Verb–Object Dependencies in Hungarian and English:

A DRT-Based Account

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Erklärung

Ich erkläre hiermit, dass ich unter Verwendung der im Literaturverzeichnis aufgeführter Quellen und unter fachlichen Betreuung diese Dissertation selbständig verfasst habe.

Ágnes Bende-Farkas

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Part I

Background, Introduction

Acknowledgements and Some Background

This thesis grew out of a plan to study tense and aspect in Hungarian: The richness of prefixation in this language seems to offer many aspectual puzzles. But then Hungarian linguists know all too well that the view to pure aspectuality is obscured by these annoying definiteness constraints many verbs impose on their arguments. So, before aspect could be handled in a principled and systematic manner, these obscure little trifles such as the binding properties of internal arguments had to be cleared out of the way. Predictably, the problem turned out to be not that trifling at all. Hopefully, it has also become a little less obscure.

The writing of this thesis has involved an almost constant tension between its primary aim — to provide a systematic and *abstract* formal account, and the elusiveness of the phenomena, which required extensive data collection. The results of this work yielded a large bulk of data, all of which could of course not receive a formal treatment. But it has helped to set the stage for what *does* receive a formalisation. This is the reason, by the way, for the prominence of the descriptive chapters.

* * *

This thesis would not have been possible without the stimulus, help, encouragement and inspiration I have received over the years.

From my parents I have received a legacy of integrity and exigency as ambition for self-improvement. I spent my highschool and undergraduate years in an exceptionally stimulating environment. The exigency, rigorousness and warmth of my teachers and professors can never be forgotten. Special thanks are due to my Mathematics teacher Vizi Imre, who showed that writing an equation can be like translating natural language into the language of Mathematics, to my Physics teacher Tellman Jenő, and to my M.A. advisor Cs. Gyímesi Éva. Éva taught us by her personal example that intellectual pursuits require integrity, honesty and courage. Sometimes quite literally.

During my undergraduate years I was privileged to receive informal tuition from my home town Kolozsvár's intellectual élite. I can only think back with gratitude at these extremely pleasant conversations, when I could learn and develop almost by osmosis. With hindsight, I cannot help wondering at the generosity and altruism of this élite, at their selfless dedication in grooming young intellectuals (well, fuzzy young intellectual hopefuls). I can never forget the late Professor Gáll Ernő or the playwright philosopher Székely János, both of whom taught me relentless exigency, especially towards myself. I owe many thanks to Szilágyi Júlia and my mentor and special friend Müller Ádám. May we have many more exciting conversations!

This thesis owes an obvious debt to the Hungarian linguistics community. First of all, as the reader can instantly discover, the present work relies so heavily on theirs. During my years in Budapest the members of this community were always ready to provide advice, help and comments. Special thanks are due to Szabolcsi Anna, É.Kiss Katalin, Professor Kiefer Ferenc, Michael Bródy, Kenesei István, Kálmán László, Pólos László and Professor Ruzsa Imre. Not to mention the colleagues with whom we shared many of our plans and concerns, and who were always ready to contemplate the most recent idea or batch of data — they are Bartos Huba, Dalmi Gréte, Szigeti Imre, Tóth Gabriella...My long-time friend Vöő Panni was always ready to add her literary historian's perspective to my examples.

During the actual work on this thesis I benefited immensely from the community at the IMS, and also from discussions with Peter Krause, Tim Fernando, Paul Dekker, Irene Heim, Franz Beil, Steve Berman, Barbara Partee, Edward Keenan, Uwe Reyle, Bernhard Schwartz, James Pustejovsky, Nicholas Asher, Arnim von Stechow, Dorit Abusch, whose presence at the IMS was encouragement itself, and the three persons whose names are left last on purpose: Hans Kamp, Mats Rooth and Ede Zimmermann. My indebtedness to them is so obvious, I can only hope that by doing my best in this thesis I could at least begin to return some of my debts.

Apart from their supervisorial criticism, advice or encouragement, I have received additional stimulus from their current work as well. The phenomena reported in this thesis require lexical decomposition and sometimes involve Focus — these are Mats Rooth's fields. Ede Zimmermann's work on opacity has been a direct inspiration for the analysis of existential constructions as involving a novel form of opacity. The semantic effects reported here are best analysable in a theory which contains an independent representational component, and which for sublexical event structure to anaphora resolution and attitude reports — Discourse Representation Theory has therefore been just the right medium.

The generous encouragement and assistance I received from Hans Kamp has been crucial ever since my first days at the IMS. I could only stand to gain from his insatiable curiosity regarding both the raw data and the possible regularities behind them, from his helpful suggestions in sorting out recalcitrant cases, and from his high standards of clarity and mathematical precision.

Köszönöm mindenkinek!

Chapter 1

Introduction

This thesis is about Hungarian verbs, and the novelty or familiarity properties they impose on their internal arguments. In the simplest terms, it is about the Definiteness Effect (understood as in Milsark (1977) or in the articles from Reuland and ter Meulen (1987)) shown by a large class of verbs that lack a prefix, and about the so-called Specificity Effect, which emerges just in case a certain perfective prefix is attached to the same verbs.

(1.1) *a.* János talált egy cikket/∗minden cikket
John found one article-Acc/every article-Acc
"John found an article/[intended:] every article"

b. János meg-talált egy cikket/minden cikket
John MEG-found one article-Acc/every article-Acc
"John found(=retrieved, localiised) (every) one of the articles"

What one sees in Hungarian is that a sizeable verb class triggers the Definiteness Effect. According to Anna Szabolcsi, these verbs convey the information 'something new became available or came into existence in virtue of the event I describe' (Szabolcsi (1986)). The existential sentence in (1.1a) describes the way a discourse referent and the object it denotes become available and known to the Experiencer and to discourse participants. In addition to the introduction of new discourse entities, Hungarian existential sentences describe events that are new or unexpected for at least one discourse participant (or possibly to the Agent).

The so-called Specificity Effect (Kiefer (1983), É.Kiss (1995a)) arises when the aspectual prefix *meg* is attached (roughly) to the same verbs. The first contribution of this prefix is to cancel the Definiteness Effect. An additional contribution of *meg* is the specific construal of the internal argument. With indefinites this is partitive-specificity in the sense of Enç (1991): the discourse referent of the indefinite is a new, arbitrary member of a familiar collection. Quantifiers likewise acquire a partitive or discourse-linked construal. Like the Definiteness Effect, the Specificity Effect involves not only the ±familiarity of an argument *NP*, but also the ±familiarity of the event description. Specificity Effect sentences describe events that are expected or planned (Perrot (1966)).

The Definiteness Effect and the Specificity Effect are representational, in the sense that the same event (such as the event of finding an article in (1.1)) may be described by either means. The difference lies in the information made available to discourse participants.

The task of the thesis is to provide a formally precise analysis of the Definiteness Effect and the Specificity Effect in Discourse Representation Theory (Kamp and Reyle (1993)), by tracing its origins, so to speak, to the subevent and argument structures of ±prefixed verbs.

The guiding hypothesis is that both the Definiteness Effect and the Speficity Effect involves a form of binding. With the Definiteness Effect the internal argument is existentially bound (Milsark (1977)). In the case of the Specificity Effect *meg* is a presupposition trigger, and the internal argument (though itself not presuppositional) is dependent on a distinguished argument from the presupposition.

The scope of the analysis for the Definiteness Effect extends to English *there*-sentences and to certain so-called quasi Definiteness Effect verbs in English (Burton (1995), Moltmann (1997)).

In both languages, the Definiteness Effect is taken to be a novelty constraint on the relevant discourse referent (Ward and Birner (1995), Blutner (1993), McNally (1998)). This constraint is taken to result from binding by a distinguished variable contained in the entry of the verb (or expletive+verb complex). The novelty constraint itself hinges on the novel, or non-presuppositional status of the event description itself (Kálmán (1995)). This is supported by sentences where the Definiteness Effect appears to be cancelled. The earliest known cases are from Hungarian: it was shown in Szabolcsi (1986) that in the presence of Focus the Definiteness Effect disappears.

(1.2) *a.* ∗János talált minden macskát
John found every cat-Acc
Intended: "John found every cat"

b. Minden macskát [János]$_F$ talált
Every cat-Acc [John]$_F$ found
"For every cat x, it was John who found x"

The thesis contains comparable English data that also show that the (quasi) Definiteness Effect is cancelled just in case the factor responsible for it is lexical, as in the case of the verb *have*. (In other words, the Definiteness Effect triggered by *there be* is not cancelled.)

Existential sentences are analysed as opaque constructions. The kind of opacity which is at issue could be called discourse opacity: The relevant context is narrowed down to one in which both the event described and the internal argument discourse referent count as new. It is shown (in Chapter 4) that existential constructions (in Hungarian and in English, too) do exhibit quite a few of the characteristic properties of opacity.

The analysis of existential constructions employs a version of Semantic Incorporation (van Geenhoven (1996), van Geenhoven (1998)). The intuition behind this choice is that the role of the *NP* is closer to that of a secondary predicate than to that of an argument phrase in the usual sense of this term.

The source of the Specificity Effect is the presupposition triggered by the prefix *meg*. This prefix is analysed to contribute a so-called precondition state to the entry of the verb. It is shown with presupposition tests that this state has the status of an anaphoric presupposition. The partitive–specificity of the internal argument is seen to follow from its dependency on one of the discourse referents contained in the presupposition.

From this terse presentation it may have become apparent that semantic composition plays a major role in the present work. The fundamental assumption behind the method employed here is that (sentence-internal) semantic composition can be handled with essentially the same tools as cross-sentential anaphora resolution (see also Bittner (1999), Bittner (2001), Kamp and Roßdeutscher (1994b) or Kracht (1999)). In the context of this thesis 'anaphora resolution' means term unification with DRS-merging (van Eijck and Kamp (1997), Muskens (1996)). Unification is used uniformly both in the composition of Definiteness Effect verbs with their internal argument *NP*s and in that of simple verbs with the prefix *meg*.

An important language specific factor is that Hungarian Definiteness Effect verbs are analysed as light verbs with a deficient subevent structure (see also Komlósy (1994)). Their subevent structure may be completed either by their internal argument (this corresponds to the Definiteness Effect) or by a preverbal secondary predicate (prefixes being understood as a subspecies of secondary predicate). The analysis developed here handles both genuine complex predicate formation and the Definiteness Effect case in a uniform manner.

In a nutshell, these are the basic points made in the thesis. Much of the content proper, however, conveys either background information on Hungarian, or reports the results of empirical tests that have helped in establishing these points. Beside the analysis proper, several passages are explorations of its consequences, or concentrate on Hungarian-specific issues such as incorporation or the problem of Focus-sensitive *NP*s like *legalább két macska* 'at least two cats', which in Hungarian behave like quasi-strong *NP*s.

The thesis is built up as follows:

Chapter 2 presents background information on Hungarian sentence structure and the semantics of distinguished preverbal positions. It also contains a brief analysis of the semantics of the Topic and Focus positions.

Chapters 3 and 4 present the relevant data and empirical tests. Chapter 3 does so from a more superficial, *NP*-centric perspective. Chapter 4 contains a detailed discussion of the subevent and argument structure of ±prefixed verbs, establishing informally the main observations and claims. This chapter also includes a discussion on the semantic effects that are seen to follow from the subevent structures attributed to these verbs.

Chapters 5 and 6 contain an analysis of the Definiteness Effect in English and in Hungarian, respectively. Chapter 7 contains the analysis of the Specificity Effect.

The reader can see that this work is divided into two major parts: a descriptive, data-oriented module (chapters 2–4) is followed by chapters that contain the analyses proper. However, the text can also be read according to the following partition:

General background on Hungarian : Chapter 2, parts of Chapters 3 and 4.

The Definiteness Effect: Section 3.2 in Chapter 3; subsection 4.2.1, and the appropriate subsections in Chapter 4; Chapters 5 and 6.

The Specificity Effect : Section 3.3 in Chapter 4; subsection 4.2.2, and the appropriate parts or subsections in Chapter 4; Chapter 7.

Chapter 2

Hungarian Sentence Structure

2.1 Introduction

2.1.1 Motivation

In this preliminary chapter I present some background information on Hungarian sentence structure, with particular emphasis on the distinguished preverbal positions Topic, Quantifier and Focus, and their semantic properties. There are several reasons for doing so. Apart from the usefulness of providing a general background on Hungarian, one reason is the rather tight correlation of certain semantic properties with syntactic positions in this language, as shown in Katalin É.Kiss', István Kenesei's, László Hunyadi's, or Anna Szabolcsi's work: É.Kiss (1987), É.Kiss (1994), Kenesei (1986), László Hunyadi (1986), Szabolcsi (1997a).

This tight correlation in turn implies that the semantic properties in question can be tested in Hungarian in a simple and straightforward manner, by generating sentences with the relevant word order, or with the relevant constituent in the appropriate position. A consequence of the semantic markedness of these positions is that *XP*s whose intrinsic semantic properties are incompatible with those of a given position will be excluded from that position. For instance, universal quantifiers cannot occur in the so-called Topic position, as seen from the ungrammaticality of (2.1a):

(2.1) *a.* $*$[Minden fiú]$_T$ [Marival]$_T$ [tegnap]$_T$ táncolt
[Every boy]$_T$ [Mary-with]$_T$ [yesterday]$_T$ danced
Intended: "Every boy danced with Mary yesterday"

b. OK: [Marival]$_T$ [tegnap]$_T$ [minden fiú]$_Q$ táncolt
[Mary-with]$_T$ [yesterday]$_T$ [every boy]$_Q$ danced
—the same as above—

So far, even these sketchy remarks are sufficient to suggest that these positions are independent of each other, in that the kind of *XP* that can fill a given position does not depend on properties expected or assigned by other positions. Of course, there is some interaction between the fillers of these positions, in the sense that each element scopes over the constituents on its right. (This is the Scope Principle for Hungarian: surface order marks logical scope.) What I meant by independence concerns distribution: whether a constituent can occupy a given position is determined by the semantic properties of that constituent alone, and not by the properties of its neighbours. This is in fact a widely shared assumption in the literature on Hungarian.

A challenge to this assumption is Topicalisation and its interaction with the Definiteness Effect. In brief, what one has is that the *NP* subject to the Definiteness Effect may not be Topicalised in Hungarian. This is shown in (2.2b) below. A case like (2.2) is relevant, because on its own the *NP* in question is not incompatible with the semantics of the Topic position. Rather, what one has is that the lexical semantics of the verb prevents the *NP* from occupying the Topic position.[1]

[1] Arguably, if the *verb* prevents an *NP* from being Topicalised, this does not really affect the status of the assumption

The Definiteness Effect can be understood as a novelty constraint that affects at least the relevant *NP* (Prince (1981), Ward and Birner (1995), Blutner (1993), McNally (1998)). In fact, this thesis too adopts this view on the Definiteness Effect. On the other hand, it has been attested that indefinites in Topic position acquire a partitive-specific construal (É.Kiss (1994)) that is not entirely compatible with discourse novelty.

(2.2) *a.* Van egy macska a tetőn
Is one cat the roof-on
"There is a cat on the roof"
b. ???[Egy macska]$_T$ van a tetőn
[One cat]$_T$ is the roof-on
Intended: "One of the cats, there it is on the roof"

The reason for the contrast between (2.2a-b) may be a clash in ±novelty properties, as hinted at above, but it may as well be a matter of non-locality. It will be seen in Chapter 3 that in English and in Hungarian the Definiteness Effect requires the relevant *NP* to combine locally with its verb(+expletive); this however is not possible if the *NP* is in Topicalised or dislocated. This issue will be taken up again in Chapter 6.[2]

From the verb's point of view, then, it is clear that it can impose a constraint on its relevant argument, which is strong enough to prevent this *NP* from occupying the Topic position. (Whether this is a novelty constraint and/or a locality constraint is not relevant at this point.) With the so-called Focus position, one sees a reverse effect: if the relevant *NP* occupies the Focus position, the Definiteness Effect disappears. This is seen from the contrast between (2.3a-b):

(2.3) *a.* ∗Van a macska/Jaune Tom a tetőn
Is the cat/Jaune Tom the roof-on
"There is the cat/Jaune Tom on the roof"
b. [A MACSKA]$_F$/[JAUNE TOM]$_F$ van a tetőn
[THE CAT]$_F$/[JAUNE TOM]$_F$ is the roof-on
"It is the cat/Jaune Tom that is on the roof"

The semantics of Focus is at odds with the Definiteness Effect as well, just like the semantics of the Topic position. Focus is said to be a presupposition trigger, which is not entirely compatible with discourse novelty. Focus however is seen to interact with the verb in such a manner that the constraint imposed by the verb either becomes irrelevant, or it is satisfied at the level of the presupposition triggered by Focus. This issue will be taken up in Chapters 4 and 6. What is relevant here that Focus, too, is seen to interact with the meaning of a different constituent.

The array of semantically earmarked syntactic positions in Hungarian may lead one to assume a top–down architecture in constructing semantic representations. On the other hand, the phenomena examined in this work are "bottom up" in the sense that semantic properties of certain verb classes can either determine the word order of their designated (Theme) arguments, or at least these lexically encoded constraints interact with the "structural" constraints of say, Focus, in a non-trivial way. What I want to do in this chapter (beside presenting an overview of Hungarian sentence structure) is to sketch a top-down toy system. Later, in Chapter 6, it will be tested as to how it can be integrated with the bottom-up bits and pieces that are the bulk of the thesis proper.

The presentation of the distinguished preverbal positions will be mainly descriptive, adhering to what may be called the "classical" view, found in Katalin É.Kiss' or Anna Szabolcsi's work. Recently, new data and new insights have emerged that have complicated the original picture somewhat (Kenesei (1998), Roberts (1998), Vallduví and Vilkuna (1998)). This "Baroque" stage will be briefly presented towards the end of the chapter.

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that the *preverbal* positions are independent from each other. Better cases are (i) the merge of negation with Focus, shown later in this chapter, and (ii) the fact that *sok* 'much'/'many' has a strong tendency to occur in Topic position *only when* the Quantifier or Focus positions are filled. Some examples with *sok* will be given in Chapter 3, on page 78.

[2]Topicalisation or fronting is at least awkward or requires a special context in English existential sentences as well: *??#A sister, I think that John has.*

2.1.2 Overview of Preverbal Positions

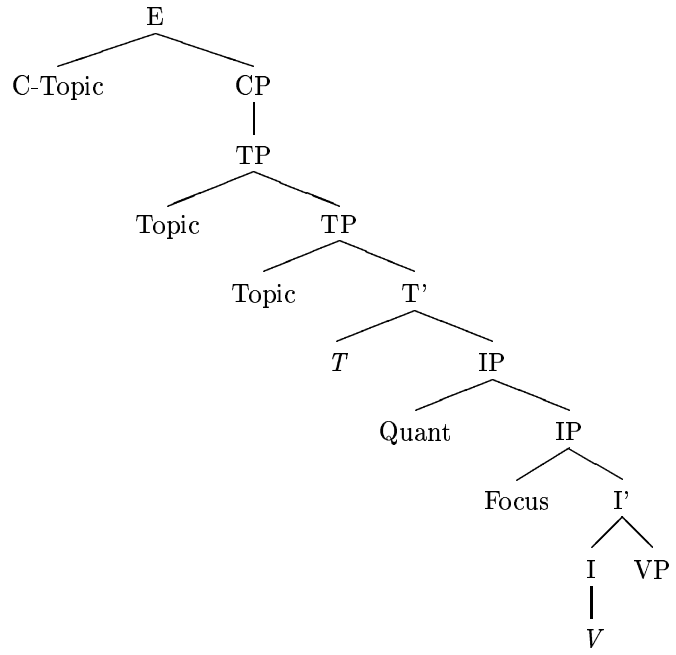
The distinguished preverbal positions in Hungarian are the following. (The Kleene-star has the usual meaning.)

(2.4) (*Contr.Topic*) *Topic** *Quantifier** *Focus/* PredOp (*Verb*) (*The Rest*)

The syntactic structure assumed in this chapter conforms to the model in É.Kiss (1994). The discussion on the semantics of these positions does not depend on a particular choice of syntactic framework.

In É.Kiss (1994), Hungarian sentences are assigned the following syntactic structure:

(2.5)



(2.5) contains the following information about Hungarian sentence structure:

- Contrastive Topics are *external* Topics, in the sense of Aissen (1992). They are outside the sentence structure proper.[3] Hence the category labelled E that dominates Contrastive Topics. It is shorthand for 'Expression', a category defined in Emonds (1985). This corresponds to the intuition that although Contrastive Topics are extrasentential, they maintain some (semantic) connection with the sentence that follows.

- Topics proper are Aissen's *internal* Topics. They are part of the sentence structure.

  If there is only one Topic in a sentence, it is said to occupy the Specifier position of TP (Tense Phrase), the projection between CP and IP. (T is said to be a covert Tense morpheme.) Other Topics are adjoined to TP.

