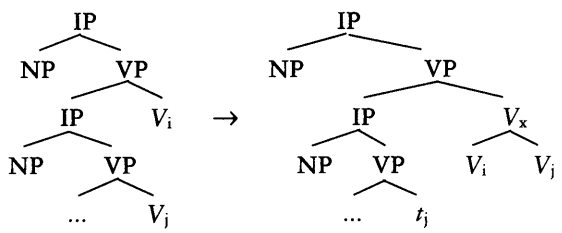
Note from (11) that under this approach Focus equals the [Spec, CP] position. A wellcome consequence of this is that Wh-phrases in Hungarian occupy also the [Spec, CP] position (cf. 2.1.(28d)), similarly to Wh-phrases in Germanic.

A concomitant of V-second is that particles of particle-verb combinations must remain stranded in their base-generated position (cf. (1)). We expect then that with the V-second effect in Hungarian, i.e. Focussing, verbal particles may not be moved

along with the verb. This turns out to be the case. Recall that Inversion between the finite verb and its verbal modifier, including particles, prefixes, and so on, is obligatory under Focussing (cf. 2.1.(28e)). Hence, "Inversion" is due to movement of the verb leaving its verbal modifier stranded.

(*III*) Apart from V-second, Dutch has another instantiation of V-movement, namely, V-*raising* (cf. Evers 1975). This type of V-movement adjoins an infinitival clause without a complementizer that is base-generated on the left-hand side of the verb of the next higher clause to the right of this verb. This yields the following configuration:

(12) *V-raising*



The following sentences exemplify some instances of *V-raising:*

(13) a. *Ik geloof [CP dat [IP Jan [IP Nederlands te leren]] begint]
I believe that John Dutch to learn begins
b. Ik geloof [CP dat [IP Jan [IP Nederlands t_j]] begint *te leren*$_j$]
I believe that John Dutch begins to learn

Van Riemsdijk and Williams (1986) report that the local character of V-raising manifests itself with (*A*) *adjacency effects* and (*B*) *restructuring phenomena*. Let us first discuss (*A*).

(*Ai*) Consider a V-raising construction with a verb combining with a particle and selecting a left-hand infinitival complement:

(14) ...[IP ... V] Particle V...

An example of this configuration is (15):

(15) *Ik geloof [CP dat [IP Jan [IP Nederlands t_j]] aanvangt *te leren*$_j$]
I believe that John Dutch starts to learn

V-raising is blocked in configuration (14). The reason for this is that the particle *aan* of the verb *aanvangen* 'to start' intervenes between the higher verb and the V-raised verb. Hence, the adjacency requirement on V-raising is violated.

(*Aii*) Certain PPs in Dutch, may optionally be extraposed to the end of the clause in which they appear. Compare:

(16) a. Ik geloof dat Jan probeert [IP de schuur [PP *met een spraydoos*] groen te
I believe that John tries the barn with a a spray can green to
schilderen]
paint
'I believe that John is trying to paint the barn green with a spray can.'
b. Ik geloof dat Jan probeert [IP de schuur groen te schilderen [PP *met een spraydoos*]]

When this PP-extraposition occurs in a left-hand complement of a V-raising verb, a structure like (17) occurs:

(17) ...[IP... V PP] V ...

Note that V-raising cannot apply to this structure:

(18) *Ik geloof dat [IP Jan [IP een schuur groen t_j [PP *met een spraydoos*]]] wil *schilderen*$_j$
I believe that John a barn green with a spray can wants to paint

The ungrammaticality of (18) demonstrates that V-raising is sensitive to an adjacency requirement.

(*Aiii*) If V-raising is conditioned by an adjacency requirement, then we expect that the mirror-image of the D-structure order is derived when several left-hand side infinitival complements are embedded within each other. The following pair shows that this turns out to be the case:

(19) a. Ik geloof dat Jan [VP [IP *PRO* [VP [IP *PRO* [VP [IP *PRO* [VP dit boek lezen$_1$]] leren$_2$]] proberen$_3$]] zal$_4$]
I believe that John this book read learn try will
'I believe that John will try to learn to read this book.'
b. Ik geloof dat [IP Jan dit boek] zal$_4$ proberen$_3$ te leren$_2$ lezen$_1$.

(*B*) Let us now consider the restructuring phenomena. So, in V-raising constructions, a V-head of a complement clause is adjoined to the V of the next higher clause. As a result, a complement clause without a complementizer may become transparent with respect to government. For example, Koster (1987: chapter three) discusses the following restructuring effects involving, among others, NP-raising, Exceptional Case Marking, Obligatory Control, Transparency, R-movement, Adverbial Scope, and Clitic Climbing. Let us discuss, for instance, Clitic Climbing.

Koster reports that clitics, like Dutch *het* 'it', can be moved across subjects in V-raising complements:[14]

(20) Ik denk dat hij *het*$_i$ [IP Peter [IP t_i t_j] hoorde zingen$_j$]
I think that he it Peter heard sing
'I think that he heard Peter sing it.'

Note that *het* has been moved from its object position in the complement clause across the subject constituent *Peter* of the embedded clause. According to Koster, this is a striking fact, because normally *het* cannot be moved across a subject. This kind of "clitic climbing" is possible only from V-raising complements. It is never possible to move *het* out of an extraposed *om*-complement. Hence, the ungrammaticality of (21b):

(21) a. Ik denk dat Peter probeerde [CP om [IP *het* aan Mary te geven]]
I think that Peter tried COMP it to Mary to give
'I think that Peter tried to give it to Mary.'
b. *Ik denk dat Peter *het* probeerde [CP om [IP *t* aan Mary te geven]]
I think that Peter it tried COMP to Mary to give

(14) Following Koster and May (1982), I will assume that infinitival phrases are clauses and that tensed and infinitival clauses share the same phrase structure. Hence, they are IPs.

It has been observed in the literature (cf. Evers 1982 and de Haan 1982, among others) that V-raising appears in languages with a V-second effect. Moreover, Evers (1982) even argues that these types of verb movements are different instantiations of the same principle. In any case, we therefore may postulate the following implication:

(22) If a language *X* displays V-raising, then *X* also displays V-movement

From this it follows that the occurrence of V-raising in a particular language provides an *indirect* argument for V-movement in that language. Let us consider then V-raising appears in Hungarian.

Kálmán et al. (1986) have observed that Hungarian has two groups of verbs which may select infinitival complements, namely *auxiliary verbs* and *main verbs*. The former group includes, among others, *akar* 'want', *bír* 'can', *fog* 'will', *kell* 'have to' (impers.), *kezd* 'begin', *kíván* 'wish to', *lehet* 'it is possible to; one can' (impers.), *mer* 'dare', *méltóztatik* 'be pleased to; one can' (impers.), *próbál* 'try to', *szabad* + copula 'it is permitted to' (impers.), *szándékozik* 'wish to' (no definiteness agreement), *szeretne* 'would like to', *szokott* 'used', *tetszik* 'be pleased to' (auxiliary of polite verb forms, impers.), and *tud* 'can'. The group of main verbs includes, among others, *utál* 'hate', *imád* 'adore', *elfelejt* 'forget', *szeret* 'like to', *enged* 'allow', *megy* 'go', and *vél* 'believe'.

Consider the following examples:

(23) a. János [$_{IP}$ úszni] akart (auxiliary)
John swim-INFI wanted-AGR3sg
'John wanted to swim.'

b. János imádott [$_{IP}$ sétálni Marival] (main verb)
John loved-AGR3sg walk-INFI Mary-INSTR
'John loved to walk with Mary.'

c. Péter [$_{IP}$ játszani] ment (main verb)
Peter play-INFI went-AGR3sg
'Peter went to play.'

Sentence (23a) shows that in neutral order an infinitival complement occurs on the left-hand side of the auxiliary verbs. Sentence (23b) demonstrates, however, that the infinitival complements occur on the right-hand side of main verbs in their neutral order, except with the verbs *megy* 'go' (cf. (23c)) and *vél* 'believe'.

From the examples in (23) V-raising cannot be proved. One could argue that the finite verbs in (23a) and (23c) remain, for some reason, in their base-generated order, and the finite verb in (23b) skips over its infinitival complement by V-movement (cf. (8)). Note therefore the following sentences:

(24) a. János [$_{IP}$ el t_j] akart *úszni*$_j$
John away wanted-AGR3sg swim-INFI
'John wanted to swim away.'

b. János imádott [$_{IP}$ elsétálni Marival]
John loved-AGR3sg away-walk-INFI Mary-INSTR
'John loved to walk away with Mary.'

c. Péter [$_{IP}$ t_i beiratkozni] ment *az iskolába*$_i$
Peter in-register-INFI went-AGR3sg the school-ILL
'Peter went to register with the school.'

Auxiliaries induce "Aux-splitting" when they select an infinitival complement which is itself modified by a verbal modifier. The auxiliary *akar* must obligatorily appear between the prefix *el* and the infinitive *úszni* of the particle-infinitive combination *elúszni* 'to swim away' (cf. (24a)). Main verbs, on the other hand, do not trigger Aux-splitting. Let us concentrate on the infinitive constructions with auxiliary verbs.

Aux-splitting cannot be derived by movement of the finite verb into the infinitival complement, because this would violate the c-command condition on traces. If this option is ruled out, then the only possibility to derive Aux-splitting is by *V-raising* as indicated in (24a). V-raising of the infinitive leaves the particle stranded in its base-generated position. Hence, Hungarian displays V-raising.

Above, I noted that V-raising has two sorts of diagnostics. It exhibits locality and restructuring effects. In section 5.3.2., I will argue that restructuring phenomena with V-raising appear in Hungarian as well. These phenomena involve, among others, some auxiliaries displaying person-number agreement with the object NP of their infinitival complement, and obligatory subject control.

Adjacency effects are much harder to prove with V-raising in Hungarian, because it allows scrambling. For example, a sentence adverb, like *tegnap* 'yesterday', may intervene between the auxiliary verb and a V-raised infinitive. Compare the counterpart of (24a):

(25) János [$_{IP}$ el t_j] akart *tegnap* úszni$_j$
John away wanted-AGR3sg yesterday swim-INFI
'John wanted to swim away yesterday.'

Locality effects, however, appear with the stacking of V-raised infinitives. Recall that the order in which V-raised infinitives are attached to the higer verb is precisely the opposite of the D-structure order (cf. (19)). Kenesei (1985c) has observed that this also appears in Hungarian. Consider the following sentences:

(26) a. János [$_{VP}$ [$_{IP}$ *PRO* [$_{VP}$ [$_{IP}$ *PRO* [$_{VP}$ a biciklit szétszedni$_1$]] tudni$_2$]] fogja$_3$]
John the bike-ACC apart-take-INF] can-INF] will-AGR3sg
'John will be able to take apart the bike.'
b. János [$_{VP}$ [$_{IP}$ szét] fogja$_3$ tudni$_2$ szedni$_1$] a biciklit
c. *János [$_{VP}$ [$_{IP}$ szét] fogja$_3$ szedni$_1$ tudni$_2$] a biciklit

In (26a), V-raising obligatorily applies yielding Aux-splitting. The deepest embedded infinitive may not occur in the derived structure between the auxiliary and the infinitive which is directly embedded under this auxiliary at D-structure (cf. (26c)). Only the reversed order is grammatical (cf. (26b)).

This locality effect is demonstrated even more persuasively in (27). Note that in these sentences the embedded infinitives are both prefixed. The infinitive *próbálni* 'to try' is prefixed with the perfectivity marker *meg* and the infinitive *úszni* 'to swim' is prefixed with *el* 'away'. Compare:

(27) a. János [$_{VP}$ [$_{IP}$ *PRO* [$_{VP}$ [$_{IP}$ *PRO* [$_{VP}$ a parttól elúszni$_1$]]
John the beach-ALL away-swim-INFI
megpróbálni$_2$]] akart$_3$]
pref-try-INFI wanted-AGR3sg
'John wanted to try to swim away from the beach.'

b. *János [VP [IP el] akart$_3$ megpróbálni$_2$ úszni$_1$] a parttól
c. *János [VP [IP el] akart$_3$ úszni$_1$ megpróbálni$_2$] a parttól
d. *János [VP [IP meg] akart$_3$ elúszni$_1$ próbálni$_2$] a parttól
e. János [VP [IP meg] akart$_3$ próbálni$_2$ elúszni$_1$] a parttól

Structure (27a) represents the underlying order of this paradigm. V-raising has to apply, because these infinitives have a prefix. Note now that only the prefix of the deepest embedded infinite may remain stranded and that the derived order must be the mirror-image of the D-structure order. Hence, only (27e) yields a grammatical result.

In conclusion, the locality effects in the paradigms of (26) and (27) strongly suggest that V-raising applies in Hungarian. If that is correct and implication (22) holds, then we provided an argument for the existence of V-movement.

So far I did not discuss generalization 2.1.(28b) which states that verbal modifiers precede the finite verb in their neutral order. Let us consider how this fits into the system outlined above.

With V-movement in Dutch, the particle remains obligatorily stranded in its base-generated position. This is illustrated by the following pair:

(28) a. Peter beldej hem gisteren *op* t_j
Peter phoned him yesterday up
b. *Peter *op*belde$_j$ hem gisteren t_j

In Hungarian, on the other hand, verbal modifiers, including prefixes, must precede the finite verb in their neutral order. Therefore, I will assume that verbal modifiers in Hungarian move along with the finite verb, contrary to Dutch. Therefore, the Hungarian counterpart of (28b) is grammatical:

(29) János *fel*hívtaj őt tegnap t_j
John up-phoned him yesterday
'John phoned him up yesterday.'

The phenomenon that a verb takes along its prefix under movement is not so exceptional. Observe from (27) that this may also appear with V-raising. The following pair demonstrates this optionally applies with V-raising in Dutch as well:

(30) a. Ik heb [IP Jan *op* t_j] willen bellen$_j$
I have John up will phoned
b. Ik heb [IP Jan t_j] willen *op*bellen$_j$
I have John will up-phoned

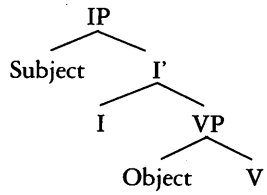
The reason for this dichotomy between V-movement and V-raising in Dutch is not clear to me. However, the Hungarian cases in which the prefix moves along can be accounted for much easier.

Suppose that the prefix may be incorporated by the verb at D-structure before movement applies. Incorporation of verbal modifiers is a quite general phenomenon in Hungarian (cf. the sections 4.4. and 5.3.1.). Hence, the tight connection beween the prefix and verb in the neutral order is a subcase of a much broader phenomenon. Furthermore, if incorporation takes place at D-structure, we expect that the complex verbs reflect the D-structure order. This appears to be the case. In all such cases, the verb is in final position.

Let us now turn to the consequences of the IP-parameter for the phrase structure of English, Dutch, Frisian, and Hungarian. Consider first English, a language with a strong I.

In languages with a strong I, an independent lexical I-item fills the I-position. This yields the following phrase structure for English:

(31) *English*



Observe from (31) that I governs the subject, and that V governs the object. Consequently, the minimal maximal domain of the subject does not coincide with the minimal maximal domain of the object. The domain of the subject is IP, the projection of its governor, whereas the domain of the object is CP, the projection of the verb.[15] Hence, we derive the following assumption:

(32) *Assumption 1:* In languages with *strong* I, the minimal maximal domain of the is IP but the minimal maximal domain of the object is CP

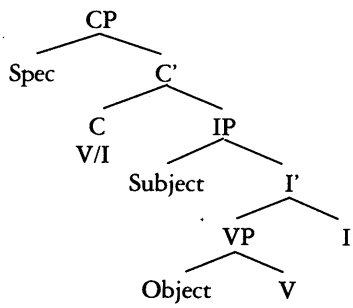
Let us now consider the phrase structure of languages with weak I. First of all, a weak I is a bound morpheme which has to satisfy the following condition:

(33) A bound morpheme may not remain stranded

This principle can be satisfied in several ways. Either I itself attaches to a host word, like C or V, or another lexical head, such as V, is moved to I. Let us examine how principle (33) is satisfied in Dutch, Hungarian and Frisian.

Bennis and Hoekstra (1987) have argued that in Dutch the V moves first to I before the V/I complex lands in C. Note that the merging of V and I in the I-position satisfies principle (33). A consequence of V-to-I movement is that I is lexically supported. Therefore, it may project into an IP (cf. (3)). Hence, Dutch has the following phrase structure:

(34) *Dutch*



(15) As regards the second claim, I will follow Koster (1987). According to Koster, CP and IP, are auxiliary projections to VP. This implies, among other things, that the local domain of categories governed by V is not necessarily VP but may be CP.

The V/I complex leaves a trace in I. By virtue of this trace, the verb governs the subject as well. Consequently, the minimal maximal domain of the subject is the same as the minimal maximal domain of the object, namely CP.

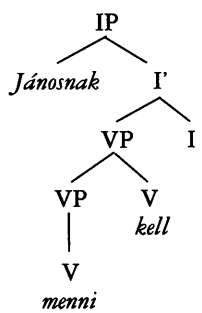
For Hungarian, I will assume that I-to-V movement satisfies principle (33). There are two pieces of evidence supporting this assumption. First, besides referential subject pro-drop, Hungarian also displays referential object *pro*-drop (cf. section 4.2.4.). According to Rizzi's (1986) theory on pro-drop, which I will follow here, referential overt pronouns may only be omitted if and only if they are governed by a Case-assigning head equipped with the relevant AGR-features. Hence, a proper context for object *pro*-drop can only be created if I lowers to V in Hungarian.

Second, infinitives in Hungarian may be optionally inflected for person-number agreement. However, this is only allowed in case the verbal governor does not host these features. For example, the auxiliary verb *kell* 'has to' may only be inflected for Tense but not for AGR (see, section 5.3.2. for details). Compare:

(35) Jánosnak menni(e) kell/kellett
John-DAT go-AGR3sg has to/had to
'John has/had to go.'

This sentence has the following D-structure:

(36)



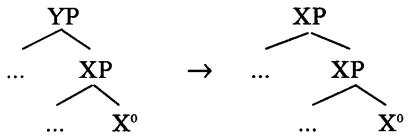
I cannot attach to *kell*. In order to avoid a violation of (33) two options are available. The infinitive moves to I, or I lowers to infinitive. The former option is ruled out, because of the HMC (cf. (6)). This principle forces *menni* to move through the position of the auxiliary but this is already lexically filled by *kell*. So I must lower to the infinitive to avoid a violation of (33). Hence, I-to-V movement derives the phenomenon of inflected infinitives in Hungarian.

Let us consider the implications of I-to-V movement for the phrase structure of Hungarian. I will assume that moved bound morphemes do not leave a trace. As a consequence, the IP-projection is bereft of its head. Following Chomsky (1973), I will assume that the minimal condition for domain *distinctedness* is that a domain must have a head. If this is not fulfilled, *L-containment* applies, which I will define as follows:

(37) *L-containment:* Projection XP *L-contains* projection YP if and only if YP directly dominates XP and YP does not contain a Y^0

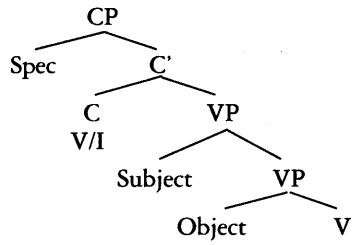
So, in the following configuration XP L-contains YP:

(38)



Hence, we derive the following phrase structure for Hungarian:

(39) *Hungarian*



Note from (39) that VP L-contains IP. As a consequence, the subject is adjoined to VP. The question then is what the governor of the subject is.

Following Chomsky (1982: fn.14), I will assume that an adjoined category is governed by the head of the category to which it is adjoined. This can be accommodated within Aoun and Sportiche's (1982) theory of *government* as follows:

(40) X *governs* Y if and only if
  a. X is an X^0 and
  b. X c-commands Y if X and Y are X", $X \neq Y$ and for V Φ a maximal projection, Φ dominates $X \rightarrow \Phi$ dominates Y where Φ includes all member-nodes of Φ

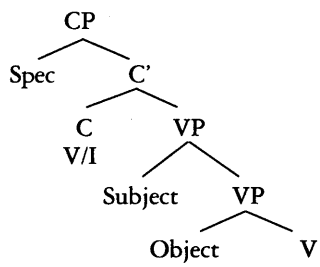
Therefore, in configuration (39) V governs the subject. This implies that the minimal maximal domain of the subject is the projection of V, that is, CP. Again, just as in Dutch, the minimal maximal domain of the subject is the same as the minimal maximal domain of the object in Hungarian.

Hoekstra and Marácz (1989) argue that I moves to C in Frisian independently of V. Note that this satisfies (33). Empirical evidence for I-to-C movement may be obtained from the fact that Frisian possesses inflected complementizers. Compare:

(41) Ik tink [$_{CP}$ *datst* [$_{IP}$ (do) jûn komst]]
  I think that-AGR2sg you tonight come-AGR2sg
  'I think that you will come tonight.'

If I moves independently to C without leaving a trace, then L-containment of the IP-projection applies, like in Hungarian. This yields the following structure:

(42) *Frisian*



Observe from (42) that in Frisian, like in Hungarian, the governor of the subject is V, and consequently the minimal maximal domain of the subject is CP.

In sum, there are several possibilities to satisfy principle (33) in languages with weak I. Either V moves to I, like in Dutch, or I moves to a host word, like C in Frisian or V in Hungarian. As a result, the subject in this type of language gets into the government domain of V. The minimal maximal domain of the subject is therefore identical with the mininal maximal domain of the object, namely CP. Hence, we derive the following assumption:

(43) *Assumption 2:* In languages with *weak* I, the minimal maximal domain of the subject is similar to the minimal maximal domain of the object, that is, CP

Both in languages with strong I and in languages with weak I the subject is structurally prominent over the object. However, in languages with weak I the minimal maximal domain of the subject is identical with the minimal maximal domain of the object, unlike in languages with strong I. In chapter five, I will argue that this covers the fact that subject-object asymmetries arise in both Dutch, English, Frisian, and Hungarian but that sometimes subject-object symmetries appear in Dutch, Frisian, and Hungarian where English displays subject-object asymmetries.

Let us consider now what the position of topicalized NPs, or quantifiers preceding Focus in the Hungarian phrase structure is (cf. 2.1.(28f)).

2.2.3. *CP is recursive within CP*

In the preceding section, I concluded that the Focus-position is identical to [Spec, CP]. If topicalized NPs and other quantifiers may precede Focus, then these phrases must be embedded under CP as well. Because of the fact that there may be infinitely many constituents in front of Focus, I will assume that CP is *recursive* within CP. This yields the following property of phrase structure in Hungarian:

(1) *CP is recursive within CP*

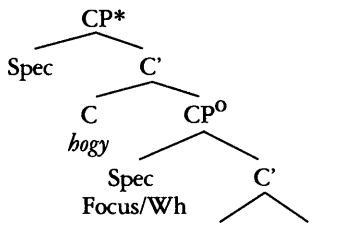
Let us consider whether we can find further empirical support for (1).

Indirect Wh-questions in Hungarian may be introduced by the complementizer *hogy* 'that'. For example, the verb *tud* 'know' may select a [+Wh] CP. Compare:

(2) Nem tudom hogy *kivel* találkozott János
Not know-AGR1sg that who-INSTR met-AGR3sg John
'I do not know who John met.'

Sentence (2) demonstrates that a complementizer may precede an indirect Wh-question in Hungarian, unlike in English. This demonstrates that the CP is recursive within CP in such embedded clauses:

(3)



Observe from (3) that the upper CP, CP*, is headed by the complementizer, and that the lower CP, CP°, serves as a landing-site for V-movement. Topicalized NPs can intervene between CP* and CP° requiring further recursions of CP:

(4) Nem tudom [CP* hogy [CP János [CP tegnap [CP° *kivel* találkozott]]
not know-AGR1sg that John yesterday who-INSTR met-AGR3sg
'I do not know who John met yesterday.'

A consequence of (1) is that it also allows V-movement in embedded clauses with a lexical complementizer. Hence, we may say that V-movement in Hungarian is *generalized.* It does not only apply in root clauses, like in Dutch, but also in embedded clauses. Below I will demonstrate that V-movement in Frisian is sometimes also allowed in embedded clauses with a lexical complementizer. In that case, these clauses contain multiple CPs.

Property (1) of the Hungarian phrase structure is not so exotic as it looks at first sight. The phenomenon of multiple CPs has been attested in other languages as well. For example, it also appears in Spanish and Germanic.

Plann (1982) reports that in Spanish the complementizer *que* 'that' can occur before an indirect question after certain verbs of communication. In the following sentences, *que* precedes a Wh-phrase, similarly to Hungarian. Compare:

(5) a. Te preguntan [CP* que [CP° para qué quieres el préstamo]]
you ask-AGR3pl that for what want-AGR2sg the loan
'They ask you what do you want the loan for.'
b. Pensó [CP* que [CP° cuáles serían adecuados]]
thought-AGR3sg that which ones would be appropriate
'He wondered which ones would be approppriate.'

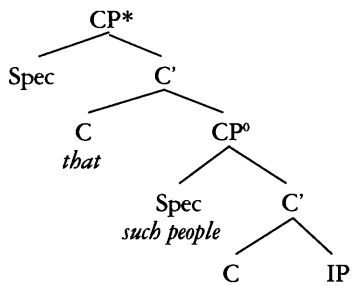
Let us discuss now some examples of multiple CPs in Germanic.

Hooper and Thompson (1973) have observed that the phenomenon of multiple CPs in English arises with embedded main clauses. Such clauses are embedded clauses to which root transformations in the sense of Emonds (1969) apply. For instance, objects may be topicalized in embedded main clauses:

(6) He said [CP* that [CP° *such people* [IP he doesn't like t]]]

This embedded clause may be represented in the following tree-structure:

(7)



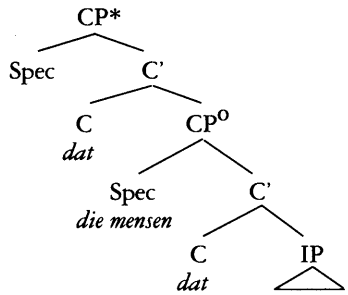
Note that [C, CP°] may not be filled in English by a lexical complementizer. The reason for this is that English does not allow a head of CP and its specifier to be fil-

led simultaneously (cf. Chomsky and Lasnik's (1977) doubly-filled COMP Filter). This is, however, a language-particular restriction, because in Dutch, for instance, topicalized objects may intervene between CP* and a CP^0 headed by a lexical complementizer. Compare:

(8) Ik denk [$_{CP*}$ dat *die mensen* [$_{CP^0}$ dat [IP die gek zijn *t*]]]
I think that those people that those crazy are
'I think that those people are crazy.'

This embedded clause has the following structure:

(9)



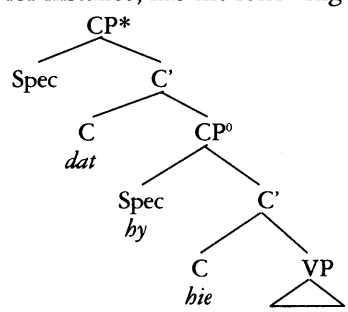
De Haan and Weerman (1986) discuss the occurrence of multiple CPs in Frisian. De Haan and Weerman note that V-movement is not only restricted to root clauses but may also apply in embedded clauses with a lexically filled C.[16] However, this is not allowed freely. Such embedded clauses must be complements of verbs denoting statements, feelings or observations.[17] Compare the following pairs:

(10) a. Ik leau [$_{CP}$ dat hy him wol rêdde kin]
I believe that he himself take care of can
'I believe that he can take care of himself.'
b. Ik leau [$_{CP*}$ dat [$_{CP^0}$ hy *kin* [him wol rêdde t]]]

(11) a. Ik sei [$_{CP}$ dat hy my sjoen hie]
I said that he me seen had
'I said that he had seen me.'
b. Ik sei [$_{CP*}$ dat [$_{CP^0}$ hy *hie* [my sjoen t]]]

Recall that the landing-site of a moved finite verb is C in Germanic. Hence, the (b)-sentences in (10) and (11) must contain a multiple CP. Therefore, the embedded clause of (11b), for instance, has the following structure:

(12)



(16) Hoekstra (1987) argues this is also the case in the Frisian Imperativus-pro-Infinitivo.

(17) De Haan (1983) reports that there are further restrictions on V-movement in clauses with a lexical complementizer. The matrix verb must be factual, it cannot be negative or modalized.

This phenomenon may also appear with adverbial degree clauses:

(13) a. Hy is sa meager [$_{CP}$ dat hy wol efter in reid skûlje *kin*]
he is so skinny that he behind a cane hide can
'He is so skinny that he can hide behind a cane.'
b. Hy is sa meager [$_{CP*}$ dat [$_{CP*}$ hy *kin* [wol efter in reid skûlje t]]]

De Haan and Weerman provide the following pieces of evidence which demonstrate that the clauses embedded under the complementizer of the (b)-sentences in (10), (11), and (13) have the same structure as root clauses.

(*i*) The distributional property of the subject clitic *er* 'he', a variant of the non-clitic *hy*. This clitic subject optionally appears after lexical complementizers such as *dat*, but it cannot appear sentence-initially. Compare:

(14) a. Hy sei [$_{CP}$ dat hy/*er* my sjoen hie]
he said that he me seen had
'He said that he had seen me.'

b. [$_{CP}$ Hy/**er* *hie* my sjoen t]
He had me seen
'He had seen me.'

Note that in clauses with a lexical complementizer and V-movement, the clitic subject *er* cannot appear immediately after the complementizer:

(15) Hy sei [$_{CP}$ dat [$_{CP}$ hy/**er* *hie* my sjoen *t*]]
He said that he had me seen

(*ii*) Consider the following sentence:

(16) Douwe [$_{CP}$ dy *woe* net komme *t*]
Douwe that wanted not come
'Douwe, he did not wanted to come.'

This sentence demonstrates that Left Dislocation may apply in root clauses. Note now that this phenomenon is blocked in regular embedded clauses (cf. (17a)) but it is allowed in embedded clauses with V-movement (cf. (17b)):

(17) a. *Hy sei [$_{CP}$ dat Douwe dy net komme woe]
he said that Douwe that not come wanted
b. Hy sei [$_{CP}$ dat Douwe [$_{CP}$ dy *woe* net kommen t]]
He said that Douwe that wanted not come

So embedded clauses with lexical complementizers and V-movement pattern the same as root clauses with Left Dislocation.

De Haan and Weerman conclude from these similarities that root clauses and embedded clauses with V-movement have, at least partly, a similar structure. According to De Haan and Weerman, this suggests that embedded clauses with a lexical complementizer and V-movement have a double CP. The upper CP is filled with the lexical complementizer, and the lowest CP serves as a landing-site for V-movement.

Hoekstra (1987) provides an additional argument for a double CP in such clauses.

(*iii*) Hoekstra observes that embedded clauses with a lexical complementizer and a moved verb have syntactic properties different from regular embedded clauses. The latter allow long Wh-movement of the object (cf. (18a)), whereas the former block this type of movement:

(18) a. *Hokker boek*$_i$ seist [$_{CP}$ dat se t_i lêzen hie]
which book said-you that she read had
'Which book did you say she had read.'
b. **Hokker boek*$_i$ seists [$_{CP}$ dat [$_{CP}$ se *hie*$_j$ [t_i lêzen t_j]]]

Hoekstra suggest that this difference is due to the fact that the embedded sentence in (18b) contains an extra CP-node which serves as a barrier in the sense of Chomsky (1986a).[18]

Recapitulating, in embedded clauses with lexical complementizers root transformations may apply involving Topicalization of objects (English, Dutch), and V-movement (Frisian). Furthermore, such clauses may contain indirect Wh-questions (Spanish). These phenomena require a recursion of CP. This demonstrates that multiple CPs appear in other languages than Hungarian as well, although it certainly is more restrictred in these languages.

It has been observed in the literature (cf. Hooper and Thompson 1973, De Haan 1983, and Plann 1982) that embedded main clauses exist only under certain conditions. First, these clauses must be introduced by the complementizer *that,* and second the verb of the matrix sentence governing the embedded main clause must have an asserted reading. The categorial component of Hungarian generates CPs much more freely. It must be admitted that the ultimate rationale behind this is unclear at the present state of research. I will leave this problem for further research.

A further consequence of (1) is that the universal condition on *scope-interpretation* (cf. Reinhart 1983) covers the descriptive generalization on the scope-interpretation of quantifiers (cf. 3.1.(28g)):

(19) A quantifier c-commands its scope at S-structure

The recursion of the CP within CP creates binary branching structures to the left of the verb which may accommodate the Quantifier Field. In a left-branching phrase structure, the leftmost constituent has the largest c-command domain. Therefore, in correspondence with (19), the leftmost quantifier in Hungarian has wide scope. A separate condition on scope in terms of linearity is thus superfluous (cf. also chapter six for discussion of scope phenomena).

2.2.4. Summary

I argued in this chapter that the underlying order of Hungarian is *SOV,* and that C is a strong and I is a weak governor in this language. Because strong governors must be lexicalized at S-structure, V-to-C movement applies. I presented empirical evidence for this type of movement involving the neutral SVO-order, V-second phenomena (Focussing, Inversion between finite verb and its modifier, and the phrase-structural position of Wh-phrases), and V-raising.

(18) In Chomsky's (1986b) theory, extraction out of embedded clauses with multiple CPs is allowed. The lower CP is not an argument. Therefore, a moved category may adjoin to it and subsequent movement of this category crosses one barrier only. Hence, no violation of Subjacency arises. The ungrammaticality of (18b) can, however, be accounted for under the assumption that the complementizer L-marks the lower CP. In that case, it becomes an argument and it can no longer act as an adjunction-site. Hence, extraction out of this category results in a violation of the Subjacency Condition. (See also chapter six for discussion of extraction with multiple CPs in Hungarian).

Further, I argued that CP is recursive within CP. Evidence for this was provided from various languages including Spanish, Dutch, English, Frisian and Hungarian. Repetition of CP appears unrestrictedly in Hungarian but not in the other languages. Multiple CPs accommodate indirect Wh-questions introduced by lexical complementizers, Topicalization and the position and interpretation of quantifiers. Furthermore, a recursive CP allows generalized V-movement. It may also apply in embedded clauses with multiple CPs. Hungarian shares this phenomenon with Frisian precisely when this language exhibits multiple CPs.

The phrase structure of Hungarian elaborated in this chapter resembles the phrase structure of Germanic languages, like Dutch, Frisian or German. C and I are the same in strength. C is strong and I is weak. We expect then that Hungarian and these languages will have several syntactic properties in common that are not shared by English. In this chapter, I concluded that languages with a strong C and a weak I display V-to-C movement. Furthermore, in chapter five I will show that some subject-object symmetries in Hungarian, including the absence of verb-object adjacency, the lack of that-trace effects, the absence of VP-deletion, and the lack of superiority effects, are caused by the fact that C is strong, and I is weak in this language. What is more, the very same properties turn also up in Dutch, Frisian, and German, but not in English.

3. THE LEXICON AND ASYMMETRIES

3.1. Introduction

This chapter discusses some properties of the lexicon and principles which mediate between lexical properties such as θ-assignment and syntactic structure.[1] I would like to argue for the following two claims:

I. In Hungarian the Unmarked θ-Assignment Conventions are operative

II. The realization of the Unmarked θ-Assignment Conventions is parametrized

Consider first the Unmarked θ-Assignment Conventions (cf. Carter 1967):

(1) *Unmarked θ-Assignment Conventions* (UTHAC)
   a. The theme role is assigned to the object GF
   b. The agent role is assigned to the subject GF

These conventions mediate between lexical properties of verbal predicators and syntactic structure. I will demonstrate that the assignment of θ-roles is guided by the principles in (1) in Hungarian. If these conventions are operative, then, this implies a *subject-object asymmetry,* that is, the subject and object GFs are discriminated structurally. This subject-predicate dichotomy of the sentence will be empirically supported by the following phenomena:

(*I*) An inventarization of the case frames which may be associated with basic verbal predicators in Hungarian. The cases selected by a verbal predicator and their corresponding θ-grids, that is, the set of θ-roles selected by that verbal predicator shows that Hungarian is a *nominative-accusative* language. The agent role of a basic verb is always related to the subject, i.e. the nominatively marked argument, and the theme role is always associated with the object, i.e. the accusatively marked argument. Hence, an interplay of the principles of Case theory, θ-theory, and the UT-

(1) See for studies of the lexicon in generative grammar: Bresnan (1982), Chomsky (1970; 1981), Guerssel et al. (1985), Hale (1983), Hale and Laughren (1983), Jackendoff (1972), Levin (1983), Marantz (1984), Ostler (1980), Perlmutter (1984), Simpson (1983), Stowell (1981), Williams (1981), and Zubizarreta (1985). These studies also discuss the relation between and the universal status of case-systems, θ-roles, and GFs.

HACs provide support for the subject-predicate dichotomy of the Hungarian sentence (cf. section 3.2.).

(*II*) Subjects may be assigned a θ-role *compositionally* but not objects. This is also the case in Hungarian, although ambiguities with predicates containing inalienable body part objects are absent from this language (cf. section 3.2.2. and 3.2.3. for discussion).

(*III*) Hungarian displays *transitivity alternations* such as the middle, unaccusative, ergative, and passive alternation (cf. section 3.3.). In spite of the fact that these alternations are *lexical* in nature, i.e. they can only be triggered by adding morphology to basic verbs, they provide evidence for a subject-predicate partitioning of the sentence. The following question then arises. Why are *syntactic* transitivity alternations in Hungarian absent but present in English?

Hale and Keyser (1985) argue that transitivity alternations are the result of the interaction of properties that enter into the lexical representation of basic verbs with both universal principles, such as formulated in Chomsky (1981), and language-specific rules. It may be clear that the absence versus presence of syntactic transitivity alternations with morphologically unaffected basic verbs in Hungarian and English respectively is due to a language-specific rule.[2] I will attribute this difference between Hungarian and English to a parameter, namely, to the θ-*Assignment Parameter:*

(2) θ-*Assignment Parameter* (THAP)
± apply the UTHACs in the syntactic representation of basic verbs

I will argue that Hungarian is specified positively for this parameter, whereas English may be specified negatively for it.

It has been claimed that the absence of syntactic transitivity alternations, i.e. NP-movement in Chomsky's (1981) sense, like syntactically derived middle verbs, ergatives, passives, and raising verbs is a diagnostic for a non-configurational sentence structure (cf. section 1.1.(6d) and É. Kiss 1987: 75). Since non-configurational languages do not distinguish the subject and object GF structurally, function-dependent operations cannot be executed in the syntax.[3] Below, I will demonstrate how the positive value of the THAP provides a straightforward answer to the question why in nominative-accusative languages, such as Hungarian, syntactically derived transitivity alternations might be missing in the syntactic representation of basic verbs. This will, then, compensate this diagnostic of non-configurationality *without* giving up the subject-predicate dichotomy of the sentence.

Let us, first, turn to a discussion of some properties of the lexicon. In section 3.2., I will introduce the subcomponents of which the lexical entries are composed.

3.2. The Structure of Lexical Entries

Following Hale and Keyser (1985), I will assume that in addition to its morphophonological and categorial features a lexical entry of a verb contains two parts

(2) See for transitivity alternations in other languages: Burzio (1981), Guerssel et al. (1985), Hoekstra (1984), Levin (1983), and Marantz (1984).

(3) Thoughout this study, I will adopt the position that GFs are structurally encoded (cf. Chomsky 1965: 68-74; 1981: 10).

which are relevant for its syntactic realization. The first part is the *Lexical Conceptual Structure* (LCS), roughly its dictionary meaning, from which the θ-*grid*, that is, the inventory of θ-*roles* can be derived (cf. Stowell (1981)). The second part is the subcategorization frame or *Lexical Structure* (LS), an abstract syntactic projection of the verbal lexical item, embodying the basic syntactic organization of its arguments. For example, the English dyadic verb *cut* has the following lexical entry:

(1) a. LCS for English 'cut':
{x produce linear separation in the material integrity of y, by sharp edge coming into contact with y}
b. θ-grid for English 'cut': (agent, theme)
c. LS for English 'cut': [$_s$ arg [$_{vp}$ arg v]]
(Hale and Keyser 1985: 16)

The entities in the θ-grid belong to a universal set of o-roles such as *agent, theme, goal, path,* etc. (cf. Gruber 1965, Fillmore 1968, and Jackendoff 1972). They are introduced by the participants involved in the action denoted by the verb. In the case of English *cut,* these participants are represented in the LCS of that verb by means of the variables *x* and *y.* These variables are projected into the θ-grid of the associated verb. In this way, for example, *x* and *y* of (1a) are represented, respectively, by the θ-roles *agent* and *theme* in the θ-grid (1b) of the verb *cut.*

In Chomsky (1981: 36) the following condition on the realization of θ-roles is formulated. Chomsky supposes that all θ-roles selected by a verbal predicator must be assigned to its arguments, the so-called θ-*criterion:*[4]

(2) θ-*Criterion* a. Each argument bears one and only one θ-role, and
b. Each θ-role is assigned to one and only one argument
(cf. Chomsky 1981: 36)

In (1c), the LS-projection of the transitive verb *cut* is depicted. Following, Hale and Keyser (1985), I will take (1c) to be a syntactic representation in the relevant sense. In particular, it represents the fact that the transitive verb governs an object, and that the subject is external to the VP.[5] With respect to its configurational properties I assume, in agreement with Chomsky (1981), that LS is universal.

The next question to answer is: how are the θ-roles in the θ-grid associated with the syntactic arguments in the LS of the verb? Hale and Keyser (1985) adopt the view that in syntactically nominative-accusative languages, verbs like transitive *cut,* which select both agent and theme θ-roles, assign the theme to the internal argument (the grammatical object) and assign the agent to the external argument (the grammatical subject). According to Hale and Keyser, this is the *unmarked* linking relation. They suppose that each of these conventions of θ-assignment is a genuine principle of UG, representing the unmarked case:[6]

(4) See for reformulations of the θ-Criterion: Hale and Laughren (1983), Higgingbotham (1985a), Rothstein (1983) and Williams (1983).

(5) The fact that the subject is always external to the VP is due to the operation of Predication. Compare Williams (1980) and Rothstein (1983) for details.

(6) Several authors, for example, Jackendoff (1972), Ostler (1980) and Carrier-Duncan (1985) have proposed a θ-hierarchy with a universal status:

(i) agent > theme > path (goal, source, location)

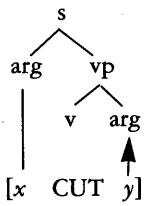
Observe that this hierarchy is rendered in structural terms by the UTHACs in (3).

(3) *Unmarked* θ-*Assignment Conventions* (UTHAC)
a. The theme role is assigned to the object GF
b. The agent role is assigned to the subject GF

These conventions become operative regularly where possible, i.e., where their application is not precluded for some reason, such as the prior application of some other convention or conventions, or the operation of other general principles of grammar.

The full lexical representation, which will be referred to as *Predicate Argument Structure* (PAS), of for example the verb *cut* indicates the projection of the agent and theme of the θ-grid, which are represented as the *x*- and *y*-variable respectively in LCS, onto the external and internal argument position of LS respectively. These connections will simply be indicated with the help of an association line. Compare:

(4) PAS for Transitive *cut*



The question is whether Hungarian is a nominative-accusative language. To answer this question, we will check whether the UTHACs are operative in Hungarian. This will be done by inventarizing the case frames and θ-grids associated with some basic verbs.

3.2.1. *Case Frames and* θ-*Grids in Hungarian*

Before an inventory of case frames and θ-grids in Hungarian can be presented, I will first discuss its case-system. Among Hungarian linguists, there is no agreement about which suffixes should be considered inflectional and which should be included into the set of case-markers.[7] The classification below follows Antal (1961b). According to Antal, case-markers are the markers that may be attached to each of the 14 different stems of the Hungarian noun. Consider:

(5)	*Case*	*marker*[8]	*Conjugation of the noun* fiú 'boy'
a.	NOM	-Ø	fiú (subj)
b.	ACC	-t	fiú*t* (obj)
c.	DAT	-nak/nek	fiú*nak* 'to the boy'
d.	INSTR	-val/vel	fiú*val* 'with the boy'
e.	ILL	-ba/be	fiú*ba* 'into the boy'
f.	SUBL	-ra/re	fiú*ra* 'onto the boy'
g.	ALL	-hoz/hez/höz	fiú*hoz* 'near the boy'
h.	INESS	-ban/ben	fiú*ban* 'in the boy'
i.	SUPER	-on/en/ön	fiú*n* 'on the boy'

(7) Kiefer (1988), for example, argues that Hungarian may have 18 cases if the following criterion is decisive:
(i) A bound morpheme is a case-marker if and only if it appears in a case frame.
(8) The alternants in this array are subject to the phonological rule of Vowel Harmony (cf. Vago 1980).

j.	ADESS	-nál/nél	fiú*nál* 'at the boy'
k.	ELAT	-ból/ből	fiú*ból* 'out of the boy'
l.	DELAT	-ról/ről	fiú*ról* 'of the boy'
m.	ABL	-tól/től	fiú*tól* 'from the boy'
n.	CAUS	-ért	fiú*ért* 'for the boy'
o.	TRANS/ESS	-vá/vé;-ul/ül	fiú*vá* 'become a boy'
p.	FORM/ESS	-ként;-képp;-ul/ül	fiú*ként* 'like a boy'
q.	TERM	-ig	fiú*ig* 'up to the boy'

Case-markers in Hungarian may have the following three main syntactic uses: (*i*) they may function as argument relators, (*ii*) as argument taking predicates (ATP), or (*iii*) as attribute relators.[9] In the use of argument relators, they mark the relation between an ATP and one of its arguments. The nominative and accusative cases are exclusively used as argument relators. The cases (c)-(q) may have both the function of argument relator signaling a thematically selected argument and of an ATP in which they subcategorize for a nominal complement yielding a 'free' or adverbial argument. The terminative case indicates that the NP to which it is attached is an adverbial argument.

I will discuss the use of case as attribute relator in section 4.6.[10]

Let us turn to an overview of the case frames and corresponding θ-grids of basic predicates in Hungarian appearing with respectively one argument (monadic), two arguments (dyadic), and three arguments (tryadic). I delay the introduction of derived predicates until section 3.3. Here I will not present a complete list of case frames but rather concentrate on the generalizations which may be derived from this sample.[11] Consider:

(6)

Verb	*Case frame* θ-*roles*
Monadic Verbs	
fut	'NOM run' agent
sétál	'NOM walk' agent
Dyadic Verbs	
lát	'NOM see ACC' agent - theme
szeret	'NOM love ACC' agent - theme
beszél	'NOM speak to DAT' agent - goal
vág	'NOM cut with INSTR' agent - instrument
megy	'NOM go into ILL' agent - goal

(9) See section 7.2.1. for the semantic-thematic classification of morphological case-markers in Hungarian.

(10) See Ackerman (1984) and Komlósy (1985) for further discussion of the functions of case-markers in Hungarian.

(11) A more extensive list of the Hungarian case frames can be found in: De Groot (1981a; 1984; to appear) Horvath (1983), Károly (1982), É. Kiss (1982a), Komlósy (1985), and Molnár (1966; 1967; 1973). These references discuss also some theoretical problems associated with case frames.

mutat	'NOM point to SUBL'
	agent - goal
áll	'NOM stand in INESS'
	agent (theme?) - goal
megy	'NOM go on SUPER'
	agent - path
áll	'NOM stand at ADESS'
	agent (theme?) - path
jön	'NOM come out of ELAT'
	agent - source
lelép	'NOM steps off from DELAT'
	agent - source
elfut	'NOM run away from ABL'
	agent - source
Tryadic Verbs	
ad	'NOM give ACC to DAT'
	agent - theme - beneficiary/goal
átköt	'NOM bind ACC with INSTR'
	agent - theme - instrument
bedob	'NOM throw ACC into ILL'
	agent - theme - goal
dob	'NOM throw ACC onto SUBL'
	agent - theme - goal
csatol	'NOM attach ACC to ALL'
	agent - theme - goal
akadályoz	'NOM hinder ACC in INESS'
	agent - theme - goal
kivesz	'NOM take ACC out of ELAT'
	agent - theme - source
beszed	'NOM withdraw ACC from ABL'
	agent - theme - source
beszél	'NOM speak to DAT about DELAT'
	agent - goal - source
beszél	'NOM speak with INSTR about DELAT'
	agent - instrument - source
beszél	'NOM speak to ALL about DELAT'
	agent - goal - source

If an agent is present in the θ-grid of a basic verb it is always associated with the nominative case, while a theme when present is always associated with the accusative case. These associations are rather fixed and they conform to a general rule of Hungarian grammar. For example, basic transitive verbs such as *lát* 'see' of the agent-theme semantic class occur always with a NOM-ACC case frame. This generalization is further supported by the association between case and θ-roles with active intransitive verbs. For example, the agent role of the active intransitive (unergative) verb *fut* 'run' is connected to the nominative case.

Languages in which the agent corresponds to the nominatively marked complement of a basic verb, while its theme to the accusatively marked complement are classified as nominative-accusative languages in the literature (cf. Marantz 1984:

198, among others). Hungarian, then, is a *nominative-accusative* language. These correspondences are established by an application of the UTHACs (cf. (3)). This implies that such languages recognize a structural subject-predicate partitioning since the GFs subject and object are defined as [NP, IP] and [NP, VP] respectively (cf. Chomsky 1965; 1986b). The structural configuration mediates between cases and θ-roles.

The nominative and accusative cases are assigned to the subject and object respectively by the Case-assignment rules for nominative-accusative languages (cf. Chomsky 1981; 1986b). Therefore, I will assume that Hungarian obeys the following Case-assignment rules as well:[12]

(7) *Case-Assignment Rules for Nominative-Accusative Languages*
a. Nominative Case is assigned to [NP, IP] under government by I[+AGR]
b. Accusative Case is assigned to [NP, VP] under government by V

As a result of the properties of nominative-accusative languages a classification of the overt morphological realization of Case in Hungarian may be set up. The nominative and accusative cases are structurally assigned under government and may henceforth be called *structural* Case, whereas the other cases in (5) are thematically dependent on verbal predicators.

(12) The nominative Case assignment rule (7a) is not general enough. It holds only from right to left. This follows from the fact that nominative Case may be assigned without a governing I[+AGR]. Koster (1986: 258) presents examples with nominative topics from German and Dutch. The topic positions in (ia) and (ib) are not governed by I[+AGR]:

(i) a. *Der Hans*, mit dem spreche ich nicht mehr
the Hans-NOM with him-DAT talk I not More
'Hans, I don't talk to him any longer.'
b. *Hij* een huis kopen, wie had dat kunnen denken
he-NOM a house buy who had that can think
'He buying a house, who could have imagined that.'

In Hungarian, too, nominative Case may appear without being governed by I[+AGR]. Consider, for example, the following two constructions:

(i) The complement of a nominalized verb is in the unmarked or nominative case (see also section 5.3.1.2. on Noun-Incorporation):

(ii) *fa* vágás
wood-NOM cut-NOMI
'wood-cutting'

(ii) Some PPs in Hungarian may display person-number inflection with pronominal complements (cf. section 7.3.1.). Consider:

(iii) *ő* mögöte
he-NOM behind-ppAGR3sg
'behind him'

The pronominal complement of these PPs bear nominativa case. This nominative Case assignment may be subsumed under (7a).

Nominal complements in such PPs appear also in the nominative case:

(iv) a fiú mögött
the boy-NOM behind
'behind the boy'

Note, however, from the minimal pairs in (iii) and (iv) that these complements do not trigger person-number inflection on the P.

Following Borer (1986), Taraldsen (1984), and Zwart (1988), I will assume that the nominative Case without being governed by I[+AGR] is a default Case. See chapter seven for the determination of the structural conditions on default Case in Hungarian.

For example, the three variants of the tryadic verb *beszél* 'speak' in (6) demonstrate that the case assigned to the non-nominative arguments is determined by thematic or lexical factors in a rather arbitrary way. Goal, instrument, goal and source correspond to the dative, instrumental, allative, and delative case respectively. A specific θ-role goes together with a particular case. Therefore, I will refer to the morphological cases in (5c)-(5q) as lexical case.

In order to formulate the principles of Case theory as strongly as possible it would be necessary to specify a unique structural position for lexical case as well. The determination of such a position and its relative structural prominence with respect to the positions of structural Cases is an empirical matter. In chapter five (see especially section 5.4.1.), I will return to these issues in more detail.

If the Hungarian sentence displays indeed a subject-predicate partitioning as is witnessed by the fact this language is a nominative-accusative language in which the UTHACs apply, it is to be expected that a subject-object asymmetry occurs with respect to the assignment of θ-roles. Chomsky (1981) suggests that *objects* (internal arguments) are assigned their θ-roles *directly* by their governing verb, whereas subjects (external arguments) are assigned a θ-role *compositionally* by the VP of which they are predicated. In the following section, I will discuss whether this asymmetry appears in Hungarian as well.

3.2.2. *The Asymmetric Nature of* θ-*Role Assignment*

Chomsky (1981: 104) has argued that a sentence like *John broke his arm* is ambiguous, depending on whether the subject bears the agent role or the patient role, in contrast to sentences such as *John broke the window* in which *John* has only an agent reading. Chomsky accounts for these readings by arguing that the subject but not the object may be assigned a θ-role *compositionally,* that is, by the VP.[13] The differences in the kinds of θ-assignments to the subject in the above sentences are clearly dependent on the choice of a different direct argument for the verb *break.*

Marantz (1984: 22-30) further elaborates on this asymmetry. Marantz presents two other pieces of empirical evidence for his hypothesis. First, he shows that simple transitive verbs in English express a wide range of predicates depending on the choice of the direct object but the predicates of transitive verbs remain unaffected by the choice of the subject. Second, Marantz argues that idiom frames in English are nearly always object-verb combinations but hardly ever of a subject-verb combination.

Evidence for a selectional subject-object asymmetry on the basis of the Hungarian equivalents of Chomsky's (1981) original examples cited above and the syntax of idiom frames does not easily carry over to Hungarian. Below I will attempt to make clear why compositional θ-assignment in Hungarian is more restricted than in English. However, discussion of idiom frames will have to wait until section 5.2.1.2.

Let us discuss first the *selectional asymmetry* between the (grammatical) subject of the predicate and the direct arguments of the verb.

(13) Jan Koster (personal communication) brings to my attention that facts about the world such as *his arm* and *the window* should not change rules of syntax. Although this position seems to me correct in essence, it must be noted that knowledge of the world such as 'agent of', 'theme of', etc. is mediated by θ-theory. Therefore, it should be not too surprising to find precisely in this domain interaction of structural conditions with knowledge of the world.

Horvath (1987) argues, convincingly in my view, that Hungarian exhibits selectional subject-object asymmetries. Horvath notes (cf. Horvath 1987: 150): "That selection of subjects by verb-object, but not selection of objects by verb-subject is quite systematically in Hungarian can be demonstrated by picking any common transitive verb, examining the variety of predicates it can produce with its objects, and contrasting this with the lack of parallel phenomena between the same verb and its subject". In order to support her claim, Horvath presents the following examples with lexical variants of the verb *vesz* 'take', i.e. *elvett* 'take away', *kivett* 'take out', and *átvett* 'take over' respectively. Compare:

(8) a. NP el*vette* a könyvet az asztalról
away-took the book-ACC the table-DELAT
'NP took the book from the table.'

b. NP el*vette* a pénzt
away-took the money-ACC
'NP accepted the money.'

c. NP el*vette* Marit
away-took Mary-ACC
'NP married Mary.'

d. NP el*vette* a kedvemet az utazástól
away-took the mood-npAGR1sg-ACC the trip-DELAT
'NP spoiled my interest in the trip.'

(9) a. NP ki*vette* a levelet a zsebéből
out-took the letter-ACC the pocket-npAGR3sg-ELAT
'NP took the letter out of his pocket.'

b. NP ki*vette* a szobát
out-took the room-ACC
'NP rented the room.'

c. NP ki*vette* a részét a munkából
out-took the share-npAGR-3sg-ACC the work-ELAT
'NP did his share of the work.'

(10) a. NP át*vette* a dijat
over-took the prize-ACC
'NP received the prize.'

b. NP át*vette* az irányitást
over-took the direction-ACC
'NP took charge.'

c. NP át*vette* a házifeladatot Marival
over-took the homework-ACC Mary-INSTR
'NP went through the homework with Mary.'
(Horvath 1987: 11)

Horvath notes that the θ-roles assigned to the subject NP in these sentences vary considerably, due to the wide range of predicates the verb produces with different objects (and other direct arguments). She proceeds to note that no corresponding variation in the interpretation of the object can be induced by varying the subject in the same case. The options for the assignment of θ-roles remain unaffected by the choice of subject:

(11) { A tanár / Egy bolond / Mindenki / Az apám / A csapat } { elvette / kivette / átvette } NP.

{ The teacher / A fool / Everyone / The father-my / The team } { away-took / out-took / over-took }

Obviously, Horvath presented clear instances of selectional subject-object asymmetries. From them it is apparent that the θ-role of the subject is affected by the choice of the direct argument of the verb but the choice of subject does not influence the assignment of the θ-role to the object of the verb. Therefore, it must be concluded that the subject-predicate partitioning of clauses is well-established and that Hungarian does not form an exception to this hypothesis.[14] Let us consider now compositional θ-assignment in English and Hungarian.

3.2.3. *Compositional θ-Assignment*

In the preceding section, I noted that some arguments concerning selectional subject-object asymmetries in English do not easily carry over to Hungarian. Consider again the sentences on which Chomsky (1981: 105) based an argument in favor of the idea that the VP assigns a θ-role to the subject of which it is predicated:

(12) a. John broke the window b. John broke his arm

According to Chomsky, the subject *John* in (12a) is normally understood as the active participant of the action. The sentence in (12b), however, has an additional interpretation, its more normal interpretation, in which *John* represents the passive participant in the sentence. Chomsky attributes this ambiguity to the fact that the subject is assigned a θ-role *compositionally* by the VP, i.e., by a combination of the verb and its direct arguments. The choice of the different internal arguments is responsible for the different readings in (12b). According to Hale and Keyser (1985), it seems to be quite generally the case in English that a VP of the form [V X's N], where *X* is an anaphor and *N* is a *body part,* can assign the *experiencer* role to the subject.[15]

Of course, the 'literal' reading of sentences like (12b) is also available. In this case the compositional θ-assignment of the VP to the subject is regular. The agent is associated with the subject subsumed under the UTHAC (3b).

From pairs as in (12), I conclude that the assignment of the agent role of a transitive verb to its subject might be *suppressed* in English in favor of the assignment of θ-role determined by the content of the predicate.

Let us consider the Hungarian equivalents of the sentences in (12):

(13) a. János eltörte az ablakot
John broke the window-ACC
'John broke the window.'

b. János eltörte a karját
John broke the arm-npAGR3sg-ACC
'John broke his arm.'

In contrast to the English pair, the subject *János* in the Hungarian sentences may only have an active reading.

In Hungarian, the two readings associated with the English (12b) are *disambiguated.* They are associated with two different lexical forms of the verb *eltör* 'break'. The active reading is expressed by the basic unaltered form *eltör* which is of the

(14) I will discuss some selectional subject-object symmetries in section 5.2.2. and I will evaluate their theoretical consequences in section 5.4.2.6.

(15) Chomsky (1981) refers to this θ-role as patient. Here I will follow Hale and Keyser (1985) in labelling this role as experiencer.

agent-theme semantic class and is associated with a NOM-ACC case frame. The passive reading associated with (12b) is expressed by employing the intransitive variant of the verb *eltör* by adding the verbal suffix *-ik,* as we will see below an instance of passive morphology, to the basic transitive verb stem *eltör.*[16] Compare:

(14) János karja eltörött
John arm-npAGR3sg broke

The verb in (14) has only *one* argument which is a possessive NP that consists of the experiencer, the possessor NP, and an inalienable body part, the noun-possessed. This possessive NP is marked nominatively.

The question is now: what should we conclude from the strategies employed by Hungarian in order to derive the readings of sentence (12b)? One could argue that the subject in Hungarian is not assigned its θ-role compositionally but relies on another kind of mechanism. This answer cannot be correct, however, because as we have noted in the preceding section the predicate of Hungarian transitive sentences may assign the subject a compositional θ-role as well. A more reasonable hypothesis is rather that a basic Hungarian transitive verb of the agent-theme semantic class realizes its θ-roles according to the UTHACs (cf. (3)). Therefore, the subject of a clause which contains a morphologically underived transitive verb of this semantic class receives always an active reading.

Obviously, the connection between the agent and subject is not so tight in English. It may be overruled by other grammatical factors. This dichotomy between English and Hungarian exemplifies that there is a *difference* in the application of the UTHACs between these languages. In the following section, I will discuss some instances in the domain of transitivity alternations which are due to this difference as well.

3.3. Transitivity Alternations in Hungarian

In the preceding section, I have presented evidence for the claim that the Unmarked θ-Assignment Conventions 3.2.(3), here repeated as (1),

(1) *Unmarked θ-Assignment Conventions* (UTHAC)
a. The theme role is assigned to the object GF
b. The agent role is assigned to the subject GF

apply in Hungarian. Recall that a language in which these principles hold is defined as a nominative-accusative language.

Suppose now that the UTHACs apply unrestrictedly in a particular nominative-accusative language. As a result of this, the D-structure thematic relations would be mirrored at surface structure. We expect then that in such a language no *transitivity alternations* would occur with morphologically unaffected basic verbs other than the ones made possible by the above rules. Transitive verbs of the agent-theme semantic

(16) The morpheme *-ik* itself appears only in the third person present tense: *eltörik* 'break-present tense-AGR3sg'. In the past tense, the transitive and the intransitive alternant can be kept apart, because they are conjugated differently. The transitive variant takes the definite conjugation, whereas the intransitive variant takes the indefinite conjugation. (See for a discussion of these verbal conjugations section 4.2.).

class will only have an agentive alternant, while non-agentive basic intransitive verbs cannot exist, because their subject position would remain empty yielding a violation of the universal requirement that all sentences must have a subject (the Extended Projection Principle of Chomsky 1982).

In this section, I will attempt to demonstrate that in Hungarian, as distinct from English, the UTHACs hold unrestrictedly. I will relate this difference to the following parameter, i.e. the θ-*Assignment Parameter:*

(2) θ-*Assignment Parameter* (THAP)
+/- apply the UTHACs in the syntactic representation of basic verbs

Hungarian takes the positive value of this parameter, whereas English may take its negative value. In Hungarian, the UTHACs apply whenever it is possible. In English, the application of these rules may be suppressed, although rule (1a) applies more rigidly than rule (1b). The theme role is nearly always associated with the object GF (but see section 3.3.6. on the Dative Shift Alternation), the realization of the agent role in English is more 'liberal'.

This parameter accounts for the fact why syntactic transitivity alternations, i.e. NP-movement in Chomsky's (1981) terminology, might be absent from the grammar of a *purely* nominative-accusative language. Because Hungarian is specified positively for (2), it is not possible to derive *syntactic* transitivity alternations which do appear in English, such as the Middle Alternation, the Causative/Inchoative Alternation, the Passive Alternation, Experiencer Verbs, Raising Predicates, and the Dative Shift Alternation. The difference in application of the UTHACs produces, then, superficial differences within the nominative-accusative languages yielding a typological difference, namely, the presence or absence of *NP-movement.*

Languages in which these conventions hold unrestrictedly, such as Hungarian, represent the *unmarked* case. The equivalents of the syntactic transitivity alternations in English can only be derived in Hungarian by carrying out a morphological operation which has the effect of *altering* the substructures in the lexical entry of a basic verb.

This section is organized as follows. First, I will discuss transitivity alternations which have a transitive and an intransitive alternant involving the *Middle Alternation* (cf. section 3.3.1.) and the *Causative/Inchoative Alternation* (cf. section 3.3.2.). It appears that in Hungarian the transitive alternant is always the basic one. Then, I will deal with transitivity alternations which can be derived in Hungarian only with the help of morphological markers, like the *Passive Alternation* cf. (section 3.3.3.), *Experiencer Verbs* (cf. section 3.3.4.) and *Raising Predicates* (cf. section 3.3.5.). Finally, section 3.4.3.6. will focus on the presence versus the absence of the *Dative Shift Alternation* in English and Hungarian respectively. This difference will be attributed to the fact that the theme role in English can be assigned by the structural position [NP, VP] but not in Hungarian.

3.3.1. *The Middle Alternation*

Consider the following sentences:

(3) a. John cuts the bread b. The bread cuts easily

Some basic transitive verbs like *cut, slice, kill, bribe, crush, assemble, maim, discourage, convince, corrupt,* etc. of the agent-theme semantic class may optionally undergo a process of *detransitivization* yielding the *Middle Alternation* (3b).[17] In the literature, two analyses are proposed for its derivation.

(*I*) Keyser and Roeper (1984) argue that this alternation may be derived from an interaction of Case and θ-theory. Some verbs are lexically specified to lose their ability to assign accusative Case to their object. In accordance with *Burzio's Generalization* which states:

(4) *Burzio's Generalization:* If some NP governed by V is assigned no Case, then the VP of which V is the head assigns no θ-role (cf. Burzio 1981)

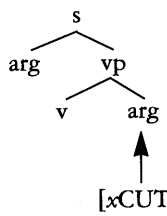
The verb or the VP fails to assign its subject a θ-role. Hence, for example, the D-structure object *bread* is moved to the subject position of (3b) in order to escape a violation of the *Case Filter.* The Case Filter is defined as:

(5) *Case Filter:* Every NP with phonological content must receive Case (cf. Chomsky 1983: 6)

(*II*) Hale and Keyser (1985) present an alternative analysis of the middle construction. Their approach is similar to that of Keyser and Roeper in that this alternation is the result of the interaction of independent modules and principles. According to Hale and Keyser, the external position in English is *not* a canonical agent position. The mapping of the agent onto the external position is optional, in contrast with the theme which is steadily linked to the D-structure object position. Hence, (1b) is not a core rule of English grammar.

They assign basic transitive verbs which participate in the middle alternation the following PAS (cf. also Guerssel et al. 1985):

(6) PAS for Middle *cut*



The theme role represented by the *y* variable in the LCS of the verb *cut* is associated with the internal position in LS by (1a). Hale and Keyser assume the projection of the agent role onto the subject position to be optional in such cases. In case the agent role represented by the variable *x* is assigned to the subject the Transitive Alternant (3a) is derived, whereas if it fails to project the Middle Alternant (3b) is derived. In the latter case, the theme argument is moved in the syntax to the subject position as an instance of the *Extended Projection Principle* which states:[18]

(17) The obligatory presence of an adverbial in the middle construction is not well understood yet. See Hale and Keyser (1985) for suggestions.

(18) This principle is responsible for the appearance of expletive *it* in the subject position of weather verb constructions (cf. (ia)) (see Chomsky 1981: 27, and in constructions with a preliminary subject *it* and a clause as a real subject (cf. (ib)) (see Stowell 1981):

(i) a. *It* rains b. *It* is clear *that he will come*

(7) *Extended Projection Principle* (EPP): Clauses must have subjects
(cf. Chomsky 1982: 10, Perlmutter 1984)

Under both analyses, the theme argument receives its Case-features in the subject position. This is, of course, only possible if the agent role is not present in the subject position, otherwise a violation of the θ-criterion would arise. Therefore, both analyses presuppose a relaxation of principle (1b) with respect to the realization of the agent role.

In section 3.2.3., I presented empirical evidence for the claim that the UTHACs apply unrestrictedly in the syntactic representation of basic Hungarian transitive verbs of the agent-theme semantic class. If that is correct, then we expect that there is no possibility in Hungarian for deriving syntactically middle constructions. This turns out to be the case. In order to derive this construction Hungarian necessarily employs an alternative strategy.

The transitive variant is always the basic alternant similar to English. *The Middle Alternation* is derived by *morphological* operations on these basic verbs. There are several morphological suffixes which have the effect of forming Middles. For example, the complex suffix *-ható* (cf. (8b)), which consists of a combination of the potentialis suffix (POT) *-hat* and the suffix of the participle present (pres.part.) *-ó,* or the reflexive suffix (refl) *-ódik* (cf. (9)) (see Károly (1982) for a classification of transitivity morphology in Hungarian):

(8) a. Janos vágja a kenyeret
John cuts the bread-ACC
'John cuts the bread.'

b. A kenyér könnyen vág*ható*
the bread easily cut-POT-pres.part.
the bread can be cut easily (lit.)
'The bread cuts easily.'

(9) a. Az emberek könnyen megvesztegetnek bürokratákat
the people easily bribe-AGR3pl burocrats-ACC
'People easily bribe burocrats.'

b. A bürokraták könnyen megvesztegetöd*nek*
the burocrats easily bribe-refl-AGR3pl
'Burocrats bribe easily.'

An analysis for the *lexically* derived Middle Alternation in Hungarian may be elaborated along the lines of Chomsky (1981: 126). According to Chomsky (1981), morphological processes may absorb the assignment of a θ-role to the subject (for example passive morphology). Suppose, then, that the suffixes triggering the Middle Alternation have exactly this effect. They *absorb* the assignment of the agent role to the subject. Further, parallel to the English equivalents the theme argument in Hungarian is promoted to the subject position. This can be seen from the fact that it appears in nominative Case (cf. 3.2.(7a)). This movement to the subject position may then be the result of avoiding a violation of the Case Filter or the EPP.[19] Hence, the attachment of *passive* morphology to a basic transitive verb in Hungarian has the following consequences:

(19) Koster (1986; 1987: 262-266) argues that the obligatoriness of NP-movement in the case of passivization cannot be attributed to the Case Filter, because Case absorbed objects can remain in-situ in Dutch. According to Koster, this follows from the fact that the underlying object in passives appears both to the right and to the left of an immobile indirect object. In the former case it is in a VP-internal position. Consider:

(10) *The Properties of Passive Morphology*:
a. It absorbs the assignment of the agent role to the subject, and
b. The theme role is realized in surface subject position

Although Hungarian has no overt syntactic NP-movement, this rule may be triggered in the lexicon by adding passive morphology to a basic transitive verb.

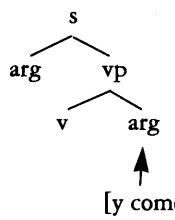
3.3.2. *The Causative/Inchoative Alternation*

Let us turn to the *causative/inchoative* alternation referred to in the theoretically oriented literature as 'ergative' alternation (cf. Burzio 1981) or 'unaccusative' alternation (cf. Perlmutter 1984). Some of the verbs belonging to this class are: *break, close, open, tighten, collapse, drop, slide, happen, arrive, appear,* etc. An example of the syntactic alternation at stake is provided by the following pair:

(11) a. The glass broke b. John broke the glass

The single argument in the intransitive alternant here denotes a passive participant in the event or process depicted by the verb (cf. Burzio 1981, Perlmutter 1984, among others). The theme role is assigned to the D-structure object in correspondence with (1a). Therefore, we may set up the following PAS of the verbs belonging to this class (cf. Hale and Keyser 1985 and Guerssel et al. 1985):

(12) PAS for Inchoative break



The NP bearing the object relation comes to bear the subject relation under the application of move-α. By the Case-marking rule 3.2.(7a) this argument is assigned nominative Case ensuring that the Case Filter is met. The theme argument is, of course, also the passive participant in the related transitive variant (11b).

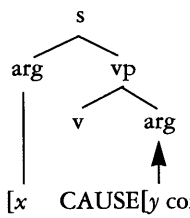
Jackendoff (1983) hypothesizes that the intransitive and transitive variant of this alternation are related by means of a *causative* rule. The principal observable effect of this rule in English is to embed the monadic LCS of the intransitive alternant as the complement of the causative function, which is itself dyadic, possessing an agentive argument as well as the complement it receives, as a result of the causativization process. Thus, for example, if the LCS of *break* is, roughly, [*y*BREAK], then the derived causative is, approximately, [*x*CAUSE(*y*BREAK)]. This rule is fully productive in English and applies to verbs which take an LCS of the form *y come to be a STATE*.

(i) a. dat_ *hem het boek* gegeven werd b. dat *het boek* hem__ gegeven werd
that him the book given was
'that he was given the book.'

Koster concludes that the obligatoriness of NP-movement in English cannot be caused by the Case Filter but by the EPP. This difference between English and Dutch, then, is related to the satisfaction of the EPP in these languages. In English NP-movement applies, whereas in Dutch the subject position may be filled optionally by the insertion of small *pro* (cf. Koster 1986).

Guerssel et al. (1985) assign the following PAS to the Causative Variant of the verb *break:*

(13) PAS for Causative *break*



Verbs participating in the middle alternation are basically *transitive* introducing an active and passive participant in the action denoted by them. The passive variant of the middle is derived by preventing the realization of the agent argument in the syntax. The inchoative alternation, on the other hand, is basically *intransitive* having a single passive participant.[20] The transitive variant of the inchoative construction, the causative alternant, is derived by adding an agentive role to the LCS of the inchoative verb which may then be projected onto the syntactic subject position.

In relation with the Hungarian equivalents of the examples in 3.2.(12), I already noted that the agent of a basically transitive verb in Hungarian may not be wiped out from its position by a rule assigning compositionally another θ-role to the subject. The verb involved in those examples belongs to the class of verbs which undergo the Causative/Inchoative Alternation. Recall that in Hungarian the Causative variant is the *basic* variant, that is, morphologically underived, whereas the Inchoative Alternant involves the suffixation of the passive morpheme *-ik.* Compare the Hungarian equivalents of the sentences in (11):[21]

(14) a. Az üveg eltörött
the glass broke-AGR3sg-indef
'The glass broke.'

b. János eltörte az üveget
John broke-AGR3sg-def the glass-ACC
'John broke the glass.'

In Hungarian as distinct from English, the 'Causative' Alternant is the basic alternant which realizes its agent and theme role according to the UTHACs, whereas the Inchoative Alternant is the derived one.[22] Its derivation involves the same effects as noted with respect to the derivation of the Middle Alternant (cf. (10)). The as-

(20) Compare Keyser and Roeper (1984) for the claim that there is an implicit agent in the middle construction but not in the inchoative (ergative) construction.

(21) See for the different types of conjugations in these sentence note 16.

(22) Hungarian has a morphological causative which may be derived by adding the suffix (CAUSAT) *-(t)at/(t)et* to verbal stems. If the verb is intransitive, then the original agent becomes the causee accusatively marked, while the causer is marked nominatively:

(i) a. János sétal
John walk-AGR3sg
'John walks.'

b. Mari sétál *tat*ja Jánost
Mary walk-CAUSAT-AGR3sg John-ACC
'Mary makes John walk.'

If the verb is transitive, then the original agent becomes the causee instrumentally marked, while the causer is marked nominatively in this construction as well (cf. (ii)):

(ii) a. A szabó varrja a ruhát
the tailor sew-AGR3sg the dress-ACC
'The tailor sews the dress.'

b. A szabóval varr*at*om a ruhát
the tailor-INSTR sew-CAUSAT-AGR1sg the dress-ACC
'I make the tailor sew the dress.'

See Hetzron (1976) for an extensive discussion of the morphological causative in Hungarian.

signment of the agent role to the subject is blocked and the theme role is realized in the surface subject position. Korponay (1980) and Károly (1982) observe that the following suffixes may yield Inchoative Alternations in Hungarian, like the reflexive suffix *-ódik/ődik, -ul/ül and -ad/ed.* These suffixes take a transitive base or a base unspecified for transitivity and add the syntactic properties in (10) to these stems.[23]

Compare an example with the suffix *-ódik.* The inchoative verb *becsukódik* 'close' (cf. (15a)) is formed by the suffixation of the morpheme *-ódik* to the morphologically unaffected variant *becsuk* 'close' (cf. (15b)):

(15) a. Az ajtó becsukódott
the door closed-refl-AGR3sg
'The door closed.'

b. Mari becsukta az ajtót
Mary closed-AGR3sg the door-ACC
'Mary closed the door.'

In sum, the syntactic properties of the Hungarian equivalents of the Inchoative/Causative Alternation show that the transitive variant, unlike its equivalent in English of the agent-theme semantic class, is the *basic* alternant. The unmarked case involves the core case of the generalization in (1). The Inchoative Alternant is derived by morpholexical operations. Adding passive morphology results in the syntactic properties specified in (10).

A subgroup of the inchoative verbs (ergatives) is formed by the *unaccusative alternation.* An unaccusative verb, like an inchoative verb, assigns its θ-role to the object NP which appears as the surface subject under application of NP-movement. However, an unaccusative verb, unlike an inchoative, has no transitive counterpart.[24] Compare the following examples:

(16) a. Three men arrive b. A problem arises c. Several solutions exist

In Hungarian, Unaccusatives bear *passive morphology*, like the suffixes *-ik, -ódik/ődik, -ul/ül* and *-ad/ed.* Recall that passive morphology involves the syntactic properties in (10). (10a), which states that the agent role is not assigned to the subject, applies vacuously because these verbs are inherently monadic selecting only a theme role. Property (10b), however, also holds with Unaccusatives. This is clear from the fact that the underlying theme object appears as the surface subject, in the nominative Case (cf. 3.2.(7a)). Consider the Hungarian equivalents of the sentences in (16):[25]

(23) Hungarian has also a set of transitive morphology which has the oppositie effect of passive morphology. (i) The subject is assigned an agent role and (ii) a (verbal) root is turned into an accusative Case assigner. The suffixes of passive and transitive morphology often occur in oppositional pairs. For example *-ódik/ődik* (pass.) versus *-ít* (tr.), *-ul/ül* (pass.) versus *-ít* (tr.) and *-ad/ed* (pass.) versus *-aszt/eszt* (tr.). These suffixes may be added to transitive and intransitive verbal bases respectively, and to verbal bases which are unspecified for transitivity such as adjectives or nouns. Compare: *fehéredik* 'whiten' (pass.) versus *fehérit* 'make white' (tr.), *barnul* 'get brown' (pass.) versus *barnít* 'make brown' (tr.) and *fakad* 'spring' (pass.) versus *fakaszt* 'cause to spring' (tr.). See Bánhidi and Jókay (1960), Korponay (1980), Károly (1982) and De Groot (to appear) for more examples of such oppositions.

(24) See Perlmutter (1978) and Hale and Keyser (1985) for distributional differences between ergatives and unaccusatives. For example, Unaccusatives (cf. (ia)), unlike Ergatives (cf. (ib)) may participate in the rule of *There-insertion*:

(i) a. There arrived three guests b. *There closed a door

(25) See Szabolcsi (1986e; 1986f; and 1986g) for the participation of Unaccusatives in the definiteness effect in Hungarian.

(17) a. Három ember érk*ezik*
three man arrive-AGR3sg
b. Egy probléma ad*ódik*
a problem arise-AGR3sg
c. Több megoldás létez*ik*
several solution exist-AGR3sg

3.3.3. *The Passive Alternation*

So far I have investigated the effect of passive morphology on a transitive base or on an inherently intransitive base. It was concluded that the verbs derived in this way lack agentive arguments. The standard case of *Passivization* in English, however, allows the realization of an agentive argument as a *demoted* subject. Compare:

(18) a. The enemy beats the army b. The army is being beaten *by the enemy*

In (18a), we have the transitive verb *beat* of the agent-theme semantic class. By adding passive morphology *-en* to this verb the passive participle *beaten* is formed. The attachment of passive morphology has the properties in (10). The agent role is blocked from being assigned to the subject, and the underlying theme object is moved to the subject position where it can be assigned nominative Case by 3.2.(7a)). Note, however, that the agent role may be realized as a prepositional *by*-phrase.[26] The question arises whether passive morphology in Hungarian yields a two-place passive construction. In the literature, two instances of the passive alternation have been discussed.

(I) According to Károly (1982), the *Passive Alternation* is passing out of use but is entirely productive.[27] It may be formed by attaching to a transitive verb stem of the agent-theme semantic class the suffix (PASS) *-tatik/tetik.* Compare the Hungarian equivalents of the sentences in (18):

(19) a. Az ellenség megveri a sereget
the enemy beated-AGR3sg the army-ACC
b. A sereg megveretik az ellenségtől/ellenség által
the army beated-PASS-AGR3sg the enemy-ABL/ enemy by

The D-structure object is realized as the surface subject, and the demoted subject is expressed by a constituent marked ablatively or similarly as in English by a *by-phrase.*

(II) Kiss 1982a and Laczkó 1985a observe that *Deverbal Nominalization* with the suffix (NOMI) *-és/ás* patterns like passivization in Hungarian. Compare, for example:

(26) Compare Hoekstra (1986), among others, on the status of the demoted subject and passive morphology with passivization.

(27) Since the nineteenth century the passive formed with the suffix *-(t)atik/tetik* is not used any longer in active speech. To avoid this construction several kinds of strategies are employed. For example, it may be circumvented by either an impersonal infinitive construction:

(i) Itt dolgozni kell!
here work-INFI must
'Here one must work!'

or by a third person plural missing person construction (cf. section 4.2.4.1. for an analysis of this construction):

(ii) a. Ették a levest
ate-AGR3pl the soup-ACC
'The soup was eaten.'
b. Itt magyarul beszélnek
here Hungarian speak-AGR3pl
'Hungarian is spoken here.'

(20) a. Az ellenség megveri a sereget
the enemy beats-AGR3sg the army-ACC
'The enemy beats the army.'
b. A sereg megverése az ellenségtől/ az ellenség által
the army beat-NOMI-npAGR3sg the enemy-ABL/ the enemy by

Again, the D-structure theme is realized as the surface subject and the D-structure agent appears as a demoted subject assigned ablative case or as a PP.[28]

3.3.4. *Experiencer Verbs*

In section 3.3.2., I discussed the syntax of Unaccusative Verbs in Hungarian. These verbs lack an underlying agent subject. Two other verb classes in Hungarian also display this property, namely, *Experiencer Verbs* and *Raising Predicates.* The former are dyadic verbs which select a theme and an *experiencer* role and the latter are monadic verbs having a theme role in their θ-grids. Let us first consider Experiencer Verbs.

Compare, for example an experiencer verb construction with *tetszik* 'please':

(21) János tetsz*ik* Marinak
John please-AGR3sg Mary-DAT
'Mary likes John.'

Most of the Experiencer Verbs, like *tetszik* 'please', *hiányzik* 'is missing', and so on are *inherently* passive displaying passive morphology such as the suffix *-ik.* Consequently, they trigger (10b) as can be seen from the fact that the D-structure object theme is realized at surface structure in the nominative Case. The experiencer role is assigned to the dative complement (cf. Füredi 1976; É. Kiss 1982a and Pléh 1982).[29]

3.3.5. *Raising Predicates*

Raising Predicates in English as *seem, certain* and so on may select either an infinitival complement clause (cf. (22a)) or a tensed embedded complement (cf. (22c)):

(22) a. — seems [$_{IP}$ John to be sad] b. John seems [$_{IP}$ — to be sad]
c. It seems [$_{CP}$ that John is sad]

The embedded complement clause in (22a) lacks a fully specified I-node. According to Chomsky (1981), the D-structure subject in this clause cannot be assigned

(28) The suffix of the past participle *-(t)*t (cf. (ic)) follows the pattern of passive morphology, whereas the present participle *-ó* (cf. (ib)) leaves the transitive pattern of a verb of the agent-theme class unaffected (cf. (ia)) (see also Laczkó 1985):

(i) a. Az ellenség elszigetelte a hajót
the enemy isolated-AGR3sg the ship-ACC
'The enemy isolated the ship.'
b. A hajót elszigetelő ellenség
the ship-ACC isolate-pres part enemy
'The enemy isolating the ship.'
c. Az ellenségtől/ellenség által elszigetelt hajó
the enemy-ABL enemy by isolate-past part ship
'The ship isolated by the enemy.'
(Laczkó 1985: 93)

(29) Consider Pléh (1982) for the behavior of Experiencer Verbs with Switch Reference in Hungarian (cf. also section 5.3.4.).

Case, which results in a violation of the Case Filter.[30] However, the grammar provides for a way out of this conflict.

Raising predicates do not assign a θ-role to their subjects as can be seen from the realization of an expletive in (22c). Therefore the matrix subject position in (22a) qualifies as a landing site for NP-movement. So, the embedded D-structure subject of the infinitival complement may move to this position in order to receive a Case-feature of the matrix I. This results in the licit S-structure representation (22b).

As distinct from D-structure representation (22a), in (22c) a fully specified I is present in the embedded complement. Therefore, it assigns (nominative) Case to the embedded subject. An expletive is realized in the subject position of the matrix clause.

It has been observed that *Raising Predicates* in Hungarian, such as *látszik* 'seem' and *tünik* 'appear', do not trigger NP-raising (cf. É. Kiss 1987a: 64). Hence, the construction analogous to (22b) is lacking in Hungarian. In the equivalent of (22c), the Raising Predicate selects a tensed complement clause in which there is a null realization of the verb *van* 'be' (cf. Kiefer 1968) which acts as a nominative Case-assigner. Compare:

(23) (*Az) látsz*ik* [CP hogy János szomorú]
it seem-AGR3sg that John sad

From a closer investigation of some of the Raising Predicates it appears that morphologically they belong to the *-ik* class which we met already with Causative/Inchoative Alternation for example (cf. section 3.3.2.). As noted above, lexically raising predicates are monadic predicates which select a theme role. A result of the fact that they bear passive morphology is that this θ-role is realized in the subject position of these predicates. This can be seen from the fact that the anticipatory pronoun *az* 'that' which is a representant of the embedded clause in the LS of the matrix verb (cf. section 4.5.) appears in the nominative Case.[31] Therefore, a constituent cannot be raised from the embedded clause into the matrix clause without violating the θ-criterion (cf. 3.2.(2)).[32] Hence the absence of (22b) in Hungarian.

(30) Koster (1987: 262-265) argues that Raising Predicates are Unaccusatives in English and Dutch, and that the *it* expletive in raising predicate constructions (cf. (22c)) is an underlying theme object. This object represents the embedded clause in the LS of the verb. NP-movement of *it* to the subject position is then due to the EPP. In Dutch, the expletive *het* does not have to be present in raising predicate constructions:

(i) a. *Het* schijnt zeker dat Jan ziek is
it seems sure that John ill is
'It seems to be sure that John is ill.'
b. Dat Jan ziek is schijnt zeker

Similar to passivization, the subject position in Dutch may be filled optionally by smal *pro* (cf. note 19). These parallelisms between passive and raising predicates suggest that NP-movement is not caused by the Case Filter but rather by the EPP.

(31) Note, however, that in this case the anticipatory pronoun must be replaced by small *pro* (cf. chapter four).

(32) Raising Predicates may select not only an embedded clause but also a small clause:

(i) a. ____seems [s John sad]
b. John seems [s____ sad]

The difference with the infinitival complement in (22), is, that in these sentences the predicate is an AP instead of a VP. What (ia) shares with (22a) is that the embedded D-structure subject cannot be assigned Case because there is no suitable Case assigner present. By raising it to the matrix subject position it can receive a (nominative) Case from I. Compare the Hungarian equivalent of (ib):

3.3.6. *The Dative Shift Alternation*

The transitivity alternations discussed so far were all related to UTHAC (1b). In Hungarian, the agent is always connected to the subject, unless passive morphology specifies otherwise. In English, on the other hand, this mapping convention is not so strictly obeyed. Concerning the theme role, we have hypothesized so far that in both languages this θ-role is connected to the object. The question arises whether this is always the case. Marantz (1984) discusses the *Dative Shift Alternation* exemplified in the following pair:

(24) a. John gives a book to Mary b. John gives Mary a book

(24a) is an example of the unshifted alternant, whereas (24b) represents an instance of the shifted one.

Marantz presents the following analysis of this alternation. θ-roles may not only be assigned by lexical predicators and case-markers but also by *structural* positions. Further, Marantz assumes, adopting Chomsky's (1981) θ-criterion, that verbs may only assign one θ-role. He captures this restriction in his One role/One assigner principle. Marantz assigns the English verb *give* the following θ-grid:

(25) (*theme, goal*)

In (24a), the verb *give* assigns the *theme* role. According to the One role/One assigner principle, some other θ-role assigner must assign the *goal* role. Marantz argues that this is done by the preposition *to.* In (24b), however, the *goal* role is assigned by the verb. Hence, according to the One role/One assigner principle the *theme* role must be assigned by another θ-role assigner. Marantz claims (1984: 168) that the structural position [NP, VP] in English may qualify as a *theme* role assigner.

In Hungarian only the equivalent of the *unshifted* variant, that is, (24a) appears:

(26) János adja a könyvet Marinak
John gives the book-ACC Mary-DAT
'John gives the book to Mary.'

From the meaning of the verb *ad* 'give', it follows that this verb selects the same θ-grid as its English equivalent. *Ad* itself licenses the *theme* role, as is the case with the English variant (24a), whereas the dative marker has a similar function as the preposition *to,* namely, the assignment of the *goal* role.

The question is now of course: why is the shifted variant absent from Hungarian? If the analysis of the Dative Shift Alternation proposed in Marantz (1984) is correct, then, there might be two possibilities. Either Hungarian verbs do not assign a *goal,*

(ii) János szomorúnak látszik
John sad-DAT seem-AGR3sg
According to Komlósy (1985), the small clause complement is fully incorporated into the LS of the verb and forms a complex verb with it (cf. section 4.4.) in which the adjective is assigned dative case. It is unclear why Hungarian displays 'restructuring' in these cases (cf. also section 5.3.6.2. for the discussion of (ii) as an instance of secondary predication). Restructuring also applies with Raising Predicates which may select an infinitival complement (cf. Kálmán et al. 1984):

(iii) János futni látszott
John run-INFI seemed-AGR3sg
'John seemed to be running.'

or the structural object position [NP, VP] does not qualify as a licit *theme* role assigner. The first option is clearly incorrect as can be seen from the list in section 3.2.(6). Compare for example the verb *megy* 'go' which may select a goal argument:

(27) János a konyhába ment
John the kitchen-ILL went
'John went into the kitchen.'

Therefore, the latter option remains. The fact that the [NP, VP] position does not qualify as a θ-role assigner may be attributed to the strict application of the UTHACs. The [NP, VP] position in Hungarian may not be a *theme* role assigner because it is assigned this role *itself* whenever possible. Again, the application of such a convention seems to be more relaxed in English, although the association theme-object is more stable than agent-subject in that language.