- Quantifiers are adjoined to IP.

- Focus is in a Specifier position. In É.Kiss' model it is the Specifier of IP. In more recent models it is often assumed to be in the Specifier of F(ocus)P (Brody (1995)), where the covert Focus feature F is said (per def.) to head its own projection. In this work I will assume Focus

[3]For a different view on the status of Contrastive Topics cf. É.Kiss (t.a.).

to be in the Specifier position of IP, but the semantics of Focus in part 2.6.3 will in fact be neutral with regard to the choice between IP and FP.[4]

- In the first generative model of Hungarian (É.Kiss (1987)), negation (including the negative particle *nem* 'no' and negative *NP*s like *senki* 'no-one') was said to be in Focus. More recently, a separate projection *NegP* has been postulated in Szabolcsi (1996).[5] *NegP* can be preceded by Focus (negating the remainder of the sentence), it can precede Focus (with full *NP*s like *senki* 'no-one'), or it can be merged with it:

(2.6) *a.* János [MARIVAL]$_F$ [nem]$_{Neg}$ táncolt — $F \prec Neg$
John [MARY-with]$_F$ [not]$_{Neg}$ danced
"It was Mary whom John did not dance with"

b. [Senki sem]$_{Neg}$ [MARIVAL]$_F$ táncolt — $Neg \prec F$
[No-one SEM]$_{Neg}$ [MARY-with]$_F$ danced
"No-one danced with MARY"

c. János [NEM MARIT]$_F$ szereti — $[NegF]$
John [NOT MARY-Acc]$_F$ love+Def3Sg
"It is not Mary whom John loves"

Where the semantics of the distinguished preverbal positions is concerned, there is consensus among Hungarian linguists about the following properties. With a little irony this could be called the 'established view':

- Preverbal positions in Hungarian are marked from a semantic point of view. These positions are blind to grammatical functions: it can be seen from (2.7) that subjects, objects or obliques can be Topics (this list is not exhaustive).

(2.7) *a.* [Mari]$_T$ kedveli Jánost—subject in Topic
[Mary]$_T$ like+Def3Sg John-Acc
"Mary likes John"

b. [Jánost]$_T$ kedveli Mari—object in Topic
[John-Acc]$_T$ like+Def3Sg Mary
—roughly the same—

c. [Marihoz]$_T$ sokan járnak tanácsért—oblique in Topic
[Mary-to/chez]$_T$ many-Adv go-3Pl advice-for
"Mary is sought out/visited for advice by many people"

These positions are blind to the category and individual sort denoted, as well. They can be filled with *NP*s, *PP*s or adverbials. The decisive factors concern semantic properties such as referentiality, being quantificational, and monotonicity. In (2.8a) below, preverbal positions

[4]The Specifier analysis of Focus is problematic for cases of multiple *wh*-movement, or cases where non-*wh*-Focus is followed by a *wh*-phrase:

(*i*) *a.* [Tegnap[$_T$ [ki]$_F$ [kivel]$_F$ táncolt?
[Yesterday]$_T$ [who]$_F$ [who-with]$_F$ danced?
"Who danced with whom yesterday?"

b. [MARIT]$_F$ [ki]$_F$ szereti?
[MARY-Acc]$_F$ [who]$_F$ loves+Def3Sg
"(I know who loves Cathy—but) who loves MARY?"

Cases like (*i*) are beyond the scope of this thesis. So, for this work, the Focus-as-Specifier view can be maintained.

[5]The reader is also referred to work in progress by Csaba Olsvay and Greta Dalmi.

are filled with *NPs*, and in (2.8b) with temporal or frequency expressions.[6]

(2.8) *a.* [Marinak]$_T$ [minden fiú]$_Q$ [KÉT szál rózsát]$_F$ adott
[Mary-Dat]$_T$ [every boy]$_Q$ [TWO stem rose-Acc]$_F$ gave
"Every boy gave TWO roses to Mary"

b. [Egy évben]$_T$ [gyakran]$_Q$ [ESTE]$_F$ ment úszni Mari
[One year-in]$_T$ [often]$_Q$ [EVENING]$_F$ went swim-Inf Mary
"One (of those) year(s) Mary often went for a swim in the EVENING"

According to Hungarian linguists, there are three possibilities as regards the interactions of these positions and their potential fillers. The formally most explicit account may be found in Szabolcsi (1997a).

- An *XP* may be *compelled* to occupy a certain position; this is the case with *NP*s modified by *is* 'too': when preverbal, they have to be in the Quantifier position; the same holds for non-negative, $MON\downarrow$ *XP*s and Focus (unless Focus is filled by something else).
- An *XP* may be *prohibited* from a certain position: for instance, *minden N'* 'every *N*'' on its own can be neither a Topic, nor Focus.
- An *XP* may *optionally* occur in a given position, and, once there, it may acquire a construal *typical* of that position. This is the case with indefinites in Topic or Focus position. (i) If an indefinite is in Topic, it acquires a partitive-specific construal. 'Partitive-specific' conforms to the definition in Enç (1991): being an arbitrary member of a familiar/determined context set; or, introducing a new discourse referent that is however part of a familiar collection. (ii) If an indefinite is in Focus, it acquires an exhaustive interpretation (like most other constituents).

  (2.9) *a.* [Egy lány]$_T$ [tegnap]$_T$ nem jött órára
  [One girl]$_T$ [yesterday]$_T$ not came class-to
  "One of the girls did not come to class yesterday"

  b. [János]T [EGY KÖNYVTÁROSNAK]$_F$ udvarol
  [John]$_T$ [ONE LIBRARIAN-Dat]$_F$ courts
  "It is a librarian whom John courts"

  In (2.9a), the Topicalised indefinite is understood as denoting a member of a familiar set. This set may be given from previous discourse, or it may be salient: in the case of (2.9a) it may be the set of students who attend the class in question.

  In (2.9b), the indefinite in Focus denotes the unique (maximal) individual that has the property of being courted by John.

- The Scope Principle (stated as early as the nineteen-eighties, especially by Katalin É.Kiss, István Kenesei and László Hunyadi): in Hungarian, the surface order of preverbal constituents corresponds to their scope ordering. Only Contrastive Topics are exempt from the Scope Principle.

[6] There is perhaps one relevant constraint, which concerns eventualities: finite verbs may not fill these positions. Thus event descriptions may be preverbal just in case they are non-finite (infinitives) or they are event nominals:

(*ii*) *a.* [Úszni]$_T$ [mindig is]$_Q$ szeretett Mari
[Swim-Inf]$_T$ [always IS]$_Q$ liked Mary
"Mary has always liked swimming"

b. [Az úsz-ás]$_T$ egészséges
[The swim-Suff]$_T$ healthy
"Swimming is healthy"

(2.10) shows that Contrastive Topics may have narrow scope relative to a quantifier in the 'main' sentence:

(2.10) [A mamájának]$_{CT}$ [minden fiú]$_Q$ vitt egy szál rózsát
[The mother-Poss3Sg-Dat]$_{CT}$ [every boy]$_Q$ took one stem rose-Acc
"Every boy brought a rose for [his mother](B-accent)"
(but they may not have brought anything for anyone else)

(2.11) shows that (i) an indefinite in Topic has wide scope relative to material to its right, and (ii) the scope of preverbal quantifiers corresponds to their linear order. In (2.11b), where *kétszer is* 'even twice' precedes *minden fiú* 'every boy', the boys may vary with the occasions. This is not possible in (2.11a), where *every* has scope over the adverbial. Both (2.11a-b) have the reading that involves two sets of asking-events, such that all events from the first set precede all events from the second. But (2.11b) cannot have the reading that (2.11a) has, viz where asking-events by different boys are dispersed in time, so to speak.

(2.11) *a.* [Egy lányt]$_T$ [minden fiú]$_Q$ [kétszer is]$_Q$ felkért
[One girl-Acc]$_T$ [every boy]$_Q$ [twice too]$_Q$ up-asked
"One of the girls, every boy asked her for a dance twice"
NOT: "Every boy twice asked a (different) girl for a dance"
b. [Egy lányt]$_T$ [kétszer is]$_Q$ [minden fiú]$_Q$ felkért
One girl-Acc twice too every boy up-asked
"One of the girls, twice even she was asked for a dance by every boy"

(2.12) shows that Focus itself interacts with quantifiers, in the manner predicted by the Scope Principle. In fact, since Focus is a presupposition trigger, both its presupposition and its assertion part proper are involved such interactions. In (2.12a), the presupposition (there is an y such that x loves y) is in the scope of the universal quantifier, because the quantifier occurs on its left, in the Quantifier position. In (2.12b), the presupposition is outside the scope of the quantifier, and is taken to be of the form 'there is a y loved by everyone'.

(2.12) *a.* [Mindenki]$_Q$ [MARIT]$_F$ szereti
[Everyone]$_Q$ [MARY-Acc]$_F$ love+Def3Sg
"For every person x, it is Mary x loves"
b. [MARIT]$_F$ szereti mindenki
[MARY-Acc]$_F$ love+Def3Sg everyone
"It is Mary that everyone loves"
c. [MARIT]$_F$ szereti "mindenki
[MARY-Acc]$_F$ love+Def3Sg "everyone
—same as sentence *a*—

(2.12) is not the best example to show the scope interactions of the assertion part of Focus, as in all sentences the Focus is a scopeless proper name. Yet such examples with can be shown to differ with respect to the scope of the presupposition triggered by Focus. A clearer case is when an indefinite is in Focus, as in (2.13).

(2.13) [Minden tanár]$_Q$ [EGY KÖNYVET]$_F$ ajánlott
[Every professor]$_Q$ [ONE BOOK-Acc]$_F$ recommended
"For every professor x, it was a book x recommended"
NOT "It was one book (namely, *Daniel Martin*) that every professor recommended"

Returning to (2.12a-c), it has to be noted that postverbal quantifiers have narrow scope with respect to preverbal material just in case they do not receive prosodic prominence. This is the case in (2.12b). In (2.12c) the quantifier receives stronger stress than usual (this is marked by "), and then it has wide scope over Focus.[7]

[7]This has nothing to do with my dissertation proper. I included it as a diversion for the reader.

- According to the 'established' view, each of the preverbal positions comes with a distinct, well-defined semantic side-effect (to be presented in greater detail in the following sections). Topics are logical subjects and hence referring expressions, Quantifiers are, well, quantifiers (for the most part). Focus in turn now resembles English it-clefts or pseudo-clefts, now *NP*s modified with *only*. This is suggestive of some kind of agreement or unification mechanism between the syntactic projections (or their heads) and the fillers themselves.

  This is the line taken in Szabolcsi (1997a), the semantically most explicit model of Hungarian. According to this paper, the appropriate *XP*s move to the specifiers of their matching positions because these positions contain a covert head responsible for the appropriate semantic properties. This article is discussed in some detail in the present chapter; this is motivated by its formal explicitness and by the proposal concerning semantic composition that it contains.

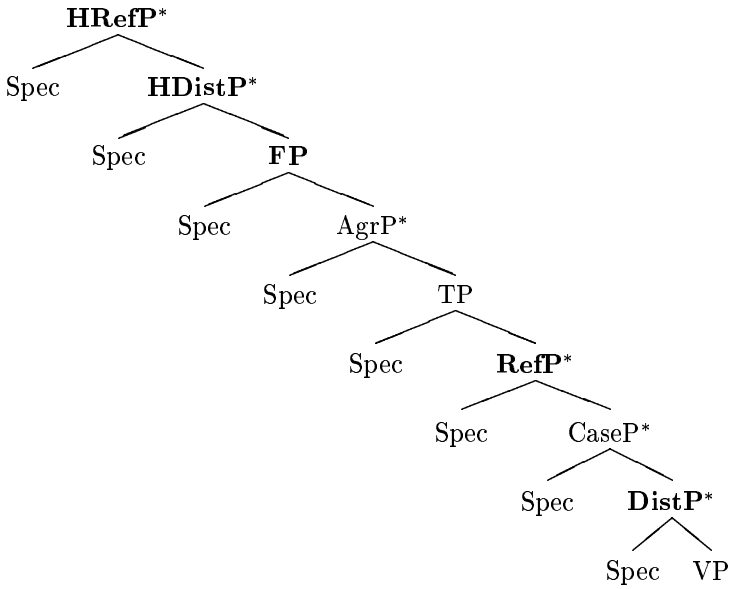
  Szabolcsi adopts the *LF* model of Beghelli and Stowell (1994), Beghelli and Stowell (1997). This model disposes of Quantifier Raising as a uniform and target-blind operation. Instead, a host of target projections is postulated, which vary according to the semantic properties the expect from, or confer to, the *NP*s that move to them. The landing sites for *NP*s are said to be the specifiers of these projections. Any *XP* from these projections is said to contain a covert head *X*, containing the relevant semantic information. Sometimes the relation between the specifier of *XP* and the head *X* is that of agreement (as in the case of a 'referential', Topic-like projection), sometimes the semantic import of the *NP* is its own meaning plus the contribution of the head *X*. This would, for instance, correspond to the case of universal quantifiers, where distributivity is assumed to be a separate contribution of the covert head *Dist*.

  In English, these movement types are said to take place covertly, at *LF*. According to Szabolcsi, in Hungarian they are overt, and it is in fact these operations that yield the scope-aligned preverbal word order of Hungarian.

  Szabolcsi's proposal is that each of these positions is associated with one of two procedures (or 'modes of operation'). One is the 'traditional' mode of predication, whose recipe is 'take a witness, and predicate of it (distributively or collectively)'. This corresponds to the intuition that in property attributions 'aboutness' is relevant. The other procedure is counting, where the property takes precedence (in terms of procedure), and the relevant *NP* provides the number of entities that have that property. So, this 'mode' does not concern aboutness; rather, it is related to so-called amount quantification (Kroch (1989), Dobrovie-Sorin (1994)).

  Szabolcsi's model of Hungarian sentence structure/overt *LF* can be seen in (2.14):

(2.14)



In (2.14), preverbal *HRefP* corresponds to Topics, preverbal *HDistP* to Quantifiers, and *FP* to Focus. Focus can be either 'proper', ordinary Focus, or a so-called *PredOp*.

PredOp hosts modified numerals of the type *több, mint n N'* 'more than nN'', *pontosan n N'* 'exactly n N''. According to Szabolcsi, bare nominals also occupy the *PredOp* position.

The property shared by *HRefP*, *HDistP* and *FP* (Focus proper, not *PredOp*) is said to be the introduction of a discourse referent that serves as the/a subject of predication. This is taken to be the property that distinguishes all these positions from *PredOp*. Now if all these positions are filled, then one has either (i) an n-tuple of subjects of predication contributed by Topic, Quantifier and Focus (the logical predicate being the verb and the postverbal part of the sentence), or (ii) a recursive subject–predicate structure. The latter view is obviously more attractive, because it preserves the articulation of Topic–Quantifier–Focus. (Not to mention scope effects.)

In the class of referent-introducing positions, the specific difference attributed to *HDistP* is distributivity, which is said to be conferred by a covert distributivity head *H-Dist*.

According to Szabolcsi, the property that distinguishes *PredOp* from the other preverbal positions is a counting operation, and the fact that no discourse referent is introduced. As a consequence, argues Szabolcsi, *NP*s in *PredOp* can participate in collective readings (like *NP*s in *HRefP* or *FP*), as opposed to *NP*s in *HDistP*, which are said to involve distributive readings by necessity. This is motivated by the following contrasts:

(2.15) *a.* [Kati és Mari]$_T$ fel-emelte az asztalt
[Cathy and Mary]$_T$ up-lifted+Def3Sg the table-Acc
"Cathy and Mary lifted the table"
HRefP: OK: collective

b. [Minden fiú]$_Q$ fel-emelte az asztalt
[Every boy]$_Q$ up-lifted+Def3Sg the table-Acc
"Every boy lifted the table"
HDistP: *collective

c. [Több, mint hat fiú]$_{PrOp}$ emelte fel az asztalt
More, than six boy lifted+Def3Sg up the table-Acc
"It took more than six boys to lift the table"
PredOp: OK: collective

(Szabolcsi (1997a), ex. (43): 128)

Szabolcsi's model and its predictions will be discussed distributively, as part of the discussion of each preverbal position.

- On the so-called Baroque view precisely the tightness of these syntax–semantics connections has been questioned. It seems now that if multi-sentence discourses are to be analysed, then this piecewise, constituent-by-constituent architecture needs to be made part of a more 'global' and less surface-oriented semantic structure. This will be discussed in more detail in the section on Focus, in Part 2.5.3.

  In fact, the 'established view' already contains the first such partition: according to Katalin É.Kiss, Topics stand in a distinguished relation to the rest of the sentence. This is Williams' predication relation (Williams (1980)). So, the first division one gets is that of Topics (logical subjects) and 'logical predicates':

(2.16) *a.* *Topic* *Predicate*

b. [Marival]$_T$ [[mindig]$_Q$ [minden fiú]$_Q$ [SZÍVESEN]$_F$ keringőzött]$_{Pred}$
[Mary-with]$_T$ [[always]$_Q$ [every boy]$_Q$ [GLADLY]$_F$ waltzed]$_{Pred}$
"With Mary, every boy was always GLAD to waltz"

In (2.16) above, it is not easy to view the quantificational structure *every boy was always glad to waltz (with her)* as a predicate. But, apart from the term Rheme being more appropriate, É.Kiss' insight is correct: it will be shown later that Topics need to be separated from the rest of the sentence, and are definitely not interchangeable with postverbal indefinites. A consequence of the Topic(Theme)–Rheme articulation of Hungarian sentences is that Topics are regarded to be blind as to what the Rheme contains. In view of the interaction of the Definiteness Effect with Topicalisation, this may be an oversimplification, or simply a matter for further research.

To conclude, this section has presented an outline of Hungarian sentence structure, along with the 'established' view on the semantics of the distinguished positions of Contrastive Topic, Topic, Focus and Quantifier. In the following sections these positions will be described one by one. This will be followed by an outline of the so-called Baroque view, and by a DRT-sketch of Topics and Foci in Part 2.6.

2.2 Contrastive Topics

The *distribution* of Contrastive Topics includes names, definites, indefinites (weak *NP*s in general), bare nominals, pronouns (both individual and time denoting), (MON↑ and non-MON) quantifying *NP*s and adverbials.

Contrastive Topics have a Fall-Rise *intonation contour*, like English B-accents (Jackendoff (1972), Pierrehumbert (1980), Büring (1999)). By contrast, ordinary Topics have a flat and relatively weak prosodic contour. Thus, *Marit* in the string *Marit szereti János* "Mary is loved by John" can be understood as having either a Contrastive Topic or an Ordinary Topic function, depending on its prosodic contour. This is shown in (2.17):[8]

(2.17) *a.* Marit(↘↗) szereti János — Fall–rise: Contrastive Topic
Mary-Acc (↘↗) loves+Def3Sg John
"Mary, she is loved by John"

b. Marit (—) szereti János — Flat: Ordinary Topic
Mary-Acc loves+Def3Sg John
"Mary is loved by John"

Where their *syntax* is concerned, a distinctive feature of Contrastive Topics is that they can only occur in matrix clauses. This is shown in the contrast in (2.18).

(2.18) *a.* [Macskát]$_{CT}$ tudom, hogy talált János
[Cat-Acc]$_{CT}$ know-1Sg, that found John
"Cats(B), I know that John has found"
(but he may not have found anything else)

b. # ∗ Mari tudja, hogy [macskát]$_{CT}$ talált János
Mary know+Def3Sg, that [cat-Acc]$_{CT}$ found John
"Mary knows that John has found cats(B)"
(but he may not have found anything else)

According to É.Kiss (1994), Contrastive Topics are generated in situ, under an E(xpression) node (Emonds (1985)). Hungarian Contrastive Topics correspond to Aissen's external Topics (Aissen (1992)), precisely on account of their syntactic distribution and their prosody.

Unlike Topics, which have wide scope relative to the rest of the sentence, the *scope* of Contrastive Topics can be narrow, as seen in (2.19). This, according to É.Kiss, is indicative of reconstruction.

(2.19) [A mamáját]$_{CT}$ mindenki szereti
[The mother-Poss3Sg-Acc]$_{CT}$ everyone love+Def3Sg
"Everyone loves (at least) his/her mother" (But they may not love anyone else)

[8] In what follows, B in the English glosses will indicate fall-rise B-accents.

Contrastive Topics allow for *resumptive pronouns/demonstratives* within the sentence. Again, this is to be understood in contrast with ordinary Topics. (2.20a) below contains an ordinary Topic, which disallows the resumptive demonstrative *azt*. The Contrastive Topic in (2.20b) does not prohibit the demonstrative. I take this to indicate that Contrastive Topics are indeed not part of the sentence structure proper.

(2.20) *a.* [Tegnap]$_T$ [a macskát]$_T$, (∗azt) ki-engedtem
[Yesterday]$_T$ [the cat-Acc]$_T$, (that-Acc) out-let-1Sg
Intended: "The cat, I let it out yesterday"
b. [A macskát]$_{CT}$, azt kiengedtem
[The cat-Acc]$_{CT}$, that-Acc out-let-1Sg
"The cat(B) (at least) I let out"

Bare nominals can be Contrastive Topics. This, by a somewhat circular argumentation, is also indicative of a reconstructed interpretation of Contrastive Topics. That is, the bare nominal is to be understood as reconstructed to its so-called "base" position, which is preverbal. The next two chapters will contain more discussion on bare nominals.

(2.21) [Fát]$_{CT}$ tegnap nem vágott János
[Wood-Acc]$_{CT}$ yesterday not cut John
"John has not chopped any wood yesterday", or
"As for wood, John has not chopped any yesterday", or
"As for wood-chopping, John did not do any of it yesterday"

Where their *semantics* is concerned, Contrastive Topics can serve as non-exhaustive counterparts of Focus, or they may resemble Topics. When they resemble Focus, they can partially fill the 'information gap' of a question, as seen in (2.22c). Unlike Focus, which is exhaustive (relative to the speaker's knowledge), Contrastive Topics signal that the speaker knows or suspects that his/her knowledge is incomplete. (Or that s/he is unwilling to convey more.)

(2.22) *a.* Ki$_F$ ment át a vizsgán?
Who went throught the exam-on?
"Who has passed the exam?"
b. [MARI és ANNA]$_F$ ment át. ##Péter is át-ment.
[MARY and ANNA]$_F$ went through. Peter too through-went
"It is Mary and Anna who have passed. Peter has passed, too."
c. [Mari]$_{CT}$ (legalábbis) átment. Péter is át-ment.
[Mary]$_{CT}$ (at-least) through-went. Peter too thorugh-went.
"Mary(B) (at least/according to what I know) has passed.
Peter, too has passed."

(2.22b), containing Focus, is an exhaustive answer to the question (2.22a). This is shown by the inappropriateness of the continuation *Péter is átment* "Peter, too, has passed". (2.22c), the variant with the Contrastive Topic, is not exhaustive—at least it allows the speaker to express doubts concerning the completeness of his/her knowledge.

In contexts other than the type seen in (2.22a), Contrastive Topics are like Topics, in that they can denote some member(s) of a familiar context set, and the sentence may be understood as being about these individuals. Such sentences may even contain Focus, which is indicative of the non-Focus discourse role of the Contrastive Topic. (This is the case with (2.23c), where the direct object may optionally receive Focus stress.)

In cases like (2.23), the difference between ordinary and Contrastive Topics concerns discourse continuations.[9]

[9]This observation emerged in discussions with Nicholas Asher.

(2.23b), a sentence with a Contrastive Topic, can only be continued with a sentence about the other members of the context set, such as (2.23c):

(2.23) *a.* Bejött az ivóba tíz kém
In-came the saloon-into ten spy
b. [Hárman]$_{CT}$ konyakot rendeltek
[Three-Adv]$_{CT}$ cognac-Acc ordered-3Pl
"Three of them ordered cognac"
c. [A többiek]$_{T}$ meg [ásványvizet]$_{(F)}$
[The others]$_{T}$ and [mineral-water-Acc]$_{(F)}$
"The others ordered [mineral water]$_{(F)}$"

The point is, continuing sentences cannot be about the discourse referent introduced in the Contrastive Topic position. This is seen in (2.24c-d). By contrast, if (2.24b) contained an *ordinary* Topic, such a discourse could be continued with (2.24c-d).[10]

(2.24) *a.* Bejött az ivóba tíz kém
In-came the saloon-into ten spy
b. [Hárman]$_{CT}$ konyakot rendeltek
[Three-Adv]$_{CT}$ cognac-Acc ordered-3Pl
"Three of them ordered cognac"
c. #?Nehéz napjuk volt
Hard day-Poss3Pl was
"They had had a hard day"
d. ##??De most az italtól magukhoz tértek
But now the drink-from themselves-onto came-3Pl
"But now the drink refreshed them"

Another difference between ordinary and contrastive Topics is partitivity. If a definite or some other uniquely referring expression is in Topic, its context set may trivially be a singleton (the set containing only the individual denoted by that expression). By contrast, the referents of Contrastive Topics are proper subsets of their context sets. A consequence of this is that when in Topic, uniquely referring expressions do not always need a nontrivial context set. This is not possible for Contrastive Topics. (2.25) below is meant to illustrate this: the referent of *a fiúk* 'the boys' is intended to be be *identified* with that of *két kém* 'two spies' from (2.25a). This is possible if the definite is a Topic, as in (2.25b), but not when it is a Contrastive Topic, as in (2.25c).

(2.25) *a.* Bejött az ivóba két kém
In-came the saloon-into two spy
"Two spies entered the room"
b. [A fiúk]$_{T}$ konyakot rendeltek
[The boy-Pl]$_{T}$ cognac-Acc ordered-3Pl
"The boys(=the two spies) ordered cognac"
c. ??[A fiúk]$_{CT}$ konyakot rendeltek
[The boy-Pl]$_{CT}$ cognac-Acc ordered-3Pl
Intended: same as above

Another difference between Contrastive and ordinary Topics is that Contrastive Topics may denote some member of the complement (relative to a context set) of a previously introduced group

[10](2.24c-d) are felicitous if the antecedent of the verbal suffixes is the referent introduced in the first sentence, viz the initial group of ten spies.

referent, or even the entire complement set.[11]

(2.26) *a.* Mari szereti Jánost?
Mary love+Def3Sg John-Acc
"Does Mary love John?"

b. Nem tudom, de [én]$_{CT}$ rá sem néznék
Not know-1Sg+Def3Sg, but [I]$_{CT}$ onto-3Sg SEM look-at-Cond-1Sg
"I don't know, but I(B) would not even look at him"

c. [A barátnői]$_{CT}$ lehet, hogy kedvelik
[The girl-friend-Poss3Sg-Pl]$_{CT}$ maybe, that like-3Pl+Def3Sg
"Her girl-friends(B) may like him"

The following is an informal sketch of the analysis for Contrastive Topics:

When Focus-like, Contrastive Topics are coindexed with a higher order variable in the representation of the rest of the sentence; they are "reconstructed" into the site of that variable; they are taken to introduce alternatives, with some sort of minimality condition. For instance, (2.22c) should convey that it is possible, but not necessary that the rest of the alternative set does not have the relevant property.

When Topic-like, Contrastive Topics introduce a context set referent and their 'own' discourse referent, which is a proper part (member or proper subset) of the context set referent. In addition, they bind a variable in the rest of the sentence. The constraint on discourse continuations (viz the following sentences have to be about other members of the context set) is presumably a higher order discourse constraint, which calls for a framework that can integrate discourse/rhetorical relations.

2.3 Topics

The Topic position is said to be an adjunction position (to TP). In Szabolcsi's model it corresponds to (the leftmost) *HRefP*. That Topics are indeed at the left edge of Hungarian sentences can be seen from the fact that universal quantifiers (or other quantifying XPs) cannot precede indefinites or proper names that lack Focus stress:

(2.27) *a.* [János]$_T$ [minden lánnyal]$_Q$ keringőzött
[John]$_T$ [every girl-with]$_Q$ waltzed
"John has waltzed with every girl"

b. $*$[Minden lánnyal]$_Q$ [János]$_T$ keringőzött
[Every girl-with]$_Q$ [John]$_T$ waltzed
Intended: same as above

The *distribution* of Topics is the following. The Topic position *admits* names, definites, indefinites, weak XPs, *a legtöbb N'* 'most N''. These can in fact be time- and individual denoting constituents alike, i.e. NPs, PPs or $AdvP$s, provided they are not quantificational. *Excluded* are quantifying XPs (with the exception of *most N'*), $MON\downarrow$ XPs, bare nominals.

The *intonation* contour of Topics is flat. Topics are relatively unstressed, since in Hungarian the main accent of the sentence marks the VP boundary (É.Kiss (1994)).

As opposed to Contrastive Topics, which may occur only in matrix clauses, ordinary Topics may occur in *subordinate* clauses. Their sentence-internal status is indicated by the fact that they have to follow the complementizer *hogy* 'that', as seen from (2.28).

(2.28) *a.* Péter tudja, [$_{CP}$ hogy [Marinak]$_T$ [tegnap]$_T$ minden fiú virágot hozott]
Peter know+Def3Sg,
[$_{CP}$ that [Mary-Dat]$_T$ [yesterday]$_T$ every boy flower-Acc brought]
"Peter knows that every boy has brought flowers for Mary yesterday"

b. $*$...Marinak [$_{CP}$ hogy minden fiú]...
...Mary-Dat [$_{CP}$ that every boy]...

[11] This is similar to what finds in English or German, cf. Büring (1999).

On the basis of the intonation pattern and sentence-internal placement of Topics, Katalin É.Kiss concluded that Hungarian ordinary Topics correspond to Aissen's internal Topics. Thus, Hungarian is seen as a language that has both internal and external Topics, just like Russian (King (1995)).

As noted several times in this chapter, Topics have *wide scope* with respect to the rest of the sentence. This can be seen e.g. from (2.29) below. Topics do not allow resumptive pronouns/demonstratives in the rest of the sentence, as seen from (2.29b).

(2.29) *a.* [Egy hölgy]$_T$ tegnap nem volt koncerten
One lady yesterday not was concert-on
"One of the ladies was not at the concert yesterday"
b. [Egy lányt]$_T$ (∗,azt) mindenki többször is felkért keringőzni
One girl-Acc (that-Acc) everyone several-times even asked waltz-Inf
"One of the girls was asked for a waltz by everyone, several times"

Usually, discourse referents introduced by Topics are understood as anaphoric, in the sense of belonging either to a previously introduced set referent, or to a set referent salient from discourse (even though this requirement is less strong than with Contrastive Topics). Indefinites, for instance, acquire a partitive–specific construal when they are Topicalised, as seen in (2.30b). Indefinite time adverbials may also acquire a partitive construal, as seen in (2.31b): the temporal referent of *egy este* 'one evening' is to be bound to that of *a múlt héten* 'last week' from (2.31a).

(2.30) *a.* Bejött a szobába tíz kém
In-came the room-into ten spy
"Ten spies entered the room"
b. [Egy hölgyet]$_T$ felismert János
[One lady-Acc]$_T$ recognized John
"John recognized a lady (from the ten spies)"

(2.31) *a.* Mari a múlt héten sokat főzött
Mary the last week-on much-Acc cooked
"Last week Mary did a lot of cooking"
b. [Egy este]$_T$ salátalevest főzött
[One evening]$_T$ lettuce-soup-Acc cooked
"One evening (last week) she cooked lettuce soup"

Bare nominals are not admitted in Topic position, as seen from (2.32):

(2.32) ∗János tudja, hogy [fát]$_T$ [minden fiú]$_Q$ vágott
John knows+Def3Sg, that [wood-Acc]$_T$ [every boy]$_Q$ cut-Past
Intended: "John knows that as for wood, every boy chopped some"

(2.32) is relevant as a diagnostic for the semantics of bare nominals, and not necessarily for the semantics of Topics. Given that the Topic position hosts referring expressions, and bare nominals cannot occur there, the conclusion is that bare nominals are not referring expressions in Hungarian (see e.g. Kiefer (1990–91), or the discussion in Chapter 3).

Another aspect of the same issue is that bare nominals cannot serve as logical subjects, neither on existential nor on universal/generic readings. Thus (2.33) is grammatical iff the *N macska* 'cat' is preceded by an article.

(2.33) [∗(Az/Egy) macska]$_T$ [Egyiptomban]$_T$ istenség volt
[(The/One) cat]$_T$ [Egypt-in]$_T$ deity was
Indefinite: "A cat in Egypt was (respected as) a deity" (existential)
Definite: "The cat in Egypt was (respected as) a deity"

The definite variant of (2.33) can have a generic/kind level construal: "The cat/The species Felis catus was respected as a deity in Egypt". So, what one can see from this construal is that the Topic

position is a host for logical subjects of generic statements, and that 'generic' *NP*s in Hungarian are definite. In fact, as shown in É.Kiss (1998a), Hungarian generic statements have *by necessity* a *Subject/Topic*, *Predicate* articulation. That is, generic statements have to contain at least one definite in Topic position, and this definite has a kind name reading:

(2.34) *a.* [Az egerekre]$_T$ [MACSKÁK]$_F$ vadásznak
[The mice-onto]$_T$ [CATS]$_F$ hunt-3Pl
"Mice are hunted by CATS"

b. [A fókáknak]$_T$ [a CÁPA]$_F$ a legnagyobb ellenségük
[The seal-Pl-Dat]$_T$ [the SHARK]$_F$ the biggest enemy-Poss3Pl
"The biggest enemy of seals is the SHARK"
"Of seals, it is the shark that is their biggest enemy"

According to É.Kiss (1998a), (2.34a) for instance is a statement about mice, and not about cats. Likewise, (2.34b) is about seals, and not about sharks. This is to be understood in contrast with English: the English sentence *Cats hunt mice* can be either about cats, about mice, or about the kind-pair cats—mice (asserting that they stand in the hunt relation to each other).[12]

2.4 The Quantifier Position

It could be seen from the structure in (2.5) that Hungarian has a so-called Quantifier position between Topic and Focus. In É.Kiss' model, the Quantifier position is an adjunction position to IP. In Szabolcsi's model this position is labelled as *HDistP*.

The Quantifier position admits $MON\uparrow$ quantifying XPs (of the type *every N, all N, always, most(ly)*), quasi-quantificational $MON\uparrow$ or non-monotone weak XPs (of the type *at least N'* or *at least n times*). In addition, it admits *XP*s with the particle(s) *(még) ... is* ('(even)...too'). In fact, *XP*s that contain these particles can only occur in the Quantifier position when preverbal. This is seen in (2.35).[13]

(2.35) *a.* *[Jánossal is]$_T$ [tegnap]$_T$ táncolt Mari
[John-with too]$_T$ [yesterday]$_T$ danced Mary
Intended: "Yesterday, Mary danced with John, too"

b. *[Mari]$_T$ [mindig]$_Q$ [Jánoshoz is]$_F$ ment el
[Mary]$_T$ [always]$_Q$ [John-to too]$_F$ went away
Intended: "Mary always visited John too"

c. [Mari]$_T$ [mindig]$_Q$ [Jánoshoz is]$_Q$ el-ment
[Mary]$_T$ [always]$_Q$ [John-to too]$_Q$ away-went
"Mary always visited John too"

Excluded from the Quantifier position are names, pronouns, (in)definites, bare nominals, unless 'decorated' with *is* 'too'. $MON\downarrow$ XPs are excluded as well.

Quantifiers conform to the Scope Principle: an XP in the Quantifier position takes scope over the rest of the sentence, including other quantifiers or other ZPs in the Quantifier position. This is the case with (2.36). (2.36b) is true if the set of boys varies with the occasions. For instance, it can be true when (2.36a) is false, e.g. it can pick out occasions where not every boy was present, since it can mean 'a girl on several occasions waltzed with every boy present at that occasion'. Thus it can be true if there are boys she did not waltz with on every occasion. On the other hand, (2.36a) can

[12] In (2.34), the bare nominals in Focus position are not understood as logical subjects. Section 3.2.4 in the following chapter will contain some discussion of bare nominals in Focus.

[13] In (2.35b), *Jánoshoz is* 'to John, too' is intended to be in Focus. In written Hungarian the presence of Focus is indicated by the postverbal position of prefixes. In (2.35c) *Jánoshoz is* is in Quantifier position, indicated by the 'default' preverbal position of the prefix *el*.

be true if for every boy x, the occasions $o_{\{1_x,\ldots,j_x\}}$ she danced with x are dispersed in time. (2.36b) does not have this reading.

(2.36) *a.* [Egy lány]$_T$ [minden fiúval]$_Q$ [többször is]$_Q$ keringőzött
One girl every boy-with several-times too waltzed
"One of the girls waltzed with every boy several times"
b. [Egy lány]$_T$ [többször is]$_Q$ [minden fiúval]$_Q$ keringőzött
One girl several times even every boy-with waltzed
"One of the girls, several times she waltzed with each of the boys"

(2.37) suggests that the scope of the presupposition triggered by *is* 'too' obeys the Scope Principle.

(2.37) *a.* [Minden fiú]$_Q$ [Marival is]$_Q$ táncolt
Every boy Mari-with too danced
"Every boy danced with Mary too"
b. [Marival is]$_Q$ [minden fiú]$_Q$ táncolt
Mari-with too every boy danced
—difference: scope of presupposition—

(2.37a) may be true in a scenario where every boy danced with a different girl, and then they danced with Mary. (2.37b) can only be true in a scenario where every boy danced with the same girl, and they danced with Mary too.

The following example (based on a similar example for English by Hans Kamp (p.c.)) is potentially problematic for the Scope Principle, or, at least for the assumption that the scope of presuppositions in Hungarian is on a par with the scope of quantifiers, and is accordingly automatically under the rule of the Scope Principle.

(2.38) *a.* Mari szülei segítettek neki költözködni
Mary parent-Pl-Poss3Sg helped to-her move-Inf
"Mary's parents helped her to move"
b. És (még) egy macskát is vettek neki
And (even) one cat-Acc too bought to-her
"And they bought her a cat, too"

In (2.38b) the scope of the presupposition is the entire proposition, which suggests a misalignment between sentence semantics and what may be called a syntactic constraint on Hungarian *is* 'too', which in most cases has to occur within an *NP*, and the *NP* is compelled for some reason to occupy the Quantifier position.

What this example suggests is that operator scope is distinct from presupposition scope, even though the two may interact. This is just another addendum to a phenomenon that will be relevant in the parts about prefixed verbs: presuppositions seem to have a scope of their own.[14] This is even more conspicuous in (2.39c), where the scope of *is* is different from that of the *NP* it occurs in:

(2.39) *a.* A fiúk nagyon segítőkészek voltak:
The boys very helpful were:
"The boys were very helpful:"
b. Elmosogattak, kitakarítottak,
Pfx-washed-up-3Pl, out-cleaned-3Pl,
"They did the washing up and the cleaning"
c. És [mindegyik]$_Q$ [még egy-egy szál virágot is]$_Q$ hagyott
And [each]$_Q$ [even one-one stem flower-Acc too]$_Q$ left
"And each of them left a flower, too"

[14] This is discussed in detail in Kamp (2001).

In (2.39c), the direct object *egy-egy szál virágot is* 'a flower (each), too' has narrow scope with respect to the subject quantifier *mindegyik* 'each'. Its presupposition (describing the helpfulness of the boys) has wide scope, however, being bound to (2.39b).

The remainder of this section is devoted to the discussion of that part of Szabolcsi's model of Hungarian that concerns the Quantifier position (*HDistP* in her terminology). Concerning any preverbal position in Hungarian, Szabolcsi's uniform hypothesis is that the relevant *XP*s move to the Specifier position(s) of distinguished projections ZP_i. Such an *XP* may acquire its distinctive semantic properties from the covert head Z_i of the target projection ZP_i. Otherwise, the semantic properties of the moved phrase *XP* have to agree with those of the head Z_i. Thus, the Hungarian-specific semantics of preverbal positions is said to follow from *Spec–Head* agreement.

According to Szabolcsi, *XP*s in the Quantifier position are characterised by two properties.
(i) On their own, the *XP*s introduce discourse referents (including *minden N'* 'every *N*"). That is to say, the Quantifier position belongs to the same class as Topic and Focus, and stands in opposition with *PredOp*, which is said not to accept referent-introducing *XP*s.
(ii) *XP*s *within* the Quantifier position can only have distributive readings. According to Szabolcsi, distributivity is contributed by the covert distributivity head *Dist* that resides in *HDistP*. This is motivated by the independently established need to factor out quantification or scope effects from distributivity (Gil (1995), Beghelli (1995), Beghelli and Stowell (1997)).

As regards property (i), the following comment can be added. That Hungarian quantifying *NP*s do introduce discourse referents can be seen from the following example (which is my own). In (2.40), the plural possessive suffix **-ük** from the nuclear scope is bound to the collection of widow-courting farmers. This example may not be quite as conclusive as it may seem at first sight, however. This is because the relevant pronominal element occurs in a non-restrictive relative clause, which can easily be construed as being dislocated from the quantificational structure.