3.4. Conclusions

In this chapter, I discussed some properties of the lexicon in general and the lexicon of Hungarian in particular. We have adopted the position that the lexicon contains several subcomponents such as LCS, LS, and a θ-grid. Further, we have adopted the Unmarked θ-Assignment Conventions, here repeated as (1), which mediate between lexical properties and syntactic structure:

(1) *Unmarked θ-Assignment Conventions* (UTHAC)
a. The theme role is assigned to the object GF
b. The agent role is assigned to the subject GF

From the assumptions of LS and these conventions, it follows that the sentence in Hungarian recognizes a *subject-predicate* divisioning.

This hypothesis has been supported, first, by the fact that Hungarian is a *nominative-accusative* language. Since the agent of underived transitive verbs of the agent-theme semantic class and of active intransitive verbs is associated with the subject, i.e. the nominatively marked argument, and the theme of underived transitive verbs of the agent-theme semantic class is associated with the object, i.e. the accusatively marked argument.

Secondly, the assignment of θ-roles is subject to a subject-object *asymmetry*. The subject but not the object may receive its θ-role *compositionally* in Hungarian as well.

Thirdly, Hungarian displays morpholexically induced *transitivity alternations*. These phenomena are instances of NP-movement which apply at D-structure. This can be seen from the fact that the D-structure theme object may appear in the subjective (nominative) Case of morpholexically derived Middles, Ergatives, Unaccusatives, Passives, Nominalizations, Experiencer Verbs and Raising Predicates.

I have further demonstrated that although Hungarian and English are both nominative-accusative languages, there are some *differences* in the domain of compositional θ-assignment by a predicate which contains an inalienable body part object, and in the domain of transitivity alternations.

In Hungarian, the subject may not be assigned the θ-role experiencer by a predicate which contains an inalienable body part with a transitive verb of the agent-

theme semantic class. The agent role of basic transitive verbs in Hungarian may not remain unrealized as in the English Middle Alternation, the agent role in Hungarian may not be introduced as with the case of the English Causative/Inchoative Alternation, and the theme in Hungarian may not be assigned by a structural [NP, VP] position as in the English Dative Shift Alternation.

These differences between Hungarian and English can be accounted for by a dichotomy in the application of the UTHACs. It is attractive to associate this dichotomy with a *parameter.* Intuitively, it is plausible to suppose that languages may display parametric variation in the way θ-roles and syntactic positions are related. Therefore, I will set the θ-Assignment Parameter as follows:

(2) θ-*Assignment Parameter* (THAP)
+/- apply the UTHACs in the syntactic representation of basic verbs

If we assume that Hungarian takes the positive value, of this parameter, and English may take its negative value the differences between these languages discussed above are accounted for. Thus, Hungarian is much stricter in the application of (1) in the syntax of basic verbs than English.

Transitivity alternations in Hungarian have in fact a fairly simple structure. The *core* cases are produced by the UTHACs, whereas the *alternants* such as Ergatives, Unaccusatives, Passives, Nominalizations, Experiencer Verbs and Raising Predicates are derived by adding passive morphology to the basic verbal stems. These morpholexical rules operate on the subcomponents of the lexical entries of these verbal stems, and have the effect of 3.3.(10).

It has been claimed that the absence of syntactic transitivity alternations (NP-movement), such as the lack of syntactically derived middle verbs, ergatives, passives, and raising verbs is a diagnostic for non-configurationality,[33] since in non-configurational languages the GFs subject and object cannot be distinguished structurally and hence function-dependent operations cannot apply in syntax. I have suggested, however, that a possible source for the absence of these alternations in nominative-accusative languages lies in the strict application of conventions (1).

Reineke Bok-Bennema (personal communication) points out to me that there is no one-to-one correspondence between overt syntactic NP-movement and the morphological encoding of transitivity alternations. According to her, in Spanish, for example, all transitivity alternations which are instances of NP-movement cooccur with a morphological reflex. Hence, it could be claimed that all morpholexically induced transitivity alternations in Hungarian are cases of NP-movement as well. Above I have shown that there is indeed some evidence for this hypothesis.

Rather, the problem of this chapter is formed by the following implication. If overt syntactic NP-movement is absent with transitive basic verbs, then it can only apply with the help of morpholexical means. This statement holds from left-to-right but not the reverse. Further, it also implies that a strict application of the UTHACs in a language *L* and the lack of the morphological means to manipulate them would

(33) The appearance of transitivity alternations in a particular language is an argument in favor of the configurational structure of such a language. Levin (1989) argues that Basque must have a subject-predicate dichotomy on the basis of the syntactic properties of Unaccusative Verbs in that language.

predict *L* to be active. Mary Laughren (personal communication) informs me that Warlpiri is such a case. It has no transitivity alternations such as Causatives, Passives, Anti-Passives, and so on. The only transitivity alternation appearing is the Causative/Inchoative Alternation, which is encoded morphologically.

4. THE PROJECTION PRINCIPLE IN HUNGARIAN

4.1. Introduction

It has been argued that the Projection Principle in non-configurational languages is satisfied only at LS.[1] In these languages, constituents may be base-generated freely at PS as a consequence of this parameter, and the relation between LS and PS may be either one-to-null, or one-to-many (cf. section 1.1.). The way in which the Projection Principle applies in non-configurational languages accounts for some of their properties, such as free word order, extensive use of null pronouns and split constituents.

In this chapter, I will present some empirical evidence for the hypothesis that the Projection Principle holds in Hungarian at *all* levels of representation. This implies that Hungarian is a configurational language and that the "non-configurationality" diagnostics above must be derived without making reference to a parametrization of the Projection Principle.

The intuitive sense of the Projection Principle may be stated as follows:[2]

(1) The θ-marking properties of each lexical item must be represented categorially at each level of representation: at LF, S-structure, an D-structure (cf. Chomsky 1982: 8)

In section 3.2., we pointed out that the θ-marking properties of each lexical predicator are associated with an LS. Therefore, this formulation of the Projection Principle may be replaced by (2):

(2) *Projection Principle:* The LS must be represented categorially at each level of representation (cf. Chomsky 1986a: 84)

(1) See Chomsky's (1981) parameter *Assume a GF*, Hale's (1983) *Configurationality* Parameter, Mohanan's (1983) distinction between *Lexical Structure* and *Configurational Structure* and Zubizarreta and Vergnaud's (1982) dichotomy between *Virtual Structure* and *Actual Structure* (cf. section 1.1. for discussion).

(2) See Chomsky (1981; 1986a), Bresnan (1982), Marantz (1984), and Pesetsky (1983) for discussion of the Projection Principle and its status within UG.

This principle specifies the relation between the PAS of a lexical predicator and its syntactic realization. The determination of this relation is a fundamental problem of any syntactic theory.[3] Note that (2) puts the strongest possible constraint on relations at different levels in the syntactic analysis of a sentence. The above formulation states that the relation between PAS and phrase structure is a *structure-preserving* isomorphism. Hence, syntactic configuration is projected from the lexicon. Consequently, the phrase structure rules become superfluous.

The relation between PAS and phrase structure has the following characteristics:

(3) a. identity b. biuniqueness c. obligatoriness d. locality

The Projection Principle determines that this relation is one of *identity*. The structural relations established by θ-assignment and subcategorization frames are preserved in the course of the derivation.

Identity between PAS and phrase structure does not affect word order. The linear ordening of constituents is relevant only at surface structure. Language particular directionality principles, like the *Head Parameter* (cf. Chomsky 1988) which specifies the order of heads and complements, yield surface word order.

The relation between PAS and phrase structure is *biunique* in the sense that each argument selected by a lexical predicator has precisely one counterpart in phrase structure. This excludes the possibility of having, for example, one-to-null or one-to-many relations. So, all the arguments of a lexical predicator are visible at surface structure.

Consider, for example, the following pair:

(4) a. John eats a cake b. John eats

Sentence (4a) contains the transitive verb *eat* of the agent-theme semantic class. In sentence (4b), the object NP is missing. The question arises now whether there is a null pronoun present in the phrase structure and whether the object NP is truly missing. The former option is ruled out by the fact that English is not a *pro*-drop language, it has no morphological means to license non-overt pronouns. The latter option is not allowed by the Projection Principle, since the mapping between PAS and phrase structure would be one-to-null in that case. From this it follows that verbs such as *eat* in English are specified in the lexicon as intransitive, and may optionally also be realized as transitive Vs.

The *obligatoriness* of the mapping between PAS and phrase structure has the following two consequences. Firstly, we observed that Hungarian has two types of cases (cf. section 3.2.1.), involving (*i*) structural Case (nominative governed by I[+AGR] and accusative governed by V) and (*ii*) lexical case, which is assigned under θ-government (cf. (3)-(16) of 3.2.(5)). Recall, furthermore, that both types of cases might function as argument relators indicating the dependency relation between the NPs which bear them and an argument taking predicates (ATP). As a consequence of the Projection Principle, NPs with these cases must be present at S-structure and surface

(3) Most linguistic frameworks incorporate something comparable to the Projection Principle. For example, in Montague grammar there is a homomorphism from syntax to semantics. This means that the mapping between semantic values and syntactic categories is structure-preserving (cf. Dowty et al.1981).

structure. Secondly, Chomsky (1985: 84) notes that if some element is "understood" in a particular position, then it is there in the phrase structure, either as an overt category that is phonetically realized or as an empty category assigned no phonetic form. This means that when NPs are missing from the phrase structure their position is filled by an empty category.

A further property of the relation between PAS and phrase structure is that it obeys a *locality* constraint. This constraint arises from the fact that the structural government relation between a head and its argument determines the LS. An NP in the phrase structure must be in the local domain of the verb of which the LS contains the argument to which that NP is related.

This locality requirement has consequences for the analysis of unbounded dependencies. For example, long Wh-movement fronts a Wh-phrase from its base-generated position in the embedded clause to the matrix sentence. The locality constraint on the mapping from PAS onto phrase structure dictates that in the embedded clause an empty category must be present which satisfies the θ- and subcategorization-features of the embedded verb. Empirical support for the local implementation of the Projection Principle will be postposed until chapter six, in which I will discuss long Wh-movement in Hungarian.

In this chapter, I will discuss the following phenomena from Hungarian bearing on the Projection Principle. These involve the *system of personal pronouns* (cf. section 4.2.), *Left Dislocation* (cf. section 4.3.), *complex verb constructions* (cf. section 4.4.), *embedded clause formation* (cf. section 4.5.) and *split constituents* (cf. section 4.6.). The properties in (3) characterizing the Projection Principle figure in all these phenomena.

Section 4.2. investigates the system of personal pronouns in Hungarian. This system is determined by a morpholexical and syntactic split between the nominative/accusative personal pronouns (pronouns assigned structural Case) on the one hand, and the personal pronouns with lexical case (cf. (3)-(16) of 3.2.(5)) on the other hand. The former have a constant lexical stem which is declined as an ordinary noun, whereas the latter have a stem which is often homophonous with the corresponding case-suffix. In order to derive a fully specified personal pronoun in these cases, person-number agreement must be added to the case-stem.

In accordance with the Projection Principle, the personal pronouns with lexical case may not be omitted when they function as a verbal complement. Personal pronouns assigned structural Case, however, are used for reasons of emphasis only and are preferably omitted in neutral contexts. Therefore, Hungarian is a so-called *pro*-drop language (cf. Chomsky 1981). As a consequence of the Projection Principle, an empty category must be present in the phrase structure of *pro*-drop languages. I will attempt to demonstrate that this empty category is small *pro* (cf. Chomsky 1982), because it displays the diagnostics of *pro:*

(5) a. It is recoverable from AGR
b. It is a non-anaphoric pronominal with independent (deictic) reference, and
c. It is free in its governing category

The Projection Principle is also operative in Left Dislocation. Section 4.3. shows that in Hungarian a pronominal item marks the complement position of a verb to which the left-dislocated NP is related.

Section 4.4. discusses complex verb constructions in Hungarian. The verbal prefixes involved are homophonous with personal pronouns bearing lexical case. The verbal prefixes receive an argumental interpretation if a verbal complement is selected.

Section 4.5. demonstrates that embedded sentences in Hungarian are always accompanied by a dummy pronoun which has a syntactic function comparable to expletive *it* in English. *It* holds the syntactic complement position of an embedded clause in order to satisfy the Case- and θ-features of a verb.

Section 4.6. analyzes *split* constituents in Hungarian. I will conclude that split constituents with NPs are highly restricted by syntactic and semantic conditions. If split constituents were not constrained, this phenomenon would constitute a counterexample against the Projection Principle. The mapping between PAS and phrase structure would be one-to-many in such cases.

4.2. The System of Personal Pronouns in Hungarian

In this section, I will discuss the system of personal pronouns in Hungarian and its relation to the Projection Principle. Not all the personal pronouns trigger the same conjugational pattern when accusatively specified. Hence, I will first have to introduce the two different conjugational patterns of the Hungarian verb, the so-called indefinite and definite conjugation.

4.2.1. *The Indefinite and Definite Conjugation of the Hungarian Verb*

Hungarian verbs may be conjugated with two different types of conjugations in all tenses and moods, the so-called *indefinite* and *definite* conjugation. Consider, for example, the indefinite and definite paradigm of the verb *lát* 'see' in the present tense:[4]

(1)

indefinite conjugation	*definite conjugation*
1sg. látok	1sg. látom
see-AGR1sg-indef	see-AGR1sg-def
2sg. látsz	2sg. látod
see-AGR2sg-indef	see-AGR2sg-def
3sg. lát ϕ	3sg. látja
see-AGR3sg-indef	see-AGR3sg-def
1pl. látunk	1pl. látjuk
see-AGR1pl-indef	see-AGR1pl-def
2pl. láttok	2pl. látjátok
see-AGR2pl-indef	see-AGR2pl-def
3pl. látnak	3pl. látnak
see-AGR3pl-indef	seeAGR3pl-def

The question arises: when are these patterns used? Roughly, the choice of these conjugational patterns depends on the *definiteness* feature of the *accusative* object of the verb. This may be captured by the following descriptive statement:[5]

(4) Hungarian personal suffixes are subject to Vowel Harmony (cf. Vago 1980).

(5) Szamosi (1976) argues that the indefinite pattern is the basic one and that the definite pattern is derived by Clitic Doubling. According to Szamosi, the definite pattern obeys the cross-linguistic condition on this rule. It takes place with all and only those direct objects which are definite.

(2) The definite paradigm is triggered in case the accusative object of the verb is definite, otherwise the indefinite paradigm is triggered

The next question to answer is: what counts as an indefinite or definite object? At this place I will not give an exhaustive answer to this question. The reason for this is that there is no unique criterion available to determine grammatical definiteness.

A classification of grammatical definiteness might be related to the (in)definite status of the entity denoted by the NP in the discourse. From this point of view two classes of objects may be distinguished. Firstly, objects which are indefinite or definite in the discourse, and consequently trigger indefinite or definite conjugation respectively. In these cases there is a perfect match between the (in)definite status of the entity denoted by the object and the conjugation it triggers. I will call NPs belonging to this group *properly (in)definite.* Secondly, the conjugational pattern triggered by an object cannot be related to the (in)definite status of the entity denoted by it. Such cases arise when it is impossible to determine whether a certain linguistic object denotes an (in)definite entity in the discourse, or when an NP connected to a definite entity in the discourse triggers indefinite conjugation and vice versa. Therefore, I will refer to the NPs in this class as *inherently (in)definite.* Consider first some examples of properly (in)definite NPs:

(3) *properly indefinite*
- NPs modified by the *indefinite* article *egy* 'a'
- *indefinite quantifiers: valaki* 'someone', *(egy) néhány* 'a few', and *semmi* 'nothing'
- *Wh-phrases: ki* 'who', and *mi* 'what'

properly definite
- NPs modified by the *definite* article *az* 'the'
- *quantifier: összes* 'all', *valamennyi* 'all of', *mindnyájuk* 'we', and *mindnyájatok* 'you all'
- *proper names: Mari* 'Mary', János *'John',* and so on
- *noun-possessed: az anyja* 'his mother', *az apja* 'his father', and so on
- *demonstrative pronouns: az ilyen* 'such', and *az a(z)* 'that'
- *reflexive pronoun: maga* 'himself'
- *reciprocae pronoun: egymás* 'each other'

Consider now some NPs which belong to the class of inherently (in)definite expressions:

(4) *inherently indefinite*
- *personal pronouns:* accusative 1sg, 2sg, 1pl, and 2pl
- *relative pronouns: aki* 'who', and *ami* 'which'
- *demonstrative pronouns: egy amolyant* 'one of that kind-ACC', *ugyanilyent* 'the same kind-ACC', and *egy ilyen* 'such'
- *quantifiers: mindent* 'everything-ACC'
- *demonstrative pronouns and universal quantifiers with partitive interpretation: azt* 'some of-ACC', *valamennyi* 'all' in the sense of 'some of'

inherently definite

- *personal pronouns:* accusative 3sg, and 3pl
- *relative and interrogative pronouns* ending in *-ik*:[6] *melyik* 'which', *valamelyik* 'someone', and *amelyik* 'whichever'
- *embedded clauses*

Compare the following pairs exemplifying the distribution of the indefinite and definite conjugation in Hungarian:

(5) a. Látok egy lányt
see-AGR1sg-indef a girl-ACC
'I see a girl.'

a'. Látom a lányt
see-AGR1sg-def the girl-ACC
'I see the girl.'

b. Látok valakit
see-AGR1sg-indef someone-ACC
'I see someone.'

b'. Látom Marit
see-AGR1sg-def Mary-ACC
'I see Mary.'

c. Kit látok?
who-ACC see-AGR1sg-indef
'Who am I seeing?'

c'. Melyiket látom?
which-ACC see-AGR1sg-def
'Which one do I see?'

d. Látsz engem?
see-AGR2sg-indef me
'Do you see me?'

d'. Látom őt
see-AGR1sg-def him
'I see him.'

e. Látlak téged
see-AGR1sg-indef you-ACC
'I see you.'

e'. Látom magamat
see-AGR1sg-def myself-ACC
'I see myself.'

Observe from the comparison between (5a) and (5a') that a properly indefinite and definite NP trigger the indefinite, and definite conjugation respectively. Moravcsik (1984) notes, however, that modification by a definite article is a *sufficient* condition for triggering the definite conjugation, whereas modification by the indefinite article is not always a sufficient condition for triggering the indefinite conjugation:

(6) a. Látom az egyiket
see-AGR1sg-def the one of-ACC
'I see one of them.'

b. Egy másikat is látom
an other of them-ACC also see-AGR1sg-def
'I see another of them also.'

The indefinite and definite conjugation is triggered also in the pair ((5b), (5b')) in which the properly indefinite quantifier *valaki* 'someone' and a properly definite name appear, respectively.

As noted above, however, in a number of cases there is no direct relation between definiteness in the discourse and the grammar. In the case of Wh-phrases there is even a *split* between *who*-phrases and *which*-phrases. Note from the comparison between (5c) and (5c') that accusative *who*-phrases trigger indefinite conjugation but accusative *which*-phrases trigger definite conjugation. According to Comrie (1975), the difference in the conjugation type between *who*-phrases and *which*-phrases in Hungarian is not controlled by definiteness in the strict sense, but by the related notion of

(6) Pronouns ending on *-ik* trigger the definite conjugation, except *másik* 'the other'. Compare:
(i) Kérek/*kérem másikat
ask-AGR1sg-indef/def other-ACC
'I want the other.'

restricted superset. In the case of *which*-phrases, the speaker presupposes that both speaker and hearer can identify the restricted set from which the choice is to be made, whereas with *who*-phrases this choice is completely free.

Pesetsky (1987) observes another split between *who*-phrases and *which*-phrases in English. *Which*-phrases in-situ fail to exhibit *superiority effects*, unlike *who*-phrases in-situ. Pesetsky relates this to the fact that *which*-phrases are *discourse-linked* whereas *who*-phrases are not. It would be worth exploring whether the split in the category of Wh-phrases in Hungarian is connected to discourse-linking.

In some cases the conjugational pattern triggered by the accusative object is the reverse of what we expect on the basis of relations in the discourse. The first and second person, i.e. the speaker and hearer in discourse, are referentially unique and hence count as *definite*. The third person, on the other hand, is assigned reference in discourse only. Therefore it counts as *indefinite*. Notice, however, that from a comparison between ((5d), (5e), and (5d')), it appears that exactly the opposite is the case concerning the conjugational-type. First and second person accusative objects trigger indefinite conjugation, whereas third person accusative objects trigger definite conjugation.

Summarizing, for our purposes it is sufficient to keep in mind that the conjugational pattern of the Hungarian verb is determined by the definiteness feature of the accusative object. By and large the descriptive statement in (2) captures the distribution of the indefinite and definite paradigm. Let us turn now to a discussion of the system of personal pronouns in Hungarian starting with the nominative and accusative personal pronouns.

4.2.2. *The Nominative/Accusative Personal Pronouns*

Consider the following paradigms:

(7) a. (Én) látom (őt) |*(őket)
I see-AGR1sg-def him/her|them
'I see him/her|them.'

b. (Te) látod (őt) |*(őket)
you-sg see-AGR2sg-def him/her|them
'You see him/her|them.'

c. (Ő) látja (őt) |*(őket)
he/she see-AGR3sg-def him/her|them
'He/she sees him/her|them.'

d. (Mi) látjuk (őt) |*(őket)
we see-AGR1pl-def him/her|them
'We see him/her|them.'

e. (Ti) látjátok (őt) |*(őket)
you-pl see-AGR2pl-def him/her|them
'You see him/her|them.'

f. (Ők) látják (őt) |*(őket)
they see-AGR3pl-def him/her|them
'They see him/her|them.'

(8) a. (Én) látlak (téged)/*(titeket)
I see-AGR1sg2sg/pl-indef you-sg/you-pl
'I see you.'

b. (Te) látsz (engem)/*(minket)
you-sg see-AGR2sg-indef me/us
'You see me/us.'

c. (Ő) lát-Ø (engem)/*(minket)|(téged)/*(titeket)
he/she see-AGR3sg-indef me/us |you-sg/you-pl
'He/she sees me/us/you.'

d. (Mi) látunk (téged)/*(titeket)
we see-AGR1pl-indef you-sg/you-pl
'We see you.'

e. (Ti) láttok (engem)/*(minket)
you-pl see-AGR2pl-indef me/us
'You see me/us.'
f. (Ők) látnak (engem)/*(minket)|(téged)/*(titeket)
they see-AGR3pl-indef me/us /you-sg/you-pl
'They see me/us/you.'

In (7) and (8), the full definite and indefinite paradigm of the transitive verb *lát* 'see' is listed. Overt pronouns marked nominatively and accusatively are used in Hungarian for reasons of emphasis only. In a neutral context, they are usually omitted. Mostly personal pronouns are recoverable from verbal inflection, which specifies person and number. Therefore, the behavior of these pronouns is subsumed by Chomsky's (1981) *Avoid Pronoun Principle*. Below I will return to an extensive discussion of the omissibility of overt nominative and accusative personal pronouns.

Let us first determine the *intrinsic* features of personal pronouns in Hungarian, that is the so-called ϕ-*features,* such as *number, gender*, etc. Observe from the glosses in (7) and (8) that personal pronouns are specified for *person* and *number,* similarly as their counterparts in English. Note, however, that personal pronouns in Hungarian are *not* specified for *gender.* The personal pronoun of the third person ő (cf. (7c), (8c)) may be translated in English with *he,* or *she.* This means they are neutral with respect to the feature gender. Further, recall that personal pronouns in Hungarian, in their accusative forms, are specified inherently for *definiteness* (cf. (4)). These pronouns of the first and second person are [+definite], and the personal pronouns of the third person are [+definite]. Hence, personal pronouns in Hungarian have the following ϕ-features:

(9) ϕ-*features of personal pronouns in Hungarian:* person, number, and definiteness

Let us turn to the personal pronouns corresponding to the cases (c)-(p) in 3.2.(5), i.e. the personal pronouns bearing lexical case.

4.2.3. *Personal Pronouns with Lexical Case*

Elsewhere (cf. Marácz 1984), I observed that the fully specified forms of the personal pronouns with lexical case differ from those of the nominative and accusative personal pronouns and other kinds of pronouns, like demonstrative pronouns, interrogative pronouns, etc. The latter group of pronouns have a constant lexical stem, i.e. the pronoun *itself,* which may be declined as an ordinary nominal such as *fiú* 'boy' in 3.2.(5). The stems of the personal pronouns with lexical case are, however, not constant lexical items but are often homophonous with the corresponding case-suffix:

(10) *Stems of personal pronouns with lexical case:*

DAT	*nek-*	SUPER	*rajt-*
INSTR	*vel-*	ADESS	*nál-*
ILL	*bele-*	ELAT	*belől-*
SUBL	*rá-*	DELAT	*ről-*
ALL	*hozz-*	ABL	*től-*

In order to receive a fully specified personal pronoun, person-number agreement must be added to the case-stems in (10). Compare, for example, the paradigms of the dative (cf. (11)) and sublative personal pronouns (cf. (12)):

(11) a. nekem
DAT-AGR1sg
'to me'
b. neked
DAT-AGR2sg
'to you (sg)'
c. neki
DAT-AGR3sg
'to him'
d. nekünk
DAT-AGR1pl
'to us'
e. nektek
DAT-AGR2pl
'to you (pl)'
f. nekik
DAT-AGR3pl
'to them'

(12) a. rám
SUBL-AGR1sg
'on me'
b. rád
SUBL-AGR2sg
'on you (sg)'
c. rá-Ø
SUBL-AGR3sg
'on him'
d. ránk
SUBL-AGR1pl
'on us'
e. rátok
SUBL-AGR2pl
'on you (pl)'
f. rájuk
SUBL-AGR3pl
'on them'

Obviously, case-stems are lexically specified for selecting AGR. Other lexical categories, such as nouns or the so-called dressed postpositions, also display this property (cf. chapter seven). AGR is "rich" enough to sanction the omission of an overt nominative pronoun in these constructions. An overt nominative personal pronoun is spelled out only when it expresses emphasis. Compare the paradigm of an inflected dative case-stem with the nominative pronouns:[7]

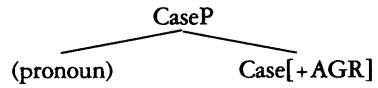
(13) a. (én) nekem
I-DAT-AGR1sg
'to ME'
b. (te) neked
you (sg)-DAT-AGR2sg
'to YOU (sg)'
c. (ő) neki
he-DAT-AGR3sg
'to HIM'
d. (mi) nekünk
we-DAT-AGR1pl
'to US'
e. (ti) nektek
you (pl)-DAT-AGR2pl
'to YOU (pl)'
f. (ők) nekik
they-DAT-AGR3pl
'to THEM'

Therefore, nominative personal pronouns in combination with inflected case-stems behave like nominative and accusative personal pronouns in combination with verbal agreement. In neutral contexts, they are omitted, and they are recoverable from person-number agreement. Therefore, I will assume that the nominative personal complements of a case-stem fall under the Avoid Pronoun Principle as well. (See the following section and chapter seven for a discussion of the syntactic role of AGR

(7) The nominative third person plural pronoun (cf. (13f) is homophonous with the nominative third person singular pronoun (cf. (13c)). Regularly, the nominative third person plural pronoun is *ők* 'they'. The omittance of *-k* in (13f) is due to a functional principle of redundancy, because AGR already marks plurality. This phenomenon appears also in inflected NPs and PPs (cf. section 7.3.1.).

in Hungarian). The projection of an inflected case-stem with a nominative personal pronoun may be represented in the following tree-diagram:

(14)



Anna Szabolcsi (personal communication) points out that the existence of the forms in (13) make possible an alternative analysis of personal pronouns with lexical case. Instead of taking the case-suffix as the stem of a personal pronoun with lexical case, it would be a *regular* case-ending attaching to the constant lexical stem provided by the personal pronoun marked nominatively. Note that under this proposal, personal pronouns with lexical case would have a morphological structure identical to other inflected lexical items such as nouns. There are, however, two arguments against this position.

First, if a nominative personal pronoun is the stem of the lexical case forms of personal pronouns instead of a case ending, it would be unclear why the suppletive forms *rajt-* and *belol-* of the superessive and the elative case appear with fully inflected forms and not the corresponding regular case endings *-n* and *-ből*. So, why do we not find (15b) and (16b) instead of (15a) and (16a)?:

(15) a. (én) rajtam
I SUPER-AGR1sg
'on me'
b. *énen
I-SUPER

(16) a. (én) belőlem
I ELAT-AGR1sg
'out of me'
b. *énből
I-ELAT

Second, Vago (1980: 97) formulates a phonological rule capturing the behavior of the *v-* of the instrumental case-suffix *-val/vel* and the translative suffix *-vá/vé*. The initial sound of these suffixes undergoes *total assimilation* with a preceding consonant of the stem to which these suffixes are added:

(17) *v-Assimilation*
C + v
1 2 3 → 1 2 1

Compare, the phonetic realization of the instrumental form of the noun *vén* 'old one':

(18) vén + *-vel* → vén*nel*

If the nominative personal pronoun *én* 'I' were the stem of the instrumental personal pronoun, the conditions of *v*-Assimilation would be met. We would expect, then, the initial *v-* to assimilate to the preceding *-n,* resulting in:

(19) én + -vel → *énnel

However, this form does not exist. The grammatical form *énvelem* (I INSTR-AGR1sg) 'with me' suggest that not the personal pronoun but the case-marker is the stem.

If we compare the case-markers in 3.2.(5) with the personal pronouns with a case-stem in (10), it appears that the *translative, essive, formalis,* and *terminative* are ab-

sent in the latter. Thus, we do not find the following personal pronouns, among others:

(20) a. *(én) kéntem
I TRANS-AGR1sg
'becoming me'

b. *(én) ülöm
I ESS-AGR1sg
'like me'

c. *(én) vém
I FORM-AGR1sg
'like me'

d. *(én) igem
I TERM-AGR1sg
'until me'

According to Komlósy (1985), the primary function of these cases is to mark *secondary predication.* They indicate that the arguments to which they are attached are referentially bound to another argument of the predicate. NPs with translative, formalis, or essive function as constants with an idiomatic sense (cf. section 5.3.6.2.). An intrinsic property of personal pronouns, however, is that they may have independent reference. Hence, this explains why these cases do not have pronominal forms. The terminative case is the only case-suffix which marks exclusively *non-selected,* adverbial NPs. The cases which serve as stems for personal pronouns, however, may function both as argumental and adverbial case. Obviously, this is a necessary condition for being a member of the group in (10). This accounts, then, for the fact that the personal pronouns of the terminative case do not exist.

Paradigms (7) and (8) in the preceding section demonstrate that the personal pronouns of the nominative and accusative may be omitted. The question arises whether this occurs with the personal pronouns with lexical case as well. Consider the following examples with argumental lexical pronouns:

(21) a. Beszélek *(neki)/*(nekik)
speak-AGR1sg he-DAT/they-DAT
'I am speaking to him/them.'

b. Várok *(rá)/*(rájuk)
wait-AGR1sg he-SUBL/they-SUBL
'I am waiting for him/them.'

c. Találkoztam *(vele)/*(velük)
met-AGR1sg he-INSTR/they-INSTR
'I met him/them.'

The verbs *beszél* 'speak to', *vár* 'wait for', and *találkoz* 'meet' may select an inherent dative, sublative, and instrumental case, respectively. Observe that the pronominal forms of the lexical cases may *not* be dropped. This contrasts, as we have noticed above, with the behavior of nominative and accusative personal pronouns.

The personal pronouns in the sentences (21a) and (21b) may sometimes be omitted. However, in those cases the meaning is not preserved. So, if the personal pronouns are dropped these sentences mean *I am speaking* and *I am waiting.* The reason that verbs such as *speak* or *wait* may have two grammatical variants is related to the fact that these verbs may be specified in the lexicon both as transitive and intransitive. Therefore, in case the pronominal forms of lexical cases are missing, they are truly missing. Let us turn now to a discussion of the conditions on the omission of personal pronouns in Hungarian.

4.2.4. *Pro-drop in Hungarian*

In this section, I will discuss the restrictions on omission of personal pronouns, that is *pro-drop,* in Hungarian. The question arises whether the syntactic position of a

dropped pronoun remains empty or is filled by a *null* pronominal. Chomsky (1982) identifies the missing pronominal in such cases as the empty category small *pro*. According to Chomsky, *pro* has the following properties:

(22) a. It is recoverable from AGR
b. It is a non-anaphoric pronominal with independent (deictic) reference, and
c. It is free in its governing category

The presence of null pronominals is guaranteed in case of *pro*-drop by the Projection Principle in combination with the θ-criterion. These principles are supported empirically if evidence can be provided for the claim that the non-overt counterpart of a full pronoun is present in the syntactic representation. First, I will attempt to demonstrate that in case personal pronouns are dropped in Hungarian, *pro* is actually present (cf. section 4.2.4.1.). After we have settled this, I will formulate the conditions on the distribution of *pro* in Hungarian (cf. section 4.2.4.2.).

4.2.4.1. *Is There pro in Hungarian?*

Above we noted that nominative and accusative pronouns are usually omitted in a neutral context (cf. the paradigms (7) and (8)). Consider again clause (7a), here repeated as (23):

(23) (Én) látom (őt)
I see-AGR1sg-def him/her
'I see him/her.'

First of all, observe that omission of the overt pronoun does not affect the interpretation of the clause. This implies that a non-overt item with independent deictic reference must be present in the syntactic position of the overt pronoun.

Of course, one could argue that verbal agreement takes over this function of personal pronouns when they are omitted. Hence, I will present more sophisticated evidence for the presence of a null pronoun in the case of *pro*-drop. This evidence comes from: (*I*) the *parallel* distribution of overt and null pronominals (with syntactic principles such as the Binding Principles), and (*II*) the *different* distribution between overt and null pronominals in various syntactic phenomena. Let us first turn to a discussion of the cases in (*I*).

(*I*) Recall that binding theory specifies the relation of referential expressions to possible antecedents. The conditions on which I will rely in the argumentation below are the *Binding Principles B* and *C* (cf. Chomsky 1981: 188). These conditions specify the environment in which a pronominal and a name may be bound:

(24) a. *Binding Principle B*
A pronominal (a category that may be referentially independent or may depend upon an antecedent for its reference, and thus includes the classes of pronouns) is free in its governing category
b. *Binding Principle C*
An R-expression (a category that is referentially independent, and it includes all other NP-types, for example names and Wh-traces) is free

A parallel distribution between an overt pronoun and *pro* shows up with structural conditions on *coreferentiality* between (*i*) a *pronoun* and another *pronoun* or *name,* and (*ii*) between a *pronoun* and a *Wh-trace.* Let us first consider (*i*).

(*i*) Compare the following sentences:

(25) a. *(Ő) látta (őt)
he saw-AGR3sg him
*'*He/she* saw *him/her.*'

b. *(Ő) látta *Marit*
she saw-AGR3sg Mary-ACC
*'*She* saw *Mary.*'

c. **Mari* látta (őt)
Mary saw-AGR3sg her
*'*Mary* saw *her.*'

d. (Ő) látta az (ő) anyját
she saw-AGR3sg the she mother-npAGR3sg -ACC
'She saw her mother.'

e. Az (ő) anyja látta (őt)
the she mother-npAGR3sg saw-AGR3sg her
'Her mother saw *her.*'

The ungrammaticality of a coreferential reading in the clauses (25) is accounted for by either Binding Principle B or C. *Disjoint reference* in the English equivalents of the clauses (25a)-(25c) is covered by Binding Principle B (cf. (25a), and (25c)) and Binding Principle C (cf. (25b)). In (25a) and (25c), the object pronoun is bound in its governing category, that is the sentence, and in (25b) the name in object position is not free, because it is bound.

The Hungarian counterparts exemplifying disjoint reference may be ruled out with the help of the Binding Principles in a *similar* fashion. Observe now that with respect to the coreferential interpretations in (25a)-(25c) there is no substantial difference between an overt and non-overt pronoun. This suggests that if overt pronouns are dropped in Hungarian null pronouns are present at their positions in syntax.

The pairs in (25d)-(25e) illustrate a similar point. Both the subject and object pronominals and the pronominals embedded in the possessive NPs in (25d) and (25e) are *free* in their governing categories. The clause counts as the governing category for the subject and object pronominals, and the possessive NP counts as the governing category for the embedded pronominals (cf. section 7.4.2.3. for this claim). So, a grammatical reading under coreferentiality of the personal pronouns is allowed by Binding Principle B both in (25d) and (25e). The grammaticality of these sentences remains *unaffected* in case one of the overt pronouns or both overt pronouns are omitted.

(*ii*) Horvath (1987: 140) presents an argument for the presence of pro and Wh-*trace* in the syntactic representation based on Binding Principle C. Horvath discusses the following pair:

(26) a. **Kitől* gondoltad hogy (ő) gyanította hogy Mari
who-DELAT think-AGR2sg that s(he) suspected-AGR3sg that Mary
ellopott egy könyvet t?
stole-AGR3sg a book-ACC
*'From *who* did you think that *s(he)* suspected that Mary had stolen a book t?'

b. *Ki* mondta hogy (ő) gyanította hogy Mari ellopott
who said-AGR3sg that s(he) suspected that Mary stole-AGR3sg
tőle egy könyvet?
he-DELAT a book-ACC
'Who said that *s(he)* suspected that Mary had stolen a book from *her/him?*'

Horvath argues that (26a), unlike (26b), is a case of *Strong Crossover* (SCO), that is, a Binding Principle C violation with Wh-traces. According to Horvath, the trace of

Wh-movement in the deepest embedded clause of (26a) may not be coindexed with a pronoun in the intermediate clause. This follows from the requirement that Wh-traces fall under Binding Principle C, and thus have to be free. The grammaticality of (26a) and (26b) does not change in case the pronouns in the intermediate clauses are dropped. Horvath concludes, then, that SCO yields an argument for both Wh-trace and small *pro* in Hungarian (cf. the sections 5.2.3. and 5.4. for SCO effects).

(*II*) The null-hypothesis is that non-overt pronouns have the same set of ϕ-features as overt pronouns. However, I will demonstrate that overt pronouns in Hungarian clearly have *different* grammatical features than non-overt pronouns. If correct, then, this would provide an argument for their independent existence in the grammar. I will illustrate this by investigating the following phenomena. including (*i*) the *weather verb construction,* (*ii*) coreference with *third person pronouns,* and (*iii*) the *impersonal passive construction.*

(*i*) Consider an instance of a *weather verb construction* in English:

(27) *It* rains

The Extended Projection Principle (cf. 3.3.(7)) is responsible for the appearance of expletive *it* in this type of construction (cf. Chomsky 1981: 27). With Chomsky (1981: 325), I will assume that weather verbs assign a quasi-ϕ-role to their subject NP. In Hungarian, overt expletives such as the demonstrative pronoun *az* 'that' may not appear in weather verb constructions.[8] Compare:

(28) a. (**Az*) esik
that rains
'It rains.'

b. (**Az*) zuhog
that pours
'It is pouring with rain.'

c. (**Az*) locsog
that plashes
'It is plashing with rain.'

d. (**Az*) villámlik
that lightens
'It is lightning.'

e. (**Az*) dörög
that thunders
'It is thundering.'

The question arises now whether there is a non-overt expletive pronoun present in the syntactic representation of these phrases. The noun undergoing the action in weather verb constructions may be spelled out in Hungarian (cf. Molnár 1967):

(29) a. Esik az *eső*
rains the rain
'It rains.'

b. Zuhog az *eső*
pours the rain
'It is pouring with rain.'

c. Locsog az *eső*
plashes the rain
'It is plashing with rain.'

d. Villámlik az *ég*
lightens the sky
'It is lightning.'

e. Dörög az *ég*
thunders the sky
'It is thundering.'

(8) This pronoun may function as an expletive anticipatory pronoun holding the syntactic position of embedded clauses (cf. section 4.5.).

Observe from (28) and (29) that weather verb constructions consisting of the predicate only and weather verb constructions with a subject NP have the same meaning. In the phrases of (29), the subject NP bears the quasi-θ-role which is assigned by the weather verb. The null-hypothesis is, therefore, to postulate a null expletive pronoun in the subject position of (28) which absorbs this θ-role. The weather verb constructions with an overt expletive is ruled out by the fact that the demonstrative pronoun *az* 'that' must be assigned a referential θ-role. Note, then, that there is a distributional difference between expletive small *pro* and its overt counterpart *az*. The latter may not appear in the subject position of weather verb constructions.

Empirical evidence for this hypothesis is provided by investigating Binding Principle C effects with these constructions. Consider the following sentences:

(30) a. Esik (*az eső*) csak úgy zuhog (**az eső*)
rains the rain just as pours the rain
'It is pouring with rain.'
b. Esik (*az eső*) csak úgy locsog (**az eső*)
rains the rain just as plashes the rain
'It is plashing with rain.'

In these expressions, the subject of the matrix clause is intended to be coreferential with the subject of the embedded clause. The predicate of both the matrix clause and the embedded clause is a weather verb which may appear independently with an overt NP (cf. (28b)-(28c) and (29b)-(29c)). Note that under the coindexing in (30) the overt NP *az eső* in the embedded clause may not be spelled out.

This fact may be accounted for along the following lines. The NP *az eső* is an R-expression. Hence, its distribution when it is coreferent with another NP is determined by Binding Principle C. If the subjects of both the matrix clause and the embedded clause are overt NPs, *az eső* in the embedded clause may not be spelled out. This is due to the fact that it is bound by the subject NP of the matrix clause. This yields then a Binding Principle C violation. Nor may *az eső* be spelled out in the subject position of the embedded clause when the subject NP of the matrix clause is omitted. In order to account for the ungrammaticality of a coreferential reading in this case, I will hypothesize that an expletive *pro* is present when there is no overt subject present. Under this assumption these sentences display a configuration which is ruled out by Binding Principle C as well.

This parallel distribution between overt NPs and their non-overt counterparts with Binding Principle C resembles the parallel distribution of overt and null pronominals with principles of the binding theory discussed under (*I*) above. The assumption of an expletive *pro* in Hungarian weather verb constructions also explains why a coreferential reading in (30) is possible when *az eső* in the embedded clause is dropped. If its position is occupied by small *pro* no binding theory violation appears. Small *pro,* being a pronoun, is subsumed under Binding Principle B. Embedded *pro* in (30) is free in its governing category, the embedded clause. This provides support for the assumption that null expletive *pro* is present in weather verb construction.

(*ii*) *Coreference of third person pronouns* also indicates that overt pronouns and their non-overt counterparts do not have the same distribution. Kenesei (1985: fn.6). ob-

serves that the nominative third person personal pronouns *ő* 'he/she'and the accusative third person pronoun *őt* 'him/her', can only have [+human] referents. The demonstrative pronoun *az* 'that' refers to [-human] referents. The dropped versions of the nominative and accusative third person personal pronouns, however, may refer both to [+human] and [-human] referents. Compare:

(31) a. Mari látta a könyvet, de nem olvasta (*azt*)/(**őt*)
Mary saw-AGR3sg the book-ACC but not read-AGR3sg that-ACC/him
'Mary saw the book, but she didn't read it.'
b. Mari látta a könyvet, de nem írt *(?**arról*)/*(*róla*)
Mary saw-AGR3sg the book-ACC but not wrote-AGR3sg that-DELAT/it-DELAT
'Mary saw the book but she didn't write about it.'
(Kenesei 1985: 163)

This shows that the coreference with nominative and accusative third person *pro* has a wider range of antecedents than its overt nominative and accusative counterparts.

(*iii*) The *impersonal passive construction* in English is formed by means of the rule of there-insertion. Consider:

(32) *There* is ringing

Hungarian employs a different strategy. The impersonal passive construction is rendered by a *third person plural missing subject construction.* The subject personal pronoun must be dropped. Otherwise the sentence would receive an active interpretation with the pronoun functioning as a referential expression. Compare:

(33) a. Ők csengetnek
they ring-AGR3pl-indef
'They are ringing.'
b. Csengetnek
'There is ringing.'

In accordance with the Extended Projection Principle (cf. 3.3.(7)), I will assume that small *pro* is present in the subject position of (33b) which absorbs the agent role of the verb *csenget* 'to ring'. Clause (33b) may be translated, in fact, more correctly as *someone is ringing.* So, the difference between (33a) and (33b) does not lie in an active-passive dichotomy but rather in that the overt pronoun is *specified,* whereas small *pro* is *unspecified.* The latter yields the impersonal passive construction in Hungarian. This implies that a subjective third person plural *pro* need not have an overt counterpart.

Recapitulating, I have presented two types of arguments in favor of *pro* in the syntax of Hungarian. (*I*) The parallel distribution of overt and their non-overt counterparts with Binding Principles B and C. A non-overt pronoun must be assumed in the position of omitted ones in order to account for the identity of coreference possibilities. (*II*) Overt pronouns and their non-overt counterparts may have a different distribution. Null expletive *pro* may function as the subject in weather verb constructions. Nominative and accusative third person pronouns may only refer to [+human] antecedents, whereas their non-overt counterparts may also corefer with [-human] antecedents. Small *pro* but not an overt third person plural pronoun may be the subject of an impersonal passive construction. This division of functions bet-

ween overt and non-overt personal pronouns provides an argument for the independent status of *pro* in the grammar. Having provided evidence for the presence of this category in the syntax of Hungarian, let us determine its *distribution.*

4.2.4.2. *The Distribution of pro in Hungarian*

The conditions under which personal pronouns can be dropped have been captured in the *Pro-drop Parameter* (cf. Chomsky 1981; among others). Informally, this parameter states that personal pronouns may be omitted in a language if that language possesses "rich" person-number inflection. Theories about the licensing of *pro* rely on the concept of *local recovery*. This involves two subparts, namely the conditions specifying its *structural* sanctioning and conditions specifying its ϕ-*features.* Rizzi (1986), which I will follow here, proposes a theory of licensing conditions of *pro.* The structural sanctioning of *pro* is linked to the presence of a Case-assigning head. This head may belong to a language-specific set, like I[+AGR] in Romance. The feature specification of *pro* is licit only when it is recovered through a binding relation with a head bearing AGR-features. Rizzi further argues that a successful recovery of the person and number features is a necessary condition for functioning as a referential NP.

The phenomenon of *pro*-drop in Hungarian is *more* extensive than in Romance. As we have observed above not only nominative pronouns but also accusative pronouns may be dropped. The phenomenon is further conditioned by the distribution of the *conjugation-type* of the verb. Recall that first and second person accusative pronouns trigger indefinite conjugation, whereas third person accusative pronouns trigger definite conjugation.

Observe from the paradigms in (7) and (8) that nominative personal pronouns may be dropped in all persons and numbers both in the indefinite and definite conjugation. Accusative personal pronouns, on the other hand, may only be dropped in the singular. (This is also the case with the verbal suffix *-lak,* which signals that the nominative subject is first person singular and the accusative object is second person singular or plural (cf. (8a)). Recall that pronominal forms of the lexical cases may not be dropped. Summarizing, *pro*-drop in Hungarian has the following distribution:

(34) *The Distribution of pro in Hungarian*
   a. *Nominative* personal pronouns may be dropped in all persons and numbers
   b. *Accusative* personal pronouns may be dropped only in case they are singular. First and second person pronouns may be dropped with the indefinite conjugation. Third person pronouns may be dropped only with the definite conjugation
   c. Personal pronouns with lexical case may not be dropped

Let us determine how the distribution of *pro* in Hungarian is related to Rizzi's (1986) theory of *pro*-drop.

The question is how *pro* is licensed in Hungarian. *Structurally,* nominative and accusative *pro* may be licensed by I[+AGR] and V respectively, which are both Case-assigning heads (cf. 3.2.(7)). If we assume that the licensing of *pro* is related to structural Case, it is obvious why pronouns with lexical case (cf. (21)) may not be

dropped. Recall that lexical case is thematically governed (cf. section 3.2.1.). This yields the following generalization on *pro*-drop in terms of *Case theory:*

(35) Pronouns in Hungarian may only be dropped if they are assigned structural Case

The licensing of the content of *pro* is connected to the AGR-features on the verbal head.[9] An apparent problem for this hypothesis is the absence of overt AGR in the case of the indefinite conjugation third person singular (cf. (8c)). Note, however, that in this case as well I has *discrete* grammatical features. The gap in the indefinite paradigm is unambiguously marked by absence of all other phonetically represented members of the relevant paradigm. Therefore, the zero-realization in (8c) has exactly the same status as any other realization of AGR.

As may be clear from (34), asymmetries show up between the nominative subject and the accusative object with respect to the licensing of *pro.* The AGR-features of both the definite and the indefinite pattern are "rich" enough to recover the features of non-overt nominative pronouns but obviously cannot license all persons and numbers in the accusative paradigm. If no additional constraints were operative we would end up with *ambiguities* in cases as (7) and (8). However, the outranking of plural by singular in both conjugational patterns, and the prominence of first person singular over the second person singular and plural in the case of the verbal suffix *-lak* suggest that there is an association between the phenomenon of *pro*-drop and *discourse.*

The discourse helps to reduce ambiguities. The restrictions in discourse which condition the "filling in" of the content of *pro* have the form of *individuation hierarchies* (cf. Timberlake 1975). According to Timberlake, individuation is the degree to which the participants are characterized as a distinct entity or individual in discourse. Timberlake proposes the following individuation hierarchies (cf. also Silverstein 1985):

(36) *Individuation hierarchies*
a. 1 > 2 > 3 b. sg > pl

So, first person is higher on the scale than second or third, in the sense that its referent is more highly individuated than second and third person. First and second person are more highly individuated (the speaker and hearer are uniquely referential in the clause) than third person which is assigned reference only in discourse. Singular has a higher degree of individuation than plural.

Therefore, we formulate the following rule which applies at the interface between syntax and discourse:

(37) If structural and morphological conditions do not sanction *pro* unambiguously, then apply *pro*-drop in agreement with the hierarchies in (36)

For example, verbal morphology and structural configuration cannot disambiguate accusative *pro*-drop. The feature *number* of accusative personal pronouns is not

(9) Besides the licensing of *pro* by AGR, Huang (1984) observes that in languages such as Chinese, Japanese, or Korean *pro* may be licensed by an antecedent in discourse. Huang argues that this type of *pro*-drop is a subcase of a more general property of those languages, namely the property of being discourse-oriented.

recoverable. Hence, in accordance with (37) only object singular pronouns may be omitted. I will leave the elaboration of the precise relation between *pro*-drop and discourse strategies as a topic for further research.

Whatever the exact principles are which determine *pro*-drop in Hungarian, the rather specific, not to say bizarre, distribution of *pro* in Hungarian (cf. (33a) and (33b)) provides an excellent diagnostic for "knowing" when there is a small *pro* present in the syntactic representation.

4.2.5. *Summary*

The system of personal pronouns in Hungarian provides two pieces of evidence in favor of the Projection Principle. Firstly, I noted that the nominative and accusative personal pronouns may be dropped. The presence of a pronominal empty category in such cases is provided by the Projection Principle together with the θ-criterion. Evidence from the distribution of overt and omitted pronouns has shown that this is indeed the case and that this pronominal empty category is Chomsky's (1982) small *pro*. Further, I have specified in (34) the distribution of *pro*. The conditions under which pronouns in Hungarian may be omitted depend on structural configurations, verbal AGR-features, and individuation hierarchies in discourse. Secondly, I observed that the stem of personal pronouns with lexical case is often homophonous with the corresponding case-suffix. It follows from this property and the requirement that pronouns with lexical case may not be dropped (cf. (34c)) that an argumental pronominal with lexical case is always visible at surface structure. This is in agreement with the Projection Principle. The Φ-features of the personal pronoun with a case-stem are specified by adding AGR to the case-stem.

4.3. Left Dislocation in Hungarian

Consider the following clauses:

(1) a. *Mari, ő/az* szereti Imrét
Mary she/that loves Imre-ACC
'Mary, she loves Imre.'

b. *Marit, őt/azt* szereti Imre
ACC she-ACC/that-ACC loves Imre
'Mary, Imre loves her.'

c. *Marinak, neki/annak* nem adtam semmit
Mary-DAT she-DAT/that-DAT not gave nothing-ACC
'Mary, I did not give her anything.'

d. *Marival, vele/azzal* találkoztam tegnap
Mary-INSTR she-INSTR/that-INSTR met yesterday
'Mary, I met her yesterday.'

e. *Marira, rá/arra* sokat gondoltam
Mary-SUBL she-SUBL/that-SUBL a lot thought
'Mary, I have thought a lot of her.'

f. *Maritól, tőle/attól* kaptam egy könyvet
Mary-ABL she-ABL/that-ABL got a book-ACC
'Mary, I got a book from her.'

The above clauses are instances of *Left Dislocation* in Hungarian. The left-dislocated NP is pronounced with a rising intonation and is separated from a clause by a pause indicated by a comma in (1).

The pronoun has the following properties. (*i*) It bears stress. (*ii*) The pronoun coreferential with the left-dislocated NP may appear either as a personal or as a demonstrative pronoun. This personal pronoun/demonstrative-switch is subject to dialectal variation. Anna Szabolcsi (personal communication) informs me that in her dialect only the demonstrative pronoun is used. (*iii*) The pronoun must be right-adjacent to the left-dislocated NP, that is, in clause-initial position. (*iv*) It may not be omitted even when it is associated with AGR and satisfies the diagnostics of *pro*-drop (cf. (34)).[10] (*v*) It bears the lexical case assigned by the verb. Note that the verbs *ad* 'give', *találkoz* 'meet', *gondol* 'think', and *kap* 'get' subcategorize for a lexical *dative, instrumental, sublative,* and *ablative* in (1c)-(1f) respectively.

At this place, I will not present an exhaustive analysis of this phenomenon (cf. De Groot 1981b for discussion) but I will rather concentrate on the question why a pronoun is present in the clause.

In the literature on Left Dislocation (cf. Van Riemsdijk and Zwarts 1974; Koster 1987; among others), it has been argued that clauses such as:

(2) *That book*, I won't read *it*

are not derived by an application of move-α. Instead the left-dislocated NP *that book* is *base-generated* outside the clause in a non-A-position which is adjoined to the sentence. The left-dislocated NP depends for its Case- and θ-features on the pronoun with which it is coreferential, in (2) *it.*

Left Dislocation in German indicates that this rule may not only transfer θ-but also Case-features, as has been pointed out in Koster (1987: 65). Consider:

(3) *Den Hans*, ich habe *ihn* gestern gesehen
the John-ACC I have him yesterday seen
'John, I saw him yesterday.'
(Van Riemsdijk 1978: 175)

Folllowing Koster (1987: 65), I will assume that Left Dislocation is non-transformationally derived and has the properties discussed in connection with the clauses (2) and (3). Having settled this, let us return to the Hungarian cases in (1) and provide an answer to the question put forth above.

We observed that the anaphoric pronoun in the sentence satisfies the Case- and θ-requirements of the verb which are transferred to the connected NP in left dislocation position. The presence of the pronoun in the local domain of the verb, i.e. the clause, can only be guaranteed if the Projection Principle is operative which maps lexical requirements onto the overt syntactic representation.

(10) Anna Szabolcsi (personal communication) reports that Counterfocus is an instance of Left Dislocation with *pro* instead of an overt pronoun (cf. Szabolcsi 1981b; 1981c, and Kenesei 1984c for the phonetics and semantics of this construction):

(i) Marit, *pro* SZEreti Imre
Mary-ACC her loves Imre

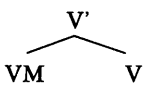
4.4. Complex Verb Constructions in Hungarian

In this section, I discuss the syntactic behavior of lexical items in Hungarian which may function either as *personal pronouns* or as *Verbal Modifiers (VM)*. In the former case they have an argumental interpretation, whereas in the latter case they have a non-argumental one. This difference is due to an interaction of lexical properties and the Projection Principle. Before determining how the Projection Principle operates in these cases, let us first discuss *complex verb constructions* in Hungarian.

4.4.1. *The Structure of Complex Verb Constructions*

I noted briefly in chapter two that Hungarian possesses a productive strategy to form *complex verbs*. According to Ackerman and Komlósy (1983), these verbs consist of a VM and a V, and may be represented categorially as V':

(1)



Verbal prefixes may also function as VMs. Ackerman and Komlósy argue that verbal prefixes have no independent θ-role and therefore they treat them as affixes in the sense of Lieber (1980). Such affixes may subcategorize for other morphemes. The lexical entries of affixes indicate both the category of items to which they attach and the category of items produced. The verbal prefix *meg* 'perfectivity marker' has the following subcategorization frame:

(2) *meg:* [V' - [V]]

Context-free rewrite rules and feature percolation conventions guarantee that a complex verb is formed and that it receives a new category label.

Ackerman and Komlósy present the following evidence for this V'-constituency. Firstly, the *word order* of the [VM-V] combination is restricted. In their neutral order, VMs must appear immediately in preverbal position (cf. (3a)). The neutral order is characterized by a level-prosody intonation in the sense of Kálmán et al. (1986). On the other hand, the verbal prefix must be postposed in non-neutral orders, like in (3b) in which the accusative NP *házat* is focussed.[11] Compare:

(3) a. Mari meg vette a házat
Mary perf bought-AGR3sg the house-ACC
'Mari has bought the house.'
b. Mari a házat vette meg
'It was the house that Mary has bought.'

Secondly, the VM and the V may not be separated by sentence adverbs (cf. also Horvath 1981). Therefore, strings with these adverbs (ADV) and [VM-V] combinations pattern in the following manner:

(4) a. ... ADV VM V ... b. ... VM V ADV ... c. *... VM ADV V ...

(11) See for derivation of the inverse-order of the [VM-V] section 2.2.

Consider an example with the sentence adverb *remélhetőleg* 'hopefully'.[12]

(5) a. A fiú *remélhetőleg* be fejezte a feladatot
the boy hopefully perf-finished the assignment-ACC
'Hopefully, the boy has finished the assignment.'
b. A fiú befejezte *remélhetőleg* feladotot
c. *A fiú be *remélhetőleg* fejezte a feladatot

Thirdly, [VM-V] combinations may interact with the *morpholexical* component of the grammar. They may be input to derivational processes which create verbs and nominals from a [VM-V] sequence. Consider for example the following derivations:

(6) a. *győz* 'win'
b. *meggyőz* 'convince'
c. **győződik*
d. *meggyőződik* 'be convinced of'

The verb *győz* in (6a) may be prefixed with the VM *meg* 'perfectivity marker' deriving the verb *meggyőz* (cf. (6b)). As may be observed from the ungrammaticality of (6c), *győz* cannot be suffixed with the verbal derivational suffix *-ődik,* a passivizer with the properties in 3.3.(10)). This suffix relates for example the verbs *nyel* 'swallow', and *nyelődik* 'is swallowed'. The derived lexical item *meggyőződik* in (6d), however, contains both the prefix *meg* and the suffix *-ődik.*

The question is now how it is derived? The input to this verbal item cannot be (6c) because *győz* to which *-ődik* is attached is a lexical gap. Another possibility is that (6d) is formed by attaching *-ődik* to the verb *meggyőz* in (6b). If this derivation takes place in the lexicon, then the prefix *meg* must be attached to the verb *győz* already in the lexicon.

Fourthly, [VM-V] combinations may have *different* substructures in their Predicate Argument Structure (PAS) than the basic verb which participates in the complex verb construction. The reason for this difference is that the attachment of VMs may affect the substructures in the lexical entry of a basic verb. The fact that the PAS of complex verb constructions is already determined in the morphological component of the lexicon demonstrates that they are already merged into a V' in this component of the grammar. For example, the verb *tol* 'push' is a tryadic verb subcategorizing for a NOM-ACC-ILL case frame (cf. (7a)). However, when combined with the verbal prefix *meg* 'perfectivity marker' it turns into a dyadic verb with a NOM-ACC case frame (cf. (7b)). Compare:

(7) a. János a sarokba tolta a szekrényt
John the corner-ILL pushed the cupboard-ACC
'John pushed the cupboard in the corner.'
b. János *meg* tolta a szekrényt
John perf-pushed the cupboard-ACC
'John has pushed the cupboard.'
c. *János *meg* tolta a szekrényt a sarokba

(12) The fact that sentence adverbs may be interposed between the verb and its accusative object will be discussed in section 5.2.1.1. and 5.4.

4.4.2. *Complex Verb Constructions and the Projection Principle*

This section discusses complex verb constructions consisting of a *verbal prefix* and a verb. I will focus on the following four prefixes:

(8) a. *neki* '(in)to
b. *bele* 'into'
c. *rá* 'on'
d. *hozzá* 'to'

The reason we isolated these prefixes is that they are *homophonous* with the dative, illative, sublative, and allative personal pronouns of the third person singular. Compare:

(9) a. *neki*
DAT-AGR3sg
'to him/her'
b. *bele*
ILL-AGR3sg
'into him/her'
c. *rá*
SUBL-AGR3sg
'on(to) him/her'
d. *hozzá*
ALL-AGR3sg
'to him/her'

The *double-faced* nature of these items offers an excellent opportunity for providing insight into the application of the Projection Principle in Hungarian.

The verbal prefixes in (8) may select a verb of the semantic class of *linear motion.* Compare, for example, the lexical entry of the Hungarian verb *fut* 'run' which contains the following substructures, among others:

(10) LCS for Hungarian 'run': {x moves along a path rapidly}
θ-grid for Hungarian 'run': (agent)

Because the variable *x* undergoes a change of location it could also be defined as the theme of the action denoted by the verb (cf. Hale and Laughren 1983). However, whatever the exact θ-role is of the argument selected by the verb, it always appears in the nominative case:

(11) Mari futott
Mary ran-AGR3sg
'Mary has run'

Attaching the prefixes in (8) to the verb *fut* 'run' has the following consequences for the substructures of its lexical entry. In the LCS an entity is added corresponding to the place into/to/at/on which the agent is going. This entity is associated with the *goal.* From this it follows that these VMs introduce an *extra* argument. Therefore, these prefixes function as argument taking predicates (ATP). The argument added is assigned dative, illative, sublative, or ablative depending on whether *neki, bele, rá,* or *hozzá* is prefixed respectively to the verbal stem *fut* 'run'. Further, LCS indicates how the goal is affected by the agent. Compare some of the substructures of the lexical entry of the complex verbs formed by the verb *fut* and these prefixes:

(12) a. *nekifut:*
LCS for *nekifut:* {*x* moves along a path rapidly toward y such that it comes into contact with *y*}
θ-grid for *nekifut:* (agent, goal)
case frame for *nekifut:* NOM run into DAT

b. *belefut:*
LCS for *belefut:* {*x* moves along a path rapidly toward y such that it comes to be internal to *y*}
θ-grid for *belefut:* (agent, goal)
case frame for *belefut:* NOM run into ILL

c. *ráfut:*
LCS for *ráfut:* {*x* moves along a path rapidly toward y such that it gets on the surface of *y*}
θ-grid for *ráfut:* (agent, goal)
case frame for *ráfut:* NOM run on SUBL

d. *hozzáfut:*
LCS for *hozzáfut:* {*x* moves along a path rapidly toward y such that it comes into facinity to *y*}
θ-grid for *hozzáfut:* (agent, goal)
case frame for *hozzáfut:* NOM run to SUBL

Observe the following sentences with the verb *ráfut* (cf. (12c)). This choice does not affect the course of the argumentation below. In fact, examples with any of these verbs could have been chosen. Compare:

(13) a. *Rá* [ATP] futott a hegyre [ARG]
onto ran-AGR3sg the mountain-SUBL
'He ran onto the mountain.'

b. **Rá* [ATP] futott
onto ran-AGR3sg

c. **Rá* [ARG] futott a hegyre [ARG]
it-SUBL ran-AGR3sg the mountain-SUBL

d. **Rám* [ARG] futott a hegyre [ARG]
I-SUBL ran-AGR3sg the mountain-SUBL

e. *Rá* [ARG] futott
it-SUBL ran-AGR3sg
'He ran onto it.'

f. *A hegyre* [ARG] futott
the mountain-SUBL ran-AGR3sg
'He ran onto the mountain.'

g. *Rám* [ARG] futott
I-SUBL ran-AGR3sg
'He ran onto me.'

As already noted, the prefixes in (8) are homophonous with the dative, illative, sublative, and allative personal pronouns of the third person singular. Further, we noticed that these prefixes may function as ATPs, whereas they may be *argumental* (ARG) as personal pronouns.

In (13a), *rá* 'onto' functions as a prefix and the NP a *hegy* 'the mountain' is associated with the sublative argument in the case frame of *ráfut.* The ungrammaticality of (13b) shows that the sublative argument may not be omitted. The sentences in (13c) and (13d) exemplify that *rá* 'it-SUBL' and *rám* 'I-SUBL' respectively may not receive an argumental interpretation when another sublative argument, i.e. a *hegyre* 'the mountain-SUBL', is present in the sentence. The reason for the ungrammaticality in (13c) and (13d) is not caused by the absence of a verbal prefix, for the sentences in (13e)-(13g) demonstrate that the verb *fut* 'run' may always surface with an optional sublative NP which receives an argumental interpretation.

From this paradigm, we may draw the following conclusions. The comparison of (13a) with (13b) demonstrates that the mapping of LS onto phrase structure is *obligatory.* Argumental NPs, selected, may not be omitted. Further, the sentences (13a) versus (13c) or (13d) show that the relation between LS and phrase structure is also

restricted by a biuniqueness condition. In case *rá* or one of its inflected alternants and a full referential NP are present, the sentence receives only a grammatical reading if it is possible to interpret *rá* as a verbal prefix, such as in (13a). In (13d), this is impossible because *rá* is inflected for the first person singular. Therefore, (13d) has no grammatical counterpart.

4.5. Embedded Clause Formation in Hungarian

In this section, I will discuss the formation of embedded *clauses* in Hungarian. I will conclude that their shape supports the hypothesis that the Projection Principle is operative in Hungarian. Before discussing some *linear* restrictions on the formation of embedded clauses, let us first turn to a discussion of their *structure.*[13]

4.5.1. *The Structure of Embedded Clauses*

Hungarian distinguishes two types of *subordination.* Embedded clauses may either be related to a constituent of the matrix sentence, or may appear freely in the matrix sentence.[14] In the present context only a discussion of the former type is relevant.

Kenesei (1985) observes that the NPs to which embedded clauses are related may be of two types: they are either *lexical* or *pronominal* ('anticipatory'). This pronoun is homophonous with the non-proximate demonstrative pronoun *az* 'that', or with the third person singular personal pronoun. In this section only examples with the demonstrative anticipatory pronoun will be presented, postponing the discussion of embedded clauses related to a personal anticipatory pronoun until the following section. These two types of constituents may be used in the formation of both *relative* and *that-clauses* in Hungarian. Compare:

(1) a. *Relative, lexical NP*
Az a darab, amit Péter látott, érdekes volt
that the play what-ACC Peter saw-AGR3sg interesting was
The play that Peter saw was interesting.'

b. *Relative, anticipatory pronoun*
Az, amit Péter látott, érdekes volt
that what-ACC Peter saw-AGR3sg interesting was
'That what Peter saw was interesting.'
(Kenesei 1985f: 145)

(2) a. *That-clause, lexical NP*
Az a kérdés, hogy mit látott Péter, érdekes
that the question that what-ACC saw-AGR3sg Peter interesting
'The question of what Peter saw is interesting.'

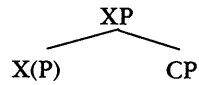
(13) Anna Szabolcsi (personal communication) brings to my attention that there is an alternant of the sublative, illative, and allative third person singular pronoun which dissolves the syntactic ambiguity between the verbal prefix and personal pronoun function. By adding the suffix *-ja/je* of the third person possessive agreement to *rá, bele,* and *hozzá,* they are turned unambiguously into personal pronouns: *rája* 'on him/her', *beléje* 'into him/her', and *hozzája* 'to him/her'.

(14) To the latter type belong embedded clauses introduced by complementizers such as *mivel* 'since', *bár* 'though', and free relatives. (See Kenesel 1985a, 1985f and section 5.4. for these cases of subordination with pronominal noncoreference).

b. *That-clause, anticipatory pronoun*
Az, hogy mit látott Péter, érdekes
that that what-ACC saw-AGR3sg Peter interesting
'What Peter saw is interesting.'
(Kenesei 1985f: 146)

Two theories on the structure of embedded clauses are possible.

(I) Kenesei (1984a) assumes that embedded clauses of the above type have the following structure:

(3)


The head of this structure is the *X(P)* in which *X* may be substituted by *N, A,* or *P.* In the embedded clauses (1) and (2), the position of (X)P is either filled by a lexical NP or by an anticipatory pronoun. Both constituents are categorially of the type N. This implies that 'ordinary' that-clauses in Hungarian are complex NPs under this hypothesis.

(II) A second analysis of embedded clauses in Hungarian relies on the syntactic position embedded clauses may occupy. In general, embedded clauses cannot be in a Case-position, because of the *Case Resistance Principle* (cf. Stowell 1981). This principle states:

(4) *Case Resistance Principle* (CRP)
Case may not be assigned to a category bearing Case-assigning features

Stowell assumes that the feature-matrix of CP contains the feature [+Tense]. This feature is a a Case-assigning feature (cf. Chomsky 1981). Hence, CPs cannot be in a Case-position but must be dislocated.

The question arises what the role of the anticipatory pronoun is under this hypothesis. Compare some other examples with *that*-clauses in which the anticipatory pronoun appears:[15]

(5) a. Kiderült (*az*) [CP hogy János nem olvas]
out-turned-AGR3sg-indef that that John not read-AGR3sg
'It has turned out that John doesn't read.'
b. Tudom (*azt*) [CP hogy János nem olvas]
know-AGR1sg-def that-ACC that John not read-AGR3sg
'I know that John doesn't read.'
c. Hiszek *(*abban*) [CP hogy újra találkozni] fogunk
believe-AGR1sg-indef that-INESS that again meet-INFI will-AGR1pl
'I believe that we will meet again.'
d. Számitok *(*arra*) [CP hogy Mari beteg lesz]
count-AGR1sg-def that-SUBL that Mary ill will-be
'I expect that Mary will be ill.'
e. Tudok *(*arról*) [CP hogy János nem olvas]
know-AGR1sg-indef that-DELAT that John not read-AGR3sg
'I know that John does not read.'

(15) Embedded clauses are inherently definite. In (5b), the embedded clause is associated with the accusative position in the LS of the verb. Hence, the definite conjugation on ther verb.

f. Péter haragszik *(*azért*) [CP hogy Mari megérkezett]
Peter be angry-AGR3sg-indef that-CAUS that Mary arrived-AGR3sg
'Peter is angry because Mary arrived.'

In (5a)-(5f), the verbs *kiderül* 'turn out', *tud* 'know', *hisz* 'believe', *számít* 'count on', *tud* 'know about', and *haragszik* 'be angry' appear with a NOM, NOM-ACC, NOM-INESS, NOM-SUBL, NOM-DELAT, and NOM-CAUS case frame. If embedded clauses are in a non-A-position, as we hypothesized above, then the Case- and θ-features of the verb cannot be satisfied by the CP. Therefore, they are absorbed by the anticipatory "dummy" pronoun *az,* which is base-generated in an A-position and linked to the CP.[16] This covers the fact that the above anticipatory pronouns bear nominative, accusative, inessive, sublative, delative, or causalis case.

It seems to me that the analysis of embedded clauses in (II) should be preferred over the one in (I), because it is related to general principles of the grammar. As a consequence, the function of *az* is comparable to the function of English *it* and Dutch *het* with a postverbal CP. Compare:

(6) a. Ik betreur *het* [CP dat Jan ziek is] b. *It* surprised me [CP that John is ill]
I regret it that John ill is

Bennis (1986: ch.2) and Koster (1987: ch.5) argue that *het* and *it* are referential expressions in an A-position carrying a propositional θ-role. This analysis accounts for the fact that extraction may not take place from postverbal embedded clauses, since they are in adjunct position. Adjunct clauses usually form islands for extraction. Hence, the ungrammaticality of the following sentence:

(7) *Wat betreurde jij het [CP dat hij had gezegd]?
what regretted you it that he had said

If CPs in Hungarian are in an adjunct position and their position in the LS of the verb is occupied by *az,* then we expect that extraction from embedded clauses will be ruled out. In chapter six, I will demonstrate that this is indeed the case. Therefore, this provides further support for the analysis adopted here.

Before I discuss some *linear* restrictions on the position of embedded clauses in Hungarian, let us first consider the omissibility of anticipatory pronouns in (5).

The nominative and accusative anticipatory pronoun may be dropped (cf. (5a), (5b)) but not the anticipatory pronouns with lexical case (cf. (5c)-(5f)). Note that this corresponds with the distribution of small *pro* in Hungarian (cf. 4.2.(34)). Therefore, I will assume that the anticipatory pronoun is replaced by *pro* when omitted (cf. also Kenesei 1984a; 1985d for a similar claim). This implies that there are no free that-clauses in Hungarian.

(16) There are a number of anticipatory pronoun-complementizer pairs which introduce adjunct embedded clauses, like embedded clauses of time such as the pairs *akkor-amikor* 'then-when' and *azalatt-mialatt* 'during it-while', or embedded clauses of place such as *ott-ahol* 'there-where', etc. Compare:

(i) a. *Azalatt mialatt* János keményen tanult Péter lányokhoz járt
it-during while John hard studied Peter girls-ALL went
'While John was studying hard, Peter went to meet girls.'
b. *Ott ahol* sok a titkos rendör nem jó lakni
there where lot the secret agent not good live-INFI
'Where a lot of secret agents are, it is not good living.'

4.5.2. *Linear Restrictions on Embedded Clauses*

In the preceding section, I examined the structure of embedded clauses in Hungarian. Let us turn now to a discussion of *linear* restrictions on their position in the sentence. Although embedded clauses may be scrambled around freely, the following linear restrictions may be observed:

(I) Kenesei (1984a) observes that *that-clauses* and the lexical NP or the anticipatory pronoun to which they are related may be separated by intervening material. The sentences in (8) are the contiguous counterparts of the sentences in (2) (bracketing is mine):

(8) a. *Az a kérdés* érdekes [$_{CP}$ hogy Péter mit látott]
that the question interesting that Peter what-ACC saw-AGR3sg
b. *Az érdekes* [$_{CP}$ hogy Péter mit látott]
that interesting that Peter what-ACC saw-AGR3sg

Kenesei notes furthermore that the CP and its related lexical NP or anticipatory pronoun must be *non-adjacent* obligatorily when the embedded clause is focussed.[17] Compare:

(9) a. *[$_{F}$ *Az a kérdes* [$_{CP}$ hogy Péter mit látott]] érdekes
b. [$_{F}$ *Az a kérdés*] érdekes [$_{CP}$ hogy Péter mit látott]
'It is the question what Peter saw that is interesting.'
c. *[$_{F}$ *Az* [$_{CP}$ hogy Péter mit latott]] érdekes
d. [$_{F}$ *Az*] érdekes [$_{CP}$ hogy Péter mit látott]
'What Peter saw IS interesting.'

In accordance with the analysis of embedded clauses argued for above, the lexical NP or the anticipatory pronoun is in the Focus position, and the CP is base-generated postverbally.

(II) Another linear restriction on embedded clauses has been discussed in Kenesei (1984a; 1985d). According to Kenesei, there are positional restrictions on the occurrence of the anticipatory pronoun. If the order *'that*-clause...V... demonstrative pronoun' occurs, the third person singular personal pronoun must replace its corresponding demonstrative anticipatory pronoun. This pronoun always has the same Case-marking as the anticipatory pronoun. Compare the scrambled variants of the sentences in (5):

Demonstrative/personal pronoun - that-clause - V

(10) a. **(Az)/*ő* [hogy János nem olvas] kiderült
that/he that John not read-AGR3sg out-turned-AGR3sg
b. **(Azt)/*őt* [hogy János nem olvas] tudom
that-ACC/he-ACC that John not read-AGR3sg know-AGR1sg
c. *Abban/*benne* [hogy újra találkozni fogunk] hiszek
that-INESS/it-INESS that again meet-INFI will-AGR1pl believe-AGR1sg
d. *Arra/*rá* [hogy Mari beteg lesz számítok]
that-SUBL/it-SUBL that Mary ill will-be count-AGR1sg

(17) Compare for discussion of Extraposition É. Kiss (1981a) and Kenesei (1984a). Compare, furthermore, Kenesei (1985e) for the interaction of constituent embedding and the uniformity condition on the branching of X'-categories (cf. 2.2.1.(1)) yielding Extraposition obligatorily.

e. *Arról/*róla* [hogy János nem olvas] tudok
that-DELAT/it-DELAT that John not read-AGR3sg know-AGR1sg
f. *Azért/*érte* [hogy Mari megérkezett] Péter haragszik
that-CAUS/it-CAUS that Mary arrived-AGR3sg Peter is-angry

That-clause - V - demonstrative/personal pronoun

(11) a. [Hogy János nem olvas] **(az)/*ő* kiderült
that John not read-AGR3sg that/he out-turned-AGR3sg
b. [Hogy János nem olvas] **(azt)/*őt* tudom
that John not read-AGR3sg that-ACC/he-ACC know-AGR1sg
c. [Hogy újra találkozni fogunk] *abban/*benne* hiszek
that again meet-INFI will-AGR1pl that-INESS/it-INESS believe-AGR1sg
d. [Hogy Mari beteg lesz] *arra/*rá* számítok
that Mary ill will-be that-SUBL/it-SUBL count-AGR1sg
e. [Hogy János nem olvas] *arról/*róla* tudok
that John not read-AGR3sg that-DELAT/it-DELAT know-AGR1sg
f. [Hogy Mari megérkezett] *azért/*érte* Péter haragszik
that Mary arrived-AGR3sg that-CAUS/it-CAUS Peter is-angry

Demonstrative/personal pronoun - V - that-clause

(12) a. **(Az)/*ő* kiderült [hogy János nem olvas]
that/he out-turned-AGR3sg that John not read-AGR3sg
b. **(Azt)/*őt* tudom [hogy János nem olvas]
that-ACC/he-ACC know-AGR1sg that John not read-AGR3sg
c *Abban/*benne* hiszek [hogy újra találkorni fogunk]
that-INESS/it-INESS believe-AGR1sg that again meet-INFI will-AGR1pl
d. *Arra/*rá* számítok [hogy Mari beteg lesz]
that-SUBL/it-SUBL count-AGR1pl that Mary ill will-be
e. *Arról/*róla* tudok [hogy János nem olvas]
that-DELAT/it-DELAT know-AGR1sg that John not read-AGR3sg
f. *Azért/*érte* Péter haragszik [hogy Mari megérkezett]
that-CAUS/it-CAUS Peter is-angry that Mary arrived-AGR3sg

That-clause - V - demonstrative/personal pronoun

(13) a. [Hogy János nem olvas] kiderült *(*az)/(*ő)*
that John not read-AGR3sg out-turned-AGR3sg that/he
b. [Hogy János nem olvas] tudom *(*azt)/(*őt)*
that John not read-AGR3sg know-AGR1sg that-ACC/he-ACC
c. [Hogy újra találkozni fogunk] hiszek **abban/benne*
that again meet-INFI will-AGR1pl believe-AGR1sg that-INESS/it-INESS
d. [Hogy Mari beteg lesz] számítok **arra/rá*
that Mary ill will-be count-AGR1sg that-SUBL/it-SUBL
e. [Hogy János nem olvas] tudok **arról/róla*
that John not read-AGR3sg know-AGR1sg that-DELAT/it-DELAT
f. [Hogy Mari megérkezett] Péter haragszik **azért/érte*
that Mary arrived-AGR3sg Peter is-angry that-CAUS/it-CAUS

V - demonstrative/personal pronoun - that-clause

(14) a. Kiderült *(az)/(*ő)* [hogy János nem olvas]
out-turned-AGR3sg that/he that John not read-AGR3sg
b. Tudom *(azt)/(*őt)* [hogy János nem olvas]
know-AGR1sg that-ACC/he-ACC that John not read-AGR3sg

c. Hiszek *abban/benne* [hogy újra találkozni fogunk]
believe-AGR1sg that-INESS/it-INESS that again meet-INFI will-AGR1pl
d. Számitok *arra/rá* [hogy Mari beteg lesz]
count-AGR1sg that-SUBL/it-SUBL that Mary ill will-be
e. Tudok *arról/róla* [hogy János nem olvas]
know-AGR1sg that-DELAT/it-DELAT that John not read-AGR3sg
f. Péter haragszik *azért/érte* [hogy Mari megérkezett]
Peter is-angry that-CAUS/it-CAUS that Mary arrived-AGR3sg

V - that-clause - demonstrative/personal pronoun

(15) a. *Kiderült [hogy János nem olvas] *az/ő*
out-turned-AGR3sg that John not read-AGR3sg that/he
b. *Tudom [hogy János nem olvas] *(azt)/(őt)*
know-AGR1sg that John not read-AGR3sg that-ACC/he-ACC
c. *Hiszek [hogy újra találkozni fogunk] *abban/benne*
believe-AGR1sg that again meet-INFI will-AGR1pl that-INESS/it-INESS
d. *Számitok [hogy Mari beteg lesz] *arra/rá*
count-AGR1sg that Mary ill will-be that-SUBL/it-SUBL
e. *Tudok [hogy János nem olvas] *arról/róla*
believe-AGR1sg that John not read-AGR3sg that-DELAT/it-DELAT
f. *Péter haragszik [hogy Mari megérkezett] *azért/érte*
Peter is-angry that Mary arrived-AGR3sg that-CAUS/it-CAUS

The paradigm (10)-(15) has the following properties:

(*i*) If the linear order is '*that*-clause...V...anticipatory pronoun' the demonstrative anticipatory pronoun must be replaced by its corresponding third person singular personal pronoun (cf. (13)). This switch is optional when both the *that*-clause and the demonstrative pronoun are postverbal (except for the nominative and accusative anticipatory pronoun) (cf. (14)). Note, however, that in such cases the pronoun may not be in final-position (cf. (15)). Note, further, that only the demonstrative pronoun is allowed preverbally (cf. (10)-(12)).

The following questions arise in connection with this demonstrative/personal pronoun-switch: What is the reason for this phenomenon and what is the status of the personal pronoun in case it replaces the demonstrative pronoun? Kenesei (1984a; 1985d) suggests that the reason for this pronoun-switch has probably to do with a general condition on anaphora in Hungarian. The linking between the demonstrative anticipatory pronoun *az* and an embedded clause may be understood as an anaphoric relation. Obviously, backward anaphora with a demonstrative pronoun is blocked in the '*that*-clause...V...demonstrative pronoun' order (cf. (11)-(13)). Consequently, only a personal pronoun may be related to a clausal antecedent in those cases. It must be admitted, however, that the conditions governing this pronoun-switch need further investigation.[18]

(18) Kenesei (1985a) reports some exceptions to this phenomenon of pronoun-switch.

(i) If the anticipatory pronoun has no corresponding pronominal form with lexical case such as in the case of translative, essive, formalis, and terminative (cf. section 4.2.3.), the anticipatory pronoun may not be replaced. This yields an ungrammatical variant in case the demonstrative pronoun-personal pronoun switch is obligatory, that is, in the order '*that*-clause...V...anticipatory pronoun'. Compare:

The personal pronoun has the same syntactic status as the demonstrative anticipatory pronoun in (13)-(14). It represents the Case- and θ-features of the embedded clause in the LS of the main verb. First, observe that it does not function as a deictic expression with independent reference. Second, consider the following sentence:

(16) a. El akarok menni *azért/*érte* [$_{CP}$ hogy láthassalak]
away want-AGR1sg go-INFI that-CAUS/it-CAUS that see-SUBJ-AGR1sg2sg
'I want to go in order to see you.'

b. [$_{CP}$ Hogy láthassalak] el akarok menni **azért/*érte*
that see-SUBJ-AGR1sg2sg away want-AGR1sg go-INFI go-INFI
that-CAUS/it-CAUS

The case-marker on the anticipatory pronoun, i.e. the causalis, is not selected by the main verb complex. Hence, the embeddedd clause is not a *direct* argument of this complex. Observe that the phenomenon of pronoun-switch is not possible in (16). Not even in the context *'that*-clause... V...anticipatory pronoun' in which regularly this phenomenon is obligatory (cf. (13)). This implies that the personal anticipatory pronoun is base-generated in an NP-position to where a dislocated clause may be linked. Formally, this relation may be expressed by coindexing the agreement marker of the personal pronoun with the embedded clause. The Case- and θ-features of

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(i) a. Eljutottam *addig,* [$_{CP}$ hogy engedélyt kaptam]
reached-AGR1sg that-TERM that permission got-AGR1sg
'I reached to get permission.'

b. * [$_{CP}$ Hogy engedélyt kaptam] eljutottam *addig*

(II) The pronoun-switch with the superessive case sometimes behaves irregularly. It may not apply in a context where this phenomenon is usually allowed, for example, in the order 'V...anticipatory pronoun... *that*-clause'. Compare an example with the verb *aggódik* 'worry about' which subcategorizes for a superessive argument:

(ii) Aggódtam *azon/*rajta* [$_{CP}$ hogy Mari beteg volt]
worried-AGR1sg that-SUPER/it-SUPER that Mari ill was
'I was worried about the fact that Mary was ill.'

In some idiomatic expressions the demonstrative/personal pronoun-switch may even take place preverbally with the superessive:

(iii) *Azon/raijta* leszek [$_{CP}$ hogy ...
that-SUPER/it-SUPER be-AGR1g that
'I will do my best to ...'

(III) When a complex verb construction contains a prefix that is homophonous with a personal pronoun bearing lexical case, that is, with the lexical items in 4.4.(8), then the demonstrative anticipatory pronoun may not be replaced by a personal pronoun. Compare an example with the verbal prefix *bele* 'into' which is homophonous with the third person singular illative pronoun *bele* 'into it'.

(iv) a. János bele ment *abba/*bele* [$_{CP}$ hogy eljöjjön]
John into went that-ILL/it-ILL that come-SUBJ-AGR3sg
'John consented in coming.'

b. [$_{CP}$ Hogy eljöjjön] János bele ment *abba/*bele

If the prefix in (iva) is postposed from its preverbal position because some other constituent is focussed, it is better to omit the demonstrative anticipatory pronoun entirely. Compare:

(v) [$_{F}$ János] ment bele (abba) [$_{CP}$ hogy eljöjjön]

I will assume that a small *pro* is present in the syntactic representation if the demonstrative anticipatory pronoun is absent. This *pro* is then sanctioned by the verbal prefix.

The sentences in (iv) and (v) support the conclusion which we reached in section 4.4.2., namely, that the syntax behavior of the double-faced lexical items is determined by the Projection Principle. If *bele* would be present twice in these sentences, it would be impossible to decide which one is the verbal argument.

the verb may be shared under this coindexing by the personal pronoun and the embedded clause.

(*ii*) Note that the overt nominative and accusative personal pronouns may not participate in the pronoun-switch (cf. (10)-(11)), only their non-overt *pro* counterparts. This reason for this is, as pointed out in Kenesei (1985d), that the overt nominative and accusative personal pronouns may have only [+human] referents (cf. also section 4.2.4.2.).

(*iii*) In the preceding section, I noted that the demonstrative anticipatory pronoun may be dropped in accordance with the distribution of *pro* in Hungarian (cf. 4.2.(34)). There are, however, two apparent exceptions to this generalization with anticipatory pronouns.

(*A*) The nominative and accusative anticipatory pronoun may never be dropped in preverbal position (cf. (10)-(13)). This has probably to do with the fact that pragmatic functions such as Topic and Focus are assigned preverbally. These functions are marked phonetically (cf. section 2.1.). It is reasonable to suppose that phonetic markers may only be assigned to overt elements.

(*B*) Kenesei (1985b: fn.7) notes that some verbal and adjectival predicates allow pro-drop with a demonstrative/personal anticipatory pronoun bearing lexical case. This would constitute a counterexample to generalization 4.2.(34c), which states that pronouns with lexical case may not be dropped. Such predicates include, among others, *örülök* 'be happy' subcategorizing for a dative argument, *kíváncsi lenni* 'be curious about' subcategorizing for a sublative argument, *fél* 'be afraid of' which subcategorizes for an ablative argument, and *kezeskedik* 'be sure of' that subcategorizes for a causalis argument. Compare, for example:

(17) Örülök (*annak)/(neki*) [$_{CP}$ hogy jöttél]
be happy-AGR1sg that-DAT/it-DAT that came-AGR2sg
'I am happy that you came.'

It is not clear why these predicates permit a violation of 4.2.(34c). Note that semantically they belong to the same category. These predicates express an emotive state. Maybe this is worth exploring further.

4.5.3. *Summary*

Recapitulating, in this section I have presented empirical support from the formation of embedded clauses in Hungarian for the hypothesis that the Projection Principle maps lexical information onto phrase structure in a one-to-one fashion. Embedded clauses may not appear in an A-position, because of the CRP. I have argued that despite this, Case- and θ-features assigned to embedded clauses by a verbal predicator are always represented in the overt syntactic representation. These lexical properties may be carried by a demonstrative anticipatory pronoun, or its personal pronoun alternant. The switch between a demonstrative anticipatory pronoun and a personal anticipatory pronoun seems to be determined by a sort of anaphoric process, which requires further investigation.

4.6. Split Constituents in Hungarian

The Projection Principle specifies a one-to-one correspondence between LS and syntactic representations. For each argument selected at LS there is a corresponding constituent present in syntax. In this section, I will focus on *split constituents* in Hungarian. This phenomenon apparently violates the one-to-one matching between LS and syntactic representation. I will demonstrate, however, that this is not the case. Split constituents in Hungarian are conditioned by highly specific syntactic and semantic restrictions.

Syntactically, the parts of split constituents involve a predication relation signaled by identity of morphological features such as case, number and so on. Semantically, the parts of split constituents express simple conjunction. These restrictions show that split constituents are rather marked. They cannot appear freely. This is in accordance with the Projection Principle.

Split constituents constitute a subcase of noun modification. In section 4.6.1., I will first discuss the syntax of noun modification. Section 4.6.2. examines its semantics. In section 4.6.3., I will present an analysis of split constituents which is in correspondence with the Projection Principle. Finally, in section 4.6.4., I will investigate split constituents appearing in other languages, such as Warlpiri and German, and conclude that this phenomenon favours a representational approach to grammar over a derivational one.