(2.40) *a.* [Majdnem minden gazda]$_Q$ udvarol egy-egy özvegynek,
[Almost every farmer]$_Q$ courts one-one widow-Dat,
"Almost every farmer courts a widow,
b. aki dicséri az esz**ük**et
who praises+Def3Sg the mind-**Poss3Pl**-Acc
who praises **their** intellect"

(2.41) *a.* [Majdnem minden gazda]$_Q$ [olyan özvegynek]$_F$ udvarol,
[Almost every farmer]$_Q$ [such widow-Dat]$_F$ courts,
"Almost every farmer courts such a widow
b. ?akinek jól ismert**ék** a férjét
who-Dat well knew-**3Pl**+Def3Sg the husband-Poss3Sg-Acc
whose husband **they** used to know well"

(2.41b) contains a restrictive relative clause, and the intended anaphoric link is indeed harder to obtain than with a non-restrictive relative. This issue will be set aside for further research. In the remainder of this section I will discuss the second property attributed to the Quantifier position by Szabolcsi. That is, whether all *XP*s in *HDistP* are obligatorily distributive, and whether this is because distributivity is contributed by a covert *HDist* head.

To support the claim that *NP*s in the Quantifier position are by necessity distributive, Szabolcsi makes use of the sentences reproduced under (2.42) here. What one sees here is a universal quantifier in (2.42a), which is by definition distributive, and a single proper name with *is* 'too' in (2.42b), which is trivially distributive. Finally, there is another *NP* ('six boys') with *is* in (2.42c), under the construal 'as many as'. This sentence is taken to have a 'counting' reading, paraphraseable as "The

table has been lifted six times, by six boys".

(2.42) *a.* [Minden fiú]$_Q$ fel-emelte az asztalt—distributive
[Every boy]$_Q$ up-lifted+Def3Sg the table-Acc
"Every boy lifted the table"
b. [Kati is]$_Q$ fel-emelte az asztalt—trivially distributive
[Cathy too]$_Q$ up-lifted+Def3Sg the table-Acc
"Cathy, too, lifted the table"
c. [Hat fiú is]$_Q$ fel-emelte az asztalt—distributive
[Six boy even]$_Q$ up-lifted+Def3Sg the table-Acc
"As many as six boys lifted the table"

(Szabolcsi (1997a), ex. (43):128)

There are several counterexamples to the claim of obligatory distributivity in *HDistP*, however. The first type of counterexample comes from plurals with *is*, as in (2.43) below. Incidentally, (2.42c), which is one of Szabolcsi's original examples, can also have a collective reading. This is when *is* means 'too' and not 'even', or 'as many as'. Another counterexample is (2.43), which has a collective reading induced by the adverb *együtt* 'together' in Focus.

(2.43) [A fiúk is]$_Q$ [EGYÜTT]$_F$ emelték fel az asztalt
[The boy-Pl too]$_Q$ [TOGETHER]$_F$ lifted+Def3Pl up the table-Acc
"The boys, too, lifted the table together"

To this one could say that the mechanism of landing *XP*s with *is* 'too' in the Quantifier position is not well understood, and maybe there are some unknown factors that exempt these *XP*s from being distributive.[15] But even if this kind of example is accounted for in some manner, there can still be genuine quantifying *NP*s that occur in the Quantifier/*HDistP* position, and yet they have a collective reading.

(2.44) *a.* [A legtöbb/legalább két orvos]$_Q$ [OLYAN beteget]$_F$ kezelt,
[The most/at least two doctor]$_Q$ [SUCH patient-Acc]$_F$ treated,
"Most/at least two doctors treated (such) patients,
b. akivel hosszasan el-beszélget-t-**ek**
who-with long-Adv away-discuss-Past-**3Pl**
with whom they had (had) a long discussion"

I tested (2.44) with several native speakers, all of whom agreed that both determiners (*a legtöbb* 'most' and *legalább két* 'at least two') allow for collective readings: both the treatment and the discussion can be done collectively.

2.5 Focus

2.5.1 Focus proper

Hungarian (like many other languages, as analysed for instance in the papers in É.Kiss (1995b)) has a distinguished syntactic position for Focus. Sometimes this position will be called H-Focus, to mark the difference between syntactic position and its semantic contribution, and deeper, or less syntax-friendly semantic effects (that were uncovered during the so-called "Baroque" stage). The presentation in this section is based on É.Kiss (1994), Szabolcsi (1981) and Szabolcsi (1997a).

H-Focus is the syntactic position reserved for *wh*-phrases in Hungarian. (2.45a) contains the *NP Péter-rel* 'with Peter' in preverbal Focus position. In (2.45b) the *wh*-phrase *ki-vel* 'with whom'

[15] For instance, one could define a distinct landing site for *XP*s with *is*, say *IsP*, which would be in free variation with Quantifiers.

occupies the same preverbal position. (2.45c) shows that in Hungarian a *wh*-phrase cannot be placed in the *Spec* of CP.[16]

(2.45) *a.* János tudja, [$_{CP}$hogy tegnap Mari [PÉTERREL]$_F$ táncolt]
John know+Def3Sg, that yesterday Mary [PETER-with]$_F$ pp danced
"John knows that it was with Peter that Mary danced yesterday"

b. János tudja, [$_{CP}$hogy tegnap Mari [kivel]$_F$ táncolt]
John know+Def3Sg, that yesterday Mary [who-with]$_F$ danced
"John knows who(m) Mary danced with yesterday"

c. *János tudja, [$_{CP}$[$_{Spec}$kivel] tegnap Mari táncolt]]
John knows+Def3Sg, [$_{CP}$[$_{Spec}$who-with] yesterday Mary danced]]
Intended: same as above

The discussion in this section will be confined to non-*wh* Focus.

The Focus position is immediately preverbal. It hosts at most one constituent, but it may also remain unfilled. Focus is marked by prosodic prominence relative to the rest of the sentence.

Hungarian sentences that lack Focus are characterised by an even distribution of accentuated phrases: this is the so-called *even* prosody described in Kálmán and Kornai (1989). By contrast, sentences with Focus are marked with prominence on Focus alone, and the rest of the sentence is characterised by a lack of prosodic prominence. This has been called *eradicating* prosody by Kálmán et al., since it is as if Focus 'eradicated' or 'drained' the (default) prosody of the rest of the sentence. These two patterns are schematised in (2.46) below. ' and " indicate 'normal' prominence, capitals indicate the kind of prosody that goes with Focus. Note in (2.46b) the only constituent marked for prominence is the name in Focus.

(2.46) *a.* ['János]$_T$ ['Marit]$_T$ [$_{VP}$"szereti] even prosody
[John]$_T$ [Mary-Acc]$_T$ [$_{VP}$ loves+Def3Sg
"John loves Mary"

b. [János]$_T$ [MARIT]$_F$ szereti eradicating
[John]$_T$ [MARY-Acc]$_F$ loves+Def3Sg
"It is Mary whom John loves"

It has to be noted that Hungarian Focus differs from Focus in English, Dutch or German, precisely because in Hungarian Focus is optional, and because of the prosodic differences between sentences with or without Focus. The reader may recall that in English, Dutch or German, *every* sentence must contain an element maximum prosodic prominence, and that that element carries the Focus feature. (In turn, the Focus feature may be projected onto higher levels, depending on the syntactic status (head/complement/adjunct) of the element in question).

The *distribution* of NPs/XPs in Hungarian Focus position is the following. *Possible* fillers of Focus are names, indefinites, pronouns, definites, bare nominals. Temporal and locative adverbials with similar semantic properties are also potential fillers, e.g. *egy napon* 'one day', or *onnan* 'from there'. Manner adverbials are also possible in Focus. *Excluded* are $MON\uparrow$ quantifying XPs (of the type of *every N', all/each N', always, most(ly)*—except for corrections.

Quasi-quantifying weak XPs of the type *more/less than n N'*, or *few N'* are *excluded* from Focus in the narrow sense of this term; they occur in the so-called *PredOp* position, which shares some of the properties of Focus. For the purposes of this thesis, Focus proper and *PredOp* may safely be taken under the cover of Focus as an umbrella term. *Obligatory* fillers of the Focus position are non-negative $MON\downarrow$ XPs of the type *few* or *rarely*.

The following examples illustrate the *syntactic placement* of Hungarian Focus. Focus is strictly preverbal. In fact, what (2.47) shows is that Focus cannot be interleaved with XPs in the Topic or

[16]Hungarian has a special relative pronoun for relative clauses. Kenesei (1994) contains a detailed discussion of Hungarian relative clauses, and subordinate clauses in general.

Quantifier positions.

(2.47) *a.* $*$[MARI]$_F$ [tegnap]$_T$ találta meg/meg-találta a macskát
[MARY]$_F$ [yesterday]$_T$ found+Def3Sg MEG/MEG-found+Def3Sg the cat-Acc
Intended: "It is Mary who found the cat yesterday"
b. $*$[Minden fiú]$_Q$ [MARIVAL]$_F$ [mindig]$_Q$ táncolt
[Every boy]$_Q$ [MARY-with]$_F$ [always]$_Q$ danced
Intended: "Every boy always danced with MARY"

The Focus position may be occupied by at most one constituent.[17]

(2.48) $*$[MARI]$_F$ [A MACSKÁT]$_F$ találta meg
[MARY]$_F$ [THE CAT-ACC]$_F$ found+Def3Sg MEG
Intended: "MARY has found the CAT"

If a sentence contains several non-*wh*-Foci, one of these will be preverbal, in canonical Focus position, the rest will be postverbal:

(2.49) *a.* Nem JÁNOS adott virágot MARINAK,
Not JOHN$_F$ gave flower-Acc MARY-DAT$_F$,
"It was not JOHN who gave flowers to MARY,
b. hanem PÉTER KATINAK
but PETER$_F$ KATI-Dat$_F$
but PETER to CATHY"

If a sentence contains Focus, prefixes or other secondary predicates have to occur postverbally, as in (2.50b). In fact, in written texts the presence of a postverbal prefix is the best indicator of Focus.

(2.50) *a.* [Mari]$_T$/[minden fiú]$_Q$ meg-találta a macskát — $T/Q \prec PV \prec V$
[Mary]$_T$/[every boy]$_Q$ MEG-found+Def3Sg the cat-Acc
"Mary/every boy has found the cat"
b. [MARI]$_F$ találta meg a macskát — $F \prec V \prec PV$
[MARY]$_F$ found+Def3Sg MEG the cat-Acc
"It is Mary who has found the cat"
c. $*$[MARI]$_F$ meg-találta a macskát — $*F \prec PV \prec V$
[MARY]$_F$ MEG-found+Def3Sg the cat-Acc
"It is Mary who has found the cat"

One can see from (2.50b) that in Hungarian preverbal secondary predicates and Focus are in complementary distribution. Then one can instantly ask the question whether secondary predicates and Focus occupy the same position. In É.Kiss (1987), the earliest generative model of Hungarian they were indeed said to occupy the same position, namely, *Spec* of VP. É.Kiss' original argument concerned not only the complementary distribution of Focus and secondary predicates, but also their distinguished role in completing the meaning of the verb and that of the entire sentence.

In later models (including É.Kiss (1994)) Focus and secondary predicates are assumed to move to distinct positions, even if the analyses vary with respect to the position assigned to secondary predicates (Chapter 4 will briefly discuss these options.)

That secondary predicates are not a subspecies of syntactic Focus can be seen from the fact that these predicates themselves can be Focussed, as in (2.51b) and (2.52b). Such sentences are

[17] *Wh*-phrases are an exception, since Hungarian is a language that allows multiple *wh*-movement:
α [Ki]$_F$ [kivel]$_F$ [mikor]$_F$ táncolt?
[Who]$_F$ [who-with]$_F$ [when]$_F$ danced?
"Who danced with whom, and when?"

markedly different from their Focus-less counterparts. This is shown in the contrast between (2.51b) and (2.52b), and (2.53a) and (2.53b), respectively.

(2.51) *a.* Mit csinált János?
What-Acc did John?
"What did John do?"
b. Pirosra festette a kerítést
Red-onto painted+Def3Sg the fence-Acc
"He has painted the fence red"

(2.52) *a.* Milyen színűre festette János a kerítést?
What colour-onto painted+Def3Sg John the fence-Acc
"What colour has John painted the fence?"
b. [PIROSRA]$_F$ (festette)
[RED-onto]$_F$ (painted+Def3Sg)
"(He has painted it) RED"

(2.53) *a.* János fel-ment a lépcsőn
John up-went the stair-on
"John has gone up the stairs"
b. János [FEL]$_F$ ment a lépcsőn (és nem LE)
John [UP]$_F$ went the stair-on (and not DOWN)
"John went UP the stairs, and not DOWN"

From these examples it may have become apparent that if secondary predicates and Focus are assigned different syntactic positions, then the tree (2.5) becomes insufficient. There are several proposals in the syntactic literature that differentiate these positions—they will be briefly mentioned in Chapter 4.

Where the *semantics* of Focus is concerned, perhaps its most conspicuous property is that it confers an exhaustive interpretation to its filler. In this respect Hungarian Focus is comparable to English it-clefts, or to the effect of English Focus when combined with *only*.

Exhaustiveness is to be understood relative to the speaker's knowledge. In (2.54b) the sentence containing Focus is intended to convey the information that Mary and Anna were the only persons to pass the exam. Consequently, the continuation *Valaki más is átment* 'Someone else, has passed, too' is false, if the sentence with Focus is true in the intended scenario, and if it corresponds to what the speaker knows. If the sentence with Focus is false because there is someone else who passed, (i) the sentence itself may still accurately describe the speaker's knowledge about the exam, and (ii) the continuation is still inappropriate when uttered by the same speaker, whose information state does not change between the utterance of the two sentences. To be concise, my point is that the continuation is appropriate only as a correction based on an information state which is distinct from the information state that corresponds to the sentence with Focus.

(2.54) *a.* Ki$_F$ ment át a vizsgán?
Who went throught the exam-on?
"Who has passed the exam?"
b. [MARI és ANNA]$_F$ ment át. ##Valaki más is átment.
[MARY and ANNA]$_F$ went through. Someone else too through-went
"It is Mary and Anna who have passed. #Someone else has passed, too."

Thus the constituent in Focus denotes the largest set of which the predication expressed by the sentence is true, relative to the speaker's information state.

In the Hungarian literature Focus has long been regarded as a quantifier or operator, on the basis of its conforming to the Scope Principle. This observation gains more weight, so to speak, by testing with Weak Crossover and with examples where Focus is in a scope island.

(2.55b) shows that an indefinite in Focus position disallows Weak Crossover.

(2.55) *a.* A tanár-a$_i$ mondta, hogy [egy matekhallgató$_i$]$_T$ jelest kapott
The professor-Poss3Sg$_i$ said+Def3Sg, that [one maths-student$_i$]$_T$ ace-Acc got
"Her$_i$ professor said that [a maths student$_i$] received an A"

b. ???A tanár-a$_i$ mondta, hogy EGY MATEKHALLGATÓ$_i$ kapott jelest
The professor-Poss3Sg$_i$ said+Def3Sg, that [ONE MATHS-STUDENT$_i$]$_F$ ace-Acc got
"Her$_i$ professor said that it was a maths student$_i$ who received an A"

(2.56) shows that even a proper name is prone to Weak Crossover when in Focus.

(2.56) *a.* A tanár-a$_i$ mondta, hogy [Mari$_i$]$_T$ jelest kapott
The professor-Poss3Sg$_i$ said+Def3Sg, that [Mary$_i$]$_T$ ace-Acc got
"Her$_i$ professor said that [Mary$_i$] received an A"

b. ??A tanár-a$_i$ mondta, hogy [MARI$_i$]$_F$ kapott jelest
The professor-Poss3Sg$_i$ said+Def3Sg, that [MARY$_i$]$_F$ ace-Acc got
"Her$_i$ professor said that it was Mary$_i$ who received an A"

For English, the scope (in)sensitivity of Focus amounts to *only* associating with a Focussed constituent from a scope island (Rooth (1996)). According to Mats Rooth, Focus does associate with *only* in the following examples:

(2.57) *a.* Dr. Svenson will only complain if [Bill]$_F$ doesn't finish his job

b. Dr. Svenson will only complain when [Bill]$_F$ leaves the lights on.

Rooth's comment is that in (2.57) the Focussed *NP* associates with *only* outside the scope island.

In Hungarian the same test cannot be applied, or, at least, it is not relevant. The reason for this is that Hungarian Focus need not associate with any operator.[18] On the other hand, Hungarian *csak* 'only' needs to associate with a Focussed constituent very locally.

(2.58) *a.* Dr. Svenson [csak akkor]$_{F_1}$ dühös, [ha [Bill]$_{(F_2)}$ lusta]$_{F_1}$
Dr. Svenson [only then]$_{F_1}$ angry, [if [Bill]$_{(F_2)}$ lazy]$_{F_1}$
"Dr. Svenson is angry only if [[Bill]$_{(F_2)}$ lazes about]$_{F_1}$"

b. *#Dr. Svenson [csak dühös]$_{F_1}$, ha [Bill]$_{(F_2)}$ lusta
Dr. Svenson [only angry]$_{F_1}$, if [Bill]$_{(F_2)}$ lazy
Out: "Dr. Svenson is angry only if Bill lazes about"
OK: "Dr. Svenson is [only angry]$_{F_1}$ if Bill$_{(F_2)}$ lazes about"
(e.g. he does not write a letter of complaint to the dean)

(2.58) shows the following about Hungarian Focus:

- *Csak* 'only' needs to associate very locally: note the unacceptability of (2.58b), on the intended reading of *csak* associating with the *NP* in the consequent. This is to be understood in contrast with English (2.57).
- *Csak* can associate with a relative pronoun (e.g *akkor* 'then', 'at which time') that serves as a pointer to a subordinate clause. Thus in (2.58a) *csak* scopes over the entire consequent, in fact. Note that the consequent need not contain a Focus: this is indicated by the parantheses around the label F_2.

It seems then, that Hungarian Focus is like English Focus plus (local) *only*.[19] From what one has seen so far, it comes as no surprise that *NP*s in Focus position cannot escape scope islands.

(2.59) presents a minimal pair with conditionals, Topic and Focus: When the indefinite is in Topic position, as in (2.59a), it can easily have widest scope. This reading is not available for

[18] Hungarian Focus cannot associate with *is* 'too'. It may associate with *csak* 'only', but this is not quite straightforward.

[19] For some complications and mismatches with *csak* 'only' the reader is referred to Katalin É.Kiss' work.

(2.59b), where the indefinite is in Focus. This sentence can only be understood in contrast with a sentence like *If a philosopher has a donkey, he writes papers about it*, i.e. it is taken to answer a question like *What happens if a scholar from what field owns a donkey?*

(2.59) *a.* Ha [egy szemantának]$_T$ van egy szamara, akkor jól tartja
If [one semanticist-Dat]$_T$ is one donkey-Poss3Sg, then well keeps+Def3Sg
"If a semanticist has a donkey, he takes good care of it"

b. Ha [EGY SZEMANTÁNAK]$_F$ van (egy) szamara, akkor #jól tartja
If [ONE SEMANTICIST-Dat]$_F$ is (one) donkey-Poss3Sg, then well keeps+Def3Sg
Int.: "If it is a semanticist who has a donkey, then he takes good care of it"

c. Ha [EGY SZEMANTÁNAK]$_F$ van (egy) szamara, akkor az állatorvos örül
If [ONE SEMANTICIST-Dat]$_F$ is (one) donkey-Poss3Sg, then the vet is-glad
"If it is a semanticist who has a donkey, the vet is glad"

Note also another property of (2.59b), which is seen to follow from the bound status of the indefinite. This is that the donkey pronoun in the consequent (better said, the verbal suffix *-ja*) is not licensed.[20][21]

If Hungarian Focus resembles English *only*+Focus, or English it-clefts, then one can inquire whether Hungarian Focus is presuppositional. Indeed, I take Focus to trigger a presupposition–assertion division of the sentence, similar to English it-clefts or pseudoclefts. This is confirmed by the negation and the conditional tests: both (2.60a-b) presuppose that there is someone whom John loves. In view of the exhaustivity of Focus, the presupposition is in fact that there is a maximal set of individuals loved by John.

(2.60) *a.* János [nem MARIT]$_F$ szereti (hanem KATIT)
John [not MARY-Acc]$_F$ love+Def3Sg (but CATHY-Acc)
"It is not Mary whom John loves (but Cathy)"

b. Ha János [MARIT]$_F$ szereti, akkor Kati dühös
If John [Mary-Acc]$_F$ love+Def3Sg, then Cathy angry
"If it is Mary whom John loves, then Cathy is angry"

To be exact, Focus involves a presupposition–assertion division of the non-Topic part of the sentence. This can be seen from the contrast between (2.61a-b), which was pointed out to me by Ede Zimmermann (p.c.).

(2.61) *a.* [Egy énekkar]$_T$ [TAVALY]$_F$ alakult
[One choir]$_T$ [LAST-YEAR]$_F$ was-formed
"One of the choirs, it was last year that it was formed"

b. [TAVALY]$_F$ alakult egy énekkar
[LAST-YEAR]$_F$ was-formed one choir
"It was last year that a choir was formed"

Both (2.61a-b) presuppose that there was a choir-forming event some time in the past, and assert that that time was within the interval of last year. Apart from that, the two sentences are not interchangeable. Because of Topicalisation, (2.61a), involves a familiar non-singleton set of choirs or other ensembles, of which the choir in question is one. (2.61b) need not involve such information; that is, it can be true, if there is only one, non-familiar choir (or ensemble) in question.

[20]The pronoun is of course licensed if the indefinite *a donkey* has wide scope. Then the sentence means *If it is a semanticist who owns a certain donkey, he takes good care of it.* Only, in Hungarian this would be conveyed with a predicative Genitive:

(δ) Ha [egy szamár]$_T$ [EGY SZEMANTÁ-É]$_F$, akkor az jól tartja
If [one donkey]$_T$ [ONE SEMANTICIST-Poss3Sg]$_F$, then that well keeps+Def3Sg
"If a donkey belongs TO A SEMANTICIST, he takes good care of it"

[21]The pronoun is licensed if (2.59b) answers a question that contains the entire conditional, and thus the pronoun is bound, ab ovo. Such a question is e.g. *Who is such a person, s.t. if s/he has a donkey, s/he takes good care of it?*. English cases like this were discussed first in Chomsky (1976). See also Rooth (1996).

In Szabolcsi (1981), which represents the first systematic formal analysis of Hungarian Focus, Focus was defined as non-presuppositional. This view has since been rejected by Anna Szabolcsi, but the original argument from the 1981 paper is still worth reviewing.

According to Szabolcsi, (2.62a) does not presuppose that there is someone Peter is beating, because this sentence can have other continuations beside the presupposition-suggesting (2.62b), and then the negative particle *nem* would have to be assigned varying scope, depending on the varying 'scope' of Focus in (2.62a).

That is, Szabolcsi's reasoning about (2.62a) and its multiple continuations is that (i) if Focus were presuppositional, it would license only the continuation in (2.62b). (ii) But (2.62a) can be continued in two other ways, so, by contraposition, (iii) Focus is not presuppositional.

(2.62) *a.* [Nem MÁRIÁT]$_F$ veri Péter,
[Not MARY-Acc]$_F$ beat+Def3Sg Peter,
"It is not Mary whom John is beating,
"What John is doing is not beating Mary,
"What is happening is not that John is beating Mary,

b. hanem [ÉVÁT]$_F$
but [EVE-Acc]$_F$
but Eve"

c. hanem [A GYEREKKEL]$_F$ játszik
but [THE CHILD-with]$_F$ plays
but playing with the child"

d. hanem [AZ AJTÓ]$_F$ csapódott be
but [THE DOOR]$_F$ banged into
but the DOOR banged shut"

(Szabolcsi (1981), exx (14) on p. 523.)

This is not conclusive, however, for the following reasons:

1. Where the continuation (2.62c) is concerned, this merely serves to indicate that in the initial sentence (2.62a), Focus is projected onto the VP, and this is contrasted with the other VP *a gyerekkel játszik* 'he is playing with the child'.

2. The continuation (2.62d) is suggestive of Focus being projected onto the entire sentence in (2.62a). The intended English paraphrase is: *What happened was not that Peter was beating Mary, but that the door banged shut.* But (2.62a), as it stands, does not allow Focus to be projected to sentence level. This is because, for some mysterious reason, Hungarian all-Focus sentences (if understood contrastively) require two Foci. The right sentence pattern for such projection is then following:

   (2.63) *a.* Nem MÁRIÁT veri PÉTER,
   Not MARY-Acc beat+Def3Sg PETER,
   "It is not Peter beating Mary,

   b. hanem AZ AJTÓ csapódott be
   but THE DOOR banged into
   but the door banged shut"

3. The observation to be drawn from (2.62a) is that Focus in Hungarian can indeed be projected at least to VP-level (see also Kenesei (1998)). But this does not by any means imply that Focus is not presuppositional. It can just as well imply that the different 'projected' readings involve different presuppositions. In the case when Focus is projected onto the VP in (2.62a), the presupposition can be e.g. *Peter is making noise.*

4. Concentrating on the NP-Focus case alone, it can be seen that the continutation (2.64b) is very awkward. The reason for its awkwardness is that the second sentence is intended to deny the presupposition triggered by Focus in the first sentence.

(2.64) *a.* [János]$_T$ [nem KATIT]$_F$ szereti,
[John]$_T$ [not CATHY-Acc]$_F$ loves+Def3Sg
"It is not Cathy whom John loves,
b. ???hiszen nem szeret ő senkit
since not loves he no-one-Acc
since he does not love anyone"

(2.64b) is an appropriate continuation to (2.64a) only if it denies the presupposition of another speaker's utterance.

In what follows, Focus will be taken as presuppositional, by definition. So, the following example is not meant to provide evidence. It is recorded here as an interesting case of a presupposition interacting with a quantifier:

(2.65) *a.* [Balázs]$_T$ senkinek sem mondott szépeket
[Balázs]$_T$ no-one-Dat SEM said nice-things
"Blaise did not compliment anyone"
b. [BALÁZS]$_F$ nem mondott szépeket senkinek
[BLAISE]$_F$ not said nice-things-Acc no-one-Dat
"It was Blaise who did not compliment anyone"
a. Senkinek sem [BALÁZS]$_F$ mondott szépeket
No-one-Dat SEM [BLAISE]$_F$ told nice-things-Acc
"For no x, it was not Blaise who complimented x"

(2.65a-c) all have different meanings. The 'neutral' sentence (2.65a) is strictly about the Topic *Balázs*: it conveys no information about other members of some alternative set. Thus, (2.65a) is compatible with a scenario where no-one was complimented, either because there was no-one else who could have uttered the compliments (=no alternative set for complimenting Agents), or because there was no-one to compliment (no potential recipients).[22] By contrast, (2.65b) presupposes that there was someone who did not compliment anyone; by the maximality property of Focus, it is inferred that everyone else from the relevant alternative set complimented someone. Also, it is not necessary for every potential recipient to have been complimented. In turn, in (2.65c), where the negative quantifier precedes Focus, it is presupposed that *everyone* from some context set was complimented by a possibly different person. This, I think, is a clear case of presupposition surviving under negation, as a consequence of which *senki* 'no-one' gets a specific construal: *no-one from a familiar or salient context set.*

As a consequence of the Scope Hypothesis, Focus can have only narrow scope relative to quantifiers in Quantifier position. (This was anticipated in several earlier examples, including (2.65c).) This is the case even when the Focus position is filled by a proper name, as in (2.66). In this case it is in fact the presupposition triggered by Focus that has narrow scope relative to the quantifier: for every book x from a given set, it is presupposed that there is a unique recipient of x, and it is asserted that the recipient is John.

(2.66) [Minden könyvet]$_Q$ [János]$_F$ kapott
[Every book-Acc]$_Q$ [John]$_F$ received
"For every book, it was John who received it"
NOT: "It was John who received every book"

Since Hungarian Focus involves maximality or exhaustive listing, certain entailments of $MON\uparrow$ XPs are blocked. This is similar to what one finds in English it-clefts, though, to my knowledge,

[22] Possible continuations of (2.65a) are then Hungarian equivalents of *There was no-one to compliment, The others were quite rude, too*, and so on.

this has not been noted in the literature on English clefting so far. What one has in (2.67a-b) is that the referent introduced by Focus is maximal relative to the property expressed by the *VP*, but this is lost once we take 'larger' properties. (Of course, (2.67a) entails (the Hungarian equivalent of) the Focus-less or uncleft sentence *A physicist was making music in the park.*) By contrast, the *NP* in Focus can be replaced with a predicate whose extension contains that of the initial N'. This is seen in (2.67c).

(2.67) *a.* [EGY FIZIKUS]$_F$ dobolt a parkban
[ONE PHYSICIST]$_F$ drummed the park-in
"It was a physicist who was playing drums in the park"
b. $\not\models$ [EGY FIZIKUS]$_F$ zenélt a parkban
[ONE PHYSICIST]$_F$ made-music the park-in
"It was a physicist who was making music in the park"
c. $\models$ [EGY TUDÓS]$_F$ dobolt a parkban
[ONE SCIENTIST]$_F$ drummed the park-in
"It was a scientist who was playing drums in the park"

When the possible fillers of the Focus position were enumerated, it was said that $MON\uparrow$ quantifying *XP*s cannot occur in Focus. This can be seen from (2.68a). It seems to me that this is a purely semantic constraint, since *NP*s with *nem minden* 'not every' can in fact occur in Focus. Presumably in this case *nem minden* forms a complex determiner.

(2.68) *a.* *[MINDEN MACSKA]$_F$ fogott meg egy egeret
[EVERY CAT]$_F$ caught MEG one mouse-Acc
Intended: "EVERY CAT has caught one of the mice"
b. [NEM MINDEN MACSKA]$_F$ fogott meg egy egeret"
[NOT EVERY CAT]$_F$ caught MEG one mouse-Acc
"Not all cats have caught one of the mice"

The Focus in (2.68a) is intended to be noncorrective, say, as an answer to a question like *Who has caught mice?*, or *How many cats have caught mice?*. If Focus is corrective, then one can have the following:

(2.69) Minden MACSKA fogott meg egy egeret, és nem minden KUTYA
Every CAT caught MEG one mouse-Acc, and not every DOG
"Every CAT has caught a mouse, and not every DOG"

Cases of correction like (2.69a) are quite different from ordinary Focus, and have not been sufficiently studied in the Hungarian literature. Here, too, they will be ignored.

Negation

In the first model by É.Kiss preverbal negative *XP*s were said to be in Focus. The same holds for the negative particle *nem* 'no'. Indeed, they are not interchangeable with quantifiers, as shown in (2.70):

(2.70) *a.* *Mari$_T$ semmit$_Q$ kétszer$_Q$ nem olvasott az órára
Mary$_T$ nothing-Acc$_Q$ twice$_Q$ not read the class-for
Int.: "Twice, Mary did not read anything for class"
b. Mari$_T$ kétszer (is) semmit nem olvasott az órára
Mary$_T$ twice (even)$_Q$ noting-Acc not read the class-for
"Even twice, Mary has read nothing for class"

Analysing negation as a species of Focus is supported by the fact that in the presence of the negative particle *nem* prefixes have to follow the verb, just in the case of 'ordinary' Focus:

(2.71) *a.* Nem ment el Mari
Not went away(Pfx) Mary
"Mary did not leave"
b. ∗Nem el-ment Mari
Not away-went Mary
Intended: same as above

Since the mid-nineties it is currently assumed that negative XPs occupy a projection distinct from Focus (Szabolcsi (1996)). This was motivated by examples of the type (2.65b), where the NP *senkinek (sem)* 'to no-one' is followed by an NP in Focus.

According to Anna Szabolcsi, Hungarian negation occupies a separate projection $NegP$ that may interact with Focus. In fact, there may be several (at least two) $NegP$s surrounding Focus:

(2.72) $[_{HDistP}\ \ldots\ [_{NegP}\ \ldots\ [_{FP}\ \ldots\ [_{NegP}\ \ldots\ ]]]]$

The need for more than one $NegP$s surrounding Focus is motivated by examples like the following one, which contains (i) a negative NP (quantifier), (ii) a negated constituent in Focus, and (iii) sentence- or VP-negation:

(2.73) [Senki]$_{NegP}$ [nem MARIT]$_F$ [nem]$_{NegP}$ szereti
[No-one]$_{NegP}$ [not MARY-Acc]$_F$ [not]$_{NegP}$ loves+Def3Sg
"For no-one, it is not Mary s/he does not like"

In the case of constituent negation, the negative particle *nem* may merge with Focus. This is the case e.g. in (2.74c). Sentence negation follows Focus, as seen in (2.74b) and (2.74d). In this case negation is taken to be part of the presupposition: (2.74b,d) presuppose for instance that there is someone John does not like.

(2.74) *a.* János nem szereti Marit
John not loves+Def3Sg Mary-Acc
"John does not like Mary"
b. János [MARIT]$_F$ nem szereti
John [MARY-Acc]$_F$ not loves+Def3Sg
"It is Mary John does not like"
c. János [NEM MARIT]$_F$ szereti
John [NOT MARY-ACc]$_F$ loves+Def3Sg
"It is not Mary whom John likes"
d. János [NEM MARIT]$_F$ nem szereti
John [NOT MARY-Acc]$_F$ not loves+Def3Sg
"It is not Mary John does not like"

In the case of constituent negation the negative particle the Neg head is presumably merged with Focus. This merge is prevented if $NegP$ already contains a constituent preceding Focus:

(2.75) *a.* ∗[Senki sem]$_{NegP}$ [nem MARIT]$_F$ szereti
[No-one]$_{NegP}$ [not MARY-Acc]$_F$ loves+Def3Sg
Intended: "For no x from X, it is not Mary whom x loves"
b. [Senki sem]$_{NegP}$ [MARIT]$_F$ szereti
[No-one]$_{NegP}$ [MARY-Acc]$_F$ loves+Def3Sg
Intended: same as above

2.5.2 Focus proper and *PredOp*

Szabolcsi (1997a) assumes TWO syntactic positions for what has traditionally been assumed as ONE Focus. The so-called *PredOp* position is reserved for certain modified numerals, listed below, and for bare nominals. This distinction is motivated by the fact that these numerals do not express contrast or exhaustivity in the manner other constituents (typically names) do when in Focus, yet they have to be in immediately preverbal position. (In this case the numeral receives stronger stress.)

(2.76)	*a.*	*több, mint n N'*	more than n N'
	b.	*n-nél több N'*	more than n N'
	c.	*pontosan n N'*	exactly n N'
	d.	*kevés N'*	few/little N'
	e.	*kevesebb, mint n N'*	less than n N'
	f.	*n-nél kevesebb N'*	less than n N'
	g.	*legfeljebb n N'*	at most n N'
	h.	*macská(-ka-)t*	cat(s)-Acc

(Szabolcsi's ex. (33) on p. 121)

It is remarkable that (i) *legalább n N'* 'at least n N' is excluded from the *PredOp* position, although it is a modified numeral very much like *több, mint n N* 'more than n N'; yet its syntactic distribution is different from those in the list above. (ii) *Több, mint n N'* 'more than n N', with the analytic comparative can also occupy the Quantifier position. Its synthetic counterpart, *n-nél több N'* is confined to the *PredOp* position (when preverbal). Szabolcsi also relegates bare nominals to the *PredOp* position. The reason for this is presumably that their distribution indeed coincides with that of other *NP*s 'confined' to the *PredOp* position. Only, the semantics of bare nominals is very much at odds with that of *at least n*-type *NP*s. It is preferable, then, to analyse bare nominals as secondary predicates (Komlósy (1994)), and thus to exclude them from *PredOp*.

Szabolcsi's reasons for distinguishing between Focus proper and *PredOp* are that they are said to correspond to distinct modes of semantic composition (or 'modes of operation', in Szabolcsi's terminology). (i) *NP*s in Focus are said to introduce a discourse referent that serves as subject of predication. By contrast, (ii) *NP*s in *PredOp* are not said to contribute an entity to the interpretation of the sentence, and do not serve as logical subjects for predication. Such *NP*s are said to perform a counting operation on the property denoted by material on their right.

Focus and *PredOp* are said to be in complementary distribution. Usually *PredOp* is filled, and then the intended Focus is postverbal. On the basis of prosodic prominence alone it is hard to distinguish between Focus and *PredOp*, so some testing is required. The test employed by Szabolcsi is negation. As shown in (2.77a-b), it is not possible to have constituent negation with *NP*s in *PredOp*. Instead, the relevant *NP* has to be postverbal, in the scope of sentence negation, as seen in (2.77a).

(2.77) *a.* ∗Nem kevés diák bukott meg (hanem sok)
Not few student tripped MEG (but many)
Intended: "The proportion of flunked students of ours is not *few* (rather, it is *many*)"

b. Nem bukott meg kevés diák
Not tripped MEG few student
—same as above—

c. Kevés diák nem bukott meg
Few student not tripped MEG
"Few (are the) students (who) did not flunk"

(2.77) shows that *NP*s with *kevés* 'few' are not compatible with constituent negation. This is taken to be a diagnostic of the *PredOp* position by Szabolcsi.

Szabolcsi concludes that *PredOp* does not introduce a discourse referent on the basis of the contrast between (2.78) and (2.79).

(2.78) *a* [Több, mint hat diákunk]$_Q$ félreértette a kérdést
[More, than six student-Poss1Pl]$_Q$ away-understood+Def3Sg the question-Acc
"More than six of our students misunderstood the question."
b Lehet, hogy másokat is találsz
Maybe, that other-Pl-Acc too find-2Sg
"Maybe you will find others, too"

(2.79) *a.* [Több, mint HAT diákunk]$_{PrOp}$ értette félre a kérdést
[More, than SIX student-Poss1Pl]$_Q$ understood+Def3Sg the question-Acc
"More than SIX students of ours misunderstood the question"
b. ∗Lehet, hogy másokat is találsz
Maybe, that other-Pl-Acc too find-2Sg
"Maybe you will find others, too"

(Szabolcsi's (54) on p. 135)

These examples differ in the placement of the *NP több, mint hat diákunk* 'more than six students of ours', and this difference is responsible for the lack or presence of a maximality effect. In (2.78a) the *NP* is in the Quantifier position, and hence involves no maximality. In (2.79b) on the other hand the *NP* is in *PredOp*, hence the maximality effect.

According to Szabolcsi, the two examples have a different predicational structure: (2.78) is said to introduce a group and predicates a property of it—it is not excluded that other referents have this property, as well. With (2.79), the property is said to take precedence, and it is stated that it is the collection in question, with the given cardinality, that has that property, and no other individuals. In my terms, this analysis (2.79) is compatible with the presupposition structure triggered by Focus: in this case it is narrow Focus on the numeral. That is, it is presupposed that there is a unique maximal referent with the given property, and it is asserted that its cardinality is greater than six. Szabolcsi however concludes something more: the maximality effect of (2.79) is also taken to show that *NP*s in PredOp do not introduce discourse referents.

Szabolcsi's intuition concerning the non-availability of a suitable discourse referent is supported by the following (it is my example):

(2.80) *a.* [Több, mint HAT diákunk]$_{PrOp}$ értette félre a kérdést
[More, than SIX student-Poss1Pl]$_Q$ understood+Def3Sg the question-Acc
"More than SIX students of ours misunderstood the question" (=(2.79a)
b. #Biztosan siett-*ek* a kocsmába
Certainly hurried-3Pl the pub-to
"They must have been in a hurry to get to the pub"

One can see from (2.80) that *NP*s in *PredOp* do not readily license pronominal anaphora. ((2.80b) becomes acceptable if the relevant group is explicitly introduced in a preceding sentence.) This is suggestive that (i) either no discourse referent is introduced by an *NP* in *PredOp*, as maintained by Szabolcsi, or that (ii) there may be a discourse referent, but it is bound by some mechanism related to Focus.

Other examples with 'ordinary', non-*PredOp* Focus suggest that the second alternative is more viable. Cases like (2.80) are by no means confined to *PredOp* alone.

First, already 'standard' Focus involves an unusual discourse referent introduction mechanism that makes pronominal links hard to obtain.

(2.81) [A LÁNYOK]$_F$ mentek el sízni. #Utána úszni mentek.
[THE GIRLS]$_F$ went away ski-Inf. After-3Sg swim-Inf went-3Pl
"It is the girls who went to ski. They went to swim afterwards."

Anaphoric continuations in such cases are not readily licensed, as shown in (2.81), unless some part of the continuation receives Focus stress, too. In (2.81) for instance, matters improve if the infinitive *úszni* 'swim' is stressed. This mini-discourse can then be taken as either (i) about what the girls did, as opposed to another, contextually salient group. (Note that there is a shift between the two sentences: the first is about the identification of the group that went skiing, viz. the girls; the second is about this group proper). (ii) Or , (2.81) can be taken as evidence of the speaker's knowledge, in which case the continuation is an evidential link to the first sentence, and the whole can be paraphrased as follows: *I know that it is the girls who went skiing. I even know that they went swimming after that.*

My point is that already this relatively simple case of Focus is seen to discourage anaphoric links. I have no ready explanation for the phenomenon in (2.81). One conjecture concerns the question–answer structure such a sentence seems to rely on. Another conjecture involves the quantificational (=variable-binding) nature of Hungarian Focus. If this is the case, felicitous continuations (which are rare and involve special intersentential relations) are seen as instances of telescoping or quantificational subordination (Roberts (1987)).

If only a (sub)constituent of the constituent in Focus gets the Focus feature (in this case it is said to be in the Focus position proper and not in *PredOp*), pronominal links are likewise hard to obtain. According to my intuitions these are harder to obtain than with (2.81):[23]

(2.82) *a.* János [egy SZŐKE nőt]$_F$ szeret, akinek naponta virágot vesz
John [one BLONDE woman-Acc]$_F$ loves, who-Dat daily flower-Acc buys
"John loves a BLONDE, to whom he buys flowers daily"

b. János [egy SZŐKE nőt]$_F$ szeret.??Naponta virágot vesz neki
John [one BLONDE woman-Acc]$_F$ loves. ???Daily flower-Acc buys to-her
"It is a BLONDE that John loves. He buys her flowers every day"

In (2.82) a property is in Focus. If Focus proper is taken to introduce a discourse referent, then (2.82b) does it in a nonstandard manner. That is, the sentence presupposes that John loves a woman with some property P, and it is asserted that P is the property of being blonde. That is, Focus in (2.82) has a nonstandard role, comparable to that of the modified numeral in (2.83) below. My point is, it is not only modified numerals that behave in a nonstandard manner where predication is concerned, and that this is not confined to the *PredOp* position.