4.6.1. *The Syntax of Noun Modification*

Roughly, modifier noun constructions may appear in two patterns in Hungarian. Either the combination of the modifier and noun forms a *single constituent* (cf. (1a), (2a)) or the parts may be separated resulting in a so-called *split constituent* (cf. (1b), (1c)) and (2b), (2c)):

(1) a. Mari (a) két biciklit (látta)/látott
Mary (the) two bike-ACC saw-AGR3sg-def/indef
'Mary saw (the) two bikes.'
b. Mari *biciklit* látott *kettőt*
Mary bike-ACC saw-AGR3sg two-ACC
'What Mary saw two of were bikes.'
c. Mari *biciklit* látott, *kettőt*
Mary bike-ACC saw-AGR3sg two-ACC
'Mary saw only bikes and there were two of them.'

(2) a. Mari (a) nagy biciklit (látta)/látott
Mary (the) big bike-ACC saw-AGR3sg-def/indef
'Mary saw (the) big bikes/(bike).'
b. Mari *biciklit* látott *nagyot*
Mary bike-ACC saw-AGR3sg big-ACC
'Mary saw bikes such that they were big.'
c. Mari *biciklit* látott, *nagyot*
Mary bike-ACC saw-AGR3sg big-ACC
'Mary saw only bikes and they were big/big ones.'

Superficially, the variants in (1) and (2) have similar properties. On closer investigation, however, it turns out that there are subtle syntactic and semantic differences between them. Because of the fact that intuitively these variants are "connected" a linguistic approach which unifies them seems to be justified. In section 4.6.3., I will consider two such analyses. Let us first discuss the syntactic properties of the above constructions.

(*I*) As appears from (1a) and (2a) attributive modifiers in single NPs are on a *left* branch in Hungarian, whereas in split constituents the modifier is *separated* from the head noun, see ((1b), (1c)) and ((2b), (2c)). Thus the modifier in single NPs is usually in construction with its head. The parts of split constituents, however, may be scrambled around in the sentence[19] freely.

(*II*) Modifiers in single NPs are *uninflected* (cf. (1a), (2a)). Modifiers in split constituents, on the other hand, are *case-marked* (cf. (1b), (1c), (2b) and (2c)). Note that there is congruence between the case of the head noun and the modifier.

(*III*) Single NPs may be *modified* by a determiner (cf. (1a), (2a)). The parts of split constituents, however, must be bare:

(3) a. **A/egy* biciklit láttam kettőt
the/a bike-ACC saw-AGR1sg two-ACC
b. *Biciklit láttam *a/egy* nagyot
bike-ACC saw-AGR1sg the/a big-ACC
c. **A/egy* biciklit láttam *a/egy* nagyot
the/a bike-ACC saw-AGR1sg the/a big-ACC

(*IV*) If modifiers expressing quantity, like numerals or quantifiers, are in construction with the head noun they always require this head to be in the *singular.* Therefore, (4a) is grammatical, unlike (4b). This restriction does not have to be obeyed with split constituents. The head noun may sometimes appear in the plural as well (cf. (4c), (4d)):

(4) a. Láttam két nyulat
saw-AGR1sg two rabbit-sg-ACC
'I saw two rabbits.'
b. *Láttam két nyulakat
saw-AGR1sg two rabbit-pl-ACC
c. Nyulat láttam kettőt
rabbit-sg-ACC saw-AGR1sg two-ACC
d. Nyulakat láttam kettőt
rabbit-pl-ACC saw-AGR1sg two-ACC

If a plural marker is attached to a non-numeral modifier with split constituents, then the head noun must be in plural too:

(5) a. Láttam nagy biciklit
saw-AGR1sg big bike-sg-ACC
'I saw a big bike.'
b. Láttam nagy bicikliket
saw-AGR1sg big bike-pl-ACC
'I saw big bikes.'
c. *Biciklit láttam nagyokat
bike-sg-ACC saw-AGR1sg big-pl-ACC
d. Bicikliket láttam nagyokat
bike-pl-ACC saw-AGR1sg big-pl-ACC

Observe from the comparison between the pairs in ((4c), (4d)) and ((5c), (5d)) that there must be full morphological concord between the parts of split cons-

(19) There is some uncertainty among native-speakers whether the singular count noun *bicikli* 'bike' in (1b) and (1c) is in F-position, in the preverbal modifier position, or may be in both positions. Here I will follow Szabolcsi (1983c) who presents only examples in which the head noun is focussed.

tituents with a non-numeral modifier but not with a numeral modifier. The reason for this difference is due to the fact that numerals are morphologically singular (cf. **kettök* 'two-pl') but are semantically specified for plural (except *egy* 'one'), whereas non-numeral modifiers can always be accompanied by a plural marker.

(*V*) Not all types of noun modifiers may participate in split constituent. For example, only adjectives, numerals, and some quantified constituents, but not demonstratives or universal quantifiers, are allowed. It appears that in split constituents only *N'-complements,* that is, sisters of the head noun, may occur. Hence, a split constituent with the nominal demonstrative pronoun *az* 'that' yields an ungrammatical result:

(6) a. Láttam *azt* a biciklit
saw-AGR1sg that-ACC the bike-ACC
'I saw that bike.'

b. *Biciklit láttam *azt*
bike-ACC saw-AGR1sg that-ACC

This explains also why an NP with *az* over which a relative clause is predicated may not be split (cf. (7a), (7c)), unlike an NP which contains its adjectival variant, i.e. the N'-complement *olyan* 'such' (cf. (7b), (7d)):

(7) a. Láttam azt a biciklit aminek piros volt a kereke
saw-AGR1sg that-ACC the bike-ACC which-DAT red was the wheel-npAGR3sg
'I saw the bike which had a red wheel.'

b. Láttam *olyan* biciklit aminek piros volt a kereke
saw-AGR1sg such bike-ACC which-DAT red was the wheel-npAGR3sg
'I saw a bike which had a red wheel.'

c. *Biciklit láttam *azt* aminek piros volt a kereke
bike-ACC saw-AGR1sg that-ACC which-DAT red was the wheel-npAGR3sg

d. Biciklit láttam *olyat* aminek piros volt a kereke
bike-ACC saw-AGR1sg such-ACC which-DAT red was the wheel-npAGR3sg
'I saw bikes such which had a red wheel.'

(*VI*) Modifiers in split constituents are nominals, more precisely *nominal predicates.* This is supported by the following two pieces of evidence.

(*i*) Modifiers in split constituents are case-marked (cf. (*II*) above). In Hungarian only members of the category *N* may bear a case-marker (cf. section 3.2.1.).

(*ii*) Some modifiers have two lexical alternants, an *attributive* and a *predicative* alternant. These alternants have a different distribution. The attributive alternant may occur only attributively, that is in a single NP. The predicative alternant may be used both attributively and predicatively. In the latter case, it heads an NP or is the predicate of a predicative sentence.

Consider, for example, the Hungarian counterparts of the modifiers *small* and *two.* The attributive alternant of the modifier *small* is *kis,* and its predicative variant is *kicsi.* The attributive alternant of the numeral modifier *two* is *két,* and the predicative variant is *kettö.*

Note that only *kicsi* and *kettö* may be the head of an NP which is modified by a determiner:

(8) a. a *kis/*kicsi*
the small
'the small one'

b. a *két/*kettő*
the two
'the two people, pieces, etc.'

Attributively, both *kis* and *kicsi* may be used, although the former is more common (cf. (9a)). In predicative sentences, however, only *kicsi* yields a grammatical result (cf. (9b)). Note now that the modifier with split constituents has exactly the same lexical shape as the predicative part of the predicative sentence (cf. (9c)):

(9) a. A *kis/kicsi* fiú
the small boy
'The small boy.'

b. A fiú **kis/kicsi*
the boy small
'The boy is small.'

c. Fiút láttam **kist/kicsit*
boy-ACC saw-AGR1sg small-ACC

Both *két* and *kettö* may be combined with a head noun, although there is a semantic divergence. Attributively kettö has a specific reading (cf. (10a)). Only *kettö,* however, may be the predicate in a predicative sentence (cf. (10b)). Again, the modifier with split constituents has the same lexical form as the modifier in a predicative sentence (cf. (10c)):

(10) a. A *két/kettö* fiú
the two boy
'The two boys/the two (specific) boys.'

b. A fiú **ket/kettö*
the boy two
'The boy is two (years old).'

c. Fiút láttam **kétet/kettőt*
boy-ACC saw-AGR1sg two-ACC

Summarizing, the fact that modifiers in split constituents are case-marked and have the same lexical shape as modifiers heading an NP or the predicative parts of a predicative sentence suggest that they are nominal predicates.

(VII) With split constituents in Hungarian *no* subject-object asymmetries turn up. In the sentences (1) and (2), we saw already that an object NP may be split. The pair in (11a) and (11b) demonstrates that a modifier may also be scrambled out of a subject, i.e. nominative, NP:

(11) a. Két ember szalad
two people run-AGR3sg
Two people are running.'

b. *Ember* szalad *kettö*
people run-AGR3sg two

Concluding this section, I would like to make the following syntactic generalization on split constituents in Hungarian:

(12) The parts of split constituents are nominal predicates and display identity of morphological features (case, number, etc.)

4.6.2. *The Semantics of Noun Modification*

In this section, I would like to discuss the semantics of the sentences in (1) and (2), here repeated for convenience as (13) and (14):

(13) a. Mari (a) két biciklit (látta)/látott
Mary (the) two bike-ACC saw-AGR3sg-def/indef
'Mary saw (the) two bikes.'

b. Mari *biciklit* látott *kettőt*
Mary bike-ACC saw-AGR3sg two-ACC
'What Mary saw two of were bikes.'

c. Mari *biciklit* látott, *kettőt*
Mary bike-ACC saw-AGR3sg two-ACC
'Mary saw only bikes and there were two of them.'

(14) a. Mari (a) nagy biciklit (látta)/látott
Mary (the) big bike-ACC saw-AGR3sg-def/indef
'Mary saw (the) big bikes/(bike).'
b. Mari *biciklit* látott *nagyot*
Mary bike-ACC saw-AGR3sg big-ACC
'Mary saw bikes such that they were big.'
c. Mari *biciklit* látott, *nagyot*
Mary bike-ACC saw-AGR3sg big-ACC
'Mary saw only bikes and they were big/big ones.'

My presentation will be rather informal. For a formal approach to the semantics of these constructions, I refer to Szabolcsi (1983c).

In the sentences ((13a), (13b)) and ((14a), (14b)) the modification is *restrictive,* whereas in (13c) and (14c) it is *non-restrictive.* The latter is indicated by a comma which corresponds in speech to a pause and a comma-intonation. Non-restrictive modification in Hungarian may be compared roughly to coordination in English as in the sentence 'Mary saw only bikes and they were big' or to the afterthought, appositional construction 'Mary saw only bikes, that is, big ones'. Before we take a closer look at the semantics of these sentences, let us first consider some different types of semantic modification.

Since Kamp (1975) the following types of semantic modification have been distinguished, among others, *intersective* and *syncategorematic* modification. I will illustrate these types through the following English pair:

(15) a. That is a big butterfly b. That butterfly is big

According to Higginbotham (1985a: 563), in (15a) the attributive modifier *big* may have only a syncategorematic reading, whereas in (15b) the predicative modifier may be used both syncategorematically and intersectively. Sentence (15a) means: 'that is a butterfly, and it is big (for a butterfly)'. The adjective is taken as grading with respect to the attribute given in the head noun. The predicative modifier in (15b), on the other hand, may have both a syncategorematic and an intersective reading. In the syncategorematic reading, it has the same meaning as (15a). However, in the intersective reading (15b) means: 'the big butterfly is a thing which is big and which is a butterfly'. Thus, when the adjective is syntactically separated from N, the semantic link may also be broken. The semantics of intersective modification can be taken as expressing *simple conjunction* (cf. Higginbotham 1985a). This implies that (15b) may count as false with respect to an object for which (15a) counts as true. Hence, from this it follows that the sentences in (15) may have different truth values.

The difference between the syncategorematic and intersective reading is illustrated even clearer by taking *stacked* adjective constructions into account. Gil (1987) notes that the following English phrases are non-synonymous:

(16) a. small powerful engine b. powerful small engine

Phrase (16a) refers to an engine that is small relative to powerful engines, whereas (16b) picks out an engine that is powerful relative to small engines. Moreover, neither of the phrases in (16) is synonymous with the phrase in (17):

(17) small and powerful engine

This phrase denotes an engine that is both small and powerful relative to engines in general.

Gil attributes the reading of stacked modifier constructions to the fact that in a hierarchical structure the sequence *A A N* may possess the structure [*A* [*A N*]]. The possibility of internal structuring enables a stacked adjective construction to be interpreted hierarchically in such a way that the outermost adjective modifies the entire [*A N*]. This yields, then, the syncategorematic readings in (16). Hierarchically, the sequence *A* and *A N* in (17) may possess the internal structure of [[*A and A*] *N*]. The adjectives are embedded under the conjunction *and.* This structuring allows (17) to be interpreted hierarchically in such a way that the entire [*A and A*] sequence modifies the N. This yields the intersective reading.

Let us turn now to a discussion of the semantics of noun modification in Hungarian.

Consider first the sentences in (14). The adjective in (14a) may have only the syncategorematic reading. So, the sentence means 'Mary saw a bike, and it was big (for a bike)'. In sentences (14b) and (14c), on the other hand, the split modifiers force the intersective reading. Hence, the meanings of (14b) and (14c) may be represented with the help of the following semantic expression: $<\forall>x$[Mary saw(x) $\rightarrow$ bike(x)] & $<\exists>x$[Mary saw(x)] & big(x). According to Szabolcsi (1983a), the universal quantifier in this constituent is provided by focussing of the head noun. This implies that the variants in (14) have different truth values.

The difference in meaning between single and split NPs is also illustrated by the Hungarian equivalents of the English stacked adjective constructions in (16) and (17). Compare:

(18) a. kis erős gép
small powerful engine
b. erős kis gép
'powerful small engine
c. kicsi és erős gép
small and powerful engine

The sentences (18a) and (18b) have the same readings as their English counterparts in (16a) and (16b). In both sentences the leftmost adjective takes scope over the entire [*A N*] sequence. Hence, they display a syncategorematic reading. From this it follows that the NP in Hungarian has a hierarchical structure (cf. also chapter seven).

The phrase in (18c) displays the intersective reading, similarly as its English counterpart (17) does. It denotes an engine which is both small and powerful with respect to engines in general. Split constituents with multiple modifiers also display an intersective reading:

(19) a. Gépet láttam kicsit erőset
engine-ACC saw-AGR1sg small-ACC powerful-ACC

b. Gépet láttam erős-et kicsit
engine-ACC saw-AGR1sg powerful-ACC small-ACC
'I saw engines and they were small and powerful.'

Before discussing the semantics of the sentences in (13), I will first adopt a proposal made in Verkuyl (1981) on the semantics of numerals.

Verkuyl argues that categorially numerals are adjectives, i.e. N' complements, and that their semantics may be characterized on the basis of a set-theoretical approach. For example, the numeral *Q* in (13), i.e. *két/kettő,* can be said to refer to those subsets of the power set of the denotation of the noun P that contain exactly two members. In a set expression: {<P,Q>| Card ($P \cap Q$) = 2}. This implies that this type of modifier can only have an intersective reading.

However, according to Szabolcsi, even in this triple there is a subtle semantic difference caused by the fact that the head noun is focussed in (13b) and (13c). The sentence in (13a) means that Mary saw two bikes. The sentence may be still true in case Mary saw other things like two cars, one plane and so on. In sentence (13b) Mary saw two things that were bikes. In this case the sentence is false when she saw two things not having the property bike such as two cars, two planes and so on. Of course, she may have seen one car, three planes and so on. The meaning of (13c) differs from (13a) and (13b) in that everything except bikes are barred from the universe. The comma indicates that occasionally there happened to be two bikes. Again, we conclude that the variants of noun modification may have different truth values.

Summarizing, in this section I examined the semantics of modification in Hungarian. It appeared that the triples in (13) and (14) have different truth values. They have in common that modification in all three cases expresses *conjunction* representable in a set expression. Hence, we may draw the following semantic generalization on split constituents in Hungarian:

(20) Split constituents express simple conjunction

4.6.3. *Split Constituents and the Projection Principle*

Any analysis of split constituents must solve the following two problems. First, it must avoid a violation of the Projection Principle. The mapping between LS and syntax may not be one-to-many. Second, it must account for the intuition that the variants in (13) and (14) are related semantically and syntactically. Therefore, it is justified to connect them by means of a single syntactic operation.

Such an operation is provided both by a derivational approach and by a representational approach. The former assumes the existence of an independent transformational component, or, more specifically, of the rule move-α. This means that S-structure is related to D-structure by an application of this rule. The latter, however, assumes that the rule move-α is superfluous, because the intrinsic and contextual properties of NPs at S-structure are sufficient to characterize the syntactic representation.[20]

(20) Compare Chomsky (1981), Koster (1987), and Van Riemsdijk (1982b) for further discussion of derivational versus representational grammar.

The question is whether the parts of split constituents are related by means of move-α or otherwise. In this section, I will argue that the split constituents in Hungarian provide an argument for a *representational* approach, because the parts of split constituent *cannot* be related by move-α.

Let us first discuss the derivational analysis of the triples in (13) and (14), here repeated as (21) and (22):

(21) a. Mari (a) két biciklit (látta)/látott
Mary (the) two bike-ACC saw-AGR3sg-def/indef
'Mary saw (the) two bikes.'
b. Mari *biciklit* látott *kettőt*
Mary bike-ACC saw-AGR3sg two-ACC
'What Mary saw two of were bikes.'
c. Mari *biciklit* látott, *kettőt*
Mary bike-ACC saw-AGR3sg two-ACC
'Mary saw only bikes and there were two of them.'

(22) a. Mari (a) nagy biciklit (látta)/látott
Mary (the) big bike-ACC saw-AGR3sg-def/indef
'Mary saw (the) big bikes/(bike).'
b. Mari *biciklit* látott *nagyot*
Mary bike-ACC saw-AGR3sg big-ACC
'Mary saw bikes such that they were big.'
c. Mari *biciklit* látott, *nagyot*
Mary bike-ACC saw-AGR3sg big-ACC
'Mary saw only bikes and they were big/big ones.'

Horvath (1986: 29; 83) proposes a derivational analysis of split constituents. In Horvath's acccount the (a)-sentences in (21), and (22) are taken as the underlying structures for their counterparts in (b) and (c). These sentences are derived by applying Quantifier Float and Topicalization respectively. Move-α scrambles the modifier out of its base-generated position and leaves a trace in the modifier position of the NP. This analysis of split constituents does not violate the Projection Principle. However, I will discuss the following *morphological* (cf. *I*), *syntactic* (cf. *II-III*), and *semantic* (cf. *IV*) anomalies arising with this type of derivation.

(*I*) The derivational analysis leaves some *morphological* dichotomies unexplained between the split and unsplit variants. First, it is unclear where the case-marker on the modifier in the split variant comes from. Second, this problem appears also with the plural marker on the head noun in (4d). Recall that in the underlying structure only singular head nouns are allowed when the head noun is in construction with a modifier expressing quantity.

Third, the derivational analysis must allow for the formation of new lexical predicative stems after scrambling the attributive modifier out of its NP, for example, *két/kettö,* and *kis/kicsi* in (9), and (10). If the triples in (21) and (22) are indeed related by an application of move-α, then this contradicts the *Lexical Integrity Hypothesis* (cf. Lieber (1980)) which states that NPs are base-generated in their fully inflected forms.

(*II*) Horvath (1985, section 1.3.) refers to split constituents as 'Quantifier Float'. This term suggests, however, that a generalization is missed. Not only numerals or

quantifiers but also adjectives may appear in the split variant (cf. (22)). The question is why only these modifiers may be scrambled out of their NP.

Horvath further claims that Quantifier Float obeys an adjacency requirement. She cites the following examples to illustrate this:

(23) a. Mari nem mutatta be az új diákot mindegyik tanárnak
Mary not showed-AGR3sg in the new student-ACC each teacher-DAT
(Horvath 1985: 27, (19a))

b. Mari nem mutatta be az új diákot a *tanároknak mindegyiknek*
Mary not showed-AGR3sg in the new student-ACC the teachers-DAT each-DAT
(Horvath 1985: 27, (19b))

According to Horvath (1985: 27), the QP *mindegyik* 'each' occurs either in the specifier position of NPs (cf. (23a)), that is, on a left branch within NPs, or outside the NP as a result of Quantifier Float (cf. (23b)).

Horvath lists the following properties of Quantifier Float including (*i*) the quantifier exhibits case-marking identical to the head noun (p. 27), (*ii*) the head noun must be plural (p. 27), (*iii*) the quantifier must be adjacent to the NP it modifies (p.28), (*iv*) the QP must occur to the right of its NP (p. 82, fn. 15), (*v*) absence of subject-object asymmetries (p. 30), and (*vi*) the Quantifier Float also has a right dislocated variant with the QP base-generated in the right dislocated position. Such structures are ungrammatical in case the right dislocated QP is in the scope of a negation operator (NEG) (p. 82, fn. 15).

Horvath argues that her SVO-hypothesis of the Hungarian in combination with the properties of Quantifier Float listed above can account for the difference between the following two structures:

(24) a. ?*...NEG V NP-DAT... QP-DAT
Horvath (1986: 28, (21a))

b. ...NEG NP_i-DAT V... t_i QP-DAT
Horvath (1986: 28, (21b))

In an SVO-structure non-subject NPs are base-generated postverbally. According to Horvath, the reason why (24a) is ungrammatical and (24b) is not involves a violation of the adjacency requirement on Quantifier Float in the former. The latter escapes the violation of this requirement since the head noun has been subject to move-α and is (via its trace) adjacent to the QP. Horvath claims thus that the floated QP must be right-adjacent to the head noun or its trace.

In Szabolcsi (1983c), however, a number of examples are presented which are not in accordance with this claim. Of course, they could fall under Horvath's transformational approach. The crucial example in favour of Horvath's adjacency requirement is provided by properties of structures as (24a). Let us carefully examine this case.

Horvath observes that (24a) is not an instance of a right dislocated structure. Hence, it cannot be ruled out by her rule that right dislocated QPs may not be in the scope of NEG (cf. Horvath (1985), 82, fn.15)). Therefore, she concludes that the reason for its ungrammaticality must be a violation of the adjacency requirement. Szabolcsi (1983c, fn.8), however, observes that sentences with a non-dislocated QP in the scope of a NEG are perfectly grammatical:

(25) Biciklit nem látott Mari *kettőt*
bike-ACC not saw-AGR3sg Mary two-ACC
'What Mary didn't see two of were bikes.'

In this sentence the head noun and the floated QP are not adjacent. This casts doubt on Horvath's claim that an adjacency requirement is operative with Quantifier Float.

A further question which Horvath does not discuss is why only bare Ns undergo Quantifier Float.

(III) It is a well-known fact that languages possessing floating quantifiers display subject-object asymmetries with this phenomenon. (See, for example, Haig 1980 for such asymmetries in Japanese). With split constituents in Hungarian, however, no subject-object asymmetries arise (cf. section 4.6.1.*(VII)*).

(IV) It remains unclear under a derivational analysis why the split variant may only have an intersective reading. Because of the trace in the modifier position, the NP-configuration remains unaffected. Hence, the syncategorematic reading should be available in case of a split NP as well.

From the problems listed in *(I)*-*(IV)*, I conclude that a derivational analysis of split constituents makes the wrong predictions and leaves open a number of questions. An alternative analysis of this type of constituents is provided by a representational approach to grammar. Below I will elaborate such an analysis of split constituents along the lines of Higginbotham's (1985a; 1986) theory of θ-*discharge.*[21] Before doing so, let us first consider the concepts relevant for our approach.

Higginbotham (1985a) proposes the following redefinition of the θ-*criterion* (cf. 3.2.(2)):

(26) θ-*Criterion:* a. Every argument is assigned one and only one θ-role
b. Every θ-position is discharged (uniquely)

The original second part of the θ-criterion (cf. 3.2.(2b)) is now replaced by (26b) which is more general. The elimination of open θ-positions in the θ-grid of lexical items is not only restricted to arguments under this approach.

Higgingbotham distinguishes the following types of θ-discharge:

(27) a. θ-*marking,* exemplified by pairs consisting of a predicate and one of its arguments
b. θ-*identification*, exemplified in simple adjectival modification as in *white wall* interpreted as 'white(x) and wall(x)'
c. *Autonymous* θ-*marking,* where the value assigned to the open position in the θ-marker is the attribute given by its sister
d. θ-*binding*, exemplified by determiners or measure-words and their nominals, as in *every dog*, interpreted as 'for every x such that dog(x)'

These modes of discharge are the primitive semantic operations of structural meaning which are all controlled by the configuration of *government* (mostly identifiable with sisterhood). θ-marking covers the nonmodificatory, or simple case of θ-discharge. The others types refer to a modification relation.

Consider an example of each of the latter type. Let us first discuss θ-*identification.*

Bare nominals are open constructions. This is supported by the fact that nominals can serve as predicates in many languages. Adjectives must have an open position

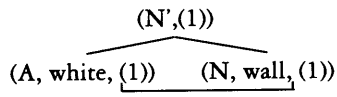
(21) Pica (1987) applies this theory to reflexive anaphors. According to Pica, the fact that reflexive anaphors must be bound by an antecedent is due to the property that they have an open position in their syntactic representation which must be saturated.

as well since they may also function as a predicate. Hence, we may assign nominals and adjectives the following θ-grids as part of their lexical entries ((1) indicates that there is an undischarged role associated with the predicate):

(28) a. *nominal,* [-V, +N], (1) b. *adjective,* [+V, +N], (1)

The semantics of the phrase *white wall* is expressed by a simple conjunction: a white wall is a thing that is white and a wall. In this phrase, some position in the adjective is identified with the nominal position. The θ-structure of *white wall* may be represented in the following diagram:

(29)



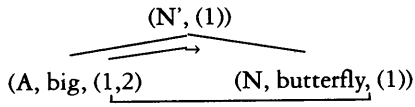
The open position of the adjective is discharged under this identification, indicated by the connecting line. We can compare its structure to that of building up a compound Fx & Gx and then identifying x and y.

Let us consider now an instance of *autonymous θ-marking*. Consider again (15a), here repeated as (30):

(30) That is a big butterfly

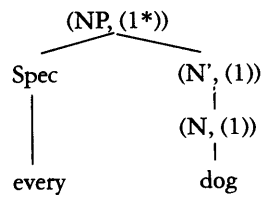
This phrase can be paraphrased as follows: that is a butterfly, and it is big (for a butterfly). In this paraphrase, the head noun is an argument of the adjective. So, this category serves to discharge two θ-positions in a syncategorematic adjective-noun construction. One by identification and the other by θ-marking of the noun itself by the adjective. This latter mode is called autonymous θ-marking, indicated by an arrow in diagram (31). The tail of the arrow is at the position of the θ-marker and its head abuts the point marked:

(31)



Higginbotham notes that head nouns do not take arguments when they form NPs. What happens instead is that the position (1) in (28a) is accessible to Spec, which acts as a binder. There must be some binder, and there can not be two. This mode of θ-discharge is referred to as θ-*binding*. The θ-*structure* of, for example, *every dog* might be depicted as follows (the asterisks indicates that the open position in N' is not open in NP):

(32)



Having discussed several modes of θ-discharge, let us turn now to a representational analysis of split constituents.

I will first examine the representations (21a) and (22a). Recall that numeral modifiers always display an intersective reading (cf. section 4.6.2.). So the modification in (21a) is an instance of θ-identification. We observed that (22a) is a case of syncategorematic modification. Analogously to (30a), we may handle this sentence by the combination of θ-identification and autonymous θ-marking. Let us turn to (21b) and (22b).

Suppose we assign for example the head noun *biciklit* the status of direct object argument in these sentences. Either it is in a complement position itself, or it is related to this position by scrambling. This has two consequences.

First, the Projection Principle is satisfied, because the transitive verb *lát* has now two arguments, a subject and an object. Second, the modifiers *kettőt* and *nagyot* turn into adjuncts. Accordingly, I assume that they are base-generated in a non-A-position, as any other adjunct is. This accounts then for the fact that the parts of split constituents display freedom of word order. The question arises then how the parts of split constituents are related under a representational approach.

The semantics of split constituents is characterized by simple conjunction (cf. (20)). From this it follows that the parts of these constituents must be related by means of θ-identification. The question to answer is how this relation is set up and how it is restricted.

Nominals and adjectives have an open position in their θ-grid which must be discharged. This covers the fact why only certain types of modifiers (adjectives, numerals, some quantifiers) may participate in split constituent constructions, namely, exactly those which may function as predicate nominals, and thus may be open structures.

The fact that the parts of split constituents have this property also provides an explanation for the observation that they must be bare. Modification by a definite or indefinite determiner would close the structure, i.e. eliminate its θ-role from the grid, by the mode of θ-binding. Hence, θ-identification would be blocked as a violation of the θ-criterion (cf. (26b)).

Szabolcsi (1986b: 48) notes an interesting apparent exception to this restriction. Szabolcsi observes that if the separated modifier is in the superlative it may be modified by a determiner:

(33) Zöld lóval itt találkoztam a legszebbel
green horse-INSTR here met-AGR1sg the prettiest-INSTR
'I met a prettier green horse here than anywhere else.'
*'As for green horses, it was here that I met the prettiest of them, i.e. the prettiest green horse that there is.'

Observe from the glosses that a superlative adjective modified by a definite article may only be separated from the head noun in the comparative reading. This sentence is ungrammatical in the absolute reading of the superlative.

Szabolcsi claims that the superlative phrase in the absolute reading is in the Spec of the NP, whereas the superlative phrase is NP-internal in the case of the comparative reading. Her conclusion fits in nicely with our result. In the absolute reading the NP would be closed by a binder in the Spec of the NP. In the comparative read-

ing, although there is a determiner present, the NP counts as an open structure with an undischarged θ-position. Hence, the superlative phrase may be available for split constituents only on the comparative reading.

Higginbotham assumes that θ-identification is restricted by government. One part of split constituents must be base-generated in a non-A-position outside a maximal projection by assumption. Therefore, θ-identification in these cases cannot be restricted by government. Instead I will assume that this type of θ-discharge between the parts of split constituents is conditioned by a weaker structural condition than government, namely, by *c-command.* C-command is the minimal structural condition two mutually dependent constituents generally have to obey. It is always respected in split constituents because one of the parts is in a non-A-position from where it can c-command the part in a complement position. This covers then the fact that no subject-object asymmetries turn up with split constituents.

θ-identification is further restricted by a morphological licensing condition, i.e. *identity of morphological features* (case, number, etc.). This depends on the different functions morphological markers may have in a language. In Hungarian, case-markers may act as an attribute relater in split constituents. A case-marker indicates that an adjunct is predicated of the head noun. The optional agreement of plural features does not form an obstacle under this analysis (cf. 4.6.1.(IV)).

If this analysis of noun modification in Hungarian is on the right track, we expect that the following predictions about the possibility of "splitting" single NPs will be borne out. In case the semantics of a modifier-noun combination cannot be captured by a simple conjunction, a split constituent is not allowed, or to put it differently, if it is not possible to take the combination of adjective and noun as having as its denotation the intersection of the set denoted by the adjective with the set denoted by the noun. This arises at least in the following two cases.

(*i*) Modification is interpreted as a combination of θ-identification and autonymous θ-marking. Consider the following pair:

(34) a. Mari nagy bolhát látott
Mary big flea-ACC saw-AGR3sg
'Mary saw a big flea.'

b. *Mari bolhát látott nagyot
Mary flea-ACC saw-AGR3sg big-ACC

Sentence (34a) means: 'Mary saw a thing that was a flea and it was big for a flea'. This reading is a case of a combination of θ-identification with autonymous θ-marking. In sentence (34b), the modifier is separated from its head noun. According to generalization (20), the semantics of such constructions is captured by simple conjunction. Therefore, the sentence should mean: 'Mary saw a thing that was a flea and it was big'. However, this is not in coherence with the properties of fleas. Even big fleas are not big creatures. Hence, the ungrammaticality of (34b).

(*ii*) Modification is interpreted as a case of autonymous θ-marking only. Examples of the latter are phrases like *former president* and *alleged murder.* Adjectives such as *former* and *alleged* cannot have as denotation the intersection of any such sets. For example, *former president* cannot be analysed as the intersection of the set of presidents with the set of things *that are former*. It is easy to see that this latter phrase is meaningless. Compare the following sentences:

(35) a. Mari látta az előző elnököt
Mary saw-AGR3sg the former president-ACC
'Mary saw the former president'
b. *Mari elnököt látott előzőt
Mary president-ACC saw-AGR3sg former-ACC

In sentence (35a) the phrase 'former president' designates a person whose presidency is former. This is not a case of intersective modification (cf. Higginbotham 1985a: 567, who suggests to analyse this case by adopting a temporal positions in the θ-grids of nouns). Hence, as (35b) shows, it is impossible to have the split variant.

Consider the following pair:

(36) a. Mari látta az állitólagos gyilkost
Mary saw-AGR3sg the alleged murder-ACC
'Mary saw the alleged murder.'
b. *Mari gyilkost látott állitólagosat
Mary murder-ACC saw-AGR3sg alleged-ACC

Sentence (36a) is a case of autonymous θ-marking (cf. Higginbotham 1985a). An alleged murder is true of things alleged to be a murder. Again, it is not possible to form a split constituent construction (cf. (36b)), as this presupposes an intersective reading of the modifier-noun combination.

Summarizing, I have discussed the syntax and semantics of noun-modification in Hungarian. I have isolated the syntactic and semantic conditions under which one of the variants of noun-modification, the split constituent, appears (cf. (12) and (20)). Further, I have considered two analyses which relate the split constituent to the unmarked single constituent, a derivational and a representational one. Neither of them violates the Projection Principle, because the biuniqueness requirement on this principle is obeyed.

I have argued that a representational analysis makes the better predictions. The reason for this is that the derivational approach assumes that the parts of split constituents are related by trace-binding. At the position of the modifier a trace is postulated. This assumption causes morphological, syntactic, and semantic anomalies.

The representational approach, on the other hand, assumes that some positions in the grids of the parts of split constituents are related. This type of binding is distinct from trace-binding. A position in a grid is not a formative of the grammar but rather a part of the lexical entry of a predicator whose grid it is. Therefore, the above anomalies are avoided under a representational analysis.

Let us turn now to a discussion of split constituents in other languages.

4.6.4. *Split Constituents and the Theory of Grammar*

In the literature, split constituents have been discussed most extensively for Warlpiri and German. As we will demonstrate below, the properties of split constituents in these languages coincide largely with the ones of Hungarian. Therefore, it is suspicious that they give rise to widely different theoretical views. First, I will discuss split constituents in Warlpiri and then I will turn to this phenomenon in German.

(I) Split Constituents in Warlpiri

Hale (1983) argues that the Projection Principle applies in *Warlpiri* only at LS. Under this assumption, a many-to-one linking from PS onto LS is allowed. Consequently, split constituents may appear unrestrictedly.

The following sentences exemplify some instances of this phenomenon in Warlpiri:

(37) a. *Wawirri* kapirna pantirni *yalumpu*
kangaroo Aux spear-nonpast that
'I will spear that kangaroo.'
(Hale 1983: (4))

b. *Malikirli* Φ- ji yarlkurnu *wiringki*
dog-ERG perf 1obj bite-past big-ERG
'The/a big dog bit me.'
'The/a dog me and it was big.'
(Hale 1983: (39))

Word order is free in these sentences, apart from Aux, which is usually in second position in Warlpiri.

The composing parts of an NP in English may appear linearly non-adjacent in a Warlpirian clause. For example, in (37a) the restrictive determiner *yalumpu* modifies the noun *wawirri* as in the English translation. According to Hale, this discontinuous pair forms an expression corresponding to that represented by the single syntactic constituent *wawirri yalumpu* in (38):

(38) *Wawirri yalumpu* kapirna pantirni
kangaroo that Aux spear-nonpast
'I will spear the kangaroo.'
(Hale 1983: (5))

Let us consider now whether split constituents in Warlpiri obey the same restrictions as the ones in Hungarian.

I formulated the syntactic restriction (12) on the occurrence of this phenomenon, here repeated for convenience as (39):

(39) The parts of split constituents are nominal predicates and display identity of morphological features (case, number, etc.)

Nash (1980) and Hale (1981) observe that the parts of split constituents in Warlpiri must have the same categorial and morphological features (N, case, number) as well. For example, in (37a) both parts are in the absolutive singular, and in (37b) they are marked ergative singular. Hence, split constituents in both Warlpiri and Hungarian display *identity of morphological features.*

Several authors (cf. Nash 1980, Hale 1981; 1983, and Simpson 1983) claim that the category N includes both nominals and adjectives in Warlpiri. There are no formal morphological and syntactic properties which distinguish these parts of speech. Nash (1980: 15), for example, points out that adjectives are in fact nominals that prefer a reading which has an argument position in it. This is illustrated by the following sentence:

(40) Pakarni kapala maliki *witajarrarlu*
strike-nonpast Aux-pres-3dual dog small-dual-ERG
'The two small ones (children, say) are striking the dog.'
(Hale 1981: (31))

Note that the adjective *wita* 'small' may receive the interpretation of a full NP in this sentence.

We may conclude then that both adjectives and nominals in Warlpiri may function as nominal predicates. In fact, any part of an NP in English may be turned into an independent NP in this language. From (37a), it is clear that even a determiner such as *that* displays this property, since it participates in split constituents.

Hence, there seems to be a correlation between the ability to promote a modifier into a predicate and the participation of that modifier in split constituents. Languages may differ with respect to this ability. For example, modern English does not display split constituents of the type discussed here. Nor may modifiers head an NP. As a consequence, in an elliptical NP the missing head must be represented by one:

(41) a big *(one)

In Hungarian and Warlpiri, modifiers may be promoted into predicates, although the group of modifiers participating is more restrictive in Hungarian. Hungarian allows these modifiers to be only adjectives, numerals, and some quantifiers, whereas Warlpiri allows all modifiers to become nominal predicates.

This ability to promote modifiers into predicates might then be a parametric difference among languages. English and Warlpiri are on the ends of the scale, while Hungarian is somewhere in the middle. English has no split constituents, in Warlpiri this phenomenon appears freely, and in Hungarian split constituents do occur but not as freely as in Warlpiri. In sum, there is no difference between Hungarian and Warlpiri in the syntactic status of the split parts. In both languages, they are *nominal predicates* which head an NP.

Let us discuss now whether the semantics of split constituents in Warlpiri coincides with the semantics of these constituents in Hungarian. Recall that (12), here repeated as (42), captures the semantics of Hungarian split constituents:

(42) Split constituents express simple conjunction

According to Hale (1983), split constituents in Warlpiri may receive at least two interpretations. Consider again sentence (37b), here repeated as (43):

(43) *Malikirli* Φ- ji yarlkurnu *wiringki*
dog-ERG perf 1obj bite-past big-ERG
'The/a big dog bit me.'
'The/a dog me and it was big.'

On one reading of this sentence, the expression *wiringki* is taken as a modifier of *malikirli,* constituting an expression which corresponds to the single constituent *maliki wiringki* in the following sentence:

(44) *Maliki wiringki* Φ- ji yalkurnu
dog big-ERG perf 1obj bite-past
'The/a dog bit me.'

Hale refers to this reading as the 'merged' interpretation. That the subject in (44) is a single constituent is shown not only by the position of Aux but also by the manner in which the case-category of this expression is marked. The ergative suffix appears on the final subconstituent only. On the other reading of (43), *wiringki* is simply predicated of *malikirli.* It receives an unmerged interpretation.

The parallelism between split constituents in Hungarian and Warlpiri breaks down at this point. Hungarian split constituents have only what Hale calls an unmerged interpretation (cf. (42)). There is, however, some reason to be careful with the claim that one of the interpretations of the split constituent in (43) is synonymous with the interpretation of the single expression in (44). Hale himself (1983: fn.2) notes that the role of word order in interpretation is an aspect of Warlpiri which is still very much in need of investigation. Furthermore, McGregor (1989), in a paper on split constituents in Gooniyandi (another aboriginal Australian language related to Warlpiri) emphasizes that single and split constituents have different semantic, pragmatic, and phonetic properties.

Summarizing, split constituents in Hungarian and Warlpiri display the same syntactic properties. The parts of split constituents may be linked only under identity of morphological features, and they are nominal predicates. Semantically, Hungarian and Warlpiri seem to diverge with this phenomenon. Hungarian split constituents do not exhibit a merged interpretation.

In my view, these syntactic parallelisms between split constituents in Hungarian an Warlpiri do not justify a radically different analysis. If these constituents do not violate the Projection Principle in Hungarian, then the null-hypothesis should be that they do not in Warlpiri either.

An analysis of Warlpiri which respects the Projection Principle has been elaborated in Jelinek (1983). Jelinek argues that the clitic pronouns in Aux serve as verbal arguments which satisfy the Projection Principle. As a consequence, nominals are not verbal arguments but are adjuncts coindexed with these arguments. There is nothing which prohibits the binding of the parts of split constituents along the lines of section 4.6.3. The precise elaboration of this, however, is beyond the scope of this study.

(II) Split Constituents in German

Below, I will discuss split constituents in *German.* In my discussion, I will heavily rely on observations made in Bayer (1987), Fanselow (1987b), and Van Riemsdijk (1987). Split constituents in German have a number of properties in common with such constituents in Hungarian. Hence, it is attractive from a theoretical point of view to analyse them in a similar way.

Van Riemsdijk (1987) argues for a derivational approach. In order to do so, Van Riemsdijk proposes to extend derivational grammar with the theory of regeneration. I will argue, however, that Van Riemsdijk's analysis is rather defective in that it makes a number of *ad hoc* claims and incorrect predictions. Before entering this theoretical debate, let us first examine some of the relevant properties of split constituents in German.

(*i*) According to Van Riemsdijk, this phenomenon in German is formed by topicalizing the head noun which is an N' and leaving behind the determiner in the sour-

ce position. Therefore, Van Riemsdijk refers to this construction type as *Split Topicalization* (ST). Compare the following example:

(45) *Bücher* habe ich *keine* mehr
books have I none more
'As for books, I don't have any more.'
(Van Riemsdijk 1987: (1))

The head noun *bücher* is in the preverbal topic position which is identified as the Spec of CP position, and the stranded determiner is in the object position in this sentence. Recall split constituents in Hungarian are not so positionally restricted as ST in German (cf. 4.6.1.(I)).

Van Riemsdijk observes further that the topic NP must be indefinite. It may not be modified by an overt definite or indefinite article, except by *ein* in some southern varieties of German (cf. *(iv*A) below). The split source must be indefinite but is not otherwise restricted. Split constituents in Hungarian are restricted by a *definiteness effect* as well (cf. 4.6.1.(III)).

(*ii*) ST requires identity of number and case agreement. In the following sentence, both parts must be in the accusative singular:

(46) *Einen/*ein* *Wagen* has er sich noch *keinen* gekauft
a-ACC/NOM car has he refl yet none bought
(Van Riemsdijk 1987: (20))

Recall that split constituents in Hungarian display *identity of morphological features* as well, at least with reference to the case-marker (cf. section 4.6.1.(II)).

(*iii*) Some determiners, such as *kein* 'no', bear different *adjectival inflection* depending on whether they are in an independent elliptical NP or whether they are in construction with a head noun. When they act as an independent NP their inflection switches from weak (cf. (47b)) to strong (cf. (47a)):

(47) a. Er hat *keines*/*kein
he has no

b. Er hat *kein*/*keines Geld
he has no money
(Fanselow 1987b: (43))

Such a determiner in the source position of ST must take the inflection of the independent form, that is, it must appear with strong inflection:

(48) *Geld* hat er *keines*/*kein
money has he no

Fanselow (1987b) argues that in case the modifier appears in an elliptical NP, it has not become a noun. The reason for this is that even in such an NP the modifier retains its adjectival properties.

There are three-classes of case-number-gender endings for adjectives, the so-called 'strong', 'weak', and 'mixed' systems of inflection. Choice among them is triggered by the respective determiner:

(49) a. Ein *roter* Apfel
a red apple

b. Der *rote* Apfel
the red apple

Nouns, on the other hand, have just one class of case-number-inflection:

(50) a. Ein Bote
a herald

b. Der Bote
the herald
(Fanselow 1987b: (46))

Note now that in NPs without overt nominal heads, adjectives retain the three-valued system of inflection:

(51) a. Ein interessanter
an interesting
'An interesting one'

b. Der interssante
the interesting
'The interesting one'
(Fanselow 1987: (47))

(*iv*) The parts of ST cannot appear as single NPs in some cases. This implies that there is in these cases *no* source to which the parts of ST can be related under a movement analysis.

(*A*) Van Riemsdijk observes that some varieties of southern German allow the head noun in topic position to be modified by an independent determiner. Van Riemsdijk refers to this as *determiner overlap*. With this phenomenon, the determiner in the topic part is always the simple indefinite article, that is, *ein* for singular count nouns and zero for singular mass nouns and plurals. Compare, for example:

(52) *Einen Wagen* hat er sich noch *keinen* leisten können
a car has he refl yet none afford could
'As for cars, he has not been able to afford one yet.'
(Van Riemsdijk 1987: (4))

In this sentence, both the topic and the source position contain a determiner. The split constituent cannot be derived from an underlying source which contains both determiners, because such a single NP does not exist:

(53) a. *Einen keinen Wagen b. *Keinen einen Wagen

(*B*) Another case in which the parts of ST cannot be related to a single NP is with the word *welch-*. As an independent NP, it has the meaning of an existential quantifier (cf. (54a)). When it is part of a single NP, however, *welch-* cannot have this meaning (cf. (54b)):

(54) a. *Geld* frage ich mich ob er *welches* hat
money ask I me whether he some has
'I wonder if he has some money.'
b. *Ich frage mich ob er *welches Geld* hat
'I wonder if he has some money.'
(Fanselow 1987b: (40))

(*v*). Van Riemsdijk (1987: 6) and Bayer (1987) argue that the parts of ST are *complete* NPs.

First, determiner overlap: both the topic and source part are turned by the determiner into a full NP (cf. (52)).

Second, the determiner has strong inflection in ST just as in independent elliptical NPs (cf. (51)). Recall that the parts of split constituents in Hungarian display

this property too. They have the same lexical forms as independent elliptical NPs or the predicative parts of predicative sentences (cf. section 4.6.1.(VI))

Third, nouns which cannot function as independent NPs may not participate in ST. Hence, the singular unmodified noun *Foto,* unlike its plural counterpart, yields an ungrammmatical result with ST:

(55) a. Fotos sehe ich viele
photos see I many
'I am seeing many photos.'
b. Ich sehe Fotos
I see photos
'I am seeing photos.'
c. *Foto sehe ich das
photo see I that
d. *Ich sehe Foto
I see photo
(Fanselow 1987b: (45))

(*vi*) Joseph Bayer (personal communication) informs me that ST is subject to a similar semantic restriction as split constituents in Hungarian (cf. (20)). A non-intersective modifier may not participate in ST. Therefore, (56a) with the intersective modifier *rothaarig* is grammatical, unlike (56b) with the non-intersective modifier *angeblich:*

(56) a. *Mörder* hat er *einen rotharigen* getroffen
murder has he a redhaired met
'As for a murder, he has met a redhaired one.'
b. **Mörder* hat er *einen angeblichen* getroffen
murder has he a alleged met

(*vii*) According to Van Riemsdijk, the meaning of the word *welch-* is dependent on its syntactic context. When it is part of an NP modifying a head noun, it has the meaning of *which* (cf. (57a)), but it has the meaning of an existential quantifier when it is elliptical (cf. (57b)). (If the existential reading is preserved in a single NP *welch-* must be pefixed with *irgend-*). Van Riemsdijk observes now that *welch-* may only have the existential reading *when* it participates in ST (cf. (57c)):

(57) a. *Welche* unbeschädigten Exemplare hast du?
which undamaged copies have you
(*welche* = which)
b. Hast du *welche?*
have you any
(*welche* = some)
c. Unbeschädigte Exemplare habe ich kaum noch *welche*
undamaged copies have I hardly still any
(*welche* = some)

(*viii*) According to Van Riemsdijk, ST obeys the diagnostics of move-α, since it is sensitive to island constraints. It may not violate the Wh-island Constraint, the Complex Noun Phrase Constraint, and it does not allow Preposition Stranding. Further, it displays ECP-effects with extraction from the left-branch and it displays reconstruction effects.

Van Riemsdijk observes a paradox now. Several properties of ST such as the fact that there is no underlying source for a movement analysis in the case of determiner overlap (cf. (*ivA*)) and with the word *welch-* (cf. (*ivB*)), and the fact that both parts of ST are complete NPs (cf. (*v*)) suggest that ST cannot be derived by move-α. On the other hand, it obeys the diagnostics of movement. In order to escape this paradox,

Van Riemsdijks invents the theory of regeneration which filters the application of move-α.

Let us summarize the essence of this theory. Van Riemsdijk allows move α to affect any category on the X'-projection. According to Van Riemsdijk, ST involves an instance of N'-movement which leaves a trace in the source position.

Van Riemsdijk formulates an S-structure filter which does not allow S-structure representations containing an X'-category which is not dominated by its maximal projection. This filter permits regeneration of the X'- projection in topic position into a full-fledged NP.

Regeneration may be followed by the partial relexicalization of the regenerated structures. The relevant morphosyntactic features such as [count], [gender], [number], and [case] which are for the most part inherent features of the head noun, are used to determine the lexical form of the determiner. A recoverability requirement on relexicalization accounts for determiner overlap.

Regeneration and relexicalization are subject to parametric variation, since some languages such as modern English do not allow split constituents, and some dialects of German do not allow determiner overlap with ST.

Van Riemsdijk states that this derivational theory of ST is both theoretically and empirically superior to a representational account. However, regeneration runs into the following anomalies.

(I) It is not obvious why the machinery of regeneration applies at all in case of ST. Van Riemsdijk assumes that ST is an instance of N'-movement. Some of its properties, however, suggest that both parts are full NPs (cf. *(v)*). This is also acknowledged by Van Riemsdijk (1987: 6) himself. In other words, it remains unclear why the source NP should contain an N'-gap.

Alternatively, it could be assumed that the determiner/modifier in source position heads the remnant NP, such as with split constituents in Hungarian (cf. section 4.6.3.), or it could be assumed that the head of the source NP is small *pro* (cf. Fanselow 1987b).

According to Fanselow, the latter alternative also explains the switch of weak to strong inflection in elliptical independent NPs and the source NP in ST. Only the strong adjectival inflection can license *pro.* Therefore, in languages without strong adjectival inflection, like English, *pro* has to be spelled out in elliptical NPs:

(58) An interesting *(one)

(II) Van Riemsdijk argues that regeneration is supported by the observation that the ordering restrictions within a single NP are preserved under movement. According to Van Riemsdijk, the element which is nearest to the head noun in a single NP appears in topic position. Hence, only *Amerikanisches* can be fronted with the following pair yielding a grammatical result in (60a):

(59) a. ein neues Amerikanisches Auto
b. *ein Amerikanisches neues Auto
(Van Riemsdijk 1987: (48))

(60) a. *Ein Amerikanisches Auto* kann ich mir *kein neues* leisten
an American car can I refl no new afford
b. **Ein neues Auto* kann ich mir *kein Amerikanische* leisten
(Van Riemsdijk 1987: (47))

Van Riemsdijk claims that under the movement theory the contrast in (60) can immediately be reduced to the principles that account for the ordering restrictions on the adjectives in the non-split NP in (59). Although the correlation between these pairs may be accounted for by regeneration, it is also in agreement with an alternative theory along the lines of section 4.6.3. Since the predication relation between the parts of ST qualifies full NPs.

But let us turn now to ordering restrictions with NPs in Hungarian. Compare the Hungarian counterparts of (59):

(61) a. egy új *amerikai* autó
a new American car
b. *egy *amerikai új* autó

However, contrary to German in Hungarian the internal order of modifier within a single NP does not have to be preserved with split constituents:

(62) a. Amerikai autót vettem *ujat*
American car-ACC bought-AGR1sg new-ACC
'I bought an American car such that it was new.'
b. *Új* autót vettem *amerikait*
new car-ACC bought-AGR1sg American-ACC
'I bought a new car such that it was american.'

Thus, the correlation in the German pairs (58) and (59) does not turn up in these Hungarian pairs. If the correlation in German is an argument in favour of move-α in ST, then the absence of such a correlation in Hungarian is an argument against this rule in Hungarian split constituents.

(III) Regeneration runs into an ordering conflict with lexical insertion. Van Riemsdijk (1987: fn.5) assumes that relexicalization applies at or after S-structure, because of the morphological form of determiners which participate in the inflection switch such as *kein* (cf. *(iii)*). However, Van Riemsdijk (p.29) also assumes that lexical insertion must apply at D-structure, since otherwise the relative order of adjectives (cf. *(II)*) cannot be determined. Such principles have to refer to the lexical content of adjectives. Thus, lexical insertion must take place at D-structure to account for the relative order of adjectives, but it may not apply at D-structure otherwise the morphological form of some determiners cannot be predicted. To assume, however, that only relexicalized elements are inserted at S-structure is rather *ad hoc.*

(IV) Regeneration does not predict why non-intersective modifiers may not participate in ST (cf. (vi)). Van Riemsdijk (1987: 8) covers lexical meaning at or after S-structure in order to avoid the problems with the change of meaning of *welch-* under a movement analysis (cf. (vii)). However, if lexical meaning is fixed at or after S-structure and regeneration applies at S-structure, it is unclear why non-intersective modifiers may not participate in ST. After regeneration a full-fledged NP is available which could denote the meaning of non-intersective modifiers.

(V) Van Riemsdijk argues that the reassembling of the NP under a representational account can partly account for the determiner overlap problem. But it can not cover the fact that the only type of determiner that shows up in the topic position is the simple indefinite determiner. In order to handle this fact within a representational approach, we could follow here Van Riemsdijk's suggestion that the indefin-

ite article is the unmarked form of the nominal determiner which must be overtly represented in some dialects. It seems to me that this spelling out of the indefinite article does not prevent the topic NP to participate in the unification of the parts of ST. Hence, this fact remains neutral with respect to the choice between movement and base-generation.

Summarizing, ST in German has a number properties in common with split constituents in Hungarian. Some of these properties conflict with a movement analysis. Van Riemsdijk (1987), however, extends the derivational theory with the theory of regeneration in order to account for ST. I have pointed out that this theory makes some wrong predictions, both in the case of German ST and Hungarian split constituents. Therefore, it should be treated with some scepticism. However, the elaboration of a representational analysis of ST lies beyond the scope of this study.

4.7. Conclusions

In this chapter, I presented empirical evidence from Hungarian for the hypothesis that the Projection Principle holds in the mapping from LS onto syntax. Therefore, it is not justified to parametrize the Projection Principle in order to derive some of its apparent 'non-configurational' properties, such as relative free word order or split constituents. This chapter supports the claim that the Projection Principle is a universal principle.

The Projection Principle seems to be violated by omitted pronouns (cf. section 4.2. and 4.5.) and by split constituents (cf. section 4.6.). In the former case, the correspondence between LS and syntax is one-to-null, and in the latter case this correspondence is one-to-many.

However, I argued that the position of omitted pronouns is taken by small *pro*. The presence of this empty category in Hungarian follows from the fact that it displays the same distribution as its overt counterpart, and that there is a functional split between *pro* and its overt counter-part with some syntactic phenomena.

Split constituents may appear only under highly specific syntactic and semantic restrictions. This implies that they are are rather marked. In fact, they are "saved" by an interaction of θ-theory with Case theory, more precisely, with the properties of overt case-markers in Hungarian. So, these phenomena do not question the hypothesis that the relation between LS and syntax is biunique. This is also supported by other phenomena in Hungarian. The Case- and θ-features of verbal predicators are assigned to dummy pronouns when a syntactic constituent is base-generated in a non-A-position, like fronted NPs with Left Dislocation (cf. section 4.3.), or embedded clauses (cf. section 4.5.). The behavior of some lexical items ambiguous between an argumental (personal pronoun) interpretation and a non-argumental one (verbal prefix) is determined by the Projection Principle (cf. section 4.4.).

By keeping the Projection Principle constant, we have created a number of new puzzles. To mention some of them.

The distribution of nominative and accusative *pro* is not totally free in Hungarian. The restrictions have been captured by making reference to structural conditions such as government, the 'richness' of AGR, and discourse hierarchies.

Left-dislocated NPs and embedded clauses cannot receive Case- and θ-features directly from the governing verb. Therefore, I assumed that personal and demonstrative pronouns have the ability to transfer these features to (clausal) antecedents.

Split constituents may be derived under a derivational or a representational approach to grammar. I argued that a representational approach makes the better predictions with this phenomenon in Hungarian.

The phenomena discussed in this chapter do not only support the hypothesis that the Projection Principle applies between LS and PS but they may also give us some insight into the way lexical information is projected. For example, θ-governed lexical case must be visible at surface structure. This appeared from personal pronouns with case-stems, double-faced lexical items, the demonstrative/personal pronoun-switch in the formation of embedded clauses, and left-dislocated structures. What seems to be projected onto syntax with these phenomena is Case. The Projection Principle is category blind in these cases. The properties of transfer systems allow then the different types of categorial constituents in syntax.

If this is correct, it provides an argument for the autonomy of LS. It would be worth investigating whether LS is an independent module. A more complete elaboration of such puzzles will have to await, however, further research.

In this chapter, I have argued that the relation between LS and syntax is subject to a biuniqueness condition. I have, however, not argued for the particular formulation of the Projection Principle in 4.1.(2):

(1) The LS must be represented categorially at each level of representation

This formulation expresses the hypothesis that the relation between LS and syntax is structurally isomorphic, that is, structure is projected from the lexicon. This implies that a VP-node must be present in Hungarian syntax. In the following chapter, I will present empirical evidence for this claim.

5. SYMMETRIES AND ASYMMETRIES IN HUNGARIAN

5.1. Introduction

This chapter discusses clusters of subject-object symmetries and asymmetries in Hungarian and their consequences for its phrase structure and the theory of UG.

É. Kiss (1987a: 36, 44) claims that subject-object asymmetries do not occur in Hungarian. According to É. Kiss, subject and object have the same distribution and they are identically affected by syntactic operations. Therefore, É. Kiss assigns a flat structure to the propositional part of the Hungarian sentence (cf. 1.2.(1)):

(1) $S \rightarrow V\ X^{n*}$

This structure expresses the claim that there is no VP in Hungarian.

I agree with É. Kiss (1987a) that in Hungarian a number of subject-object symmetries show up where asymmetries appear in English. However, I do not think that these symmetries should lead to the postulation of a non-configurational phrase structure. At least, empirical evidence points rather in a different direction. As I will demonstrate below, the presence of subject-object asymmetries in Hungarian is empirically well-motivated (cf. section 5.3.). Incidentally, some of these subject-object asymmetries are even reported by É. Kiss (1987a) herself. In the light of this, I will assume that its phrase structure is hierarchical, configurational. This hypothesis is the null-hypothesis (cf. discussion in section 1.2.). The question arises, then, how subject-object symmetries in Hungarian are to be accounted for? My attempt to solve this puzzle will be rather modest. The reason for this is that some of these phenomena are badly understood at the present state of research and require further study. In section 5.2. and 5.3., I will catalogue subject-object symmetries and subject-object asymmetries. This will be done in terms of the modules discussed in chapter one. In section 5.4., I will evaluate the facts bearing on subject-object symmetries and asymmetries.

The subject-object asymmetries provide empirical evidence for the following two claims about the phrase structure of Hungarian:

(2) a. The Hungarian phrase structure is *configurational*
b. The phrase structure meets the principle of *binary branching*

A corollary of (2) is that Hungarian has VP. Consequently, the arguments of the verb are ordered in a strict hierarchy:

(3) External argument (subject) > internal argument *1* (object) > internal argument *2* (indirect object, arguments with lexical case)

If these statements are correct, then there is no rationale for relaxing X'-theory, government theory or the Projection Principle which would allow a phrase structure of the type in (1).

Concerning the analysis of subject-object symmetries, I will proceed as follows. Two classes of subject-object symmetries will be distinguished.

(*I*) Subject-object symmetries which also appear in unambiguously configurational languages, like Germanic and Romance languages. These symmetries pose the following problem. How are subject-object symmetries derived in languages with a hierarchical structure?

(*II*) Subject-object symmetries which are also attested in established configurational languages such as Dutch or Frisian, but have a somewhat different shape in Hungarian. It seems reasonable to relate them to a specific property of the syntax of Hungarian.

As a working hypothesis, I will relate the symmetries in (*I*) to general principles of UG which can account for subject-object symmetries in other configurational languages as well. The symmetries in (*II*) call for a more language-particular approach involving specific properties of Hungarian syntax such as the recursive CP (cf. 2.2.3.(1)).

5.2. Symmetries in Hungarian

This section discusses the *subject-object symmetries* in Hungarian. I will heavily rely on É. Kiss (1987a), which contains a detailed examination of symmetries in Hungarian. These phenomena appear in the following modules: *X'-theory* (cf. section 5.2.1.), θ-*theory* (cf. section 5.2.2.), *binding theory* (cf. section 5.2.3.), *Wh-module* (cf. section 5.2.4.), and *quantification theory* (cf. section 5.2.5.).

5.2.1. *X'-Theory*

The most direct evidence for a VP-constituent generated by the rules of *X'-theory* comes from operations which do not affect the internal constituency of verb and object. É. Kiss (1987a) argues that the reverse of this statement holds as well. According to É. Kiss, if any rule does not involve the internal constituency of verb and object in a particular grammar, then the VP is missing from that grammar. É. Kiss discusses two cases which bear on this issue, including the *distribution of sentence adverbs* (cf. section 5.2.1.1.), and the *absence of VP-rules* (cf. section 5.2.1.2.). Note, however, that a priori there is no reason to follow this line of argumentation. Trace theory and adjunction can easily account for discontinuities between the verb and its objects (cf. section 5.4.2.).

5.2.1.1. *The Distribution of Sentence Adverbs*

Chomsky and Lasnik (1977) note that verb-object adjacency is required in English.[1] Therefore, the following string is ungrammatical:

(1) *[VP V - Adv - NP]

A consequence of this is that adverbs which are immediately dominated by IP, like sentence adverbs, adverbs of time and place, and adverbs of manner cannot stand between the verb and object but may appear, however, between the verb and the subject in some cases (cf. Jackendoff 1972, Stowell 1981, among others). This is examplified in the following pairs:

(2) a. John *probably* saw Mary
b. *John saw *probably* Mary

(3) a. John *quickly* opened the door
b. *John opened *quickly* the door

The Hungarian counterparts of these sentences are all grammatical:

(4) a. János *valószínüleg* látta Marit
John probably saw Mary-ACC
'John probably saw Mary.'

b. János látta *valószínüleg* Marit
'John probably saw Mary.'

(5) a. János *gyorsan* kinyította az ajtót
John quickly opened the door-ACC
'John quickly opened the door.'

b. János kinyította *gyorsan* az ajtót
'John quickly opened the door.'

Adverbs of place or time may likewise occur between verb and object:

(6) a. Mari elolvasta *tegnap* a könyvet
Mary read yesterday the book-ACC
'Mary read the book yesterday.'

b. Mari elolvasta otthon a könyvet
Mary read at home the book-ACC
'Mary read the book at home.'

These sentences show that restriction (1) on the word order of English is not operative in Hungarian. Consequently, the distribution of (sentence) adverbs does not distinguish the combination verb plus object from verb plus subject in Hungarian.[2]

It could be concluded from this subject-object symmetry that Hungarian is a non-configurational language. However, subject-object symmetries involving the distribution of sentence adverbs turn up in established configurational languages as well. Koster (1986) demonstrates that Dutch is such a case. Therefore, it cannot be a decisive argument with respect to the constituency of VP. In section 5.4.2., I will re-

(1) An apparent exception to this generalization is 'Heavy NP Shift' exemplified by the following pair:
(i) a. John saw *the woman that he loved* very often
b. John saw very often *the woman that he loved*
Note that it is possible to move the italicized heavy NP object to the right in (ib). As a result, this NP and the verb are no longer adjacent. Chomsky (1982) provides evidence that Heavy NP Shift is a syntactic rule which leaves a trace. The trace may then satisfy verb-object adjacency.

(2) Horvath (1986a: 22) argues that the distribution of sentence adverbs supports the assumptions of a VP and a basic SVO-order in Hungarian. According to Horvath, sentence adverbs may occur between the subject and the verb but not between the object and the verb. However, the empirical evidence provided by Horvath is not convincing. Horvath presents only examples (p. 23-25, (15)-(17)) in which the adverbs have the shape of quantifiers. These categories in Hungarian prefer a position to the left of the verb (cf. 2.1.(28f)). Hence, the ungrammaticality of the string [V - Adv[+Q]-Obj] is due to independent reasons.

turn to the question why the distribution of sentence adverbs in some configurational languages does not provide direct evidence for a VP-node?

5.2.1.2. *Absence of VP-rules.*

According to É. Kiss (1987a), direct evidence for a VP in a particular grammar comes from rules taking this constituent as their target. É. Kiss discusses two rules which single out the VP in English but are absent from Hungarian, namely, *(I) VP-preposing,* and *(II) idiom interpretation.* Let us first consider VP-preposing.

(I) É. Kiss (1987a, 30) observes that Hungarian has no operation resembling VP-preposing:

(7) *János megigérte hogy átmegy a vizsgán
John promised-AGR3sg that pass-AGR3sg the exam-SUPER
és átmenni a vizsgán fog
and pass-INFI the exam-SUPER will-AGR3sg
'John promised to pass the exam, and pass the exam he will.'
(É. Kiss 1987a: 30)

In English, the VP-phrase *pass the exam* may be topicalized in the second conjunct of this sentence, unlike in its Hungarian equivalent.

É. Kiss concludes from this that Hungarian lacks a VP. However, there are at least two reasons to be careful with conclusions based on examples like (7). Firstly, VP-rules which may provide direct evidence for the VP do also apply in Hungarian (cf. section 5.4.2.). These rules turn up only in a specific syntactic context, for example, with Left Dislocation. Further, VP-constituency tests, such as "VP-gapping", "VP-deletion" or "VP-reduction", are not very reliable (cf. section 5.4.2.). This conclusion emerges from a cross-linguistic examination. Hence, it is unmotivated to derive far-reaching consequences from these tests for the syntactic structure of a particular language.

(II) Several authors (for example, Chomsky 1981, Aoun and Sportiche 1981, and Marantz 1984, among others) argue that the structure of idioms serves as a diagnostic for VP-constituency. English has a strong preference to choose the subject rather than the object as the free argument in idiom frames. In Hungarian, on the other hand, not only the internal arguments and the verb may form a fixed part of an idiom but also the external argument and the verb.

Consider first the following idiomatic expression in which the nominative subject is the freely substitutable argument:

(8) a. *Ő* éli világát
he live-AGR3sg world-npAGR3sg-ACC
'He lives a merry life.'
b. *Ő* beszél (bele) a világba
he speak-AGR3sg into the world-ILL
'He talks through one's hat.'
c. *Ő* nem esett fejére
he not fell-AGR3sg head-npAGR3sg-SUBL
'He won't let himself be fooled.'

The following idiomatic expression contain two free arguments. The nominative variable is accompanied by either an accusative, dative, instrumental, or sublative argument:

(9) a. *Ő* szidja öt mint a bokrot
he scold-AGR3sg him as the bush-ACC
'He scolds him roundly.'
b. *Ő* ellátja *neki* a baját
he treat-AGR3sg he-DAT the trouble-npAGR3sg-ACC
'He will fix him.'
c. *Ő* bolondját járatja *vele*
he fool-npAGR3sg-ACC go-CAUS-AGR3sg he-INSTR
'He sends him on a fool's errand.'
d. *Ő* kivette a hálóját *rá*
he cast-AGR3sg the net-npAGR3sg-ACC he-SUBL
'He cast his net on him.'

É. Kiss (1987a: 30-31) presents the following examples in which the accusative object is the freely substitutable argument:

(10) a. Az isten áldja meg *őt*
the god bless-AGR3sg perf him
'God bless him.'
b. Az ördög vigye el *őt*
the devil take-IMP-AGR3sg away him
'The devil take him.'
c. A fene egye meg *ő*
the plague eat-IMP-AGR3sg up him
'Plague on him.'
d. Ásó, kapa válassza el *őket!*
spade, hoe separate-AGR3sg away them
'Only spade and hoe ('death') separate them.'
e. Veszik/viszik azt mint a cukrot
buy-AGR3sg/take-AGR3sg it-ACC like the sugar-ACC
'People buy/take it like sugar.'
f. Őt már nem lehet eladni
him already not possible sell-INFI
(lit. 'It is not possible to sell him anymore.')
'He speaks a certain language fairly well.'
g. Akkor lássam *őt* amikor a hátam
then see-IMP-AGR1sg him when the back-npAGR1sg
közepét
middle-npAGR3sg-ACC
'I should see him when I see the middle of my back.'
h. Kenyérrre lehetne kenni *őt*
bread-SUBL can-COND-AGR3sg smear-INFI him
(lit. 'One could spread him on bread.')
'He is so meek.'

É. Kiss reports, furthermore, that the free object argument does not have to be an accusatively marked phrase. It may also be an argument with a lexical case:

(11) a. *Neki* beszélhet az úristen is
he-DAT speak-POT-AGR3sg the lord even
(lit. 'Even the Lord might speak to him.')
'It is no use speaking to him.'

b. Az ördög sugta *neki*
the devil whispered-AGR3sg-def he-DAT
'The devil suggested it to him.'

c. *Neki* hiányzik egy kereke
he-DAT miss-AGR3sg a wheel-npAGR3sg
(lit. 'He has a missing wheel.')
'He is crazy.'

d. Őrá rájött a bolondóra
he-SUBL came-AGR3sg the hour-of-madness
'A fit of madness is upon him.'

e. Az ég roggyon *rá*
the heaven fall-IMP-AGR3sg he-SUBL
'Heaven fall on him.'

f. Nincs benne köszönet
isn't it-INESS thank-ACC
(lit. 'There isn't any thank in it.')
'There is nothing to be gained by it.'

g. Isten őrizzen *tőle*
God save-IMP-AGR1sg he-ABL
'God save me from it.'
(É. Kiss 1987a: 31-32)

In many instances, an idiom may also contain two or more non-subject free arguments:

(12) a. *Azt* harapófogóval kell kihúzni *belőle*
it-ACC pincers-INSTR must out-drag-INFI he-ELAT
'It must be dragged out of him with pincers.'

b. Őt az isten is *neki* teremtette
she-ACC the god even he-DAT created-AGR3sg
'God even created her for him.'
(É. Kiss 1987a: 31-32)

A preliminary descriptive generalization which captures the formation of these idiom frames may be formulated as follows:[3]

(13) An idiom frame may consist of any combination of a verb and its arguments

The behavior of the dative possessor NP within idioms demonstrates that the notion argument is indeed relevant for the formation of idioms. This NP in Hunga-

(3) Kenesei (1985e) observes that idioms in Hungarian display two linear orders. They have either a [VM -V] or a [V - NP] order:

(i) a. A fiú lépre ment
the boy trap-SUBL went
'The boy became a victim of someone's trickery.'

b. Ez a viszgázó kivágta a rezet
this the examinee out-cut the share-ACC
'This examinee did his best.'

(Kenesei 1985e: 337)

Kenesei observes further that scrambling of the constituents in these idioms 'reconstructs' the original compositional meaning:

(ii) a. ?Lépre a fiú ment
'The boy fell into the trap.'

b. ?A rezet ez a vizsgázó vágta ki
'This examinee did his share.'

Suppose, now, that a string can only be assigned an idiomatic interpretation if and only if it is categorially complete and the constituents in that string are in neutral order. Under these assumptions, the above differences support the hypothesis that in (ia) *lépre ment* forms a V-constituent with the neutral [VM -V] order, and in (ib) the idiom frame is a VP with the neutral SVO-order.

rian may be freely scrambled around in the sentence (cf. section 3.1.), although it is not an argument of the verb. The following sentences show that the dative possessor NP may be the freely replaceable argument in an idiom but may not belong to the fixed part of an idiom frame:

(14) a. *Neki* leesett az álla
he-DAT fell-AGR3sg the jaw-npAGR3sg
'His jaw fell.'
b. *Neki* bekötötték a fejét
she-DAT up-tied-AGR3pl the head-npAGR3sg-ACC
'She has got married.'
c. *Neki* kinyílik a bicska a zsebében
he-DAT open-AGR3sg the pocket-knife the pocket-npAGR3sg-INESS
'He gets angry.'

É. Kiss (1987a) makes two assumptions concerning idiom formation. First, it takes place at D-structure. Second, the syntactic structure of idioms is a precise reflection of the syntactic relations at D-structure. According to É. Kiss, this implies that the subject and the other complements of the verb do not differ in hierarchical prominency.

It seems to me, however, that at the present state of research no far-reaching conclusions for syntactic structure should be based on idioms. Too little is known about idioms and their status within a theory of UG. It is unclear at what level of representation idiom formation applies. For example, if the nominative possessor NP is in its NP-internal D-structure position, no idiomatic reading is possible. Compare the counterpart of (14a):

(15) Leesett az (ő) álla
fell-AGR3sg the he jaw-npAGR3sg
'His jaw fell.'

This sentence has only a literal reading, unlike (14a).

Note now that a conflict arises between the assumption that idioms are formed at D-structure (cf. Chomsky 1981, Marantz 1984) and Szabolcsi's (1981a; 1984) hypothesis that the dative possessor NP leaves its possessive NP by movement. Under Szabolcsi's analysis, the idiom interpretation in (14a) would only be available at S-structure. A way out of this conflict would certainly be not to allow idiom formation both at D-structure and S-structure. In section 5.4.2., I will return to the structure of idiom frames arguing that they do not support a non-configurational approach to Hungarian syntax.

5.2.2. θ-*Theory*

I noted in section 3.2.2. that the thematic content of the VP determines the θ-*selection* of the subject. Compare the following examples:

(1) a. János eszi a levest
John eats the soup-ACC
'John is eating the soup.'

b. Az unalom eszi Jánost
the boredom eats John-ACC
'Boredom is eating John.'
(É. Kiss 1987 a: 244)

c. Az irigység eszi Jánost
the envy eats John-ACC
'Envy is eating John.'

d. A méreg eszi Jánost
the anger eats John-ACC
'Anger is eating John.'

e. A fene eszi Jánost
the plague eats John-ACC
'The plague is eating John.'
(É. Kiss 1987c: 22-23)

(2) a. Mari öli az embert
Mary kills the man-ACC
'Mary is killing the man.'

b. A szomjúság öli Marit
the thirst kills Mary-ACC
'Mary suffers from the fact that she is thirsty.'
(Marácz 1986b: 163)

In the presence of an agent subject like in (1a) and (2a) the object of the Hungarian verbs *eszik* 'eat', and *öl* 'kill' can only be interpreted as the theme or patient of the action denoted by the verb. However, in the presence of a cause subject such as in (1b)-(1e) and (2b), the object may receive an experiencer role.

É. Kiss (1987a: 244) regards these selectional symmetries between subject and object as evidence for a non-configurational phrase structure. I will demonstrate, however, that such symmetries appear also in uncontroversial configurational languages, like English (cf. section 5.4.2.6.). Therefore, assigning Hungarian a non-configurational structure on the basis of this is rather misleading.

5.2.3. *Binding Theory*

É. Kiss (1981c; 1982b; 1987a; 1987c) observes that in some instances of *pronominal noncoreference* subject-object symmetries show up in Hungarian where subject-object asymmetries appear in English. In the literature, the following principles have been formulated to cover this phenomenon:

(1) a. *Pronominal Noncoreference:* A pronominal may not c-command its antecedent (Reinhart 1983: 18)
b. *Binding Principle C:* An R-expression (a category that is referentially independent, for example names, Wh-phrases) is free (Chomsky 1981: 188)

In a language in which subject and object occupy asymmetric structural positions different coreference possibilities hold between a pronominal object and an R-expression embedded under the subject, and between a pronominal subject and an R-expression embedded under the object. According to these rules, in the former case coreference should be possible (cf. (2a), (3a)), whereas in the latter case a coreferential reading is blocked because the R-expression is c-commanded by the pronominal (cf. (2b), (3b)):

(2) a. *John's* mother loves *him*
b. **He* loves *John's* mother

(3) a. *Whose* mother loves *him*
b. **Whose* mother does *he* love *t*

In order to predict the grammaticality pattern exemplified in (3) the rules in (1) have to apply before Wh-movement takes place. Alternatively, 'reconstruction' of the *whose*-phrase to its D-structure position could be carried out before these rules are checked.

The Hungarian equivalents of the sentences in (2) and (3) are all ungrammatical under a coreferential reading between the pronoun and the R-expression:[4]

(4) a. **János* anyja szereti (*őt*)
John mother-npAGR3sg love-AGR3sg him
'John's mother loves *him.'*
b. *(Ő) szereti *János* anyját
he love-AGR3sg John mother-npAGR3sg-ACC
**'He* loves *John's* mother.'

(5) a. *(*Őt*) szereti *János* anyja
him love-AGR3sg John mother-npAGR3sg
b. **János* anyját szereti (*ő*)
John mother-npAGR3sg-ACC love-AGR3sg he

(6) a. **Kinek* az anyja szereti (*őt*)
whose-DAT the mother-npAGR3sg love-AGR3sg him
'Whose mother loves *him?'*
b. **Kinek* az anyját szereti (*ő*)
whose the mother-npAGR3sg-ACC love-AGR3sg he
**'Whose* mother does *he* love?'

(7) a. *(*Őt*) *kinek* az anyja szereti
him whose-DAT the mother-npAGR3sg love-AGR3sg
b. *(*Ő*) *kinek* az anyját szereti
he whose-DAT the mother-npAGR3sg-ACC love-AGR3sg

The sentences in (4) and (6) exemplify the Hungarian counterparts of the sentences in (2) and (3). Scrambling of the constituents in these sentences does not affect pronominal noncoreference, the sentences in (5) and (7) are the scrambled variants of (4) and (5). So subject-object symmetry occurs with pronominal noncoreference in Hungarian, as distinct from English. The sentences (4a) and (6a) are ungrammatical under a coreferential reading in Hungarian but their counterparts in English are grammatical.

É. Kiss (1987a: 207; 1987c: 40) explains this symmetry in Hungarian by applying the rules in (1) to a flat sentence structure (cf. 5.1.(1)) in which the subject and object are in a mutual c-command relation. In section 5.4.2.7., I will present some other facts on pronominal noncoreference displaying subject-object asymmetries rather than subject-object symmetries. This suggests that a different approach is required with respect to the paradigm in (4)-(7) without necessarily giving up a configurational analysis of Hungarian.

5.2.4. *Wh-Module*

With *Wh-movement* in Hungarian three types of subject-object symmetries have been observed involving (*i*) absence of *superiority effects,* (*ii*) the lack of that-trace effects, and (*iii*) Wh-movement out of *possessive NPs*. Let us first discuss the absence of superiority effects in Hungarian.

(4) This does not differ under pro-drop. So, these sentences should be added to the cases discussed in 4.2.4.1.(l) which support the claim that *pro* is present when an overt pronoun is omitted.

5.2.4.1. *Absence of Superiority effects*

É. Kiss (1982b; 1987a; 1987c) notes that Hungarian lacks *superiority effects* (cf. Chomsky 1973) with multiple Wh-questions.[5] In English, the Wh-phrase that is structurally superior to other Wh-phrases in the multiple question will occupy the Spec of CP position, whereas the other Wh-phrases must remain in their D-structure positions:

(1) a. Who said what b. *What who said c. *What did who say

The Hungarian counterparts of these questions may be equally grammatical:

(2) a. Ki mit mondott
who what-ACC said-AGR3sg
'Who said what?'
'For which x, x a person,
for which y, y a statement, x said y'

b. Mit ki mondott
what-ACC who said-AGR3sg
'Who said what?'
'For which y, y a.statement,
for which x, x a person, x said y'

Although no superiority effects arise in Hungarian, the meaning associated with the different orders is not the same. The leftmost Wh-phrase has wide scope. This is in accordance the universal condition on scope-interpretation 2.2.(19).

É. Kiss concludes from the absence of superiority effects that subject and object occupy structurally parallel positions, i.e., neither of them is structurally superior to the other. An alternative to this explanation, within a configurational framework of Hungarian, would be to formulate this difference between English and Hungarian in terms of the availibility of preverbal positions for Wh-phrases (cf. section 5.4.3.1.).

5.2.4.2. *Anti-that-Trace Effect*

Chomsky and Lasnik (1977) observe that *long Wh-movement* in English is restricted by the so-called *that*-trace effect. Subject Wh-phrases may undergo long Wh-movement only if the complementizer *that* is omitted (cf. (3a)). This requirement does not have to be obeyed when an object Wh-phrase is extracted (cf. (3b)):

(3) a. *Who* do you think (**that*) *t* saw Bill b. *Who* do you think (*that*) Bill saw *t*

É. Kiss (1981a) and Horvath (1981) note that the *that*-trace effect does not appear in Hungarian. Consider the Hungarian counterparts of these sentences:

(4) a. *Kit* gondolsz *(*hogy*) *t* látta Vilit
who-ACC think-AGR-2sg that saw-AGR3sg Bill-ACC
'Who do you think saw Bill?'

b. *Kit* gondolsz *(*hogy*) Vili látott *t*
who-ACC think-AGR-2sg that Bill saw-AGR3sg
'Who do you think that Bill saw?'

The complementizer *hogy* 'that' is obligatorily present with both extraction from the embedded subject and embedded object position. Thus, we find an anti-*that*-trace effect in Hungarian.

(5) For the syntax and semantics of multiple questions in Hungarian see also Ackerman (1981), E. Kiss (1986; 1987a; 1987c), Kenesei (1986b) and Szabolcsi (1986).

É. Kiss (1987a) argues that this effect can be covered for if the subject and the object are both immediately dominated by the same maximal major category, namely S. The ECP is satisfied under this assumption because the verb properly governs both the subject and the object.[6] However, the violation of *that*-trace effects is also attested in a number of established configurational languages, like Dutch (cf. Koopman 1982, and Koster 1986; 1987: ch.4), Frisian (Jarich Hoekstra, personal communication), Bavarian (a dialect of German, cf. Bayer 1984), Icelandic (cf. Platzack 1987) or Swedish (cf. Engdahl 1984). So, a priori there is no reason to assume that the occurrence of anti-*that*-trace effects in Hungarian provides evidence for a VP-less phrase structure. In section 5.4.2.3., I will present an analysis of these phenomena within a configurational approach to Hungarian.

5.2.4.3. *Wh-movement from Possessive NPs*

Wh-possessor NPs in Hungarian must occur in the dative case and they must be scrambled out of their possessive NPs (cf. section 2.1.). Szabolcsi (1984) observes that these Wh-possessor NPs may be extracted both from an accusative possessive NP (cf. (5a)) and a nominative possessive NP (cf. (5b)):

(5) a. *Kinek* ismertétek [NP a *t* vendégét]
who-DAT knew-AGR2pl the guest-npAGR3sg-ACC
'Whose guest did you know?'

b. *Kinek* alszik [NP a *t* vendége]
who-DAT sleep-AGR3sg the guest-npAGR3sg
'Whose guest is sleeping?'
(Szabolcsi 1984: 92)

É. Kiss (1987c) notes that an extracted dative possessor NP may also participate in long Wh-movement:

(6) a. *Melyik színésznőnek* gondolja János hogy Péter
which actress-DAT think-AGR3sg John that Peter
megtalálta [NP a *t* fényképét]
found the photo-npAGR3sg-ACC
'Which actress does John think that Peter found the photo of?'

b. *Melyik színésznőnek* gondolja János hogy [NP a *t* fényképe] meglett
which actress-DAT think-AGR3sg John that the photo-npAGR3sg up-turned
'Which actress does John think that the photo of was found?'

É. Kiss (1987c), and Szabolcsi (1984) argue that these subject-object symmetries indicate that the subject and object are in similar structural positions with respect to the verb. Wh-movement from the possessive NP leaves a trace which must be pro-

(6) The ECP states that empty categories like Wh-traces must be properly governed. The definition of proper government consists usually of two conjunctive subcomponents. Consider, for example, Koopman (1982):

(i) β properly governs α iff β governs α
a) $\beta = X^0$
b) β is an NP coindexed with α

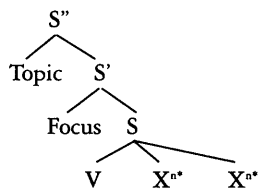
perly governed in agreement with Chomsky's (1981) ECP (see fn.6 for a definition of the ECP). According to É. Kiss and Szabolcsi, the ECP can only be satisfied if the verb, a proper governor, governs both the subject and object. Hence, they conclude that the structure of the Hungarian clause is non-configurational.

In section 5.4.2.4., I will analyse these subject-object symmetries with Wh-movement from possessive NPs within a configurational framework. Our analysis will heavily rely on the fact that such NPs contain an escape hatch for dative possessor raising. Hence, the paradigms above do not necessarily provide an argument for a non-configurational analysis of Hungarian.

5.2.5. *Quantification Theory*

É. Kiss (1987a: 29) presents an argument based on the distribution of universal quantifiers with Topicalization in favor of her phrase structure of Hungarian syntax 1.2.(1), here repeated for convenience as (1):

(1)



É. Kiss sets up the following line of argumentation. Topicalization is known to be incompatible with universal quantification. Therefore, if there are both sentence-initial subjects and objects in a language, and if sentence-initial subjects can be universally quantified, but sentence-initial objects cannot, then it may be concluded that sentence-initial objects are located under a topic node different from the subject position. É. Kiss, however, claims that, unlike for example in Italian, universally quantified subjects and objects display a completely parallel distribution. Compare the following sentences:

(2) a. *Mindenki* megette az ebédet
everyone ate-AGR3sg the lunch-ACC
'Everyone ate the lunch.'

b. *Mindent* megevett János
everything-ACC ate-AGR3sg John
'John ate everything.'

(3) a. **Mindenki* ette meg az ebédet
everyone ate-AGR3sg up the lunch-ACC

b. **Mindent* evett meg János
everything-ACC ate-AGR3sg up John

(4) a. *Mindenki az ebédet megette
lunch-ACC ate-AGR3sg

b. **Mindent* János megevett
everything-ACC John ate-AGR3sg

(5) a. Az ebédet megette *mindenki*
the lunch-ACC ate-AGR3sg everyone

b. János megevett *mindent*
John ate-AGR3sg everything-ACC

According to É. Kiss, this paradigm implies that sentence-initial quantifiers in Hungarian are in the same position.

So, a subject-object symmetry shows up with the Topicalization of universal quantifiers in Hungarian. É. Kiss explains this fact by assuming that Topicalization

moves the subject and the object to the Topic position. These instances of move-α are allowed in structure (1), because both the subject and the object are properly governed by the verb. I will argue in section 5.4.3.2., however, that this phenomenon is due to the fact that the CP is recursive within CP (cf. 2.2.3.(1)). As a result, subject-object symmetries with the Topicalization of universal quantifiers may arise within a configurational phrase structure of Hungarian.

5.3. Asymmetries in Hungarian

This section discusses *subject-object asymmetries* in Hungarian. Subject-object asymmetries occur in the following modules of the grammar, involving *Lexicon* (cf. section 5.3.1.), *X'-theory* (cf. section 5.3.2.), *θ-theory* (cf. section 5.3.3.), *binding theory* (cf. section 5.3.4.), *Case theory* (cf. section 5.3.5.), *control theory* (cf. section 5.3.6.), *Wh-module* (cf. section 5.3.7.) and *quantification theory* (cf. section 5.3.8.).

5.3.1. *Lexicon*

In chapter three, I argued that *lexical phenomena* in Hungarian such as transitivity alternations or compositional θ-assignment depend on the universal status of the subject-object dichotomy in phrase structure. Hence, they are instances of subject-object asymmetries in Hungarian. Furthermore, I demonstrated that the formation of transitivity alternations, which involve Middle Verbs, Unaccusatives, Ergatives, Inchoatives, Passives, Raising Predicates, and Experiencer Verbs, is mediated by suffixes. In this section, I will examine two other suffix-mediated transitivity alternations, including *reflexivization,* and *reciprocalization* (cf. section 5.3.1.1.). It will turn out that these phenomena affect only the accusative argument of a transitive verb. Next, I will investigate *noun-incorpration* in Hungarian. I will conclude that only underlying non-subject arguments may be incorporated (cf. section 5.3.1.2.).

5.3.1.1. *Reflexivization and Reciprocalization*

In Hungarian several verbal suffixes may trigger *reflexivization* and *reciprocalization.* The suffixes with this property have an *-ik* ending: *-ódik/ödik, -özik/özik, -ódzik/ödzik, -odik/edik/ödik, -ozik/ezik/özik, -kodik/kedik/ködik*, and *-kozik/kezik/közik* (cf. Károly 1982). Some of these suffixes participate also in passive morphology with the properties in 3.3.(10). According to Komlósy (1985), it is hard to predict which verb allows suffixation by which of these suffixes or which of the verbs will have a reflexive, reciprocal, or frequentative reading.

Let us consider the following examples with Reflexivization:

(1) a. János borotválja Pétert
John shave-AGR3sg Peter-ACC
'John shaves Peter.'

b. János borotválja magát
John shave-AGR3sg himself-ACC
'John shaves himself.'

c. János borotvál*kozik*
John shave-REFL-AGR3sg
'John shaves himself.'
(Komlósy 1985: 72)

(2) a. Mari mossa Pétert
Mary wash-AGR3sg Peter-ACC
'Mary washes Peter.'

b. Mari mossa magát
Mary wash-AGR3sg herself-ACC
'Mary washes herself.'

c. Mari mosa*kodik*
Mary wash-REFL-AGR3sg
'Mary washes herself.'

These examples display sentences with the verbs *borotvál* 'shave' and *mos* 'wash'. As may be observed from the (a)-sentences, these verbs are transitive verbs of the agent-theme class and are associated with a NOM-ACC case frame. The (b)-sentences represent the analytic variant of reflexivization formed with the reflexive pronoun *maga* 'himself/herself'. (cf. section 5.3.4.1. for a discussion of this construction). This pronoun is associated with the accusative argument of the verb which bears the theme role. The (c)-sentences exemplify the synthetic alternant of reflexivization.

Attachment of the reflexive morphology (REFL) has two consequences. Firstly, the accusative argument is deleted from the case frame of the verb. Secondly, following Marantz (1984), I suppose that reflexive morphology absorbs the theme role associated with these transitive verbs. Note that under this analysis no violation of the Projection Principle occurs.

Let us turn to a discussion of reciprocalization. Komlósy points out that adding reciprocal morphology (REC) to a transitive verb has the same effects as the attachment of reflexive morphology. The only difference is that in some cases the deletion of the accusative argument is counterbalanced by the occurrence of an optional instrumental argument. Compare:

(3) a. A fiúk verik a lányokat
the boys beat-AGR3pl the girls-ACC
'The boys are beating the girls.'

b. A fiúk ver*ekednek* (egymással)
the boys beat-REC-AGR3pl each other-INSTR
'The boys are fighting (with each other).'

(4) a. A gyerekek kergetik a macskákat
the children chase-AGR3pl the cats-ACC
'The children are chasing the cats.'

b. A gyerekek kergetőznek (?egymással)
the children chase-REC-AGR3pl each other-INSTR
'The children are chasing about.'
(Komlósy 1985: 73)

In (3) and (4), we find sentences with the Hungarian transitive verbs *ver* 'beat' and *kerget* 'chase'. I will assume that the theme role is absorbed by the reciprocal suffix. This avoids a violation of the Projection Principle.

Summarizing, suffix-mediated Reflexivization and Reciprocalization in Hungarian affect only the accusative argument of a transitive verb of the agent-theme semantic class. Hence, these transitivity alternations display a subject-object asymmetry.

5.3.1.2. *Noun-Incorporation*

Several authors (see, Ackerman 1984, Horvath 1986a, Komlósy 1985, Szabolcsi 1986e) have observed that Hungarian exhibits *Noun-Incorporation.* In order to examine the syntactic properties of this phenomenon consider the following sentences:

(5) a. Mari (*a/egy) *könyvet* olvas
Mary the/a book-ACC read-AGR3sg
'Mary is book-reading.'
b. Péter (*a/egy) *fát* vág
Peter the/a wood-ACC cut-AGR3sg
'Peter is wood-cutting.'
c. János (*az/egy) *eleget* tesz az igéretnek
John the/a enough-ACC make-AGR3sg the promise-DAT
'John fulfills the promise.'
d. János (*a/egy) *fejbe* veri magát
John the/a head-ILL beat-AGR3sg himself-ACC
'John hits himself to the head.'
e. Mari (*a/egy) *számon* tartja a költségeket
Mary the/a track-SUPER keep-AGR3sg the expenses-ACC
'Mary keeps track of the expenses.'

These sentences illustrate the following properties of Noun-Incorporation:

(6) a. The incorporated noun cannot be modified by an article
b. The construction receives a generic, indefinite, sometimes an idiomatic interpretation
c. The incorporated noun is preferably left-adjacent to a finite verb
d. Any argument of the verb, except the nominative one, may be incorporated

In the studies referred to above, it has been argued that incorporated nouns occupy the VM-position (cf. the sections 2.2. and 4.4.2. for a discussion of this position). This accounts, then, for the properties (6a)-(6c) of this construction. VMs may only be X°-categories. Therefore, they may not be modified by an article. VM and V form a V'-constituent which may have a non-compositional meaning. Finally, VMs occur left-adjacent to a finite verb in their neutral order.

VMs may be and sometimes must be postposed, for example, when another constituent of the sentence is focussed. Compare the counterparts of (5) with a focussed NP:

(7) a. MARI olvas *könyvet*
'It is Mary who is book-reading.'
b. PÉTER vág *fát*
'It is Peter who is wood-cutting.'
c. JÁNOS tesz *eleget* az igéretnek
'It is John who fulfills the promise.'
d. JÁNOS veri *fejbe* magát
'It is John who hits himself to the head.'
e. MARI tartja *számon* a költségeket
'It is Mary who keeps track of the expenses.'

One could argue that we are not facing noun-incorporation but something else. However, if a non-finite alternant of the verbs in (5) and (7) is chosen, like an infinitive or a deverbal noun, the noun is "sucked in" by the verbal form.

The infinitive is formed by adding the suffix *-ni* (INFI) to the verbal stem (cf. (8)), and the deverbal noun by adding the suffix *-és/ás* (NOMI) (cf. (9)):

(8) a. *könyvet* olvasni
book-ACC read-INFI
*olvasni *könyvet*
'book-reading'

b. *fát* vágni
wood-ACC cut-INFI
*vágni *fát*
'wood-cutting'

c. *eleget* tenni az igéretnek
enough-ACC make-INFI the promise-DAT
*tenni *eleget* az igéretnek
'to fulfill the promise'

d. *fejbe* verni magát
head-ILL beat-INFI himself-ACC
*verni *fejbe* magát
'to beat oneself to the head'

e. számon tartani a költségeket
track-SUPER keep-INFI the expenses-ACC
*tartani *számon* a költségeket
'to keep track of the expenses'

(9) a. *könyv* olvasás
book read-NOMI
*olvasás könyv
'book-reading'

b. *fa* vágás
wood cut-NOMI
*vágás *fa*
'wood-cutting'

c. *elég* tevés
enough make-NOMI
*tevés *elég*
'fulfillment'

d. *fejbe* verés
head-ILL beat-NOMI
*verés *fejbe*
'beating to the head'

These examples show that infinitives and nouns are more tightly connected with VMs than finite verbs. Probably, this dichotomy is related to V-movement in finite clauses (cf. chapter two).

Putting this problem aside for further research, consider again property (6d) of Noun-Incoporation, here repeated as (10):

(10) Any argument of the verb, except the nominative one, may be incorporated

Noun-Incorporation provides another instance of a subject-object asymmetry. In fact, any direct argument of the verb may be incorporated except the nominative one.

There is, however, an apparent class of counterexamples to this generalization, that is, some incorporated nouns show up in the nominative. We saw already some instances of this in (9a)-(9c). The incorporated noun with deverbal nominalization is in the nominative. The following sentences display a similar phenomenon:

(11) a. (*A) *lehetőség* nyílik
the possibility open-AGR3sg
'There opens a possibility.'

b. (*Az) *alkalom* adódik
the opportunity arise-AGR3sg
'An opportunity arises.'

From an examination of the verbs allowing incorporation of a nominatively marked argument, it appears that they are *passivizers.* Deverbal nominalization with the suffix *-és/ás* follows the pattern of passivization (cf. 3.3.3.(*II*)). Hence, the incorporated nominative in (9a)-(9c) is the underlying object. The verbs in (11) belong to the class of Unaccusatives in Hungarian.[7] These verbs are intransitive with an under-

(7) The incorporation of nouns by the infinitival and deverbal nominal alternants of Unaccusatives is not possible:

(i) a. *Lehetőség nyflani
possibility open-INFI

b. *Lehetőség nyflás
possibility open-NOMI

lying object (cf. section 3.3.2.). This yields the following generalization on Noun-Incorporation:

(12) Only underlying internal arguments may be incorporated in Hungarian

This generalization is in correspondence with Baker (1983; 1988) who observes that cross-linguistically only underlying objects can be incorporated.

Summarizing, Noun-Incorporation displays another instance of a subject-object asymmetry. Only internal arguments of the verb be incorporated.

5.3.2. *X'-Theory*

It is hard to provide direct evidence in Hungarian for a VP-constituent in finite sentences (cf. section 5.2.1.2.). Tests which bear on this, like VP-deletion, are lacking in Hungarian. However, it appears that evidence for the constituency of the VP can more easily be found within the context of non-finite clauses. In this section, I will investigate the structure of *infinitive complements* selected by *auxiliaries* (cf. section 2.2.2.).

Such complements appear with a subtype of subject control verbs (cf. section 5.3.6.1 for these verbs), like *kell* 'have to' and *akar* 'want'. Let us first consider the properties of the constructions with *kell:*

(1) a. Jánosnak látni(a) kell Marit
John-DAT see-INFI-AGR3sg must Mary-ACC
'John must see Mary.'
b. Jánosnak találkozni(a) kell Marival
John-DAT meet-INFI-AGR3sg must Mary-INSTR
'John must meet Mary.'
c. Jánosnak el kell menni(e)
John-DAT away must go-INFI-AGR3sg
'John must go away.'

(*i*) In neutral order the infinitive is left-adjacent to *kell.* Furthermore, *kell* receives no stress.

(*ii*) *Kell* may only be inflected for tense. For example, the past variant of the present form of *kell* is *kellett* 'had to'. Hence, it lacks a fully specified I[+AGR].

(*iii*) *Kell* assigns its direct argument a lexical dative case. The reason for the absence of the nominative on this argument is presumably due to the fact that I is not specified for AGR. If the nominative case is assigned by I, it must fully be specified in finite sentences (cf. Case-assignment rule 3.2.(7a)).

(*iv*) The infinitive may optionally agree in person and number with the dative marked NP.

(*v*) Consider the finite counterparts of the infinite complements in (1a) and (1b)):

(2) a. János látja Marit
John see-AGR3sg Mary-ACC
'John sees Mary.'
b. János találkozik Marival
John meet-AGR3sg Mary-INSTR
'John meets Mary.'

The internal arguments are accusatively and instrumentally marked in these sentences. They remain unaffected by the formation of the infinite construction.

(*vi*) Auxiliaries trigger Aux-splitting in neutral sentences when they select an infinitive which is itself modified by a VM (cf. section 2.2.2.). In (1c), for example, the prefix *el* 'away' of the infinitive *elmenni* 'to go away' is separated from the infinitive by an intervening modal auxiliary.

Let us turn to the properties of infinitive constructions with *akar.* Compare the following sentences:

(3) a. János látni akarja/*ϕ Marit
John see-INFI want-AGR3sg-def/indef Mary-ACC
'John wants to see Mary.'

b. János talalkozni akar Marival
John meet-INFI want-AGR3sg Mary-INSTR
'John wants to meet Mary.'

c. Én látni akar*lak* téged
I see-INFI want-AGR1sg2sg you-ACC
'I want to see you.'

d. János el akar menni
John away want-AGR3sg go-INFI
'John wants to go away.'

(*i*) Word order in neutral sentences of the *akar*-type is identical to the *kell*-type. The infinitive is left-adjacent to *akar,* which is unstressed.

(*ii*) Contrary to *kell, akar* may be inflected both for tense and agreement. This means that its I is fully specified. Therefore, the subject complement of *akar* appears in the nominative case.

(*iii*) *Akar* agrees with the object complement of the infinitive. This complement is definite in (3a), because it is a proper name (cf. 4.2.(3)). Therefore, *akar* displays definite conjugation in this sentence. This agreement phenomenon can also be observed from (3c).

The verbal suffix *-lak* reflects that the verb agrees with a first person singular nominative subject and a second person accusative object (cf. section 4.2.4.2.). It is easy to see that the accusative object of the infinitive in this sentence agrees with *akar.*

(*iv*) As was also the case with the *kell*-type, the internal arguments of the infinite complements selected by *akar* are identical to the internal arguments of their finite counterparts. Observe from a comparison between the pairs ((3a), (3b)) and ((4a), (4b)) that the internal arguments of both the finite and non-finite alternants are in the accusative and instrumental.

(*v*) Just as *kell, akar* triggers Aux-splitting. *Akar* intervenes between an infinitive and its VM in a sentence with neutral order. In (3d), the infinitive *elmenni* 'to go away' which consists of the prefix *el* 'away' and the infinitive *menni* 'to go' is split by *akar.*

These properties involving the neutral order of infinitives, obligatory subject-control, Aux-splitting, and object agreement suggest that auxiliaries induce 'restructuring' effects. In chapter two, I noted that this is a consequence of the application of *V-raising* in such constructions.

Szabolcsi (1983a) argues that the obligatory subject-control with these auxiliaries is due to the absorption of the external argument of the infinite complement, i.e. big *PRO* in Chomsky (1981). Note, however, that its internal arguments remain unaffected by an application of V-raising. This implies that these arguments are structurally *closer* to the infinitives in their X'-projection than the external arguments of these verbs. In conclusion, the structure of infinitival complements displays a subject-object asymmety.

5.3.3. θ-*Theory*

Subject-object asymmetries provided by θ-*theory* involve selectional restrictions on θ-assignment. I noted in section 3.2.2. that the θ-role of the subject is affected by the choice of the object but that the choice of the subject does not affect θ-assignment to the object.

5.3.4. *Binding Theory*

In section 5.2.3., I discussed some Binding Principle C symmetries. Here I will examine some subject-object asymmetries in the domain of *binding theory.*

Studies on coreference draw a distinction between the coreferential and the *bound variable* reading of a pronoun. The following pair illustrates this distinction:

(1) a. John loves his mother b. Everyone loves his mother

In (1a), the pronoun *his* can be understood as being coreferential with the referring expression *John,* i.e., a pronoun can pick up its reference from another NP in the sentence. In (1b), on the other hand, the pronoun has a quantifier expression as its antecedent, and receives an interpretation analogous to the bound variables of logicians.

In the linguistic literature much effort has been devoted to the proper formulation of the conditions on the coreferential and bound variable interpretations of pronouns (see, Chomsky 1981, Evans 1980, Haik 1984, Higginbotham 1983a, Koopman and Sportiche 1982, and Reinhart 1983, among others). What all these studies have in common is that the bound variable interpretation of a pronoun obeys a stricter condition than mere coreference. Compare for example the rules in Reinhart (1983):[8]

(2) a. A non-pronominal NP must be interpreted as non-coreferential with any NP that c-commands it (Reinhart 1983: 136)
b. Quantified NPs and Wh-traces can have anaphoric relations only with pronouns in their c-command domain (Reinhart 1983: 137)

Insights provided by these rules have been translated into the Binding Principles (cf. Chomsky 1981: 188):

(3) a. *Binding Principle A:* An *anaphor* (a category that lacks independent reference, and thus includes reflexives, recirocals) is bound in its governing category
b. *Binding Principle B:* A *pronominal* (a category that may be referentially independent or may depend upon an antecedent for its reference, and thus includes the class of pronouns) is free in its governing category
c. *Binding Principle C:* An *R-expression* (a category that is referentially independent, and includes all other NP types, for example names) is free

These principles are well-formedness conditions on structures which contain coindexing relations. The indexing device of binding theory is one of free-indexing.

(8) Reinhart gives the following definition of c-command:
(i) Node A c(constituent)-commands node B iff the branching node most immediately dominating A also dominates B.

(3) makes clear that it distinguishes three lexical primitives including anaphors, pronominals, and R-expressions.

Binding Principle A accounts for the coreferential interpretation in the following cases. The sentence is the governing category for the reflexive pronoun *himself* and reciprocal pronoun *each other:*

(4) a. *John saw himself* b. *The boys saw each other*

Disjoint reference in the following examples is captured by Binding Principle B (cf. (5a)-(5b)) and Binding Principle C (cf. (5c)-(5d)). Again, the sentence is the governing category for pronouns and names in object position:

(5) a. **He saw him* b. **John saw him* c. **He saw John* d. **John saw John*

According to Reinhart, anaphora with quantified antecedents and with anaphors have in common that the anaphora interpretation involves in both cases its translation as a bound variable. Observe from the comparison of (2b) and (3a) that the structural condition restricting the interpretation of anaphors is the same as the one restricting the interpretation of bound variables.

However, anaphors also have the peculiar grammatical property specified in (3a), namely, that they must be bound in a local domain. This cannot be reduced to the bound anaphora rule and thus has to be captured separately.

To summarize, earlier studies report the following properties of binding relations. (*i*) The structural conditions restricting coreferential and bound variable interpretation obey some version of c-command (see, fn.8 for a definition). (*ii*) The rule determining a bound variable interpretation of pronouns is a stricter condition than the rule allowing coreferential interpretation. (*iii*) Anaphors are subject to the same structural restrictions as bound pronouns. They have to be c-commanded by their antecedent. (*iv*) Reinhart (1983) restricts the coreferential interpretation of pronominals and names by the same condition (cf. (2b)). By doing so, Reinhart claims that on the level of sentence-syntax no significant difference between these two categories exist. In Chomsky (1981), on the other hand, pronominals and names are considered to be different syntactically as is suggested by the separate formulation of Binding Principles B and C.

Binding relations involve asymmetries which are accounted for in structural terms. Therefore, if in a particular language subject-object asymmetries with binding phenomena arise and if the principles in (2), or (3) have a universal status, then that language has a hierarchical, configurational structure.

In this section, I will discuss the following binding phenomena in Hungarian, including *reflexive binding* (cf. section 5.3.4.1), *the binding of names* (cf. section 5.3.4.2.), *the distribution of bound pronouns* (cf. section 5.3.4.3.) and *switch reference* (cf. section 5.3.4.5).

5.3.4.1. *Reflexive Binding*

Reflexive binding has been discussed extensively in É. Kiss (1981c). É. Kiss notes that the antecedent-anaphor relation is subject to a case-hierarchy which has the following shape:

(6) NOM > ACC > DAT > INSTR > LEXICAL CASE

According to É. Kiss (1981c: 192), the binder must precede the anaphor in this hierarchy.

Let us consider some examples with the binding of the lexical anaphor *maga* 'himself/herself'.

In accordance with (6), a nominative NP can be the antecedent of an anaphor in every arbitrary case, but not vice versa:

(7) a. *János* szereti *magát*
John loves himself-ACC
'John loves *himself.'*

b. **Jánost* szereti *maga*
John-ACC loves himself

c. *János* könyvet vesz *magának*
John book-ACC buys himself-DAT
'John buys a book for *himself.'*

d. **Jánosnak* könyvet vesz *maga*
John-DAT book-ACC buys himself

e. *János* hisz *magában*
John believes himself-INESS
'John believes in *himself.'*

f. **Jánosban* hisz *maga*
John-INESS believes himself

g. *János* számít *magára*
John counts himself-SUBL
'John counts on *himself.'*

h. **Jánosra* számít *maga*
John-SUBL counts himself

An accusative NP may be the antecedent of an anaphor with dative, instrumental, or a lexical case, but not vice versa:

(8) a *Jánost* dicsértem *magának*
John-ACC praised-AGR1sg himself-DAT
'I praised *John* to *himself.'*

b. *?Jánosnak* dicsértem *magát*
John-DAT praised-AGR1sg himself-ACC

c. *Jánost* megmutattam *magának* a tükörben
John-ACC showed-AGR1sg himself-DAT the mirror-INESS
'I showed *John* to *himself* in the mirror.'

d. *?Jánosnak* megmutattam *magát* a tükörben
John-DAT showed-AGR1sg himself-ACC the mirror-INESS

e. *Jánost* szembesítettem *magával*
John-ACC confronted-AGR1sg himself-INSTR
'I confronted *John* with *himself.'*

f. *??Jánossal* szembesítettem *magát*
John-INSTR confronted-AGR1sg himself-ACC

g. *Jánost* sokat faggattam *magáról*
John-ACC much interrogated-AGR1sg himself-DELAT
'I interrogated *John* a lot about *himself.'*

h. **Jánosról* sokat faggattam *magát*
John-DELAT much interrogated-AGR1sg himself-ACC

A dative NP can be the antecedent of an anaphor with instrumental or lexical case:

(9) a. *Jánosnak* minding baja van *magával*
John-DAT always problem is himself-INSTR
'John has always problems with *himself.'*
b. **Jánossal* minding baja van *magának*
John-INSTR always problem is himself-DAT
c. *Jánosnak* sokat beszéltem *magáról*
John-DAT a lot spoke-AGR1sg himself-DELAT
'I spoke a lot to *John* about *himself.'*
d. **Jánosról* sokat beszéltem *magának*
John-DELAT a lot spoke-AGR1sg himself-DAT

An instrumental binder can be the antecedent of an anaphor with lexical case, but not vice versa:

(10) a. **Jánossal* vitatkoztam *magáról*
John-INSTR argued-AGR1sg himself-DELAT
'I argued with *John* about *himself.'*
b. **Jánosról* vitatkoztam *magával*
John-DELAT argued-AGR1sg himself-INSTR

É. Kiss also notes that prominence of the accusative argument over the dative argument is less clear than the other grades of the hierarchy (cf. (8a) versus (8b), and (8c) versus (8d)). Furthermore, É. Kiss observes that this hierarchy is clearer if instead of the reflexive anaphor *maga* the reciprocal anaphor *egymás* 'each other' is used (see, É. Kiss 1981c: 192).

Scrambling does not affect reflexive binding. Compare, for example, the scrambled counterparts of (7a) and (7b):

(11) a *Magát* szereti *János* b. **Jánost* szereti *maga*
himself-ACC loves John John-ACC loves himself

The above paradigms show that Hungarian displays not only subject-object asymmetries in a narrow sense but also asymmetries with all other arguments of the verb. In section 5.4.1., I will return to the position of (6) in the theory of UG. I will argue that it has no theoretical status. For now it is sufficient to note that the arguments of the verb obey a strict hierarchy with reflexive binding which is captured adequately by this descriptive rule.

5.3.4.2. The Binding of Names

I reported that a subject-object symmetry arises with pronominal noncoreference in Hungarian (cf. section 5.2.3.). However, Marácz (1986a) observes that if the pronoun in 5.2.3.(4) is replaced by another name a subject-object asymmetry occurs. This asymmetry is subsumed by Binding Principle C:

(12) a. *János* anyja szereti *Jánost*
John mother-npAGR3sg loves John-ACC
'John's mother loves *John.'*
b. **János* szereti *János* anyját
John loves John mother-npAGR3sg-ACC
**'John* loves *John's* mother.'

The coreference relation between two names in Hungarian displays the same distribution as in their English counterparts. The question arises whether this subject-object asymmetry carries over to the other arguments of the verb, as was the case with Binding Principle A phenomena. The sentences below exemplify that a non-embedded nominative name may not be coreferential with another name embedded in an NP with any other case. A non-nominative name, on the other hand, may always be coreferential with a name embedded in a nominative NP:

(13) a. **János* könyvet vesz *János* anyjának
John book-ACC buys John mother-npAGR3sg-DAT
**John* buys a book for *John's* mother.'

b. *János* anyja könyvet vesz *Jánosnak*
John mother-npAGR3sg book-ACC buys John-DAT
'John's mother buys a book for *John.'*

c. **János* hisz *János* anyjában
John believes John mother-npAGR3sg-INESS
**John* believes in *John's* mother.'

d. *János* anyja hisz *Jánosban*
John mother-npAGR3sg believes John-INESS
'John's mother believes in *John.'*

e. **János* számít *János* anyjára
John counts John mother-npAGR3sg-SUBL
**John* counts on *John's* mother.'

f. *János* anyja számít *Jánosra*
John mother-npAGR3sg counts John-SUBL
'John's mother counts on *John.'*

Observe, furthermore, that a non-embedded accusative name may not be coreferential with or may hardly be interpreted as coreferential with another name embedded in an NP with dative, instrumental, or a lexical case. However, a name assigned dative, instrumental, or a lexical case may always be coreferential with a name embedded in an accusative NP:

(14) a. *?János* dicsértem *János* anyjának
John-ACC praised-AGR1sg John mother-npAGR3sg-DAT
*'I praised *John* to *John's* mother.'

b. *János* anyját dicsértem *Jánosnak*
John mother-npAGR3sg-ACC praised-AGR1sg John-DAT
'I praised *John's* mother to *John.'*

c. *?János* megmutattam *János* anyjának a tükörben
John-ACC showed-AGR1sg John mother-npAGR3sg-DAT the mirror-INESS
*'I showed *John* to *John's* mother in the mirror.'

d. *János* anyját megmutattam *Jánosnak* a tükörben
John mother-npAGR3sg-ACC showed-AGR1sg John-DAT the mirror-INESS
'I showed *John's* mother to *John* in the mirror.'

e. **János* szembesítettem *János* anyjával
John-ACC confronted-AGR1sg John mother-npAGR3sg-INSTR
*'I confronted *John* with John's mother.'

f. *János* anyját szembesítettem *Jánossal*
John mother-npAGR3sg-ACC confronted-AGR1sg John-INSTR
'I confronted *John's* mother with *John.'*

g. **Jánost* sokat faggattam *János* anyjáról
John-ACC much interrogated-AGR1sg John mother-npAGR3sg-DELAT
*'I interrogated *John* a lot about *John's* mother.'
h. *János* anyját sokat faggattam Jánosról
John mother-npAGR3sg-ACC much interrogated-AGR1sg John-DELAT
'I interrogated *John's* mother a lot about *John.*'

The following sentences exemplify that a non-embedded dative name may not be coreferential with another name embedded in an NP marked instrumental, or with a lexical case, whereas a name with instrumental, or a lexical case may always be coreferential with a name embedded in a dative NP:

(15) a. **Jánosnak* minding baja van *János* anyjával
John-DAT always problem is John mother-npAGR3sg-INSTR
*'*John* has always problems with *John's* mother.'
b. *János* anyjának minding baja van *Jánossal*
John mother-npAGR3sg-DAT always problem is John-INSTR
'*John's* mother has always problems with *John.*'
c. **Jánosnak* sokat beszéltem *János* anyjáról
John-DAT a lot spoke-AGR1sg John mother-npAGR3sg-DELAT
'I spoke a lot to *John* about John's mother.'
d. *János* anyjának sokat beszéltem *Jánosról*
John mother-npAGR3sg-DAT a lot spoke-AGR1sg John-DELAT
'I spoke to *John's* mother a lot about *John.*'

The following pair shows that a non-embedded instrumental name may not be coreferential with another name embedded in an NP with lexical case, whereas a name assigned an instrumental case may always be coreferential with a name embedded in an NP bearing lexical case:

(16) a. **Jánossal* vitatkoztam *János* anyjáról
John-INSTR argued-AGR1sg John mother-npAGR3sg-DELAT
'I argued with *John* about *John's* mother.'
b. *János* anyjával vitatkoztam *Jánosról*
John mother-npAGR3sg-INSTR argued-AGR1sg John-DELAT
'I argued with *John's* mother about *John.*'

Binding Principle C phenomena are sometimes affected by factors such as linear order, depth of embedding and so on. Let us consider whether these phenomena in Hungarian interfer with (*i*) the structure of the possessive NP, (*ii*) linear order or (*iii*) the depth of embedding.

(*i*) Binding Principle C effects also appear in the following paradigm which Anna Szabolcsi (personal communication) brought to my attention:

(17) a. **Mari* csak *Mari* biciklijét látta
Mary only Mary bike-npAGR3sg-ACC saw
*'*Mary* saw only *Mary's* bike.'
b. **Mari* csak *Marinak* a biciklijét látta
Mary only Mary-DAT the bike-npAGR3sg-ACC saw
c. **Mari* csak *Marinak* látta a biciklijét
Mary only Mary-DAT saw the bike-npAGR3sg-ACC

(18) a. *Marit* csak *Mari* biciklije birja el
Mary-ACC only Mary bike-npAGR3sg is able to carry
'Only *Mary's* bike is able to carry *Mary.*'
b. *Marit* csak *Marinak* a biciklije birja el
Mary-ACC only Mary the bike-npAGR3sg is able to carry
c. **Marit* csak *Marinak* birja el a biciklije
Mary-ACC only Mary-DAT is able to carry the bike-npAGR3sg

In these sentences which involve the variants of the possessive NP in Hungarian a pair of names is intended to be coreferential.

Szabolcsi (1981a; 1984) argues that the possessor NP can appear both in the nominative and the dative, but only the dative one may be separated from its noun-possessed (cf. also section 2.1.(*II*)). In case the non-embedded name is in the nominative no coreferential reading between the names is possible, independently of the fact whether the possessor name is in construction with its noun-possessed (cf. (17a) and (17b)) or separated from it (cf. (17c)). If, on the other hand, the non-embedded name is in the accusative it may be coreferential with the possessor name. However a coreferential reading is allowed in these cases only when the possessor name is embedded in a nominative possessive NP (cf. (18a) and (18b)) but not when it is separated from its noun-possessed (cf. (18c)).

This paradigm thus displays another subject-object asymmetry with the coreferentiality between a pair of names. Futhermore, it supports the hypothesis that the dative possessor in the (c)-sentences but not in the (b)-sentences has escaped from its possessive NP, otherwise a Binding Principle C violation could not occur.

(*ii*) Compare the scrambled variants of the sentences in (12):

(19) a. Jánost szereti János anyja
John-ACC loves John mother-npAGR3sg
b. **János* anyját szereti *János*
John mother-npAGR3sg-ACC loves John

This demonstrates that Binding Principle C effects with a pair of names are immune to the effects of scrambling just like Binding Principle A effects.

(*iii*) The following sentences examplify that the depth of embedding is not relevant for Binding Principle C effects with a pair of names:

(20) a. **János* megtudta [NP azt a tényt [CP hogy *János* beteg lesz]]
John perf-knew that-ACC the fact-ACC that John ill becomes
**'John* got to know the fact that *John* would become ill.'
b. *[NP Azt a tényt [CP hogy *János* beteg lesz]] megtudta *János*
that-ACC the fact-ACC that John ill becomes perf-knew John
c. *Jánost* zavarta [NP az a tény [CP hogy *János* beteg lett]]
John-ACC disturbed that the fact that John ill became
**'John* was disturbed by the fact that *John* became ill.'
d. [NP Az a tény [CP hogy *János* beteg lett]] zavarta *Jánost*
that the fact that John ill became disturbed John-ACC

In these sentences, the name in the possessive NPs of (12) is embedded a maximal projection deeper. The embedded clauses in (20) are complex NPs. However, the

possibility of coreference is not affected by the depth of embedding, nor by scrambling in this case.

Summarizing, the paradigms in this section demonstrate that subject-object asymmetries show up involving coreference between a pair of names. Speaking in terms of the descriptive hierarchy (6), a name *A* may only be coreferential with name *B*, if and only if *B* is embedded in an NP which takes prominence over *A* in this hierarchy. If these asymmetries can be accounted for by making reference to Binding Principle C, then it follows that the phrase structure of Hungarian must have a hierarchical structure.

5.3.4.3. *The Distribution of Bound Pronouns*

In this section, I will examine some aspects of the syntax of *bound pronouns* in Hungarian. Consider, again Reinhart's (1983) rule (1b) for their distribution, here repeated as (21):

(21) Quantified NPs and Wh-traces can have anaphoric relations only with pronouns in their c-command domain (Reinhart 1983: 137)

The blocking of a bound variable interpretation of pronouns has been referred to in the literature as 'Weak Crossover' (WCO) (cf. Wasow 1972).[9] WCO-effects arise in English in case a quantified NP is in object position and the bound pronoun is embedded in a subject phrase. An example of this is the ungrammaticality of the following sentence:

(22) **His mother loves everyone*

These effects in Hungarian have been noted first in Horvath (1981, 210). Marácz (1985a) observes that pronouns do not allow a bound variable interpretation when the pronoun precedes an accusative quantified antecedent, which may be a Wh-phrase, a universal quantifier, or a focussed NP, and which is at the same time embedded in a nominative NP:[10]

(9) WCO has played an important role in the configurationality debate. Saito and Hoji (1983) discuss some cases of WCO in Japanese from which they conclude that it is configurational. WCO-effects also appear in other languages that have been claimed to be non-configurational, involving Basque (cf. Marácz 1986a, Ortiz de Urbina 1986), German (cf. Webelhuth 1985), Hungarian (cf. Horvath 1981, Kenesei 1989, Marácz 1985a; 1986a, and Szabolcsi 1986a), Japanese (cf. Hoji 1986, Saito 1985), and Korean (cf. Choe 1985; 1989). Farmer et al. (1986) have critised the tests elaborated in Saito and Hoji (1983). Haider (1985) reports that c-command is not operative with WCO-phenomena in German but rather Lasnik's (1976) command. Rebuschi (1989) observes that WCO-violations are lacking from some Basque dialects.

(10) Marácz (1985a; 1988a) argues that Horvath (1986) cannot account for the contrast between (23) and (24) involving the presence or absence of WCO-effects. The ungrammaticality of the cases in (23) comes as expected under Horvath's SVO-hypothesis of Hungarian. These ungrammatical constructions can be accounted for in terms of the absence of the c-command relation between the trace of the object quantifier and the pronoun in the nominative NP. The grammaticality of the sentences in (24), on the other hand, is unexpected. Horvath assumes that the subject in these cases undergoes Subject Postposing, an adjunction to the VP. This should, however, not affect the c-command relation between the object trace and the pronoun embedded in the possessive NP.

(23) a. *Az *anyja* *kit* szeret
the mother-npAGR3sg who-ACC loves
*'*Who* does *his* mother love?'
b. *Az *anyja* *mindenkit* szeret
the mother-npAGR3sg everyone-ACC loves
*'*His* mother loves *everyone*.'
c. *Az *anyja* *VILIT* szereti
the mother-npAGR3sg Bill-ACC loves
*'*His* mother loves *BILL*.'

(24) a. *Kit* szeret az *anyja*
who-ACC loves the mother-npAGR3sg
b. *Mindenkit* szeret az *anyja*
everyone-ACC loves the mother-npAGR3sg
c. *VILIT* szereti az *anyja*
Bill-ACC loves the mother-npAGR3sg

(25) a. *Ki* szereti az *anyját*
who loves the mother-npAGR3sg-ACC
'*Who* loves *his* mother?'
b. *Mindenki* szereti az *anyját*
everyone loves the mother-npAGR3sg-ACC
'*Everyone* loves *his* mother.'
c. *VILI* szereti az *anyját*
Bill loves the mother-npAGR3sg-ACC
'*BILL* loves *his* mother.'

(26) a. Az *anyját* *ki* szereti
the mother-npAGR3sg-ACC who loves
b. Az *anyját* *mindenki* szereti
the mother-npAGR3sg-ACC everyone loves
c. az *anyját* *VILI* szereti
the mother-npAGR3sg-ACC Bill loves

Before investigating this paradigm in detail, let us first discuss the realization of personal pronouns in possessive NPs.

The realization of overt pronouns in possessive NPs is optional (cf. section 4.4.2.1.). The overt personal pronoun is used for reasons of emphasis only, and indicates disjoint reference for most speakers:

(27) a. Az *ő* anyja
the he mother-npAGR3sg
'HIS/HER mother' or 'It is his/her mother...'
b. *Mari*$_i$ látta az *ő*$*_{i/j}$ anyját
Mary saw the she mother-npAGR3sg-ACC
'Mary saw her mother.'

In the unmarked case, the pronoun must remain non-overt. According to Szabolcsi (1984), this means that pro-drop applies in possessive NPs. The agreement marker in the possessive NP (npAGR) is able to license the occurence of a small *pro* in the position of the possessor NP (cf. also chapter seven).

Wh-phrases and focussed NPs must appear in the preverbal Focus position in Hungarian (cf. 2.1.(28c)). The sentences in (23) display a WCO-effect. The non-

overt pronoun embedded in a nominative possessive NP may not be interpreted as a bound variable. This effect disappears if the nominative possessive NP is scrambled to the right of the verb (cf. (24)). The sentences in (25) and (26) show that no WCO-effects occur in case the binder, i.e. the quantified NP, is in the nominative.

From this it follows that the distribution of bound pronouns yields a *subject-object asymmetry*. This observation falsifies É. Kiss' (1981c; 1982b; 1987a; and 1987c) claim that WCO-effects are lacking in Hungarian. The source of this claim is probably the fact that É. Kiss cites only examples of the type in (24) and (25) (cf. É. Kiss 1987a: 208-209), that is, with the binder preceding the bindee.

The question arises whether this subject-object asymmetry appears also with subcategorized arguments of the verb other than the nominative-accusative ones. This turns out to be the case, as the sentences below will exemplify.

With the help of the hierarchy in (6), we formulate the following descriptive rule for the distribution of bound pronouns in Hungarian. A pronoun embedded in a possessive NP may not be interpreted as a bound variable when the possessive NP precedes the quantified NP linearly and is at the same time higher in hierarchy (6).[11] This covers the examples in (28)-(34).

In the following examples, the universal quantifier *mindenki* 'everyone' is the quantified antecedent. Another quantifier, however, would make no difference with respect to grammaticality judgements. Compare:

(28) a. *Az *pro* anyja *mindenkinek* könyvet vesz
the mother-npAGR3sg everyone-DAT book-ACC buys
*'*His* mother buys a book for *everyone.*'
b. *Mindenkinek* könyvet vesz az *pro* anyja
everyone-DAT book-ACC buys the mother-npAGR3sg
c. *Mindenki* könyvet vesz az *pro* anyjánaki
everyone book-ACC buys the mother-npAGR3sg-DAT
'*Everyone* buys a book for *his* mother.'
d. Az pro anyjának mindenki könyvet vesz
the mother-npAGR3sg everyone book-ACC buys

(29) a. *Az *pro* anyja *mindenkiben* hisz
the mother-npAGR3sg everyone-INESS believes
*'*His* mother believes in *everyone.*'
b. *Mindenkiben* hisz az *pro* anyja
everyone-INESS believes the mother-npAGR3sg
c. *Mindenki* hisz az *pro* anyjában
everyone believes the mother-npAGR3sg-INESS
'*Everyone* believes in *his* mother.'
d. Az *pro* anyjában *mindenki* hisz
the mother-npAGR3sg-INESS everyone believes

(11) Kenesei (1989) notes a counterexample to this descriptive generalization. According to Kenesei, WCO-effects vanish with verbs like *zavar* 'disturb'. Note that such verbs belong to the class of experiencer verbs. However, verbs of the agent-theme class like in (23) represent the unmarked case (cf. section 3.3.4.).

(30) a *Az *pro* anyját *mindenkinek* dicsértem
the mother-npAGR3sg-ACC everyone-DAT praised-AGR1sg
*'I praised *his* mother to *everyone.*'
b. *Mindenkinek* dicsértem az *pro* anyját
everyone-DAT praised-AGR1sg the mother-npAGR3sg-ACC
c. *Mindenkit* dicsértem az *pro* anyjának
everyone-ACC praised-AGR1sg the mother-npAGR3sg-DAT
'I praised *everyone* to *his* mother.'
d. Az *pro* anyjának *mindenkit* dicsértem
the mother-npAGR3sg-DAT everyone-ACC praised-AGR1sg

(31) a. *Az *pro* anyját *mindenkivel* szembesítettem
the mother-npAGR3sg-ACC everyone-INSTR confronted-AGR1sg
*'I confronted *his* mother with *everyone.*'
b. *Mindenkivel* szembesítettem az *pro* anyját
everyone-INSTR confronted-AGR1sg the mother-npAGR3sg-ACC
c. *Mindenkit* szembesítettem az *pro* anyjával
everyone-ACC confronted-AGR1sg the mother-npAGR3sg-INSTR
'I confronted *everyone* with *his* mother.'
d. Az *pro* anyjával *mindenkit* szembesítettem
the mother-npAGR3sg-INSTR everyone-ACC confronted-AGR1sg

(32) a. *Az *pro* anyját *mindenkiről* sokat faggattam
the mother-npAGR3sg-ACC everyone-DELAT a lot interrogated-AGR1sg
*'I interrogated *his* mother a lot about *everyone.*'
b. *Mindenkiről* sokat faggattam az *pro* anyját
everyone-DELAT a lot interrogated-AGR1sg the mother-npAGR3sg-ACC
c. *Mindenkit* sokat faggattam az *pro* anyjáról
everyone-ACC a lot interrogated-AGR1sg the mother-npAGR3sg-DELAT
'I interrogated *everyone* a lot about *his* mother.'
d. Az *pro* anyjáról *mindenkit* sokat faggattam
the mother-npAGR3sg-DELAT everyone-ACC a lot interrogated-AGR1sg

(33) a. *Az *pro* anyjának *mindenkiről* sokat beszéltem
the mother-npAGR3sg-DAT everyone-DELAT a lot spoke-AGR1sg
*'I spoke a lot to *his* mother about *everyone.*'
b. *Mindenkiről* sokat beszéltem az *pro* anyjának
everyone-DELAT a lot spoke-AGR1sg the mother-npAGR3sg-DAT
c. *Mindenkinek* sokat beszéltem az *pro* anyjáról
everyone-DAT a lot spoke-AGR1sg the mother-npAGR3sg-DELAT
'I spoke to *everyone* a lot about *his* mother.'
d. Az *pro* anyjáról *mindenkinek* sokat beszéltem
the mother-npAGR3sg-DELAT everyone-DAT a lot spoke-AGR1sg

(34) a. *Az *pro* anyjával *mindenkiről* vitatkoztam
the mother-npAGR3sg-INSTR everyone-DELAT argued-AGR1sg
*'I argued with *his* mother about everyone.'
b. *Mindenkiről* vitatkoztam az *pro* anyjával
everyone-DELAT argued-AGR1sg the mother-npAGR3sg-INSTR
c. *Mindenkivel* vitatkoztam az *pro* anyjáról
everyone-INSTR argued-AGR1sg the mother-npAGR3sg-DELAT
'I argued with *everyone* about *his* mother.'
d. Az *pro* anyjárol *mindenkivel* vitatkoztam
the mother-npAGR3sg-DELAT everyone-INSTR argued-AGR1sg

It is obvious from this paradigm that the distribution of bound pronouns yields asymmetries involving all direct arguments of the verb.

Having settled this, let us investigate whether the distribution of bound pronouns may be affected by varying in (23)-(26) (*i*) the structural configuration or (*ii*) the linear order.

(*i*) The crucial difference between these sentences and their counterparts to be presented below is that the bound pronoun is embedded one maximal projection deeper, namely, in an embedded clause with a lexical head. Such clauses are complex NPs.

We expect that a pronoun in an embedded clause may be interpreted as a bound variable except when this clause is in the nominative and precedes the binder, a quantified NP. This is, however, not the case. A pronoun in such a configuration may always be interpreted as a bound variable:

(35) a. [NP Az a tény [CP hogy (*ő*) szélhámos]] *kit* idegesített
that the fact that he fraud who-ACC got nervous
'Who got nervous from the fact that *he* was a fraud?'
b. *Kit* idegesített [NP az a tény [CP hogy (*ő*) szélhámos]]
who-ACC got nervous that the fact that he fraud
c. *Ki* állitotta [NP azt a tényt [CP hogy (*ő*) szélhámos]]
who stated that-ACC the fact-ACC that he fraud
'Who stated that *he* was a fraud?'
d. [NP Azt a tényt [CP hogy (*ő*) szélhámos]] *ki* állította
that-ACC the fact-ACC that he fraud who stated
(Marácz 1985a: 134)

The same is illustrated by embedding the bound pronoun in a relative clause, as Anna Szabolcsi (personal communication) has pointed out to me. A relative clause is a complex NP as well. Compare:

(36) a. [NP A professzor [CP akitöl (*ök*) matematikát tanultak]] *minden diákot* szeretett
the professor who-ABL they mathematics-ACC learnt every student-ACC liked
*'The professor who *they* took mathematics from liked *every student.*'
b. *Minden diákot* szeretett [NP a professzor [CP akitöl (*ök*) matematikát tanultak]]
every student-ACC liked the professor who-ABL they mathematics-ACC learnt
c. *Minden diák* szerette [NP a professzort [CP akitöl matematikát tanultak]]
every student liked the professor who-ABL mathematics-ACC learnt
'Every student liked the professor who they took mathematics from.'
d. [NP A professzort [CP akitöl (*ök*) matematikát tanultak *minden diák* szerette]]
the professor-ACC who-ABL they mathematics-ACC learnt every student liked

Observe from the comparison between (23a)-(23c) on the one hand and (35a) and (36a) on the other hand that the WCO-effect disappears when the bound pronoun is more deeply embedded. According to Anna Szabolcsi (personal communication), the reason for this is that embedded clauses are so "heavy" that in initial position they can only be produced with the intonation charateristic for Left Dislocation. Szabolcsi suggests therefore that this difference is due to the fact that the former phrases are in neutral position, whereas the latter are left-dislocated. Recall that a left-dislocated constituent is adjoined to the sentence (cf. section 4.3.).

The following sentences indicate that Szabolcsi's suggestion may be on the right track. The WCO-effect also vanishes in (23a)-(23c) when the possessive NP is left-dislocated:

(37) a. Az *pro* anyja, *ö kit* szeret
the mother-npAGR3sg she who-ACC loves
'As for *his* mother, *who* does she love.'
b. Az *pro* anyja, *ö mindenkit* szeret
the mother-npAGR3sg she everyone-ACC loves
'As for *his* mother, she loves *everyone.*'
c. Az *pro* anyja, *ö VILIT* szereti
the mother-npAGR3sg she Bill-ACC loves
'As for *his* mother, she loves *BILL.*'

A more complicated case with the distribution of bound pronouns has been examined in Szabolcsi (1986a).

Szabolcsi notes that the subject-object asymmetry with this phenomenon also occurs when the pronoun is embedded in a quantified possessive NP:

(38) a. *Minden *pro* fia *MARIT* szereti
every son-npAGR3sg Mary-ACC loves
'For every son of x's, it is x=Mary that he loves'
b. *MARIT* szereti minden *pro* fia
Mary-ACC loves every son-npAGR3sg
c. *MARI* szereti minden *pro* fiát
Mary loves every son-npAGR3sg-ACC
'For every son of x's, it is x=Mary that loves them'
d. Minden *pro* fiát *MARI* szereti
every son-npAGR3sg-ACC Mary loves

This paradigm exemplifies that a pronoun in a quantified NP may only be bound if that NP does not precede the binder and is higher on hierarchy (6) than the binder[12] .

In the sentences discussed so far, the binder has been in the preverbal field. Let us consider whether the distribution of bound pronouns is affected by scrambling the quantified NP into the postverbal field, that is, to the right of the verb.

(*ii*) With Wh-phrases and focussed NPs this is not allowed, because they have to stick to the Focus position. (This position is left-adjacent to the verb (cf. 2.1.(28c)).

(12) See Szabolcsi (1986a) and Kenesei (1989) for further discussion of bound pronouns in quantified possessive NPs.

However, some quantified NPs, like (narrow scope) universal and existential quantifiers, may appear postverbally. A bound variable interpretation of the pronoun is not possible in the scrambled alternants of (23)-(26):

(39) a. *Az *pro* anyja szeret *mindenkit/valakit*
the mother-npAGR3sg loves everyone-ACC/someone-ACC
*'*His* mother loves *everyone/someone.*'
b. *Szereti az *pro* anyja *mindenkit/valakit*
loves the mother-npAGR3sg everyone-ACC/someone-ACC
c. *Szereti *mindenkit/valakit* az *pro* anyja
loves everyone-ACC/someone-ACC the mother-npAGR3sg

(40) a. *Az *pro* anyját szereti *mindenki/valaki*
the mother-npAGR3sg-ACC loves everyone/someone
'Everyone/someone loves his mother.'
b. *Szereti az *pro* anyját *mindenki/valaki*
loves the mother-npAGR3sg-ACC everyone/someone
c. *Szereti *mindenki/valaki* az *pro* anyját
loves everyone/someone the mother-npAGR3sg-ACC

These paradigms are not in correspondence with the descriptive rule on the distribution of bound pronouns, namely, that a pronoun may not be interpreted as a bound variable if and only if the possessive NP in which the pronoun is embedded precedes the binder and is higher in case-hierarchy (6) than the binder of the pronoun. It appears that when a quantifier appears postverbally, it may never bind a pronoun.

I would like to suggest, however, that the bound variable interpretation of pronouns in these sentences is ungrammatical for independent reasons. Usually quantifiers appear preverbally (cf. 2.1.(28f)). They may appear postverbally only under specific conditions. For example, when a postverbal quantifier is in the scope of a preverbal one. Therefore, if the possessive NP is focussed in (39a) and (40a), again a subject-object asymmetry with bound pronouns shows up:

(41) a. *AZ *pro* ANYJA szeret *mindenkit/valakit*
the mother-npAGR3sg loves everyone/someone
*'It is *his* mother who loves everyone/someone.'
b. AZ *pro* ANYJÁT szereti *mindenki/valaki*
the mother-npAGR3sg-ACC loves everyone/someone
'It is *his* mother who *everyone/someone* loves.'

Recapitulating, in this section some subject-object asymmetries in the distribution of bound pronouns in Hungarian have been discussed. These phenomena indicate that its phrase structure has a hierarchical structure, otherwise they can not be accounted for in terms of the universal condition on the distribution of bound pronouns in (21): A quantifier must c-command its bound pronoun.

5.3.4.4. *Summary*

Let us now summarize the discussion on binding theory so far. In (5.3.4.1.)-(5.3.4.3.), the following subject-object asymmetries have been observed. (*i*) Binding

Principle A asymmetries with reflexive and reciprocal pronouns. (*ii*) Binding Principle C asymmetries with a pair of names and (*iii*) asymmetries with the distribution of bound pronouns. These dichotomies between subject and object are not restricted to the nominative and accusative arguments of the verb but they also involve the other direct arguments of the verb. In line with theories on binding, I assume that these asymmetries can be accounted for in terms of structural conditions. These conditions must be interpreted on a syntactic structure with a hierarchical ordering. Hence, these binding asymmetries support the claim that Hungarian is a configurational language.

Furthermore, Hungarian also testifies to some generalizations in the domain of binding theory which have been made in connection with other languages. (*i*) Both the reflexive anaphor and the bound pronoun obey a stricter condition than the coreferential reading of a name. The former must be bound by a more prominent argument, whereas the latter must be free, and (*ii*) a pronominal and a name have distinct syntactic properties. The binding relation between a pair (pronoun, name) may yield a symmetry. However, such a relation between a pair (name, name) yields always an asymmetry (cf. 5.2.3.(4) versus (12)). This dichotomy supports Chomsky's (1981) view that pronominals and names are distinct lexical primitives which have to be accounted for by separate principles.

5.3.4.5. *Switch Reference*

Hungarian displays a *switch reference* system (cf. Pléh 1980; 1981a; 1981b and Pléh and Radics 1978).[13] Although this phenomenon does not strictly belong to sentence syntax, it involves an interesting restriction. Compare the following example from English first:

(42) The *boy*$_i$ noticed *the man*$_j$. *He*$_{i/j}$ walked up to *him*$_{i/j}$

In this sentence, it is impossible to decide without knowledge of the world which pronoun in the second part is coreferential to which lexical NP in the first one.

In Hungarian, however, this type of referentiality has been grammaticalized. To illustrate, consider the following sentences:

(43) a. A *fiú*$_i$ meglátta *a bácsit*$_j$. (*Ő*)$_{i/*j}$ odament *hozzá*$_j$
the boy noticed the man-ACC. He up-walked he-ALL
'The boy noticed the man. He (=the boy) walked up to him.'
b. A *fiú*$_i$ meglátta *a bácsit*$_j$. Az*$_{i/j}$ odament *hozzá*$_i$
'The boy noticed the man. That (=the man) up-walked to him.'
(Pléh and Radics 1978: 93)

This pair illustrates the following two points. First, only the nominatively marked pronoun may switch between a (non-overt) personal pronoun and a demonstrative pronoun. Second, the different choice of pronoun yields 'switch reference'. When the personal pronoun *ő* 'he, she' is chosen (cf. (43a)), we have the *proximate* reading, i.e. the pronoun refers to the nominative antecedent. On the other hand, when

(13) See Finer (1985) for a cross-linguistic study of switch reference.

the demonstrative pronoun *az* 'that' is used, we get the *obviate* reading, i.e. the pronoun refers to the accusative antecedent in (43b). Pléh and Radics point out that the demonstrative pronoun may refer to any non-nominative argument of the verb. The following sentences examplify this.

In (44) and (45) the object of the verb is an allative argument, while in (46) the object is assigned delative case by the verb:

(44) a. *Pista*$_i$ odament *Ferihez*$_j$ (*Ő*)$_{i/*j}$ nem akarta észrevenni (*őt*)$_j$
Steve up-went Frank-ALL he not wanted notice-INFI him
'Steve went up to Frank. He (=Steve) didn't want to notice him.'

b. *Pista*$_i$ odament *Ferihez*$_j$. Az$_{*i/j}$ nem akarta észrevenni (*őt*)$_i$
'Steve went up to Frank. That (=Frank) didn't want to notice him.'
(Pléh and Radics 1978: 96)

(45) a. *A postás*i bement a *házmesterhez*$_j$. (Ő)$_{i/*j}$ odaadta *neki*$_j$ a kulcsot
the postman went the caretaker-ALL. He gave he-DAT the key-ACC
'The postman went into the caretaker's. He (=the postman) gave him the key.'

b. *A postás*$_i$ bement a *házmesterhez*$_j$. Az$_{*i/j}$ odaadta *neki*$_j$ a kulcsot
'The postman went into the caretaker's. That (=the caretaker) gave him the key.'
(Pléh and Radics 1978: 95)

(46) a. A *munkás*$_i$ már sokat hallott az *új igazgatóról*$_j$, de most (*Ő*)$_{i/*j}$ találkozott *vele*$_j$
new manager-DELAT the worker already a lot heard the but now he met
elöször
he-INSTR the first time
'The worker had heard a lot about the new manager, but now he (=the worker) met him for the first time.'

b. A *munkás*$_i$ már sokat hallott az *új igazgatóról*$_j$, de most az$_{*i/j}$ találkozott *vele*$_i$
elöször
'The worker had heard a lot about the new manager, but now that (=the new manager) met him for the first time.'
(Pléh and Radics 1978: 98)

Switch Reference emphasizes in two ways that the nominative argument is more prominent than the other arguments of the verb. First, the switch between the personal pronoun and demonstrative pronoun may affect only the nominative argument. The other cases do not participate in this switch. Only the personal variant may corefer to an accusative (cf. (43)), allative (cf. (44)), allative (cf. (45)), or a delative NP (cf. (46)). Hence, use of the corresponding demonstrative pronouns *ahhoz* 'that-ALL' in (43), *azt* 'that-ACC' in (44), *annak* 'that-DAT' in (45), or *azzal* 'that-INSTR' in (46) yields an ungrammatical result. Second, the nominative personal pronoun may refer to any argument in the preceding sentence, contrary to the demonstrative pronoun, which may refer to any argument provided that it is not the nominative.

The following rule covers Switch Reference in Hungarian:[14]

(47) The nominative personal pronoun ő is coreferential with a nominative argument, whereas the nominative demonstrative pronoun *az* is coreferential with a non-nominative argument

(14) Warlpiri exhibits a phenomenon which is quite similar to Switch Reference in Hungarian. Simpson and Bresnan (1983) note that in constructions with obligatory control only the subject argument is accessible to binding by an argument from another domain, and that the distinction between subject versus non-subject controller is made by means of person marking suffixes which are attached to the infinitivals.

Pléh and Radics (1978) report that, as in English, Switch Reference in Hungarian may also interact with knowlegde of the world, pragmatic factors, grade of activity, linear order, agency, or number specification, and so on.

Pléh (1982) discusses two construction types in which exactly the reverse of what is predicted by this rule occurs, involving (*i*) constructions with *experiencer verbs* or (*ii*) with the *existential verb.*

(*i*) Experiencer verbs select an experiencer and a theme argument which are associated with the dative and nominative case, respectively (cf. section 3.3.4.). If the first sentence contains an experiencer verb, the personal pronoun in the second sentence is coreferential with the dative argument (cf. (48a)), and its demonstrative variant is coreferential with the nominative argument (cf. (48b)):

(48) a. *A színésznönek*$_i$ tetszett a *rendezö*$_j$. (Ö)$_{i/*j}$ minden nap új ötleteket adott *neki*$_j$
the actress-DAT liked the producer. He every day new ideas-ACC gave he-DAT
'The actress liked the producer. She gave him every day new ideas.'

b. *A színésznönek*$_i$ tetszett a *rendezö*$_j$. Az*$_{i/j}$ minden nap új ötleteket adott *neki*$_i$
'The actress liked the producer. That gave her every day new ideas.'

(*ii*) A similar exception to the above rule appears with the existential verb *van* 'be'. *Van* selects a dative and a nominative argument (cf. Szabolcsi 1981a, and De Groot 1983b for an analysis of existential clauses with *van*):

(49) a. *Jánosnak*$_i$ van *barátja*$_j$. (Ö)$_{i/*j}$ adott *neki*$_j$ ajándékot
John-DAT is friend-npAGR3sg he gave him present-ACC
'John has a friend. He (=John) gave him a present.'

b. *Jánosnak*$_i$ van *barátja*$_j$. Az*$_{i/j}$ adott *neki*$_i$ ajándékot
'John has a friend. That (=his firiend) gave him a present.'

The personal pronoun is coreferential with the dative NP (cf. (49a)). The demonstrative pronoun, however, is coreferential with the nominative NP.

The solution of this puzzle is that neither experiencer verbs nor the existential verb do select an agent. If we assume that rule (47) is conditioned by *agency* as well, then it is clear why constructions with experiencer verbs or with the existential verb constitute an exception to it.

Pléh observes furthermore that linear order may overrule (47) as well. If the nominative antecedent of the first part is in sentence-final position, native-speakers tend to interpret the demonstrative pronoun *az* as coreferential with it. This tendency is even stronger in the case of constructions with experiencer verbs or with the existential verb.

In sum, Switch Reference displays a subject-non-subject opposition captured by rule (47). However, it becomes visible only if the conditions on agency and linear order do not intervene.

5.3.5. *Case Theory*

This section examines subject-object asymmetries which are related to *Case theory,* including the different *conjugations* of the Hungarian verb (cf. section 5.3.5.1.), the distribution of small *pro* (cf. section 5.3.5.2.) and the syntax of *ACI-verbs* in Hungarian (cf. section 5.3.5.3.).

5.3.5.1. *The Conjugational Patterns of the Hungarian Verb*

Subject-object asymmetries with the conjugation of the Hungarian verb involve (*I*) the *definite* and *indefinite* conjugation, and (*II*) the verbal suffix *-lak*.

(*I*) The verb may appear with two different conjugational patterns, namely, the definite and the indefinite conjugation (cf. section 4.2.1.). The descriptive rule 4.2.(2) captures the distribution of these pattern, here repeated as (1):

(1) The definite paradigm is triggered in case the accusative object of the verb is definite, otherwise the indefinite paradigm is triggered

The following minimal pair is an example of (1):

(2) a. Lát*ok* egy lányt
see-AGR1sg-indef a girl-ACC
'I see a girl.'

b. Lát*om* a lányt
see-AGR1sg-def the girl-ACC
'I see the girl.'

The definite accusative NP *a lányt* (cf. (2b)) triggers the definite conjugation, whereas its indefinite counterpart *egy lányt* (cf. (2a)) appears with the indefinite conjugation.

Compare, now, the conjugational patterns of an intransitive verb (cf. (3a) and (3b)) with the conjugational paradigms of a transitive verb subcategorizing for an NP with a lexical case (cf. (3c) and (3d)):

(3) a. Egy lány fut-ϕ
a girl run-AGR3sg-indef
'A girl is running.'

b. A lány fut-ϕ
the girl run-AGR3sg-indef
'The girl is running.'

c. Beszél*ek* egy lánnyal
speak-AGR1sg-indef a girl-INSTR
'I am speaking with a girl.'

d. Beszél*ek* a lánnyal
speak-AGR1sg-indef the girl-INSTR
'I am speaking with the girl.'

In (3a) and (3b), the conjugational pattern of the agentive intransitive verb *fut* is indefinite, whatever the definiteness feature of its nominative subject is. Thus, the definiteness of a nominative argument of an intransitive verb does not affect the choice of conjugational pattern. The transitive verb *beszél* 'speak' which is associated with a NOM-INSTR case frame occurs with the indefinite conjugation in (3c) and (3d), although in (3d) its instrumental argument is definite. Obviously, an object argument other than the accusative, i.e. the instrumental in (3c) and (3d), does not affect the conjugational pattern of the verb. Hence, we conclude that the *accusative* case is a neccesary condition for the definite conjugation, besides definiteness.

The question arises whether rule (1) is sensitive to D-structure grammatical functions. *Inchoative* verbs illustrate that this is not the case but that this rule is sensitive to surface structure case.[15] Recall that these verbs select a D-structure object which ends up as the nominatively marked subject at surface structure (cf. section 3.3.2.). If the indefinite/definite alternation were sensitive to D-structure grammatical functions, then the inchoative verb *eltörik* 'break' would display the definite conjugation

(15) Unaccusative verbs are not suitable for illustrating the fact that the indefinite/definite pattern of the verb is not sensitive to the D-structure object. A number of these verbs allow only indefinite arguments (cf. Szabolcsi 1986f for a discussion of the definiteness effect in Hungarian).

when it appears with a definite NP.[16] In sentence (4b), the object NP *az üveg* 'the glass' is definite. Note, however, that *eltörik* may only be conjugated *indefinitely:*

(4) a. Egy üveg eltör-ött-ϕ/*-t-e
a glass break-past-AGR3sg-indef/def
'A glass broke.'
b. Az üveg eltör-ött-ϕ/*-t-e
the glass break-past-AGR3sg-indef/def
'The glass broke.'

In conclusion, the subject and the object do not have the same distribution with respect to the conjugational patterns of the Hungarian verb. The indefinite/definite alternation of the verbal conjugation singles out the accusative argument of the verb. This argument is distinct from the other arguments in that it may trigger, when definite, the definite conjugation. So, this dichotomy is rooted in Case theory.

(II) Another instance in which Case theory interacts with the conjugation of the Hungarian verb is in the case of the verbal suffix *-lak.* The question to which conjugational pattern, i.e. the indefinite or definite one, this suffix belongs is a matter of debate.

Lotz (1976) argues that *-lak* falls within the indefinite paradigm. This suffix may only be attached to transitive verbs which appear with NOM-ACC case frame. It reflects that the nominative NP is first person singular, and the accusative NP is second person singular or plural person

Consider, for example, the difference in grammaticality between the verb *lát* 'see' (cf. (5a)) which is associated with a NOM-ACC case frame and the verb *találkoz* 'meet' (cf. (5b)) which is associated with a NOM-INSTR case frame when they are conjugated with *lak:*

(5) a. (Én) lát*lak* (téged/titeket)
I see-AGR1sg2sg/pl you(sg)-ACC/you(pl)-ACC
'I see you.'
b. *(Én) találkoz*lak* (téged/titeket)
I meet-AGR1sg2sg/pl you(sg)-ACC/you(pl)-ACC
'I meet you.'

From a comparison between (5a) and (5b), it follows that verbal suffixation with this suffix is only allowed by transitive verbs which appear with a nominative and accusative complement.

5.3.5.2. *The Distribution of Small pro*

The presence of empty categories in the syntactic representation is guaranteed by an interplay of the Projection Principle and the θ-criterion (cf. Chomsky 1986a: 84). The licensing of small *pro* is determined by two sorts of conditions, a structural one and a contextual one (cf. section 4.2.4.2.).

The first type of constraint is related to *government.* Small *pro* is sanctioned if it is related to a governor which has enough 'strength'. These governors are, for example,

(16) *Eltörik* is monadic when it is inflected with the passivizer *-ik.* This suffix is spelled out, however, only in the third person singular present tense (cf. section 3.3.2.).

X^0-categories which assign a structural Case (cf. Rizzi 1986). The second condition may be fulfilled only by Infl if it is specified with rich AGR.

The *pro*-module is relevant in the present context, because it yields subject-object asymmetries. Consider again the distribution of *pro* in Hungarian 4.2.(34), here repeated as (6):

(6) *The Distribution of pro in Hungarian*
   a. *Nominative* personal pronouns may be dropped in all persons and numbers
   b. *Accusative* personal pronouns may be dropped only in case they are singular. First and second person pronouns may be dropped with the indefinite conjugation. Third person pronouns may be dropped only with the definite conjugation
   c. Personal pronouns with lexical case may not be dropped

I discussed in section 4.2. the following dichotomies with *pro*-drop, (*I*) nominative and accusative pronouns may be omitted, unlike pronouns with lexical case, and (*II*) pro-drop with accusative pronouns is conditioned by plurality and definiteness features. So, in (*I*) we have an opposition between nominative/accusative and lexical case, and in (*II*) we have an opposition between nominative and accusative. Let us consider first (*I*).

(*I*) Recall that the the first opposition has been captured by condition 4.2.(35), here repeated as (7):

(7) Pronouns in Hungarian may only be dropped if they are assigned structural Case

This condition on *pro*-drop is formulated in terms of Case theory. The opposition between nominative/accusative Case and lexical case coincides with the opposition between structural Case and θ-case (cf. section 3.2.1.). In theories on Case-assignment (cf. Chomsky 1981 or Kayne 1984) it is assumed that each type of Case is associated with a governor holding a separate structural position. From this it follows that structural Case is assigned to a different position than θ-case. In section 5.4.1., I will argue that structural Case-assigners are structurally more prominent than non-structural Case-assigners.

(*II*) Another distributional subject-object asymmetry with *pro*-drop shows up with nominative and accusative pronouns. Observe from (6) that this phenomenon with accusative pronouns is more restricted than *pro*-drop with nominative pronouns. Accusative pronouns may only be dropped when they are singular. I argued that this difference is due to the status of personal pronouns in discourse and the existence of discourse hierarchies (cf. section 4.2.4.2.). Although this opposition does not provide direct evidence for the hierarchical organization of Hungarian phrase structure, it provides at least some circumstantial evidence. The dichotomy between nominative and accusative pronouns indicates that the nominative argument and accusative argument represent separate primitives in the grammar. In that sense it is a real subject-object asymmetry.

5.3.5.3. *ACI-Verbs*

Verbs of *perception* like *see,* and *hear* and verbs of *propositional attitude* such as *consider,* and *believe* may select an *Accusativus-cum-Infinitivo* (ACI). Compare:

(8) a. I saw [IP John/him cut the bread] b. I consider [IP John/him to be a fool]

Chomsky (1981) attributes the following properties to these constructions.

(*i*) The clausal complement may be realized as an embedded infinitive, sometimes in the form of a so-called 'naked' infinitive as in (8a) (cf. Higginbotham 1982), and (*ii*) these clausal complements are transparent for government and Case-assignment of a higher verb. According to Chomsky, the latter property is due to the deletion of the CP.

It is a problem that there is no suitable Case-assigner in the embedded clause present for its subject. If nothing happened these sentences would be ruled out as a Case Filter violation (cf. 3.3.(5)). However, the subject of the embedded clause is assigned structural accusative Case 'exceptionally' by the matrix verb. This is clear from the fact that the personal pronoun in the subject position appears in its accusative form.

Marantz (1984) and Hale and Keyser (1985) argue that the embedded subject receives a compositional θ-role from the embedded VP. Therefore, this subject receives its Case-features from a different governor than its θ-role. A crucial assumption is that the structural subject position is outside the VP.

Let us turn to the Hungarian equivalents of the sentences in (8):

(9) a. Jánost/őt láttam vágni a kenyeret
John-ACC/him saw-AGR1sg cut-INFI the bread-ACC
'I saw John/him cut the bread.'

b. Jánost/őt hülyének tartom
John-ACC/him fool-DAT consider-AGR1sg
'I consider John/him to be a fool.'

Consider first (9a) which exemplifies an ACI-complement selected by a perception verb.[17] Observe that although word order is 'free', this complement has exactly the same properties as its English counterpart. (i) ACI-complements are selected by a perception verb, and (ii) their subject appears in the accusative case. This suggests an analysis along the lines sketched for the English ACI-complement.

The following minimal pair provides some evidence for this:

(10) a. Hallottam/láttam azt [CP hogy (te) megvered őt]
heard-AGR1sg/saw-AGR1sg that-ACC that you beat-AGR2sg him
'I heard/saw that you beat him.'
(Szabolcsi 1983a: 12)

b. Hallottalak/láttalak [IP téged megverni őt]
heard-AGR1sg2sg/pl/saw-AGR1sg2sg/pl you-ACC beat-INFI him
'I heard/saw you beat him.'
(Szabolcsi 1983a: 13)

(17) É. Kiss (1987a: 62) claims that Hungarian does not display ACI-constructions. According to É. Kiss, this provides support for the assumption that Case assignment is thematically based. However, it will be argued below that Hungarian does display these constructions and that they have similar properties as their counterparts in English.

In (10a), the perception verb selects a full clausal complement. Embedded clauses introduced by the complementizer *hogy* are CPs in Hungarian, and a matrix verb subcategorizing for a CP assigns its Case-features to the 'dummy' demonstrative pronoun *az* 'that' (cf. section 4.5.1). The subject is assigned nominative Case in its embedded clause.

In (10b), on the other hand, the clausal complement is an ACI. Recall, furthermore, that the suffix *-lak* agrees with the nominative argument first person and the accusative argument second person of a transitive verb (cf. section 5.3.5.1.*(II)*). Observe now that this suffix on the matrix verb agrees with the accusative NP *téged* which is the subject of the ACI-complement. Obviously, the NP which is assigned the structural accusative Case in the domain of the verb may trigger verbal agreement on that verb.

This demonstrates that the subject of an ACI-complement is accessible for the higher verb. Hence, in sentence (10b) clausal-reduction from CP to IP must have applied which makes the embedded subject accessible for structural Case-assignment by the higher verb. Consequently, the embedded subject agrees with the verbal suffix *-lak* on the higher verb. Hence, the syntax of ACI-complements in Hungarian provides evidence for a subject-predicate partitioning of the sentence.

Let us turn now to ACI-constructions selected by verbs of propositional attitude in Hungarian.

ACI-complements to verbs of propositional attitude have the same properties as these complements with verbs of perception. However, there is one interesting difference between these two constructions, as observed by Komlósy (1985). Komlósy notes that the clausal complement of verbs of propositional attitude is not headed by an infinitive but by an adjective (cf. (9b)). So, it might be more appropriate to call the Hungarian equivalent of (8b) *Accusativus-cum-Adjectivo.* For convenience, however, I will continue to speak about ACI-complements in these cases as well.

The Hungarian construction rather resembles the English construction with verbs of propositional attitude selecting a small clause (henceforth labelled as S):

(11) I consider [S John/him a fool]

It is unclear why these verbs in Hungarian may not select an infinitive. According to Komlósy, the adjective functions as a secondary predicate which is incorporated into the matrix verb. This yields a complex verb (cf. section 4.4.), because in neutral sentences the adjective occurs in the VM-position, and it bears dative case. So, in (9b) 'restructuring' seems to have applied resulting into a monoclausal structure.

Following the analysis of ACI-complements in English, I will relate the accusative Case of *János/öt* in this sentence to the matrix verb and its θ-role to the secondary predicate. The θ-role may be transmitted through chain formation with big *PRO* or NP-trace. The precise determination of this is a subject for further research.[18]

(18) A syntactic relative of ACI-constructions in Hungarian is the adjective complement selected by raising verbs:

(i) János [V' szomorúnak látszik]
John sad-DAT seem-AGR3sg
'John seems sad'

Recapitulating, the subject NP of an ACI-complement in Hungarian exhibits a mismatch between Case- and θ-assignment. This NP receives its accusative Case from a matrix governor, which may be a perception verb or a verb of propositional attitude. Its θ-role is assigned compositionally by the lower VP. Exceptional Case-marking is allowed, because ACI-complements are accessible for Case-assignment of the higher verb. They have a structural subject position outside the VP just as such complements in English. The appearance of such complements in Hungarian provides empirical support for the subject-predicate partitioning of the sentence. Furthermore, they also support the claim that the accusative is a structural Case in Hungarian, similar to accusative Case in English (cf. 3.2.(7b)).[19]

5.3.6. *Control Theory*

Another domain of subject-object asymmetries is provided by *control theory.* This asymmetry is due to the EPP 3.3.(7), here repeated for convenience as (1):

(1) Clauses must have subjects

In untensed embedded clauses the EPP introduces an empty category in the subject position functioning as the controllee in control relations. Chomsky (1981: 74-78) refers to this empty category as big *PRO.*

Chomsky claims that *PRO* is ungoverned in infinitive clauses, because these clauses lack an I-node. Koster (1987), on the other hand, argues that *PRO* may be governed in such cases. For our purposes, it is sufficient that both approaches assume the presence of an empty category subject in untensed embedded clauses. This implies a subject-object asymmetry.

This section examines two phenomena belonging to the domain of control theory in which subject-object asymmetries appear involving (*I*) control constructions with infinitive complements (cf. section 5.3.6.1), and (*II*) control relations with secondary predicates (cf. section 5.3.6.2.).

5.3.6.1. *Infinitive Complements*

Usually, two cases of control are distinguished with infinitive complements, namely, (*i*) *subject control,* and (*ii*) *object control* constructions. Consider an example of each:

This sentence contains a complex verb as well (cf. chapter three, note 32). Note, however, that in such constructions the raised NP receives its nominative Case from I on the raising verb. There is no other Case assigner available. The θ-role of the NP must originate from the secondary predicate, since raising verbs do not assign θ-roles. So, (i) displays another instance of a mismatch between Case- and θ-assignment.

(19) Hungarian has also some verbs selecting Dativus-cum-Infinitivo (DCI). Compare, for example, the DCI-complement of the verb *segít* 'help':

(i) Segítek [IP *Jánosnak/neki* csomagolni]
help-AGR1sg John-DAT/he-DAT pack-FI
'I help John/him to pack.'

If this complement is analysed analoguously to the ACI-complement, then it follows that the dative is a structural Case as well. Maybe this provides an explanation for the fact that the prominence of the accusative over the dative is not so clear always, for example, in the case of reflexive binding (cf. 5.3.4.(8a)-(8d)). (See section 5.4. for further discussion of the case system in Hungarian).

(2) a. *John* promised Bill [IP *PRO* to feed himself]
b. John persuaded *Bill* [IP *PRO* to feed himself]

Verbs of the *promise*-type specify that the controller of PRO is the subject of the matrix verb, as in (2a). Verbs of the *persuade*-type specify that the controller of PRO is the object of the matrix verb, as in (2b). It has been argued that Hungarian displays both subject and object control (cf. Kálmán et al. 1984; 1986, É. Kiss 1987a, and Szabolcsi 1983a). The case of object control is, however, not so clear. Below I will argue that it may be treated as an ACI-construction. Consider first some cases of subject control.

(*I*) Verbs such *as akar* 'want', *elmegy* 'go away', *fél* 'fear', *igyekszik* 'strive', *imád* 'love', *kell* 'must', *megpróbál* 'try', and *szeret* 'like' induce subject control. Compare:

(3) a. János akarta látni Marit
John wanted-AGR3sg see-INFI Mary-ACC
'John wanted to see Mary.'
b. Péter imádott táncolni Marival
Peter loved-AGR3sg dance-INFI Mary-INSTR
'Peter loved to dance with Mary.'
c. Jánosnak kell látni Marit
John-DAT has to-AGR3sg see-INFI Mary-ACC
'John has to see Mary.'
d. Küldöm Jánost úszni
send-AGR1sg John-ACC swim-INFI
'I send John to swim.'

Recall that *akar* 'want' and *kell* 'have to' trigger 'restructuring' yielding a monoclausal structure (cf. section 5.3.2.). This implies that in the surface representation of (3a) and (3c), *PRO* would not be present. This entails a violation of the EPP, since θ-role of the infinitival predicate cannot be assigned to the subject.

A violation of the Projection Principle in these cases, however, may be avoided by adopting a suggestion of Szabolcsi (1983a). Szabolcsi relates the presence of *PRO* to the assignment of a θ-role to the position it occupies. Therefore, if the infinitival predicate does not assign a θ-role to its subject, *PRO* may be missing. According to Szabolcsi, (some) subject control verbs precisely create this effect. They absorb the θ-role of the subject of their infinitive complement and bequeathe it to their own subject. Hence, *PRO* might be absent from the syntactic representation.

(*II*) Consider the following sentences:

(4) a. János látta Marit énekelni
John saw-AGR3sg Mary-ACC sing-INFI
'John saw Mary singing.'
b. Hagytalak téged játszani Pistaval
let-AGR1sg2sg you-ACC play-INFI Steve-INSTR
'I let you play with Steve.'

I analysed the infinitive complements of verbs of perception and propositional attitude, like *enged* 'let', *hagy* 'let', *hall* 'hear', *hív* 'call', *hoz* 'bring', and *lát* 'see', as ACI-complements (cf. section 5.3.5.3.). Hence, the sentences in (4) have a structure as in (5):

(5) a. János látta [IP *Marit* énekelni] b. Hagytalak [IP *téged* játszani Pistaval]

The reason I treated this group of verbs in a way comparable to ACI-verbs in English, was because they display similar syntactic properties as their ACI-counterparts in English.

Szabolcsi (1983a), on the other hand, regards the complements of these verbs as object control complements. Szabolcsi assumes that the accusative NP is a direct argument of the matrix verb associated with a *PRO* subject in the infinitive complement. So, according to Szabolcsi, the sentences in (4) have the following structure (bracketing is mine):

(6) a. János látta *Marit* [IP *PRO* énekelni]
b. Hagytalak *téged* [IP *PRO* játszani Pistaval]

Szabolcsi argues that an object control analysis in these cases is supported by the fact that the Hungarian construction does not merely require a direct perception of the action denoted by the matrix predicate but also a direct perception of the entity carrying out the action denoted by the embedded predicate. This can, however, easily be incorporated into the ACI-analysis by adopting Williams' (1983) extension of the theory of θ-assignment.

Williams argues that an NP may be assigned different θ-roles providing that each θ-role is assigned by a different θ-role assigner.[20] Of course, it remains to be explained why the subject of an ACI-complement in Hungarian receives two θ-roles but not in English. I will leave this dichotomy for further research. So, there is not much reason to assume that the syntactic representation of the cases in (4) contain a *PRO* subject.

Summarizing, the EPP provides an empty category, i.e. *PRO,* in the subject position of infinitive complements which is accessible for control by an NP of a higher domain. Hungarian displays only subject control. Control phenomena arise only if there is a subject-predicate dichtomy of the sentence. Hence, the presence of these phenomena is an argument for the subject-predicate partitioning of the sentence.

5.3.6.2. *Secondary Predicates*

Another construction type in which control theory is supposed to be operative is *secondary predication*, the so-called 'small' clause. Compare:

(7) John eats *naked*

This sentence contains a secondary predicate, the adjective *naked.* It attributes a property to the subject NP *John.* In the literature, two kinds of analyses have been proposed for secondary predication, (*I*) Chomsky (1981) and Stowell (1982), and (*II*) Williams (1980; 1983). Let us first consider the Chomsky-Stowell approach.

(*I*) Chomsky and Stowell argue that the secondary predicate in (7) heads a small clause which has a *PRO* subject analogously to the subject of infinitive complements:

(8) *John* eats [S *PRO* naked]

(20) Note that this theory violates the uniqueness condition on θ-assignment in 3.2.(2) or 4.6.(26). Therefore, Williams' suggestion remains somewhat controversial.

This clause does not contain I, and thus its *PRO* subject is accessible for a controller of a higher domain, i.e. *John* in (8).

This analysis is supported by the fact that the subject of a secondary predicate may be overtly present in syntax if the grammar provides a mode to sanction the Case of the lexical subject in the small clause parallel to infinitive constructions:

(9) a. I saw [IP *John* to be sad] b. I consider [IP *John* to be a fool]
c. *John* seems [IP — to be sad]

The matrix verb in (9a) and (9b) is an ACI-verb, and the matrix verb in (9c) is a raising predicate.

The embedded subjects in (9) are sanctioned for Case in the following manner. ACI-verbs are lexically specified for making their embedded domain accessible for government and Case-assignment (cf. section 5.3.5.3.). Hence, the embedded subject *John* in (9a) and (9b) is assigned accusative Case and may therefore remain in-situ. In (9c), a violation of the Case Filter is avoided, because a raising predicate allows movement of the embedded subject *John* to the matrix subject where it is assigned nominative Case by I.

Note that exactly the same analysis is applied to small clauses. The only difference is that the embedded VP in (9) is replaced by an AP in (10a) and (10c) and by an NP in (10b):

(10) a. I saw [S *John* sad] b. I consider [S *John* a fool] c. *John* seems [S — sad]

Again, the embedded subject of these constructions cannot be Case-marked within its own clause by absence of a suitable Case-assigner. The constructions are saved, however, in the same way as the ones in (9).

(II) An alternative to the Chomsky-Stowell analysis is elaborated in Williams (1980; 1983). According to Williams, the relation between a secondary predicate and its contoller is restricted by the theory of *Predication.*

Predication states that a predicate may be related to its controller if the controller c-commands the predicate. So, under this theory, the sentence in (7) receives the following analysis:

(11) *John* eats naked

Thus the control relation is established directly without making reference to an embedded *PRO.*

At this place, I will not take a decision in favor of one of the analyses of secondary predication. I will adopt, however, the following *structural condition* on this phenomenon relevant to both approaches, namely:

(12) A secondary predicate can be controlled by a lexical NP if it is c-commanded by that lexical NP

Let us turn to a discussion of secondary predication in Hungarian. This phenomenon has been studied by Komlósy (1985). According to Komlósy, secondary predicates may or may not belong to the PAS of the verb. The former case is an instance of *argumental* secondary predication, and the latter is an instance of *adjunctival* secondary predication. Let us first examine argumental secondary predication.

(*I*) Komlósy (1985) points out that argumental secondary predicates are semantically selected by the verb and are marked with a case-suffix. According to Komlósy, there are a couple of case-suffixes such as the *translative, formalis,* or *essive* endings whose primary function is to reflect secondary predication. Consider:

(13) János jutal*mul* kapott egy oklevelet
John reward-ESS received a diploma-ACC
'As a reward John was given a diploma.'
(Komlósy 1985: 59)

Komlósy observes furthermore that in their neutral order secondary argumental predicates must be left-adjacent to the verb and may not be modified by an article. Komlósy concludes therefore that these predicates occupy the VM-position and form with the verb a V'-constituent (see, section 4.4.1.).

Resultative predicates are a good example of secondary predication. Resultative predicates denote the new quality or property of an argument which it acquires as a result of the event denoted by the verb. They are selected by verbs of change such as *lesz* 'turn into', *válik* 'become', or *alakul* 'grow'.

Resultative nouns are assigned translative case, and resultative adjectives are usually marked ablatively:

(14) a. János (*a) jó mérnök*ké* vált
John the good engineer-TRANS became-AGR3sg
'John became a good engineer.'
b. Mari (*a) piros*ra* festette a falat
Mary the red-SUBL painted-AGR3sg the wall-ACC
'Mary painted the wall red.'
(Komlósy 1985: 61)

These verbs are obligatorily specified for a secondary predicate in their PAS.

Verbs of *change of state,* or *contact,* however, may only optionally select a secondary predicate. Consider the pairs in ((15a), (15b)) and ((16a), (16b)):

(15) a. Mari főzi a krumplit
Mary cook-AGR3sg the potatoe-ACC
'Mary cooks the potatoe.'
b. Mari pép*pé* főzte a krumplit
Mary pulp-TRANS cooked-AGR3sg the potatoe-ACC
'Mary cooked the potatoe to a pulp.'
(Komlósy 1985: 62)

(16) a. János veri Pétert
John beat-AGR3sg Peter-ACC
'John is beating Peter.'

b. János laros*ra* verte Pétert
John flat-SUBL beat-AGR3sg Peter-ACC
'John beat Peter to pulp.'
(Komlósy 1985: 62)

Let us consider the Hungarian equivalents of the English constructions in which the overt lexical subject of a small clause is sanctioned for Case (cf. (10)):

(17) a. Jánost szomorú*nak* láttam
John-ACC sad-DAT saw-AGR1sg
'I saw John sad.'

b. Jánost hüjé*nek* tartom
John-ACC fool-DAT consider-AGR1sg
'I consider John a fool.'

c. János szomorú*nak* látszik/tűnik
John sad-DAT appeared-AGR3sg/seemed-AGR3sg
'John seems sad.'

Recall that ACI-complements of the verbs of propositional attitude the infinitive is replaced by a dative marked adjective (cf. 5.3.5.(9b)). This adjective appears in the VM-position. A dative marked adjective also occurs when perception verbs (cf. (17a)) and raising verbs (cf. (17b)) select a small clause complement. With Komlósy (1985), I will assume that the dative case in these sentences belongs to the PAS of the verb, similarly as the instances of the secondary predicates in the examples (13)-(16).

Let us attempt to make some generalizations over the above examples. First, as noted by Komlósy (1985), lexical properties of the predicate govern the selection of the secondary predicates and the determination of their controller. Second, only nominative and accusative arguments of the verb, or D-structure subjects (cf. (17)) may act as controllers with this phenomenon. The nominative NP functions as a controller in case the secondary predicate is obligatorily selected as in (13) and (14a), while in (14b) and (15) the accusative argument is lexically designated as controller, even if a suitable nominative controller is present, see, for example (14b).

According to Williams (1980), the c-command condition on Predication is a necessary condition but not a sufficient one. Both lexical and syntactic factors may determine the establishment of a predication relation. The structural constraint implies that nominative and accusative NPs, or the D-structure subject of small clauses, must be higher in the syntactic tree than the secondary predicate, otherwise the c-command condition is violated. If the secondary predicates in (13)-(17) are inherent parts of the PAS of the verb, then both the (nominative) subject and the (accusative) object have structural prominence over an complement with lexical case, i.e. a translative, dative, sublative, essive, etc. argument of the verb.

Let us turn to a discussion of adjunctival secondary predication.

(II) Williams (1980) observes that sentences containing an adjunctival secondary predicate in English may be ambiguous:

(18) a. John painted the door *wet*

b. John saw Mary *drunk*

Williams points out that (18a) and (18b) have a reading in which the secondary predicates *wet,* and *drunk* may be controlled either by the subject or by the object.

Under the first reading the state of the subject is indicated. In (18a) *John* is attributed the property of being *wet,* and in (18b) *John* is attributed the property of being *drunk.* Under the second reading of (18a) the *door* becomes wet as a result of John's painting, while in (18b) *Mary* is in the state of being *drunk.*

According to Williams, these ambiguities are due to the fact that secondary predicates may be attached either to IP (labelling is mine), or to the VP. In the former case, only the subject qualifies as a controller, while in the latter case the secondary predicate is controlled by the object. This is in accordance with (12).

Consider now the Hungarian equivalents of the sentences in (18):

(19) a. *János* vizesen festette az ajtót
John wet-adv painted-AGR3sg the door-ACC
'John painted the door wet.'
b. János vizesre festette az *ajtót*
John wet-SUBL painted-AGR3sg the door-ACC
'John painted *the door wet.*'

(20) a. [NP*János* [CP aki *ittas* volt]] látta Marit
John who drunk was saw-AGR3sg Mary-ACC
'John saw Mary *drunk.'*
b. János *ittasan* látta *Marit*
John drunk-adv saw-AGR3sg Mary-ACC
'John saw *Mary drunk.'*

As may be observed from these sentences, Hungarian disambiguates the readings associated with the English sentences in (18). The (a)-sentences represent the readings of (18) in which the subject acts as the controller, while the (b)-sentences represents the readings of (18) in which the object acts as the controller.

The subject reading of (18a) is expressed in Hungarian by adding to the stem of the adjective *vizes* the adverbial marker (adv) *-en,* whereas the object reading of (18b) is formed by incorporating the adjective into the PAS of the verb as in (14b). The subject reading of (18b) cannot be expressed with a secondary predicate. A relativization strategy has to be chosen instead, while the object reading of (18b) is expressed with the help of the adverbializer just as the reading of (18a).

It is unclear why Hungarian disambiguates the readings associated with adjunctival secondary predication in English.[21] An account for the individual readings, however, may run along the following lines.

Komlósy (1985) notes that some secondary predicates may belong to the PAS of the verb that also selects the argument of which they state a property. According to Komlósy, argumental secondary predicates are semantically much *closer* to the verb than adjunctival secondary predicates. Adjuncts attribute merely a property of the argument without affecting the event denoted by the predicate. Consider the following pairs:

(21) a. János darabokra törte a vázat
John pieces-SUBL broke-AGR3sg the vase-ACC
'John broke the vase into pieces.'
b. *János vizesre/szárazra/üresre törte a vázát
John wet-SUBL/dry-SUBL/empty-SUBL broke-AGR3sg the vase-ACC

(21) Hale and Laughren (1983) and Simpson (1983) observe that in Warlpiri this phenomenon occurs as well. In that language case congruence indicates over which NP the secondary predicate is predicated. Compare:

(i) a. *Jakamarra* yani *pamajangka*
Jakamarra-ABS IMP go alcohol-source-ABS
'Jakamarra is going *drunk.'*
b. *Jakamarrarlu* Napaljarri pakarnu *pamajangkarlu*
Jakamarra-ERG Napaljarri-ABS hit alcohol-SOURCE-ERG
'Jakamarra hit Napaljarri *drunk.'*
c. Jakamarrarlu *Napaljarri* pakarnu *pamajangka*
Jakamarra-ERG Napaljarri-ABS hit alcohol-SOURCE-ABS
'Jakamarra hit *Napaljarri drunk.'*

(22) a. János darabokban hozta be a vázát
John pieces-INESS brought-AGR3sg in the vase-ACC
'John brought in the vase into pieces.'
b. János vizesen/szárazon/üresen hozta be a vázát
John wet-adv/dry-adv/empty-adv brought-AGR3sg in the vase-ACC
'John brought in the vase wet/dry/empty.'
(Komlósy (1985), 58)

The verb *tör* 'break' selects a secondary predicate with a specific meaning. Therefore, an argumental secondary predicate indicated by the sublative case is allowed (cf. (21a)). However, an adjunct with the inessive case is prohibited (cf. (21b)). The verb *hoz* 'bring' does not put selectional restrictions on its secondary predicate. Therefore, adjuncts may function as secondary predicates much more freely with this verb (cf. (22))

We can translate Komlósy's observations into structural terms as follows. An argumental secondary predicate must be attached to the VP, and an adjunct may be adjoined either to the VP, or to IP. This largely depends on idiosyncratic lexical factors. If these assumptions are correct, it is explained why the argumental secondary predicate in (19b) is controlled by the accusative argument, and why the adjunctival secondary predicate may be controlled either by the subject in (19a), or by the object in (20b). The assumption of a VP node and c-command restriction (12) are crucial in explaining the ambiguity of the English examples (18). Note that these assumptions are relevant in covering the difference between argumental and adjunctival secondary predication in Hungarian as well.

In (19a), the adjunctival secondary predicate *vizesen* is adjoined to IP. Hence, because of the c-command condition on Predication, its controller can only be the subject NP. In (20b), the adjunctival secondary predicate is adjoined to VP, and it is predicated over the object NP. In (19b), the argumental secondary predicate *vizesre* is attached to the VP, and it is controlled by the object NP.