(2.81) and (2.82) suggest that Szabolcsi's second mode of predication is not confined to 'counting' in *PredOp*. In her terms, this second mode of predication involves taking a property first, and then naming (or counting) the unique maximal individual that has that property. I take this to be nothing but the presupposition–assertion structure induced by Focus. In the representation of Focus, the (presupposed) property takes precedence, precisely because it has the status of a presupposition. The constituent in Focus then identifies *the* individual that has this property.[24] In a word, the counting associated with *PredOp* is a special case of a general Focus-related predicational structure.

On the basis of examples like (2.79), repeated as (2.84), I take modified $MON\uparrow$ numerals in *PredOp* to express amount quantification, in the sense of Kroch (1989): what is presupposed is that predication holds of a (nonempty) set with some cardinality n. What is asserted is that the cardinality of this set is (at least) m.[25]

(2.83) [Több, mint HAT diák]$_F$ állta körül Poirot-t
[More, than SIX student]$_F$ stood+Def3Sg round Poirot-Acc
"Poirot was surrounded by more than SIX students"

[23] In (2.82a), the *NP* in Focus and the relative clause are assumed to form one unit, at least at the level of semantic representation.

[24] In the case of narrow Focus on an adjective, as in (2.82b), Focus identifies a higher order entity (a property), but the mechanism is essentially the same.

[25] In Chapter 6 this analysis will be modified in order to account for $MON\downarrow$ *NP*s as well.

(2.84) *a.* [Legalább hat diákunk]$_Q$ megbukott. Lehet, hogy mások is.
[At-least six student-Poss1Pl]$_Q$ MEG-tripped. Maybe, that others too
"At least six students of ours have flunked. Maybe others did so, too."

b. [Több, mint HAT diákunk]$_F$ bukott meg. #Lehet, hogy mások is.
[More than SIX student-Poss1Pl]$_F$ tripped MEg. #Maybe, that others too.
"More than SIX students of ours have flunked. Maybe others did so, too."

On (2.83) and (2.84) I have the following to say: In the case of (2.84b), the presupposition is that there is a (maximal set) of our students who have flunked; the assertion is that the cardinality of this set is larger than six. This accounts for the maximality effect that precludes continuations of the form *maybe there were others as well.* The collective reading of (2.83b) is also seen to follow from this particular kind of presupposition/assertion division: the sentence presupposes that Poirot was surrounded by a number of students, and the assertion is that the cardinality of this set is more than six.

What needs to be retained from this discussion is the following. The *PredOp* position is distinct from Focus proper, and indeed it hosts modified numerals. *PredOp* is not said to contain a covert 'counting' head. Instead, the semantic effects noted by Szabolcsi are said to follow from the properties of the *NP*s that occur in *PredOp*, and from the presupposition–assertion partitioning triggered by Focus. Then the question is, what induces these numerals to have narrow focus—I have no ready answer to that, but suggest that these modifiers may be inherently Focus-sensitive, as proposed for English *at least* and *at most* in Krifka (1999).

The semantic aspects of the Focus/PredOp distinction are relevant for this work in that the English counterparts of the *NP*s that can (or have to) occupy the *PredOp* position are weak *NP*s. In Hungarian, however, the $MON\uparrow$ ones involve a presupposition–assertion division which is at odds with the property of being a weak *NP*. So, I take them to be quasi-strong *NP*s. The quasi-strength of these *NP*s will receive some discussion in chapters 3 and 6.

In what follows, I will assume Szabolcsi's *PredOp* position (as distinct from Focus) for such *NP*s. Only, I contend, the 'counting' operation attributed to this position by Szabolcsi is in fact the consequence of the particular kind of presupposition—assertion division triggered, as it were, by narrow Focus on the numeral.

2.5.3 The Baroque view

In the remainder of this section the Baroque view on information structure is presented. For the most part, what one finds in the literature has to do with mismatches between (Syntactic) Focus and "Information" Focus, this latter term understood as a device that relates the sentence in which it occurs to the (often implicit) question under discussion (Roberts (1998), Vallduví and Vilkuna (1998)).

These attested mismatches come in two varieties: (i) A sentence may contain a constituent in Focus position, but the syntactic unit with exhaustive interpretation is larger than what is in Focus position (Focus projection) or it is a subconstituent of what one finds in Focus position (narrow Focus). (ii) The sentence lacks overt Focus, and some other constituent (usually in Quantifier position) has the function of Information Focus, in that it serves to fill the information gap of some question. These mismatches have been reported in the literature (see Roberts (1998) for references).

To Focus-related mismatches I would like to add some Topic-related mismatches. It is possible, for instance, for a sentence to lack an overt Topic, and for (preverbal) quantifiers to correspond to groups that are related to a previously introduced collection. Such sentences can be said to be about the group(s) corresponding to the quantifier(s), which then indeed serve as Topics under discussion.

Focus projection

As in English, in Hungarian the internal argument of a head can project its Focus feature onto the (maximal) projection of that head (Kenesei (1998)), as shown in (2.85a). Adjuncts do not have this

property, as seen from (2.85b).

(2.85) *a.* János [A JELENTÉSEKET]$_F$ olvassa
John [THE REPORTS-Acc]$_F$ read+Def3Sg
"It is the reports that John is reading"
"What John is doing is reading the reports"

b. János [A KÖNYVTÁRBAN]$_F$ olvas
John [THE LIBRARY-IN]$_F$ read-3Sg
Only: "It is in the library that John is reading"
Not: "What John is doing is reading in the library"

Pied Piping to Focus

In earlier examples it could be seen that it is possible for only part of a constituent in Focus position to have the Focus feature. In such cases the entire constituent has to be in Focus position, yet only the stressed subconstituent has the relevant interpretation. According to Szabolcsi, this is comparable to pied piping with *wh*-phrases. (Obiously, if only the subconstituent with the Focus feature are moved, and the remainder of the initial constituent remains in situ, this results in ungrammaticality.)

(2.86) *a.* [Az OKOS diákjaink]$_F$ buktak meg
[The SMART student-Pl-Poss1Pl]$_F$ tripped MEG
"It is our SMART students who have flunked"

b. János [az UNALMAS jelentéseket]$_F$ olvassa
John [the BORING report-Pl-Acc]$_F$ read+Def3Sg
"It is the boring reports that John is reading"

Quantifiers and Discourse Functions

In É.Kiss' original schema, Quantifiers belong to the logical predicate or Rheme part of the sentence. Typically, obviously, (if one considers only their sentence-internal role) they are operators that embed Focus. If, however, one takes a look at the questions that sentences with quantifiers can answer, it can be seen that preverbal quantifiers and *NP*s with *is* can have either a Topic or Focus discourse function.

In many cases, $MON\uparrow$ quantificational *NP*s in the Quantifier position have information Focus status, which is marked by prosodic prominence. (In fact, *valamennyi* 'all' requires such prominence, as discussed in László Hunyadi (1986).) Such quantifiers can also be said to fill the information gap of a *wh*-phrase, as in (2.87b). Despite their Focus status, these *NP*s have to stay in the Quantifier position.

(2.87a) can answer a question like *Who flunked?*. In this case it is understood as I-Focus proper. It can also answer the question *How many students (of ours) have flunked?*, and then it is a candidate for what may be termed as I-PredOp.

(2.87) *a.* [VALAMENNYI diák-unk]$_Q$ megbukott
[ALL student-Poss1Pl]$_Q$ MEG-tripped
"ALL students of ours have flunked"

b. $*$[VALAMENNYI diák-unk]$_F$ bukott meg
[ALL student-Poss1Pl]$_F$ tripped MEG
intended meaning: same as above

The following example shows that an *NP* with *is* 'too' may also have I-Focus status, yet it cannot

occur in Focus position:

(2.88) *a.* **A:** János [MARIT]$_F$ látogatta meg
John [MARY-Acc]$_F$ visited+Def3Sg MEG
"It is (only) Mary whom John visited"
b. **B:** Nem, mert ["Katit is]$_Q$ meg-látogatta
Not, because ["Cathy-Acc too]$_Q$ MEG-visited+Def3Sg
"No, he has also visited Cathy"
c. **B:** *Nem, mert [KATIT IS]$_F$ látogatta meg
Not, because [CATHY-Acc TOO]$_F$ visited+Def3Sg MEG
—same as sentence *b*—

Note that an *NP* which is in the Quantifier position and which serves as Focus does not have an exhaustive interpretation. This is obvious in (2.88b). But (2.87a) too can be continued in such a way that denies exhaustivity.

Quantifiers can just as easily be understood as Topics, as in (2.89b).

(2.89) *a.* [A kocsmában]$_T$ üldögélt tíz kém
[The pub-in]$_T$ sat-Past ten spy
"Ten spies were sitting in the pub"
b. [Mindegyik férfi]$_{Q/*T}$ Humphrey Bogart-nak öltözött
[Each man]$_{Q/*T}$ H.B-Dat dressed
"Each man (of the ten spies) was dressed as Humphrey Bogart"

In (2.89b), the domain of the quantifier is provided by the indefinite from the preceding sentence, and the sentence is about the men from that domain. Thus, the quantifier can be taken as a (semantic) Topic, even though its 'quantifying' nature excludes it from the syntactic position of Topic.[26]

To rescue a tight syntax–semantics link, one might assume that the *context/witness set* for *mindegyik férfi* 'each man' serves as the Topic proper. It is highly implausible, however, that this information is made part of a Logical Form tree. Rather, this information is to be made part of the semantic representation, without such a syntactic correlate.

For the toy fragment in 2.6, the established view will be sufficient. The discussion of the Baroque view was included in order to formulate desiderata on a possible fuller account of information structure in Hungarian.

The Baroque view suggests that even in Hungarian, Information Focus is distinct from syntactic Focus. This implies that Information Focus, or a less syntax-friendly articulation of information structure is to be reckoned with even in a discourse configurational language like Hungarian.

Given the consideration that Hungarian sentences express a predication relation between Topics and the rest of the sentence, one gets a schema of Theme–Rheme or Vallduvian Topic–Vallduvian Focus articulation (Vallduví (1992)), of which Syntactic Topic and Focus are but a part. This model involves a looser connection between syntax and semantics than what is suggested by the established view.

2.6 Fragments of a Fragment

2.6.1 Introduction

In this part I sketch a miniature toy fragment for Hungarian Topic and Focus. It conforms to the established view, which is sufficient for the purposes of this thesis. Hopefully, it can serve as a starting point for a more elaborate, Baroque-ish system.

[26]Similar discourses can be constructed for *NP*s with *is* 'too', as well. For instance, (2.89b) could be continued with *[A nők is]$_Q$ Humphrey Bogart-nak öltöztek*, 'The women, too, were dressed as Humphrey Bogart'.

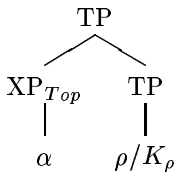
2.6.2 Topics

For a rudimentary representation of *NP*s in Topic position the following properties will be relevant:

- The Topic position admits names, pronouns, nonquantificational weak *NP*s (indefinites), *valaki* 'someone', *valamennyi N'* 'some (mass) N", *sok N'* 'much/many N", *a legtöbb N'* 'most N"; the case of *most*, as noted in Szabolcsi (1997a), remains a puzzle. Spatiotemporal expressions with similar properties can also be Topics.
- Topics have wide scope relative to rest of the sentence, in which they bind a variable.
- Topics come with a context set a variable, which is often familiar from discourse. As noted earlier, the context set often may be trivially a singleton. This is the case with proper names and uniquely identifying descriptions. With indefinites however the context set is a non-singleton. As a consequence, indefinites in Topic position acquire a partitive-specific reading.

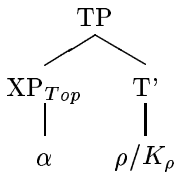
The syntax–semantics interface resembles that of Kamp and Reyle (1993). Syntactic subtrees, a.k.a. triggering configurations are paired with instructions for building representations. For Topics, I will assume two triggering configurations, (2.90) and (2.91).

(2.90)



(2.90) corresponds to the case when a sentence contains at least two Topics, $\alpha_1, \ldots, \alpha_n$; $n \geq 2$. Then it is the syntactic configuration for a Topic (α_i) between the first and last-but one Topic ($1 \leq i \leq n-1$).

(2.91)



(2.91) is the syntactic configuration for the rightmost Topic in the sentence (if there is one).

In both trees, α is an object that corresponds to a constituent from the list of XPs allowed in Topic position. Categorially, it may be an NP, a PP or an $AdvP$. For the sake of simplicity, I will consider NPs only. ρ stands for the rest of the sentence (=loosely, the Rheme).

In the case of multiple Topics, I take these to be merged into one Topic-DRS. For this, an operation like absorption is assumed. In λ-DRT this could be achieved by function composition.

In the case of n Topics, $\alpha_1, \ldots \alpha_n$, assuming that the relevant discourse referent in α_i is β_i, I assume the following schema:

(2.92) $\langle (K_{\alpha_1}; \ldots K_{\alpha_n})\ (\mathcal{T})\ K_\rho[\gamma_1/\beta_1 \ldots \gamma_n/\beta_n] \rangle$

So, what one has is an ordered pair that consists of an array of Topic-DRS-es and a Rheme-DRS. This can be conceived of as a structured meaning, or one can employ a special Topic relation $\mathcal{T}$ between Topics and Rheme (Kruijff-Korbayová (1998)). Quantifying *NP*s are correctly excluded from this schema, because their nuclear scope would remain vacuous. So are *NP*s containing negation, because negation would make the discourse referent β_i from the Topic α_i inaccessible for K_ρ. This is made possible by the structure of (2.92), which is like a loose coordinate structure, or like a presupposition–assertion structure.

It is to be noted that (2.92) is agnostic about the argument–adjunct distinction, since β_i can be an individual, locational or temporal discourse referent alike, and this implies that the remainder of

the sentence is to contain appropriate variables for β_i to bind, regardless of the fact whether these variables correspond to the verb's argument position(s) or they are anaphoric/pronoun-like.

In the case of an indefinite *NP* in Topic position (assuming the usual DRS construction rules), if the ordinary representation of α is (2.93a), then its Topic representation will be (2.93b). In (2.93b), X is an anaphoric context set.

(2.93) *a.* $\boxed{\begin{array}{c}\beta \\ P^*(\beta)\end{array}}$ *b.* $\boxed{\begin{array}{c}\beta\ \underline{X} \\ \beta \sqsubseteq X \\ P^*(\beta)\end{array}}$

(2.94) *a.* Az ivóba be-lépett tíz kém
The saloon-into in-stepped ten spy
"Ten spies entered the saloon"

b. Egy hölgyet mindenki felismert
One lady-Acc everyone recognized
"One lady (from the spies) was recognized by everyone"

c. A másikat csak János
The other-one-Acc only John
"The other one was recognized only by John"

(2.95) *a.* (2.94b):

b. $\left\langle \boxed{\begin{array}{c}x\ \underline{X} \\ lady(x) \\ x \sqsubseteq X\end{array}} \quad \mathcal{T} \quad \boxed{\begin{array}{c}y \\ person(y) \\ C(y)\end{array}} \diamond \begin{array}{c}\forall \\ y\end{array} \boxed{\begin{array}{c}e\ t \\ e{:}y\ recognize\ x \\ e \subseteq\ t < n\end{array}} \right\rangle$

In (2.95b), the condition $x \sqsubseteq X$ is rather weak, because it is meant to be a uniform condition for the following cases:

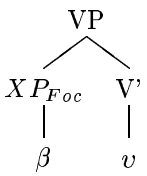
- In the case of a proper name, X can be equated with the discourse referent $\{x\}$ introduced by that name;
- definites in Topic position may be instances of identity anaphora (*A spy entered ... The man was tired*), or may be proper subsets of the context set, when they convey the additional information that their referent is unique w.r.t. the property contributed by N' (*Ten spies entered... The lady was recognized by John*).

This fragment does not include the Quantifier position. The reason for this is that the sentence-initial semantics of Quantifers is fairly standard, except for their strict scope alignment. But this is simple and straightforward to formulate in DRT. On the other hand, a proper analysis of the *discourse functions* (Topic/Focus) of quantifiers is way beyond the scope of this work.

2.6.3 Focus

As with Topics, for Focus, too I assume tree fragments with DRS-building instructions. For simplicity's sake, Focus is taken to occupy the Specifier position of the VP (though nothing hinges on this choice).

(2.96)



Hungarian Focus triggers a presupposition–assertion partitioning, s.t. the presupposition includes (roughly) what is on the right hand side of Focus. So, the contribution of υ in (2.96) will have the status of a presupposition. In this, the simple analysis of Focus adopted here will resemble the representation of English it-clefts (Delin (1989)), precisely in this presupposition—assertion division, and in the maximality condition on Focus. Thus in the representation of (2.97), the verb contributes to the presupposition triggered by Focus.

In combining Focus and verb (phrase), one can recognize the 'other' mode of combination described in Szabolcsi (1997a): a property P is introduced first (as a presupposition), and the relevant discourse referent is introduced in the assertion part, with the condition that it is the unique maximal entity that has P.

It is assumed, as in the Focus semantics of Rooth (1985), Rooth (1992), that constituents have an ordinary and a Focus representation. Only, in English the entire sentence acquires a Focus semantic value beside its ordinary value. In Hungarian, Focus (or the Focus–presupposition complex) is combined with an 'ordinary' value, yielding in turn an ordinary value. (See also Szabolcsi (1981).) In (2.97), for instance, the *VP* containing Focus (*MARIT szereti* 's/he loves Mary') has the status of an ordinary Rheme, and combines with the ordinary Topic *János*.

The main example is (2.97):

(2.97) [János]$_T$ [MARIT]$_F$ szereti
[John]$_T$ [MARY-Acc]$_F$ loves+Def3Sg
"It is Mary whom John loves"

The Focus representation of the proper name *Mari(t)* is given in (2.98). In fact this is a so-called preliminary representation, with presuppositions yet unbound or unaccommodated. The format follows Kamp (t.a.) in the following respects. (i) The proper name *Mari* has the status of a presupposition. Here, however, it is entered in the Focus niche, for the sake of uniformity (since other *XP* types are local, so tok speak). (ii) An alternative set C' is introduced, s.t. the referent m fot Mary belongs to this set. (iii) the Focus part proper is divided into an presupposition and assertion representation (separated by the lines ||). Unlike the analysis of English Focus in Kamp (t.a.), the left-hand DRS has the status of a presupposition (see also Delin (1989)). I assume that this presupposition stays in situ in the sentence *after* all other presuppositions are bound. That is, I assume that a copy of the presupposition remains within the Focus representation even if it has an antecedent in preceding discourse. This is necessary for the sake of the Scope Principle, as it could be seen from earlier examples that the presupposition of Focus has narrow scope with respect to quantifiers on its left.

(2.98) *a.* [MARIT]$_F$:

b.
$$\left\langle \left\{ \left\| \begin{array}{|c|}\hline C'\ \beta \\ \hline C'^*(\beta) \\ C'(m) \\ m\#\beta \\ \hline \end{array} \right\| , \begin{array}{|c|}\hline \alpha \\ \hline C'^*(\alpha) \\ P^*(\alpha) \\ \alpha = \Sigma\alpha'.P^*(\alpha) \\ \hline \end{array} \right\} \right\| \left\langle \left\{ \begin{array}{|c|}\hline \underline{m} \\ \hline Mary(m) \\ \hline \end{array} \right\} , \begin{array}{|c|}\hline \\ \alpha = m \\ \\ \hline \end{array} \right\rangle \right\rangle$$

In (2.98b), the left-hand side of || corresponds to the Focus frame, the right hand side to the Focus. Only, it needs to be stressed that the Focus frame has the status of a genuine presupposition. The Focus frame–Focus pair in (2.98) contains the following information. It is presupposed that there is a discourse referent α (from the alternative set C') with property P (contributed by the rest of the sentence, viz υ from (2.96)), and that α is maximal w.r.t. P. This is ensured by the condition $\alpha = \Sigma\alpha'.[P^*(\alpha')]$, which says that α is the sum of all entities that have property P.[27] The assertion

[27]To be entirely precise, the summands α' are also required to belong to the context set C', otherwise what we get is too restrictive. To wit, here is a telling example by Anna Szabolcsi:
(ρ) JOSEPH CONRAD született lengyelnek.
"It was Joseph Conrad who was born Polish"
This sentence is true, i.e. Joseph Conrad is the only person born Polish, only if the domain of individuals is narrowed down to the set of alternatives.

is that α is m, the discourse referent contributed by the (ordinary representation of) the proper name.