Note that in (19b) and (20b) both the subject and the object satisfy the c-command condition. The fact that the argumental secondary predicate in (19b) and the adjunctival secondary predicate in (20b) are controlled by the object but not by the subject NP follows from Williams' (1980) additional lexical restriction on Predication:

(23) If a secondary predicate is in the VP, then this secondary predicate is predicated of the *theme* of V

The transitive verbs *fest* 'paint' in (19b) and *lát* 'see' in (20b) belong to the agent-theme class. This type of verbs assigns its accusative object a theme by rule 3.2.(3a). Hence, the secondary predicates *vizesre* and *ittasan* are predicated over the object NP. The subject and object oriented readings associated with the adjunctival secondary predicates in (19a) and (20b) demonstrate that adjuncts may be more freely attached to the VP and IP than argumental secondary predicates. Hence, this dichotomy shows that argumental predicates always occupy a position under VP, unlike adjuncts of secondary predication.[22]

(22) Komlósy (1985) and De Groot (1987) discuss another type of adjunctival predication in Hungarian, the so-called predicative verbal adverbial construction. These predicates are formed by adding the adverbial participle suffix *-va/ve* to the verbal stem:

(i) Az ajtó be van csukva
the door prefix is close-suffix
'The door is closed.'

Recapitulating, I argued that secondary predication is restricted by the distribution of the verbal arguments. Only nominative and accusative NPs may function as controllers of an argumental secondary predicate. This type of secondary predicate is incorporated into the PAS of the verb. This may be observed from the fact that it bears a lexical case. From theories on secondary predication (cf. Chomsky 1981, Stowell 1982, and Williams 1980; 1983), it follows that the nominative and accusative NPs must be structurally superior to the argumental predicate. Hungarian resolves ambiguities between a subject and an object oriented reading, which occur with secondary predication in English, with adjunctival secondary predication, argumental secondary predication, or relativization. It must be admitted that some properties of secondary predication are not completely understood at the present state of research, like the difference between English and Hungarian with the incorporation of secondary predicates into the PAS of the verb, or the disambiguation of readings associated with adjunctival secondary predication. However, the Hungarian counterparts corresponding to the subject and object oriented readings in English show that argumental secondary predicates are attached to the VP. The distribution of adjunctival secondary predicates, on the other hand, is much freer. In order to derive the readings related to argumental and adjunctival secondary predication, the assumption of a VP is crucial.[23]

5.3.7. *Wh-Module*

Here, I will focus on subject-object asymmetries with *Wh-movement* in Hungarian. These asymmetries occur in *long Wh-movement* (cf. section 5.3.7.1.), and in a phenomenon that is contingent on *Wh-movement,* namely, *parasitic gaps* (cf. 5.3.7.2.).

5.3.7.1. *The Distribution of Long Wh-movement*

Consider the following instances of long Wh-movement:

(1) a. **Ki/kit* gondolsz hogy *t* látta Vilit
who-NOM/-ACC think-AGR2sg that saw-AGR3sg Bill-ACC
'Who do you think saw Bill?'

b. *Kit* gondolsz hogy Vili látott *t*
who-ACC think-AGR2sg that Bill saw-AGR3sg
'Who do you think that Bill saw?'

c. *Kinek* gondolod hogy János könyvet adott *t*
who-DAT think-AGR2sg that John book-ACC gave-AGR3sg
'To who do you think that John gave a book?'

d. *Kivel* szeretnéd hogy Mari beszéljen *t*
who-INSTR like-COND-AGR2sg that Mary speak-SUBJ-AGR3sg
'With whom would you like that Mary should speak?'

e. *Kitöl* gondolod hogy Mari könyvet kapott *t*
who-ABL think-AGR2sg that Mary book-ACC got-AGR2sg
'From who do you think that Mary got a book?'

Further, Komlósy distinguishes a stative construction and a perfective dynamic passive depending on the coupe used. Judging from the examples in the references above, this adverbial predicate may only be controlled by a nominative NP which may be either an agent, or an underlying theme object. This state of affairs arises if the adverbial predicate is attached to IP, and is controlled at S-structure. Hence, this construction type provides another argument for the claim that the nominative NP is the external argument.

(23) Hale and Laughren (1983) and Simpson (1983) report that extension of the semantic definition of a basic predicate is a very productive rule in Warlpiri. The syntactic concomitant of these 'adjunctions' is always a secondary predicate.

Long Wh-movement is restricted by dialectal and idiolectal factors. Roughly, there are two dialects to which I will refer in the remainder as Hungarian *I* and Hungarian *II*.

(*I*) *Hungarian I*

É. Kiss (1981a), Horvath (1981), and Szabolcsi (personal communication) report that they find long Wh-movement completely acceptable in Hungarian. This phenomenon seems to be especially frequent in the spoken language (cf. De Groot 1981c, Szalamin 1978, and Zolnay 1926).

É. Kiss (1982b) observes that a subject-object asymmetry turns up in long Wh-movement. According to É. Kiss, an extracted *nominative* Wh-phrase ends up accusatively marked (cf. (1a)), whereas an accusative Wh-phrase retains its case during the derivation (cf. (1b)). Furthermore, É. Kiss observes that extracted Wh-phrases with lexical case take their Case-feature along.

The verbs *ad* 'give', *beszél* 'speak', and *kap* 'get' subcategorize for a dative, instrumental, and ablative NP, respectively. The case-endings on the extracted Wh-phrases correspond to the subcategorized cases of these verbs in (1c)-(1e).

So, only a nominative Wh-phrase undergoes a *Case change* when it is fronted by Wh-movement. Comrie (1981, 155) and Van der Auwera (1984, 260) observe the same with *long relativization*, a syntactic relative of long Wh-movement.[24] This phenomenon is derived by Wh-fronting of the relative pronoun:

(2) a. A fiú **aki/akit* mondtam hogy *t* elvette a pénzt
the boy who-NOM/-ACC said-AGR1sg that away-took-AGR3sg the money-ACC
'The boy that I said took away the money.'

b. A pénzt *amit* mondtam hogy a fiú elvett *t*
the money-ACC which-ACC said-AGR1sg that the boy away-took-AGR3sg
'The boy that I said took away the money.'

c. A fiú *akinek* gondolod hogy János könyvet adott *t*
the boy who-DAT think-AGR2sg that John book-ACC gave-AGR3sg
'The boy that you think that John gave a book to.'

d. A fiú *akivel* szeretnéd hogy beszéljen *t*
the boy who-INSTR like-COND-AGR2sg that speak-SUBJ-AGR3sg
'The boy that you would like that he should speak with.'

e. A fiú *akitöl* gondolod hogy Mari könyvet kapott *t*
the boy who-ABL think-AGR2sg that Mary book-ACC got-AGR3sg
'The boy that you think that Mary got a book from.'

This paradigm shows that a non-nominative relative pronoun (cf. (2b)-(2e)), unlike the nominative one (cf. (2a)), takes along its Case assigned in the embedded clause when raised into the matrix sentence.

(24) Keenan and Comrie (1977) propose an accessibility hierarchy for relativization. According to Keenan and Comrie, this phenomenon is restricted by the following hierarchy:

(i) Subject > direct object > non-direct object > possessor

This hierarchy is only respected by simple sentences. Comrie (1981: 154) points out that embedded clauses do not have to obey (i). For example, long Wh-movement and relativization in Hungarian do not pattern as in (i), but rather as in (ii), the reverse of (i):

(ii) Lexical case (non-direct object) > accusative (direct object) > nominative (subject)

In chapter six, I will consider the mechanism of this Case change in more detail. Here, it is sufficient to indicate how it is related to the configurationality of phrase structure.

Theories on Case-assignment (see, for example, Chomsky 1981 or Kayne 1984) assume that some maximal projections, like VP, are opaque for Case-assignment by a higher governor. Other maximal projections, however, may be transparent for Case-assignment by a higher governor. For example, the IP is transparent for accusative Case-assignment in A.C.I.-complements (cf. section 5.3.5.3.) and the CP displays this property in long Wh-movement (cf. Kayne 1984). Hence, only complements which are base-generated outside the VP may undergo a Case change.

The Case change of the nominative NP with long Wh-movement implies, then, that it is base-generated outside the VP, and that the non-nominative NPs are base-generated within the VP. This distinction can only be made if the phrase structure in Hungarian has a configurational structure with a separate VP.

(II) Hungarian II

Other native-speakers, for example Komlósy (1986), reject cases of long Wh-movement in Hungarian entirely, or accept them only quite marginally. For the latter group there is even an accessibility hierarchy observable.

The grammaticality of this phenomenon decreases in the order ((1c), (1d), (1e)) > (1b) > (1a), and the grammaticality of long relativization decreases from ((2c), (2d), (2e)) > (2b) > (2a). This means we have the following *accessibility hierarchy:*

(3) *Accessibility Hierarchy for Long Wh-movement in Hungarian*
DAT, INSTR, ABL > ACC > NOM.

The cut off point for grammaticality in this hierarchy is at the first '>' symbol. The opposition between grammaticality and ungrammaticality in this dialect coincides with the opposition between lexical case and structural Case:

(4) Lexical case > *structural Case

Thus, the following generalization in terms of Case theory emerges for speakers of Hungarian II who allow long Wh-movement:

(5) Long Wh-movement in Hungarian *II* is licit if the Wh- antecedent bears lexical case

This restriction is the exact reverse of the condition on pro-drop in Hungarian (cf. 4.2.(34)) which states that pronouns in Hungarian may only be dropped if they are assigned structural Case. I argued in section 3.2.1. that the opposition between nominative/accusative Case and lexical case coincides with the opposition between structural Case and θ-case in Hungarian. If there is a matching between the type of Case and structural positions in the phrase structure, as is assumed in theories on Case (cf. Chomsky 1981, Kayne 1984), then condition (5) reflects that the phrase structure of Hungarian has a configurational structure.

Summarizing, long Wh-movement is subject to dialectal variation, probably in the form of a continuum. I labelled these dialects Hungarian *I* and Hungarian *II*. In chapter six, I will suggest that dialectal variation with long Wh-movement is rela-

ted to a parameter, namely, *±move Wh.* The positive option of this parameter allows long Wh-movement, apart from the Case change phenomenon, without exception, whereas its negative option accepts it rather marginally.

Anderson and Kvam (1984) report a similar variation with long Wh-movement in German. Taking into account the fact that both Hungarian and German have a relatively 'rich' case-system, it seems reasonable to search for an explanation of this variation in terms of Case theory. I will return to this topic later on.

In conclusion, in both dialects subject-object asymmetries show up. In Hungarian *I*, the fronted nominative Wh-phrase undergoes a Case change, and in Hungarian *II*, for those speakers who accept long Wh-movement at all, only Wh-phrases with a lexical case may be extracted. I have argued that both asymmetries are due to Case theory. The former asymmetry is related to the opacity of maximal projections for a higher Case-governor, whereas the latter one is related to the one-to-one matching between type of Case and structural positions. The distribution of long Wh-movement in Hungarian makes it clear that its phrase structure displays a hierarchical organization.

5.3.7.2. *The Distribution of Parasitic Gaps*

In the literature, it has been observed that the distribution of *parasitic gaps* in English yields a subject-object asymmetry:

(6) a. *You put away *the papers* [before reading *e*]
b. **The papers* fell off the table [before you read *e*]
c. *Which papers* did you put away *t* [before reading *e*]
d. **Which papers t* fell off the table [before you read *e*]

Chomsky (1982) notes that parasitic gaps, in these sentences indicated by *e*, have to obey the following two descriptive conditions:[25]

(7) a. Parasitic gaps are contingent on Wh-movement, and
b. Parasitic gaps may not be c-commanded by the Wh-trace

Absence of Wh-movement accounts for the ungrammaticality of (6a) and (6b). The difference in grammaticality between (6c) and (6b) is subsumed by restriction (7b). The trace of the subject Wh-phrase in (6d), unlike the trace of the object Wh-phrase in (6c), c-commands the parasitic gap in the adjunct phrase. Hence, sentence (6d) but not (6c) is ungrammatical. Let us consider the distribution of parasitic gaps in Hungarian. Because of condition (7a), constructions with such gaps can be tested at best by relying on the judgements of speakers of Hungarian *I*. Recall that this dialect allows long Wh-movement quite easily.

É. Kiss (1985) observes that precisely the same pattern of grammaticality occurs with parasitic gaps in the Hungarian equivalents of (6):

(25) With Koster (1987: 360), I will assume that parasitic gaps are subject to the usual anti-c-command requirement.

(8) a. *Eltetted *az iratokat* [mielőtt elolvastál volna *e*]
away-put-AGR2sg-def the papers-ACC before read-AGR2sg-indef had
b. *Leestek *az iratok* az asztalról [mielőtt elolvastál volna *e*]
off-fell-AGR3pl-indef the papers the table-DELAT before read-AGR2sg-indef had
c. *Milyen iratokat* tettél el [mielőtt elolvastál volna *e*]
what papers-ACC put-AGR2sg-indef away before read-AGR2sg-indef had
d. **Milyen iratok* estek le az asztalról [mielőtt elolvastál volna *e*]
what papers fell-AGR3pl-indef off the table-DELAT before read-AGR2sg-indef had

One could argue that the positions *e* in these sentences do not contain a parasitic gap but a small *pro,* since Hungarian is a pro-drop language. The grammaticality of (8c) would then be due to the presence of a small *pro* rather than to Wh-movement.

The spelling out of an overt pronoun in English has a similar effect. It turns the ungrammatical sentences in (6) into grammatical ones:

(9) a. You put away *the papers* [before reading *them*]
b. *The papers* fell off the table [before you read *them*]
c. *Which papers* did you put away *t* [before reading *them*]
d. *Which papers t* fell off the table [before you read *them*]

However, there are two arguments which contradict the small *pro* hypothesis. First, the assumption of *pro* cannot explain the difference in grammaticality between ((8a), (8b), (8d)) and (8c). Secondly, the distribution of *e* does not correspond with the diagnostics of accusative *pro*-drop. Third person accusative pronouns may only be omitted if they are singular, and trigger definite conjugation on the verb (cf. 4.2.(34b)). In (8), the Wh-antecedent is plural and the embedded verb displays indefinite conjugation. Therefore, a small *pro,* unlike an overt plural pronoun, may not even appear when the conjugation of the embedded verb is changed into definite. Compare the counterparts of (8a) and (8c):[26]

(10) a. Eltetted *az iratokat* [mielőtt elolvastad volna *(*őket*)]
away-put-AGR2sg-def the papers-ACC before read-AGR3sg-def had hem
b. *Milyen iratokat* tettél el [mielőtt elolvastad volna *(*őket*)
what papers-ACC put-AGR2sg-indef away before read-AGR2sg-def had them

Therefore, it may safely be concluded that the examples (8) involve parasitic gaps and that a subject-object asymmetry turns up with this phenomenon in Hungarian as well, at least in Hungarian *I.*

É. Kiss (1985) and Horvath (1987) note furthermore that other quantificational NPs than Wh-phrases may also license parasitic gaps and that subject-object asymmetries occur in these constructions, too. This supports the hypothesis that quantifiers in Hungarian are moved into non-A-positions in the Quantifier Field (cf. 2.1.(28f)), just as focussed NPs, since only such NPs may license parasitic gaps (cf. Engdahl 1984):

(26) For speakers of Hungarian II, who accept long Wh-movement only marginally, these sentences with an overt pronoun are the only grammatical alternants. Sentences of the type (8c) are a question mark at best for such speakers. (See, also section 6.7.1. for a discussion of dialectal variation with the distribution of parasitic gaps in Hungarian).

(11) a. *Minden iratot* elveszített *t* még [mielőtt elolvasott volna *e*]
every paper-ACC lost-AGR3sg-indef still before read-AGR3sg-indef had
'He lost every paper before he had read.'
b. *Elveszített *minden* iratot még [mielőtt elolvasott volna *e*]
lost-AGR3sg-indef every paper-ACC still before read-AGR3sg-indef had
(É. Kiss 1985, (5a))

5.3.8. *Quantification Theory*

This section investigates the syntactic and semantic properties of constructions containing *numeral quantificational* NPs. It turns out that with these constructions a subject-object asymmetry shows up. Before discussing *adverbial* numeral NPs, I will first concentrate on *argumental* numeral NPs.

(*I*) Consider the following sentence from English:

(1) *Two boys* stole *three apples*

This sentence contains a subject and an object numeral NP.

De Meij (1982; 1983) observes that two readings are associated with (1). In the *distributive* reading, the predicate *stole three apples* is applied to each of the boys individually. Therefore the number of the apples stolen is minimally three and maximally six. On the other hand, in the *total* reading the two plural NPs indicate merely the size of sets involved, namely, two boys and three apples. Therefore the number of apples stolen in this case is maximally three.[27]

Let us consider the Hungarian equivalent of this sentence:[28]

(2) *Két fiú* lopott *három almát*
two boy stole-AGR3sg three apple-ACC

In contrast to its English counterpart, the Hungarian word by word equivalent only has a total reading. The number of the apples stolen is maximally three. In order to derive the distributive reading of the English sentence another strategy may be chosen, namely, by *reduplication* of the adnominal numeral in the accusative NP:[29]

(3) Két fiú lopott *három-három* almát
two boy stole-AGR3sg three-three apple-ACC

Example (3) implies that six apples were stolen.

(27) See Higginbotham and May (1981) for the derivation of total and distributive readings with the assumption of LF.

(28) A nominal head is singular in Hungarian if it is modified by a countable adnominal phrase.

(29) Besides reduplication, other strategies with the same effect may be chosen as well. (i) The adnominal numeral in the nominative NP may be modified by the adnominal quantifier *mind a* 'all the':

(i) *Mind a* két fiú lopott három almát
all the two boy stole-AGR3sg three apple-ACC
'Two boys stole three apples each.'

or, (ii) by focussing the nominative NP, as Anna Szabolcsi (personal communication) brings to my attention:

(ii) [P Két fiú] lopott három almát
two boy stole-AGR3sg three apple-ACC
'Two boys stole three apples each.'

Reduplication of the adnominal numeral in the nominative NP, if possible at all, does not render the distributive reading of the English sentence (1). For those native-speakers who accept this, it has the effect of turning the *two boys* into *two sets* of *two boys.* Hence, the numeral distributes phrase-internally over its head. The number of apples stolen, however, remains three as in (2). This yields a total reading only:

(4) *Két-két* fiú lopott három almát
two-two boy stole-AGR3sg three apple-ACC
'Two groups of two boys stole (maximally) three apples.'

According to De Meij, whom I will follow here, distributivity is a property of the PAS. A distributive reading can be obtained by distributing the property of the predicate over the members of the set denoted by the subject individually. From this it follows that this phenomenon involves a subject-predicate partitioning of the sentence. In Hungarian, this subject-object asymmetry is even spelled out overtly by means of a morpholexical device, that is, by reduplicating the adnominal modifier in the object NP.

Distributivity also provides empirical evidence for the internal partitioning of the VP. Compare the following example with the tryadic verb give:

(5) *Two boys* gave *four apples* to *three girls*

This sentence may have at least the following three readings. Besides the total reading in which maximally *four apples* are given to *three girls,* (5) may have the following two distributive readings.

First, the property denoted by the direct object and the verb distributes over the members of the set denoted by the subject individually. The number of the apples given is in that case minimally four and maximally eight. Second, the property denoted by the object and the verb distributes over the indirect object. The number of apples given is then minimally four and maximally twelve.

The word by word equivalent of this sentence in Hungarian has again only a total reading:

(6) *Két fiú* adott *négy almát* *három lánynak*
two boy gave-AGR3sg four apple-ACC three girl-DAT
'Two boys gave (maximally) four apples to three girls.'

Reduplication of the numeral in the accusative NP *négy almát* results in the second distributive reading, that is, the property of the direct object and the verb may only distribute over the indirect object:

(7) Két fiú adott három lánynak *négy-négy* almát
two boy gave-AGR3sg three girl-DAT four-four apple-ACC
'Two boys gave four apples to three girls each.'

Thus, the distributive reading with tryadic verbs in Hungarian is more restricted than in English. It involves only the non-nominative NPs.

De Meij's account of distributivity is based on *compositionality.* A property of a subphrase, i.e. the VP, of the clause distributes over the subject. If this approach is correct, then the object and the verb constitute a subphrase, probably a V', when a

tryadic verb has a distributive reading. This subphrase distributes over the indirect object VP-internally.

(*II*) *Adverbial* distributive numerals provide further empirical evidence for the subject-predicate partitioning of the clause. The adverbial distributive numerals *hármasával* (three-INSTR) 'three at a time' and *hármonként* (three-ESS) 'three by three' may distribute either over the subject such as in the (a)-sentences, or over the predicate such as in the (b)-sentences:

(8) a. A fiúk *hármasával* mentek az ablakhoz
the boys three-INSTR went-AGR3pl the window-ALL
'The boys went to the window three at a time.'
b. Két fiú ellopta az almákat *hármasával*
two boy stole-AGR3sg the apples-ACC three-INSTR
'Two boys stole the apples three at a time.'

(9) a. A fiúk *hármonként* mentek az ablakhoz
the boys three-ESS went-AGR3pl the window-ALL
'The boys went to the window three by three.'
b. Két fiú ellopta az almákat *hármonként*
two boy stole-AGR3sg the apples-ACC three-ESS
'Two boys stole the apples three by three.'

The ambiguities in these sentences can be accounted for most easily by assuming that the adverbials are attached under IP so that they may equally distribute over the subject and the predicate. This implies a subject-predicate partitioning of the clause.

Summarizing, I discussed subject-object asymmetries with argumental and adverbial distributive NPs. Argumental distributive NPs may be created by a morpholexical strategy which doubles the adnominal numeral. However, their distribution is restricted. Only the accusative NP of a transitive sentence may be reduplicated. So, distributivity with two-place predicates provides empirical support for a subject-predicate dichotomy of the clause. Adverbial distributive numerals illustrate the same. They are ambiguous between a reading in which they distribute over the subject and a reading in which they distribute over the predicate. Furthermore, distributivity with three-place predicates yields evidence for a VP-internal partitioning as well. The argumental distributive object numeral may only distribute over its structurally closest 'antecedent', i.e., the indirect object.

To express distributivity by means of a morpholexical strategy is not only restricted to Hungarian. Gil (1982) notes that Georgian displays this strategy as well. Georges Rebuschi (personal communication) brings to my attention that this phenomenon in Basque is expressed with the help of the suffix *-na*. It may be attached only to the object of a transitive sentence. From this, I conclude that a morpholexical device reflecting distributivity deserves a place in the typology of subject-object asymmetries.

5.4. Evaluation

This section evaluates the subject-object symmetries and subject-object asymmetries discussed in the preceding sections. Concerning these clusters, we can make the following observations. First, in terms of the modules of the grammar they are rather *heterogeneous* in nature. Both subject-object symmetries and subject-object asymmetries appear in the domain of X'-theory, θ-theory, binding theory, Wh-module, and

quantification theory. Secondly, these clusters themselves are diverse in nature. Some of them are fairly complicated. The question arises what is the proper strategy to account for their properties within a theory of UG? Let us first consider the position of subject-object asymmetries in Hungarian.

5.4.1. *The Configurational Structure of Hungarian*

I will assume that the cluster of subject-object asymmetries is the unmarked case, as they can be derived directly from the *categorial* component of syntax (cf. 0.1.1.(1b)). This component generates structural configurations which serve as the basis for other modules, like government theory or binding theory. This implies that subject-object asymmetries should appear frequently in the grammar of natural languages. This turns out to be the case.

Subject-object asymmetries are well-attested across languages. Some of them qualify as *language universals.* A candidate for this is, for example, reflexive binding.

In all languages which have been claimed to be non-configurational, *reflexive anaphors* are subject to hierarchical constraints. Hale (1983), Whitman (1984), and Mohanan (1984) report that object reflexive anaphors in respectively Warlpiri, Japanese, and Malayalam may be bound by subjects, but not vice versa. This is also the case in Hungarian (cf. section 5.3.4.1.). It is, then, extremely likely that reflexive binding is universally restricted by a subject-object asymmetry. Thus, it is both from a theoretical and empirical point of view unmotivated to relax subcomponents of the grammar like X'-theory, government theory or the Projection Principle to derive subject-object symmetries in the grammar of a particular language. Such an approach is pursued in É. Kiss (1987a) in connection with the subject-object symmetries in Hungarian. Let us discuss some of the consequences of this attempt.

É. Kiss assigns the Hungarian phrase structure the non-configurational structure 5.1.(1), here repeated as (1):

(1) $S \rightarrow V\ X^{n*}$

This structure predicts the occurrence of subject-object symmetries in Hungarian. This appears indeed to be the case (cf. section 5.2.). É. Kiss (1987a) acknowledges the subject-object asymmetries involving reflexive binding (cf. section 5.3.4.1.), the distribution of big *PRO* in infinite complements (cf. section 5.3.6.1.), and the Case change of an extracted nominative Wh-phrase (cf. section 5.3.7.1). How are these phenomena derived in a phrase structure of the type in (1)?

Let us consider how É. Kiss deals with the asymmetries involved in reflexive binding. In order to account for this phenomenon, É. Kiss (1987a, 180) assumes a prominence hierarchy. According to her, prominence hierarchy is not reflected structurally in non-configurational languages but as a case-hierarchy:

(2) NOM > ACC > DAT > INSTR > LEXICAL CASE

She further formulates the following rule for reflexive binding:

(3) A reflexive anaphor may only be bound by an antecedent which is more prominent in hierarchy (2) than the reflexive anaphor

Although this rule is descriptively adequate, it is unsatisfying from a theoretical point of view for at least two reasons.

(*A*) A consequence of (3) is that reflexive anaphors in English and Hungarian obey completely *different* conditions. The distribution of the English reflexive anaphor is accounted for by a structural condition in the style of Binding Principle A (cf. 5.3.4.(3a)), whereas the distribution of the Hungarian reflexive anaphor falls under (3). This suggests that a generalization is missed. Reflexive binding in terms of this rule, then, leads to a break with the well-motivated c-command condition on dependent elements.

(*B*) É. Kiss (1987a: 183) makes the following remarks on the status of the case-hierarchy in Hungarian grammar:"The definition introduces case-hierarchy as an auxiliary device, to be applied in languages of a "flat" argument structure, in the sentences of which c-command is unable to establish a hierarchy among the maximal major categories." From this, it follows that this hierarchy applies only to NPs which are *coarguments*. Therefore, it can only be extended to subject-object asymmetries which involve coarguments like secondary predication (cf. section 5.3.6.2.) or reduplication of distributive numerals (cf. section 5.3.8.). However, it cannot account for the following subject-object asymmetries.

(*i*) The case-hierarchy checks overt case-endings. Hence, it is not able to cover subject-object asymmetries which do not refer to overt case-endings, but rather to underlying *GFs*. This is the case with transitivity alternations (cf. section 5.3.1.1.), noun-incorporation (cf. section 5.3.1.2.) and θ-theory (cf. section 5.3.3.).

(*ii*) This hierarchy cannot account for the asymmetries which bear on *non-coarguments*. These asymmetries turn up when one of the NPs involved is embedded in a subphrase, or a separate clause. This is the case with the binding of names (cf. section 5.3.4.2.), the distribution of bound pronouns (cf. section 5.3.4.3.), switch reference (cf. section 5.3.4.5.), the distribution of long Wh-movement (cf. section 5.3.7.1.) and of parasitic gaps (cf. section 5.3.7.2.).

(*iii*) The case-hierarchy is not operative if the asymmetries single out only one of the verbal arguments such as in synthetic reflexivization/reciprocalization (cf. section 5.3.1.1.), X'-theory (cf. section 5.3.2.), the conjugational patterns of the Hungarian verb (cf. section 5.3.5.1.), ACI-verbs (cf. section 5.3.5.3.), control with infinitive complements (cf. section 5.3.6.1.), and the distribution of small *pro* (cf. section 5.3.8.1.).

The anomalies in (*i*)-(*iii*) show that (2) has a very limited scope. This implies that further auxiliary devices have to be formulated in order to account for them. Certainly, that is an undesirable step.

Summarizing, the case-hierarchy is theoretically inadequate for the following reasons. First, the syntactic properties of lexical items such as reflexive anaphors, which are cross-linguistically uniform, would be captured differently in Hungarian. Reflexive binding could not be formulated in terms of structural conditions. Second, it applies in a rather narrow domain. From this it follows that further auxiliary mechanisms have to be added to cover other subject-object asymmetries in Hungarian. Above I noted that the case-hierarchy is descriptively adequate, at least with respect to the cases subsumed by Binding Principle A. This suggests that it is a reflection of abstract structural configurations. Let us investigate whether this hierarchy can be reinterpreted in this sense.

Van Riemsdijk (1982; 1983a) classifies the overt case-markers of languages with a rich case-system in terms of a universal feature system employing mnemo-

nic categories such as *subject* [S], *closest argument* [CA], etc. In this system, the features may be organized in a binary tree which expresses (like in hierarchical constituent structures) the concept of 'belonging closer to'. Van Riemsdijk further notes that it would be attractive to associate this case-hierarchy with the hierarchy of GFs developed within the framework of Relational Grammar (cf. Perlmutter 1984).

This framework states that the subject GF is more prominent than the object GF, etc. Following Van Riemsdijk's suggestion, I will relate the above case-hierarchy to the hierarchy of GFs, or to the *external* (*ext*) versus *internal* (*int*) dichotomy in the LS of the verb. Recall that this is defined structurally (cf. chapter three).

Further, I will assume, as in various other theoretical approaches, that besides the external-internal opposition there is also a VP-internal divisioning in the form of an *internal argument 1* versus *internal argument 2* dichotomy.

Below I will demonstrate that these hierarchies are supported empirically in Hungarian. Restatement of the case-hierarchy in terms of the hierarchy among the verb arguments yields the following taxonomy of the case-system:

(4) a. external argument = NOM
(subject)
b. internal argument 1 = ACC, DAT, INSTR
(direct object)
c. internal argument 2 = DAT, INSTR, LEXICAL CASE
(indirect object, etc.)

The equations in (4) must be read as follows. The external argument is the nominatively marked NP. The internal argument 1 is the accusative NP, if there is one, otherwise the dative NP, if there is one, and so on. The internal argument 2 is the datively marked NP, if there is one, otherwise the instrumentally marked NP, and so on.

We can use these equations to classify the subject-object asymmetries. This yields the following matrix:

(5)

	ext	*int 1*	*int 2*
transitivity alternations	+	+	-
reflexivization/reciprocalization	-	+	-
noun-incorporation	-	+	+
infinitive-with-internal argument	-	+	+
compositional θ-assignment	-	+	+
reflexive binding	+	+	-
binding of names	+	+	-
distribution of bound pronouns	+	+	-
switch reference	+	-	-
Indef/def conjugation	+	+	-
the suffix *-lak*	+	+	-
distribution of *pro*	+	+	-
person/number features of *pro*	+	-	
ACI/DCI-verbs	+	-	-
subject control	+	-	-
secondary predication	+	+	-
Case change in long			
Wh-movement/relativization	+	-	-
distribution of Wh-trace in Hungarian II	-	-	+
distribution of parasitic gaps	-	+	+
reduplication of distributive numerals	-	+	+
adverbial distributive numerals	+	-	-

The values in this matrix group together those arguments of the verb that have the same distribution with a particular syntactic phenomenon.

Compositional θ-assignment, reflexive binding, the binding of names, the distribution of bound pronouns, switch reference, ACI/DCI-verbs, subject control with infinitive complements, the distribution of parasitic gaps and reduplication of distributive numerals provide empirical evidence for the hypothesis that the external argument is superior to the internal arguments of the verb.[30] Thus, the following prominence hierarchy is supported by these phenomena:

(6) external argument > internal argument 1 and internal argument 2

Reflexive binding, binding of a pair of names, the distribution of bound pronouns, the conjugation with the suffix *-lak,* secondary predication, and the distribution of *pro* provide evidence for the hypothesis that the external argument and internal argument 1 are more prominent than internal argument 2. This yields the prominence hierarchy in (7):

(7) external argument and internal argument 1 > internal argument 2

By collapsing (6) and (7), we derive (8):

(8) external argument > internal argument 1 > internal argument 2

Some of the phenomena in the matrix above refer to one of the arguments of the verb, exclusively emphasizing their primitive status in this hierarchy.

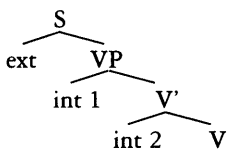
The external argument is singled out by ACI/DCI-verbs (which assign accusative/dative Case to the subject of their sentential complement), by the Case change of a nominative NP which undergoes long Wh-movement and by *pro*-drop which may affect all persons and numbers of a nominative NP only.

The accusative internal argument 1 is exclusively referred to in morpholexical transitivity alternations, synthetic reflexivization/reciprocalization, and in the definite conjugation of the verb. The internal argument 2 is singled out, at least in Hungarian *II,* by the distribution of Wh-traces.

There is also empirical evidence for the primitive status of VP. Three phenomena refer in particular to a combination of the verb with its internal arguments, including noun-incorporation, the structure of infinitive complements and argumental/adverbial distributive numerals. Below I will provide further support for this claim by showing that under certain conditions VP-rules may apply in Hungarian as well.

So, we may depict this syntactic representation by means of the familiar tree-structure notation:

(9)



(30) See also Nakajima (1986) for the claim that the distribution of parasitic gaps provides evidence for the hypothesis that Hungarian phrase structure is hierarchical rather than flat.

This diagram expresses that the Hungarian phrase structure is configurational, and meets the principle of binary branching.

In chapter seven, I will argue that the Head Parameter, which specifies the order of heads and complements, is 'head-final' in Hungarian. This means that each lexical head follows its complement. Hence, (9) reflects the basic *SOV*-structure of Hungarian.

The question arises how the spelling out of morphological case is related to the structural positions in this configuration? The Case-assignment rules in 3.2.(7) are insufficient to account for this. Here, I will not accommodate Case theory to the rich case-system of Hungarian, because this would be beyond the scope of this study. Instead I will make the following points.

If we adopt a biuniqueness condition on Case-assignment, the set of Case-governors has to be extended with the V'. The Case of the external position is governed by I, the Case of the internal argument 1 is governed by V', and the Case of internal position 2 is governed by V. Of course, the cases which are actually realized depends on the inherent properties of these governors.

The Case assigned to the external argument and internal argument 1 is structural Case, whereas the Case assigned to internal argument 2 is lexical Case. Observe then that θ-governed arguments are structurally closer to the verb than arguments assigned structural Case.

The following phenomena support the hypothesis that the dative may also be a structural Case, that is a governee of V'. First, in binding phenomena the dative and accusative are equally prominent (cf. reflexive binding in 5.3.4.(8a)-(8d)). Second, Hungarian displays DCI-complements (cf. fn.19). Third, in clauses with a tryadic verb a reduplicated adnominal numeral embedded in an accusative NP distributes over the dative NP (cf. 5.3.8.(7)).

Nearly all the subject-object asymmetries can be covered by applying the devices of the modules of the grammar to structure (9). For most of these phenomena this was already carried out above. It was not possible in all cases, given the present state of the art. First, some of their properties are badly understood. Recall, for example, Noun-Incorporation in Hungarian (see, section 5.3.1.2.). Such phenomena require much more extensive study than has been carried out hitherto.

Second, a successfull account of subject-object asymmetries depends also on specific theoretical assumptions concerning the theory of UG and the phrase structure of Hungarian. Some of them require further investigation. For example, the development of a theory of abstract Case and its morphological realization, or the status of scrambling. To illustrate the type of puzzles which have to be faced, consider again some subject-object asymmetries within the domain of binding theory.

Let us assume that the case-system of Hungarian is as in (4), and its phrase structure is as in (9). In that case, the asymmetries with reflexive binding and the binding of a pair of names fall into place. They may be accounted for by Binding Principle A and C respectively.

The phenomena subsumed under these principles remain unaffected by scrambling. Hence, the sentences 5.3.4.(7a) and (7b) and 5.3.4.(12a) and (12b), here repeated as (8) and (9), display the following pattern of grammaticality, whatever the linear order of the constituents in the sentences is:

(10) a. *János* szereti *magát*
John loves himself-ACC
'John loves *himself.'*

b. **Jánost* szereti *maga*
John-ACC loves himself

(11) a. *János* anyja szereti *Jánost*
John mother-npAGR3sg loves John-ACC
'John's mother loves *John.'*

b. **János* szereti *János* anyját
John loves John mother-npAFR3 sg-ACC

Saito and Hoji (1983) argue that scrambling is an instance of Move-α which adjoins the scrambled NP to a maximal major category, presumably into a non-A-position.

In terms of this theory, we may say that these operations do not affect the application of the Binding Principles A and C. It follows, then, that either the Binding Principles apply before movement, or that scrambling does not reverse the c-command relation. This could otherwise turn a grammatical clause into an ungrammatical one, or vice versa.

Consider now, again, the cases of bound variable interpretation of pronouns 5.3.4.((23a), (24a), (25a), and (26a), here repeated as (10) (only the relevant bracketing is indicated):

(12) a. *[CP [NP Az pro_i anyja] [CP kit_i [VP t_i szeret]]]
the mother-npAGR3sg who-ACC loves
*'*Who* does *his* mother love?'

b. [CP Kit_i [VP t_i szeret [VP [NP az pro_i anyja]]]]

c. [CP Ki_i [VP t_i [VP szereti [VP [NP az pro_i anyja]]]]
who loves the mother-npAGR3sg-ACC
'Who loves *his* mother?'

d. [CP [NP Az pro_i anyját] [CP ki_i [VP t_i [VP szereti]]]]

The distribution of bound pronouns is, unlike Binding Principle A and C phenomena, sensitive to scrambling. If the subject NP is postponed as in (10b) the WCO-effect vanishes, and if the object NP containing the pronoun is scrambled over the subject as in (10d) no WCO-effect arises.[31] Note, incidentally, that this paradigm provides empirical evidence for the claim that scrambling is not a stylistic rule applying at PF but a rule of syntax.

The question, then, is why does scrambling affect the binding relation between a pair (quantifier, pronoun) but not the binding relation between a pair (name, reflexive anaphor), or (name, name). There are several ways to escape this binding 'paradox' depending on the theoretical assumptions we adopt. A solution of this puzzle may run as follows.

Preverbal NPs are adjoined to the CP in Hungarian (cf. section 2.2.). Furthermore, suppose that postverbal subjects are adjoined to the VP (cf. Belletti and Rizzi 1982). As a consequence of the latter, the c-command relation between the subject and the object may be changed if the object is a Wh-phrase.

In (10b), the trace of the Wh-phrase in object position c-commands the bound pronoun in the subject possessive NP which is adjoined to the VP. However, in (10a)

(31) Webelhuth (1985) notes that German displays this 'anti-crossover' effect as well.

the object Wh-trace does not c-command the subject possessive NP that is adjoined to CP. Hence, the former sentence is grammatical, whereas the latter is ruled out as a violation of condition 5.3.4.(21) on bound pronouns. The dichotomy between the pairs of ((10a), 10b)) and ((10c), (10d)) follows, if we assume that the subject Wh-trace c-commands both the object possessive NP adjoined to VP (cf. (10c)) and the object possessive NP adjoined to CP (cf. (10d)).

However, under these assumptions the grammaticality of a scrambled variant of (9a) would remain unexplained:

(13) [$_{CP}$*Jánost*$_i$ [$_{VP}$ t_i szereti [$_{VP}$ [$_{NP}$*János* anyja]]]]
John-ACC loves John mother-npAGR3sg

A name embedded in a postverbal subject possessive NP would be c-commanded by the trace of the accusative name in object position. This configuration violates Binding Principle C. So, in (10b) c-command of the phrase adjoined to VP by the object trace is required but it has to be blocked in (11).

A solution for this contradiction would be to assume 'reconstruction' in the case of Binding Principles A and C, that is, to apply these conditions only to base-generated positions.[32] In that case, (11) would not violate Binding Principle C, yielding a grammatical sentence.[33]

Let us turn now to a discussion of the properties of the subject-object symmetries.

So far, it was argued that the Hungarian phrase structure is asymmetric. The subject is structurally prominent over the other arguments of the verb. How do subject-object symmetries appear in such a structural configuration?

Since some of these subject-object symmetries have rather intrinsic properties, it is hard to imagine that they fall outside the scope of UG. This is strongly supported by the fact that they appear in the same modules as subject-object asymmetries do. Before we examine subject-object symmetries in Hungarian within a theory of UG, let us localize the problems associated with these phenomena.

There are two kinds of subject-object symmetries. (*I*) Subject-object symmetries which also occur in established configurational languages, and (*II*) subject-object symmetries which have a somewhat different form in Hungarian than in other established configurational languages. The phenomena in (*I*) cannot count as decisive evidence for the absence of a VP in Hungarian. Further, these subject-object symmetries pose a problem in some other configurational languages as well. Therefore, I will argue that these subject-object symmetries are *epiphenomena.* They arise from the interaction of independent principles with the configurational phrase structure. On the other hand, the subject-object symmetries in (*II*) constitute some *residual* pro-

(32) This solution is similar in spirit to the one of Van Riemsdijk and Williams (1981) and Mohanan (1983). In these acounts, binding paradoxes are covered by applying the Binding Principles A and C before the execution of move α, and by applying the condition 5.3.4.(21) on bound pronouns after the execution of move α. As a result, the principles of binding theory are distributed over different levels of representation.

(33) In section 5.4.2.7., I will replace Binding Principle C by a discourse principle. This does nos, however, affect the solution for binding paradoxes, because the discourse principle may also be sensitive to GF-positions.

blems not yet accounted for. It seems to me that these symmetries should be dealt with by directly relating them to specific properties of Hungarian phrase structure. Let us discuss first the epiphenomenal subject-object symmetries.

5.4.2. *The Epiphenomenal Symmetries*

This section examines subject-object symmetries in Hungarian that appear also in established configurational languages such as English, Dutch or Frisian. To this category belong the following phenomena, involving the distribution of sentence adverbs (cf. section 5.4.2.1.), the absence of VP-rules (cf. section 5.4.2.2.), the absence of *that*-trace effects (cf. section 5.4.2.3.), Wh-movement from possessive NPs (cf. section 5.4.2.4.), the formation of idioms (cf. section 5.4.2.5.), compositional θ-assignment to the object (cf. section 5.4.2.6), and Binding Principle C symmetries (cf. section 5.4.2.7.).

5.4.2.1. *The Distribution of Sentence Adverbs*

Hungarian does not require *verb-object adjacency,* contrary to English (cf. section 5.2.1.1.). The verb and its direct object may be separated by an adverb. Compare 5.2.1.(4)-(6), here repeated as (1):

(1) a. János látta *valószínüleg* Marit
John saw-AGR3sg probably Mary-ACC
'John has probably seen Mary.'
b. János kinyította *gyorsan* az ajtót
John opened-AGR3sg quickly the door-ACC
'John has opened the door quickly.'
c. Mari elolvasta *tegnap* a könyvet
Mary read-AGR3sg yesterday the book-ACC
'Mary has read the book yesterday.'
d. Mari elolvasta *otthon* a könyvet
Mary read-AGR3sg at home the book-ACC
'Mary has read the book at home.'

Koster (1986) observes that in the uncontroversially configurational language Dutch the facts are similar. Consider the Dutch equivalents of (1):

(2) a. Jan heeft Marie *waarschijnlijk* gezien
John has Mary probably seen
b. Jan heeft de deur *snel* geopend
John has the door quickly opened
c. Marie heeft het boek *gisteren* gelezen
Mary has the book yesterday read
d. Marie heeft het boek *thuis* gelezen
Mary has the book at home read

These sentences show that verb-object adjacency is required neither in Hungarian, nor in Dutch.[34] Both languages differ in this respect from English, in which the object has to be adjacent to the verb. What rule is responsible for this dichotomy?

(34) Jarich Hoekstra (personal communication) points out that the lack of verb-object adjacency also occurs in Frisian:

(i) a. Jan hat Hikke *nei alle gedachten* sjoen
Jan has Hikke probably seen
b. Jan hat de door *gau* lependwaan
Jan has the door *quickly* opened
c. Jan hat it boek *juster* lein
Jan has the book *yesterday* read

I will assume that this phenomenon in Frisian is derived similar to Dutch (see below).

Object and sentence adverbs display free word order in Dutch:

(3) a. Jan heeft waarschijnlijk [VP Marie gezien]
b. Jan heeft [VP *Marie* [VP waarschijnlijk [*t* gezien]]]
John has Mary probably seen
'Probably, John has seen Mary.'

It has been argued that the absence of verb-object adjacency in Dutch is caused by the fact that Dutch easily permits leftward adjunction of objects to the VP (cf. Hoekstra 1984, and Koster 1986). Note that the trace of the object satisfies this requirement at D-structure. Hence, the absence of verb-object adjacency is allowed only at S-structure, but not at D-structure in that language.

This requirement in English can be restated as follows. Why doesn't adjunction of the object to the VP yield a grammatical sentence in English?

Koster (1988) argues that in left-branching languages only leftward adjunction of the object is allowed, and in right-branching languages only rightward adjunction of the object to the VP. According to Koster, the VP in English has properties of both a left-branching and right-branching structure. Therefore, neither adjunction of the object to the right of VP, nor adjunction to the left of VP is possible. This covers the verb-object adjacency requirement in English.

Let us consider now how the absence of this phenomenon is derived in Hungarian.

If verb-object adjacency is not required in uncontroversial configurational languages such as Dutch, its absence cannot count as an argument for the VP-less phrase structure. The apparent violation of verb-object adjacency in Dutch is due to the application of movement rules in the mapping of D-structure onto S-structure. Hence, the null-hypothesis is to relate the absence of this phenomenon in Hungarian to similar rules. We have two such rules available.

First, V-to-C movement (2.2.2.(9)). Second, the option of leftward adjunction of the object to the VP, since Hungarian is a left-branching language (cf. 2.2.1.(1)). These movement rules are sufficient to derive the following orders:

(4) a. S V Adv O b. S V O Adv

The order in (4a) represents the surface order of the constituents in (1c), for example. The order in (4b), on the other hand, represents the surface order of a scrambled alternant of this sentence:

(5) a. Mari *elolvasta* tegnap [VP a könyvet *t*]
Mary read yesterday the book-ACC
b. Mari elolvasta [VP a *könyvet* [VP tegnap *t*]]
Mary read the book-ACC yesterday

(5a) is derived by V-to-C movement, and (5b) is derived by an application of this rule in combination with leftward adjunction of the object to the VP.

Observe that in (5a) the verb scrambles over the sentence adverb *tegnap*. This yields the absence of verb-object adjacency. Accidentally, in (5b) adjunction of the object to the VP results in verb-object adjacency at S-structure as well. Thus, the absence of this phenomenon in Hungarian is subsumed by the properties of adjunction, and by the properties of its phrase structure. Let us turn to a discussion of the absence of VP-rules in Hungarian.

5.4.2.2. *The Absence of VP-rules*

It has been claimed that Hungarian lacks *VP-rules,* in contrast to English (cf. section 5.2.1.2.). However, I will argue in this section that this is the case with VP-deletion only.

In established configurational languages such as Dutch or Frisian, VP-deletion is absent as well. This implies that the lack of this phenomenon from the syntax of a particular language cannot be a decisive argument for the absence of a VP in the phrase structure of that language. Of course, the dichotomy between languages with VP-deletion and languages without it has to be accounted for.

I will suggest that the presence of VP-deletion in English, in contrast to Dutch, Frisian, or Hungarian correlates with the strength of *I* in these languages. Further, I will demonstrate that VP-preposing and VP-pronominalization are operative in Hungarian as well, just as in English, or Dutch. These rules apply only in a specific syntactic context. Note that the presence of these phenomena in Hungarian provides *direct* evidence for a VP in that language. Let us consider first VP-deletion.

(*I*) Steele (1981) notes that *VP-deletion* in English involves an Aux item to the left of the ellipsis:

(1) a. John loves Mary, and Peter *does* too
b. John will have cooked dinner, and so may *have* Peter

So, the deletion of the VP *loves Mary* in (1a), and the deletion of the VP *cooked dinner* in (1b) depends on the presence of an Aux item. This item is an inflected form of *do* in (1a), and *have* in (1b).

The equivalents of these sentences in Dutch are, however, ungrammatical:[35]

(2) a. *Jan houdt van Marie, en Peter doet ook
John loves Mary and Peter does too
b. *Jan zal een maaltijd gekookt hebben, en zo zal Peter ook hebben
Jan will a meal cooked have and so will Peter too have

These sentences can be turned into grammatical ones by inserting the d(emonstrative)-*pronoun dat* 'that' at the ellipsis site in the second conjunct. This pronoun refers to the VP:

(3) a. Jan houdt van Marie, en Peter doet *dat* ook
John loves Mary and Peter does that too
b. Jan zal een maaltijd gekookt hebben, en *dat* zal Peter ook gedaan hebben
John will a meal cooked have and that will Peter too done have

Apart from VP-pronominalization, it is also possible to form the Dutch equivalents of the sentences in (1) by maintaining the subject in the second conjunct. Compare:

(35) Fanselow (1987a: 87) reports that German lacks VP-deletion as well:
(i) *Peter liebt Afrika, und Stanley tut auch
Peter loves Afrika and Stanley does too

(4) a. Jan houdt van Marie, en Peter ook
John loves Mary and Peter too
b. Jan zal een maaltijd gekookt hebben, en zo ook Peter
John will a meal cooked have and so too Peter

These sentences, however, are not cases of VP-deletion, but of 'gapping', or 'reduction'. This operation may delete constituents, or parts of independent constituents. Therefore, as Zwarts (1986) argues, it is not a reliable constituent-test.

Zwarts discusses the following sentences:

(5) a. Arabella bought a whip and sold a faucet
b. Arabella bought and Clarissa sold a whip
(Zwarts 1986, (1))

(5a) exemplifies a case of coordination, and (5b) exemplifies two conjoined clauses in which the first conjunct is reduced by the deletion of the object. The latter construction is traditionally known as 'Right Node Raising'.

Zwarts argues as follows. If only constituents of the same categorial type may be conjoined, as is generally assumed, then it follows from the grammatical status of (5a) that the phrases *bought a whip* and *sold a faucat* are categorially identical. Zwarts continues to argue that the same reasoning leads to the conclusion that the phrases *Arabella bought* and *Clarissa sold* in (5b) are of a same categorial type. According to Zwarts, this result is rather dubious, because these phrases are not regarded as constituents. Hence, reduction rules do not necessarily obliterate a single constituent. How can Right Node Raising be captured?

According to McGee Wood (1986), this phenomenon can only be captured adequately by a *linearization* rule, a PF-rule. McGee Wood formulates the following generalization:

(6) The element which can be omitted in Right Node Raising is the right-most element in the left-hand conjunct

For example, in Japanese only the verb may be omitted from the first conjunct (Japanese is head-final). Compare the following sentences (the ellipsis site is indicated by *e*):

(7) a. *Tanaka-san ga *e* katta, Sumisu-san ga sakana o tabemasita
Takana subj bought Smith subj fish obj ate
'Ms. Takana bought and Ms Smith ate fish.'
b. Takana-san ga sakana o *e,* Sumisu-san ga niku o tabemasita
Takana subj fish obj Sumisu subj meat obj ate
'Ms. Takana ate fish and Ms. Smith meat.'
(McGee Wood 1986, (3))

Let us now discuss VP-deletion, and VP-reduction in Hungarian.

VP-deletion yields an ungrammatical result (cf. (8a)). The counterparts of English sentences with VP-deletion such as (1) can only be turned into grammatical ones by a gapping strategy (cf. (8b)):

(8) a. *János szereti Marit, és Péter is fogja *e*
John loves Mary-ACC and Peter too will
'John loves Mary, and Peter will too.'
b. János szereti Marit, és Péter is *e*
John loves Mary-ACC and Peter too

Let us turn now to VP-gapping in Hungarian. I will first examine reduction of the first conjunct, i.e. Right Node Raising, and then reduction of the second conjunct.

In Hungarian, it is allowed to omit either the *object* or the *verb* from the first conjunct, but not the subject:

(9) a. János etette *e* és Mari itatta a kacsákat
John fed-CAUS and Mary drink-CAUS the ducks-ACC
'John fed the ducks and Mary made the ducks drink water.'
b. János 'kolbászt *e* és Mari 'kenyeret adott a fiúknak
John sausage-ACC and Mary bread-ACC gave the boys-DAT
'It was sausage that John gave and it was bread that Mary gave to the boys.'
c. **e* etette a kacsákat és János itatta a kacsákat
fed-CAUS the ducks-ACC and John drink-CAUS the ducks-ACC

This paradigm demonstrates that only the subject must be present in the first conjunct.

In (9a), the object is deleted from the first conjunct, and in (9b) the verb is deleted from the first conjunct. (9a) represents a neutral sentence, as may be observed from the English glosses. (9b), on the other hand, involves contrastive Focus. The NP *kolbászt* in the first conjunct, and the NP *kenyeret* in the second conjunct have primary stress. If (6) is correct, then this provides another argument for the claim that SVO is the neutral sentence order in Hungarian (cf. 2.2.(28a)), since the object in (9a) is omitted in neutral order.

Note that (9c) matches the distribution of nominative *pro*-drop in Hungarian (cf. 4.2.(34a)). One could therefore argue that this sentence is ungrammatical for independent reasons, namely, because of the fact that backward pronominalization is not allowed. However, deletion of an NP-constituent in the first conjunct does not imply that a small *pro* must be present at the ellipsis site.

The first conjunct of (9a), for example, provides a context for accusative *pro*-drop (cf. 4.2.(343b)). The verb *etet* is conjugated definitely, and subcategorizes for an accusative NP. However, an accusative *pro* cannot be present at the ellipsis site, because the deleted constituent *a kacsák* 'the ducks' is plural. Recall that accusative *pro*-drop is not sanctioned when the NP is plural. Hence, if *pro* is not present at the ellipsis site in (9a), we may assume that this is not the case either in (9c).

In sum, reduction of the first conjunct in Hungarian yields a subject-object asymmetry. The object may always be deleted, the verb under specific circumstances, but the subject may never be omitted.

Let us consider now reduction of the second conjunct.

Reduction of the second conjunct is much freer than reduction of the first conjunct. É. Kiss (1981b) observes that this phenomenon may affect a combination of the verb and any of its NP complements:

(10) a. Péter odaadta a jegyzeteit Marinak és János is oda fogja *e*
Peter perf-gave the notes-npAGR-ACC Mary-DAT and John too perf will
'Peter gave his notes to Mary, and John will, too.'
b. Marinak oaadta a jeyzeteit Péter és Piroskának is oda fogja *e*
Mary-DAT perf-gave the notes-npAGR-ACC Peter and Piroska-DAT too perf will
c. A jegyzeteit odaadta Marinak Péter és a könyveit is oda fogja *e*
the notes-npAGR-ACC perf-gave Mary-DAT Peter and the book-npAGR-ACC too perf will
(É. Kiss 1981b: 317)

In (10a), the verb with its accusative, and dative NPs, in (10b) the verb with its nominative and accusative NPs, and in (10c) the verb with its nominative and dative NPs are 'reconstructed' in the second conjunct. These sentences thus show that any combination of the verb with its complement may be omitted from the second conjunct.

Let us summarize this brief discussion of conjunction reduction. It does not necessarily refer to single constituents. This seems to be true across languages. Hungarian does not form an exception.[36] This implies that reduction tests are illegitimate VP-tests. They do not bear on the question whether there is a VP in a particular language. Let us turn next to a discussion of VP-preposing.

(II) English acknowledges the rule of *VP-preposing.* Consider the following sentence:

(11) John read the book, and *read the book* John did *e*

The VP *read the book* is preposed to the initial position of the second conjunct.

This phenomenon in Hungarian may only apply in a specific context, namely, when the verb and its direct complements are left-dislocated. So, before presenting some instances of VP-preposing, let us first consider Left Dislocation with verbs:[37]

(12) a. *Mulatni,* Péter mulatott
enjoy-INFI Peter enjoyed-AGR3sg
'Enjoy, himself Peter did.'
b. Péter be nem rugott de *énekelni,* énekelt
Peter in not kicked-AGR3sg but sing-INFI sing-AGR3sg
'Get drunk Peter didn't but sing he did.'
(Szabolcsi 1981b: 536)

These sentences exemplify that Left Dislocation of a finite verb yields an infinitival copy of this verb in the initial-position of its own minimal clause.[38] This is in (12a) the matrix sentence, and in (12b) it is the embedded clause.[39]

The meaning of these doubled verb constructions is more subtle than indicated in the glosses (cf. Szabolcsi 1980, 1981b for discussion). Consider now the following sentences in which left dislocation of the VP has taken place:

(36) See for further discussion of ellipsis and gapping in Hungarian Kerkovits (1985) and Bánréti (1985).

(37) See Koopman (1984) for a cross-linguistic account of V-movement rules.

(38) Källgren and Prince (1988) discuss a similar phenomenon in Yiddish.

(39) With the De Groot (1981b), I assume that the infinitival copy in initial-position is what De Groot calls *theme* position. This position is identical to the left-dislocation position of section 4.3.

(13) a. (*A) *fátvágni,* János (*a) fát vágott
the wood-ACC-cut-INFI John the wood-ACC cut-AGR3sg
'Wood-cutting John did (but he didn't like it).'
b. (*A) *fejbeverni,* János (*a) fejbe verte magát
the head-ILL-beat-INFI John the head-ILL beat-AGR3sg himself-ACC
'Hitting himself to the head John did (but it wasn't painful).'

These sentences exhibit the following properties.

First of all, observe that the direct argument of the verb is doubled along with the infinitival copy. Second, this argument may not be modified by a determiner, and is incorporated by the infinitive. Hence, this left-dislocated VP displays the diagnostics of Noun-Incorporation (see, section 5.3.1.2.). Recall that this phenomenon involves only the underlying direct arguments of the verb. Third, the above constructions have a property in common with VP-preposing in English.

Webelhuth (1985) points out that in English, the inflectional complex with the tense and agreement features remains outside of the preposed constituent. In (11), for example, this complex appears on the lexical item *did.* Obviously, this is due to the requirement that these features must be attached to a lexical item within the clause. This explains also why an infinitival copy appears in Hungarian when a finite verb is left-dislocated. The finite verb must remain inside of the sentence, because the inflectional features are bound to it.

Hence, VP-preposing in Hungarian is quite similar to English in this respect, although the inflectional features are spelled out on a lexical I item in English, but in Hungarian they are realized on V. This phenomenon in Hungarian is further constrained, as it does not apply with fully referential NPs. Instead of taking this as an argument for the absence of a VP (cf. 5.2.1.(7)), the question is rather why it is prohibited with a full referential NP. At this place, I do not have a solution to offer for this problem. Let us consider now VP-pronominalization in Hungarian.

(III) We have seen already an instance of *VP-pronominalization.* In Dutch, the d-pronoun *dat* at the ellipsis site refers to the preposed VP. Compare the sentences in (2), here repeated as (14):

(14) a. Jan houdt van Marie, en Peter doet *dat* ook
John loves Mary and Peter does that too
b. Jan zal een maaltijd gekookt hebben, *dat* zal Peter ook gedaan hebben
John will a meal cooked have, that will Peter too done have

Koster (1987) argues that this phenomenon is not a transformational rule but that it is a case of anaphora, similar to the Left Dislocation of NPs. The preposed VP is left-dislocated, and its position at the ellipsis site is hold by a d-pronoun:

(15) a [Het boek lezen], *dat* wil ik niet
the book read-INFI that want I not
b. [De auto kopen], *dat* heeft Jan niet gedaan
the car buy-INFI that has John not done
c. [Het huis bouwen], *dat* zal hij niet
a house built-INFI that will he not

In these sentences, the preposed constituent is the infinitival alternant of the verb, like the preposed constituent with VP-preposing in English, or Hungarian (cf. (11), and (13)). The d-pronoun represents the dislocated VP-constituent in the sentence.

Consider now the Hungarian equivalents of (15):

(16) a. [A könyvet elovasni], *azt* nem akarom
the book-ACC perf-read-INFI that-ACC not want-AGR1sg
b. [Az autót megvenni], *azt* János nem tette
the car-ACC buy-INFI that-ACC John not did-AGR3sg
c. [A házat megépíteni], *azt* nem fogja
the house-ACC build-INFI that-ACC not will-AGR3sg

In these sentences, the accusative demonstrative pronoun *azt* refers to the dislocated VP which contains an infinitive and its direct accusative NP.

One could argue that the preposed phrases in (16) are not VPs, but IPs, because they must have a *PRO* in their subject position. Recall, however, that auxiliary verbs such as *akar* and *fog* trigger 'restructuring' with an infinitive complement at S-structure (cf. section 5.3.2.). Hence, at least the preposed complements in (16a) or (16c) are categorially VPs. Altough it must be admitted that the force of this argument for a VP in Hungarian is somewhat weakened by the fact that it depends largely on theory-internal considerations.

Let us now summarize this section on VP-rules. I demonstrated that VP-rules also appear in Hungarian.

VP-preposing applies if a finite verb together with its direct NP argument is left-dislocated. This argument, however, may not be modified by an article, and the finite verb appears in the form of an infinitival copy.

VP-pronominalization takes place if a finite verb with its direct NP argument is left-dislocated, and its position at the ellipsis site is filled by a d-pronoun. The left dislocated verb is an infinitive. The fact that the verb may only be preposed, or pronominalized in its unfinite form has to do with the requirement that the inflectional-features must be bound in its clause.

The occurrence of VP-preposing, and VP-pronominalization provides *direct* evidence for a VP in Hungarian, and may therefore be added to the list in 5.4.1.(5).[40] Further, I argued that VP-deletion is not a reliable constituent-test. It does not apply in Hungarian, in contrast to English. However, in established configurational languages like Dutch this phenomenon does not occur either. Therefore, the lack of VP-deletion in the grammar of a particular language cannot be an argument in favor of a VP-less phrase structure of that language.

It seems to me that the dichotomy between English on the one hand, and Dutch, Frisian, or Hungarian on the other hand involves the IP-parameter (cf. section 2.2.2.). I is strong in English, but it is weak in the other languages. Only material to the right of I may be deleted in English, as I is always lexically filled, and must be present in the clause to host the inflectional-features. This happens to coincide with VP. Weak I, however, does not isolate this node with reduction phenomena. Therefore, it does not show up with such phenomena in the other Germanic languages or Hungarian.

(40) Webelhuth (1985) notes that VP-preposing in German is impossible. According to Webelhuth, the absence of this is due to the fact that German has no separate I-position.

There appears to be a dichotomy between the reduction of the first conjunct (Right Node Raising), and reduction of the second one in Hungarian. With the former the verb or the object may be deleted, whereas in the second conjunct a combination of the verb and any of its direct NPs may be deleted. Hence, Right Node Raising displays a subject-object asymmetry, and may therefore be added to the list in 5.4.1.(5).[41]

5.4.2.3. *The Absence of that-Trace Effects*

Hungarian lacks *that*-trace effects (cf. 5.2.4.2). The complementizer *hogy* 'that' has to be spelled out both when the subject or the object is raised by long Wh-movement. Compare the sentences in 5.2.4.(4), here repeated for convenience as (1):

(1) a. *Kit* gondolsz *(*hogy*) *t* látta Vilit?
who-ACC think-AGR2sg that saw-AGR3sg Bill-ACC
'Who do you think saw Bill?'
b. *Kit* gondolsz *(*hogy*) Vili látott *t*?
who-ACC think-AGR2sg that Bill saw-AGR3sg
'Who do you think that Bill saw?'

Koster (1986) observes that the complementizer *dat* 'that' may not be omitted when the subject (cf. (2a)) or the object (cf. (2b)) are fronted by long Wh-movement in Dutch:

(2) a. *Wie* denk je *(*dat*) *t* hem gezien heeft?
who think you that him seen has
'Who do you think has seen him?'
b. *Wie* denk je *(*dat*) hij *t* gezien heeft?
who think you that he seen has
'Who do you think that he has seen?'

Jarich Hoekstra (personal communication) informs me that Frisian lacks *that*-trace effects as well. With long Wh-movement the complementizer must be present:

(3) a. Wa tinkst *(*dat*) *t* him sjoen hat?
who think-you that him seen has
'Who do you think has seen him?'
b. Wa tinkst *(*dat*) *er t* sjoen hat?
who think-you that he seen has
'Who do you think he has seen?'

These sentences show that *that*-trace violations appear in uncontroversial configurational languages such as Dutch or Frisian. So the absence of these violations in Hungarian does not necessarily provide evidence for the absence of a VP in that language. The question then is how to cover the dichotomy between English on the one hand, and the other Germanic languages and Hungarian on the other hand.

I will assume that this is related to the *IP-parameter* (cf. 2.2.2.(5)), here repeated as (4):

(4) a. I is strong in English
b. I is weak in Dutch, Frisian, and Hungarian

Recall further that the minimal maximal domain of the subject and object in these language-types is the following:

(41) Whitman (1984) and Fukui (1986) observe that Japanese does not display VP-rules. See these references for further discussion on the lack of direct evidence for a VP in that language.

(5) a. *Assumption 1*
In languages with *strong* I, the minimal maximal domain of the subject is IP, but the minimal maximal domain of the object is CP
b. *Assumption 2*
In languages with *weak* I, the minimal maximal domain of the subject is similar as the minimal maximal domain of the object, that is, CP

A consequence of the fact that the VP may L-contain the IP in languages with weak I (cf. chapter two) is that the domain of the subject is 'strechted' from IP to CP. Before we settle the dichotomy with *that*-trace effects between English and the other Germanic languages, or Hungarian, let us first consider the binding theory for Wh-traces.

Following Aoun (1986), I will assume that Wh-traces are non-A-anaphors, and that they must therefore be bound in the minimal maximal domain of their governor. The Binding Principle for *Wh-traces* is defined as follows:

(6) *Binding Principle for Wh-traces*
Wh-traces are bound in the minimal maximal domain of their governor (if it contains an antecedent)

Let us first derive the *that*-trace effect of English:

(7) a. *[CP *Who* do you think [CP *t* that [IP *t* saw John]]]
b. [CP *Who* do you think [CP *t* that [IP John [VP saw *t*]]]]

I is strong in English (cf. (4a)). By (5a), the domain of the subject is IP, whereas the domain of the object is CP. (7a) is ungrammatical because it yields a violation of Binding Principle (6). The subject trace is not bound in its minimal maximal domain, the IP. (7b), on the other hand, is not ruled out by Binding Principle (6). The object trace in (7b) is bound in its minimal maximal domain, the CP. In this domain there is an appropriate binder, namely, the intermediate trace in the Spec of CP. Hence, this yields a subject-object asymmetry.

The question arises why the absence of the complementizer *that* turns (7a) into a grammatical sentence:

(8) [CP *Who* do you think [CP *t* [IP *t* saw John]]]

CP in this sentence has no lexical head. Therefore, it is L-contained by IP (cf. 2.2.2.(37) for the definition of L-containment). Contrary to (7a), the subject Wh-trace is bound in its minimal maximal domain, the IP, by the intermediate trace. Hence, no binding theory violation occurs, and the sentence is grammatical.

Let us turn now to the absence of *that*-trace effects in the other Germanic languages and Hungarian.

I is weak in Dutch, Frisian, and Hungarian (cf. (4b)). By (5b), the domain of the subject and the object is the CP in these languages. This implies that subject and object Wh-traces must find an appropriate antecedent in CP.

Consider, for example, the violation of *that*-trace effects in Hungarian, here repeated as (9):[42]

(42) In chapter six, it will be argued that long Wh-movement in Hungarian applies successive cyclicly through the Spec of CP and that V-to-C movement does not block the application of this phenomenon. Hence, for ease of perception I will present the verb in its base-generated position in (9).

(9) a. [CP *Kit* gondolsz [CP *t* hogy [VP *t* [VP látta Vilit]]]]
who-ACC think-AGR2sg that saw-AGR3sg Bill-ACC
b. [CP *Kit* gondolsz [CP *t* hogy Vili [VP *t* látott?]]]
who-ACC think-AGR2sg that Bill saw-AGR3sg

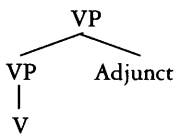
Binding Principle for Wh-traces is satisfied both by the subject and object Wh-trace. In their minimal maximal domain, i.e. the CP, an appropriate binder is present, namely, the intermediate trace in the [Spec, CP]. Hence, this accounts for the absence of *that*-trace effects in languages with weak I. This approach predicts that there is an argument/non-argument symmetry with *that*-trace effects in Dutch, Frisian, and Hungarian but not in English.

Compare the following sentences with the extraction of the adjunct *why* in English, Dutch, Frisian, and Hungarian respectively:

(10) a. [CP *Why* do you think [CP *t* that John has left *t*]]
b. [CP *Waarom* denk jij [CP *t* dat Jan *t* weggegaan is]]
why think you that John left has
c. [CP *Wêrom* tinkst [CP *t* dat Jan *t* fuortgien is]]
why think-you that John left has
d. [CP *Miért* gondolod [CP *t* hogy János elment *t*]]
why think-you that John left

Suppose adjuncts, like *why,* are adjoined to VP as follows:

(11)



According to the government definition in 2.2.2.(40), adjoined categories are governed by the head of the category to which they are adjoined. A maximal projection includes all member-nodes of that projection. Therefore, the adjunct in this configuration is governed by V.

From this it follows that the local domain of adjuncts is CP. Note now that Binding Principle (6) is satisfied in (10), for the trace in [Spec, CP] may act as an antecedent for the trace at the extraction site. This yields then an argument/non-argument symmetry with *that*-trace violations in Dutch, Frisian or Hungarian but not in English, as expected.

Recapitulating, *that*-trace violations appear also in established configurational languages such as Dutch or Frisian. Therefore, this phenomenon cannot count as a convincing argument for the hypothesis that the phrase structure of that language lacks a VP. Rather, the difference between English and the other Germanic languages or Hungarian with *that*-trace effects is related to the properties of I in these languages. If I is strong the local domain of the subject is different from the local domain of the object, whereas if I is weak the local domain of the subject and the object coincide. This is responsible for the subject-object asymmetry with this phenomenon in English, and for the lack of it in the other Germanic languages or Hungarian.

5.4.2.4. *Wh-movement from Possessive NPs*

Subject-object symmetries occur with (long) Wh-movement from *possessive NPs* in Hungarian. Compare the sentences 5.2.4.(5) and (6), here repeated as (1) and (2):

(1) a. *Kinek* ismertétek [NP a *t* vendégét]?
who-DAT knew-AGR2pl the guest-npAGR3sg-ACC
'Whose guest did you know?'
b. *Kinek* alszik [NP a *t* vendége]?
who-DAT sleep-AGR3sg the guest-npAGR3sg
'Whose guest sleeps?'

(2) a. *Melyik színésznönek* gondolja János hogy Péter
which actress-DAT think-AGR3sg John that Peter
megtalálta [NP a *t* fényképét]?
found the photo-npAGR3sg-ACC
'Which actress does John think that Peter found the photo of?'
b. *Melyik színésznönek* gondolja János hogy
which actress-DAT think-AGR3sg John that
[NP a *t* fényképe] meglett?
the photo-npAGR3sg up-turned-AGR3sg
'Which actress does John think that the photo of was found?'

In the sentences in (2), the Wh-possessor NP of an object phrase and of a subject phrase are fronted to the matrix sentence. I argued in the preceding section that long Wh-movement from both these positions yields a grammatical result. Therefore, the question is rather what allows short Wh-movement in (1)?

Following Szabolcsi (1981a, 1984), I will assume that Wh-possessors may escape from their possessive NP through the Spec-position of this constituent, more precisely through the Spec of DP (cf. chapter seven for details). This position may serve as a landing and extraction site for raised possessor NPs. Once Wh-possessors leave their possessive NP, they may participate in long Wh-movement. Hence, subject-object symmetries with (long) Wh-movement do not necessarily provide evidence for a non-configurational approach of Hungarian.

5.4.2.5. *The Formation of Idioms*

The formation of *idioms* in Hungarian is captured by generalization 5.2.1.(13), here repeated as (1):

(1) An idiom frame may consist of a combination of a verb with any of its direct arguments

If an idiom frame corresponds to a single constituent, the occurrence of idioms with a free object argument poses a problem for the assumption that Hungarian is a configurational language. É. Kiss (1987c) refers to Ö. Nagy (1966) for hundred of idioms of that type.

Horvath (1987: 162) notes, however, that among this large number of Hungarian subject idioms, only a few are true subject idioms with a free object argument. Even among those, there are some with an English counterpart matching them word by word such as the equivalents of 5.2.1.(10a) and (10b), here repeated as (2):

(2) a. Az isten áldja meg (*őt*)
the God bless perf him
'God bless *him.*'

b. Az ördög vigye el (*őt*)
the devil take away him
'The devil take *him.*'

Jan Koster (personal communication) has brought to my attention that in Dutch idioms with a free object argument may appear as well:

(3) a. Er is *mij* een steen van het hart gevallen
there is me a stone from the heart fell
'I am relieved.'
b. *Hem* is de moed in de schoenen gezonken
him is the courage into the shoes sunk
'He lost courage.'

One could argue that these idioms are not proper subject idioms, because they involve the ergative verbs *vallen* 'to fall', and *zinken* 'to sink'. The following example represents, however, an undebatable subject idiom:[43]

(4) Waar wringt *hem* de schoen?
where presses him the shoe
'What is your problem?'

In view of the fact that there are subject idioms in uncontroversial configurational languages such as English or Dutch, there is at best only a quantitative difference between these languages and Hungarian. Thus, idioms should not be considered as reliable evidence concerning the question whether the phrase structure of a particular language is configurational or not (cf. also Horvath 1987).

5.4.2.6. *Compositional θ-Assignment to the Object*

I discussed some instances of thematic *object* selection depending on the choice of the subject (cf. section 5.2.2.). Horvath (1987: 152) observes that they can essentially be matched one-to-one with similar cases from English, an established configurational language.

Horvath presents the examples (1b) and (2b)-(2d) from English, in which the object theme role is determined by the θ-role of the subject (cf. also Marantz 1984):

(1) a. The knidnappers are killing Mary
b. Her feet are killing Mary
'Mary is suffering from pain in her feet.'

(2) a. Mary hit John
b. A truck hit John
c. Misfortune hit John
d. An idea hit John

I fully agree with the conclusion of Horvath (1987: 153) on the status of arguments based on compositional θ-assignment in the configurationality debate:"In view of the lack of substantial empirical evidence that would distinguish Hungarian

(43) Eric Hoekstra (personal communication) informs me that with subject idioms in Dutch the object is often also fixed:

(i) a. Joost mag weten *wie*...
Joost may know who
'Only God knows ...'
b. De angst slaat X om 't hart
The fear hits X round the heart
'X was taken with fear.'
c. Het gevoel bekruipt X dat ...
The feeling steals upon X that
'A feeling steals upon X that ...'

from the English-type languages in terms of manifestation of selectional asymmetries and symmetries between subjects and objects, we can only conclude that the domain of semantic selection provides no support, and in fact is problematic, for a strict non-configurational model."

5.4.2.7. *Binding Principle C Symmetries*

In section 5.2.3., I discussed the subject-object symmetry with *pronominal noncoreference* (Binding Principle C) 5.2.3.(4), here repeated as (1):

(1) a. **János* anyja szereti (*őt*)
John mother-npAGR3sg loves him
'John's mother loves *him.'*

b. *(*Ő*) szereti *János* anyját
he loves John mother-npAGR3sg-ACC
**'He* loves *John's* mother.'

This phenomenon resists scrambling. Compare 5.3.2.(5), here repeated as (2):

(2) a. *(*Őt*) szereti *János* anyja

b. **János* anyját szereti (*ő*)

É. Kiss (1987a) argues that Binding Principle C 6.3.4.(3c), here repeated as (3), accounts for this symmetry with pronominal noncoreference:

(3) *Binding Principle C:* An R-expression (a category that is referentially independent, for example, names) is free

É. Kiss assumes further that this principle operates on a flat structure in the case of Hungarian (cf. 5.1.(1)).

However, Binding Principle C configurations with a sequence of names display a subject-object asymmetry. Compare 5.3.4.(12), here repeated as (4):

(4) a. *János* anyja szereti *Jánost*
John mother-npAGR3sg loves John-ACC
'John's mother loves *John.'*

b. **János* szereti *János* anyját
John loves John mother-npAGR3sg-ACC
**'John* loves *John's* mother.'

Recall furthermore that this phenomenon remains unaffected with scrambling. Compare 5.3.4.(19), here repeated as (5):

(5) a. *Jánost* szereti *János* anyja
John-ACC loves John-npAGR mother

b. **János* anyját szereti *János*
John mother-npAGR-ACC loves John

Binding Principle C with a pair of names is also unaffected by the depth of embedding.

If a name is embedded a maximal projection deeper than the other name, then again we find a subject-object asymmetry. Reconsider 5.3.4.(20), here repeated as (6):

(6) a. **János* megtudta [NP azt a tényt [CP hogy *János* beteg lesz]]
John perf-knew that-ACC the fact that John ill becomes
**'John* got to know the fact that *John* would become ill.'
b. *[NP Azt a tényt [CP hogy *János* beteg lesz]] megtudta *János*
c. *Jánost* zavarta [NP az a tény [CP hogy *János* beteg lett]]
John-ACC disturbed that the fact that John ill became
**'John* was disturbed by the fact that *John* became ill.'
d. [NP Az a teny [CP hogy *János* beteg lett]] zavarta *Jánost*

From the paradigms above, we draw the following conclusions:
(*i*) The general discourse principle (7) is *grammaticalized* in Hungarian:

(7) Avoid repetition of R-expressions

This principle operates on structural configurations, and it is subsumed by Binding Principle C.

(*II*) Because the distribution of the pair (pronoun, name) does not display any asymmetry, whereas the corresponding relation of a pair (name, name) yields an asymmetry, what falls under Binding Principle C involves a *split.* The relation (name, name) is, as pointed out above, covered by Binding Principle C. The binding relation between a pronoun and a name, however, cannot be accommodated by a structural condition. Therefore, it seems to me, it is not constrained by a syntactic principle in the strict sense.

The question arises of course how this binding relation is captured in Hungarian. Below I will suggest that it is subject to a *discourse principle* proposed in Koster (1987).

Let us first investigate whether a Binding Principle C effect appears in the relation between a pair of (pronoun, name) by varying (*i*) the *case*-marking on the NPs, (*ii*) the *type* of NPs, or (*iii*) the *depth* of embedding.

(*i*) In (1), the free pronoun is marked nominatively or accusatively. The following sentences exemplify that pronouns with *lexical* case, i.e. dative (cf. (8)) or instrumental (cf. (9)), cannot be coreferential either with a name embedded in a possessive NP, whatever the linear order:

(8) a. **Mari* anyja kiabált *neki* b. **Neki* kiabált *Mari* anyja
Mary mother-npAGR3sg shouted she-DAT
'Mary's mother shouted to *her.'*

(9) a. **Mari* anyja veszekedett *vele* b. **Vele* veszekedet *Mari* anyja
Mary mother-npAGR3sg quarelled she-INSTR
'Mary's mother had a quarrel with *her.'*

From a comparison of these examples and those in (1), we conclude that the symmetry with pronominal noncoreference has nothing to do with the type of case-marking. The pronoun may either appear with structural Case or with lexical case.

Let us determine whether this phenomenon is sensitive to the type of NP.

(*ii*) One could hypothesize that it is caused by the particular structure of the possessive NP in Hungarian. Recall that possessive NPs contain AGR which is spelled out on the head-noun (cf. chapter two).

In the following sentences, the R-expression is embedded in an NP which lacks AGR. Pronominal noncoreference is, however, obligatory in these cases as well, independently of the case-marking on the pronoun, i.e. nominative (cf. (10a)), accusative (cf. (11a)), and dative (cf. (12a)), or of whatever the linear order of the constituents is (cf. (10b), (11b), and (12b)):[44]

(10) a. *[NP A Mari által *Jánosnak* küldött levelet] nem olvasta (ő)
the Mary by John-DAT sent letter-ACC not read he
*'*He* has not read the letter sent to *John* by Mary.'
b. *(Ő) nem olvasta [NP a Mari által *Jánosnak* küldött levelet]

(11) a. *[NP A *Jánossal* tancoló lány] megcsókolta (őt)
the John-INSTR dance-pres.part. girl kissed him
'The girl who was dancing with *John* kissed him.'
b. *(Őt) megcsókolta [NP a *Jánossal* táncoló lány]

(12) a. *[NP A *Janossal* tancoló lány] tetszett *neki*
the John-INSTR dance-pres.part. girl liked he-DAT
*'*He* liked the girl who was dancing with *John.*'
b. **Neki* tetszett [NP a *Jánossal* tancoló lány]

Hence, we conclude that the symmetry with pronominal noncoreference is not due to the type of NP. Let us check whether it has to do with the depth of embedding.

(*iii*) Here, I will consider pronominal noncoreference with the following three types of embedded clauses: (*A*) *that*-clauses, or *free relatives*, (*B*) embedded clauses of *absolute* subordination and (*C*) *relative* clauses (see, section 4.5. for a discussion of these types). Let us discuss first this phenomenon in *that*-clauses and free relatives.

(*A*) Kenesei (1984b) observes that in case an R-expression is embedded in a *that*-clause (cf. (13a) and (13c)), again, a subject-object symmetry occurs with pronominal noncoreference. Note further that these configurations remain unaffected by the application of scrambling (cf. (13b) and (13d)):

(13) a. *(Őt) nem érdekelte [CP hogy keresik *Jánost*]
he-ACC not interested that seek-AGR3pl John-ACC
*'*He* was not interested in the fact that they sought *John.*'
b. *[CP Hogy keresik *Jánost*] (őt) nem érdekelte
c. *(Ő) tudta [CP hogy keresik *Jánost*]
he knew that seek-AGR3pl John-ACC
*'*He* knew that they sought *John.*'
d. *[CP Hogy keresik *Jánost*] tudta (ő)

The following paradigm shows that free relatives pattern with *that*-clauses:

(44) Anna Szabolcsi (personal communication) has brought to my attention that this is not the case with a focussed pronoun. Compare the alternant of (10a):

(i) [NP A Mari által Jánosnak küldött levelet] [pÖ/AZ] nem olvasta
the Mary by John-DAT sent letter-ACC he/that not read
*'It is him who did not read the letter sent to John by Mary.'

Hence, focussing is an intervening factor from which I will abstract in the discussion below.

(14) a. *[CP Akivel *János* beszélgetett] nem ismerte (*őt*)
who-INST John spoke not knew him
'Who *John* spoke with did not know *him.*'
b. *Nem ismerte (*őt*) [CP akivel *János* beszélgetett]
c. *[CP Amit *János* látott] (*ő*) elmondta nekünk
what-ACC John saw he told us-DAT
*'*He* told us what *John* saw.'
d. *Elmondta nekünk (*ő*) [CP amit *János* látott]

In Hungarian, embedded clauses, or free relatives have a CP-structure (cf. section 4.5.1.). Hence, the subject-object symmetry with pronominal noncoreference remains unaffected if the name is embedded only under CP. Let us consider now pronominal noncoreference with absolute subordination.

(*B*) Kenesei (1984b) notes that a positional subject-object *asymmetry* with this phenomenon shows up in embedded clauses of absolute subordination. These embedded clauses are introduced by complementizers such as *mivel* 'since', or *bár* 'though'. A coreferential reading between a free pronoun and a name embedded in such clauses is allowed only if this clause is in sentence-initial position:

(15) a. [CP Mivel *János* beteg volt] (*ő*) otthon maradt
since John ill was he at home stayed
'Since *John* was ill, *he* stayed at home.'
b. *(*Ő*) otthon maradt [CP mivel *János* beteg volt]

(16) a. [CP Bár *Péter* gazdag] Anna nem szeret (*őt*)
Although Peter rich Ann not loves him
'Although *Peter* is rich, Ann does not love *him.*'
b. *Anna nem szereti (*őt*) [CP bár *Péter* gazdag]
(Kenesei 1984b: 315)

Kenesei argues that this positional asymmetry is due to the fact that clauses of absolute subordination are adjoined to the matrix clause when they are in initial position, but are attached under this clause when they are in postverbal position. These examples show that pronominal noncoreference is sensitive to the structural environment as well.

Let us turn to pronominal noncoreference with relative clauses.

(*C*) The sentences in (1)-(2), and in (11)-(14) have in common that the name is embedded in a phrase that has a relatively low degree of embedding, i.e. either in NP, or CP. A higher degree of embedding than in these cases can be reached by embedding the name in a relative clause.

With Kenesei (1984a, 1984b), I assume that relative clauses with a lexical head have the following structure in Hungarian:

(17) [XP (X)P [CP ...]]

Note now that the subject-object symmetry with pronominal noncoreference breaks down when the name is embedded in an accusative relative clause that precedes the nominative free pronoun:

(18) a. *(Ő) nem szereti [NP azt a lanyt [CP aki *Jánossal* táncolt]]
he not loves that-ACC the girl-ACC who John-INSTR danced
*'*He* does not love the girl who danced with *John*.'
b. [NP Azt a lanyt [CP aki *Jánossal* táncolt]] nem szereti (ő)

Furthermore, pronominal coreference is also possible when the name is embedded in a nominative relative clause that precedes a free accusative pronoun:

(19) a. [NP Az a lány [CP aki táncolt *Jánossal* nem szereti (őt)]]
that the girl who danced John-INSTR not loves him
'The girl who danced with *John* does not love *him*.'
b. *(Őt) nem szereti [NP az a lány [CP aki táncolt *Jánossal*]]

So, pronominal noncoreference with relative clauses displays a *subject-object asymmetry.*[45]

Let us first examine the pair in (18). This pair represents the Hungarian structural counterpart of *SCO*. For example, the English sentence (20a), but not (20b) is a typical case of this phenomenon:

(20) a. *Who_i does he_i love t_i b. [Which man that $John_i$]$_j$ does he_i like t_j

In (20a), the trace of Wh-movement is coindexed with and c-commanded by the pronoun *he* in subject position. Such a structure exhibits the SCO-effect. Example (20b), however, neither possesses the relevant structure (with coindexing), nor displays SCO.

Saito and Hoji (1983) claim that this contrast is also found with scrambling in Japanese:

(21) a. *[S $John_{o_i}$ [S $karega_i$ t_i syōkaisita]] (koto)
John-ACC he introduced fact
*'*He*i introduced *John*$_i$ (to the audience).'
b. [S [NP Maryga *Johnni*$_i$ okutta tegamio]$_j$ [S $karega_i$ mada t_j yonde inai] (koto)
Mary John-DAT sent letter-ACC he yet read have-no fact
(Saito and Hoji 1983: 246)

Again, the object trace in (21a) is coindexed with and c-commanded by the pronoun *kare* 'he' in subject position, unlike in (21b).

Only the former exhibits SCO. According to Saito and Hoji, it is the adjunction of the object to S that reverses the c-command relations in (21b). Therefore, Saito and Hoji conclude that scrambling regarded as an instance of Move-α applied to a hierarchical phrase structure gives the correct result.

(45) In case *a* relative clause is focussed its CP-part has to be extraposed. When both the pronoun and the extraposed clause are postverbally disjoint reference is obligatory in any order:
(i) a. *[PAzt a lányt] nem szereti (ő) [CP aki Jánossal táncolt]
that-ACC the girl-ACC not loves he who John-INSTR danced
b. *[PAzt a lányt] nem szereti [CP aki Jánossal táncolt] (ő)
that-ACC the girl-ACC not loves who John-INSTR danced he
c. *[PAzt a lány] nem szereti [CP aki Jánossal táncolt] (őt)
that the girl not loves who John-INSTR danced him
d. *[PAzt a lány] nem szereti (őt) [CP aki Jánossal táncolt]
that the girl not loves him who John-INSTR danced

The SCO-effect in the Hungarian pair (18), as I will make precise below, can be accounted for along the lines of Saito and Hoji (1983). This implies that we cannot derive the absence of the SCO in the pair ((1b), (2b)) in purely syntactic terms. Therefore, I will suggest that the symmetries with pronominal noncoreference are subsumed by a discourse principle. Let us turn now to a discussion of the pair in (19).

Scrambling of the accusative pronoun *őt* to a preverbal CP-position blocks a coreferential reading between this pronoun and a name (cf. (19b)). The 'precedence' effect with pronominal noncoreference is not too surprising if we take into account that the linear order of the pronoun and the name in this sentence matches the context of backward pronominalization.

In the literature (cf. Solan 1983, among others), it has often been reported that there is almost a total ban on backward pronominal coreference across languages. This restriction is sometimes relaxed in certain structural environments as a marked alternative. Forward anaphora, on the other hand, is always possible.

How then is the dichotomy between (19a) and (19b) accounted for?

Recall that reflexive binding in Hungarian is not sensitive to scrambling (cf. section 5.3.4.1.). If, on the other hand, pronominal noncoreference is sensitive to scrambling, as the pairs in (18) and (19) demonstrate, then we run into a *reconstruction paradox* in Hungarian as well.

The following triple from English exemplifies this type of paradox:

(22) a. **He* throws away [some of the books *John* read]
b. [Which of the books that *John* read] does *he* throw away *t*?
c. [Which picture of *himself*] did Mary say *John* admired most *t*?

(22a) and (22b) represent instances of pronominal noncoreference and (22c) exhibits reflexive binding.

In the case of pronominal coreference, the pronoun may not c-command the antecedent with which it is coreferential. In the case of reflexive binding, on the other hand, the reflexive anaphor must be c-commanded by its coreferential antecedent. If we would apply these conditions at a derived level of representation, say, after Wh-movement, the ungrammaticality of (22a), and the grammaticality of (22b) would be predicted, since *he* c-commands its antecedent *John* in (22a), but not in (22b). However, under this option the grammaticality of (22c) remains unexplained. The reason for this is that the reflexive anaphor is not c-commanded by its antecedent after Wh-movement.

What is needed to arrive at the correct result in this sentence is the reconstruction of the Wh-phrase to its base-generated position. However, if we apply the Binding Principles at the base-generated structure, that is, before the application of move *Wh,* then the ungrammaticality of (22a) and the grammaticality of (22c) follow, but now the grammaticality of (22b) is unexpected. The pronoun and its antecedent in (22a) and (22b) display a similar c-command configuration in their base-generated structure.

So, whatever level of representation we take as relevant for the Binding Principles, we run into a paradox. In order to escape this paradox, Van Riemsdijk and Williams (1981), and Mohanan (1983) have proposed to determine reflexive binding at

D-structure or NP-structure, that is before an application of Move-α, and pronominal noncoreference at S-structure, that is, after an application of Move-α. This correctly yields the patterning of data in (22). Therefore, let us adopt this solution for binding paradoxes.

Consider now how the scrambling effects with pronominal noncoreference in the Hungarian pairs (18) and (19) are derived.

The subject pronoun in (18a) is higher on the tree than its antecedent, because it is scrambled to a preverbal [Spec, CP], whereas its antecedent is embedded in an object phrase that is base-generated in the VP. This configuration violates the c-command constraint on pronominal noncoreference, yielding an ungrammatical result.

(18b), however, is grammatical because of the SCO-effect. The accusative relative clause with the name is scrambled to a preverbal CP-position over the subject pronoun. Therefore, it does not c-command its antecedent at S-structure any longer.

(19a) is grammatical, because the object pronoun does not c-command the name embedded in a subject relative clause. In (19b), on the other hand, the object pronoun is scrambled to a preverbal CP-position, whereas its antecedent is adjoined to the VP. In this S-structure configuration the pronoun c-commands its antecedent. Hence, a coreferential reading between the pronoun and the name is blocked.

In sum, pronominal noncoreference in Hungarian yields both a subject-object symmetry and a subject-object asymmetry. The binding relation between a pair of names displays a subject-object asymmetry. This implies that not all the facts subsumed under Binding Principle C can be accounted for by this principle. The question then arises what is the status of this principle in a theory of UG?

Koster (1987, 369) concludes that Binding Principle C is not a purely syntactic principle. Koster proposes to reinterpret it as a *discourse principle,* according to which the crucial relative prominence of NPs in the discourse is determined by both structural and nonstructural factors. Koster motivates this step by the following two problem cases.

First, Koster observes that Binding Principle C effects do not form a unitary phenomenon. Many different cases supposed to be ruled out by this principle vary enormously in acceptability.

Compare the following sentences:

(23) a. **He* hates *John*
b. **He* thinks that *John* is sick
c. **John* thinks that *John* is sick
d. **He* left because *John* was sick
e. **John* left because *John* was sick
f. **Nobody* left because *John* was sick
g. **Who t* thinks that we like *t*
h. **Who t* was arrested before we saw *e*
(Koster 1987: 346)

Koster notes that all these sentences in (23) are supposed to be covered by Principle C. According to Koster, however, this is suspicious, because they differ enormously in acceptability. For example, (23a) is entirely unacceptable in the intended reading, while (23c) is almost acceptable.

Second, Koster notes that c-command is neither necessary, nor sufficient for the disjoint reference interpretation:

(24) a. *We talked with *him* about *John*
b. We gave *her* the furcoat that *Mary* has always wanted
(Koster 1987: 347)

(24a) illustrates that Binding Principle C effects are not necessary for disjoint reference. The pronoun embedded in the PP does not c-command the name. (24b) illustrates that c-command is not sufficient for Principle C violations to occur. This sentence is grammatical in the intended reading, although the name is c-commanded by the pronoun.[46]

In order to account for the cases accommodated by Binding Principle C, Koster (1987) formulates a *discourse principle* that also may take structural information into account:

(25) *Discourse Principle for Coreferential NPs:*
For each sequence of coreferential argument NP_i
$C = (NP_1..., NP_i, NP_{i+1}, ..., NP_n)$ $(1 < i \leq n)$
NP_{i+1} must be more anaphoric than NP_i (unless both are anaphors/pronominals), depending on the relative prominence of NP_i
(Koster 1987: 353)

According to Koster, following Lakoff (1968) at this point, *anaphoricity* is a matter of degree in agreement with the following relative scale:

(26) pronouns (anaphors) > epithets > definite descriptions > names

Koster points out that crucial in this reformulation of this Binding Principle is the role given to the relative prominence of NP. The intuitive idea is that the need to continue a sequence with a more anaphoric NP decreases if the prominence of the last NP of the discourse sequence decreases.

Koster further assumes that relative prominence can also be determined by purely structural factors for which he sets up the following prominence hierarchy:

(27) *Prominence* (i) *c-command*
a. local subject; b. governing subject; c. subject; d. nonsubject
(ii) *non-c-command*
a. degree of embedding *i* (*i*>0); b. degree of embedding *i* + *1;* c. etc.

This specification of the relative prominence of two NPs in a sequence distinguishes two cases. Firstly, the first NP c-commands the second NP. Secondly, the first NP does not c-command the second one. In the former case, the first NP is relatively more prominent if it is a local subject with respect to the second NP. If we go down the list, the disjoint reference interpretation becomes less compelling.

Consider, for example, a case in which the depth of embedding plays a role:

(28) a. *In *John's* apartment, *he* spends a lot of time
b. In the apartment *John* just rented, *he* spends a lot of time

(46) Koster (1987) points out that if one assumes that phrase structure is binary branching in the sense of Kayne (1984), the c-command relation between the pronoun and the name would be blocked. In that case, the grammaticality of (24b) would not pose a problem for Binding Principle C.

It seems reasonable to suppose that the preposed phrases in both (28a) and (28b) are structurally in the same relation to the nominative pronoun. Therefore, an account of these cases based on a version of c-command is not very attractive (see, for example, Reinhart 1983).

The relative prominence of the embedded name decreases in (28b) compared to (28a), for *John* is embedded deeper into the PP. The former, unlike the latter, is grammatical under the intended reading. Obviously, a less prominent NP in terms of degree of embedding may be followed by a more anaphoric NP.

Jan Koster (personal communication) has brought to my attention that the same holds for Dutch. In (29a), the name is embedded in a possessive NP, and in (29b) it is embedded in a relative clause. A coreferential reading is only possible in the latter one, in which the name is embedded more deeply:

(29) a. **Jan's* vader haat *hij*
John's father hates he
**'John's* father *he* hates.'

b. De man die *Jan* sloeg, haat *hij*
the man who John beat hates he
'The man who beats *John, he* hates.'

At this place, I would like to add another factor to (27) which may influence the relative prominence of two NPs in a sequence, namely linear order:

(30) (iii) *linear order:* NP_i precedes NP_{i+1} in a string

Hence, in accordance with principle (25), NP_{i+1} must be more anaphoric than NP_i on scale (26). Some languages rely for their rule on pronominal noncoreference entirely on linear order. Mohanan (1983: 120), for example, reports that a pronoun may never precede its antecedent in Malayalam. Compare the following sentences:

(31) a. *Kuṭṭi awante* ammaye ṉuḷḷi
child his mother-ACC pinched
'The child pinched *his* mother.'

b. **Awante ammaye* kuṭṭi ṉuḷḷi

c. *Awan kuttiyuṭe ammaye ṉuḷḷi
he child's mother-ACC pinched
**'He* pinched the *child's* mother.'

d. *Kuṭṭiyuṭe* ammaye *awan* ṉuḷḷi
(Mohanan 1983: 120)

According to Mohanan, if a pronoun precedes its antecedent such as in (31b) and (31c), a coreferential reading is ruled out.

Furthermore, (31b) displays that c-command does not play a role with respect to pronominal noncoreference in Malayalam. This sentence is ungrammatical, although the pronoun *his* does c-command its antecedent.

Recall that the following Binding Principle C dichotomies appear in Hungarian: (*i*) Coreferentiality between a sequence of names diverges from coreferentiality between a sequence of a pronoun and a name, and (*ii*) a subject-object asymmetry with pronominal noncoreference shows up with a relatively higher degree of embedding, otherwise a subject-object symmetry.

(*i*) In order to account for disjointness between a sequence of names, it is sufficient to check the structural configuration in combination with a c-command condition. This condition may be formulated as a separate condition, something similar to Binding Principle C, or it may be formulated in terms of the structural factors (27i) that determine discourse principle (25). I will leave open the question of whether

there is an independent syntactic principle for the binding relation of a sequence of names, the residue of Binding Principle C. Does this dichotomy appear in other languages as well?

Lasnik (1986) notes that in Thai, Vietnamese and English R-expressions must be *pronoun*-free. Lasnik suggests that this requirement, possibly a language universal, is due to an instantiation of a general prohibition on the binding of a more anaphoric expression by one that is less so. However, in Thai and Vietnamese, unlike in English, R-expressions may be bound by other names.

This split between a pair of names and a pair of (pronoun, name) is exemplified even more dramatically in Malayalam. Consider:

(32) a. *Jooṇina jooṇine* iṣṭamaanə
John-DAT John-ACC likes
'John likes *himself.'*

b. *Kuṭṭi kuṭṭiyute* ammaye ṉuḷḷi
child child's mother-ACC pinched
'The child pinched *his* mother.'
(Mohanan 1983: 124)

Mohanan (1983) claims that the repetition of coreferential R-expressions is allowed in that language.

The comparison between (31) and (32) shows that pronominal noncoreference in Malayalam obeys a condition in terms of precedence, whereas no condition is imposed on names. The latter may be covered by the following rule, similar in spirit to Chomsky's (1976) rule A (this rule accounts for the distribution of bound pronouns):

(33) An R-expression *A* in Malayalam may be rewritten as an anaphor coreferential to a name *B* if and only if it is bound by *B*

The question arises why there should be a split in coreference between a pair (name, name) and (pronoun, name)?

It seems to me, following Evans (1980: 358), that this has to do with the intrinsic differences between pronouns and names. According to Evans, the crucial difference between the relation (pronoun, name) and the relation (name, name) is that the pronoun may be referentially dependent upon the name, while two occurrences of a name may be intended to be coreferential, but neither occurrence is referentially dependent on the other.

The participants in a pair of names are equally prominent in terms of (26). Suppose, now, that by this absence of relative prominence, a pair of names may be exempted from discourse principle (25). This hypothesis is supported by the fact that disjoint reference is stronger if anaphoricity decreases. Thus, it has often been pointed out that both the following sentences are bad, but that (34b) is worse than (34a):

(34) a. **John* thinks that *John* is sick

b. **He* thinks that *John* is sick

This is also the case with the Hungarian counterparts of these sentences:

(35) a. **János* azt gondolja hogy *János* beteg
John that-ACC think-AGR3sg that John sick

b. **Ö* azt gondolja hogy *János* beteg
he that-ACC think-AGR3sg that John sick

Let us turn now to a discussion of the Binding Principle C split with pronominal noncoreference.

(ii) The binding relation between a pronoun and a name is not determined by principles of grammar in a strict sense. Factors such as anaphoricity, depth of em-

bedding, precedence, and so on may play a role as well.[47] In English and Dutch, a coreferential reading between a pronoun and an embedded name becomes possible by increasing depth of embedding (cf. (28) and (29)). This fact supports a discourse-oriented approach to pronominal noncoreference.

In Hungarian, pronominal noncoreference is always ruled out, unless the name is embedded more deeply, for example, in a relative clause. So, the situation with this phenomenon in Hungarian resembles the one in Dutch, or English. This indicates that pronominal noncoreference in that language also falls under discourse principle (25), and is determined by (27ii).

In conclusion, I argued Binding Principle C is a not a unitary phenomenon.[48] First, in Hungarian coreference between a pair of names must be separated from pronominal

(47) I argued in section 4.2.4. that binding phenomena covered by Binding Principle C exhibit a parallel distribution between overt and non-overt pronouns in Hungarian. From this I concluded that small *pro* is present in the syntax of Hungarian. The argument, however, remains valid if we replace Principle C by a discourse principle. In that case, we have to assume that this discourse principle is fed simillarly by overt and non-overt pronouns, otherwise the parallel distribution between these items would be letf unexplained.

(48) A comparative study of binding phenomena in Hungarian and Basque would be very useful, because these phenomena display a similar distribution in these languages (I am indebted to Joseba Abaitua, Bernard Oyharçabal, and Georges Rebuschi for discussion and data).

Reflexive binding (cf. (i)), the binding between a pair of names (cf. (ii)), and the distribution of bound pronouns (cf. (iii)) yield subject (ERG)-object (ABS) asymmetries in Basque as well:

(i) a. Elkar ikusi dugu guk
each other-ABS seen Aux we-ERG
'We have seen each other.'

b. *Elkarrek ikusi gaitu gu
each other-ERG seen Aux we-ABS

(ii) a. *Mayiren* amak *Mayi* *maite du*
Mary-GEN mother-ERG Mary-ABS loved Aux
'Mary's mother loves *Mary.'*

b. *??Mayik* *Mayiren* ama maite du
Mary-ERG Mary-GEN mother-ABS loved Aux

Just as in Hungarian, reflexive binding and the binding relation between a pair of names in Basque resist scrambling, unlike bound pronouns. (Wh-phrases in Basque must appear in the fixed Focus position left-adjacent to the verb (cf. De Rijk 1978). Compare:

(iii) a. Nork ikusi du bere ama?
who-ERG seen Aux his mother-ABS
'Who sees *his* mother?'

b. *Bere ama *nork* ikusi du?

c. *Bere amak *nor* ikusi du?
his mother-ERG who-ABS seen Aux
*'Who does *his* mother see?'

d. *Nor ikusi du *bere* amak?

Pronominal noncoreference with possessive NPs produces a subject-object symmetry, comparable to Hungarian:

(iv) a. *Berak maite du *Mayiren* ama
she-ERG loved Aux Mary-GEN mother-ABS
*'She loves *Mary's* mother.'

b. *Bera maite du *Mayiren* amak
she-ABS loved Aux Mary-GEN mother-ERG
'Mary's mother loves *her.'*

Joseba Abaitua (personal communication) has informed me that scrambling of the possessive NP in front of the pronoun weakens pronominal noncoreference:

(v) a. *??Mayiren* ama *berak* maite du
Mary-GEN mother-ABS she-ERG loved Aux

b. *??Mayiren* amak *bera* maite du
Mary-GEN mother-ERG she-ABS loved Aux

It vanishes completely when the name is embedded in structures with a higher degree of embedding than possessive NPs like embedded clauses:

(vi) a. [*Benitok* kantatzeko] *berari* eskatu diogu
Benito-ERG sing-NOMI-ko he-DAT asked Aux
'For *Benito* to sing, we asked *him himself.*'

b. Uste dut [*Patxi* berandu etorriko dela]
think-ARG1sg Aux Patxi-ABS late come Aux-Comp
berak esan duela
he-ERG said Aux-Comp
'I think that *Patxi* will arrive late, *he himself* said it.'

c. [Mirenek *Joni* bidali zion eskutitza] ez du *berak* oraindik irakurri
Miren-ERG John-DAT sent Aux-rel letter-ABS NEG Aux he-ERG yet read
'The letter that Miren sent to *John,* he has not read (it) yet.'

Especially the parallel between Hungarian and Basque with pronominal noncoreference is very interesting. In Basque, similar to Hungarian, a subject-object symmetry appears when the relative depth of embedding is low, otherwise a subject-object asymmetry appears.

noncoreference. The former, which yields subject-object asymmetries, may be captured in terms of a structural condition like Binding Principle C. The latter, on the other hand, is subsumed by Koster's (1987) discourse account of this phenomenon.

A prediction of this account, namely, that obligatory pronominal noncoreference vanishes with a relatively higher degree of embedding, is borne out in Hungarian as well. Hence, it is flexible enough to cover both subject-object symmetries and subject-object asymmetries.[49] From this, I conclude that subject-object symmetries with some cases of pronominal noncoreference do not motivate the assignment of a flat sentence structure to Hungarian. Likewise, subject-object asymmetries with Binding Principle C can be seen as evidence against such an analysis, and as support for the configurational approach.

5.4.3. *Some Residual Symmetries*

This section investigates the following two subject-object symmetries in Hungarian, involving the absence of *superiority effects* (cf. section 5.4.3.1.) and the symmetries with the *Topicalization of universal quantifiers* (cf. section 5.4.3.2). These symmetries differ from the epiphenomenal symmetries discussed in the preceding section in that the latter have exactly, or almost exactly the same shape as in established configurational languages. In contrast to the epiphenomenal symmetries, they have a somewhat different form. It seems reasonable, as an initial working hypothesis, to relate these residual symmetries to a specific property of the syntax of Hungarian. It appears that an appropriate candidate for this is the recursive CP in Hungarian (cf. 2.2.3.(1)).

5.4.3.1. *The Absence of Superiority Effects*

Let us consider, again, 5.2.4.(1) and (2), that display the dichotomy between English and Hungarian with *superiority effects.*

The sentences in (1) exemplify that in English an object Wh-phrase, unlike a subject Wh-phrase, may not be preposed to the Spec of CP in a multiple Wh-question. Hence, the ungrammaticality of (1b):

(1) a. *Who* has said *what* b. **What* has *who* said

In Hungarian multiple Wh-questions, on the other hand, an object Wh-phrase may precede a subject Wh-phrase (cf. (2b)):[50]

(49) Platero (1978) and Hale (1988) observe that pronominal noncoreference in Navaho always displays subject-object symmetries. A name in an embedded clause may always be coreferential with a non-overt subject, or object pronoun. Jelinek (1985; 1988) and Speas (1986) argue that this is due to the fact that NPs in that language are adjuncts that bind an A-position in Aux. Binding theory refers only to A-positions.

(50) The same appears in embedded clauses:

(i) a. Nem tudom hogy *ki mit* mondott?
not know-ARG1sg that who what-ACC said-AGR3sg
'I do not know who said what?'

b. Nem tudom hogy *mit ki* mondott?
not know-ARG1sg that what-ACC who said-AGR3sg
*'I do not know what who said?'

(2) a. *Ki mit* mondott
who what-ACC said-AGR3sg
'Who said *what'*
'For which x, x a person, for which y, y a statement, x said y.'

b. *Mit ki* mondott
what-ACC who said-AGR3sg
'Who said *what'*
'For which y, y a statement, for which x, x a person, x said y.'

Before we present an analysis of this dichotomy between English and Hungarian, let us first consider multiple Wh-questions in Dutch, and Frisian, both established configurational languages.

In Dutch or Frisian, superiority effects are absent.[51] Consider the Dutch counterparts of the English sentences in (1):

(3) a. *Wie* heeft *wat* gezegd
who has what said

b. *Wat* heeft *wie* gezegd
what has who said

Jarich Hoekstra (personal communication) has informed me that Frisian is the same in this respect:

(4) a. *Wa* sei *wat*
who said what

b. *Wat* sei *wa*
what said who

The (b)-sentences in (3) and (4) show that an object Wh-phrase may be fronted in Dutch and Frisian multiple Wh-questions over a subject Wh-phrase, unlike in English (1b). This patterning of these questions in Dutch and Frisian implies that the absence of superiority effects in Hungarian cannot count as decisive evidence for the claim that the phrase structure of that language is non-configurational.

Furthermore, there is also a dichotomy between the Hungarian multiple Wh-questions on the one hand, and the English, Dutch and Frisian multiple Wh-questions on the other hand. The Wh-phrases in Hungarian are *'stacked'* preverbally, but in the other languages one of the Wh-phrases has to remain *in-situ.*[52] Below I will argue that this dichotomy is related to the fact that the CP has a different structure in these languages.

Let us present now an analysis of superiority effects in English. Before we do so, we must first determine how Wh-phrases are assigned scope.

Following Baker (1970), I will assume that all cases of scope-assignment for Wh-phrases involve coindexing with an *abstract scope marker Q*. This marker is base-generated in the [Spec, CP] position. The representations of overt Wh-movement and Wh in-situ in this system are as follows:

(5) a. $[_{CP}\ Q_i\ [Wh\text{-}phrase]_i\ [_{IP}\ldots t_i\ldots]]$

b. $[_{CP}\ Q_i\ [_{IP}\ldots[Wh\text{-}phrase]_i\ldots]]$

In both cases, scope-assignment to the Wh-phrase depends on its relation with the scope marker *Q*. The difference between (5a) and (5b) is that the content of the

(51) Haider (1989) observes that superiority effects may be absent from German as well:

(i) a. *Wer* hat *was* gekauft?
who has what bought

b. *Was* hat *wer* gekauft?
What has who bought

(52) This phenomenon is also attested in some other languages, like Basque (cf. Ortiz de Urbina 1986), Bulgarian (cf. Rudin 1982), Georgian (cf. Harris 1981), Polish (cf. Wachowicz 1974), Czech (cf. Toman 1982), Romani (cf. McDaniel 1986) and Romanian (cf. Comorovski 1986). There is an East European sprachbund with respect to multiple Wh-questions (cf. Pesetsky 1987 for discussion).

Wh-phrase is adjacent to *Q* in the former, but not in the latter. Therefore, these cases represent a different type of binding relation.

In (5a), the Wh-trace must be linked to its overt antecedent. We defined the Binding Principle for Wh-phrases as in 5.4.2.3.(6), here repeated as (6):

(6) *Binding Principle for Wh-traces:* Wh-traces are bound in the minimal maximal domain of their governor (if it contains an antecedent)

In (5b), however, the Wh in-situ must be linked to Q. I will assume that the Binding Principle for Wh in-situ is as in (7):

(7) *Binding Principle for Wh in-situ:* Wh in-situ is bound in the minimal maximal domain of its governor (if it contains a *Q* marker)

Having settled the scope-assignment for Wh-phrases, let us reconsider the English sentence (1a), here repeated as (8):

(8) [CP *Who*$_i$ [IP t_i has [VP said *what*]]]

The subject Wh-phrase *who* is moved to the Spec of CP, whereas the object Wh-phrase *what* remains in its base-generated position. The domain of the subject in English, a language with strong I, is IP. The domain of the object, on the other hand, is CP (cf. 5.4.2.3.(5a)).

The object Wh-phrase is a Wh in-situ, and therefore it must be linked to *Q* in the Spec of CP. This linking may be established because the domain of the object is CP. Hence, the Binding Principle for Wh in-situ is satisfied in (8). Consider now the binding of the Wh-trace in subject position.

The domain of the subject is IP in English. In this domain, there is no antecedent available for the Wh-trace. Hence, the Binding Principle (6) for Wh-traces is violated. However, (8) is grammatical. This principle can only be satisfied if the moved Wh-phrase in the [Spec, CP] functions as the antecedent for the subject trace. In that case, the domain of this trace must be stretched from IP to CP. Obviously, this has indeed applied in (8). The question then arises why do moved Wh-phrases have this property?

The canonical operator position for Wh-phrases in English is the [Spec, CP]. Thus, moved Wh-phrases must land in that position. A maximal projection can only be set up if it has a lexical head, otherwise it coincides with the projection it directly dominates because of *L-containment* (cf. 2.2.2.(37)). Therefore, the [Spec, CP] position can only be determined if the CP is projected. In order to accomplish this, the CP must have a lexical head (cf. 2.2.2.(3)). This lexical head is provided by movement of I to C. This hypothesis is supported by the following pair:

(9) a. *[CP *What*$_i$ [IP he has [VP done t_i]]] b. [CP *What*$_i$ *has*$_j$ [IP he t_j [VP done t_i]]]

Observe from this pair that the auxiliary *has* must move from its base-generated I-position to the C-position when Wh-movement has applied (cf. (9b), otherwise the sentence is ruled out (cf. (9a)).

In sum, obligatorily filling the [Spec, CP] by a Wh-phrase triggers I-to-C movement.[53] Hence, the structure of (8) is actually as in (10):

(10) [CP *Who*$_i$ *has*$_j$ [IP t_i t_j [VP said what]]

Suppose, now, that a concomitant of this movement is that the domain of the subject is extended. By this movement, the IP is robbed of its lexical head, which turns it into a 'defective' projection. Therefore, the subject position is accessible for the Wh-phrase in the Spec of CP. As a result, the Binding Principle for Wh-traces is satisfied, and (10) is grammatical. Let us consider now (1b).

This sentence has the following structure:

(11) *[CP *what*$_i$ *has*$_j$ [IP *who* t_j [VP *said* t_i]]

The object Wh-phrase *what* has moved to the Spec of CP. For reasons outlined above, this triggers I-to-C movement of the auxiliary *has.* The subject Wh-phrase *who,* on the other hand, remains in-situ. The object Wh-trace does not violate Binding Principle (6), because its Wh-antecedent is in its minimal maximal domain, the CP. The subject Wh in-situ, however, cannot be linked to its *Q* marker in the Spec of CP, since the domain of the subject is IP in English. Obviously, subject Wh in-situ, unlike subject Wh-movement, does not have the ability to stretch the domain of the subject. To say the same thing otherwise, subject Wh in-situ prevents the IP from becoming a transparent domain. Hence, the Binding Principle (7) for Wh in-situ is violated, and (11) is ruled out.

Let us turn now to a discussion of why superiority effects are absent from Dutch and Frisian?

These languages have in common with English that the canonical position for Wh-phrases is the Spec of CP. There is only one such position available. Therefore, in multiple Wh-questions only one of the Wh-phrases may appear in that position:

(12) a. [CP *Wie*$_i$ heeft [IP t_i [VP *wat* gezegd]]] b. [CP *Wat*$_i$ heeft [IP *wie* [VP t_i gezegd]]]

I is weak in Dutch, and in Frisian. In languages with weak I, the domain of the subject is identical with the domain of the object (cf. 5.4.2.3. (5b)), namely CP. Therefore, in these sentences no binding theory violations occur.

In (12a), the object Wh-phrase in-situ *wat* may be linked to its *Q* antecedent in [Spec, CP], and in (12b) the subject Wh-phrase in-situ *wie* may be too. Hence, no violation of Binding Principle (7) for Wh in-situ arises. The subject trace in (12a) is bound by its Wh-antecedent in the Spec of CP. This is also the case with the object Wh-trace in (12b). Hence, the Binding Principle for Wh-traces (6) is also satistfied. This causes then the absence of superiority effects in Dutch, or Frisian. Let us now consider the absence of this phenomena in Hungarian.

(53) I-to-C movement applies also in English yes/no questions:

(i) [CP Will$_j$ [IP John t_j [VP buy this book]]]

With Kosmeijer (1988), I will assume that a question marker Q occupies the [Spec, CP] in this construction. However, this position can only be projected if the CP has a lexical head. Hence, I-to-C movement. Thus the motivation for this movement in yes/no questions is the same as for Wh-questions.

Wh-phrases in Hungarian must occur in the [Spec, CP] as well (cf. section 2.2.2.). The only difference between Dutch or Frisian on the one hand and Hungarian on the other hand with multiple Wh-questions is that Wh-phrases in Hungarian are stacked preverbally. This implies that in Hungarian, in contrast to Germanic languages, several Spec of CP positions are accessible for Wh-phrases. I will assume that this is due to the fact that CP in Hungarian is recursive within CP (cf. 2.2.3.(1)). Hence, all Wh-phrases in Hungarian are adjacent to their *Q* marker.

Therefore, the sentences in (2) display the following structure:

(13) a. [CP *Ki*$_i$ [CP *mit*$_k$ mondott$_j$ [VP t_i [VP t_k t_j]]]]
b. [CP *Mit*$_k$ [CP *ki*$_i$ mondott$_j$ [VP t_i [VP t_k t_j]]]]

The lower [C, CP] in these sentences is filled by V-to-C movement, and the Specs of CP are filled by overt Wh-movements.

Let us determine now why Hungarian lacks superiority effects. I is weak in Hungarian, as in Dutch and Frisian. Therefore, the domain of the subject traces is the same as the domain of the object traces. Hence, these traces are both bound in their minimal maximal domain, the CP. Hence, no violation of the Binding Principle for Wh-traces appears.

We expect that superiority effects in English will also show up when the object Wh-phrase is replaced by an adjunct Wh-phrase. Compare the following pairs:

(14) a. [CP *Who*$_i$ has$_j$ [IP t_i t_j [VP [VP come] *when*]]]
b. *[CP *When*$_i$ has$_j$ [IP *who* t_j [VP [VP come] t_i]]]

(15) a. [CP *Who*$_i$ has$_j$ [IP t_i t_j [VP [VP lived] *where*]]]
b. *[CP *Where*$_i$ has$_j$ [IP *who* t_j [VP [VP lived] t_i]]]

Adjuncts, like *when* and *where,* are governed by V, and thus their minimal maximal domain is CP (cf. section 5.4.2.3.), similarly to objects. Hence, the explanation for the dichotomy between the (a)-phrases and (b)-phrases in these pairs is the same as for the dichotomy between (1a) and (1b). In Dutch (cf. (16), Frisian (cf. (17)), and Hungarian (cf. (18)), on the other hand, a symmetry arises with the counterparts of these cases:

(16) a. [CP *Wie*$_i$ is$_j$ [IP t_i [VP *wanneer* [VP gekomen t_j]]]]
who is when come
b. [CP *Wanneer*$_i$ is$_j$ [IP *wie* [VP t_i [VP gekomen t_j]]]]
a'. [CP *Wie*$_i$ heeft$_j$ [IP t_i [VP *waar* [VP gewoond t_j]]]]
who has where lived
b'. [CP *Waar*$_i$ heeft$_j$ [IP *wie* [VP t_i [VP gewoond t_j]]]]

(17) a. [CP *Wa*$_i$ is$_j$ [VP t_i [VP *wannear* [VP kommen t_j]]]]
who is when come
b. [CP *Wannear*$_i$ is$_j$ [VP *wa* [VP t_i [VP kommen t_j]]]]
a'. [CP *Wa*$_i$ hat$_j$ [VP t_i [VP *wêr* [VP wenne t_j]]]]
who has where lived
b'. [CP *Wêr*$_i$ hat$_j$ [VP *wa* [VP t_i [VP wenne t_j]]]]

The only difference between Dutch and Frisian on the one hand and Hungarian on the other hand is, again, that in the Hungarian equivalents both Wh-phrases must be fronted:

(18) a. [CP *Ki*$_i$ [CP *mikor*$_k$ jött$_j$ [VP t_i [VP t_k [VP t_j]]]]]
who when came
b. [CP *Mikor*$_k$ [CP *ki*$_i$ jött$_j$ [VP t_i [VP [VP t_k t_j]]]]]
a'. [CP *Ki*$_i$ [CP *hol*$_k$ lakott$_j$ [VP t_i [VP t_k [VP t_j]]]]]
who where lived
b'. [CP *Hol*$_k$ [CP *ki*$_i$ lakott$_j$ [VP t_i [VP t_k [VP t_j]]]]]

Furthermore, we expect that the only cases in which English patterns the same as the other Germanic languages and Hungarian is when both Wh-phrases are governed by the verb. This appears, for example, with an object and an adjunct Wh-phrase. Compare English (cf. (19)), Dutch (cf. (20)), Frisian (cf. (21), and Hungarian (cf. (22)):

(19) a. [CP *What*$_i$ did$_j$ [IP you t_j [VP [VP see t_i] *where*]]]]
b. [CP *Where*$_i$ did$_j$ [IP you t_j [VP [VP see *what*] t_i]]]]

(20) a. [CP *Wat*$_i$ heb$_j$ [IP jij$_j$ [VP *waar* [VP t_i gezien t_j]]]]
what have you where seen
b. [CP *Waar*$_i$ heb$_j$ [IP jij$_j$ [VP t_i [VP *wat* gezien t_j]]]]

(21) a. [CP *Wat*$_i$ hast$_j$ [VP *wannear* [VP t_i sjoen t_j]]]
what have-you where seen
b. [CP *Wannear*$_i$ hast$_j$ [VP t_i [VP *wat* sjoen t_j]]]

(22) a. [CP *Mit*$_i$ [CP *hol*$_k$ láttál$_j$ [VP t_k [VP t_i t_j]]]]
what-ACC where saw-AGR2sg
b. [CP *Hol*$_i$ [CP *mit*$_k$ láttál$_j$ [VP t_i [VP t_k t_j]]]]

In these pairs the local domain for both the object Wh-phrase and the adjunct Wh-phrase is CP. Therefore, in all cases the Binding Principles for Wh-traces and Wh in-situ is respected. Hence, this yields in all languages a object-adjunct symmetry.

Another case in which both Wh-phrases are governed by the verb is provided by the prepositional double object constructions with *to*-phrases. Following Kayne (1984, chapter seven), I will assume that these constructions have the following structure:

(23) [VP [V' V NP] to NP]

Kayne (1984: 190) notes that the contrast between the following pair is less sharp than in (1) (bracketing is mine):[54]

(24) a. [CP *Who(m)*$_i$ did$_j$ [IP you t_j [VP [V' give *what*] to t_i]]]
b. [CP *What*$_i$ did$_j$ [IP you t_j [VP [V' give t_i] to *who(m)*]]]

(54) Joseph Aoun (personal communication) informs me that with the 'bare' double object construction, however, an asymmetry turns up:

(i) a. *[CP Who(m)$_i$ did [IP you [VP give [S ti what]]]]
b. [CP What$_i$ did [IP you [VP give [S who(m) t_i]]]]

Suppose this construction is a small clause, as suggested in Kayne (1984, chapter seven), having a 'V [S NP-NP]' structure. Suppose furthermore that its head is the accusative NP. In that case, the accusative NP, unlike the dative NP, is governed by V under head-government in the sense of Belletti and Rizzi (1982). As a result, the minimal maximal domain of this NP is stretched to CP. Therefore, the contrast between (ia) and (ib) is due to the dative NP. It falls into place if the subject of a small clause without a lexical head is accessible for government by a higher V. Hence, the Binding Principle (7) for Wh in-situ is respected in (ib) but not the Binding Principle (6) for Wh-traces in (ia). This yields the ungrammatical result in (ia).

According to the government definition 2.2.2.(40), both the direct object and indirect object are governed by V in these sentences. Hence, their local domain is CP. Therefore, no binding theory violation occurs in (24).

Multiple Wh-questions with double object constructions are grammatical in Dutch (cf. (25)), Frisian (cf. (26)), and Hungarian (cf. (27)), as expected:[55]

(25) a. [CP *(Aan) wie*$_i$ heb$_j$ [IP jij [VP t_i [V' *wat* gegeven t_j]]]]
to who have you what given
b. [CP *Wat*$_i$ heb$_j$ [IP jij [VP *(aan) wie* [V' t_i gegeven t_j]]]]

(26) a. [CP *(Oan) wa*$_i$ hast$_j$ [VP t_i [V' wat jûn t_j]]]
to who have-you what given
b. [CP *Wat*$_i$ hast$_j$ [VP *(oan) wa* [V' t_i jûn t_j]]]

(27) a. [CP *Kinek*$_i$ [CP *mit*$_k$ adtál$_j$ [VP t_i [V' t_k t_j]]]]
who-DAT what-ACC gave-AGR2sg
b. [CP *Mit*$_i$ [*kinek*$_k$ adtál$_j$ [VP t_k [V' t_i t_j]]]]

In sum, I noted that superiority conditions are violated in uncontroversial configurational languages like Dutch or Frisian. Hence, the absence of these effects in Hungarian cannot count as an argument in favor of a non-configurational phrase structure of that language. I related the presence of these phenomena in English versus their absence in Dutch, Frisian, or Hungarian to a difference in the phrase structure of these languages.

I is strong in English. Therefore, the domain of the subject differs from the domain of the object. An exception to this is overt Wh-movement. Application of this rule triggers domain stretching of the subject from IP to CP. Subject Wh in-situ lacks this ability. Therefore, a binding theory violation occurs with the latter, yielding a subject-object asymmetry.

In languages with weak I, on the other hand, like Dutch, Frisian or Hungarian, both the subject and the object have the same domain, the CP. Hence, both Wh-traces and Wh in-situ can be related to their antecedent in the Spec of CP. Therefore, no superiority effects arise in these languages.

The only difference between Dutch and Frisian on the one hand and Hungarian on the other hand, is that the Germanic languages, contrary to Hungarian, have only one canonical operator position for Wh-phrases available, the [Spec, CP]. In Hungarian, however, CP is recursive within CP. Therefore, all Wh-phrases may be adjacent to their scope marker in the Spec of CP.

Let us consider now the Topicalization of universal quantifiers.

5.4.3.2. *Topicalization of Universal Quantifiers*

É. Kiss (1987a: 29) has noted that *Topicalization* is known to be incompatible with *universal quantification.* É. Kiss argues that if a language has both sentence-initial subjects and objects, and sentence-initial subjects can be universally quantified, while sentence-initial objects cannot, it follows that such objects are located under a

(55) Because of the fact that with these double object constructions a symmetry appears, there is no reason to assume that they are small clauses, like bare double object constructions in English (cf. note 54).

Topic node different from the subject position. According to É. Kiss, this dichotomy turns up in languages in which the subject and object have a non-parallel distribution (like Italian) but not in languages which display a parallel distribution of subject and object.

Consider the Hungarian sentences in (1) (' indicates primary stress):

(1) a. János felhívott 'mindenkit telefonon
John up-called everyone-ACC phone-SUPER
'John has phoned everyone.'
b. *Mindenkit* felhívott János telefonon
everyone-ACC up-called John phone-SUPER
c. Mindenki felhívta Jánost telefonon
everyone up-called John-ACC phone-SUPER
'Everyone has phoned John.'
d. Jánost mindenki felhívta telefonon
John-ACC everyone up-called phone-SUPER

In Hungarian, an object universal quantifier may be topicalized (cf. (2b)), similar to an object name (cf. (2d)).

É. Kiss concludes from the fact that Hungarian has both sentence-initial subjects and objects (cf. (2b) and (2c)) which may be universally quantified that the subject and object are structurally equally prominent. However, the occurrence of this phenomenon in established configurational languages like Dutch or Frisian falsifies this conclusion.

Compare, for example, the Dutch equivalents of (1):

(2) a. Jan heeft iedereen gebeld
John has everyone phoned
b. *Iedereen* heeft Jan gebeld
'John has phoned everyone.'
c. Iedereen heeft Jan gebeld
everyone has John phoned
d. Jan heeft iedereen gebeld
'Everyone has phoned John.'

Jarich Hoekstra (personal communication) has brought to my attention that Frisian patterns exactly like Dutch in this respect:

(3) a. Jelle hat elke mien skille
Jelle has everyone phoned
b. *Elke* mien hat Jelle skille
'Jelle has phoned everyone.'
c. Elke mien hat Jelle skille
everyone has John phoned
d. Jelle hat elke mien skille
'Everyone has phoned John.'

The (b)- and (d)-sentences in (2) and (3) show that Topicalization from object position of universal quantifiers yields a grammatical result, just as the Topicalization of names, in both Dutch and Frisian.

Let us first analyze Topicalization in Dutch.[56] According to Koster (1978; 1987: 43-44), a topicalized phrase in Dutch is an NP in the configuration [ß NP CP]. Koster further argues that Topicalization is generalized in Dutch, because ordinary clauses are in fact topicalized constructions. Therefore, (2a) has the following structure:

(56) Jarich Hoekstra (personal communication) has pointed out to me that Koster's (1978) analysis for Topicalization in Dutch may be extended to Frisian.

(4) *Jan* [CP *0/die* heeft [IP *t* [VP iedereen gebeld]]]
John that has everyone phoned
'John has phoned everyone.'

In this construction, the open clause is predicated over the topic *Jan*. This relation is established by linking the topic NP with either an empty operator *0* or a *d-pronoun* in the [Spec, CP] that binds the trace position.

Eric Hoekstra (personal communication) informs me that the empty operator may only be realized as a d-pronoun if the topic NP is referential. With fronted quantifiers, it may not be spelled out. Compare (4) and (5):

(5) a. **Niemand* die ken ik c. **Iedereen* die ken ik d. **Wie* die ken ik
Noone that know I Everyone that know I who that know I

The complementary distribution between the overt alternant of the empty operator and fronted quantifiers suggest that these quantifiers are adjacent to O in these cases. They occupy themselves the [Spec, CP] position, the canonical position for operators. Hence, the sentences in (5) have the following configuration:

(6) [CP *0 Niemand/iedereen/wie* ken [IP ik [VP *t*]]]

So the Topicalization of names and universal quantifiers is allowed in Dutch, because the empty operator in topicalized constructions may indirectly be bound by names, via predication, or directly by the fronted quantifiers themselves, via movement of these quantifiers to [Spec, CP].

Let us now examine topicalization phenomena in Hungarian. Universal quantifiers may only appear postverbally when they are stressed (cf. (1a)). In the unmarked order, they occupy a position in the preverbal Quantifier Field (cf. 2.2.2.(28f)), as can be observed from the following alternant of (1a):

(7) János *mindenkit* felhívott telefonon
John everyone-ACC up-called phone-SUPER

This is further supported by the fact that topicalized universal quantifiers may only precede *focussed* lexical NPs, otherwise the result is ungrammatical. Hence, Inversion between the finite verb and its prefix applies obligatorily with the order [Q NP[+lexical] prefix V[+finite]] (cf. 3.2.2.(28e)). Compare the following pairs with alternants of (1a) and (1c):

(8) a. *Mindenkit János *felhívott* telefonon
everyone-ACC John up-called phone-SUPER
b. Mindenkit JÁNOS hívott *fel* telefonon

(9) a. *Mindenki Jánost *felhívta* telefonon
everyone John-ACC up-called phone-SUPER
b. Mindenki JÁNOST hívta *fel* telefonon

Thus, these pairs support the hypothesis that preverbal universal quantifiers are in the Quantifier Field.

Recall that the Quantifier Field is accommodated by the CP, because CP is recursive within CP (cf. 2.2.3.(1)). As a consequence, topicalized object universal quantifiers occupy a [Spec, CP] position. Hence, (1b) and (1d) display the following structure:

(10) a. [CP O_i *Mindenkit*$_i$ felhívott$_j$ [VP János [VP telefonon t_i t_j]]]
everyone-ACC up-called John phone-SUPER
b. *Jánost*$_k$ [CP O_k [CP O_i mindenki$_i$ felhívta$_j$ [VP t_i [VP t_k t_j]]]]
John-ACC everyone up-called

In fact, topicalized universal quantifiers are adjacent to the empty operator in [Spec, CP], just as their counterparts in Dutch (cf. (6)). Furthermore, (10b) demonstrates that Topicalization in Hungarian may even apply multiply, similarly to Wh-movement (cf. preceding section). This is a consequence of the fact that the CP is recursive within CP generating multiple operator positions. Therefore, topicalized phrases may all be adjacent to their empty operators, just as Wh-phrases may all be adjacent to their scope markers.

In conclusion, universal quantifiers in Hungarian may always be topicalized. This phenomenon is, however, also attested in other uncontroversial configurational languages, like Dutch or Frisian. Therefore, it cannot be explained in Hungarian by assuming that the subject and object are structurally equally prominent.

Topicalized universal quantifiers must be adjoined to [Spec, CP] which is due to the requirement that fronted universal quantifiers must occupy the canonical operator position, i.e. [Spec, CP]. This requirement is satisfied in Dutch, Frisian and Hungarian. Hungarian differs from the Germanic languages in that it allows multiple Topicalization. This is caused by the fact that Hungarian, unlike these languages, displays freedom of CP recursion, which provides multiple operator positions in that language.

5.5. *Summary*

Recapitulating, in this chapter I have evaluated the subject-object symmetries and the subject-object asymmetries appearing in Hungarian. The latter phenomena provide empirical evidence for the hypotheses that its syntax is *configurational,* and that it meets the principle of binary branching (cf. 5.1.(2)). This implies that the phrase structure of Hungarian has a VP.

If this is indeed correct, then the occurrence of subject-object symmetries is somewhat unexpected. However, I argued that these phenomena do not motivate the relaxation of subcomponents such as the Projection Principle, government theory or X'-theory. As a working strategy, I divided them into two groups.

(*i*) Subject-object symmetries which also appear in uncontroversial configurational languages. I referred to this group as the *epiphenomenal symmetries.* (*ii*) Subject-object symmetries which may occur in other configurational languages as well, but which have a somewat different shape in those languages than in Hungarian. I referred to this group as *residual symmetries.*

The epiphenomenal symmetries may be further divided into two subgroups.

(*A*) Subject-object symmetries which appear in *all* established configurational languages. These phenomena involve compositional θ-assignment to the object, the formation of idioms, and violation of phenomena subsumed under Binding Principle C.

(*B*) Some subject-object symmetries in Hungarian also occur in established configurational languages such as Dutch or Frisian, but not in English. These phenomena involve the absence of verb-object adjacency, the lack of VP-deletion, and the absence of *that*-trace effects. The lack of verb-object adjacency falls out from a theory of V-movement, and adjunction. The dichotomy between these languages with respect to VP-deletion is related to the status of the I-node. I is strong in English, but not in Dutch, Frisian or Hungarian. A strong I, unlike a weak I, has the ability to license the VP when VP-deletion applies. Finally, the dichotomy between these languages with *that*-trace effects is due to the scope of the subject domain. In languages with a weak I, in contrast to languages with a strong I, the domain of the subject coincides with the domain of the object. Hence, *that*-trace effects appear in English, but not in Dutch, Frisian, and Hungarian.

The residual symmetries involve the lack of superiority effects, and the possibility to topicalize universal quantifiers in Hungarian. These phenomena also occur in established configurational languages such as Dutch, or Frisian, but they have a somewhat different shape. The parallelism between, say Dutch and Hungarian shows that these phenomena do not offer convincing evidence for a non-configurational approach. The reason why these phenomena have a different shape in these languages is due to a particular property of Hungarian phrase structure.

In Hungarian, the CP is recursive within CP. Therefore, in that language there are infinitely many [Spec, CP] positions accessible to operators, whereas in Dutch or Frisian there is only one canonical operator position. As a consequence, Wh-phrases are stacked preverbally, and multiple Topicalization is allowed in Hungarian. This is not the case in Dutch or Frisian.

In conclusion, it seems to me that the evidence presented in this chapter unambiguously demonstrates that the phrase structure of Hungarian is configurational. A misleading conception of the phrase structure of that language has arisen by comparing Hungarian with English. It has gone unnoticed, however, that the position of English in, for example, the Germanic languages is rather unique, since not all Germanic languages have rigid word order, *that*-trace effects, superiority effects, and so on. By making a comparative study of Hungarian and other Germanic languages like Dutch or Frisian, we receive a radically different picture of its phrase structure.

A non-configurational approach of Hungarian is easily falsified. Instead of this apparent typology based on the presence or absence of the VP, a rather different typology emerges. This typology has to do with the strength of I.

Languages may vary in the lexical realization of this node. There may be lexical material available to fill I, or such material may be absent. Languages of the former type display a strong I, whereas languages of the latter type have a weak I. In English, for example, I is strong. In Dutch, Frisian and Hungarian, on the other hand, I is weak. This yields the *IP-parameter* involving at least the following typology (cf. also chapter two):

(1)

	strong I	*weak I*
V-to-C movement	-	+
verb-object adjacency	+	-
VP-deletion	+	-
that-trace effects	+	-
superiority effects	+	-

An interesting consequence of the IP-parameter is that it establishes a correlation between totally different phenomena in unrelated languages. Hungarian happens to fall into the same subtype as the Germanic languages Dutch or Frisian. This alone justifies, in my view, a further exploration of this parameter.

6. Wh-STRATEGIES IN HUNGARIAN

6.1. Introduction

This chapter discusses strategies of *long Wh-movement* in Hungarian. Before doing so, let us first consider some properties of this phenomenon in English.

Compare the following paradigm:

(1) a. You think that *Mary* saw *John*
b. *Who* do you think *t* saw John?
c. *Who* do you think that Mary saw *t*?

(1a) examplifies a declarative sentence with an embedded *that*-clause. This clause contains a subject NP and an object NP, namely *Mary* and *John*. In (1b), the former is questioned, and in (1c) the latter. Observe that the Wh-phrases are fronted into the matrix sentence. This type of construction has been referred to in the literature as *long Wh-movement*.

Generally speaking, it applies only if the matrix verb is a so-called *'bridge-verb'*. Bridge verbs belong semantically to the class of verbs of *knowing*, *saying* and *perception*. For example, the verb *brag*, unlike *think* in (1), does not qualify as a bridge for long Wh-movement. Compare (1b) and (2):

(2) **Who* did you brag t saw John?

So, the questioning of an embedded NP in English takes place by applying long Wh-movement. The question arises whether other natural languages employ a similar strategy. Let us therefore turn to Hungarian.

The distribution of long Wh-movement is subject to dialectal variation (cf. section 5.3.7.1.). Roughly, there are two dialects, namely Hungarian I and Hungarian *II*. For speakers of the former, it is completely acceptable. Speakers of the latter, on the other hand, accept this phenomenon only quite marginally. It may appear that this dialectal variation is not so sharp as I suggest. However, a number of native-speakers consulted have great difficulties with overt long Wh-movement. Some of them reject it entirely. The question arises of course what the grammatical equivalent of long Wh-movement is for those speakers.

Consider the following pair:

(3) a. *Kit* gondolsz hogy János látott *t*?
who-ACC think-AGR2sg that John saw-AGR3sg
'Who do you think (that) John saw?'
b. *Mit* gondolsz hogy János *kit* látott?
what-ACC think-AGR2sg that John who-ACC saw-AGR3sg
'Who do you think (that) John saw?'

(3a) is an instance of long Wh-movement. The embedded accusative Wh-phrase *kit* is fronted into the matrix clause. (4b) exemplifies the other strategy of questioning an embedded NP. This strategy has first been observed in De Meij and Marácz (1986) who refer to it as the *mit-strategy*. The main characteristic of this strategy is that the embedded Wh-phrase in (4b) *kit* remains in the Focus-position of its own (embedded) clause. In the matrix sentence, a 'dummy' Wh-phrase appears, *mit* 'what-ACC', which reflects the scope of the real Wh-phrase.

Hungarian *I* employs long Wh-movement to question an embedded NP, similar to English. Hungarian *II*, on the other hand, does this with the help of the *mit*-strategy. The following questions can be asked in connection with the two types of Wh-strategies: What are the consequences of the occurrence of these phenomena for the grammar of Hungarian and the theory of grammar in general?

I will assume that this dialectal variation is due to a *parameter*, namely, the one which is responsible for the distinction between languages with overt Wh-movement like English and languages with a Wh in-situ strategy like Chinese and Japanese (cf. Huang 1982, Lasnik and Saito 1984, Chomsky 1986a: 75). Compare:[1]

(4) *+/-move Wh*

Hungarian *I* is specified positively for this parameter. Hence, overt Wh-movement applies. Hungarian *II*, however, is specified negatively for (4), that is, overt movement is absent. If this parametric difference is real, we may expect that other phenomena are intrinsically dependent on the setting of this parameter. I will demonstrate that this is the case with the verbal conjugation in multiple long Wh-movement, the distribution of parasitic gaps and resumptive pronouns.

The existence of the two Wh-strategies in Hungarian provides empirical evidence for the *Correspondence Hypothesis*:

(5) *Correspondence Hypothesis*
Whenever there is a syntactic reflex of the assignment of (wide) scope, the dependency involved and long Wh-movement obey the same conditions on government and bounding

A consequence of this a hypothesis is that there is no need to postulate a separate level for the representation of scope known as Logical Form (LF) in the linguistic literature. However, the unification between overt long Wh-movement and Wh in-situ has, somewhat disappointingly, hardly been a major tenet of research in recent years. Rather, on the basis of the observation made by Huang (1982) that Wh in-situ in Chinese does not obey locality conditions, it has generally been assumed that

(1) I do not attribute independent status to move α, as I argued in connection with split constituents (cf. section 4.6.). With Koster (1987: 34), I will assume that move α is essentially a subcase of a general transfer mechanism which transmits Case and lexical content, but no θ-role.

wide scope-assignment is not restricted by Subjacency. Thus, the fact that this principle is not operative at LF has been taken as argument for its independent existence. Correspondence effects in Hungarian, however, seem to argue against this.

The rest of this chapter is organized as follows. Section 6.2. discusses the properties of long Wh-movement. Section 6.3. argues that it is a strictly local phenomenon which applies in a successive cyclic fashion. The following facts will be shown to support this: Overt long Wh-movement is sanctioned by bridge verbs, it may not violate island conditions, it leaves a Wh-trace, and it lacks *that*-trace effects.

Section 6.4. will propose an analysis of long Wh-movement. Section 6.5. deals with the properties of the *mit*-strategy. Section 6.6. will present an analysis of this strategy with its correspondence effects. Section 6.7. investigates some consequences of these different Wh-strategies. The parameter *+/-move Wh* empirically involves some other unbounded dependencies across languages which apply successive cyclicly. Conceptually itbears on the relation between long distance movement and the Projection Principle. Finally, section 6.8. presents some remarks about the status of LF in a theory of grammar.

6.2. Long Wh-movement in Hungarian

This section examines *overt* long Wh-movement in Hungarian, as opposed to the *mit*-strategy (cf. section 6.5.). I will heavily rely on the observations made in Horvath (1981, 1986: chapter four) and É. Kiss (1981, 1985, 1987: chapter three).

Consider the following sentences:

(1) a. *Kit* gondolsz *(hogy) *t* látta Jánost?
who-ACC think-AGR2sg-indef that saw-AGR3sg-def John-ACC
'Who do you think (*that) saw John?'

b. *Kit* gondolsz *(hogy) János látott *t*?
who-ACC think-AGR2sg-indef that John saw-AGR3sg-indef
'Who do you think (that) John saw?'

(2) a. *Melyik fiút* gondolod *(hogy) *t* látta Jánost?
which boy-ACC think-AGR2sg-def that saw-AGR3sg-def John-ACC
Which boy do you think (*that) saw John?'

b. *Melyik fiút* gondolod *(hogy) János látta *t*?
which boy-ACC think-AGR2sg-def that John saw-AGR3sg-def
'Which boy do you think (that) John saw?'

These examples are instances of long Wh-movement. In (1a) and (1b), the indefinite Wh-phrase *ki* is fronted, and in (2a) and (2b) the definite Wh-phrase *melyik NP* is fronted. Note that this phenomenon applies both with the subject (cf. (1a), (2a)) and with the object (cf. (1b), (2b)) (cf. also section 5.4.2.3.).

The acceptability of these sentences is subject to dialectal variation. In fact, a number of my informants hardly accept this strategy for forming embedded Wh-questions at all (cf. also Komlósy 1986). However, from the literature it is clear that these instances of long Wh-movement do occur. É. Kiss (1981) points out that this phenomenon has even been discussed by traditional linguists, for instance by Zolnay (1926). The occurrence of long Wh-movement is especially frequent in the spoken language

(cf. also De Groot 1981, Horvath 1981; 1986: ch.4, É. Kiss 1981; 1985; 1987: ch.3, Szalamin 1978, Szamosi 1976, and Anna Szabolcsi, personal communication).

Let us turn to a discussion of the sentences above: I will discuss the following syntactic and semantic properties of long Wh-movement:

(3) A. The obligatory presence of the complementizer
B. The anticipatory pronoun corresponding to the clause from which extraction takes place may not be spelled out
C. Case change of the Wh-moved subject
D. Morphological adjustment of the matrix verb
E. Long Wh-movement is an instance of long Focus-movement
F. The gap at the extraction site must remain non-overt
G. Long Wh-movement is allowed by bridge verbs
H. The scope of moved Wh-phrases is its S-structure position

(*A*) In ((1a), (1b)) and ((2a), (2b)), the embedded nominative subject and the accusative object Wh-phrase are extracted from the embedded clause. With long Wh-movement in Hungarian the complementizer *hogy* must be *obligatorily* present in order to avoid ungrammaticality (cf. section 5.4.2.3.). In English, however, the complementizer *that* must be dropped in case of subject-extraction, whereas the complementizer is optional with object-extraction (see, section 5.4.2.3. for an analysis of this dichotomy).[2]

(*B*) Consider the underlying representations of (1) and (2):

(4) a. Gondolod azt [$_{CP}$ hogy *ki* látta Jánost]
think-AGR2sg that-ACC that who saw-AGR3sg John-ACC
b. Gondolod azt [$_{CP}$ hogy János *kit* látott]
think-AGR2sg that-ACC that John who-ACC saw-AGR3sg
c. Gondolod azt [$_{CP}$ hogy *melyik fiú* látta Jánost]
think-AGR2sg that-ACC that which boy saw-AGR3sg John-ACC
d. Gondolod azt [$_{CP}$ hogy János *melyik fiút* látta]
think-AGR2sg that-ACC that John which boy-ACC saw-AGR3sg

The matrix verb *gondol* subcategorizes for an accusative object, categorially a CP. *Hogy*-clauses cannot be base-generated in an A-position, because of the CRP (cf. 4.5.(14)). Hence, they are in a non-A-position and linked to a 'dummy' anticipatory pronoun that absorbs its Case- and θ-features. In (4), the anticipatory pronoun *az* is therefore accusatively marked. Note now that the anticipatory pronoun may *not* be spelled out if an embedded NP is long Wh-moved:

(5) a. **Kit* gondolsz *azt* [$_{CP}$ hogy látta Jánost
who-ACC think-AGR2sg that-ACC that saw-AGR3sg John-ACC
b. **Kit* gondolsz *azt* [$_{CP}$ hogy János látott]
who-ACC think-AGR2sg that-ACC that John saw-AGR3sg

(2) Aoun et al. (1987) report that the complementizer is optional in the intermediate clause with subject-extraction from a multiple embedded Wh-question:
(i) Who do you think [$_{CP}$ (*that*) Mary said [$_{CP}$ (**that*) saw John]]
In Hungarian, however, the complementizer must always be present, also in the counterpart of (i):
(ii) Kit gondolsz [$_{CP}$ *(*hogy*) Mari mondott [$_{CP}$ *(*hogy*) látta Jánost]]
Who-ACC think-AGR2sg that Mary said-AGR3sg that saw-AGR3sg John-ACC

c. **Melyik fiút* gondolod *azt* [$_{CP}$ hogy látta Jánost]
which boy-ACC think-AGR2sg that-ACC that saw-AGR3sg John-ACC
d. **Melyik fiút* gondolod *azt* [$_{CP}$ hogy János látta]
boy-ACC think-AGR2sg that-ACC that John saw-AGR3sg

(*C*) In Hungarian, subjects are in general nominatively marked (cf. 3.2. (7a)). An extracted embedded subject Wh-phrase ends up accusatively marked when it is moved (cf. section 5.3.7.1.). Thus, a nominative Wh-phrase undergoes a morphological *Case change*, as may be observed from (1a) and (2a). Non-nominative Wh-phrases, on the other hand, retain their cases during the derivation like the embedded accusative Wh-phrases in (1b) and (2b), or Wh-phrases with a lexical phrase:

(6) a. *Kinek* gondolod [$_{CP}$ hogy János könyvet adott *t*]
who-DAT think-AGR2sg-def that John book-ACC gave-AGR3sg-indef
'To whom do you think that John gave a book?'
b. *Kivel* szeretnéd [$_{CP}$ hogy Mari beszéljen *t*]
who-INSTR like-COND-AGR2sg-def that Mary speak-SUBJ-AGR3sg-indef
'With whom would you like that Mary should speak?'
c. *Kitől* gondolod [$_{CP}$ hogy Mari könyvet kapott *t*]
who-ABL think-AGR2sg-def that Mary book-ACC got-AGR3sg-indef
'From whom do you think Mary got a book?'

In (6a)-(6c), the embedded verbs *ad* 'give', *beszél* 'speak', and *kap* 'get' subcategorize for a lexical dative, instrumental, and ablative. These cases are spelled out on the extracted Wh-phrases. Thus, no Case change occurs, as with extracted nominative Wh-phrases.

(*D*) The Hungarian verb displays two different types of conjugational patterns, the *indefinite* and *definite* conjugation (cf. section 4.2.1.). The descriptive rule 4.2.(2), here repeated as (7), captures their distribution:

(7) The definite paradigm is triggered in case the accusative object of the verb is definite, otherwise the indefinite paradigm is triggered

We classified *who*-phrases as (properly) indefinite triggering indefinite conjugation on the verb, and *which*-phrases as (inherently) definite triggering definite conjugation on the verb. Recall further that embedded clauses and names count as definite. Consider again (4a) and (4b), here repeated as (8a) and (8b):

(8) a. Gondolod azt [$_{CP}$ hogy *ki* látta Jánost]
think-AGR2sg-def that-ACC that who saw-AGR3sg-def John-ACC
b. Gondolod azt [$_{CP}$ hogy János *kit* látott]
think-AGR2sg-def that-ACC that John who-ACC saw-AGR3sg-indef

The matrix verb in these sentences has definite conjugation because its accusative object is a (definite) embedded clause. The embedded verb in (8a) also appears in the definite conjugation because its accusative object is a name, and the embedded verb in (8b) has indefinite conjugation because its accusative object is a *kit*-phrase.

Compare now the counterparts of the cases in (8) with long Wh-movement:

(9) a. *Kit* gondolsz [$_{CP}$ hogy *t* látta Jánost]
who-ACC think-AGR2sg-indef that saw-AGR3sg-def John-ACC

b. *Kit* gondolsz [$_{CP}$ hogy János látott *t*]
who-ACC think-AGR2sg-indef that John saw-AGR3sg-indef

If the indefinite nominative subject or accusative object Wh-phrase is fronted into the matrix sentence, the matrix verb has indefinite conjugation. Hence, the matrix verb in these sentences displays a *morphological adjustment*.

As a consequence, there is always an *agreement correspondence* between the matrix verb and the embedded verb when an accusative Wh-phrase is extracted. In case of a definite Wh-phrase like *melyik fiút* in (2b), both the matrix verb and the embedded verb are conjugated definitely, and in case of an indefinite phrase like *kit* in (9b), both the matrix and the embedded verb are conjugated indefinitely.

(6) shows that this phenomenon appears only with extracted nominative or accusative indefinite Wh-phrases but not with extracted Wh-phrases with lexical case. In the latter cases, the matrix verb keeps its definite conjugation. This dichotomy is another instance of an asymmetry. Therefore, we may add it to the asymmetries in 5.4.(5).

(*E*) Wh-moved NPs must land in the Focus-position, left-adjacent to the finite verb (cf. 2.1.(28d)). In fact, any NP of a *hogy*-clause may be fronted into the matrix clause, provided that it lands in this position:

(10) a. [$_{CP}$ *JÁNOST* gondolod [$_{CP}$ hogy *t* látott]]
John-ACC think-AGR2sg-def that saw-AGR3sg-def
'It is John who you think saw me.'
b. [$_{CP}$ *MARIT* gondolod [$_{CP}$ hogy láttam *t*]]
Mary-ACC think-AGR2sg-def that saw-AGR1sg-def
'It is Mary who you think that I saw.'
c. János [$_{CP}$ *MARINAK* akarja [$_{CP}$ hogy Péter könyvet adjon *t*]]
John Mary-DAT want-AGR3sg-def that Peter book-ACC give-SUBJ-AGR3sg
'It is Mary who John wants that Peter gives a book to.'

We may conclude from this paradigm that long Wh-movement is a subcase of *long Focus-movement*. Both construction types display the same properties.[3] Henceforth, I will refer to long distance movement in Hungarian as long Wh/Focus-movement.

(*F*) The counterparts of the sentences in (1) and (2) are ungrammatical with an overt personal pronoun *ő* 'he' spelled out at the extraction site:[4]

(11) a. **Kit* gondolsz [$_{CP}$ hogy *ő* látta Jánost]
who-ACC think-AGR2sg that he saw-AGR3sg John-ACC
b. **Kit* gondolsz [$_{CP}$ hogy János látott *t*]
who-ACC think-AGR2sg that John saw-AGR3sg
c. **Melyik fiút* gondolod [$_{CP}$ hogy *ő* látta Jánost]
which boy-ACC think-AGR2sg that he saw-AGR3sg John-ACC
d. **Melyik fiút* gondolod [$_{CP}$ hogy János látta *őt*]
which boy-ACC think-AGR2sg that John saw-AGR3sg him

(3) This is the case in Dutch as well. Compare (ia) which is a case of long Focus-movement, with (ib) which is a case of long Wh-movement:

(i) a. *JAN* denk jij [$_{CP}$ dat ik *t* zag] b. *Wie* denk jij [$_{CP}$ dat ik *t* zag]
JOHN think you that I saw Who think you that I saw

(4) The third person accusative pronoun may only appear with the definite conjugation (cf. section 4.2.1.).Therefore, (11b) is undetermined with respect to the prohibition on the spelling out of the Wh-gap.

This paradigm shows that the gap at the extraction site must remain *non-overt*. In the next section, I will determine whether it is a Wh-trace or a non-overt resumptive pronoun.

(*G*) In Hungarian, like in other languages, long Wh-movement is only possible in the context of the class of verbs called *bridge verbs*:[5]

(12) *Állít* 'state', *akar* 'want', *elképzel* 'imagine', *említ* 'mention', *érez* 'feel', *észrevesz* 'observe', *gondol* 'think', *hall* 'hear', *hisz* 'believe', *(meg)ígér* 'promise', *javasol* 'propose', *kérdez* 'interrogate', *kíván* 'wish', *lát* 'see', *mond* 'say', *remél* 'hope', *szeret* 'like', *szeretne* 'would like', *jól teszik* 'well do', *tud* 'know', *várt* 'wait'

These verbs semantically belong to the verbs of *knowing*, *saying* and *perception*. It is a well-known fact that such verbs in other languages belong to the same semantic classes as well. All the verbs in (12) assign accusative Case to their object. If it is an embedded clause, this Case is spelled out on the dummy anticipatory pronoun *az* 'that' (cf. (3*B*)). However, most of these verbs may also select a case-frame with a lexically marked object. I will return to the latter cases in the following section.

(*H*) Let us consider now what a felicitous answer to the Wh-questions in (1), (2), or (6) would be. The answers to (1a) and (2a) may be, for instance, *Péter* 'Peter-NOM', to (1b) and (2b), for instance, *Pétert* 'Peter-ACC', and to (6) respectively *Péternek* 'Peter-DAT', *Péterrel* 'Peter-INSTR', or *Pétertől* 'Peter-ABL'. From this it follows that Wh-phrases takes scope *over* the other constituents in the clause.

(5) There is another set of bridge verbs/predicates in Hungarian which involve the following samples, among others, *nem árt* 'not do harm', *bizonyos* 'be sure', *biztos* 'be sure' *ereje van (nincs)* '(not) have enough strength', *érthető* 'it is understandable', *eszébe jut* 'come across ones mind', *az az érzésem* 'it is my feeling', *hajszálon múlik* 'it is a near touch', *igaz* 'be true', *jól* 'be well', *jól voina* 'it would be good', *jobb lenne* 'it would be better', *kár* 'be a pity', *kell* 'need', *úgy látszik* 'seem', *közömbös* 'it is indifferent', *lehet* 'may', *lehetetlen* 'impossible', *mintegy* 'it makes no difference', *nyilvánvaló* 'it is obvious', *nincs* 'there is no', *örül az ember* 'be glad', *régen (van)* 'it is a long time ago', *ritkaság* 'it is exceptional', *szabad* 'may', *természetesen* 'it is natural', *úgy tűnik* 'seem', *valószínű* 'probable' and *van* 'be'. These predicates, contrary to the ones in (12), do not allow long Wh-movement but rather long Left Dislocation (cf. De Groot 1981a, É. Kiss 1987a, Szalamin 1987, and Zolnay 1926). Compare, for example:

(i) *Mária,* sokan azt gondolják [$_{CP}$ (hogy) megkapja az állást *pro*]
Mary many that-ACC think-AGR3pl-def that gel-AGR3sg the job-ACC
'As for Mary, many peoble think that she will get the job.'
(É. Kiss 1987a: 149)

This construction displays the following properties, among others:

(ii) a. The fronted NP appears clause-initially
b. The fronted NP is not in Focus
c. The anticipatory pronoun may be spelled out
d. The scope of the fronted NP is restricted to the embedded clause
e. The fronted NP retains always its case marker
f. There is no agreement between the fronted NP and the matrix verb
g. Several NPs may be left-dislocated
h. CNPC may be violated
i. The complementizer *hogy* may be dropped

From a comparison between (ii) and (3) it appears that long Left Dislocation has different properties from long Wh/Focus-movement. É. Kiss (1987a) argues, following Cinque (1982), that the fronted NP is base-generated in the left-dislocation position, and that it is linked to a resumptive small *pro* which provides its scope-, Case- and θ-features. (See also chapter 7, note 25 for the status of the gap in long Left Dislocation).

There is a difference between English and Hungarian with the scope of Wh-phrases in long Wh-movement. Haïk (1984) observes that in English it is restricted to the domain in which it has been base-generated. Hence, in order to determine the scope of an extracted Wh-phrase with respect to another NP not the position of the Wh-phrase should be considered but rather the position of its trace.

For example, in the following sentence the extracted Wh-phrase doesn't have scope over the existential quantifier in the matrix sentence:

(13) *Which men* did someone say that Mary likes *t*?
(Haïk 1984: 195)

If this Wh-question has an answer as *John and Bill*, it cannot be verified by states of affairs in which different persons did the saying, for example, if *x* said that Mary likes John and *y* said that Mary likes Bill, and *x* is not identical to *y*. However, an extracted Wh-phrase may always have scope over an NP of the clause it is an argument of:

(14) *Which men* did Mary say that some woman loved *t*?
(Haïk 1984: 196)

In this example, *some woman* may be in the scope of the plural Wh-phrase *which men*. An answer to (14) like *John and Bill* may be verified by a situation in which *John and Bill* are loved by a different woman. Hence, the scope of a Wh-phrase in English is determined by the position of its trace.

In Hungarian, on the other hand, this depends on the S-structure position of the Wh-phrase *itself*. Consider the Hungarian equivalents of (13) and (14):

(15) a. *Mely férfiakat* mondta valaki hogy Mari szereti *t*?
which men-ACC said-AGR3sg-def someone that Mary love-AGR3sg-def
'Which men did someone say that Mary loved?'
b. *Mely férfiakat* mondta Mari hogy valaki szereti *t*?
which men-ACC said-AGR3sg-def Mary that someone love-AGR3sg-def
'Which men did Mary say that someone loved?'

In (15a), in contrast to English (13), it is possible that different persons did the saying in case the answer to the question is *John and Bill*, for example. Kenesei (1986b) notes that existential quantifiers can never take scope over Wh-phrases, if both phrases are complements of the same predicate. This constraint cannot, however, interfere in this sentence because the existential *valaki* is base-generated in a higher predicative domain than the Wh-phrase *mely férfiakat*. From this dichotomy it follows that in English Wh-scope is determined by the trace of Wh-movement, whereas in Hungarian the S-structure position of the extracted Wh-phrase itself is decisive.

(15b) has a reading similar to (14) in English. This is due to the fact that the moved Wh-phrase in this sentence is in a higher domain at S-structure, the matrix clause, than the existential quantifier, that is, in the embedded clause. Therefore, it may include the existential quantifier in its scope.

The following pair also displays this dichotomy between Hungarian and English:

(16) a. *Melyik számot* gondolod hogy mindenki
which number-ACC think-AGR2sg-def that everyone
emlékszik hogy választotta *t*?
remember-AGR3sg that chose-AGR3sg-def
'Which number do you think that everyone remembers that he chose?'

b. Mindenki emlékszik hogy *melyik számot* választotta
everyone remember-AGR3sg that which number-ACC chose-AGR3sg-def
'Everyone remembers that he chose which number'

In (16a), a Wh-phrase is fronted into the matrix sentence from the most deeply embedded clause. The intermediate clause contains a universal quantifier. In (16b), however, it remains in the domain where it is base-generated. This yields an echo-question.

The English equivalents of these sentences involve a pair-reading listing different people who remember a particular number. So, an answer to question (16a) in English could be: "I think that Peter remembers that he chose 8, Mary remembers that she chose 6, and so on...". Such a pair-reading is also possible with the English variant of (16b). These pair-readings in English are due to the fact that in both sentences the universal quantifier is base-generated in a higher domain than the Wh-phrase. So, it may take scope over the Wh-phrase.

In Hungarian, on the other hand, a pair-reading is only possible in (16b). An answer to (16a), in which long Wh-movement has applied, involves only one single number, for instance, 6. I will return to this dichotomy between English and Hungarian in section 6.8. For now, it suffices to observe that Wh-scope is determined in Hungarian at S-structure after an application of *move Wh*, whereas in English this applies after 'reconstruction' of the extracted Wh-phrase to its base-generated position.

Summarizing, long Wh/Focus-movement in Hungarian displays the properties in (3). It is clear that a theoretically motivated analysis of this phenomenon has to account for this cluster of properties. I will elaborate in section 6.4. on Chomsky (1981), Horvath (1986a), and É. Kiss (1981a). These proposals treat long Wh/Focus-movement as an instance of *successive cyclic movement* constrained by locality conditions (cf. Chomsky 1973). Let us first turn to a discussion of locality effects in Hungarian.

6.3. Locality Effects in Hungarian

In the preceding section, I noted that long Wh/Focus-movement is sanctioned by bridge verbs, suggesting that it is subject to a locality condition. This section argues that this is indeed the case.

Therefore, I will determine whether the relation between the Wh/Focus-phrase and its extraction site is subject to island conditions. I will demonstrate that the following *island conditions* apply in Hungarian, the Complex NP Constraint (CNPC), the Sentential Subject Condition (SENSC) and the Adjunct Condition (AC). The Wh-Island Condition (WhIC) is, contrary to English, not operative in Hungarian. Wh/Focus-phrases may be extracted from a Wh-island. In section 6.4., I will suggest that this dichotomy is due to the fact that the CP is recursive within CP in Hungarian.

Further, I will determine the nature of the gap in long Wh/Focus-movement. It will be concluded that it is *trace*. Consider first CNPC.

CNPC blocks extraction from clauses with lexically filled nominal heads (cf. Ross 1967). The following sentences exemplify that it holds in Hungarian as well (cf. Horvath 1986a and É. Kiss 1987a for this observation):

(1) a. **Kit* említett(e) [$_{NP}$ azt a tényt [$_{CP}$ hogy *t* megcsókolta Marit]]
who-ACC mentioned-AGR3sg-indef/def that-ACC the fact -ACC that kissed-
*'Who did he mention the fact that kissed Mary?' AGR3sg-def Mary-ACC

b. **Kit* említett(e) [$_{NP}$ azt a tényt [$_{CP}$ hogy Mari megcsókolt *t*]]
who-ACC mentioned-AGR3sg-indef/def that-ACC the fact-ACC that Mary kissed-AGR3sg-indef
*'Who did he mention the fact that Mary kissed?'

Long Wh/Focus-movement is also restricted by SENSC. The adjectival predicates *biztos* 'be sure' and *valószínű* 'be probable' may subcategorize for subject complement clauses which are linked with a nominative anticipatory pronoun (cf. (2a) and (3a)). Observe that it is not allowed to extract Wh/Focus-phrases from these complements (cf. (2b) and (3b)):[6]

(2) a. *Az* biztos [$_{CP}$ hogy Mari eljön]
that be sure that Mary come-AGR3sg
'It is sure that Mary comes.'

b. **Ki* biztos [$_{CP}$ hogy *t* eljön]
who is sure that come-AGR3sg

(3) a. *Az* valószinű [$_{CP}$ hogy Mari eljön]
that is probable that Mary come-AGR3sg
'It is probable that Mary comes.'

b. **Ki* valószínű [$_{CP}$ hogy *t* eljön]
who is probable that come-AGR3sg

Another limitation on long Wh-movement is the islandhood of adverbial complements. These complements are introduced by adverbial phrases such as *before*, *without*, etc. The sentences in (4) show that AC is operative in Hungarian as well:

(4) a. **Mely könyveket* letísztitottad volna az asztalt
which books-ACC clean-AGR2sg would the table-ACC
azelött [$_{CP}$ hogy elolvastad volna *t*]
that-before that read-AGR2sg would
*'Which books would you clean the table before reading?'

b. **Kire* megérkeztél az iskolába anélkül
who-SUBL perf-arrived-AGR2sg the school-ILL that-without
[$_{CP}$ hogy gondoltál volna *t*]
that thought-AGR2sg would
*'About who did you arrive at school without thinking?'

Chomsky (1981) has argued that the relation between the moved Wh-antecedent and its gap is constrained by locality conditions. The sentences in (1)-(4) demonstrate that this is the case in Hungarian as well. Therefore, it is appealing to analyse long Wh/Focus-movement as an instance of *successive cyclic movement*. In order to make this more precise, let us first determine the nature of the gap involved.

I observed that the extraction site of a moved Wh/Focus-phrase must remain non-overt (cf. 6.2.(3*F*)). It has been argued that the gap of unbounded dependencies can sometimes be identified as the non-overt pronominal *pro* in *pro*-drop languages (cf. Chomsky 1982, and Cinque 1984; 1986). This would be a case of the resumptive pronoun strategy.

The question is whether the gap at the extraction site in long Wh/Focus-movement is *trace* or *pro*. This question is legitimate, because Hungarian is a *pro*-drop language (cf. section 4.2.4.). There are three pieces of evidence bearing on it which favor the assumption that this phenomenon leaves a *trace*.

(6) Some predicates, like *kell* 'be necessary', require a subject complement clause to be in the subjunctive mood (SUBJ) (cf. (ia)). Wh/Focus-movement from such clauses yields a much better result than movement from subject indicative clauses. Compare the ungrammatical (2b) and (3b) with the grammatical (ib):

(i) a. Az kell [$_{CP}$ hogy Mari eljöjjön]
that is necessary that Mary come-SUBJ-AGR3sg
'It is necessary that Mary comes.'

b. *Ki* kell [$_{CP}$ hogy *t* eljöjjön]
who is necessary that come-SUBJ-AGR3sg
'For who is it necessary to come?'

The first two arguments have to do with the environment in which small *pro* is licensed. The third argument may be construed by taking the categorial specifications of *pro* into account. It displays distribution 4.2.(34), here repeated as (5):

(5) *The distribution of pro in Hungarian*
   a. *Nominative* personal pronouns may be dropped in all persons and number
   b. *Accusative* personal pronouns may be dropped only in case they are singular. First and second person pronouns may be dropped with the indefinite conjugation. Third person pronouns may be dropped only with the definite conjugationc. Personal pronouns with lexical case may not be dropped

Recall that the distribution of *pro* is so specific that it may serve as a diagnostic for this empty category.

(*I*) Compare the following pairs:

(6) a. *Mely fiúkat* gondolod [$_{CP}$ hog látom *t*]
   which boys-ACC think-AGR2sg-def that see-AGR1sg-def
   'Which boys do you think that I see?'
   a'. (Én) látom (őt) !*(*őket*)
   I see-AGR1sg-def him/her|them
   'I see him/her|them.' (cf. 4.2.(7a))
   b. *Kiket* gondolsz [$_{CP}$ hogy (te) látsz *t*]
   who-plur-ACC think-AGR2sg-indef that you see-AGR2sg-indef
   'Who do you think that you saw?'
   b'. (Te) látsz (engem)/*(*őket*)
   you see-AGR2sg-indef me/them
   'You see me.' (cf. 4.2.(8b))
   c. *MINKET* gondolsz [$_{CP}$ hogy János látott *t*]
   us think-AGR2sg-indef that John saw-AGR3sg-indef
   'It is us that you think that John saw.'
   c'. (Ő) lát (engem)/*(*minket*)
   he/she see-AGR3sg-indef me/us
   'He/she sees me/us.' (cf. 4.2.(8c))
   d. *Kit* gondolsz [$_{CP}$ hogy János látott *t*]
   who-ACC think-AGR2sg-indef that John saw-AGR3sg-indef
   'Who do you think that John saw?' (cf. 6.2.(1b))
   d'. (Ő) lát (engem)/(téged)/*(*őt*)
   he/she see-AGR3sg-indef me/you/him
   'He/she sees me/you.' (cf. 4.2.(8c))
   e. *Kivel* gondolod [$_{CP}$ hogy János találkozott *t*]
   who-INSTR think-AGR2sg-indef that John met-AGR3sg-indef
   'Who do you think that John met?'
   e'. (Ő) találkozott *(*vele*)
   he/she met-AGR3sg-indef he/she-INSTR
   'He met him/her.'

The pairs (a) and (a'), and so on, in these sentences represent cases of long Wh/Focus-movement and *pro*-drop respectively. We have omitted examples with a subject-extraction gap and subject *pro*, since they have exactly the same distribution. However, with the object, the following three distributional differences between these gaps occur.

(*i*) According to (5b), accusative plural pronouns may not be dropped. Therefore, the phrases (6a')-(6c') are ungrammatical with *pro*. However, the corresponding gap in long Wh/Focus-movement is licensed by a plural Wh/Focus-antecedent.

(*ii*) A third person accusative pronoun may not appear with a verb conjugated indefinitely (cf. (5b)). Observe from the comparison between (6d) and (6d') that a third person accusative gap is licit in long Wh/Focus-movement, but not with *pro*-drop.

(*iii*) Lexically marked pronouns may never be dropped (cf. (5c)). Hence, the instrumental object must be present in (6e'). Note, however, that in the corresponding case of long Wh/Focus-movement (6e), such an object may be extracted.

From (*i*)-(*iii*), it follows that the environment in which a Wh/Focus-gap is allowed is much broader than the environment in which *pro* may occur. Therefore, we conclude that the gap of long Wh/Focus-movement cannot be small *pro,* but *trace*.

(*II*) If the gap in long Wh/Focus-movement were a non-overt resumptive pronoun, we would expect that it could circumvent island constraints (cf. Chomsky 1982, Cinque 1986). We noted above, however, that the relation between the Wh/Focus-antecedent and its gap displays locality effects. This dichotomy can be illustrated by constructing minimal pairs between long Wh/Focus-movement and constructions with non-overt resumptive pronouns. Instances of the former are exemplified in (6a)-(6e), and instances of the latter are exemplified in (7a)-(7e):

(7) a. *Mely fiúkról* gondolod (azt) [$_{CP}$ hogy János *látott/látta *őket/*pro*]
which boys-DELAT think-AGR2sg-def that-ACC that John saw-AGR3sg-indef/def them
'Of which boys do you think that John saw them?'

b. **Kikről* gondolod (azt) [$_{CP}$ hogy (te) *láttál/láttad *őket/*pro*]
who-plur-DELAT think-AGR2sg-def that-ACC that you saw-AGR2sg-indef/def them
'Of who do you think that you saw them?'

c. *RÓLUNK* gondolod (azt) [$_{CP}$ hogy János látott/*látta *minket/*pro*]
we-DELAT think-AGR2sg-def that-ACC that John saw-AGR3sg-indef/def us
'It is of us that you think that John saw.'

d. *Kiről* gondolod (azt) [$_{CP}$ hogy János *látott/látta *őt/pro*
who-DELAT think-AGR2sg-def that that] John saw-AGR3sg-indef/def him
'Of who do you think that John saw him?'

e. *Kiről* gondolod (azt) [$_{CP}$ hogy találkozott *vele/*pro*]
who-DELAT think-AGR2sg-def that that met-AGR3sg-indef he-INSTR
'Of who do you think that John met him?'

The matrix verb *gondol* subcategorizes in these sentences for a different case-frame than in the sentences in (6). In the latter, it subcategorizes for an accusative object clause. In the former, on the other hand, *gondol* subcategorizes for a DELAT-ACC case-frame. The Wh-phrase is assigned delative case, and the embedded clause is connected to the accusative case (through the linking with the anticipatory pronoun).

Hence, the Wh-phrases in (7), unlike the ones in (6), are direct arguments of the matrix verb. Therefore, these phrases are not related to the (non)-overt pronouns by movement. This hypothesis is supported by the fact that, in contrast to long Wh/-Focus-movement (cf. 6.2.(3B)), the anticipatory pronoun may be spelled out. This suggests that the constructions in (7) are not subject to the locality condition which restricts long Wh/Focus-movement.

Note now that the embedded pronouns in these sentences may only be dropped in accordance with the restrictions on *pro*-drop. In (7a)-(7c), the objects are accusative plural pronouns, in (7d) the object is an accusative third person singular pronoun, and in (7e) it is a pronoun with lexical case. Hence, the pronouns in (7a)-(7c) may not be dropped. The pronoun in (7d) may only be omitted if the verb displays definite conjugation, and the pronoun in (7e) may not be dropped. These facts show that *pro* functions as a resumptive pronoun only if it obeys a strict locality condition. It must be locally recoverable from AGR. This implies that the gaps in (6a)-(6e) cannot be resumptive *pro* because they are licensed in a much broader context.

(III) Chomsky (1982; 1986b) suggests that empty categories are specified at D-structure in terms of the feature-matrix [+/-anaphoric]/[+/-pronominal]. Small *pro*, being a pronominal, is specified [+pronominal,-anaphoric]. Furthermore, it is categorially of the type NP.

Suppose, now, that the gap at the extraction-site in long Wh/Focus-movement is *pro*. We would, under the assumption that members of the same chain have identical (categorial) features, expect that Wh/Focus-antecedents other than NPs cannot sanction its Φ-features. However, long Wh/Focus-movement is allowed with various different categories like time or place adverbs, PPs, APs, and prefixes:

(8) a. János *HOLNAP* szeretné [$_{CP}$ hogy haza menjünk *t*]
John tomorrow like-COND-AGR3sg-def that home go-SUBJ-AGR1pl-indef
'It is tomorrow that John wants us to go home.'

b. *OTT* gondolod [$_{CP}$ hogy láttam Jánost *t*]
there think-AGR2sg-def that saw-AGR1sg-def John-ACC
'It is there that you think that I saw John.'

c. *KI MÖGÖTT* gondolod [$_{CP}$ hogy álltunk az üzletben *t*]
who behind think-AGR2sg-indef that stood-AGR1pl-indef the shop-INESS
'Behind who do you think we stood in the shop?'

d. *BÜSZKE JÁNOSRA* gondolod [$_{CP}$ hogy voltam tegnap *t*]
proud John-SUBL think-AGR2sg-indef that was-AGG1sg yesterday
'It is proud of John that you think that I was yesterday.'

e. János *MEG* akarja [$_{CP}$ hogy *t* hívjuk Marit]
John perf want-AGR3sg-def that invite-AGR1pl-def Mary-ACC
'It is to invite that John wants us Mary.'

In (8e), the prefix *meg* 'perfectivity marker' of the embedded verb *meghív* 'invite' is extracted from the embedded clause. Prefix-extraction is only allowed when the bridge verb is an auxiliary that triggers restructuring with infinitival complements such as *akar* 'want', for instance (cf. section 5.3.2.).

This paradigm demonstrates that extracted categories may be categorially non-nominal. These categories can thus not be the antecedent of a pronominal empty category. Therefore, we conclude that the gap in long Wh/Focus-movement is *Wh/Focus-trace*.

Summarizing, I argued that long Wh/Focus-movement in Hungarian displays locality effects. The CNPC, SENSC and AC may not be violated by the extraction of Wh/Focus-phrases. Furthermore, the gap in this phenomenon cannot be *pro* but must be *trace*. In order to support this claim, I put forward two sorts of evidence.

First, the environment in which *trace* is licensed is much broader than the environment in which *pro* is allowed. Second, the gap in long Wh/Focus-movement is categorially rather heterogeneous. This implies that it cannot be a nominal category.

Small *pro* may function as a referential or as a resumptive pronoun only if it is identified by AGR. The Φ-features of trace are identified by a Wh/Focus-antecedent. Both recovery procedures are subject to locality. Therefore, Hungarian provides evidence for the hypothesis that the Φ-features of empty categories must be determined on a strictly local basis. In the next section, I will present an analysis of long Wh/Focus-movement.

6.4. An Analysis of Long Wh/Focus-movement in Hungarian

This section analyzes overt long Wh/Focus-movement in Hungarian. Ross (1967) has observed that unbounded dependencies are constrained by island conditions. Theories of these conditions have been specified in *bounding theory*. The intuitive idea behind this theory is that the distance between the dependent empty element and the antecedent of a dependency relation may not be too large. They are related stepwise, obeying *subjacency*:

(1) The basic principle of *bounding theory* is that every link (X_i,X_{i+1}) of a chain $(\alpha_1,...,\alpha_n)$ must meet *subjacency*: if (α_i,α_{i+1}) is a link of a chain, then α_{i+1} is subjacent to α_i (Chomsky 1986: 30)

In recent literature, inspired by Kayne (1984), subjacency has been related to *government*. A category that is ungoverned constitutes an island, a *barrier* in Chomsky's (1986b: 15) sense. According to Chomsky, a category may lose its barrierhood if it is lexically governed by a θ-role assigner, if it is *L-marked*:

(2) α *L-marks* ß iff α is a lexical category that θ-governs ß

Chomsky (1986b) defines the *Subjacency Condition* as follows:

(3) *Subjacency Condition*
β is *n*-subjacent to α iff there are fewer than *n + 1*
barriers for *β* that exclude α

In general, Wh-movement transfers Case and lexical content but not a θ-role. It falls under what Chomsky (1982: 33) defines as Move-α, which has the following properties:

(4) a. The antecedent lacks an independent θ-role
b. The gap is locally licensed
c. The relation is subject to bounding theory (subjacency)

Recall that long Wh/Focus-movement in Hungarian displays the properties 6.2.(3), here repeated as (5):

(5) A. The obligatory presence of the complementizer
B. The anticipatory pronoun corresponding to the clause from which extraction takes place may not be spelled out
C. Case change of the Wh-moved subject
D. Morphological adjustment of the matrix verb
E. Long Wh-movement is an instance of long Focus-movement
F. The gap at the extraction site must remain non-overt

G. Long Wh-movement is allowed by bridge verbs
H. The scope of moved Wh-phrases is its S-structure position

On the basis of our discussion in section 6.3., we may add (*I*) to the above properties:

(6) I. Long Wh/Focus-movement displays locality effects

It is clear that any analysis of this phenomenon has to account for its properties in (5A)-(6I). Let us consider how we may derive them in the above framework.

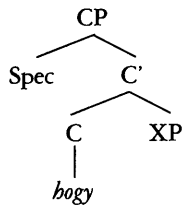
The properties (5E), (5F), (5G), and (6I) follow from the assumption that long Wh/Focus-movement is an instance Move-α. The gap in this construction may not be spelled out, because, as we concluded in the preceding section, it is *trace*. A trace inherits its Φ-features from the Wh/Focus-antecedent. This is supported by the fact that non-nominative Wh/Focus-phrases retain their cases in the course of the derivation. (I will return to the Case change phenomenon (cf. (5C)) below).

Long Wh/Focus-movement is allowed by bridge verbs only, and it displays locality effects. This indicates that it is restricted by subjacency. Let us investigate more closely how this condition operates in Hungarian.

We have to determine whether embedded clauses are barriers for long Wh/Focus-movement. Two types of embedded clauses occur in these constructions, (i) *hogy*-clauses and (ii) complex NPs. Let us first discuss the structure and position of *hogy*-clauses.

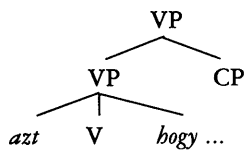
Hogy-clauses are CPs with the following structure (cf. section 4.5.1.):

(7)



Furthermore, CPs are base-generated in a non-A-position because of the CRP (cf. 4.5.(4)). The Case-position of the verb is bound by an anticipatory pronoun to which they are linked. For example, an accusative *hogy*-clause appears in the following configuration:

(8)

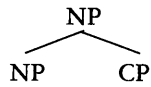


The CP is adjoined to the VP, and the object Case of the verb is spelled out on the anticipatory pronoun *azt* 'that-ACC'.