The representation of (2.97) will then proceed as usual, P being substituted for the state description s: *u loves* α, where u stands for the discourse referent introduced by the proper name *János*.

As noted before, in (2.98), the ordinary representation of the proper name is entered locally, as part of the Focus. This is to preserve uniformity, since, because of the Scope Principle, indefinites and other scopally dependent elements have to be introduced there.[28] For instance, the indefinite in (2.99) can only have narrow scope:

(2.99) [Minden tanár]$_Q$ [EGY CIKKET]$_F$ ajánlott
[Every professor]$_Q$ [ONE ARTICLE-Acc]$_F$ recommended
"Every professor, it was an article he recommended"

The Focus representation of *egy cikk(et)* ('an article') will then be the following:

(2.100)*a*. [EGY CIKK-ET]$_F$:

b.
$$\left\langle \left\{ \begin{array}{|l} \alpha\ C' \\ \hline P^*(\alpha) \\ C'^*(\alpha) \\ \alpha = \Sigma\beta.P^*(\beta) \end{array} \right\} \Big\| \begin{array}{|c} x \\ \hline paper(x) \\ x = \alpha \end{array} \right\rangle$$

When a simple co-ordinate structure is in Focus, the schema underlying (2.98) will yield the correct entailment pattern, which shown in (2.101):

(2.101)*a*. János [KATIT ÉS ANNÁT]$_F$ szereti
John [CATHY-Acc AND ANNA-Acc]$_F$ love+Def3Sg
"It is Cathy and Anna whom John loves"

b. $\not\models$ János [KATIT]$_F$ szereti
John [CATHY-Acc]$_F$ love+Def3Sg
"It is Cathy whom John loves"

c. $\models$ János szereti Katit
John loves Cathy-Acc
"John loves Cathy"

(2.101a) contradicts (2.101b), because (2.101b) claims, falsely, that Cathy is the unique individual loved by John. There is no such contradiction in the case of (2.101a) and Focus-less (2.101c).

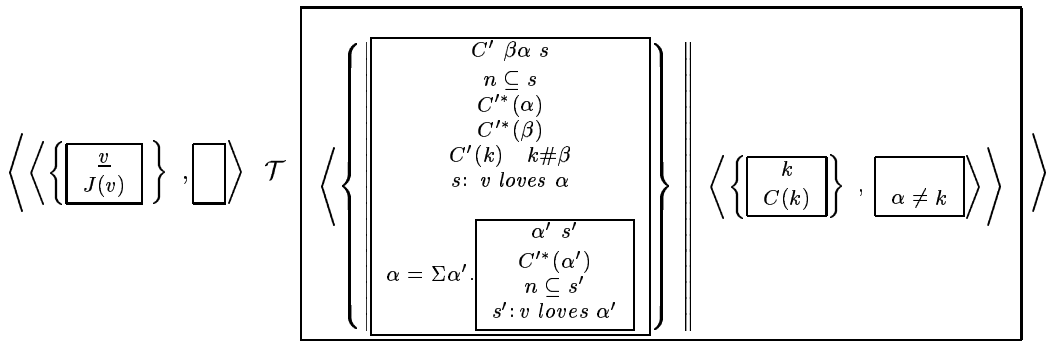
The simplest negation facts noted in Szabolcsi (1981) can be handled in a straightforward manner.

If negation is merged with Focus, as in (2.102), it will contribute to the assertion part, saying that the discourse referent contributed by Focus is not identical to the referent contributed by the

[28]The proper name is assumed to be able to 'periscope' (Dekker (1999)) out of the Focus part.

presupposition.

(2.102) János [NEM KATIT]$_F$ szereti
"It is not Cathy whom John loves"



(2.102) says that (i) there is a Topic, contributed by the proper name *János*, and (ii) the rest of the sentence consists in a Focus frame–Focus structure. In that structure it is presupposed that John loves someone, and it is asserted that that someone is not Cathy.

(2.102) predicts, correctly, that such a sentence can be in fact used to deny that the 'ordinary' referent k for *Kati* is maximal. It can be the case that the discourse referent contributed by negated Focus is in fact a proper part of α. In other words, (2.102a) can felicitously be continued with the following:

(2.103)...hanem [KATIT ÉS ANNÁT]$_F$
...but [CATHY-Acc AND ANNA-Acc]$_F$
...but Cathy AND Anna"

If negation follows Focus, it is part of the presupposition, and contributes to the appropriate slot of the 'cleft' structure. So, the presupposition of (2.104) will be that there is someone John does not love. (A full representation of (2.104) is easy to construct, and will be omitted here.)

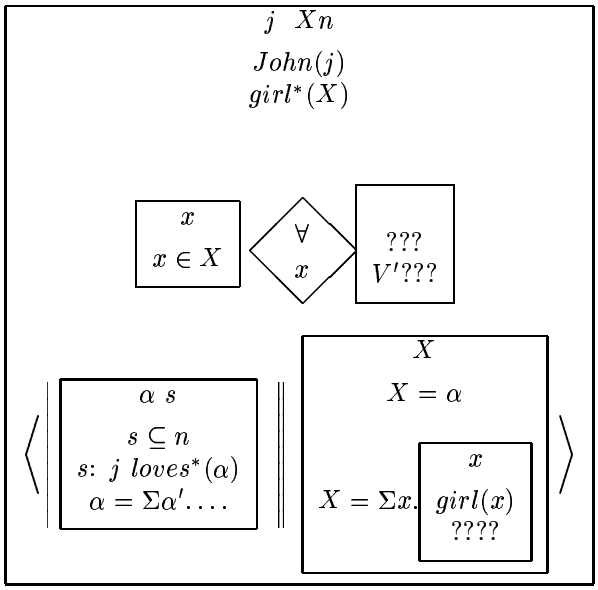
(2.104)János [KATIT]$_F$ nem szereti
John [KATI-Acc]$_F$ not loves+Def3Sg
"It is Cathy whom John does not love"

Quantifying *NP*s are excluded from a schema like (2.98) or (2.100), because they do not provide a discourse referent which is to be equated with the referent introduced in the presuppositional part. To see that this is so, consider the ungrammatical example (2.105). The intended reading of this sentence is that there is a set of girls and this set is the unique maximal collection loved by John. (2.105b) provides a simplified representation, ignoring the presuppositional status of the

proper name:

(2.105)*a*. ∗[János]$_T$ [MINDEN LÁNYT]$_F$ szeret
[John]$_T$ [EVERY GIRL-ACC]$_F$ loves
Intended: "John loves EVERY GIRL"

b.



The problem with (2.105b) is that the verb should contribute to at least two DRS-es: to the presupposition, and also to the assertion part, and/or to the nuclear scope of the quantifier. And this is not possible, on the assumption that with Focus the verb and the remainder of the sentence has uniform presupposition status. Note that this problem persists, whether abstraction is performed *after* the introduction of the quantifier (as is usual in DRT), or whether the introduction of a collective discourse referent is part of the contribution of the quantifier (as proposed in Szabolcsi (1997a), or in the literature on plural quantification: van den Berg (1996), or van der Does (1992)).

If Focus triggers a presupposition–assertion partitioning, then its presupposition part is expected to be bindable to an antecedent from discourse. This is indeed so, although in some cases this is more like copying than a proper antecedent–anaphor relation:

(2.106)*a*. János tavaly [MARIBA] volt szerelmes,
John last-year [MARY-into]$_F$ was in-love,
"Last year, it was Mary John was in love with,
b. az idén meg [KATIBA]$_F$
the this-year and [CATHY-into]$_F$
and this year it is Cathy (he is in love with)"

If the presupposition triggered by Focus can be bound to an antecedent in discourse, the question is whether the assertion of Focus can be bound off with the same move. What I mean by this is that since Sandt (1992), in the DRT-literature on presupposition binding a presupposition usually amounts to its disappearance, as it were, from its original site. It seems however that with Hungarian Focus the assertion part at least remains in situ.

(2.107)*a*. János szerelmes, ezt mindenki tudja
John in-love, this-Acc everyone know+Def3Sg
"John is in love, as everyone knows"
b. Minden diákja azt hiszi, hogy [EGY SZÍNÉSZNŐBE]$_F$
Every student-Poss3Sg that-Acc believes+Def3Sg, that [ONE ACTRESS-into]$_F$
"Every student of his believes that it is an actress"

In (2.107b), the presupposition of Focus can be bound to (2.107a). If the assertion (viz the indefinite) could be bound together with the presupposition, then the indefinite would be expected to be able to scope over the universal quantifier. According to my judgment this is not so. This also means that (2.107b) cannot readily have an attributive reading (*Every student of John's believes that the woman he loves is an actress*). By contrast, I think that an attributive reading with English Focus is easier to obtain. This, however, is work for the future. Here I merely wanted to point out the possibilities inherent in the analysis of Focus proposed here.

Another issue concerning binding is the case of a collective or quantified antecedent for the presupposition. In such cases, as in (2.108), I assume an inference step of universal instantiation (John is one of the boys who asked for a girl for a dance).

(2.108)*a*. Minden fiú felkért egy lányt
Every boy up-asked one girl-Acc
"Every boy asked a girl for a dance"

b. János (például) [EGY MAGAS, VÉKONY DIÁKLÁNYT]$_F$ kért fel
John (for instance) [ONE TALL, SLIM STUDENT-GIRL-Acc]$_F$ asked up
"John (for instance) asked [A TALL, SLIM WOMAN STUDENT]$_F$ for a dance"

Such cases, and more complicated ones, will be necessary for an analysis of the disappearance of the Definiteness Effect with Focus. This will be provided in Chapter 6. The task in that chapter will be the integration of the lexical semantics of Definiteness Effect verbs with the representation of Focus, in such a way that the absence of the Definiteness Effect is accounted for in sentences like (2.109).

(2.109)Minden széket [JÁNOS]$_F$ hozott
Every chair-Acc [JOHN]$_F$ brought
"For every chair x, it was John who brought x"

The hypothesis for such cases is that the Definiteness Effect is satisfied at the level of a presupposition that has a collective antecedent. (2.109) requires a context in which there is a group of chairs at the reference location l_r, and possibly it is also known that for each of these chairs there was an event e of that chair getting to l_r. The sentence then asserts that for each such event, the unique, maximal Agent is John.

Conclusion

This chapter has provided a somewhat unbalanced account of preverbal Hungarian positions. By 'unbalanced' I mean that a fairly rich and detailed description of phenomena has by no means been matched with the small and constrained formal fragment. This is particularly striking if one considers the syntax–semantics mismatches of the 'Baroque' view, whereas the fragment itself conforms to the established, Classicist view. (Roughly, the fragment has the same coverage as Szabolcsi (1981).)

This mismatch is due to the fact that (i) the fragment itself is sufficient for the lexical analysis which forms the bulk of the thesis. In fact, for the thesis itself, simplicity is an andvantage.
(ii) Hopefully, there will be readers who take an interest in the phenomena pertaining to the Baroque stage. Then this inventory may serve as a point of departure for a proper analysis of information structure articulation in Hungarian.

Part II

The Data

Chapter 3

The Phenomena(i): the *NP*s

3.1 Introduction

As outlined in Chapter 1, this thesis is about the way certain morphosyntactic verb classes in Hungarian can constrain or determine the semantic proprerties of their internal arguments.

One such class is that of unprefixed (or light) verbs with affected and effected objects; the internal argument of such verbs is subject to the Definiteness Effect, just like *NP*s in English *there*-insertion contexts or the object argument of the verb *have*.

(3.1) *a.* There are cats/some cats/many cats/few cats/no cats on the roof
b. ∗There is the cat/it/Macavity/every cat on the roof
c. ∗There are all cats/most cats on the roof

(Milsark (1977))

(3.2) *a.* John has a sister/many sisters/no sisters
b. ∗#John has the sister/Mary/her/every sister
c. ∗#John has all sisters/most sisters

(Partee (2000))

(3.3) *a.* János talált egy macskát
John found one cat-Acc
"John found a cat"
b. ∗János találta (őt)/a macskát/Nelsont
John found+Def3Sg (it-Acc)/the cat-Acc/Nelson-Acc
Intended: "John found it/the cat/Nelson"
c. ∗János találta az összes/a legtöbb macskát
John found+Def3Sg the all/the most cat-Acc
Intended: "John found all cats/most cats"

(3.3) shows that Hungarian has a Definiteness Effect comparable to that in English, in that strong *NP*s are excluded from certain environments. This is apparent from the parallel between (3.1–3.2) and (3.3). Only, in Hungarian the Definiteness Effect has a lexical source: as shown in Szabolcsi (1986), this is the lexical semantics of certain verb classes, discussed in detail in this chapter and the following one. (Note also the lack of an expletive in (3.3).)

The other verb class presented in this chapter is that of the prefixed counterparts of Definiteness Effect verbs. The internal argument of these verbs has to be familiar from preceding context. Familiarity is meant as a cover term for definiteness, partitive–specificity in the sense of Enç (1991),

as in the case of (3.4b), or being restricted by a familiar context set (as with the quantificational variant of (3.4b)).

(3.4) *a.* János meg-talált egy macskát
John MEG-found one cat-Acc
"John found one of the cats (that were known to be lost)"
b. János megtalálta a legtöbb/az összes macskát
John MEG-found+Def3Sg the most/the all cat-Acc
"John found most/all cats (known to be lost)"

(3.4) contains the prefixed verb *meg-talál* 'find what has been lost/unavailable'. As opposed to its prefixless counterpart *talál* from (3.3), it does not trigger the Definiteness Effect. This is seen in (3.4b). An additional property of *meg-talál* is that its internal argument is to be specific/familiar from discourse. Thus, the indefinite in (3.4a) acquires a partitive–specific construal, in that it corresponds to an arbitrary member of a familiar set or group. This phenomenon can be seen as the dual of the Definiteness Effect, and will be termed as the Specificity Effect (following Katalin É.Kiss). And, as with the Definiteness Effect, the Specificity Effect will be seen to follow from the ±familiarity constraint imposed by a subevent from the complex event structure of the verb.

This chapter and the following one present the relevant phenomena, together with previous analyses from the literature on Hungarian. This chapter will focus on the semantic properties of *NP*s when they serve as the arguments of the relevant verbs. Chapter 4 will focus on the verbs themselves, detailing differences in their subevent properties.

The phenomena are related to several issues and problems in the current semantics literature. Discussion of these will be interleaved with the presentation of the data (with a fuller discussion in Chapters 5, 6 and 7).

- A comparison of the Definiteness Effect in Hungarian and English; in this chapter, this will mean a discussion of the consequences of the Definiteness Effect, and of *NP* types in the two languages.

- Incorporation:

  Hungarian Definiteness Effect verbs can take bare nominal internal arguments, which are said to be incorporated into their host verb (Szabolcsi (1986), Kiefer (1990–91), de Hoop (1992)). These nominals can have at most existential readings, which invites a comparison of bare nominals and incorporating constructions in other languages. This thesis does not offer a semantics for bare nominals crosslinguistically, but the peculiarities of Hungarian are to be understood within a wider context (e.g. in the context of the research initiated in Chierchia (1998a), Chierchia (1998b)).

- Hungarian prefixed verbs are not unlike prefixed (or particle) verbs and resultative constructions in Slavic languages, Dutch, or German. In particular, it has been attested in Slavic languages (Filip (1996), Verkuyl (1999)), that the prefix can act upon the internal argument *NP*: it may confer a definite reading to the internal argument, or may quantify over it, as in the case of Slavic *po-*, (Galton (1984), Filip (1996)).

This chapter and the following one introduce the the Definiteness Effect/Specificity Effect contrast in Hungarian. In this chapter, the focus is on the *NP*s. Chapter 4 will contain a detailed discussion of the argument structure and subevent structure of the verbs themselves.

In this chapter, section 3.2 presents issues related to the Definiteness Effect. Parts 3.2.1 and 3.2.2 present the 'primary' Definiteness Effect in English and in Hungarian, respectively. Part 3.2.3 presents the consequences, or accompanying effects of the Definiteness Effect (in both languages). The remainder of this section is devoted to Hungarian *NP*-types that do not conform to the traditional, English-based weak–strong distinction, and to bare nominals, unmarked for number.

Section 3.3 is about prefixed verbs and the Specificity Effect Part 3.3.1 offers some background in Hungarian prefixation, and part 3.3.2 presents the Specificity Effect itself.

3.2 The Definiteness Effect in Prefixless Verbs

3.2.1 The Definiteness Effect in English and Other Germanic Lanuguages

This brief part presents the main data on the English Definiteness Effect. A fuller discussion of its analyses is to come in Chapter 5.

The so-called Definiteness Effect or Definiteness Restrction appears in English with *there*-insertion constructions and (non-custodiary) *have*. Roughly, it amounts to a ban on certain *NP*s from the construction/from being internal arguments of *have*. Since sentences like (3.5a) have been said to assert the existence of an individual (with some property), they have also been called existential sentences. Since Milsark (1974), *NP*s that can appear in existential sentences have been called weak *NP*s. *NP*s that cannot appear in (contextually unmarked) existential sentences have been termed as strong *NP*s.

There-insertion:

(3.5) *a.* There is a cat on the roof
b. There are cats, some/two/many/(a) few/no cats on the roof

(3.6) *a.* *There is it/Ollie/that cat/every cat on the roof
b. *There are most/all/those cats on the roof

Have:

(3.7) *a.* Bev has a cat
b. Bev has cats, some/many/few/(at least) two cats

(3.8) *a.* *Bev has it/Ollie/that cat/every cat
b. *Bev has most/all/those cats

Outer verbal there-insertion:

(3.9) *a.* Out of nowhere, there appeared a cat
b. *Out of nowhere, there appeared all/most/(#)those cats

(3.5)–(3.9) present the core, contextually unmarked cases of the Definiteness Effect. The data that follow concern exceptions.

Possessive descriptions, even definite *of*-Genitives may appear in existential sentences, just in case the possessor is a weak *NP* (Barker (2000), Poesio (1994)):

(3.10) *a.* There is a kitten's mother on the roof
b. There is the mother of a kitten on the roof

(3.11) *a.* *There is Ollie's/its mother on the roof
b. *There are the mothers of every kitten on the roof

Definites, proper names and other nonquantifying strong *NP*s can appear in *there*-sentences in so-called list readings (Lumsden (1988)), where they denote an individual that can fill a role or be part of a plan. As shown in (3.12b), quantifying strong *NP*s are much less acceptable in these contexts.

(3.12) *a.* There are the flowers to water and the exams to grade
b. *There are all the flowers to water and most exams to grade

(3.13) *a.* The car has broken down. How do we get to work?
b. Well, there's (always) the horse/John and his car
c. *Well, there is every horse

Other Germanic languages also have expletive constructions that show the Definiteness Effect:

In Dutch, for instance, if the sentence-initial (subject) position is filled by *er*, at least the (thematic) subject *NP* has to obey the Definiteness Restriction.

(3.14) *a.* ?dat er iemand het huis bekeken heeft
that ER someone the house inspected has
"that someone inspected the house"

b. ∗dat er iemand Piet geholpen heeft
that ER someone Pete helped has
"that someone helped Pete"

(Rullmann (1989))

What one sees in Germanic languages is that the Definiteness Restriction as such is syntactic, since it is triggered by a particular syntactic configuration. (With the one notable exception of English *have*.) Lexical factors play a preliminary constraining role, in that they determine what verb types may participate in this configuration. It can be seen even from the small sample presented here that Germanic languages may vary as regards the possible verb types: transitives are possible in Dutch, but not in English. Apart from this, Germanic languages still agree as regards the division of labour between syntax and the lexicon. As seen shortly, the Hungarian case is quite different from the Germanic one, since in Hungarian it is solely the lexicon that is responsible for the Definiteness Restriction. Not surprisingly, the picture this yields is one where very similar semantic effects are produced by different underlying structures or modules.

3.2.2 The Definiteness Effect: Hungarian

As described in Anna Szabolcsi's pioneering work (Szabolcsi (1986)), the Definiteness Effect in Hungarian is triggered by lexical factors, also partly determine word order or information structure.

(3.15) and (3.16) show the Definiteness Effect with the verbs *van* 'be', *kap* 'receive', *ír* 'write' and *vesz* 'buy'.