As a consequence, the CP is ungoverned in this configuration. Therefore, it is not L-marked by the verb (cf. (2)) and thus it is a barrier for long Wh/Focus-movement, an instance of *1-subjacency*. This directly accounts for the fact that SENSC and AC must be respected. If CPs are base-generated in ungoverned positions, then this is also the case with sentential subject and adjunct CPs. Hence, long Wh/Focus-movement from these clauses crosses a barrier yielding a violation of the Subjacency Condition.

Let us consider why complex NPs are barriers. Complex NPs have the following structure:

(9)



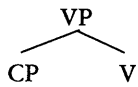
Whether it is L-marked or not, it always constitutes a barrier for long Wh/Focus-movement. The reason for this is that a complex NP inherites barrierhood from the CP it dominates (cf. Chomsky 1986b). Hence, a Wh/Focus-phrase extracted from a complex NP crosses two barriers, a case of *1-subjacency*. This yields a violation of the Subjacency Condition.

In sum, the fact that CP and complex NP are barriers immediately explains why long Wh/Focus-movement obey island constraints like SENSC, AC and CNPC. These cases are ruled out as subjacency violations. If embedded clauses were always ungoverned, then this phenomenon could never appear. Therefore, I will assume that bridge verbs have the ability to govern embedded clauses. The question then arises how they affect the configurations in (8) and (9).

Long Wh/Focus-movement is always blocked by complex NPs, independent of the fact whether they are L-marked or not. Hence, they are absolute barriers for movement. How about CPs?

Suppose that bridge verbs are lexically specified to *govern* a CP-complement in the following configuration:

(10)



In this configuration, contrary to (8), the CP is itself in a government position, the accusative object position. As a result, it is *L-marked*. Hence, (10) yields thus an instance of *0-subjacency* avoiding a subjacency violation. This accounts for the fact that CPs in long Wh/Focus-movement are transparent domains.

The question arises whether there is any empirical evidence for the government relation between the bridge verb and the CP in this configuration. According to Kayne (1984), objective Case is assigned in the Spec of CP to moved Wh-phrases.

Kayne presents the following pair from French:

(11) a. *Je crois [$_{CP}$ [$_{IP}$ *Jean* être le plus intelligent]]
b. [$_{CP}$ *Quel garçon* [$_{IP}$ crois-tu [$_{CP}$ *t* [$_{IP}$ *t* être le plus intelligent]]]]
(Kayne 1984: 5)

The ungrammaticality of (11a) is due to a Case Filter violation, *Jean* is not Case-marked. The embedded subject is not assigned Case because there is no suitable Case-assigner present. The embedded infinitive complement lacks an I-node, and French *croire*, in contrast to English *believe*, is not an ACI-verb (cf. section 5.3.5.3. on ACI-verbs).

In (11b), on the other hand, the extracted subject Wh-phrase is assigned objective Case. This yields a grammatical result. According to Kayne, the data fall into place, if *croire* assigns accusative Case to the [Spec, CP] prior to the application of Wh-movement. Kayne therefore concludes that this position may be governed by a bridge verb.

É. Kiss observes (1985: 43) that this is not only the case in French but optionally also in English (with *whom* the following sentence is ungrammatical to most speakers of English):

(12) [$_{CP}$ *Who/whom* did [$_{IP}$ you suggest [$_{CP}$ *t* [$_{IP}$ *t* should be the chairman]]]]

So Case-assignment to the specifier of CP provides an argument for the claim that CP is governed by a bridge verb.

Hungarian also supports this hypothesis. The properties (5*B*), (5*C*), and (5*D*) of long Wh/Focus-movement follow from this government relation.

The prohibition on the spelling out of the anticipatory pronoun indicates that the CP is itself in a Case-marked position. The anticipatory pronoun cannot function as a Case-dummy in that case.

Hungarian displays Case change of an extracted subject. This resembles French (11) and English (12). Therefore, we may assume that this Case change is caused by accusative Case-assignment to Spec of CP. It is unclear why the accusative marking appears only on extracted nominative NPs. Maybe, this has to do with the fact that the nominative is morphologically unmarked in Hungarian.

Note, incidentally, that accusative Case-assignment to the [Spec, CP] after Wh-movement poses a problem for the L-model of Van Riemsdijk and Williams (1981). In that framework, Case-assignment takes place at NP-structure, that is, before Wh-movement.[7]

The matrix verb undergoes a morphological adjustment, if an indefinite nominative or accusative Wh-phrase is fronted into the matrix sentence. Suppose that this is a reflection, just as Case-assignment to the [Spec, CP], of the government relation between a bridge verb and the [Spec, CP]. The syntax of ACI-verbs provides independent evidence for this claim.

ACI-verbs select a tenseless IP-complement, and they assign to its subject (= [Spec, IP]) exceptional accusative Case (cf. section 5.3.5.3.). Recall that the definiteness of the embedded accusative subject NP determines the conjugation-type of ACI-verbs (cf. section 5.3.5.3.):

(13) a. *Látok/lát*om* [$_{IP}$ Jánost vágni a kenyeret]
see-AGR1sg-indef/def John-ACC cut-INFI the bread-ACC
'I see John cut the bread.'

b. Lát*ok*/*látom [$_{IP}$ egy fiút játszani Marival]
see-AGR1sg-indef/def a boy-ACC play-INFI Mary-INSTR
'I see a boy playing with Mary.'

c. Hallotta*lak* [$_{IP}$ téged kiabálni]
heard-AGR1sg2sg/pl you-ACC shout-INFI
'I heard you shooting.'

These matrix verbs must be conjugated definitely, indefinitely, and with the *-lak* suffix. These conjugation-types are triggered by the definite accusative NP *Jánost*, the indefinite accusative NP *egy fiút* and the accusative second person pronoun *téged*, respectively (cf. section 4.2.1.). This shows that a verb may not only agree with its accusative direct complement, but also with an NP to which it assigns accusative Case exceptionally.

(7) If we assume Case checking instead of Case marking (cf. Zwart 1988), Case assignment to [Spec, CP] is not problematic for Lieber's (1980) Lexical Integrity Hypothesis.

We therefore conclude that ACI-verbs pattern in the same way as bridge verbs. ACI-verbs assign structural accusative Case to the Spec of a subcategorized clause, IP, and display conjugational agreement with the NP in that position. Bridge verbs assign structural accusative Case to the Spec of their subcategorized clause, CP, and display conjugational agreement with the NP moved into this position. In both cases, these phenomena are reflections of the government relation between the matrix verb and its embedded clause.

Let us now discuss why complementizers are obligatory (cf. (5A)), and why Hungarian displays WhIC-violations. Before providing an answer to these questions, let us first reconsider the derivation of short Wh/Focus-movement (cf. section 2.2.).

Compare the following sentences:

(14) a. $[_{CP}$ *Ki*$_i$ látta$_j$ $[_{VP}$ t_i $[_{VP}$ Marit $t_j]]]$
who saw-AGR3sg Mary-ACC
'Who saw Mary?'

b. $[_{CP}$ *Kit*$_i$ látott$_j$ $[[_{VP}$ t_i $t_j]$ Mari$]]$
who-ACC saw-AGR3sg Mary
'Who did Mary see?'

The finite verbs in these sentences land in C by an application of V-movement. In (14a), the subject Wh-phrase *ki* is moved, and in (14b) the object Wh-phrase *kit* is moved. These phrases land in the Focus position, i.e. [Spec, CP]. Extraction from both subject and object position is allowed, because the Wh-traces are bound in these cases (cf. section 5.4.2.3.).

Let us now discuss long Wh/Focus-movement in more detail.

Consider:

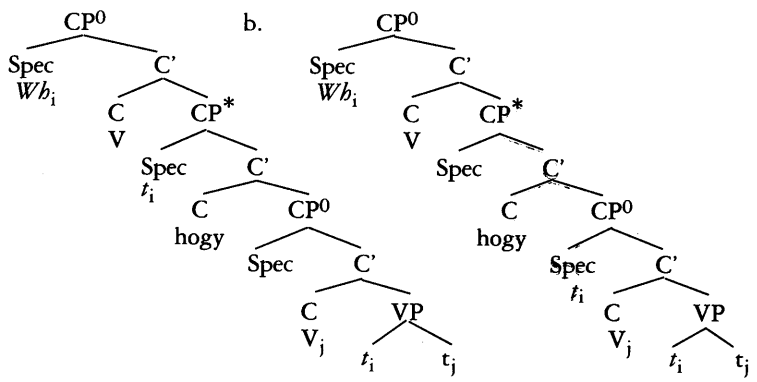
(15) *Kit* gondolsz $[_{CP*}$ *t* hogy $[_{CP}$ János $[_{CP0}$ látott $[_{VP}$ *t*$]]]]$
who-ACC think-AGR2sg that John saw-AGR3sg
'Who do you think that John saw?'

In this sentence, the verb *gondol* selects a [-Wh] complement clause. Therefore, the object Wh-phrase *kit* must be fronted into the matrix sentence.

CP is recursive within CP in Hungarian (cf. 2.2.3.(1)). Hence, all preverbal embedded constituents are in a CP-projection. The complementizer *hogy* heads the highest CP, i.e. CP*, the topicalized subject *János* fills an intermediate CP, and the finite verb heads the lowest CP, i.e. CP^0.

The question arises now whether long Wh/Focus-movement applies through the [Spec, CP*] (cf. (16a)) or through the [Spec, CP^0] (cf. (16b):

(16) a.



b.

Although the [Spec, CP^0] is the canonical landing-site for Wh/Focus-phrases, I will argue that they move successive cyclicly through the Spec of CP*. Empirical evidence for this hypothesis involves (*I*) the obligatory lexicalization of the complementizer *hogy*, (*II*) WhIC-violations, (*III*) the lack of multiple long Wh/Focus-movement, (*IV*) the absence of Inversion with prefixed verbs in long Wh/Focus-movement and (*V*) the absence of long prefix-movement.

(*I*) Kenesei (1985) reports that the complementizer *hogy* may be omitted in the following two cases.

(*i*) It may be dropped if the matrix verb is a verb of saying, knowing, or perception subcategorizing for an accusative complement clause (this class of verbs matches the set of bridge verbs in (5G)), and if the matrix verb is adjacent to its complement clause, the anticipatory pronoun is in preverbal position, and if the sentence has unmarked intonation:

(17) Azt gondolom [$_{CP}$ (*hogy*) [$_{CP}$ Mari [$_{CP}$ látta Jánost]]]
that-ACC think-AGR1sg that Mary saw-AGR3sg John-ACC
'I think that Mary saw John.'

In this sentence, the verb *gondol* selects a [-Wh] CP. V-to-C movement satisfies this requirement, since V is a [-Wh] category. Consequently, the complementizer is superfluous.

(*ii*) *Hogy*-drop also applies if the complement clause contains a Wh-phrase:

(18) Tudom [$_{CP*}$ (*hogy*) [$_{CP}$ János [$_{CP0}$ *kit*$_i$ látott$_j$ [$_{VP}$ t_i t_j]]]]
know-AGR1sg that John who-ACC saw-AGR3sg
'I know who John saw.'

In this sentence, the verb *tud* selects a [+Wh] CP. Wh-movement of *kit* to the embedded Focus-position (Spec of CP^0), fulfills this requirement. As a result, CP turns into [+Wh]. Hence, the presence of the complementizer is not demanded.

The verb *gondol* selects a [-Wh] CP with both long Wh/Focus-movement (cf. (15)) and ordinary declaratives (cf. (17)). Filling of C by V-movement satisfies this selectional requirement. Therefore, the presence of *hogy* is in fact superfluous in both cases. However, the lexicalization of *hogy* with long Wh/Focus-movement is obligatory, unlike with declarative sentences.

Suppose that long Wh/Focus-movement applies through the [Spec, CP*] leaving a trace in this position. An X'-projection always requires a lexical head (cf. also section 5.4.3. for this X'-requirement).[8] Hence, the spelling out of the complementizer.

(8) The following question-answer pair also provides evidence for this hypothesis:
(i) a. Ellopták [$_{NP}$ Mari könyvét]?
away-stole-AGR3pl Mary book-npAGR3sg=ACC
'Has Mary's book been stolen?'
b. Igen, [$_{NP}$ Mariét] ellopták
Yes Mary-APS-ACC away-stole-AGR3pl
'Yes, the one of Mary has been stolen.'

Example (ia) contains the accusative possessive NP *Mari könyvét*. The head of this phrase is the noun-possessed *könyvét*. This is supported by the fact that endocentric categories in Hungarian are left-branching and Case is spelled out on head-nouns. The possessor NP *Mari* is in the complement position of the possessive NP in both (ia) and (ib). The noun-possessed is omitted in (ib). As a consequence, the possesive NP is without head. In order to satisfy the requirement that an X'-projection must have a lexical head a 'dummy' suffix (the anaphora possessive suffix (APS)) *-é* must be spelled out replacing the noun-possessed.

This accounts for the dichotomy between long Wh/Focus-movement and declarative sentences with *hogy*-drop, and for the absence of *that*-trace effects in Hungarian (cf. section 5.4.3.2.).

Note, by the way, that movement through the [Spec, CP*] does not violate the Subjacency Condition, if we assume that L-containment (cf. 2.2.1. (37)) is *transitive*, that is, if projection XP L-contains a projection YP, and a projection ZP L-contains XP, then ZP L-contains YP. In that case, intermediate embedded CPs do not form additional barriers.

Let us consider now WhIC-violations in Hungarian.

(II) Horvath (1986a) has noted that WhIC is not operative in Hungarian. Long relativization (cf. (19a)) and long Wh/Focus-movement (cf. (19b)) may apply from a Wh-island:

(19) a. Ez volt az a fiú [$_{CP*}$ *akinek* a gyerekek mondták [$_{CP*}$ *t* hogy [$_{CP0}$ Péter kérdezte [$_{CP*}$ *t* hogy [$_{CP}$ Mari [$_{CP0}$ *mit* küldött *t*]]]]]
this was that the boy who-DAT the children said-AGR3pl that Peter asked-AGR3sg that Mary what-ACC sent-AGR3sg
*'This was the boy to whom the children said Peter asked what Mary had sent.'

b. Mari *kinek* tudta [$_{CP*}$ *t* hogy [$_{CP}$ Péter [$_{CP0}$ *mit* küldött *t*]]]
Mary who-DAT knew-AGR3sg that Peter what-ACC sent-AGR3sg
*'To whom did Mary know what Peter had sent?'
(Horvath 1986a: 226)

These cases are covered if extracted Wh-phrases move through the [Spec, CP*], and the embedded Wh-phrases are in Focus, i.e. in [Spec, CP^0]. Therefore, Hungarian Wh-phrases, unlike their English counterparts, do not form a Wh-island for long distance movement.

The following sentence displays a similar violation:

(20) A család *A LEGIDŐSEBB FIÚT* reméli [$_{CP*}$ *t* hogy [$_{CP0}$ ORVOS lesz [$_{VP}$ *t*]]]
the family the eldest son-ACC hopes that doctor becomes
'It is the eldest son that the family hopes will become a DOCTOR.'
(É. Kiss 1981a: 211)

This sentence exemplifies a Focus-island violation. The embedded object NP *a legidősebb fiút* is extracted from a Focus-island. The embedded Focus-position is filled by the NP *orvos*. If we assume, however, that long Wh/Focus-movement applies through the [Spec, CP*], and Focus is [Spec, CP^0], then the derivation is allowed yielding a grammatical result. Let us discuss the lack of multiple long Wh/Focus-movement.

(III) The impossibility of this phenomenon supports the hypothesis that long Wh/Focus-movement applies through the [Spec, CP*]:

(21) a. *Ez volt az a fiú [$_{CP*}$ *akinek*$_j$ a gyerekek mondták [$_{CP*}$ hogy [$_{CP}$ Péter *mit*$_i$ kérdezett [$_{CP*}$ t_i hogy [$_{CP}$ Mari küldött t_i t_j]]]]]
this was that the boy who-DAT the children said-AGR3pl that Peter what-ACC asked-AGR3sg that Mary sent-AGR3sg

b. *Mari *kinek*$_i$ *mit*$_i$ tudott [$_{CP*}$ t_i hogy [$_{CP}$ Péter [$_{CP}$ küldött t_i t_j]]]
Mary who-DAT what-ACC knew-AGR3sg that Peter sent-AGR3sg

These sentences are the counterparts of the ones in (19), except that multiple long Wh/Focus-movement has applied in the latter. The object Wh-phrase *mit* is ex-

tracted from the deepest embedded clause. Another instance of long Wh/Focus-movement, that is, long relativization in (21a) and long Wh-movement in (21b), is not allowed. If we assume that long Wh/Focus-movement applies through the [Spec, CP*], then these sentences are ruled out as a trace theory violation. The [Spec, CP*] is already filled by the trace of *mit*-extraction.[9]

Let us consider the absence of Inversion with prefixed verbs in long Wh/Focus-movement.

(*IV*) Compare the following sentence:

(22) a. *Kit* gondolsz $[_{CP*}$ *t* hogy $[_{CP}$ János $[_{CP0}$ *meg* szeretett $[_{VP}$ *t*]]]]
who-ACC think-AGR2sg that John perf-loved-AGR3sg
'Who do you think that John fell in love with?'

b. **Kit* gondolsz $[_{CP*}$ *hogy* $[_{CP}$ János $[_{CP0}$ *t* szeretett $[_{VP}$ *t meg*]]]]
who-ACC think-AGR2sg that John loved-AGR3sg perf

Focussing triggers Inversion with prefixed verbs obligatorily (cf. 2.1. (28e)). In (22), the object wh-phrase *kit* is long Wh-moved. If long Wh/Focus-movement applied through Focus, i.e. the [Spec, CP^0], then we would expect the prefix to be stranded. However, this does not turn out to be the case, as the ungrammaticality of (22b) demonstrates.

In the grammatical variant (22a), the verb takes its prefix along, though long Wh-movement has applied. This implies that the Wh-phrase has not travelled through the [Spec, CP^0], but must rather travel through the [Spec, CP*].

(*V*) The following sentence demonstrates that prefixes may be short Wh/Focus-moved in Hungarian:

(23) Mari $[_{CP0}$ LE_i ült$_j$ $[_{VP}$ $[_{V'}$ t_i t_j]]]
Mary down sat-AGR3sg
'Mary sat down (and not lay down).'

In this sentence, the prefix *le* of the prefixed verb *leül* 'sit down' is moved from its base-generated V'-position to Focus (Spec of CP^0). If long Wh/Focus-movement applies through the [Spec, CP^0], then we would expect that a focussed prefix could be fronted into the matrix sentence.

(9) Apparent counterexamples against movement through the [Spec, CP*] are instances of multiple raising. For example, É. Kiss (1987a) claims that this phenomenon applies in the following sentence (bracketing is mine):

(i) *János$_i$ két dolgot$_i$* hallottam $[_{CP*}$ hogy megigért $[_{VP}$ e_i $[_{VP}$ t_i]]]
John two thing-ACC heard-AGR1sg that promised-AGR3sg
'As for John, it was two things that I heard that he promised.'

Multiple long Wh/Focus-movement through the [Spec, CP*] violates trace theory. This sentence is, however, grammatical. It seems to me, that it is not a case of multiple extraction. The phrase *két dolgot* is Wh/Focus-moved but *János* is base-generated in initial-position. This is supported by the fact that *János* displays the diagnostics of a left-dislocated NP (cf. note 5).

A real instance of multiple extraction occurs with bridge verbs allowing prefix-extraction (cf. 7.3.(8e)):

(ii) János *tegnap$_i$* *a múzeumot$_j$* *meg$_k$* akarta $[[_{CP*}$ hogy látogassuk] t_i t_j t_k]
John yesterday the museum-ACC perf wanted-AGR3sg that visit-SUBJ-AGR1pl
'John wanted us to visit the museum yesterday.'

In (ii), the adverbial *tegnap*, the accusative object NP *a múzeumot*, and the prefix *meg* are fronted into the matrix sentence. I guess an analysis of these constructions can be made more easily, if the phenomenon of 'restructuring' triggered by modal auxiliaries such as *akar* is properly understood (cf. section 5.3.2.). I will put aside these cases for further research.

The following sentence, however, shows that prefixes may not be long Wh/Focus-moved (see, also Komlósy 1986):[10]

(24) *Mari $[_{CP0}$ *LE*$_i$ gondolod $[_{CP*}$ hogy $[_{CP0}$ t_i ült$_j$ $[_{VP}$ $[_{V'}$ t_i $t_j]]]]]$
Mary down think-AGR2sg that sat-AGR3sg

The ungrammaticality of this sentence demonstrates that successive cyclic movement cannot involve the Focus position (Spec of CP^0). Therefore, the absence of this prefix-movement supports the hypothesis that long Wh/Focus-movement applies through the [Spec, CP*].[11]

The question arises why focussed prefixes cannot employ this option to yield an instance of long Wh/Focus-movement, just as Wh/Focus NPs. It seems to me that Chomsky's (1986b) HMC provides an explanation for preventing prefix-movement through [Spec, CP*]. Prefixes form a constituent with the verb. Therefore, they may travel along with it when this moves to C (see, section 2.2.1.). Then the prefix may be focussed yielding (23). It cannot, however, reach the [Spec, CP*] because its head position is filled by the complementizer and prefixes do not merge with complementizers.

Recapitulating, I argued that long Wh/Focus-movement in Hungarian is an instance of successive cyclic movement through the Spec of CP. Each link in the chain between a moved Wh/Focus-phrase and its gap must be 0-subjacent. This gap must remain non-overt because it is trace. CNPC, SENSC, and AC were accomodated as subjacency violations.

Bridge verbs may circumvent a violation of this condition because they may L-mark a CP-complement. Empirical evidence for this government relation involves the obligatory absence of the anticipatory pronoun, exceptional accusative Case-marking to the Spec of CP, and the morphological adjustment of the matrix verb with moved indefinite subject and object NPs.

The obligatory lexicalization of the complementizer (the absence of *that*-effects), WhIC-violations, the lack of multiple long Wh/Focus-movement, the absence of Inversion with prefixed verbs in long Wh/Focus-movement, and the absence of long prefix-movement with this phenomenon support successive cyclic movement through the Spec of CP*.

6.5. The *mit*-Strategy in Hungarian

In the preceding sections, I have discussed instances of overt long Wh/ Focus-movement in Hungarian. De Meij and Marácz (1986) have observed, however, that the most common strategy to form embedded Wh-questions in Hungarian is to employ the so-called *mit*-strategy. I presented the more marked variant of this phenomenon first because it has, somewhat surprisingly, received more attention in the literature.

Consider the counterparts of long Wh/Focus-movement constructions (cf. 6.2.((1) and (2)) in the *mit*-strategy:

(10) This is exceptionally allowed with bridge verbs that trigger restructuring (cf. note 9 and 6.3.(8e) for examples).

(11) Long prefix-movement is also blocked in Dutch:

(i) **OP* zei Jan $[_{CP}$ dat ik hem heb *t* gebeld]
up said John that I him have phoned

(1) a *Mit* gondolsz hogy Jánost *ki* látta?
what-ACC think-AGR2sg-indef that John-ACC who-ACC saw-AGR3sg-def
'Who do you think saw John?'

b. *Mit* gondolsz hogy János *kit* látott?
what-ACC think-AGR2sg-indef that John who-ACC saw-AGR3sg-indef
'Who do you think that John saw?'

(2) a. *Mit* gondolsz hogy Jánost *melyik fiú* látta?
what-ACC think-AGR2sg-indef that John-ACC which boy saw-AGR3sg-def
'Which boy do you think saw John?'

b. *Mit* gondolsz hogy János *melyik fiút* látta?
what-ACC think-AGR2sg-indef that John which boy-ACC saw-AGR3sg-def
'Which boy do you think that John saw?'

Some native-speakers tend to interpret these sentences as consisting of two parts. The first part is the matrix clause which contains the matrix verb and its object, the Wh-phrase *mit*. This Wh-phrase asks for the contents of thought or communication. The second part is an indirect Wh-question expressing the issue on which an opinion or statement is being asked. Hence, (1a), for instance, could be paraphrased as in (3):

(3) What is your opinion on the following question: what do you think: who saw John?

Properties of (1a) in this interpretation indicate that they indeed consists of two independent clauses. First, an intonational break separates the matrix clause and the embedded clause. Second, the complementizer *hogy* must be dropped. Third, a Wh-phrase must be in the initial-position of the second part. Probably, this represents another strategy to form embedded Wh-questions. I believe, however, that this strategy does not belong to sentence-grammar. Hence, I will not discuss it further at this place.

I will examine the following properties of the *mit*-strategy:

(4) *A*. The real Wh-phrase remains in the Focus-position of its own (embedded) clause
B. The anticipatory pronoun may not be spelled out
C. The scope-marker *mit* is assigned accusative case
D. The complementizer *hogy* 'that' is obligatory
E. The *mit*-strategy displays locality effects
F. The *mit*-strategy is allowed by bridge verbs
G. The real Wh-phrase takes wide scope

(*A*) The real Wh-phrases in the *mit*-strategy remain in the Focus-position of their own (embedded) clause. This may be observed from the fact that the Wh-phrases *ki*, *kit*, *melyik fiú*, and *melyik fiút* are left-adjacent to the finite verb of their own clause in (1) and (2). Now a dummy Wh-phrase *mit* appears at the surface position of these Wh-phrases in the overt long Wh/Focus-counterparts, the matrix Focus (cf. 6.2.((1), (2)) and (1) and (2)).

(1a), for instance, has a structure as in (5):

(5) $[_{CP0}$ *Mit* gondolsz $[_{CP*}$ hogy $[_{CP}$ Jánost $[_{CP0}$ *ki*$_i$ látta$_j$ $[_{VP}$ t_i $[_{VP}$ $t_j]]]]]]$
what-ACC think-AGR2sg that John-ACC who saw-AGR3sg
'Who do you think that saw John?'

This sentence exemplifies that the *mit*-phrase occupies the [Spec, CP^0] (= Focus) of the matrix clause, and the real Wh-phrase occupies the [Spec, CP^0] (= Focus) of the embedded clause.

The following sentences show that the *mit*-strategy may not only apply to nominative and accusative embedded Wh-phrases, as in (1) and (2), but also to embedded complement NPs with lexical case:

(6) a. [$_{CP°}$ *Mit* gondolsz [$_{CP*}$ hogy János [$_{CP0}$ *kinek* adott könyvet]]]
what-ACC think-AGR2sg that John who-DAT gave-AGR3sg book-ACC
'To who do you think that John gave a book?'

b. [$_{CP°}$ *Mit* gondolsz [$_{CP*}$ hogy Mari [$_{CP0}$ *kivel* beszélt]]]
what-ACC think-AGR2sg that Mary who-INSTR spoke-AGR3sg
'With whom do you think that Mary spoke?'

c. [$_{CP°}$ *Mit* gondolsz [$_{CP*}$ hogy Mari [$_{CP0}$ *kitöl* kapott könyvet]]]
what-ACC think-AGR2sg that Mary who-ABL got-AGR3sg book-ACC
'From who do you think Mary got a book?'

The *mit*-strategy may also apply if the real Wh-phrase is a non-complement like a PP (cf. (7a)), or an AP (cf. (7b)):

(7) a. [$_{CP°}$ *Mit* gondolsz [$_{CP*}$ hogy János [$_{CP0}$ [$_{PP}$ *ki* mögött] állt]]]
what-ACC think-AGR2sg that John who behind stood-AGR3sg
'Behind who do you think that John stood?'

b. [$_{CP°}$ *Mit* gondolsz [$_{CP*}$ hogy János [$_{CP0}$ [$_{AP}$ *milyen* erös] volt]]]
what-ACC think-AGR2sg that John how strong was
'How strong do you think John was?'

(*B*) The anticipatory pronoun which is linked with the *hogy*-clause in declarative sentences (cf. section 4.5.) may not be spelled out in the *mit*-strategy. The sentences with an anticipatory pronoun in (1) and (2) yield an ungrammatical result:

(8) a. *Mit *gondolsz* azt [$_{CP}$ hogy János ki látta]
what-ACC think-AGR2sg that-ACC that John *who* saw-AGR3sg

b. **Mit* gondolsz *azt* [$_{CP}$ hogy Jánost *kit* látott]
what-ACC think-AGR2sg that-ACC that John-ACC who-ACC saw-AGR3sg

c. **Mit* gondolsz *azt* [$_{CP}$ hogy Jánost *melyik fiú* látta]
what-ACC think-AGR2sg that-ACC that John-ACC which boy saw-AGR3sg

d. **Mit* gondolsz *azt* [$_{CP}$ hogy János *melyik fiút* látta]
what-ACC think-AGR2sg that-ACC that John which boy-ACC saw-AGR3sg

The *mit*-strategy shares this property with overt long Wh/Focus-movement (cf. 6.2.(3B)). Hence, an anticipatory pronoun may never occur in long Wh/Focus-movement.

(*C*) The *mit*-phrase bears accusative case, like the anticipatory pronoun in declarative sentences and the extracted subject Wh/Focus-phrase in long Wh/Focus-movement (cf. 6.2.(9a)):

(9) a. *Mit* gondolsz [$_{CP}$ hogy Jánost ki látta]
what-ACC think-AGR2sg that John-ACC who saw-AGR3sg
'Who do you think saw John?'

b. *Azt* gondolom [$_{CP}$ hogy Mari látta Jánost]
that-ACC think-AGR1sg that Mary saw-AGR3sg John-ACC
'I think that Mary saw John.'

c. *Kit* gondolsz [$_{CP}$ hogy látta t Jánost]
who-ACC think-AGR2sg that saw-AGR3sg John-ACC
'Who do you think saw John.'

(*D*) The complementizer *hogy* 'that' is obligatory in the *mit*-strategy, as in overt long Wh/Focus-movement (cf. 6.2.(3A)). The counterparts of (1) and (2) without *hogy* yield an ungrammatical sentence:

(10) a. **Mit* gondolsz [$_{CP}$ Jánost *ki* látta]
what-ACC think-AGR2sg John-ACC who saw-AGR3sg
b. **Mit* gondolsz [$_{CP}$ János *kit* látott]
what-ACC think-AGR2sg John who-ACC saw-AGR3sg
c. *Mit* gondolsz [$_{CP}$ Jánost *melyik fiú* látta]
what-ACC think-AGR2sg John-ACC which boy saw-AGR3sg
d. *Mit* gondolsz [$_{CP}$ János *melyik fiút* látta]
what-ACC think-AGR2sg John which boy-ACC saw-AGR3sg

(*E*) The *mit*-strategy is sensitive to locality effects. These involve (i) island conditions, and (*ii*) repetition of the *mit*-phrase within each clausal domain in multiple embedded Wh-questions.

(*i*) The *mit*-strategy obeys the same island conditions as overt long Wh/Focus-movement (cf. 6.3.(1)-(4)). It may not violate the CNPC, SENSC and AC.

The following sentences exemplify that the *mit*-strategy obeys CNPC:

(11) a. *Mari *mit* hallott(a) [$_{NP}$ azt
Mary what-ACC heard-AGR3sg-indef/(def) that-ACC
a tényt [$_{CP}$ hogy János *kit* látott]]
the fact-ACC that John who-ACC saw-AGR3sg
b. *Mari *mit* hallott(a) [$_{NP}$ azt
Mary what-ACC heard-AGR3sg-indef/(def) that-ACC
a tényt [$_{CP}$ hogy Jánost *ki* látta]]
the fact-ACC that John-ACC who saw-AGR3sg-def

The ungrammaticality of these sentences shows that the *mit*-phrase in the matrix sentence may not be separated from the real Wh-phrase in the embedded clause by a complex NP.

Observe that the real Wh-phrase may neither be embedded in a sentential subject:

(12) a. **Mi* biztos [$_{CP}$ hogy *ki* jön el] b. **Mi* valószínű [$_{CP}$ hogy *ki* jön el]
what is sure that who comes what is probable that who comes

These sentences display that SENSC is operative in the *mit*-strategy.[12]

Another limitation on this phenomenon is formed by the islandhood of adverbial clauses. The embedding of the real Wh-phrases in an adverbial clause yields an ungrammatical result:

(13) a. **Mit* tisztítottál volna le az asztalt azelőtt [$_{CP}$ hogy *mely könyveket* olvastad volna el]
what-ACC clean-AGR2sg would perf the table-ACC before that which books-ACC read-AGR2sg would perf
b. **Mit* érkeztél az iskolába anélkül [$_{CP}$ hogy *kire* gondoltál volna]
what-ACC arrived-AGR2sg the school-ILL that-without that who-SUBL thought-AGR2sg would

These sentences display that AC constrains the *mit*-strategy. Let us now consider another type of locality effect with this phenomenon.

(*ii*) Compare the following multiple embedded Wh-questions:

(12) The *mit*-strategy yields a much better result with a subject subjunctive clause than with a subject indicative clause. Compare (12a) with (i):

(i) *Mi* kell [$_{CP}$ hogy *ki* jöjjön el]
what is necessary that who come-SUBJ-AGR3sg
'For who is it necessary to come?'

Overt long Wh/Focus-movement displays the same pattern (cf. note 6).

(14) a. *Mit* gondolsz [$_{CP}$ hogy Mari *(*mit*) mondott [$_{CP}$ hogy Jánost *ki* látta]]
what-ACC think-AGR2sg that Mary what-ACC said-AGR3sg that John-ACC who saw-AGR3sg
'Who do you think Mary said saw John?'

b. *Mit* gondolsz [$_{CP}$ hogy Mari *(*mit*) mondott [$_{CP}$ hogy János *kit* látott]]
what-ACC think-AGR2sg that Mary what-ACC said-AGR3sg that John who-ACC saw-AGR3sg
'Who do you think that Mary said that John saw?'

c. *Mit* gondolsz [$_{CP}$ hogy Mari *(*mit*) mondott [$_{CP}$ hogy Jánost *melyik fiú* látta]]
what-ACC think-AGR2sg that Mary what-ACC said-AGR3sg that John-ACC which boy saw-AGR3sg
'Which boy do you think Mary said saw John?'

d. *Mit* gondolsz [$_{CP}$ hogy Mari *(*mit*) mondott [$_{CP}$ hogy János *melyik fiút* látta]]
what-ACC think-AGR2sg that Mari what-ACC said-AGR3sg that John which boy-ACC saw-AGR3sg
'Which boy do you think that Mary said that John saw?'

These sentences show that a *continuity* requirement is operative in the *mit*-strategy. The Focus-positions from the real Wh-phrase up to the Focus-position of the matrix clause must be filled with a dummy *mit*-phrase. Dropping of such an intermediate phrase is not allowed. So a *mit*-phrase must be repeated from the real Wh-phrase in each clausal domain of embedded multiple Wh-questions.

WhIC may be violated with overt long Wh/Focus-movement (cf. section 6.4.). A Wh-phrase may be extracted from an embedded clause with a Wh-phrase:

(15) *Kinek* gondolod [$_{CP}$ hogy János *mit* adott *t*]
who-DAT think-AGR2sg that John what-ACC gave-AGR3sg
*'To whom do you think what John gave?'

The question arises whether the *mit*-strategy displays WhIC-violations as well? This appears to be the case. The following sentence, which is the counterpart of (15) in the *mit*-strategy, shows that it may apply to a Wh-island:

(16) *Mit* gondolsz [$_{CP}$ hogy János *kinek* *mit* adott]
what-ACC think-AGR2sg that John who-DAT what-ACC gave-AGR3sg
*'To whom do you think what John gave?'

(*F*) The *mit*-strategy is possible only with verbs allowing long Wh/Focus-movement, that is, only with the bridge verbs listed in 6.2.(12).[13] For example, the pre-

(13) A superficial investigation learns us that the *mit*-strategy yields a better result with verbs of perception and knowing (cf. (i)) than with verbs of saying (cf. (ii)):

(i) a. *Mit* hallottál hogy János *kit* látott?
what-ACC heard-AGR2sg that John who-ACC saw-AGR3sg
'Who did you hear that John saw?'

b. *Mit* hiszel hogy János *kit* látott?
what-ACC believe-AGR2sg that John who-ACC saw-AGR3sg
'Who do you believe that John saw?'

(ii) a. ?**Mit* említettél hogy János *kit* látott?
what-ACC mentioned-AGR2sg that John who-ACC saw-AGR3sg
'Who did you mention that John saw?'

b. **Mit* javasoltál hogy János *kit* lásson?
what-ACC proposed-AGR2sg that John who-ACC saw-SUBJ-AGR3sg
'Who did you propose that John should see?'

The sentences in (ii) can only be saved if they are interpreted as two separate parts involving the strategy in (3). However, more fieldwork is required to determine the distribution of the *mit*-strategy with the verbs in 6.2.(12). I will leave this as a task for further research.

dicates *elöfordul* 'appear' and *valószinü* 'be probable' do not belong to this class of verbs. Hence, they do not sanction the *mit*-strategy:

(17) a. **Mi* fordul elö [$_{CP}$ hogy *ki* hazudik]
what appears that who lies
b. **Mi* valószinü [$_{CP}$ hogy *mit* javitottak]
what is probable that what-ACC repaired-AGR-3pl

(*G*) Long Wh/Focus-movement and their equivalents in the *mit*-strategy are rendered into English similarly. In both strategies, the real Wh-phrases have scope over the rest of the sentence. A felicitous answer to the sentences 6.2.((1) and (2)) with long Wh/Focus-movement and the sentences (1) and (2) with the *mit*-strategy involves, for instance, *Péter* 'Peter-NOM', *Pétert* 'Peter-ACC', *Péter* 'Peter-NOM', and *Pétert* 'Peter-ACC' respectively. This implies that the topmost *mit*-phrase represents so to speak the scope of the embedded real Wh-phrase. Hence, I conclude that it functions as a scope-marker in the sense of Baker (1970).

Summarizing, I discussed an alternative strategy to form embedded Wh-questions, the so-called *mit*-strategy. The most striking property of this strategy is that the real Wh-phrase remains in the Focus-position of its own (embedded) clause, while in the Focus position of the matrix clause a dummy Wh-phrase *mit* appears. This phrase indicates the scope of the real Wh-phrase. In the next section, I will present an analysis of the *mit*-strategy.

6.6. Correspondence effects in hungarian

Let us consider again the properties of the *mit*-strategy 6.5.(4), here repeated in (1):

(1) *A.* The real Wh-phrase remains in the Focus-position of its own (embedded) clause
B. The anticipatory pronoun may not be spelled out
C. The scope-marker *mit* is assigned accusative case
D. The complementizer *hogy* 'that' is obligatory
E. The *mit*-strategy displays locality effects
F. The *mit*-strategy is allowed by bridge verbs
G. The real Wh-phrase takes wide scope

It is clear that an analysis of this phenomenon will have to account for these properties.

Overt long Wh/Focus-movement and the *mit*-strategy have a number of properties in common (cf. 6.2.(4) and (1)). Therefore, I will assume that the *core* syntactic principles that authorize overt long Wh/Focus-movement also authorize the *mit*-strategy. If this is correct, then we provide empirical evidence for the Correspondence Hypothesis, here repeated as (2):

(2) *Correspondence Hypothesis*
Whenever there is a syntactic reflex of the assignment of (wide) scope, the dependency involved and overt long Wh-movement obey the same conditions on government and bounding

The conditions on government involved with overt long Wh/Focus-movement are the selection and *L-marking* of a CP by a bridge verb, and the principle of bounding theory involved with this strategy is the Subjacency Condition, to be more pre-

cise, *0-subjacency* (cf. section 6.4.). Suppose now that these conditions are also operative in the mit-strategy.

Let us derive the properties in (1) within this framework. Before we can do so, consider first Baker's (1970) theory of scope-assignment to Wh-phrases.

Following Baker (1970), I will assume that all cases of scope assignment for Wh-phrases involve coindexing with an abstract scope-marker *Q* which is base-generated in the [Spec, CP] position. The representation of overt Wh-movement and Wh in-situ in this system are as follows:

(3) a. $[_{CP}\ Q_i\ [\textit{Wh-phrase}]_i\ [...t_i...]]$ b. $[_{CP}\ Q_i\ [...[\textit{Wh-phrase}]_i...]]$

In both cases, scope-assignment to the Wh-phrase depends on the relation with Q. The difference between (3a) and (3b) is that the content of the Wh-phrase is adjacent to Q in the former, but not in the latter.

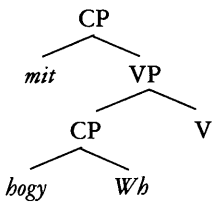
Within the local domain any category can be linked to Q. Suppose now that the local domain of *Wh* (CP) can be extended by iterating the indexing to Q (as all other indexing can be):

(4) $...[Q_i...[Q_i...[_{CP}\ Q_i\ [...\textit{Wh}_i...]]]]...$

This representation does not violate bounding theory. Scope is assigned to *Wh* by coindexing it with a chain of abstract scope-markers. This iterative indexing mimics overt successive cyclic movement.

Let us consider now how the properties of the *mit*-strategy are accounted for. In analogy with overt long Wh/Focus-movement, I will assume that bridge verbs may select and L-mark a CP-complement yielding the following configuration:

(5)



This configuration directly accounts for the fact that the *mit*-strategy is allowed by bridge verbs only (cf. (1*F*)), and for the fact that the anticipatory pronoun may not be spelled out (cf. (1*B*)). The CP is itself in an A-position (the object position). Let us examine now why the *mit*-phrase is assigned accusative Case (cf. (1*C*)).

A sentence with the *mit*-strategy has the following structure:

(6) $[_{CP^o}\ \textit{Mit}_i$ gondolsz $[_{CP^*}\ Q_i$ hogy $[_{CP}$ János $[_{CP^o}\ \textit{kit}_i$ látott$_j$ $[_{VP}\ t_i\ t_j]]]]]$
what-ACC think-AGR2sg that John who-ACC saw-AGR3sg
'Who do you think that John saw?'

In this sentence, the embedded real object Wh-phrase *kit* is moved to the Focus-position of its own clause, that is, to the [Spec, CP°]. It may be coindexed with a base-generated scope-marker Q in the [Spec, CP*], as an instance of (3b). The dummy *mit*-phrase in the matrix clause represents the scope of the real Wh-phrase. In fact, the scope of *kit* is extended to a higher domain. This suggests that the *mit*-phrase is an overt realization of an iterated abstract scope-marker (cf. (4)).

Bridge verbs have the ability to assign exceptional accusative Case to the [Spec, CP*] in a configuration like (5) (cf. section 6.3.). Suppose now that this Case is as-

signed to Q in the [Spec, CP]. Hence, we derive (1*C*). Below I will return to the question why an iterated scope-marker must be overtly realized.

Let us now turn to a discussion of the locality effects which occur with the *mit*-strategy.

It displays locality effects (cf. (1*F*)). Island conditions such as CNPC, SENSC, and AC may not be violated. Therefore, the real Wh-phrase and the *mit*-phrase may not be coindexed across a complex NP, a sentential subject, and an adjunct clause. This would result in a subjacency violation. This coindexing is, however, allowed with bridge verbs, because they L-mark a CP-complement in configuration (5) (cf. section 6.4.). Therefore, the real Wh-phrase and the *mit*-phrase are no longer separated by a barrier. Hence, an instance of 0-subjacency preventing a violation of the Subjacency Condition.

Overt long Wh/Focus-movement exhibits WhIC-violations (cf. section 6.4.). Wh/Focus-phrases may be extracted from a Wh-island because this phenomenon applies through the [Spec, CP*] and the embedded Wh-phrase occupies the [Spec, CP^0] (= Focus). The *mit*-strategy may also violate WhIC. Consider 6.5.(14), here repeated as (7):

(7) *Mit*$_i$ gondolsz $[_{CP*}$ Q_i hogy $[_{CP}$ János $[_{CP1}$ *kinek*$_i$ $[_{CP0}$ *mit*
what-ACC think-AGR2sg that John what-DAT what-ACC
adott]]]
gave-AGR3sg
*'To whom do you think what John gave?'

An explanation for the grammaticality of this sentence runs along the same lines as for WhIC-violations with overt long Wh/Focus-movement. The embedded object Wh-phrase *mit* is in the embedded Focus-position. Therefore, Q in the [Spec, CP] remains accessible for coindexing with the Wh-phrase *kinek*.[14] This circumvents a violation of WhIC.

Let us consider now why the complementizer is obligatory in the *mit*-strategy (cf. (1*D*)).

Hogy-drop may apply if the complement clause contains a Wh-phrase (cf. 6.4.(18)). The complementizer in the *mit*-strategy, however, must be obligatorily present:

(8) a. Tudod $[_{CP*}$ (*hogy*) $[_{CP}$ János $[_{CP0}$ *kit* látott]]]
know-AGR2sg that John who-ACC saw-AGR3sg
'Do you know who John saw?'
b. Mit gondolsz $[_{CP*}$ *(*hogy*) $[_{CP}$ János $[_{CP0}$ *kit* látott]]]
what-ACC think-AGR2sg that John who-ACC saw-AGR3sg
'Who do you think that John saw?'

The distribution of the complementizers in this pair matches the distribution of complementizers in declarative sentences and long Wh/Focus-movement constructions (cf. section 6.4.). Lexicalization of *hogy* is obligatory with long Wh/Focus-movement but not with declarative sentences. This is due to the fact that complementizers provide a [Spec, CP*] position for Wh/Focus-trace in the former.

The explanation for this dichotomy carries over to the pair in (8). But now instead of a trace a scope-marker Q is present in the [Spec, CP*]. Therefore, the complementizer must be spelled out in (8b) with the *mit*-strategy, unlike in (8a) with the indirect Wh-question. In the latter, Q is not have to be present in the [Spec, CP*].

(14) The intermediate CPs do not provide additional barriers if we assume that L-containment is transitive (cf. section 6.4.).

The lack of multiple *mit*-strategy also supports the hypothesis of an abstract scope-marker in the [Spec, CP*] position with this strategy:

(9) *Mit_i mit_j gondolsz $[_{CP*}$ Q hogy $[_{CP}$ János $[_{CP1}$ $kinek_i$ $[_{CP0}$ mit_j adott]]]]
what-ACC what-ACC think-AGR2sg that John what-DAT what-ACC gave-AGR3sg

This sentence is the counterpart of (7), except that another *mit*-phrase has been inserted in the matrix clause. The ungrammaticality of (9) shows that multiple *mit*-strategy cannot apply. This fact is covered, if we assume the presence of a (single) scope-marker in the [Spec, CP*] which is available for iterative coindexing.

Let us consider now why the real Wh-phrase in the *mit*-strategy takes wide scope (cf. (1G)).

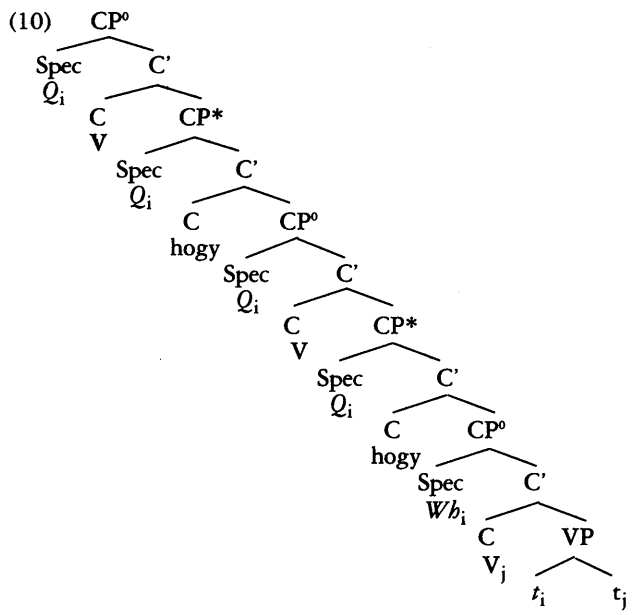
The scope of a Wh-phrase directly corresponds to its position in syntax in long Wh/Focus-movement (cf. 6.3.(2*H*)). The scope of the real Wh-phrase in the *mit*-strategy, however, is represented at another position than where this phrase is physically realized. In both strategies, the real Wh-phrases have wide scope. The reason for this is that scope-assignment to Wh-phrases involves, as Baker (1970) has proposed, two patterns, namely, an adjunction (cf. (3a)) and an in-situ schema (cf. (3b)).

Overt long Wh/Focus-movement is an instance of the former. The Wh-phrase is adjoined to its scope-marker. It is assigned wide-scope by being adjacent to Q. The *mit*-strategy is an instance of the latter. The embedded Wh-phrase is bound by its scope-marker. It is assigned wide scope by this coindexing. This derives then property (1*G*)).

Let us now consider why an iterated Q must be spelled out as an overt *mit*-phrase.

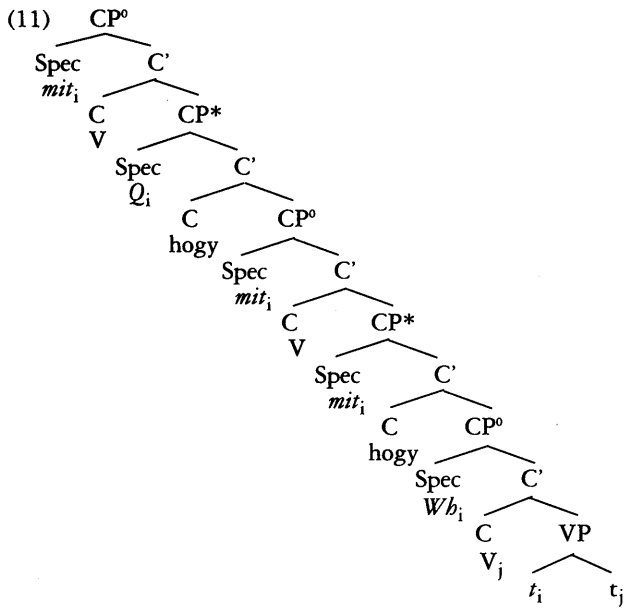
The canonical landing site of Wh-phrases is the Focus-position, left-adjacent to the finite verb (cf. 2.1.(28c)). So all phrases bearing a feature [+Wh] must occupy this position. The abstract scope-marker receives this feature as well under coindexing with the real (embedded) Wh-phrase. As a consequence, Q must also land in Focus. The representation of a multiple embedded Wh-question with the *mit*-strategy is as follows:

(10)



Focus is a prominent position in the syntax of Hungarian. It must be visible for reasons of phonetic interpretation, like for primary stress-assignment. Let us assume that this visibility requirement is responsible for the spelling out of an abstract scope marker in Focus as an overt *mit*-phrase. (11) yields the following representation of (10):

(11)



Summarizing, I argued that long Wh/Focus-movement and the *mit*-strategy involve the same core syntactic principles, L-marking and 0-subjacency.

This provides empirical evidence for the Correspondence Hypothesis. In order to make this hypothesis operative, I adopted the assumption that the *mit*-phrase is a scope-marker in the sense of Baker (1970). This accounts also for the fact why correspondence effects are absent with long Focus-movement, unlike with long Wh-movement. There is no lexicalised scope-marker with respect to Focus. In the next section, I will discuss the consequences of the Correspondence Hypothesis for the grammar of Hungarian and the theory of grammar.

6.7. Some Consequences of Wh-strategies in Hungarian

This section discusses some consequences of the different Wh-strategies in Hungarian. First, I will determine the position of these strategies within the grammar of Hungarian (cf. section 6.7.1.). Second, I will examine the consequences of correspondence effects for the theory of UG. I will conclude that these effects make the level of representation called LF superfluous (cf. section 6.7.2.).

6.7.1. Wh-strategies and the Grammar of Hungarian

I noted in section 5.3.7. a dialectal split with respect to overt long Wh-movement in Hungarian. Hungarian I accepts overt long Wh-movement entirely, and

Hungarian II accepts it only marginally. In the latter, the following accessibility hierarchy (cf. 5.3.7.(4)) is operative:

(1) *Accessibility hierarchy for long Wh-movement in Hungarian*
Lexical case > structural Case (NOM and ACC)

Extraction of a Wh-phrase with lexical case yields a far better result than extraction of a Wh-phrase with structural Case. Instead of the latter, speakers of Hungarian II prefer the *mit*-strategy.

I will assume that this dialectal difference is related to the following parameter (cf. Chomsky 1986a: 75):

(2) *+/-move Wh*

This parameter states that Wh-movement is optional, as all syntactic movement rules are. The existence of languages with overt long Wh-movement such as English and languages with Wh in-situ such Chinese and Japanese provide empirical evidence for its postulation.

Move Wh is set positively in Hungarian I, whereas it is set negatively in Hungarian II. If this parameter is real, then we expect that phenomena contingent on Wh-movement will diverge in these dialects as well. I will demonstrate that this indeed is the case with (*I*) the morphological adjustment of an intermediate verb with the extraction of an indefinite (nominative and accusative) Wh-phrase from multiple embedded Wh-questions, and (*II*) the distribution of parasitic gaps and resumptive pronouns.

(*I*) A bridge verb displays agreement with an extracted indefinite nominative and accusative Wh-phrase in long Wh/Focus-movement (cf. 6.2.(3*D*)). I argued in section 6.4. that this phenomenon applies successive cyclicly through the [Spec, CP*], and that the indefinite (nominative and accusative) Wh-phrases trigger the indefinite conjugation on the bridge verb. The question arises how the bridge verbs are conjugated when an indefinite nominative or accusative Wh-phrase is extracted from a multiple embedded Wh-question. Consider the following sentences:

(3) a. *Kit* gondolsz [$_{CP*}$ *t* hogy [Mari *mondta/mondott* [$_{CP*}$ *t* hogy [látta *t* Jánost]]]]
who-ACC think-AGR2sg-indef that Mary said-AGR3sg-def/indef that saw-AGR3sg-def John-ACC
'Who do you think Mary said saw John?'
b. *Kit* gondolsz [$_{CP*}$ *t* hogy [Mari *mondta/mondott* [$_{CP*}$ *t* hogy [János látott *t*]]]]
who-ACC think-AGR2sg-indef that Mary said-AGR3sg-def/indef that John saw-AGR3sg-indef
'Who do you think that Mary said that John saw?'

These sentences exemplify the extraction of an indefinite Wh-phrase from the most deeply embedded clause. In (3a), it is base-generated in the subject position, and in (3b) it is base-generated in the accusative object position.

If successive cyclic movement through the [Spec, CP] is correct, then we expect that both the matrix verb and the intermediate verb exhibit indefinite conjugation. The traces occupy this position and they are indefinite. Hence, they may trigger the indefinite conjugation.

This prediction is, however, only borne out in Hungarian I. É. Kiss (1985) has reported that in multiple embedded Wh-questions, in which the subject or the accusative object is long Wh-moved from the deepest embedded clause, both the matrix and the intermediate verb are conjugated indefinitely. Hence, speakers of this dialect realize the matrix verb and the intermediate verb in (3) *as gondolsz* 'think-AGR2sg-indef' and *mondott* 'said-AGR2sg-indef'.

Speakers of Hungarian II, on the other hand, marginally accept these sentences, if possible at all, with the definite conjugation on the intermediate verb. Hence, the intermediate verb must be *mondta* 'said-AGR3sg-def'.

It is reasonable to assume that this dialectal variation is related to the parameter +/-move Wh. Hungarian I behaves as expected. The (indefinite) conjugation on the intermediate bridge verb is determined by the trace in the [Spec, CP*]. This unambiguously supports successive cyclic movement through the Spec of CP*.

Hungarian II involves successive cyclicity as well. The insertion of the anticipatory pronoun yields a completely unacceptable result:

(4) a. **Kit* gondolsz [$_{CP}$ hogy Mari mondta *azt* [$_{CP}$ hogy János látott]]
who-ACC think-AGR2sg-indef that Mary said-AGR3sg-def that-ACC that John saw-AGR3sg-indef

b. **Kit* gondolsz [$_{CP}$ hogy Mari mondta *azt* [$_{CP}$ hogy látta Jánost]]
who-ACC think-AGR2sg-indef that Mary said-AGR3sg-def that-ACC that saw-AGR3sg-def John-ACC

Suppose that the relation between the Wh-phrase and its gap in these sentences is not an instance of real successive cyclic movement but rather mimics successive cyclic movement. Maybe, it involves an analogic form of the *mit*-strategy. As a consequence, no intermediate traces are present. This accounts for the absence of indefinite conjugation on the intermediate verbs.

Instead these verbs pattern the same as intermediate verbs in multiple declarative sentences (cf. (5b)) or in multiple embedded Wh-questions with the extraction of a Wh-phrase bearing lexical case (cf. (5b)). They are conjugated definitely. Hence, the form of the verb is *mondta* 'said-AGR3sg-def':

(5) a. Azt gondoltam [$_{CP}$ hogy Mari azt *mondta* [$_{CP}$ hogy János találkozott Péterrel]]
that-ACC thought-AGR1sg-def that Mary that-ACC said-AGR3sg-def that John met-AGR3sg-indef Peter-INSTR
'I thought that Mary said that John met Peter.'

b. *Kivel* gondolod [$_{CP}$ hogy Mari *mondta* [$_{CP}$ hogy János találkozott]
who-INSTR think-AGR2sg-def that Mary said-AGR3sg-def that John met-AGR3sg-indef
'With whom do you think that Mary said that John met?'

(*II*) Hungarian displays parasitic gaps (cf. section 5.3.7.2.):

(6) a. [$_{CP}$ *Milyen iratokat* tettél [$_{VP}$ el *t*] [mielőtt elolvastál volna *e*]]
what papers-ACC put-AGR2sg-indef away what-before perf-read-AGR2sg-indef would
'Which papers did you put away before reading?'

b. [$_{CP}$ *Milyen iratokat* tettél [$_{VP}$ el *t*] [mielőtt elolvastad volna *(*őket*)]]
what papers-ACC put-AGR2sg-indef away what-before perf-read-AGR2sg-def would them
'Which papers did you put away before reading?'

(7) a. [$_{CP}$ *Milyen iratot tettél* [$_{VP}$ el *t*] [mielőtt végeztél volna *e*]]
what paper-ACC put-AGR2sg-indef away what-before finished-AGR2sg-indef would
'Which paper did you put away before finishing?'
b. [$_{CP}$ *Milyen iratot tettél* [$_{VP}$ el *t*] [mielőtt végeztél volna *(*vele*)]]
what paper-ACC put-AGR2sg-indef away what-before finished-AGR2sg-indef would it-INSTR
'Which paper did you put away before finishing?'

These sentences exhibit short Wh-movement and they contain an adjunct clause with a parasitic gap (indicated by *e*). The (a)-sentences represent the intuitions of speakers of Hungarian I (cf. É. Kiss 1985). The (b)-sentences represent the intuitions of speakers of Hungarian II. The gap in the (a)-sentences must remain non-overt. The gap in the (b)-sentences, however, must be spelled out as an overt pronoun. Hence, Hungarian I involves a parasitic gap strategy, whereas Hungarian II involves a resumptive pronoun strategy in similar cases.

In Hungarian I, the gap cannot be *pro* because plural accusative personal pronouns and pronouns with lexical case may not be omitted (cf. 4.2.(34)). In Hungarian II, on the other hand, the gap may be *pro,* as the following sentence demonstrates:

(8) [$_{CP}$ *Kivel* találkoztál [$_{VP}$ *t*] [anelkül hogy **meghívtál/meghívtad* volna (*őt*)]]
who-INSTR met-AGR2sg-indef that-without that perf-invited-AGR2sg-indef/def would him
'Who did you meet without you having invited?'

A singular accusative pronoun *őt* may be dropped only if the verb is conjugated definitely. This matches the distribution of *pro* (cf. 4.2. (34)). Hence, *pro* may function as a resumptive pronoun only if it locally recoverable from AGR.

The following pair shows that long Wh-movement with parasitic gap clauses patterns the same as short Wh-movement with such clauses:

(9) a. [$_{CP}$ *Kiket* szeretnél [$_{CP}$ ha eljönnének *t*] [anélkül hogy meghívtál volna *e*]]
who-pl-ACC like-COND-AGR2sg-indef if came-COND-AGR3pl-indef that-without that perf-invited-AGR2sg-indef would
'Whom would you like if came without you having invited?'
b. [$_{CP}$ *Kiket* szeretnél [$_{CP}$ ha eljönnének *t*] [anélkül hogy meghívtad volna *(*őket*)]
who-pl-ACC like-COND-AGR2sg-indef if came-COND-AGR3pl-indef that-without that perf-invited-AGR2sg-def would them
'Whom would you like if came without you having invited?'

Again, in the (a)-sentence a parasitic gap is allowed, and in the (b)-sentence a resumptive pronoun must be spelled out.

In sum, Hungarian I allows a parasitic gap strategy, whereas Hungarian II employs a resumptive pronoun strategy in similar cases. The question then is how do we account for this difference?

The distribution of empty categories is restricted b the following descriptive condition:

(10) Empty categories must be bound locally

For example, *pro* must be bound by a local AGR, and Wh-trace must be bound by its antecedent in its minimal maximal domain. It is reasonable to assume that parasitic gaps obey principle (10) as well. Chomsky (1986b) suggests that these gaps are bound locally if they are 1-subjacent to the real gap, since a parasitic gap is embedded in an adjunct clause.

Suppose now that empty categories must be 0-subjacent to their binders in Hungarian II but not in Hungarian I. Hence, a real gap cannot license a parasitic gap in Hungarian II. This yields the absence of parasitic gaps. We have seen that such constructions may be saved by a resumptive pronoun strategy.

Let us summarize the differences between Hungarian I and II in the following diagram:

(11)

	Hungarian I	*Hungarian II*
-accessibility hierachy for overt long Wh-movement	-	+
-preference of the *mit*-strategy	-	+
-indefinite conjugation on intermediate verb in multiple embedded Wh-questions	+	-
-parasitic gap strategy	+	-
-resumptive pronoun strategy	-	+

The two dialects differ with respect to phenomena intrinsically dependent on the presence or absence of (long) Wh-movement. I suggested that this involves the parameter +/-move Wh. I will leave the further exploration of this parameter and the phenomena contingent on it as a task for further research.

6.7.2. Correspondence Effects and the Theory of Grammar

Correspondence effects effects also appear in languages other than Hungarian. Van Riemsdijk (1983b) observes that *German* displays a Wh-strategy quite similar to the *mit*-strategy in Hungarian. The scope marker in German is *was* 'what'. Compare (12a):

(12) a. [$_{CP}$ *Was* glaubst du [$_{CP}$ *was* Peter meint [$_{CP}$ *wer* heute kommt]]]
what think you what Peter believes who today comes
'Who do you think Peter believes will come today?'

b. *[$_{CP}$ *Was* glaubst du [$_{CP}$ *was* Peter meint [$_{CP}$ *wer* kommt heute]]]
what think you what Peter believes who comes today

The ungrammaticality of (12b) shows that the *was*-strategy involves a complex sentence. The finite verb must be in final-position in embedded clauses, since German is an SOV-language.

Hiemstra (1986) notes correspondence effects in Frisian:

(13) a. [$_{CP}$ *Wa* tinke jo [$_{CP}$ dat ik *t* sjoen ha]]
who think you that I seen have
'Who do you think that I have seen?'

b. [$_{CP}$ *Wat* tinke jo [$_{CP}$ *wa't* ik *t* sjoen ha]]
what think you who-that I seen have
'Who do you think that I have seen?'

(14) a. [$_{CP}$ *Wa* tinke jo [$_{CP}$ dat *t* my sjoen hat]]
who think you that me seen has
'Who do you think has seen me?'
b. [$_{CP}$ *Wat* tinke jo [$_{CP}$ *wa't* my sjoen hat]]
what think you who-that me seen has
'Who do you think has seen me?'
(Hiemstra 1986: 33)

The (a)-sentences represent instances of overt long Wh-movement. This may apply from both the subject position (cf. (14a)) and the object position (cf. (13a)).[15] The (b)-sentences exemplify the Frisian variant of the scope marker-strategy. The real Wh-phrases *wa* move to the [Spec, CP] of their own (embedded) clause in (13b) and (14b). They merge with the complementizer *dat* yielding *wa't*. The Wh-phrases *wat* in the matrix clauses function as a scope marker.

Thus, iterative long distance Wh-movement without overt syntactic movement appears in historically unrelated languages like Hungarian, German or Frisian.[16] This provides empirical evidence for the Correspondence Hypothesis 6.2.(6), here repeated as (15):

(15) *Correspondence Hypothesis*
Whenever there is a syntactic reflex of the assignment of (wide) scope, the dependency involved and long Wh-movement obey the same conditions on government and bounding

This hypothesis states that the grammar of Wh-trace and the grammar of scope is constrained by the same syntactic principles. If this is correct, then these principles have optimal explanatory power. Hence, the Correspondence Hypothesis represents the null-hypothesis.

This unification has not been a major focus of research in recent years. Rather, it has generally been assumed that wide scope-assignment is not restricted by bounding theory. This has been regarded as an argument for the independent status of LF (cf. Huang (1982), Lasnik and Saito (1984), and Chomsky (1986), among others).

Correspondence effects provide empirical evidence against this position. They yield a contradiction in the terminology of Chomsky and Huang. Wide scope assignment is restricted by subjacency, and consequently this condition holds at LF. However, according to Chomsky and Huang subjacency does not hold at LF but at S-structure. Note, incidentally, that it is not appealing to escape this contradiction by parametrizing bounding theory at LF, as may be clear from Chomsky (1986, 220): "It seems difficult to imagine that rules of the LF component are subject to

(15) Copying of the moved Wh-phrase in the intermediate [Spec, CP] may stress the successive cyclic effect in Frisian overt long Wh-movement (cf. Hiemstra 1986):
(i) [$_{CP}$ *Wa* tinke jo [$_{CP}$ *wa't* *t* my sjoen hat]]
who think you who-that me seen has
'Who do you think has seen me?'
This repetition of moved Wh-phrases with overt long Wh-movement appears also in Afrikaans (cf. Du Plessis 1977) and German (cf. Höhle 1989).

(16) McDaniel reports that Romani, an Indic language spoken in southern Yugoslavia, exhibits correspondence effects as well. The scope marker in this language is *so* 'what'.

parametric variation since it is unclear what evidence to fix their character would be available to the language-learner."

Koster (1987) argues that all grammatical dependency relations display the following properties at S-structure:

(16) a. obligatoriness b. uniqueness of the antecedent
c. c-command of the antecedent d. locality

The assignment of wide-scope does not form an exception. If that is correct, then a separate representation for the level of scope, LF, is entirely *superfluous.* The null-hypothesis even predicts that locality effects should appear with wide-scope Wh in-situ in Chinese and Japanese. Pesetsky (1984) has demonstrated that this appears to be the case.

Interestingly, natural languages also employ syntactic means other than scope markers to express the successive cyclic effect in long distance dependencies without overt movement.

According to McCloskey (1979), Irish relative clauses and Wh-questions are divided in two types, those that terminate with a gap, and those that terminate with a resumptive pronoun. McCloskey notes that the most striking property of the latter type is that the verb must be preceded by the complementizer *aL.* In long distance relativization (cf. (17a)) and long Wh-movement (cf. (17b)), *aL* must be present in each clause:

(17) a. An duine [$_{CP}$ *aL* mheas tú [$_{CP}$ *aL* chonaic tú *t*]]
the person Comp thought you Comp saw you
'The person that you thought you saw.'
b. Cé [$_{CP}$ *aL* mheas tú [$_{CP}$ *aL* chonaic tú *t*]]
who Comp thought you Comp saw you
'Who did you think you saw?'

The requirement that *aL* must be present in each clause suggests successive cyclicity. This is further supported by the fact that long relativization and long Wh-movement may not violate island conditions like CNPC and WhIC.

The syntax of long relativization and long Wh-movement in Irish resembles the syntax of the scope marker-strategy in Hungarian, German or Frisian. Both construction types lack overt syntactic movement, and they display successive cyclicity. A complementizer stresses the successive cyclic effect in Irish, and a Wh-phrase does the same in Hungarian, German, and Frisian.[17]

In conclusion, correspondence effects render an independent level for the representation of scope, LF, superfluous. Wide scope assignment is subsumed by the same principles which restrict grammatical dependency relations at S-structure. Long distance movement is implemented in the grammar in a successive cyclic fashion. In Hungarian, the domain of scope is extended in a fascinating way by the iteration of the scope marker *mit.*

(17) This is also the case with the iteration of certain types of verbal agreement in some languages. For example, Chung (1982) and Georgopoulos (1985) report that this phenomenon occurs with unbounded (Wh)-dependencies in Chamorro and Palauan respectively. Thráinsson (1976) and Pica (1987) demonstrate that the iteration of AGR conditions the occurrence of long distance anaphors in Icelandic. A non-local subject may bound the reflexive anaphor *sig* as long as the intermediate verbs are marked with the subjunctive.

6.8. Concluding Remarks

This chapter examined Wh-strategies in Hungarian. This language has two long distance Wh-strategies, overt long Wh-movement and the so-called *mit*-strategy. These strategies are subject to dialectal/idiolectal variation. I hypothesised that this variation is associated with the parameter +/-move Wh. Some phenomena appear to be contingent upon the setting of this parameter such as the conjugation-type of intermediate verbs in multiple embedded Wh-questions, the distribution of parasitic gaps and resumptive pronouns.

The existence of these Wh-strategies yields empirical support for the Correspondence Hypothesis, which excludes the existence of an independent level for the representation of scope (LF). What principle covers the scope of quantifiers?

The following universal principle determines the scope of quantifiers (cf. Reinhart 1983):[18]

(1) A quantifier c-commands its scope at S-structure

Hungarian is a left-branching language (cf. 2.2.1.(1)). This implies that the leftmost constituent has the largest c-command domain. Hence, in accordance with this principle the leftmost quantifier has widest scope in the following pair:

(2) a. [$_{CP1}$ *Mindenki* [$_{CP0}$ *csak Marit* szereti]]
everyone only Mary-ACC loves-AGR3sg
'Everyone is such that he loves only Mary.'
*'Only Mary is such that everyone loves her'.
b. [$_{CP0}$ *Csak Marit* szereti [$_{VP}$ *mindenki*]]
only Mary-ACC loves-AGR3sg everyone
'Only Mary is such that everyone loves her'.
*'Everyone is such that he loves only Mary.'

The scope of Wh-phrases in multiple Wh-questions is also accounted for by principle (1). The leftmost Wh-phrase, which has the largest c-command domain, has the widest scope:

(3) a. [$_{CP1}$ *Ki* [$_{CP0}$ *mit* mondott]]
who what-ACC said-AGR3sg
'For which x, x a person, for which y, y a statement, x said y'.
*'For which y, y a statement, for which x, x a person, x said y'.
b. [$_{CP1}$ *Mit* [$_{CP0}$ *ki* mondott]]
what-ACC who said-AGR3sg
'For which y, y a statement, for which x, x a person, x said y'.
*'For which x, x a person, for which y, y a statement, x said y.'

Long Wh-movement satisfies condition (1) as well. The scope of an extracted Wh-phrase is determined at its S-structure position, at least in Hungarian (cf. 6.2.(3H)).

(18) Exceptions to this rule include donkey-sentences and inverse-linking. For instance, a universal quantifier embedded in an NP may bind a pronoun in the following Hungarian inverse-linking construction:

(i) [[$_{NP}$ Egy olasz város *minden lakósa*] azt gondolta [$_{CP}$ hogy (*ő*) nyerni fog]]
an Italian city every inhabitant-npAGR3sg that-ACC thought-AGR3sg that he win will
'Every inhabitant of an Italian city thought that he would win.'

Rullman (1988) notes that all exceptions to condition (1) bear on referential dependency. According to Rullman, a violation of the c-command requirement is avoided in these cases if c-command affects the mother node of embedded quantifiers.

If the Wh-phrase is not fronted into the matrix sentence, as with the *mit*-strategy, its scope is represented at S-structure by the topmost scope marker. Compare:

(4) a. [$_{CP}$ *Kivel* gondolod [$_{CP}$ *t* hogy mindenki mondta [$_{CP}$ *t* hogy Mari táncolt *t*]]]
who-INSTR think-AGR2s that everyone said-AGR3sg that Mary danced-AGR3sg
'With who do you think that everyone said that Mary danced?'

b. [$_{CP}$ *Mit* gondolsz [$_{CP}$ hogy *mit* mondott mindenki [$_{CP}$ hogy Mari *kivel* táncolt]]]
what-ACC think-AGR2sg that what-ACC said-AGR3sg everyone that Mary who-INSTR danced-AGR3sg
'With who do you think that everyone said that Mary danced?'

In (4a), the Wh-phrase *kivel* is extracted from the most deeply embedded clause. In (4b), on the other hand, it remains in the Focus position of its own clause, as an instance of the *mit*-strategy. In both sentences, *kivel* takes scope over the universal quantifier *mindenki* in the intermediate sentence. This is in accordance with principle (1), since *kivel* is itself (cf. (4a)) or its scope marker (cf. (4b)) is in a higher domain, i.e. the matrix clause, at S-structure than the universal quantifier. Hence, an answer to both questions involves only one single dancer, for instance *John*.[19]

In chapter four, we defined the Projection Principle as follows (cf. (4.7.(1)):

(5) The LS must be represented categorially at each level of representation

This principle requires that each lexically selected argument is recoverable in the syntactic structure.

Consider the following instance of long Wh-movement:

(6) Who do you think that John saw?

See selects two arguments, a subject and an object. In (6), the object is fronted into the matrix sentence.

The question then is whether the Projection Principle is directly satisfied by the moved object Wh-phrase, or is indirectly satisfied by virtue of a trace at its extraction-site. In other words, is the S-structure representation of (6), (7a) or (7b)?:

(7) a. *Who* do you think that John saw? b. *Who* do you think that John saw it?

The Projection Principle is strictly locally satisfied in (7b).

Consider the following instances of long Wh-movement in Hungarian from the embedded object position:

(19) This parallel between overt long Wh-movement and the *mit*-strategy breaks down if the intermediate universal quantifier binds a pronoun, a *pro*, in the deepest embedded clause:

(i) a. [$_{CP}$ *Kivel*$_i$ gondolod [$_{CP}$ t_i hogy *mindenki*$_j$ mondta [$_{CP}$ t_i hogy *pro*$_j$ táncolt t_i]]]
who-INSTR think-AGR2sg that everyone said-AGR3sg that he danced-AGR3sg
'With who do you think that everyone said that he danced?'

b. [$_{CP}$ *Mit*$_i$ gondolsz [$_{CP}$ hogy *mit*$_i$ mondott *mindenki*$_j$ [$_{CP}$ hogy *pro*$_j$ *kivel*$_i$ táncolt]]]
what-ACC think-2sgAGR that what-ACC said-AGR3sg everyone that he who-INSTR danced-AGR3sg
'With who do you think that everyone said that he danced?'

(ib) may also involve a pair-reading, although this reading is harder to get than the one in which the Wh-phrase has scope over the universal quantifier. It seems to me that in this sentence a connectedness effect is operative. I will leave the dichotomy between the pair in (4) and (i) for further research.

(8) a. Kit *gondolsz* hogy János *látott?*
who-ACC think-AGR2sg-indef that John saw-AGR3sg-indef
'Who do you think that John saw?'
b. Melyik fiút *gondolod* hogy János *látta?*
which boy-ACC think-AGR2sg-def that John saw-AGR3sg-def
'Which boy do you think that John saw?'

These sentences show that the matrix verb always displays the same conjugation-type as the embedded verb when an accusative object Wh-phrase is extracted (cf. 6.2.(3*D*)). The matrix verb and the embedded verb are both conjugated indefinitely if an indefinite Wh-phrase is moved (cf. (8a), and they are conjugated definitely if a definite Wh-phrase is extracted (cf. (8b)). Hence, the conjugation-type corresponds with the definiteness of the extracted Wh-phrases.

If the Projection Principle is directly satisfied by the extracted Wh-phrase, then the agreement correspondence between the upper and the lower verb remains unexplainded. If we assume, however, that overt long Wh-movement leaves a trace which inherites its Φ-features, it is accounted for. Both the Wh-phrase and its trace trigger the same conjugation-type on their verbal governor. This agreement correspondence favors a strictly local implementation of the Projection Principle. Hence, we have another argument supporting a definition of the Projection Principle as in (5) (cf. also chapter four).

7. THE SYNTAX OF THE PP IN HUNGARIAN

7.1. Introduction

This chapter examines the syntax of the PP in Hungarian. The results of our investigations can be summarized as follows.

(*i*) PPs are *head-final* configurational categories, like NPs. This provides empirical evidence for the claim that all X'-projections are head-final in Hungarian (cf. 2.2.1.(1)).

(*ii*) Some Ps may be inflected for *person-number agreement* (AGR) when they select a pronominal complement. In fact, there are two types of postpositions, including *inflected* Ps, the "dressed" ones, and *non-inflected* Ps, the "naked" ones. Consequently, there are two different types of PPs as well, dressed PPs and naked PPs. I will demonstrate that there are some syntactic differences between these types of PPs which correlate with the presence or absence of AGR.

(*iii*) Possessive NPs contain a realization of AGR as well which is spelled out on the noun-possessed (cf. Szabolcsi 1981a, Kornai 1984; 1985). By comparing dressed PPs, naked PPs, and possessive NPs, we can isolate the following properties of *AGR*.

(1) *Properties of AGR in Hungarian*
   a. It reflects the person-number features of the NP-complement
   b. It has no phrase-structural prominence
   c. It is not a Case-assigner
   d. It does not function as an accessible subject
   e. It identifies *pro*

(*iv*) There is also a structural difference between PPs and NPs. This is due to the fact that nouns, unlike postpositions, have the ability to combine with a determiner (D). D determines its own X'-projection, a *DP*. I will show that this category is responsible for some striking syntactic differences between PPs and NPs.

This chapter is organized as follows. Section 7.2. discusses the basic syntax of the PP. I will first argue that P is an *independent* category. Furthermore, I will illustrate that the PP is *postpositional*.

Section 7.3. presents a classification of dressed and naked Ps. This has repercussions for the syntax of the maximal projections of these categories. A pronominal complement may be omitted in dressed PPs but not in naked ones, as an instance of the *Pro-drop Parameter*. Dressed Ps assign *structural* (nominative) Case, whereas naked Ps assign *lexical* case. In the demonstrative construction of PP, a dressed P must be doubled, unlike a naked postposition.

Section 7.4. compares the PP with the NP. Although these categories have some properties in common, there are also remarkable differences between them involving *Case theory*, *theory of movement* and *binding theory*.

The complement of a possessive NP, the possessor NP, may appear with a nominative or dative case. The NP-complement of a dressed PP, on the other hand, may only be marked nominatively. The possessor NP may scramble within the possessive NP and it may be extracted from this category. The NP-complement of a PP and the head of this category may however not be separated by movement. Possessive NPs set up an opaque domain for binding theory. PPs, on the other hand, are always transparent for binding.

I will argue that these differences are due to the fact that the possessive NP, unlike the PP, should be analyzed as a DP. This category has its own specifier (Spec) position which provides a Case-position, and a landing-site or escape-hatch for possessor-raising. The head of the DP, D, is a structural subject in the sense of Chomsky (1981: 38). Such a category creates an inaccessible domain for binding.

Finally, section 7.5. investigates the status of AGR in of Hungarian. The status of this morpheme across languages may vary, yielding a typology of inflected PPs.

In some languages, it is *"agreement"* in a traditional sense. Its only function is to reflect the person-number features of the NP-complement on the head of its category. In other languages, AGR itself is a syntactic *complement*. With Hale (1988), I will assume that this typology depends on the level of representation at which the merging between AGR and a head takes place. For example, it is a lexical rule in Hungarian, but a syntactic one in Irish. As a consequence, AGR may cooccur with an overt syntactic complement in Hungarian, unlike Irish.

Let us first consider the basic properties of PP in Hungarian.

7.2. The Basic Syntax of PP in Hungarian

This section discusses the *basic* syntax of PP in Hungarian. I will first argue that P is an independent category (cf. section 7.2.1.). Then I will demonstrate that PP is postpositional (cf. 7.2.2.).

7.2.1. The Category P in Hungarian

This section argues that P is a category on its *own*, not to be identified with the categories prefix, adverb or case. In order to do so, I will develop some grammatical tests showing that it does not coincide with these categories, although they have historically developed from a common adverbial ancestor (cf. Bárczi et al 1978, and Mátai 1971).[1]

The classification of postposition, prefix, adverb and case has given rise to conflicting views in the literature. For example, Horvath (1978) does not acknowledge a category prefix. According to Horvath, prefixes are intransitive postpositions.

(1) The category of prefixes includes, among others:
(i) *be* 'in', *ki* 'out'. *le* 'down'. *fel/föl* 'up', *meg* 'perfectivity marker' and *el* 'away'
These prefixes often indicate the perfectivity and also the direction of an action denoted by the verb to which they are prefixed.

Ackerman (1987b) also takes prefixes and (naked) postpositions together but under the category verbal modifier (cf. section 4.4.1.).

In my view, the source of all confusion is due to two facts. First, some postpositions, prefixes, adverbs and cases have the ability to function as a verbal modifier. They may subcategorize for a verb and form with it a tight lexical and syntactic unit. Therefore, these categories have the same positional distribution. Second, some prefixes and (naked) postpositions may appear without complement.

Below, however, I demonstrate that postpositions, prefixes, adverbs, and cases are categorially distinct.

The strongest evidence for this claim comes from the fact that they have a completely different distribution with respect to various morpholexical rules. The assumption of a category including postpositions, prefixes, adverbs, and cases would render the formulation of these rules unnecessaryly complex, if not impossible.

The rules involve, (I) *Comparative Formation*, (II) *Adjective Formation with the Suffix -i*, (III) *Compounding with the P -felé*, (IV) *SUBL/DELAT Case-marking* and (V) *Conjunction Reduction*. Before presenting them, I will first classify postpositions from a semantic point of view. This will allow us to formulate some of these morpholexical rules in a much easier way.

In Hungarian, there is an almost perfectly regular system developed for local relations corresponding to the questions *to where?*, *where?*, and *from where?*. The case-system may be divided into subsystems corresponding to these three directions. For example, the illative marker *-ba/be* 'to where?', the inessive marker *ban/ben* 'where?' and the elative marker *-ból/ből* 'from where?' form such a subsystem (cf. 3.2.(5)).

Ackerman (1987b) classifies these tripartite subsystems with the help of semantic features [*path*], and [*goal*]:

(1) *Semantic Characterization of Morphological case*:

	[-path] [+goal]	[+path] [-goal]	[+path]
'containment'	INESS	ILL	ELAT
'surface'	SUPER	SUBL	DELAT
'proximity'	ADESS	ALL	ABL

Some postpositions also display a tripartite subsystem, like the cases participating in (1). For instance, *alá* 'under' (to where?), *alatt* 'under' (where?) and *alól* 'under' (from where?) form such a triple. Each meaning is connected to a separate formal element which is not productive as a case-marker any more, involving respectively *-á/é* 'lative' (LAT), *-tt/n* 'locative' (LOC), *-l* 'ablative' (ABL). Analogously to the morphological case forms, I classify these postpositions as follows:

(2) *Semantic Characterization of Postpositions*:

	[-path] [+goal]	[+path] [-goal]	[+path]
'location'	LOC	LAT	ABL

Let us now consider comparative formation in Hungarian.

(I) A comparative is formed by adding the comparative suffix *-(vowel)bb* to the stem. Members of the category P do not have comparatives. Therefore, the following forms are ungrammatical:[2]

(3) a. alatt 'under' (dressed P)
a'. *alatt*abb*
b. ellen 'against' (dressed P)
b'. *ellen*ebb*
c. mögül 'behind' (dressed P)
c'. *mögül*ebb*
d. át 'over' (naked P)
d'. *át*abb*
e. belül 'inside' (naked P)
e'. *belül*ebb*
f. együtt 'together' (naked P)
f'. *együt*ebb*

Prefixes and adverbs, on the other hand, can have comparatives quite easily:[3]

(4) a. ki 'out' (prefix)
a'. kij*ebb* 'farther out'
b. fel 'up' (prefix)
b'. felj*ebb* 'higher up'

(2) The lative dressed postpositions, except **felébb* 'above-comparative suffix', **körébb* 'round-comparative suffix', and *közébb* 'between-comparative suffix', and the naked postpositions *kívül* 'outside' and *közél* 'near' form an exception to the prohibition of putting Ps in the comparative:

(i) a. alá 'under' (dressed P) c. kívül 'outside' (naked P)
a'. al*ább* 'lower down' c'. kivül*ebb* 'more outside'
b. elé 'before' (dressed P) d. közel 'near' (naked P)
b'. el*ébb* 'more forward' d'. közel*ebb* 'nearer'

Obviously, these forms have maintained some of their adverbial character.

(3) István Kenesei (personal communication) questions this claim concerning prefixes. Alternatively, they could be comparatives of adverbs as well. The following argument supports the claim that these comparatives are indeed categorially prefixes.

The verb *tesz* 'do, make' subcategorizes for an accusative object. This object may not be nominal:

(i) a. *Jót* tettem b. *Tettem *a képet*
good-ACC did-AGR1sg did-AGR1sg the picture-ACC
'I did well'

Prefixes may subcategorize for a verb yielding an independent lexical item. For example, the prefix *fel* 'up' combines with *tesz* into the complex verb *feltesz* 'put up'. This verb has an independent meaning and it subcategorizes for an accusative object. This accusative object, however, may be nominal, unlike the accusative object of its unprefixed form. Compare (ib) and (ii):

(ii) *Fel*tettem a *képet*
up-put-AGR1sg the picture-ACC
'I put up the picture.'

Note now that the accusative object is nominal as well if the verb *tesz* cooccurs with the comparative *feljebb* 'higher up':

(iii) *Feljebb* tettem a *képet*
higher up did-AGR1sg the picture-ACC
'I put the picture higher up.'

If *feljebb* would not be the comparative of the prefix *fel* but of an adverb, it would be puzzling why *tesz* may have a nominal object in this example but not in (ib). This dichotomy and the parallel subcategorization features of *feltesz* and *feljebbtesz* receive a straightforward explanation under the assumption that *feljebb* is categorically identical to *fel*.

c. le 'down' (prefix)
c'. lej*ebb* 'farther down'
d. bent 'inside' (adverb)
d'. bent*ebb* 'more inside'
e. hamar 'soon' (adverb)
e'. hamar*abb* 'sooner'
f. lent 'below' (adverb)
f'. lent*ebb* 'more below'

So this yields the following derivational rule capturing *Comparative Formation*:[4]

(5) *Comparative Formation:* where X = *prefix* or *adverb*
X + *-bb* -> X*bb* 'comparative of X'

(II) The word-formation component contains the following derivational rule deriving *adjectives* with the help of the suffix *-i*:[5]

(6) *Adjective Formation with the Suffix -i:* where X = *noun*, *postposition* or *adverb*
X + *-i* -> A

The following examples illustrate that postpositions and adverbs may feed this rule:

(7) a. a híd mögött*i* út (dressed P)
the bridge behind-adj road
'The road behind the bridge'
b. a műsor alatt*i* vita (dressed P)
the program under-adj discussion
'The discussion during the program'
c. tíz éven alul*i* gyerekek (naked P)
ten year-SUBL under-adj children
'Children under ten year'
d. a házon kívül*i* virágok (naked P)
the house-SUBL outside-adj flowers
'The flowers outside the house'
e. a bent*i* szoba (adverb)
the inside-adj room
'The room inside'
f. a fent*i* magyarázat (adverb)
the above-adj explanation
'The explanation above'

Adjectives of prefixes may not be derived by rule (6):

(8) a. *kij*i* (prefix) b. *lej*i* (prefix)
out-adj down-adj

(4) The comparatives of the prefixes *el* 'away' and *meg* 'perfectivity marker' do not exist: **elebb* and **megebb*. István Kenesei (personal communication) informs me that the following prefixes do not have comparatives either: *agyon* 'adds to the meaning of the verb 'in extreme', *félbe* 'incomplete', *félre* 'aside', and *szét* 'asunder'. It seems to me that these non-existing forms are lexical gaps or semantically impossible.

(5) The lative dressed postpositions and the dressed postpositions with the sublative marker *-ra/re* do not participate in this rule. Neither do the naked postpositions *fogva* 'as a result of', *fogva* 'from' (time adverbial), and *kezdve* 'from' (time adverbial).

(III) Hetzron (1982) notes that only prefixes and adverbs with the feature [+path] in their meaning may be compounded with the element *-felé* '-ward':[6]

(9)	a.	haza 'home'	(adverb)
	a'.	haza*felé* 'homeward'	
	b.	hátra 'back'	(adverb)
	b'.	hátra*felé* 'backward'	
	c.	ki 'out'	(prefix)
	c'.	ki*felé* 'outward'	
	d.	fel 'up'	(prefix)
	d'.	fel*felé* 'upward'	

The attachment of *-felé* to a prefix or adverb assigns progressive aspect to the action denoted by the verb. Compare the difference in aspectual reading between the following pairs:

(10) a. Be mentem a boltba
in went-AGR1sg the shop-ILL
'I entered the shop.'

b. Be*felé* mentem a boltba
inward went-AGR1sg the shop-ILL
'I was entering the shop'

(11) a. Haza mentem
home went-AGR1sg
'I went home.'

b. Haza*felé* mentem
homeward went-AGR1sg
'I was going home.'

However, not a single postposition can be suffixed with *-felé*, not even postposition which have the feature [+path] inherent in their meaning. Therefore, the following compounds do not exist:

(12)	a.	alá 'under'	(dressed P)
	a'.	*alá*felé*	
	b.	mögül 'behind'	(dressed P)
	b'.	*mögül*felé*	
	c.	át 'over'	(naked P)
	c'.	*át*felé*	
	d.	keresztül 'across'	(naked P)
	d'.	*keresztül*felé*	

The prohibition of *-felé* compounding with postpositions is probably due to the fact that *felé* is itself a postposition. This may then be considered a case of a more general principle which blocks the attachment of elements to stems with the same category label, namely, the lexical counterpart of Hoekstra's (1984) *Unlike Category Condition*:

(13) *Unlike Category Condition*
At S-structure, no element of [αN, ßV] may govern a projection of [αN, ßV]

(6) In standard Hungarian, *-felé* may only be suffixed to locational prefixes. However, it may also combine with the perfectivity marker *meg* in the North-Eastern dialect. This compound attributes to the action denoted by the verb progressive aspect:

(i) Zárd befelé az ajtót mert *megfelé* fagynak az emberek
close-IMP-AGR2sg inward the door-ACC because perf-ward freeze-AGR3pl the people
'Close the door because the people are freezing to dealth.'

The following rule covers the *Compounding with the P felé* in standard Hungarian:

(14) *Compounding with the P felé* X[+path] + *-felé* -> *Xfelé* 'Xward' where X = *adverb*, or *prefix*

(IV) Postpositions may be inflected with the sublative case-marker *-ra/re* and delative case-marker *-ról/röl*. These suffixes add the feature [+path] to the P to which they are suffixed or they make this feature inherent in the meaning of such a P more explicit:[7]

(15) a. a híd mögött*re* (dressed P)
the bridge behind-SUBL
'to behind the bridge'

b. a híd mögött*röl*
the bridge behind-DELAT
'from behind the bridge'

c. a híd mögül*röl* dressed P)
the bridge behind-DELAT
'from behind the bridge'

(16) a. a hídon át*ra* (naked P)
the bridge-SUPER over-SUBL
'to over the bridge'

b. a hídon át*ról*
the bridge-SUPER over-DELAT
'from over the bridge'

c. a hídon alul*ról* (naked P)
the bridge-SUPER under-DELAT
'from under the bridge'

Some adverbs which contain the features [+location] or [+path] in their lexical meaning may also be suffixed with the sublative and delative marker *-ra/re* and *-ról/röl*:

(17) a. bent*re* (adverb)
inside-SUBL
'to inside'

b. bent*röl*
inside-DELAT
'from inside'

c. fent*re* (adverb)
above-SUBL
'to inside'

d. fent*röl*
above-DELAT
'from inside'

(7) The lative dressed Ps, except *felé/fölé* 'to/above', may not be inflected with a sublative or delative marker:

(i) a. **alára* (lative dressed P) c. **mögére* (lative dressed P)
under-SUBL behind-SUBL

b. **aláról* d. **mögéröl*
under-DELAT behind-DELAT

These Ps do neither participate in Comparative Formation (cf. note 2) or Adjective Formation with the Suffix *-i* (cf. note 5). This suggests that they block further morphological suffixation. If we assume that the lative marker is still acting as a case-marker, then this is covered by (20a) below. Case-markers in Hungarian may not be inflected further. This then yields a morphological dichotomy between lative dressed Ps and the other dressed Ps. From a syntactic point of view, however, it would be unatractive to propose a further subclassification of dressed Ps (cf. section 7.3.).

Prefixes, on the other hand, do not have this ability:

(18) a. *l*é*re* (prefix)
down-SUBL
b. *l*é*röl*
down-DELAT
c. *fel*re* (prefix)
up-SUBL
d. *fel*röl*
up-DELAT

In sum, the following lexical rule governs the suffixing of the *sublative* and *delative* case-marker to postpositions and adverbs:

(19) *SUBL/DELAT Case-marking*
X[+/-path] + *-SUBL/DELAT* -> *XSUBL/DELAT* 'to/from *X*'
where *X* = *postposition* or *adverb*

So far, I have discussed the distribution of postpositions, adverbs, and prefixes with respect to various morpholexical rules. Let us now turn to a discussion of the status of case-markers. Case-markers have the following two morphological properties:

(20) *Morphological Properties of case-markers in Hungarian*
a. A case-marker cannot be followed by any other morphological markers
b. A case-marker is a bound morpheme

(20a) states that a case-marker cannot be further inflected as a result of derivational or inflectional morphology. Therefore, the adjectivization with the suffix *-i* of a noun with a case-marker is blocked, for instance:

(21) a *a kertben*i* virág
the garden-INESS-adj flower
'the flower in the garden'
b. *a Jánossal*i* fiú
the John-INSTR-adj boy
'the boy with John'

It is easy to see that case-markers have a different distribution with respect to the above morpholexical rules than postpositions, adverbs or prefixes. Apart from this, as a consequence of (20b), there are also some syntactic differences between case-markers and postpositions.

A case-marker, being a bound morpheme, cannot be deleted or refer to a deleted NP with *Backward Conjunction Reduction* (cf. (22a)) or *Forward Conjunction Reduction* (cf. (23a)) (cf. Neijt 1979). These rules may freely apply with postpositions (cf. (22b) and (23b)):

(22) a. Sétáltam a ház*(*ban*) és a kert*ben*
walked-AGR1sg the house-INESS and the garden-INESS
'I walked in the house and the garden.'
b. Sétáltam a ház (*mellett*) és a kert *mellett*
walked-AGR1sg the house near and the garden near
'I walked near the house and the garden.'

(23) a. A *ház*ban és a (**ház*)nál sétáltam
the house-INESS and the house-ILL walked-AGR1sg
'I walked in and by the house.'
b. A *kert* mellett és (*a kert*) mögött sétáltam
the garden near and the garden behind walked-AGR1sg
'I walked near and behind the garden.'

The properties of case-markers in (20) demonstrate that they fundamentally differ from prefixes, postpositions and adverbs. Hence, case-markers have their own categorial status.

Let us summarize the distribution of postpositions, adverbs, prefixes and cases with respect to the morpholexical rule (5), (6), (14) and (19) in the following diagram:

(24)

Category	Comparative Formation	Adjective Formation with *-i*	Compounding with the P *felé*	SUBL/DELAT Case-marking
dressed	-	+	-	+
naked P	-	+	-	+
adverb	+	+	+	+
prefix	+	-	+	+
case	-	-	-	-

This diagram illustrates the following two claims. First, dressed and naked postpositions have exactly the same distribution with these morpholexical phenomena. This provides support for the hypothesis that they belong to the *same* category. Second, postpositions, adverbs, prefixes and case-markers display a different distribution with respect to these rules, supporting the hypothesis that these categories are categories on their *own*. Therefore, (5), (6), (14) and (19) may be formulated in terms of these independent categories.

7.2.2. Hungarian is Postpositional

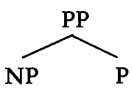
In the neutral order, NP-complements have to precede the P which selects them:[8]

(25) a. a ház *mögött* (dressed P)
the house behind
'behind the house'
b. **mögött* a ház

(26) a. a hídon *át* (naked P)
the bridge-SUPER over
'over the bridge'
b. **át* a hídon

This means that Hungarian is *postpositional*. The structure of PP is therefore as follows:

(27)



7.3. Dressed and Naked PPs

This section discusses some differences between *dressed* and *naked* PPs. There are at least three differences between these categories. (*i*) Dressed Ps may be inflected for AGR, unlike naked Ps (cf. section 7.3.1.). (*ii*) Dressed Ps assign structural (nominative) Case to their NP-complement, whereas naked Ps assign lexical case to their

(8) Inversion of this order is only possible when the PP is naked and when it bears stress. Hence, the counterpart of (26b) is grammatical, unlike the counterpart of (25b):

(i) a. *MÖGÖTT a ház b. ÁT a hídon
BEHIND the house OVER the bridge-SUPER

See Marácz (1986c) for discussion of this dichotomy.

NP-complement (cf. section 7.3.2.). (*iii*) A dressed P must be repeated in the demonstrative construction, contrary to a naked P (cf. section 7.3.3.)

Before investigating these differences, I will first list both types of Ps together with their translation:

(1) *Dressed Ps*

alá 'under' (answers the question 'to where?'), *alatt* 'under' (where?), *alól* 'under' (from where?), *elé* 'before' (to where?), *előtt* 'before' (where?), *elől* 'before' (from where?), *felé* 'to' (to where?), *felől* 'from' (from where?), *fölé* 'above' (to where?), *fölött/felett* 'above' (where?), *fölül* 'above' (from where?), *kívül*[9] 'without', *köré* 'round' (to where?), *körül* 'round' (where?), *közé* 'between' (to where?), *között/közt* 'between' (where?), *közül* 'from, out of' (from where?), *mögé* 'behind' (to where?), *mögött* 'behind' (where?), *mögül* 'behind' (from where?), *által* 'by' (adverbial modifier of means), *ellen* 'against', *helyett* 'instead of', *iránt* 'in the direction of', *miatt* 'because of', *nélkül* 'without', *szerint* 'according to', *után* 'after', *végett* 'because of', *ellenére* 'despite', *javára* 'in favor of', *létére* 'as', *részére* 'for' and *számára* 'for'.[10]

(2) *Naked Ps*

által 'over, across, during' (adverb of place and time), *alul* 'below, under', *át* 'over, across, during', *belül* 'within, inside', *együtt* 'together', *felül* 'over', *innen* '(on) this side', *keresztül* 'over, across, during', *kívül* 'outside' (adverb of place), *közel* 'near', *nélkül* 'without'[11], *szembe* 'opposite to', *szemben* 'opposite to' (where?), *szemközt* 'opposite to' (where? and to where?), *túl* 'over, across, on the other side', *végig* 'to the very end', *fogva* 'as a result of', *fogva* 'from' (time adverbial), *képest* 'compared to', *kezdve* 'from' (time adverb), *nézve* 'regarding'.

Let us now turn to a discussion of AGR in PPs.

7.3.1. Agreement in PP

This section investigates AGR in PPs. The dressed Ps in 7.3.(1) may all be inflected for person-number agreement when they select a pronominal complement.

Compare, for example, the full paradigms of the tripartite variants of the Hungarian equivalent of English 'behind': *mögé* 'to where?' (cf. (3)), *mögött* 'where?' (cf. (4)) and *mögül* 'from where?' (cf. (5)):[12]

(9) Although *kívül* is basically a naked P, it may pattern as a dressed P when it takes a pronominal complement (cf. also section 7.3.4.).

(10) The AGR morpheme of the Ps *ellenére* 'despite', *javára* 'in favor of', *létére* 'as', *részére* 'for' and *számára* 'for' is followed by the sublative case-marker *-ra/re*. This order matches the order of morphemes in inflected nominals. Compare, for instance, *ház* 'house': *ház-am-ban* (house-AGR-INESS) 'in my house'.

(11) *Nélkül* is the opposite case of *kívül* (cf. note 9). It is in principle a dressed P, but in combination with a pronominal complement it may pattern as a naked P (cf. also section 7.3.4.).

(12) Ther markers of the nominal (possessive), postpositional, and case inflection correspond with the markers of the definite verbal conjugation in Hungarian (cf. 4.2.(1)), except for the first and third person plural:

(i) a. *person-number agreement for nominal, postpositional, and case stems*

	sg	pl
1	*-m*	*-unk*
2	*-d*	*-atok*
3	*-a*	*-uk*

b. *person-number agreement of the definite verbal conjugation*

	sg	pl
1	*-m*	*-uk*
2	*-d*	*-átok*
3	*-a*	*-ak*

According to Vago (1980), the third person plural marker of these paradigms are allomorphs. Therefore, the only difference between the paradigms in (ia) and (ib) is the shape of the first person plural marker. Ther former is identical with the first person plural marker of the indefinite verbal conjugation (cf. 4.2.(1)). It remains to be investigated whether the correspondences between (ia) and (ib) are due to a parallel syntactic property of the categories which cooccur with these markers.

(3) a. (*én*) mögé*m*
I behind-ppAGR1sg
'to behind me'
b. (*te*) mögé*d*
you(sg) behind-ppAGR2sg
'to behind you(sg)'
c. (*ő*) mögé*je*
he behind-ppAGR3sg
'to behind him'
d. (*mi*) mögé*nk*
we behind-ppAGR1pl
'to behind us'
e. (*ti*) mögé*tek*
you(pl) behind-ppAGR2pl
'to behind you(pl)'
f. (*ő*) mögé*jük*
they behind-ppAGR3pl
'to behind them'

(4) a. (*én*) mögött*em*
I behind-ppAGR1sg
'behind me'
b. (*te*) mögött*ed*
you(sg) behind-ppAGR2sg
'behind you(sg)'
c. (*ő*) mögötte
he behind-ppAGR3sg
'behind him'
d. (*mi*) mögött*ünk*
we behind-ppAGR1pl
'behind us'
e. (*ti*) mögött*etek*
you(pl) behind-ppAGR2pl
'behind you(pl)'
f. (*ő*) mögött*ük*
they behind-ppAGR3pl
'behind them'

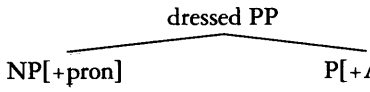
(5) a. (*én*) mögül*em*
I behind-ppAGR1sg
'from behind me'
b. (*te*) mögül*ed*
you(sg) behind-ppAGR2sg
'from behind you(sg)'
c. (*ő*) mögül*e*
he behind-ppAGR3sg
'from behind him'
d. (*mi*) mögül*ünk*
we behind-ppAGR1pl
'from behind us'
e. (*ti*) mögül*etek*
you(pl) behind-ppAGR2pl
'from behind you(pl)'
f. (*ő*) mögül*ük*
they behind-ppAGR3pl
'from behind them'

Naked Ps may not be inflected for AGR. Compare, for example, the ungrammaticality of the inflected forms of the naked P *át* 'over':

(6) a. *át*am*
over-ppAGR1sg
b. *át*ad*
over-ppAGR2sg
c. *át*a*
over-ppAGR3sg
d. *át*unk*
over-ppAGR1pl
e. *át*atok*
over-ppAGR2pl
f. *át*uk*
over-ppAGR3pl

In sum, dressed Ps with a pronominal complement, contrary to naked Ps, may be inflected for AGR. For the time being, I will assume that it is a cliticized morpheme in PPs. As a consequence, a dressed PP with a pronominal complement has the following structure:

(7)



Below, I will present empirical evidence for the claim that AGR has *no* phrase-structural prominence in Hungarian.

The realization of pronominal complements in dressed PPs is optional. In the unmarked case, personal pronouns are not spelled out. They are used for reasons for emphasis only. Compare (4a) and (8):

(8) *ÉN* mögött*em*
I behind-ppAGR1sg
'behind ME' or 'It is behind me...'

The question arises what the syntactic representation of a dressed PP with an omitted pronominal complement is.

In general, personal pronouns may be dropped in Hungarian if agreement is 'rich' enough to license them (cf. section 4.2.4.). This is an instance of the *Pro-drop Parameter*. The examples above demonstrate that *pro*-drop also applies in dressed PPs. Therefore, a more adequate representation of (4a) without the overt pronoun is (9):

(9) *pro* mögött*em*
'behind me'

In most cases, the third person plural pronoun is morphologically distinguished from its singular counterpart by the plural marker *-k*. The following pairs illustrate this:

(10) a. *ő* jött-ø
he came-AGR3sg
'He came.'

b. *ők* jöttek
they came-AGR3pl
'They came.'

In (10), the third person pronoun functions as the subject. The plural variant in (10b) is inflected for the plural marker.

This morphological dichotomy occurs also when the third person pronoun functions as the object:

(11) a. Láttam *őt*
saw-AGR1sg him
'I saw him.'

b. Láttam *őket*
saw-AGR1sg them
'I saw them.'

In dressed PPs, however, the third person plural pronoun is homophonous with its singular counterpart. Compare (3c) and (3f), here repeated as (12a) and (12b):

(12) a. *ő* mögé*je*
he behind-ppAGR3sg
'to behind him'

b. *ő* mögé*jük*
they behind-ppAGR3pl
'to behind them'

The equivalent of (12b) in which the nominative third person plural pronoun is fully inflected for number is ungrammatical:

(13) **ők* mögé*jük*

This is also the case with other inflected categories like possessive NPs (cf. (14)) and CasePs (cf. (15) (see, section 4.2.5. for CasePs):

(14) a. az *ő* any*ja*
the he mother-npAGR3sg
'his mother'

b. az *ő*/**ők* any*juk*
the they mother-npAGR3pl
'their mother'

(15) a. *ő* vel*e*
he INSTR-AGR3sg
'with him'

b. *ő*/**ők* vel*ük*
they INSTR-AGR3pl
'with them'

The opposite of this morphological *number-drop* has been attested in Turkish. Kornfilt (1984) reports that the plural marker of the AGR morpheme is omitted but not the plural marker of the third person plural pronoun subject. Thus, there seems

to be a tendency to omit the plurality specification on one of the two connected elements within a minimal domain. This is probably due to a functional principle of non-redundancy.

Let us now consider how the pronominal complement of a naked PP is realized.

Instead of the forms in (6), a pronominal complement of a naked P appears within a CaseP. Consider the full pronominal paradigm of the naked Ps *át* 'over' (cf. (16)) *együtt* 'together' (cf. (17)) and *képest* 'compared to' (cf. (18)).

Át subcategorizes for a superessive NP:

(16) a. (*én*) rajt*am* át
I SUPER-AGR1sg over
'over me'

b. (*te*) rajt*ad* át
you(sg) SUPER-AGR2sg over
'over you(sg)'

c. (*ő*) rajt*á* át
he SUPER-AGR3sg over
'over him'

d. (*mi*) rajt*unk* át
we SUPER-AGR1pl over
'over us'

e. (*ti*) rajt*atok* át
you(pl) SUPER-AGR2pl over
'over you(pl)'

f. (*ő*) rajt*uk* át
they SUPER-AGR3pl over
'over them'

Együtt subcategorizes for an instrumental NP:

(17) a. (*én*) vel*em* együtt
I INSTR-AGR1sg together
'together with me'

b. (*te*) vel*ed* együtt
you(sg) INSTR-AGR2sg together
'together with you(sg)'

c. (*ő*) vel*e* együtt
he INSTR-AGR3sg together
'together with him'

d. (*mi*) vel*ünk* együtt
we INSTR-AGR1pl together
'together with us'

e. (*ti*) vel*etek* együtt
you(pl) INSTR-AGR2pl together
'together with you(pl)'

f. (*ő*) vel*ük* együtt
they INSTR-AGR3pl together
'together with them'

Képest subcategorizes for an allative NP:

(18) a. (*én*) hozz*ám* képest
I ALL-AGR1sg compared to
'compared to me'

b. (*te*) hozz*ád* képest
you(sg) ALL-AGR2sg compared to
'compared to you'

c. (*ő*) hozz*á* képest
he ALL-AGR3sg compared to
'compared to him'

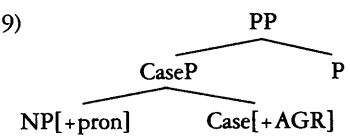
d. (*mi*) hozz*ánk* képest
we ALL-AGR1pl compared to
'compared to us'

e. (*ti*) hozz*átok* képest
you(pl) ALL-AGR2pl compared to
'compared to you(pl)'

f. (*ő*) hozz*átok* képest
they ALL-AGR3pl compared to
'compared to them'

These paradigms demonstrate that a pronominal complement of naked Ps occurs within a CaseP. The pronominals may be omitted as an instance of *pro*-drop. Hence, these PPs have the following structure:

(19)



Let us now consider whether PPs may be inflected for AGR when they select instead of a pronominal complement a nominal one.

The following phrases exemplify the dressed P *mögött* 'behind' with a nominal complement. This complement has the shape of a full NP, proper name, reflexive anaphor, Wh-phrase, and a universal quantifier:

(20) a. *a fiú* mögött
the boy behind
'behind the boy'

b. *János* mögött
John behind
'behind John'

c. *maga* mögött
himself behind
'behind himself'

d. *ki* mögött
who behind
'behind who'

e. *mindenki* mögött
everyone behind
'behind everyone'

These examples demonstrate that overt AGR is not spelled out when the complement of a dressed PPs is nominal.

The question arises whether AGR has a null-realization or whether it is completely missing in these cases. In other words, is the syntactic representation of, for instance, (20a) phrase (21a) or phrase (21b)?:

(21) a. a fiú mögött-ø
the boy behind-ppAGR3sg

b. a fiú mögott
the boy behind

The verbal stem lacks overt subject agreement with the third person singular indefinite conjugation (cf. section 4.2.). In this case, a null-morpheme represents AGR which has exactly the same status as any other realization of agreement. As a consequence, *pro*-drop is allowed when a third person pronoun singular subject cooccurs with the indefinite conjugation:

(22) (Ő) ad-ø valamit
he/she give-AGR3sg something-ACC
'He/she gives something.'

A dressed P without overt AGR, on the other hand, does not refer to a third person pronoun subject. For example, *mögött* means only 'behind' and not 'behind him/her'. Hence, it only denotes its lexical meaning. This implies that a dressed P without overt AGR does not possess a null-realization of this morpheme. It is simply missing in these cases. The adequate syntactic realization of (20a) thus is (21b).

Consequently, in a strict sense it is not even appropriate to speak about 'dressed' Ps when nominal complements are involved. For convenience, however, I will stick to this terminology in these instances as well.

So a dichotomy appears between dressed PPs with a pronominal complement on the one hand and dressed PPs with a nominal complement on the other hand. Only the pronominal complement triggers AGR. The question arises whether further distributional differences exist between these categories. This turns out to be the case: (I) Nominal complements, unlike pronominal ones, may appear with a P to which sublative or delative case-marking has applied, and (II) Pronominal NPs and nominal NPs are case-marked differently within inflected PPs in Turkish.

(I) The sublative or delative case marking of a P is captured by rule 7.2.(19), here repeated as (23):

(23) *SUBL/DELAT Case-marking*
X[+/-path] + *-SUBL/DELAT* -> *XSUBL/DELAT* 'to/from X'
where *X* = *P* or *adverb*

The following minimal pairs show that a dressed P feeding rule (23) may not be inflected for AGR:

(24) a. *János* mögött*re*
John behind-SUBL
'to behind John'
b. *(ő) mögött*ére*
he behind-ppAGR3sg-SUBL

(25) a. *János* mögött*röl*
John behind-DELAT
'from behind John'
b. *(ő) mögött*éről*
he behind-ppAGR3sg-DELAT

(II) According to Kornfilt (1984), pronominal and nominal complements of Turkish inflected PPs bear genitive and nominative case respectively. Kornfilt accounts for this by assuming the following case-rules:

(26) a [$_{PP}$ NP[+pron] P [+AGR]] -> GEN
b. [$_{PP}$ NP[+nom] P [+AGR]] -> NOM

The following phrases illustrate their application:

(27) a. *Ahmet* hakk[i]n
Ahmed-NOM about-ppAGR3sg
'about Ahmed'

b. (*senin*) hakk[i]n
you(sg)-GEN about-ppAGR2sg
'about you(sg)'

c. (*sizin*) hakk[i]n[i]z
you(pl)-GEN about-ppAGR2pl
'about you(pl)'

Let us now turn to a discussion of naked PPs in which the pronominal complement is replaced by a nominal one.

In the following phrases, this complement is a full NP, proper name, reflexive anaphor, Wh-phrase or a universal quantifier:

(28) a. *a hídon* át
the bridge-SUPER over
'over the bridge'
b. *Jánoson* át
John-SUPER over
'over John'
c. *magán* át
himself-SUPER over
'over himself'
d. *kin* át
who-SUPER over
'over who'
e. *mindenkin* át
everyone-SUPER over
'over everyone'

These examples show that naked Ps also lack AGR when their complement is nominal.

In conclusion, dressed Ps, as opposed to naked Ps, may be inflected for AGR, provided their complement is pronominal. Furthermore, nominal and pronominal complements of inflected PPs do not only differ with respect to the distribution of AGR. They also display distributional dichotomies when these categories appear with a dressed P inflected for sublative/delative case or when they are complements

of inflected PPs in Turkish. These dichotomies emphasize the relevance of the features [+/-nominal] and [+/-pronominal] for syntax.

The following diagram summarizes the findings of this section:

(29)

complement of	AGR on P
dressed P [+pron]	+
dressed P [+nom]	-
naked P [+pron/nom]	-

Let us now turn to case-assignment in PPs.

7.3.2. Case in PP

Let us consider first this phenomenon in dressed PPs:

(30) a. *János* mögött
John-NOM behind
'behind John'

b. (*ő*) mögötte
he-NOM behind-ppAGR3sg
'behind him/her'

These examples demonstrate that the NP-complement of a dressed PP displays nominative case. It has the unmarked form. The question arises where this case comes from.

In the standard approach to Case theory (cf. Chomsky 1981), nominative Case is assigned by I[+AGR] (cf. 3.2.(7a)). This rule can, however, only cover the nominative Case with pronominal complements as in (30b), because, as I argued above, only these complements cooccur with a realization of AGR. Therefore, I will adopt the view that the standard nominative Case-assignment rule represents only one of the structural contexts in which nominative Case is licensed.[13] Let us then assume that nominative Case in Hungarian is the *default case* when it appears in a structural government configuration with a lexical head. As a consequence, dressed Ps govern a *structural* nominative Case.

Let us discuss case-assignment in naked PPs.

Naked Ps may assign a large variety of cases to their complements involving instrumental, sublative, allative, superessive, adessive and ablative:

(31) *INSTR* by *együtt* 'together', *szembe* 'opposite to', *szemben* 'opposite to' (where?), and *szemközt* 'opposite to' (where? and to where?), *SUBL* by *nézve* 'regarding', *ALL* by *képest* 'compared to', and *közel* 'near', *SUPER* by *által* 'over, across, during', *alul* 'below, under', *át* 'over, across, during' *belül* 'within, inside', *felül* 'over', *innen* '(on) this side', *keresztül* 'over, across, during', *kívül* 'outside', *túl* 'over, across, on the other side', and *végig* 'to the very end', *ADESS* by *fogva* 'as a result of', and *nélkül* 'without', *ABL* by *fogva* 'from' and *kezdve* 'from'

Consider an example of each:

(32) a. valaki*vel* szembe
someone-INSTR opposite to
'opposite to someone'

b. valami*re* nézve
someone-SUBL regarding
'regarding something'

d. valami*n* túl
something-SUPER over
'across something'

e. valami*nél* fogva
something-ADESS as a result of
'as a result of something'

(13) Comapre the references in chapter three, note 12 that support this treatment of nominative Case.

c. valami*hez* közel
something-ALL near
'near something'

f. holnap*tól* kezdve
tomorrow-ABL from
'starting tomorrow'

Although naked Ps govern various cases, these cases all fall under what I called *lexical* case in section 3.2.1. The θ-features of the naked Ps determine the choice of the various instances of lexical case.

In sum, dressed Ps govern structural nominative Case, whereas naked Ps govern lexical case. This yields the following diagram:

(33)

	structural Case (NOM)	lexical case
dressed P	+	-
naked P	-	+

Let us consider now the demonstrative construction of the PP.

7.3.3. The Demonstrative Construction of PP

This section examines the *demonstrative construction* of the PP. Before doing so, let us first consider the demonstrative construction of the NP. For ease of reference, I will call the demonstrative construction of the NP, *NP-Dem* and the demonstrative construction of the PP, *PP-Dem*.

In a Hungarian NP-Dem, the demonstrative pronoun (Dem) has to precede the NP, similarly to English. However, the definite article (Art) must be present in front of the head noun. Futhermore, the Dem and the head noun exhibit agreement in case. This may be expressed with the help of the α-notation. So, *NP-Dem* patterns as follows:

(34) *NP-Dem*
[[Dem+αcase] Art [N+αcase]]

The following examples illustrate this scheme:

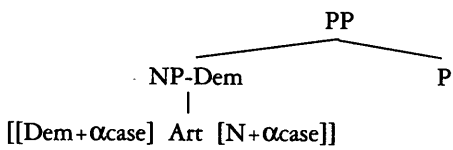
(35) a. az a ház
Dem-NOM Art house-NOM
'that house'
'that house'

b. azt a házat
Dem-ACC Art house-ACC

c. arra a házra
Dem-SUBL Art house-SUBL
'onto that house'

Let us turn to PP-Dem. The naked PP-Dem is formed by a combination of NP-Dem and a naked P. The subcategorization properties of the naked P determine α in the NP-Dem. Hence, *naked PP-Dem* has the following structure:

(36) *naked PP-Dem*



The following phrases are instances of (36). Recall that *át*, *együtt* and *képest* subcategorize for a superessive, instrumental, and allative complement:

(37) a. azon a hídon át
Dem-SUPER Art bridge-SUPER over
'over that bridge'

b. azzal a fiúval együtt
Dem-INSTR Art boy-INSTR together
'together with that boy'

c. ahhoz a fiúhoz képest
Dem-ALL Art boy-ALL compared to
'compared to that boy'

Let us now consider the dressed PP-Dem. The ungrammaticality of the following examples shows that the dressed PP-Dem patterns differently from the naked PP-Dem:

(38) a. *az a ház mögé
Dem-NOM Art house-NOM behind

b. *az a ház mögött
Dem-NOM Art house-NOM behind

c. *az a ház mögül
Dem-NOM Art house-NOM behind

Instead of these phrases, we find that dressed Ps are *doubled* yielding the following pattern:

(39) *dressed PP-Dem*
[[Dem-NOM P] [N-NOM P]]

The grammatical counterparts of (38) have the following shape:[14]

(40) a. a *mögé* a ház *mögé*
Dem-NOM behind the house-NOM behind
'to behind that house'

b. a *mögött* a ház *mögött*
Dem-NOM behind the house-NOM behind
'behind that house'

c. a *mögül* a ház *mögül*
Dem-NOM behind the house-NOM behind
'from behind that house'

Let us now determine the structure of these phrases.

In a dressed PP-Dem, the P is repeated and it merges with the demonstrative pronoun *az* 'that'. According to Horvath (1981), merging of *az* with a lexical head only applies when the initial sound of the head is a consonant and when *az* is a complement of that head. This suggests that PP-Dem contains in fact two PPs. The leftmost PP consists of Dem and P, while the rightmost PP dominates a full NP and a copy of the same P.

(14) Dressed PP-Dems display several stress patterns. Consider the different stressing in (40b) (' indicates primary stress; " indicates heavy stress):

(i) a. 'a mögött a ház mögött
that behind the house behind
'behind that house'

b. a '*mögött* a ház' *mögött*
'behind that house (and not in front of it)'

c. a *mögött* 'a *ház* mögött
'behind that house (and not behind the shop)'

d. *"a* mögött a ház mögött és nem" *e* mögött
that behind the house behind and not this behind
'behind that house, and not behind this one'

In the unmarked case, Dem is assigned primary stress (cf. (ia)). The doubled postpositions bear primary stress if the meaning denoted by them is exclusively referred to (cf. (ib)). The NP-complement is assigned primary stress when it is exclusively referred to (cf. (ic)). Dem is heavily stressed when its opposite location is excluded (cf. (id)).

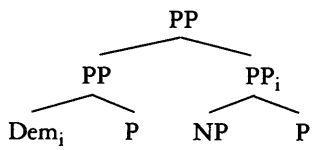
This hypothesis is also supported by the fact that the sublative or delative case-marker must be spelled out on both Ps when a dressed PP-Dem feeds rule (23):

(41) a. a mögött*(*re*) a ház mögött*(*re*)
the behind-SUBL the house behind-SUBL
'to behind that house'
b. a mögött*(*ről*) a ház mögött*(*ről*)
the behind-DELAT the house behind-DELAT
'from behind that house'

The obligatory spelling out of the sublative and delative case-marker in these cases receive a straightforward explanation if the Ps function as independent lexical items to which (23) may apply.

In analogy with my earlier claims about the syntactic structure of embedded clauses, I will assume that the demonstrative pronoun *az* in a dressed PP-Dem is as a kind of anticipatory pronoun (cf. section 4.5.1.). In this construction, however, it is associated with an adjoined PP resulting in the following structure:

(42) *dressed PP-Dem*



Of course, this structure does not provide an explanation for the following two problems. First, why do dressed PP-Dems not pattern the same way as naked PP-Dems, and the reverse? In other words, why are the phrases in (38) ungrammatical, and why are the following phrases ungrammatical?:

(43) a. *azon át a hídon át
Dem-SUPER over Art bridge-SUPER over
b. *azzal együtt a fiúval együtt
Dem-INSTR together Art boy-INSTR together
c. *ahhoz képest a fiúhoz képest
Dem-ALL compared to Art boy-ALL compared to

Second, why do the structures in (36) and (42) render the same semantics? Both naked and dressed PP-Dems yield a demonstrative construction in the English translation.

I hasten to admit that I do not know the solutions of these problems. However, the structural dichotomy between dressed and naked PP-Dems unambiguously shows that they have a different distribution. As a working hypothesis, it is reasonable to suppose that a successful account of this correlates with the factors causing the other differences between dressed and naked Ps.

7.3.4. Summary

In this section, I classified the Ps in Hungarian into dressed and naked Ps. This classification is lexically determined. I examined three differences between these categories and their maximal projections. (*i*) Dressed Ps may be inflected for AGR when they select a pronominal complement. As a consequence, *pro*-drop applies in

inflected PPs as well. Naked Ps, on the other hand, may never be inflected. (*ii*) The complements of dressed Ps appear with the nominative case, whereas the complements of naked Ps appear with a lexical case. The nominative Case governed by dressed Ps is a structural default case. (*iii*) In the demonstrative construction of the PP, a dressed P must be repeated, unlike a naked P.

The Ps *nélkül* 'without' and *kívül* 'without' are ambiguous between a naked P and a dressed P when they select a pronominal complement. These minimal pairs of the same lexical stems illustrate best that this classification has repercussions for the syntax of these categories.

Nélkül is basically a dressed P. This is clear from the fact that nominal complements of *nélkül* appear with the nominative case:

(44) *János* nélkül
John-NOM without
'without John'

Further, *nélkül* must be doubled when it appears in a demonstrative construction. Recall that all and only dressed Ps may be doubled in demonstrative constructions:

(45) a *nélkül* a fiú *nélkül*
Dem-NOM without the boy without
'behind that boy'

If *nélkül* selects a pronominal complement, it may pattern either as a dressed P (cf. (46a)) or as a naked P (cf. (46b)):[15]

(46) a. (*én*) nélkül*em*
I without-ppAGR1sg
'without me'

b. (*én*) nál*am* nélkül
I ADESS-AGR1sg without
'without me'

So, if *nélkül* distributes as a dressed P (cf. (46a)), it may be inflected for AGR, its pronominal complement is nominatively marked, and this complement may be *pro*. If *nélkül*, however, distributes as a naked P (cf. (46b)), it may not be inflected, its pronominal complement is assigned lexical (adessive) case, and this complement appears within a CaseP.

Consider now *kívül*, the opposite case of *nélkül*. *Kívül* belongs basically to the category of naked Ps, because its nominal complement is, assigned lexical case, that is superessive:

(47) *János/*Jánoson* kívül
John-NOM/John-SUPER without
'without John'

Further, in a demonstrative construction *kívül* patterns as a naked P. It may not be doubled but it selects an NP-Dem:

(48) a. *a kívül a fiú kívül
Dem-NOM without the boy without

b. azon a fiún kívül
Dem-SUPER Art boy-SUPER without
'without that boy'

(15) There is some dialectal variation with the distribution of *nélkül*. István Kenesei (personal communication) informs me that in his dialect it may only pattern as a dressed P.

However, if *kívül* selects a pronominal complement it may distribute as a dressed P as well:

(49) a. (*én*) rajt*am* kívül
I SUPER-AGR1sg without
'without me'

b. (*én*) kívül*em*
I withou-ppAGR1sg
'without me'

In (49a), *kívül* patterns as a naked P. It is inflected for AGR, its pronominal complement bears lexical (superessive) case, and this complement is realized within a CaseP. In (49b), on the other hand, *kívül* distributes as a dressed P. It is inflected for AGR, its pronominal complement is nominatively marked, and this complement may undergo *pro*-drop.

In conclusion, the minimal pairs in (46) and (49) demonstrate that switching of the lexical classification of Ps yields different syntactic properties. The next section discusses a structural asymmetry between PP and NP and its consequences for the syntax of these categories.

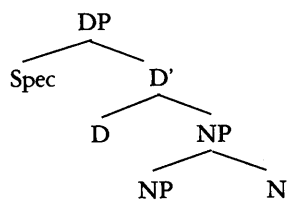
7.4. PP and NP

The categories NP and PP in Hungarian have some properties in common. They are head-final maximal projections and their heads may bear AGR. There is, however, a striking difference between these categories. Nouns, contrary to postpositions, have the ability to combine with a *determiner* (D). This section argues that this dichotomy has also a structural concomitant which is responsible for some syntactic differences between NP and PP.

7.4.1. A Structural Dichotomy between PP and NP

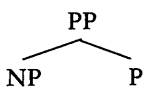
Abney (1985) and Fukui and Speas (1986) have argued that NP has in fact two 'heads', a *functional* head and a *lexical* head. D acts as the functional head, and N functions as the lexical head. Abney and Fukui and Speas assume that D, similarly to other X^0-categories, determines its own X'-projection, a DP. Therefore, NP has the following structure:

(1)



Following these references, I will assume that NPs in Hungarian display this structure as well (cf. also Szabolcsi (1986) for this claim). Recall that PPs in Hungarian have structure 7.2.(27), here repeated as (2):[16]

(2)



(16) Ps may also select DPs but Ds may not combine with PPs.

Observe from a comparison of (1) and (2) that there is a dichotomy in *richness* of structure between NP and PP. The former is embedded in a DP, whereas the latter is not dominated by another category. In the next section, I will show that this structural dichotomy has some implications for the syntax of these categories.

Let us first determine the structure of the *possessive* NP in Hungarian.

The following phrases exemplify possessive constructions:

(3) a. a fiú háza
the boy house-npAGR3sg
'the boy's house'

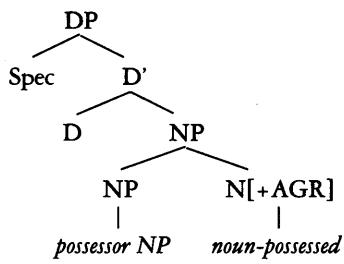
b. az (én) házam
the I house-npAGR1sg
'my house'

Szabolcsi (1981, and subsequent papers) has observed that the noun-possessed of a possessive NP is inflected for AGR. For example, *ház* in (3a) displays person-number agreement of the third person singular, and it displays person-number agreement of the first person singular in (3b).

Szabolcsi attributes to AGR phrase-structural prominence. Below I will argue, however, that it is *weak* in the sense of chapter two. As a consequence, this morpheme and the head noun are merged at all levels of representation. Hence, it has no separate position in phrase structure.

This yields then the following structure for possessive NPs:

(4)



Let us now turn to a discusssion of some differences between PP and possessive NP.

7.4.2. Some Differences between PP and Possessive NP

This section concentrates on some *differences* between PP and possessive NP. These differences bear on *Case theory* (cf. section 7.4.2.1.), *theory of movement* (cf. section 7.4.2.2.), and *binding theory* (cf. section 7.4.2.3.).

7.4.2.1. Case Theory

Szabolcsi (1981) has noted that the possessor NP displays two different case-marked variants. The phrases in (3) exemplify the *nominatively* marked variant, whereas the following phrases show that it may also be marked *datively*:

(5) a. a fiú*nak* a háza
the boy-DAT the house-npAGR3sg
'the boy's house'

b. *nek*em a házam
I-DAT the house-npAGR1sg
'my house'

In the literature (cf. Szabolcsi 1981a, subsequent literature, Kenesei 1985e, and Kornai 1985), it has been assumed that AGR assigns nominative Case to the posses-

sor NP. Alternatively, we may also apply the approach of nominative Case argued for in section 7.3.2.

Nominative is the default case in Hungarian when it occurs in a structural government configuration with a lexical head. In that case, the possessor NP receives its nominative Case by being in a structural government relation with the head noun.

If AGR has no phrase-structural prominence, then the alternative approach should be preferred. In general, only lexical items which occupy an independent position in phrase-structure may govern a Case-position.

As to the status of the dative case, there is no consensus. The following argument supports the hypothesis that it is assigned to the possessor NP within the possessive NP.

A possessive NP with a dative possessor is a single maximal projection, just as a possessive NP with a nominative possessor. This can be verified with the help of the focussing test. Focussing may only apply to one single maximal projection and it triggers Inversion with a prefixed verb (cf. 2.1.(28e)).

Compare now the following sentences (F = [Spec, CP]):

(6) a. $[_{CP}\,[_{F}$ A fiú háza] $[_{CP}$ égett le]]
the boy house-npAGR3sg burned-AGR3sg down
'It was the house of the boy which burned down.'

b. $[_{CP}\,[_{F}$ A fiúnak a háza] $[_{CP}$ égett le]]
the boy-DAT the house-npAGR3sg burned-AGR3sg down
'It was the house of the boy which burned down.'

The prefix *le* remains stranded with the focussing of both variants of the possessive NP.[17] This implies that the dative possessor NP (cf. (6b)), similarly to the nominative possessor NP (cf. (6a)), forms a single maximal projection with its noun-possessed. Therefore, it is reasonable to suppose that the dative case, just as the nominative case, originates from a governor internal to the possessive NP.

The leading idea behind Case theory is that there is a one-to-one correspondence between Cases and governors (cf. Chomsky 1981, and Kayne 1984).[18] Each Case is related to a different governor. Consequently, each Case is assigned in a different structural position.

The nominative Case of the possessor NP is assigned in the [NP, NP] under government by N. Note that there is still only one position left in which the possessor NP can get dative case, namely, the [Spec, DP]. Let us therefore assume that the dative Case of the possessor NP is assigned in this position under government by D.

This is supported by the fact that the order of the possessor NP and the D is reversed with the dative variant of the possessor NP. With its nominative variant, the

(17) This parallelism between the two variants of the possessive NP breaks down if the possessor NP is pronominal. A pronominal dative possessor may not be taken along when the possessive NP is focussed. Compare (6b) with (ib):

(i) a. $[_{F}$ Az én házam] égett le
the I house-npAGR1sg burned-AGR3sg down
'It is my house that burned down.'

b. *$[_{F}$ Nekem a házam] égett le
I-DAT the house-np-AGR1sg burned-AGR3sg down

(18) There are some exceptions to this idealization. For example, Kayne (1984: ch. 5) argues that V and P in English govern in the same way, that is, both categories may assign Case structurally.

D precedes the possessor NP, whereas it is vice versa with the dative variant (cf. (3) and (5)). Following Szabolcsi (1986e), I will assume that movement of the possessor NP from its base-generated [NP, NP] into the [Spec, DP] accounts for the order of these categories with the dative variant. This moved NP gets the dative Case-features in its landing-site (cf. also the next section).

If this approach to the dative-marking of the possessor NP is on the right track, then we expect that the NP-complement of PP cannot appear with a dative case. The ungrammaticality of the sentences (7b) and (8b) shows that this is indeed the case:[19]

(7) a. János mögött
John-NOM behind
'behind John'
b. *Jánosnak mögött(e)
John-DAT behind-ppAGR3sg

(8) a. (én) mögöttem
I behind-ppAGR-1sg
'behind me'
b. *nekem mögöttem
I-DAT behind-ppAGR3sg

In sum, the possessor NP may be marked both nominatively and datively, in contrast to the NP-complement of a PP. The latter may only appear with the nominative case. This dichotomy is due to the fact that possessive NPs, unlike PPs, contain a DP-projection which provides a separate structural position, that is [Spec, DP], for dative-marking by D.

Let us now turn to the theory of movement in relation to possessive NPs and PPs.

7.4.2.2. Theory of Movement

Szabolcsi (1981a) has observed that some types of possessor NPs, such as the Wh-possessor *ki* 'who' or the NP-Dem possessor, may only occur with a dative case.

Let us first examine the case of Wh-possessor NPs.

(*I*) Observe the following phrases:

(9) a. *[$_{DP}$ a [$_{NP}$ *ki* háza]]
the who house-npAGR3sg
'whose house?'
b. [$_{DP}$ *kinek* a [$_{NP}$ *t* háza]]
who-DAT the house-npAGR3sg
'whose house?'

According to Szabolcsi (1986e), the Wh-possessor NP *ki* cannot remain in its base-generated [NP, NP] (cf. (9a)) but must be moved into the [Spec, DP] (cf. (9b)).

Furthermore, Szabolcsi observes that such Wh-phrases must land in the Focus-position (= [Spec, CP]), that is, in the canonical position of Wh-phrases in Hungarian (cf. 2.1.(28d)). This may be established in two ways. Either the dative Wh-possessor leaves its possessive NP stranded (cf. (10a)) or the possessive NP is pied-piped (cf. (10b)):

(10) a. [$_{CP}$ *Kinek* gyújtották meg [$_{DP}$ *t* a [$_{NP}$ *t* házát]]]
who-DAT set-AGR3pl on fire perf the house-npAGR3sg-ACC
'Whose house was set on fire?'
b. [$_{CP}$ [$_{DP}$ *Kinek* *a házát*] gyújtották meg *t*]
who-DAT the house-npAGR3sg-ACC set-AGR3pl perf
'Whose house was set on fire?'

(19) Some poets and writers in the nineteenth century used a dative marked NP-complement in dressed PPs. In modern Hungarian, these constructions are no longer productive (cf. Marácz 1986c).

The derivation of these sentences runs as follows.

Suppose that D *L-marks* NP, where L-marking is defined as in 6.4.(2), here repeated as (11):

(11) *L-marking:* α L-marks ß iff α is a lexical category that θ-governs ß

This is not an unreasonable assumption, because D determines, for instance, the definiteness of an NP. In that case, NP does not constitute a barrier for movement of the possessor NP into the [Spec, DP]. This then yields (9b). Furthermore, V L-marks its accusative object. In (10), this is the possessive NP *kinek a házát*. Hence, further movement of the dative Wh-possessor into the [Spec, CP] is allowed. This covers the grammatical result in (10a).

In sum, the [Spec, DP] serves as a *landing-site* and an *escape-hatch* for possessor movement. PPs do not possess such a position. Hence, Wh-complements of PPs cannot be scrambled out of their maximal projection (cf. (12a), (13a)). In order to satisfy the requirement that Wh-phrases must land in Focus (=[Spec, CP]), only the pied-piping option is available for PPs (cf. (12b), (13b)):

(12) a. *János [$_{CP}$ [$_{F}$ *min*] futkározott [$_{PP}$ *t* kívül]]
John what-SUPER ran-AGR3sg about outside
b. János [$_{CP}$ [$_{F}$ [$_{PP}$ *min* *kívül*]] futkározott *t*]
John what-SUPER outside ran-AGR3sg
'Outside what was John running about?'

(13) a. *Mari [$_{CP}$ [$_{F}$ *ki*] állt [$_{PP}$ *t mögött*]]
Mary who stood-AGR3sg behind
b. Mari [$_{CP}$ [$_{F}$ [$_{PP}$ *ki mögött*]] állt *t*]
Mary who behind stood-AGR3sg
'Behind who did Mary stand?'

Note, incidentally, that the obligatory movement of *who*-possessor NPs does not apply for logistic reasons like Fiengo and Higginbotham's (1981) Specificity Constraint.

This constraint states that a specific NP may not contain a quantified expression. However, other quantified possessor NPs may have both a nominative and a dative variant such as *which*-possessor NPs:

(14) a. [$_{NP}$ *melyik fiú* anyja]
which boy mother-npAGR3sg
'which boy's mother?'
b. [$_{DP}$ *Melyik fiúnak* az [$_{NP}$ *t* anyja]]
which boy-DAT the mother-npAGR3sg
'Which boy's mother?'

(II) The NP-Dem possessor may only appear with the dative case, like a *who*-possessor NP:

(15) a. *[$_{NP}$ [$_{NP\text{-}Dem}$ az a fiú] anyja]
that the boy mother-npAGR3sg
b. [$_{DP}$ [$_{NP\text{-}Dem}$ *annak* *a fiúnak*] [$_{NP}$ *t* az anyja]]
that-DAT the boy-DAT the mother-npAGR3sg
'that boy's mother'

Recall that an NP-Dem may not be embedded in a dressed PP. Hence, the ungrammaticality of 7.3.(38b), here repeated as (16):

(16) *[$_{PP}$ [$_{NP\text{-}Dem}$ az a ház] mögé]
that the house behind

The dative-marking of NP-Dem cannot save this phrase, like in the case of a possessive NP (cf. (15)). Rather, the grammatical counterpart of a PP-Dem involves doubling of the P (cf. 7.3.(40b)):

(17) a. *[$_{PP\text{-}Dem}$ annak a háznak mögött(e)]
that-DAT the house-DAT behind-ppAGR3sg
b. [$_{PP\text{-}Dem}$ a mögött a ház mögött]
that behind the house behind
'behind that house'

The dichotomy between the pair in (15) on the one hand and the pair (16)-(17a) on the other hand is covered if possessive NPs but not PPs possess a Spec of DP which serves as a landing-site and which may serve as a Case-position for NP-Dem possessors.

So in general +NP-complement of a PP may not be separated from its head linearly. However, in some cases a P and its complement may form a discontinuous category:

(18) János *át* ment *a hídon*
John across went the bridge-SUPER
'John went across the bridge.'

Following Ackerman (1984), I will assume these categories are not derived by an application of move-α but they are the result of a lexical 'restructuring'. This affects the V and the P yielding a complex verb (V') which subcategorizes for an NP-complement (cf. section 4.4.). The following arguments provide empirical evidence for this.

(*i*) This lexical restructuring is dependent on the *lexical* properties, like subcategorization requirements, of these categories.

The verb *megy* 'go', which is directional, subcategorizes for a directional PP in (18). This allows the formation of a complex verb that governs an NP with lexical superessive. The formation of a complex verb is blocked, however, if the PP is a time adverbial. As a consequence, the P and its NP-complement cannot be separated:

(19) a. János ment [$_{PP}$ egy héten át]
John walked-AGR3sg a week-SUPER for
'John walked for a week.'
b. *János [$_{V}$ *át* ment] *egy héten*
John for walked-AGR3sg a week-SUPER

(*ii*) The lexical combination of P and V may feed *morpholexical* rules such as Nominalization with the suffix *-ás/és* (cf. 3.3.3.(II)):

(20) a. [$_{NP}$ az *átmenés*] a hídon]]
the across-go-NOMI the bridge-SUPER
'The going across the bridge'

b. [$_{NP}$ a hídon való *átmenés*]
the bridge-SUPER be-part.pres. across-go-NOMI
'The going across the bridge'

In (20), the attachment of *-és* to the complex verb *átmegy* turns it into the noun *átmenés*. This noun projects into an NP with its NP-complement to the right (cf. (20a)). The insertion of the dummy participium *való* 'being' may transform this phrase into a left-branching structure (cf. (20b)). Note that in both cases the NP-complement gets a lexical superessive case, similarly to the NP-complement of the complex verb *átmegy* in (18).

(*iii*) Ackerman (1984) has observed that the verb *kerekedik* 'arise' and the dressed P *fölé* 'above' may constitute a complex verb:

(21) a. Péter kerekedett [$_{PP}$ János fölé]
Peter arose-AGR3sg John above
'Peter beated John.'
b. Péter [$_{V'}$ *föléje* kerekedett] *Jánosnak*
Peter above-ppAGR3sg arose-AGR3sg John-DAT
'Peter got the better of John.'

Observe from the comparison between (21a) and (21b) that the dressed P is inflected for AGR of the third person singular, the P-V combination receives an idiomatic sense and the NP-complement appears with a lexical dative in the complex verb construction. If this verb would be created by an application of move-α, then it remains puzzling why its base-generated variant cannot exist:

(22) *Péter kerekedett [$_{PP}$ Jánosnak fölé(je)]
Peter arose-AGR3sg John-DAT above-ppAGR3sg

(*iv*) Consider the following sentences:

(23) a. János [$_{V'}$ *neki* ment] *a falnak*
John into went-AGR3sg the wall-DAT
'John run into the wall.'
b. János *a falnak* [$_{V'}$ *neki* ment]
John the wall-DAT into went-AGR3sg
c. *János [$_{V'}$ *neki* ment] *nekem*
John into went-AGR3sg DAT-AGR1sg
d. János [$_{V'}$ *nekem* ment]
John DAT-AGR1sg went-AGR3sg
'John run into me.'

The lexical item *neki* is ambiguous between a prefix 'into' and an inflected dative CaseP meaning 'to him' (see, section 4.4.2.). In both cases, *neki* patterns as a VM in the sense of Ackerman and Komlósy (1984).

In (23a) and (23b), the prefix *neki* combines with the verb *megy* into the complex verb *nekimegy*. This verb governs a lexical dative NP. If this NP is a pronominal item, then the construction yields an ungrammatical result (cf. (22c)). However, the spelling out of AGR on *neki* renders this sentence grammatical (cf. (22d)). This implies that it may satisfy subcategorization requirements when it is inflected for AGR.

Observe now the following paradigm with the dressed P *mögé* 'behind':

(24) A fiú [$_{PP}$ *az asztal mögé*] állt
the boy the table behind stood-AGR3sg
'The boy went and stood behind the table.'
b. A fiú [$_{V'}$ *mögé* állt] az *asztalnak*
the boy behind stood-AGR3sg the table-DAT
'The boy went and stood behind the table.'
c. *A fiú [$_{V'}$ *mögé* állt] *nekem*
the boy behind stood-AGR3sg DAT-AGR3sg
d. A fiú [$_{V'}$ *mögém* állt]
the boy behind-ppAGR1sg stood-AGR3sg
'The boy went and stood behind me.'

Mögé may form a complex verb with the verb *áll* (cf. (24b)). This verb assigns its NP-complement a lexical dative case. Note that this NP may not be a pronominal item (cf. (24c)) but it is expressed by AGR on the P (cf. (24d)). Hence, an inflected P patterns the same as an inflected CaseP (cf. (23)). The parallel distribution between these categories supports the hypothesis that *mögé* act as a VM in this paradigm. Hence, the discontinuous PP in (23b) is the result of a lexical rule.

Summarizing, the possessor NP may be moved within its possessive NP and it may be extracted from this category, unlike the NP-complement of a PP. This dichotomy is due to the fact that possessive NPs but not PPs contain a DP-projection which provides a landing-site and an escape-hatch for the moved possessor NP. An NP-complement of a PP, however, may get 'scrambled' out of this category only when its head has already merged with a verb in the lexicon.

7.4.2.3. Binding Theory

This section examines binding theory with respect to PPs and possessive NPs. Let us first discuss binding with possessive NPs.

Consider the following sentences:

(25) a. ?**János* látta [$_{DP}$ a [$_{NP}$ *maga* anyját]]
John saw-AGR3sg the himself mother-npAGR3sg-ACC
'*John* saw *his* mother.'
b. *A fiúk* látták [$_{NP}$ *egymás* anyját]
the boys saw-AGR3pl each other mother-npAGR3sg-ACC
'*The boys* saw *each other's* mothers.'

These sentences demonstrate that lexical items which meet Binding Principle A (cf. 5.3.4.(3a)) do not pattern alike in the [NP, NP] position of a possessive NP.[20]

(20) This is also the case in English (cf. (i)) and Dutch (cf. (ii)):
(i) a. **John saw himself's* mother
b. *The boys* saw *each other's* mother
(ii) a. **Jan* zag *zichzelf's* moeder
John saw himself's mother
b. *De jongens* zagen *elkaars* moeder
The boys saw each other's mother
Reflexives are not allowed in the complement position of possessive NPs (cf. the (a)-sentences), in contrast to reciprocals (cf. the (b)-sentences).

Reflexive anaphors are not allowed in this position (cf. (25a)), unlike reciprocal anaphors (cf. (25b)).[21]

Consider now the distribution of lexical items which are restricted by Binding Principle B (cf. 5.3.4.(3b)).

Compare the following sentence:

(26) *János* látta [$_{DP}$ az [$_{NP}$?**ő*/*pro* anyját]]
John saw-AGR3sg the he mother-npAGR3sg-ACC
'*John* saw *his* mother.'

This sentence demonstrates that an overt pronoun yields a rather ungrammatical result when it is bound in the [NP, NP] position of the possessive NP. This has, however, nothing to do with restrictions on binding theory but is an instance of the *Avoid Pronoun Principle* (cf. section 4.2.2.). An overt pronoun is omitted when it is recoverable from AGR.

Hungarian is *pro*-drop in possessive NPs (cf. section 5.3.4.3.). AGR in possesive NPs has the ability to sanction *pro* in the position of the possessor NP. Hence, it is the pronominal item relevant for binding theory. Note that *pro* may be bound by a c-commanding antecedent within possessive NPs. This antecedent may also be a quantified expression (cf. section 5.3.4.3.):

(27) a. *Ki* látta [$_{DP}$ az [$_{NP}$ *pro* anyját]]
who saw-AGR3sg the he mother-npAGR3sg-ACC
'*Who* saw *his* mother?'
b. *Mindenki* látta [$_{DP}$ az [$_{NP}$ *pro* anyját]]
everyone saw-AGR3sg the his mother-npAGR3sg-ACC
'*Everyone* saw *his* mother.'

The following descriptive generalizations capture the distribution of anaphors and pronominals in possessive NPs:

(28) a. *Anaphors:* Reciprocals are allowed in the [NP, NP] position of possessive NPs, reflexives are not
b. *Pronominal: pro* can be bound by an antecedent outside the possessive NP

(21) The reflexive anaphor *maga* consists of the stem *mag-*, which originally meant 'body', and person-number agreement. This phrase can sanction a *pro*-complement:

(i) (*én*) magam
I self-AGR1sg
'myself'

Instead of *maga*, the anaphor *saját* 'his own, her own' must be employed to render (25a) grammatical:

(ii) *János lattá* [$_{DP}$ a [$_{NP}$ *saját* anyját]]
John saw-AGR3sg the his own mother-npAGR3sg-ACC
'*John saw his own* mother.'

Saját may also be inflected for AGR. The pronoun, however, may not be spelled out:

(iii) az (**én*) sajátom
the I own-AGR1sg
'my own'

Besides simple reflexive anaphors, like *maga* and *saját*, Hungarian also possesses some complex anaphors, such as *sajátmaga* (his own-himself, her own-herself) 'he himself, she herself', or *önmaga* 'he himself, she herself'. These anaphors often function as intensifiers. Their distribution requires further investigation.

Let us now discuss binding in PPs. Consider first the case of dressed PPs. Dressed PPs are only inflected for AGR if their NP-complement is pronominal. Hence, it is absent with anaphoric complements.

Compare the following sentences:

(29) a. *János* lenézett [pp *maga* mellé]
John down-looked-AGR3sg himself beside
'*John* looked down beside *himself*.'
b. *A fiúk* lenéztek [pp *egymás* mellé]
the boys down-looked-AGR3pl each other beside
'*The boys* looked down beside *each other*.'

These sentences show that both a reflexive (cf. (29a)) and a reciprocal (cf. (29b)) may be bound in dressed PPs.

Let us replace the anaphor by a pronominal. The pronominal item relevant for the binding theory is *pro* with dressed PPs, like with possessive NPs. Consider:

(30) a. **János* lenézett [pp *pro* melléje]
John down-looked-AGR3sg he beside-ppAGR3sg
'*John* looked down beside *him*.'
b. **Ki* nézett le [pp *pro* melléje]
who looked-AGR3sg down he beside-ppAGR3sg
'*Who* looked down beside *him*.'
c. **Mindenki* lenézett [pp *pro* melléje]
everyone down-looked-AGR3sg he beside-ppAGR3sg
'*Everyone* looked down beside *him*.'

These sentences demonstrate that *pro* must be disjoint in reference with an antecedent outside the PP. Let us turn to naked PPs. Consider first the distribution of anaphors:

(31) a. *János* becsületes [pp *magával* szemben]
John honest himself-INSTR opposite
'*John* is honest with *himself*.'
b. *A fiúk* becsületesek [pp *egymással* szemben]
the boys honest each other opposite
'*The boys* are honest with *each other*.'

Both the reflexive and reciprocal may be bound in the complement position of a naked PP. Let us substitute a pronominal for the anaphors:

(32) a. **János* becsületes [pp *vele* szemben]
John honest he-INSTR opposite
**John* is honest with *him*.'
b. **Ki* becsületes [pp *vele* szemben]
who honest he-INSTR opposite
**Who* is honest with *him*.'
c. **Mindenki* becsületes [pp *vele* szemben]
everyone honest he-INSTR opposite
**Everyone* is honest with *him*.'

Note from this paradigm that a pronoun cannot be coreferential with a c-commanding antecedent.

Let us summarize the distribution of binding phenomena with PPs. The following generalizations hold both for dressed and naked PPs:

(33) a. *Anaphors:* Reflexives and reciprocals may appear in the [NP, PP] position of PPs
b. *Pronominal:* A pronominal in PPs (*pro* in dressed PPs and overt pronoun in naked PPs) is disjoint in reference with an antecedent outside the PP

Note from a comparison between (27) and (32) that an anaphor, except the reciprocal, is in complementary distribution with a pronominal. A reflexive anaphor, unlike *pro*, may not be bound in possessive NPs. In PPs, we find the opposite. How do we account for this distribution?

Chomsky (1981) characterizes the locality conditions for bound anaphors and pronominals in terms of the notion *governing category*. We will define governing category as follows:

(34) *Governing Category:* α is a governing category for ß if and only if α is the minimal IP (CP) or NP containing ß, a governor of ß, and a SUBJECT accessible to ß

SUBJECT includes AGR of finite sentences, the subject of an infinitive sentence and the complement (i.e. genitive specifier) of an NP. Furthermore, it is an opacity factor for binding theory when it acts as the accessible SUBJECT.[22]

The Binding Principles for anaphors and pronominals are the following (cf. section 5.3.4.):

(35) a. *Binding Principle A:* An anaphor must be bound in its governing category
b. *Binding Principle B:* A pronominal is free in its governing category

These principles reflect the complementary distribution between bound anaphors and pronominals. An anaphor must be bound precisely in the domain in which a pronominal is free.

Let us first determine what the governing category is for anaphors and pronominals in Hungarian PPs and possessive NPs.

(32) does not distinguish between dressed and naked PPs. In both types of PPs, an anaphor may be bound by a higher antecedent and a pronominal must be disjoint in reference with this antecedent. Hence, AGR does not function as an accessible SUBJECT in PPs. It does not create an opaque domain. This means that the governing category for bound items in PPs is the finite sentence which contains the PP. The subject of this sentence functions as the accessible SUBJECT.

From this it follows that the anaphors in (29) and (31) are bound in their governing category, i.e. CP, satisfying Binding Principle A. Hence, these sentences are grammatical. The pronominals in (30) and (32) are bound in their governing category, i.e. CP, as well. This yields, however, a violation of Binding Principle B rendering these sentences ungrammatical.

(22) Accessibility is based on the following filter
(i) *I/I condition*
*[α...β...] where α and β bear the same index
The notion of accessible is defined as follows:
(ii) α is accessible to β if and only if β is in the c-command domain of α, and assignment to β of the index of α would not violate (i)

Let us consider now the governing category for anaphors and pronominals in possessive NPs.

Generalization (28a) states that a split occurs between reflexives and reciprocals in possessive NPs. Reciprocals are allowed, in contrast with reflexives. Hence, the former pattern in the same way as reciprocals in PPs (cf. (33a)). AGR therefore is not an accessible SUBJECT in possessive NPs either.

Note furthermore that the structure of possessive NPs with reflexives differs fundamentally from the structure of such NPs with reciprocals (cf. (25a) and (25b)). The former contains a D, unlike the latter. The following sentences show that this determiner may not be omitted in possessive NPs with reflexives but it may not be spelled out in possessive NPs with reciprocals:

(36) a. **János* látta [$_{NP}$ *maga* anyját]
John saw-AGR3sg himself mother-npAGR3sg-ACC
b. ?**A fiúk* látták [$_{DP}$ az [$_{NP}$ *egymás* anyját]]
the boys saw-AGR3pl the each other mother-npAGR3sg-ACC

This suggests that possessive NPs with reflexives are DPs but that possessives with reciprocals are simple NPs.[23]

If D acts as an accessible SUBJECT, the generalizations in (33) fall into place. The governing category for reflexives in possessive NPs is DP, because D may function as an accessible SUBJECT. Observe now that there is no suitable antecedent available in that category, yielding a violation of Binding Principle A. Hence, the ungrammaticality of (25a).

The governing category for small *pro* in possessive NPs is the same as for the reflexive. This implies that *pro* is free in its governing category, that is, DP, satisfying Binding Principle B. As a consequence, the sentences in (26) and (27) are grammatical.

The governing category for the reciprocal in possessive NPs cannot be DP. Structurally, such possessive NPs are, by absence of D, NPs. Therefore, the finite sentence containing this NP functions as the governing category for a reciprocal in a possessive NP. In this sentence, the reciprocal can find an antecedent, namely, the subject. This satisfies Binding Principle A, yielding the grammatical sentence (25b).

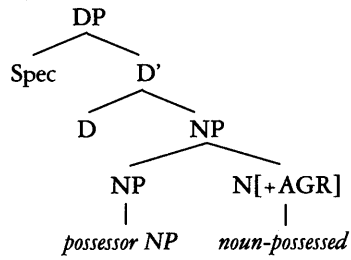
So far I have argued that D but not AGR is an opacity factor for binding theory in Hungarian. The question then arises how we can account for this result without making ad-hoc stipulations.

Suppose we allow an extension of the notion *subject* in the sense of Chomsky (1981: 38). According to this concept, a subject is an NP in a configuration [$_{\beta}$ NP XP], where *XP* stands for any maximal projection. Let us assume now that not only NPs but all categories at the position of NP are a structural subject in this configuration.

(23)The former claim is also supported by the fact that an anaphor may not appear as a dative possessor NP:
(i) **János* látta [$_{DP}$ *magának* az [$_{NP}$ *t* anyját]]
John saw-AGR3sg himself-DAT the mother-npAGR3sg-ACC
This sentence is ruled out as a Binding Principle A violation, because the trace of *maga,* being anaphoric, is not bound in its governing category NP.
The claim with respect to the structure of possessive NPs with reciprocals is somewhat weakened by the fact that (36b) improves when the reciprocal appears as a dative possessor NP:
(ii) ?*A fiúk látták egymásnak* (az) anyját
the boys saw-AGR3pl each other-DAT the mother-npAGR3sg-ACC

Therefore, D is a structural subject in possessive NPs. Compare 7.4.(4), here repeated as (37):

(37)



In this structure, D is a sister of the topmost NP. Hence, it is a subject in the extended sense.

Let us incorporate this notion of subject into binding theory. In the literature, it has been claimed that different categories may be opacity factors across languages including, among others, *I* in English (cf. Chomsky 1981), *C* in Dutch (cf. Koster 1987), and *AGR* in Turkish IPs, and NPs, (cf. George and Kornfilt 1981). It is of course rather unattractive from a theoretical point of view to have a list with various unrelated opacity factors. The comparison between AGR in Turkish NPs and Hungarian NPs may shed some light on what kind of generalization is involved.

Kornfilt (1984) has argued that a full-fledged AGR in Turkish heads the category which contains it. As a consequence, AGR assigns (genitive) Case and it acts as an accessible SUBJECT in NPs. AGR in Hungarian NPs, however, does not have these properties.

Note that these differences correlate with the fact that AGR in Turkish but not in Hungarian has phrase-structural prominence, that is, it is a structural subject in the extended sense. Suppose now that this category may function as an accessible subject. Hence, AGR in Turkish NPs is an opacity factor, in contrast with its Hungarian counterpart.

This interpretation of accessible subject thus provides some insight into the question why various types of categories, such as I in English, C in Dutch, D in Hungarian, and AGR in Turkish may be opacity factors. These categories are structural subjects in the extended sense.

7.4.2.4. Summary

This section examined some differences between PPs and possessive NPs. The NP-complement of possessive NPs may be marked dative, it may be extracted from its category, and it may not be a reflexive anaphor, unlike the NP-complement of PPs. These differences originate from the fact that possessive NPs, contrary to PPs, may contain a DP, the projection of a D. The Spec of DP provides a Case-position in which dative Case-assignment applies, and it serves as a landing-site and escape-hatch for moved possessor NPs. Furthermore, the D, being external to the NP, is a structural subject functioning as an opacity factor for binding theory.

AGR does not act as an accessible SUBJECT in Hungarian.[24] It cannot turn an NP or PP into an opaque domain, contrary to AGR in Turkish. Hence, it does not have phrase-structural prominence, unlike in Turkish. This indicates that we have to do with a cliticized morpheme in Hungarian. In the next section, I will provide support for this claim by comparing inflected PPs in Hungarian and Irish.

7.5. A Typology of Inflected PP

In the preceding section, I argued that AGR in Hungarian has no phrase-structural prominence. The question then arises what the status of this morpheme is in this language.

I will demonstrate that AGR is *agreement* in a traditional sense. Its function is to reflect the person-number categories of the NP-complement on the head. I will provide empirical evidence for this hypothesis by examining a dichotomy between inflected PPs in Hungarian and Irish.

In Hungarian, AGR in inflected PPs may always cooccur with an overt complement, provided that it is a pronominal (cf. section 7.3.1.):

(1)	a. (*én*) mögött*em*	b. (*ő*) mögött*e*	c. János mögött
	I behind-ppAGR1sg	he behind-ppAGR3sg	John behind
	'behind me'	'behind him'	'behind John'

McCloskey and Hale (1983) have observed that Irish displays so-called *'pronominal prepositions'*. These are simply prepositions inflected for AGR with their pronominal subjects (cf. (2b) and (3b)). AGR may not cooccur with an overt complement in such PPs. Hence, the illformedness of (2c) and (3c):

(2)	a. le Máire	(3) a. le iad/siad
	with Mary	with them/they
	'with Mary'	'with them'
	b. léi	b. leofa
	with-AGR3sg	with-AGR3pl
	'with her'	'with them'
	c. *léi Máire	c. *leofa iad/said
	with-AGR3sg Mary	with-AGR3pl them/they
	(Hale and McCloskey (1984), (41))	

These examples show that there is a complementary distribution between an overt subject NP-complement and AGR in inflected PPs.

(24) CasePs with a *pro*-complement pattern the same as dressed PPs. A *pro* subject is disjoint in reference to a c-commanding antecedent:

(i) a. **János* beszéit [$_{\text{CaseP}}$ *pro* róla]
John spoke-AGR3sg he DELAT-AGR3sg
**'John* spoke about *him.'*

b. **Ki* beszéit [$_{\text{CaseP}}$ *pro* róla]
who spoke-AGR3sg he DELAT-AGR3sg
**'Who* spoke about *him.'*

c. **Mindenki* beszéit [$_{\text{CaseP}}$ *pro* róla]
everyone spoke-AGR3sg he DELATG-AGR3sg
**'Everyone* spoke about *him.'*

This paradigm also supports the claim that AGR is not an opacity factor in Hungarian.

Hale (1988) treats this merging of AGR and P as an instance of Incorporation in the sense of Baker (1988). The person-number inflection is a pronominal heading a DP in the complement position of PP. This pronominal head may move to the head of the PP as an instance of head-movement. Hence, AGR in inflected PPs is identical with the NP-complement.

Hale's analysis immediately accounts for the fact why a complement may not be overtly present. Incorporation in Irish is the result of a *syntactic* rule which leaves a trace in the complement position of the PP. This excludes the realization of an overt syntactic NP in that position.

If AGR in Irish is affected by a syntactic rule, then this cannot be the case in Hungarian. Therefore, the merging of AGR and P is a *lexical* rule in that language. With inflected PPs, it is conditioned by the feature [+pron]. Only pronominals may trigger AGR in this category.

AGR in Hungarian does not differ from its counterpart in Irish in terms of the morphology of incorporation. Lexical and syntactic incorporation, the same morphological forms. The difference is that lexical incorporation cannot leave a trace, since only syntactic rules can produce traces. Hence, the possibility of spelling out an overt NP in Hungarian but not in Irish.

In conclusion, the status of AGR in Hungarian PPs is different from the status of prepositional inflection in Irish. In the latter, inflection is literally identified with the argument. It has been incorporated from the complement position in syntax. In the former, on the other hand, inflection merely agrees with the subject complement and it is already merged with the head in the lexicon.

This then yields a *typology* of inflected PPs. In languages with a syntactically incorporated AGR, the NP-complement may not be spelled out, whereas in languages with a lexically incorporated AGR, an overt NP-complement may cooccur with this morpheme. Irish provides an instance of the former type. Hungarian, on the other hand, is an instance of the latter type.

7.6. Conclusions

This chapter provided empirical evidence for the following claims:

(*i*) The syntax of PPs and NPs unambiguously demonstrates that maximal major categories are specified as *'head-final'* in Hungarian with respect to the Head Parameter. This supports the hypothesis that Hungarian is an SOV-language (cf. section 2.2.).

(*ii*) PPs and NPs differ in *richness* of structure. NPs may contain a D which sets up it own X'-projection, a DP. This is responsible for the fact that (possessive) NPs pattern differently from PPs in relation to Case theory, the theory of movement, and binding theory.

(*iii*) Furthermore, I isolated the properties of AGR in Hungarian by comparing dressed PPs, naked PPs, and possessive NPs. It displays the following properties:

(a) It has no phrase-structural prominence. In other words, AGR does not function as the head of the category which contains it.

- (*i*) AGR is not a structural Case-assigner, because a structural nominative Case also occurs in dressed PPs where it is lacking (cf. section 7.3.2.). Hence, a rule for nominative Case-assignment is independently required in this context. Furthermore, if AGR acts as the head of a category it assigns genitive Case, as in Turkish (cf. Kornfilt 1984), rather than nominative Case.

- (*ii*) AGR does not function as an accessible SUBJECT for binding theory (cf. section 7.4.2.3.). It is an opacity factor only when it heads a category, like in Turkish (cf. Kornfilt 1984).

(b) AGR in Hungarian is *agreement* in a traditional sense.

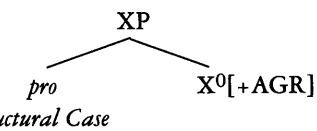
- (*i*) It merely reflects the person-number features of the subject NP-complement. AGR is not the argument itself, such as in Irish (cf. section 7.5.). Hence, it may cooccur with an overt NP. This implies that the merging of AGR and an X^0 is a lexical phenomenon.

- (*ii*) These properties support the hypothesis that person-number complexes are *weak* in Hungarian (cf. chapter two). They are bound morphemes that must merge with a lexical category. Therefore, these complexes cannot determine an X'-projection by their own.

(c) AGR identifies a non-overt *pro* subject.

- Small *pro* is allowed in dressed but not in naked PPs. This supports Rizzi's (1986) theory on the *local recovery* of *pro* (cf. section 4.2.4.). The feature specification of *pro* is licit in dressed PPs, because it is recoverable from AGR on the P (cf. section 7.3.1.). The structural sanctioning of *pro* is also covered in dressed PPs. Dressed Ps assign a structural (nominative) Case to their NP-complements (cf. section 7.3.2.). Therefore, the following configuration captures the distribution of *pro*-drop in Hungarian:[25]

(1)



where X^0 = *V*, *dressed P*, *N* or *Case*

(25) É. Kiss (1987a) assumes that long Left Dislocation involves a resumptive *pro* at the empty argument position (cf. chapter 6, note 5 for discussion of this phenomenon). This occurrence of *pro* does not correspond with its distribution in Hungarian (cf. (1)). Since the antecedent (the long left-discolated NP) of this empty category is not its structural sister. Hence, either Rizzi's (1986) theory of *pro* is too restrictive or long Left Dislocation does not involve small *pro*. I will leave this problem for further research.

8. GENERAL CONCLUSIONS

Up until recently the study of Hungarian has been guided by the view that it is a language with rather specific properties which do not turn up in other languages. I will refer to this as the *Hungarian-as-a-different-language-doctrine*. This doctrine originates from a mixture of cultural, historical and linguistic factors.

Under the influence of romanticism, a national movement arose in nineteenth century Hungary, which was in search of the own identity of the Hungarian people. One way to reach this goal was to stress the special character of the Hungarian language. This tendency was strengthened by the fact that Hungarian, a language of Finno-Ugric origin, was surrounded by non-related Germanic, Slavic and Romance languages.

Staal (1986: 274-275) noted that the western tradition with respect to the study of language has been word-oriented. Language has been considered as a collection of words. De Haan (1988), for example, notes that this view has strongly determined the linguistic research on the West-Germanic language Frisian up till quite recently.

In Hungary, a country belonging to the western cultural sphere, this view has been popular as well. This may be observed from the fact that grammar books on Hungarian mainly contain long lists of morphological paradigms. It is often claimed that this covers the whole language-structure.

These cultural historical factors have been reinforced by some striking properties of Hungarian, such as free word order, its agglutinative nature and the fixed Focus-position, which are often absent from familiar European languages.

In recent theoretically oriented research, a further pitfall was the fact that it was confronted almost exclusively with English. It was, however, overlooked that the position of English among the Germanic languages is rather unique (cf. Koster 1988). Only English has 'strong' auxiliaries, no movement of the main verb, and so on. Syntactically, Hungarian resembles rather the Germanic languages Dutch, Frisian and German. Hence, the comparison of Hungarian with these or the Slavic languages makes it look far less "exotic".

The Hungarian-as-a-different-language-doctrine has been most clearly represented in the work of É. Kiss. According to É. Kiss, the role of phrase structure in Hungarian is *fudamentally* different from its role in English. She claims (cf. É. Kiss 1987a: 250) that: "In the type represented by English, phrase structure configurations encode lexical structure, and logical relations are expressed on a virtual level, in the type of languages represented by Hungarian, phrase structure encodes logical relations, and lexical structure exists merely in the form of a virtual structure (if at all)." Thus, according to this view, the phrase structure of Hungarian does not ex-

press the familiar structural subject-predicate partitioning of the sentence, as in English.

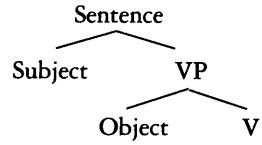
It was argued in this study that the treatment of Hungarian-as-a-different-language is rather unmotivated for both theoretical and empirical reasons. Therefore, the setting of "deep" parameters, like Configurationality Parameters, which have the effect of destroying the structural subject-predicate partitioning of the sentence, should be rejected.

Our approach was guided by *the idea of an abstract and fairly uniform underlying structure across languages*. This research strategy has proven to be fruitful for the study of UG. We defended the claim that all languages have a similar phrase structure at the proper level of abstraction. From this hypothesis an insightful and empirically motivated analysis of Hungarian phrase structure ensues.

The idea of an abstract and fairly uniform underlying structure across languages dictates Hungarian to be configurational, because configurational languages are well-attested. This represents the null-hypothesis, although some of its properties, like subject-object symmetries, are apparently in conflict with such a structure.

In a configurational phrase structure, the subject occupies a different position than the object. The object is dominated by the VP, whereas the subject is external to this maximal projection:

(1)



Languages with this structure display subject-object asymmetries. These phenomena also appear in Hungarian (cf. chapter five). This indicates that its phrase structure is configurational.

It is rather surprising that subject-object asymmetries have been reported so poorly in the linguistic literature of Hungarian, particularly, if we take into account that they probably belong to the best documented language-universals.[1] É. Kiss (1981c) observed an asymmetry with reflexive binding, and Horvath (1981) did the same with WCO. Apart from the cases listed in chapter five, no other convincing subject-object asymmetry has been discussed.[2] This is, in my view, due to the Hungarian-as-a-different-language-doctrine. The idea of an abstract and fairly uniform underlying structure, however, leads one to search for subject-object asymmetries quite naturally. By adopting this approach, it is therefore to be expected that these phenomena will turn up in all natural languages.[3]

In this thesis, I argued that the real challenge offered by the 'non-configurational' or 'free' word order languages is to account for the parallel occurrence of a cluster of subject-object asymmetries and subject-object symmetries. It is extremely unlikely that the properties of these clusters will be covered by the parametrization of one module, because they are heterogeneous in nature and they sometimes affect one and the same module. Therefore, it seems to me, only an articulated theory of UG will be able to account for these phenomena.

For example, in Hungarian subject-object symmetries are found with respect to superiority effects and *that*-trace phenomena, although the subject is structurally prominent to the object in phrase structure. This apparent contradiction may arise, however, because the binding domain for both subject and object Wh-traces is similar, namely CP (cf. section 5.4.).

Free word order phenomena have been captured in early generative grammar by a stylistic rule, that is "scrambling", applying at PF (cf. Ross 1967). This has proved to be a rather trivial hypothesis. It cannot explain, for instance, why in some languages, like Hungarian or Japanese, scrambling applies almost freely, but it is blocked in others, such as English or Navajo. Scrambling furthermore suggests that word order is rather unconstrained in languages in which it applies.

In Hungarian, this is clearly not the case. Hungarian displays all sorts of restrictions on word order. It has a neutral SVO-order, a fixed Focus-position, quantifiers strung together to the left of the verb, complex verbs exhibit a verb-final order, and maximal projections are head-final (cf. chapter two). Moreover, scrambling as a PF-rule has also been falsified empirically. For example, the fact that it affects the interpretation of bound pronouns clearly demonstrates that scrambling is not a PF-rule but a syntactic rule (cf. section 5.3.4.3.).

Horvath (1981) was the first who tried to restrict 'freedom' of word order in Hungarian by syntactic conditions on operations like adjunction. In this study, I have added two other sources for freedom of word order, namely CP-recursion and V-movement. It remains to be investigated whether this is correct and, if so, how further restrictions can be made. For example, suppose that the evaluation metric of X'-syntax determines the directionality of adjunction. In that case, only leftward adjunction would be possible in Hungarian.

É. Kiss (1987a: 187) proposes the following hierarchy to systematize the extensive morphological case-system in Hungarian:

(2) NOM > ACC > DAT > INSTR > ADVERBIAL

É. Kiss assigns this hierarchy a *special* status in the grammar of Hungarian. According to É. Kiss, it is an auxiliary device which takes over the role of the non-configurational phrase structure when this is unable to account for syntactic relations.

In this study, however, we further elaborated on Van Riemsdijk (1982) who in turn relies on the insights of Relational Grammar and Lexical-Functional Grammar. Van Riemsdijk classifies the above hierarchy in terms of a binary feature-system involving mnemonic labels, like [SUBJ] and [OBJ]. Morphological cases should not be mapped directly onto abstract Case but through the mediation of this feature-system (cf. section 5.4.1.). Consequently, there are no longer "deep" syntactic differences between English and Hungarian but only at the surface level involving the morphological encoding of abstract Case.

The Hungarian-as-a-different-language-doctrine has also influenced Horvath's (1986) treatment of Focus, although Horvath adopts the idea of an abstract and fairly uniform underlying structure across languages (cf. Horvath 1986: introduction).

Horvath assigns Hungarian main clauses an SVO-order, and embedded clauses an SOV-order. This matches the distribution of word order in non-English Germanic languages. In these languages, this phenomenon has been analyzed as 'V-second' (cf. Koster 1975 and Thiersch 1978, among others).

It has been argued that the order of the embedded clause represents the underlying order and that the order of the main clause is derived by movement of the finite verb. Surprisingly, instead of treating Hungarian as an SOV-language with V-movement, Horvath takes SVO as the basic order. As a result, its phrase structure has a *special* VP-internal position for Focus. This leads to some questionable consequences, like a lowering-transformation with subject focussing or the VP-internal position of Wh-phrases which is rather exceptional from a cross-linguistic point of view.[4]

These problems could have been circumvented, if the underlying SOV-order had been related to the unmarked SVO-order by V-movement, like in the Germanic languages with V-second (cf. chapter two). As a consequence, the adjacency requirement on Focus could have been treated as the Hungarian manifestation of the V-second effect.

Chomsky (1986b) argues that V-second appears in the following configuration:

(3) $[_{CP}$ (X") (V-finite) IP]

X" in the [Spec, CP] marks the position of Wh-phrases or some other quantified expression. The finite verb may land in the [C, CP] position as a result of V-movement. This yields V-second. Concomitant to this phenomenon is an adjacency effect involving the category which fills the X"-position and the finite verb.

If focussing in Hungarian is regarded as a V-second effect, then this immediately explains why the Focus-position must be left-adjacent to the verb. Futhermore, a striking parallel with English arises.

V-second in English yields I-to-C movement. This is triggered by exactly the same type of categories which trigger Focussing in Hungarian, namely, quantified expressions like Wh-phrases, negated phrases and so on. So, the treatment of focussing as a V-second effect not only avoids the theoretical problems which Horvath's (1986) approach runs into but also makes some interesting parallels available with other languages.

Let us summarize the most important results of this study. Consider first the concepts which are supported by empirical evidence from Hungarian.

- Hungarian phrase structure has a *VP* which is supported by the occurrence of a large variety of *subject-object asymmetries* (cf. chapter five). This provides empirical evidence for the hypothesis that the VP is a language-universal, and that these phenomena appear in all natural languages.
- The *Projection Principle* maps lexical structure onto syntactic configurations. A number of unrelated phenomena show that this principle is operative in Hungarian as well (cf. chapter four).
- Hungarian phrase structure exhibits the two characteristic properties of standard grammatical tree-structures, namely, *symmetry* and *recursion*. Symmetry appears in X'-grammar. All endocentric maximal projections are left-branching

(cf. chapter two). Recursion turns up in two subcomponents involving X'-grammar (cf. chapter two) and Wh-module (cf. chapter six). CP is recursive within CP and the scopal domain of Wh-phrases is extended by the iteration of a dummy Wh-phrase, or by successive cyclic movement of the Wh-phrase itself.

- We have provided evidence for the theory of *empty categories*. This theory is motivated by the idea of an abstract and fairly uniform underlying structure par excellence, for there is nothing to see in the overt syntactic representation. Small *pro* holds the position of omitted pronouns in Hungarian (cf. chapter four and seven) and *trace* fills the base-generated position of moved Wh/Focus-phrases (cf. chapter six).
- Maximal projections may vary in the *richness* of structure (cf. chapter seven). Ns but not Ps may combine with a D which projects into a maximal projection, a DP. As a consequence, an NP is in fact a DP and it is richer in structure than a PP. This has repercussions for the syntax of these categories (cf. chapter seven).
- Languages may differ with respect to the *strength* of person-number agreement. AGR or I is 'strong' if it is lexically independent, and it is 'weak' in case it is a bound morpheme. Only if I or AGR is strong may it head an X'-projection, otherwise it must merge with a lexical item. *AGR* and *I* are *weak* in Hungarian (cf. chapter two and seven). Hence, they have no phrase-structural prominence.
- The agent and theme role of morphologically unaffected verbs in Hungarian are always mapped onto the syntactic configurations in accordance with the *UTHACs* (cf. chapter three). The agent role is projected onto the subject position, and the theme role is projected onto the object position. This supports the hypothesis that these matching rules are the *unmarked* cases of θ-assignment.
- *Parameter theory* is a fruitful way to address questions of language-typology. We have set the following parameters: *IP-parameter* (cf. chapter two and five), the *Head Parameter* (cf. chapter two and seven), *Pro-drop Parameter* (cf. chapter four and seven), the *θ-Assignment Parameter* (cf. chapter three), and the parameter +/- *move Wh* (cf. chapter six).

Let us make some remarks with respect to the final point, parameter theory. Before doing so, consider a brief review of these parameters.

I have related some of the typological differences between English on the one hand and Hungarian and other Germanic languages like Dutch, Frisian and German on the other hand to the IP-parameter. I is an independent lexical item in English but not in the other languages. This property has far-reaching consequences for the syntax of these languages. The IP-parameter establishes a correlation between V-movement and subject-object symmetries. If a language has V-to-C movement, it displays subject-object symmetries.

Hungarian is specified with respect to the Head Parameter as 'head-final'. The heads of all endocentric categories are in final position. This represents one of the core options of X'-theory. The Head Parameter does not only bear on X'-theory but also on the grammar of scope. In a left branching language, the leftmost quantifier has the largest c-command domain, and thus it has wide scope.

Hungarian realizes the agent and theme role of morphologically underived (in)transitive verbs in accordance with the UTHACs. The agent corresponds with

the subject and the theme with the object. In English, these conventions may be suppressed. Hence, in Hungarian but not in English syntactic NP-movement is blocked with Passivization, Ergativization, Middle verbs, and Raising Verbs, Dative Shift is lacking, and the predicate containing an inalienable body object does not assign a compositional θ-role to the subject.

Hungarian exhibits two dialects concerning long Wh-movement, namely +/- move Wh. This parameter relates phenomena involving an accessibility hierarchy for overt long Wh-movement, preference for the *mit*-strategy, the conjugation of intermediate verbs, parasitic gaps and resumptive pronouns.

Comrie (1987) distinguishes two types of parameters. *Holistic* parameters which may affect the totality of the language-structure, and *partial* parameters which cover only a subpart of the language-structure. In our terminology, this means that holistic parameters may bear on several modules, whereas partial parameters are restricted only to one single module.

According to this typology, the θ-Assignment Parameter is a partial parameter. It refers only to θ-theory. The IP-parameter, the Head Parameter, the *Pro*-drop Parameter, and +/- Move Wh, on the other hand, are holistic parameters.

For example, the IP-parameter affects various components of the grammar like move-α (V-movement), X'-theory (verb-object adjacency, VP-deletion and topicalization to CP) and Wh-module (the lack of superiority and *that*-trace effects). Hence, this parameter connects totally unrelated phenomena and it accounts for the fact that these phenomena and only these phenomena are interrelated across languages.

It seems to me that holistic parameters make intriguing claims with respect to problems of language-typology. Therefore, I do not share Comrie's scepticism with respect to the setting of such parameters. Of course, they should be conditioned. Parameters must at least be inductive, for reasons of explanatory power, and they should be easy to discover, because of learnability. The latter requires, for example, that parameters are related to the lexicon (cf. the IP-parameter), or to surface properties, such as 'rich' morphology (cf. the *Pro*-drop Parameter) or surface order (cf. the Head Parameter). I will leave, however, the further elaboration of these questions for future research.

Let us consider now the theoretical concepts of standard approaches in generative grammar which have to be rejected on the basis of empirical evidence from Hungarian.

- Hungarian favors a *representational* approach over a derivational approach to grammar. This implies that the theory of movement has no independent status in the theory of UG. We have supported this claim with evidence from *split constituents* (cf. chapter four) and the so-called *mit*-strategy (cf. chapter six). In both cases, a derivational theory cannot account for the facts without making ad-hoc assumptions.
- The level of representation referred to as 'Logical Form' is superfluous (cf. chapter six). The *scope* of quantified expressions in Hungarian can be read off directly from *S-structure*. The S-structure counterpart of May's (1977) Quantifier Raising involves binding with a scope marker.

- I have demonstrated that *Binding Principle C* is not a core principle of UG (cf. section 5.4.2.7.). It is not stable across languages and it is sometimes determined by non-syntactic phenomena like linearity. Binding Principle C effects with names can at best be subsumed by a *discourse principle*. This implies that the core principles of binding theory are *Principle A* and *Principle B* (cf. Koster 1987: chapter 6). Hence, binding theory is then a theory only about the properties of dependent items, such as anaphors and pronouns.

In conclusion, I have argued in this study that the phrase structure of Hungarian is configurational. This supports the hypothesis that all languages exhibit a configurational core. This result has been achieved by adopting the view that the idea of an abstract and fairly uniform underlying structure provides a fruitful approach for tackling linguistic puzzles. If we are willing to abstract from surface phenomena, rich and articulated structures become visible which happen to be rather constant across languages.

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