(3.15) *a.* *Van* könyv/két könyv/(némi) tej
Is book/two book/(some) milk
"There is a book/two books/some milk"

b. ∗*Van* a könyv/Mari könyve/minden könyv
Is the book/Mari book-Poss3Sg/every book
"There is the book/Mary's book/every book"

(Ex. (7) Szabolcsi (1986):324)

(3.16) *a.* *Kaptam/írtam/vettem* könyvet/két könyvet
Got-1Sg/wrote-1Sg/bought-1Sg book-Acc/two book-Acc
"I received/wrote/bought a book/two books"

b. ∗*Kaptam/írtam/vettem* minden könyvet/a könyvet
Got-1Sg/wrote-1Sg/bought-1Sg every book-Acc/the book-Acc
"I received/wrote/bought every book/the book"

(Based on ex. (8) from Szabolcsi (1986):324-325)

The variants in (3.16a) are existential sentences: they assert the existence of a number of books with the subject. *Kaptam két könyvet* for instance can be paraphrased as "there are two books that I have received". Although word order in Hungarian is relatively free, in existential sentences the relevant argument of the verb (the *NP* which is to stay weak) has to follow the verb.[1] More about this later.

[1] It will be shown later that this is the case if it is a "typical" $MON\uparrow$ NP, without presupposition triggers in its N′.

In Hungarian entire verb classes show the Definiteness Effect. The common trait of these classes is existence/availability, as seen from the following inventory:

EXIST: *van* 'be', *akad* 'happen, chance to be', 'occur', *tart* 'keep';

BECOME AVAILABLE IN A PARTICULAR FASHION: *érkezik* 'arrrive', *történik* 'happen', *kerül* 'become available',...

COME INTO EXISTENCE IN A PARTICULAR FASHION: *születik* 'be born', *épül* 'become/get built', *alakul* 'be formed/incorporated', *keletkezik* 'come into existence/emerge (natural phenomena such as storms, lightning)',...

CAUSE TO BECOME AVAILABLE IN A PARTICULAR FASHION: *kap* 'get', *talál* 'find', *szerez* 'obtain', *hoz* 'bring', *visz* 'take', *lop* 'steal', *vesz* 'buy', *ad* 'give', *kerít* 'make available', 'acquire', ...

CAUSE TO BECOME EXISTENT, IN A PARTICULAR FASHION: *rajzol* 'draw', *fest* 'paint', *főz* 'cook', *eszik* 'eat', *épít* 'build', ...

(Based on Szabolcsi (1986):323-324)

In the next chapter this classification will be enriched with considerations of thematic structure and aspect.

Returning to the semantic features "existence" and "availability", it has to be noted that these are mixed in a non-trivial way with morphological/syntactic considerations.[2] The point is, Hungarian Definiteness Effect verbs are morphologically simple, unprefixed verbs. Section 4.6 in Chapter 4 will analyse the link between the lexical semantics of these verbs and their morphosyntactic or morphosemantic structure.

Till then, it suffices to note that the complex counterparts of these verbs do not trigger the Definiteness Effect, even if they do have the relevant semantic properties. In fact, as shown in example (3.4), the internal arguments of prefixed verbs are to be familiar from preceding discourse.

The argument subjected to the Definiteness Effect is invariably the internal argument: the object of transitives, and the subject of unaccusatives. This is seen from (3.17): subjects of transitive verbs, oblique arguments can be strong *NP*s, object *NP*s or subjects of unaccusatives cannot.

(3.17) *a.* Minden vendég hozott egy szál virágot a háziasszonynak
Every guest brought-3Sg one stem flower-Acc the hostess-Dat
"Every guest brought a flower for the hostess"

b. ∗Egy tanár adott minden könyvcímet egy diáknak
One teacher gave-3Sg every booktitle-Acc one student-Dat
Intended: "A professor gave every reference to a student"

c. ∗Érkezett minden látogató
Arrived every visitor
Intended: "Every visitor arrived"

3.2.3 Consequences of the Definiteness Effect

This subsection contains a checklist of the semantic properties that are seen to follow from the Definiteness Effect in English and in Hungarian. It is based in fact on what has been attested for English in the literature (Milsark (1977), Reuland and ter Meulen (1987), Comorovski (1995), Zucchi (1995), Barker (1993), Kim (1996), McNally (1998), Bende-Farkas (1999b)). My contribution in this chapter has been the provision of the corresponding Hungarian data.

The secondary properties of the Definiteness Effect can be seen to form the following clusters:

[2]This point has emerged in discussions with Mats Rooth.

1. This is really not a secondary but a defining property of the Definiteness Effect: ($MON\uparrow$) weak *NP*s are the typical nonquantifying *NP*s of DRT and File Change Semantics (with the exception of *many* or *few*). It can be shown with small discourses that these *NP*s introduce discourse-new discourse referents, in the sense of Prince (1981).

2. Scope and other binding phenomena are indicative of bound status for weak *NP*s. Specific indefinites can occur in existential sentences, which is taken to indicate that specificity, understood as speaker reference (Kripke (1977/1990), Farkas (1996)) is distinct from the wide or narrow scope properties of indefinites. Narrow scope and the well-known prohibition against individual-level predicates in existential sentences are taken to indicate that the binder is the expletive *there*, or the expletive–verb complex (Milsark (1974), Williams (1984), Musan (1996)).

   Beside *there*-insertion, there are other contexts that confer some kind of event-dependency to weak *NP*s, but not to strong *NP*s. This suggests that indefinites (or weak *NP*s in general) can be bound not only by quantifiers or operators, but by verbs or verbal elements as well, and that existential sentences may be a special case of a broader spectrum of phenomena.

Novelty: the relevant *NP*s in existential sentences introduce hearer- or discourse-new discourse referents. This is fairly obvious with indefinites (although the presence of specific indefinites in existential sentences warrants some discussion). On the other hand, uniquely identifiable indefinites are felicitous in English just in case they are not anaphoric (Ward and Birner (1995)). (3.18b) below is felicitous just in case it is <u>not</u> preceded by material like (3.18a):

(3.18) *a.* Yesterday I met the editor of the Economist
b. *#There is the editor of the Economist sitting in the pub

In Hungarian, existential sentences can hardly ever contain definites, whether anaphoric or not. That is, (3.19b) will be ungrammatical, regardless of the context it appears in.

(3.19) *a.* Két diák eltévedt
Two student lost-(his-)way
"Two students lost their way"
b. *János találta a lányt
John found+Def3Sg the girl-Acc
"John has found the girl"
c. #János talált egy lányt
John found one girl-Acc
"John found a girl"

Where the grammatical sentence (3.19c) is concerned, it is inappropriate as a continuation to (3.19a). First, the two event descriptions cannot be construed as connected (this will be discussed in Chapter 4). Furthermore, the indefinite in (3.19c) cannot have a partitive reading, with its context set provided by preceding discourse (e.g. the *NP* from (3.19a)). As a matter of fact, it cannot have a covert partitive reading, either. It will be seen later that explicit, overt partitives are possible in Hungarian existential sentences. So, what one has in (3.19c) is the unavailability of a given construal for genuine indefinites.

The incoherent discourse (3.19a,c) has another, siginificant property: it will be incoherent even if the two real world events and the real world individuals stand in the intended relation, viz if the girl found by John was indeed one of the two students who had lost their way. The existential sentence (3.19c) simply does not convey this information.

The novelty constraint applies to bridged/accommodated definites as well:

(3.20) *a.* A szállodába vártak egy házaspárt
The hotel-into waited-3Pl one married-couple-Acc
"A couple were expected (as guests) in the hotel"
b. Tegnap érkezett #egy férfi/∗a férfi"
Yesterday arrived a man/the man
"A man/the man arrived yesterday"

Specific Indefinites: It has been noted by several authors (Fodor and Sag (1982), Prince (1981), Kratzer (1998)), that specific indefinites can appear in *there*-insertion contexts:

(3.21) *a.* There was a student I know smoking behind the woodshed
b. There was this girl who cheated on the exam

(Based on Fodor and Sag (1982))

These indefinites are taken here to introduce speaker-old and discourse-new discourse referents (Prince (1981)). Scopal properties of indefinites in *there*-sentences (shown later in this list) indicate that this kind of specificity is distinct from scope. In simpler terms, these examples indicate that specific indefinites are not referring terms that have widest scope (contra Fodor and Sag (1982) or Kratzer (1998)).

Specific indefinites are acceptable in Hungarian existential sentences as well, which is in a sharp contrast with the unacceptability of *definites* (as in (3.19b)).

(3.22) János hozott valakit, akit régóta ismerek
John brought some-one, who-Acc long-ago know-1Sg
"There is someone John brought along, whom I've known for a long time"

Definites, Proper Names: As noted earlier, (non-anaphoric) definites and proper names are allowed in English *there*-sentences, in certain special contexts (Ward and Birner (1995)).

(3.23) *a.* There are the flowers to water and the papers to grade
b. There was on the panel your friend Jim Altman

In Hungarian, definites and proper names are far less acceptable than in English. The scenarios I could think of involve e.g. the present tense with an imperfective/modal construal, and (as it will be shown in Chapter 4) the Definiteness Effect is not present with imperfective construals:

(3.24) *a.* Mi dolgom van mára?
What task-Poss1Sg is today-for?
"What are the tasks for today?"
b. Jön a küldöttség, és lesz a gyűlés
Come-3Sg one delegation, and will-be the meeting
"The delegation is coming,
and there will be the meeting"

The other type of scenario is recalling familiar entities, with the verbs in the past tense—here, presumably, the relevant state is also considered as familiar to discourse participants. But note that this is possible with a small number of verbs only.[3] The following could be a restaurant dialogue, with the waiter writing up the bill. But even (3.25) is not perfectly acceptable. It

[3]For instance, (3.25b) would be ungrammatical if the verb were changed to *eszik* 'eat'.

improves if e.g. the waiter writes individual bills for the members of a company, ticking off items from his list:

(3.25) *a.* Akkor mi is volt (ÖNNEK)?
Then what IS was (YOU-Dat)?
"What (now) did YOU have, then?"
b. (Nálam$_{F?}$) Volt a gyümölcsleves, a lazac és a fagylalt
(I-Dat$_{F?}$) Was the fruit-soup, the salmon and the ice-cream
"I$_{F?}$ had the fruit soup, the salmon and the ice-cream"

In order to convey the appropriate meanings, Hungarian can resort either to complex predicate formation, or to Focus, both of which come with the loss of the Definiteness Effect:

(3.26) Mari ∗([A KÁVÉZÓBAN]$_F$) találta a világ legidősebb emberét
Mary ([THE CAFÉ-IN]$_F$) found+Def3Sg the world oldest man-Acc
"Mary found the oldest man in the world ([in the café$_F$])

(3.27) Az építők ∗(meg-)találták Atlantiszt
The builder-Pl (MEG-)found+Def3Sg Atlantis-Acc
"The construction team found Atlantis"

The object *NP*s from (3.26) and (3.27) correspond to individual concepts, such that before the relevant events, the identity of the corresponding individual was unknown. Then the sentences describe the finding of the relevant individuals, who still count as new qua individuals. Yet, apparently, what matters for Hungarian is the familiarity of the *concept*, hence the need to use a device that does not show the Definiteness Effect. (3.26) contains Focus, and (3.27) contains a prefix. Without them, the sentences would be ungrammatical, whereas similar English sentences may be acceptable (e.g. *There was the oldest man in the world sitting in the café*, or *Suddenly, there appeared Atlantis under the water*).

Aside: in certain contexts where English proper names are acceptable, Hungarian proper names get coerced into indefinites, as in (3.28) below. (Of course, the Focus or complex predicate strategy is available in this case as well.)

(3.28) *a.* Ki főzi meg a kávét?
Who cook+Def3Sg MEG the coffee-Acc?
"Who is going to make the coffee?"
b. Hát, van ∗(egy) Mari-nk...
Well, is one Mary-Poss1Pl...
Lit.: "Well, we have a Mary..."
"We have Mary (to do that)"

Partitives: In English, partitive *NP*s are admitted just in case the sentence contains an overt coda (Ladusaw (1982), Comorovski (1991)):

(3.29) There are ten of Mary's/those students ∗(in the pub)

Apparently, partitives are not always excluded from Hungarian existential sentences.

(3.30) *a.* János ?(meg-)talált kettőt az elveszett diákok közül
John (MEG-)found two-Acc the lost student-Pl from-among
"John found two of the lost students"
b. János evett egyet a Mari almáiból
John ate one-Acc the Mary apple-Pl-Poss3Sg-from
"John ate one of Mary's apples"

No Topicalisation: Internal argument *NP*s cannot be Topicalised in Hungarian:

(3.31) ???[Egy széket]$_{Top}$ hozott tegnap János
[One chair-Acc]$_{Top}$ brought yesterday John
OUT: "One of the chairs, John brought it yesterday", or
OUT: "There is one of the chairs here, John brought it yesterday"

In English, too, the relevant *NP* is hard to dislocate, except in special contexts:

(3.32) #?A sister, I think that John has

No discourse linked *wh*-phrases: As a consequence of the novelty constraint imposed by Definiteness Effect verbs, internal argument *wh*-phrases cannot be discourse-linked in the sense of Pesetsky (1987). This is shown in (3.33a-b). As expected, Focus overrides this constraint, which is seen in (3.33c-d):

(3.33) *a.* Mit vett János?
What-Acc bought John?
"What did John buy?"
b. ??Melyiket vette János?
Which-Acc bought+Def3Sg John?
"Which one did John buy?"
c. Melyiket VETTE János?
Which-Acc BOUGHT+Def3Sg John?
"Which one did John BUY?"
d. Melyiket vette JÁNOS?
Which-Acc bought+Def3Sg JOHN?
"Which one did JOHN buy?"

This is comparable to English cases of the type shown in (3.34), discussed in Safir (1982) or Heim (1987).

(3.34) *a.* How many soldiers were there in the infirmary/drunk?
b. ??Which one of the two men was there in the room/*drunk

(Heim (1987): 27.)

This thesis has no account of this phenomenon. It was mentioned because I take it to be indicative of a novelty constraint on discourse referents in existential sentences.

±Personal pro-forms :

Both in English and in Hungarian, in many cases impersonal *wh*-phrases and relative pronouns are more appropriate than their 'personal' counterparts.

Likewise, denial with a pronoun is possible only if the indefinite in an existential sentence is discourse-new in the sense of Prince (1981). This is seen from (3.35), which is based on Fodor and Sag (1982):

(3.35) *a.* There was someone smoking behind the woodshed
b. No, there wasn't.
c. #No, she wasn't.

However, as noted in Fodor and Sag (1982), if an indefinite has a specific construal in a *there*-sentence, the personal pronoun is more appropriate than the indefinite construction. To this

I have to add that this is so just in case the hearer recognises the speaker's intention to refer to a particular individual. So, (3.21a), repeated here as (3.36a), can be denied with (3.36b) under these conditions:

(3.36) *a.* There was a student I know smoking behind the woodshed
b. No, he wasn't
c. #No, there wasn't

In Hungarian, as in English, impersonal *wh*-phrases are often more appropriate than personal or animate ones:

(3.37) *a.* Mit/#Kit találtál?
What-Acc/Who-Acc found-2Sg
"What/Whom have you found?"
b. Egy elveszett diákot
One away-lost student-Acc
"A student who had lost his/her way"

As in English, denials usually involve the (non-)emptiness of the relevant set, and not the intended referent:

(3.38) *a.* Van egy macska a tetőn
Is one cat the roof-on
"There is a cat on the roof"
b. Nem lehet, a tetőn nincs senki
Not can-be, the roof-on not-is no-one
"No, there is no-one on the roof"
c. #Nincs a tetőn, hanem a pincében egerészik
Not-is the roof-on, but the cellar-in mouse-3Sg
"It isn't on the roof, it is mousing in the cellar"

Possessive constructions differ in the two languages.

In English, possessive descriptions are sometimes acceptable in existential sentences. The decisive factor is the strength or weakness of the possessor *NP* (Barker (1993)). As shown in (3.39a-b), if the possessor is weak, then the entire *NP* qualifies as weak, and is accordingly appropriate; the converse holds for strong possessor *NP*s:

(3.39) *a.* There is a linguist's bicycle in the garden
b. *There is linguist's bicycle in the garden

In Hungarian, possessive constructions are not grammatical in existential sentences, even if the possessor *NP* is weak ((3.40a-b)), and even if one tries to accommodate the relevant presupposition.

(3.40) *a.* * *Van* egy nyelvész bicikli-je a kertben
Is a linguist bicycle-Poss3Sg the garden-in
"There is a linguist's bicycle in the garden"
a. *János *találta* egy nyelvész bicikli-jé-t a kertben
John found a linguist bicycle-Poss3Sg-Acc the garden-in
"John found a linguist's bicycle in the garden"

Exception: when *van Det N-Poss* involves *be* of possession, i.e. ('be Det N-Poss') means ('to have Det N'). In this case weak *NP*s are appropriate, and the properties of the possessor are not relevant:

(3.41) *a.* Jánosnak *van* egy biciklije a kertben
John-Dat is a bicycle-Poss3Sg the garden-in
"John has a bicycle in the garden"
b. Minden nyelvésznek *van* két-három biciklije a kertben
Every linguist-Dat is two-three bicycle-Poss3Sg the garden-in
"Every linguist has two or three bicycles in the garden"

The fact that proper names, non-anaphoric definites and possessive descriptions are unacceptable in Hungarian existential sentences is indicative of the grammaticalisation of definiteness and of the Definiteness Effect in this language. This is to be understood in contrast with English, where the relevant constraint is semantic in nature.

Anaphora: the indefinite is an appropriate antecedent for pronouns both in English and in Hungarian:

(3.42) There is a student in the garden. He is fast asleep.

(3.43) János *hozott* egy karosszéket, és bele-ült
John brought a chair-Acc, and into-3Sg-sat
"John brought an armchair and sat down in it"

I take (3.42) and (3.43) to show that in existential sentences the indefinites themselves are not quantificational.

This concludes the list of properties indicative of a nonquantificational status for weak *NP*s.

Nonrestrictive relative clauses: It has been shown in Rullmann (1989) that indefinites in existential sentences cannot be modified by nonrestrictive relative clauses.

Dutch:

(3.44) Ik hoopte dat (∗er) een student, wiens moeder ik
I hoped that (ER) one student, whose mother I
trouwens nog van vroeger kende, op bezoek zou kommen
b.t.w. still from earlier knew, would visit
"I hoped that a student, whose mother by the way I used
to know, would visit"

(Rullmann (1989))

According to Rullmann, this indicates a nonreferential/nonspecific construal for the indefinite, as indicated by the fact that usually it is referring expressions that can be modified by restrictive realtive clauses:

(3.45) John/This boy/∗Every boy, whose mother by the way I used to know,
will visit us tomorrow

From these examples, Rullmann concludes that indefinites in existential sentences are not referring expressions, and goes on to conclude that they are quantificational (on his analysis for Dutch, they are bound by VP-level existential closure).

It seems to me, however, that if the indefinite gets a specific construal, non-restrictive relative clauses become more acceptable:

(3.46) There is a student of mine, whose mother, by the way,
I also happen to know, smoking behind the woodshed.

In Hungarian, non-restrictive relative clauses are quite acceptable. But this may be due to their relative independence in this language. This is shown by the contrast between (3.47a-b): in the second sentence the locative phrase *az erdőben* 'in the forest' prevents the relative clause from being dislocated.

(3.47) *a.* János talált egy macskát, amelyik egyébként a szomszédé
John found one cat-Acc, which b.t.w. the neighbour-Poss3Sg
"John found a cat which, by the way, is the neighbour's"
b. ???János talált egy macskát, amelyik egyébként a szomszédé az erdőben
John found one cat-Acc, which b.t.w. the neighbour-Poss3Sg the forest-in
"John found a cat which, by the way, is the neighbour's, in the forest"

Scope: Indefinites in *there*-insertion sentences can only have narrow scope, either in English or in Hungarian. In the following examples, the *b*-sentences are existential, and their indefinites can only have narrow scope, as opposed to the 'ordinary' *a*-sentences.

(3.48) *a.* Ralph believes that some lunatic is spying on him
b. Ralph believes that there is some lunatic spying on him

(Milsark (1977), Heim (1987))

(3.49) *a.* János azt hiszi, hogy egy őrült a ház-ban *van*
John that-Acc believes+Def3Sg, that a lunatic the house-in is
"John believes that one of the lunatics is in the house"
b. János azt hiszi, hogy a ház-ban *van* egy őrült
John that-Acc believes+Def3Sg, that the house-in is a lunatic
"John believes that there is a lunatic in the house"

Binding by universal quantifiers; donkey anaphora.

Hungarian is like English in allowing strong readings for indefinites in donkey sentences.

(3.50) Whenever/If there is a woman John likes, his parents invite her
to dinner

(3.51) Ha János *talál* egy hibát a program-ban, akkor ki-javítja
If John find-3Sg an error-Acc the program-in, then pfx-fix+Def3Sg
"If John finds an error in the program, he fixes it"

In (3.52a) and (3.53a), the indefinite can have intermediate scope, whereas the existential sentences (3.52b) and (3.53b) only allow for narrow scope. According to Dorit Abusch, (3.52a) is true if every professor gets a headache if some, but not all students he hates are in his class. For (3.52b) to be true, all hated students have to cause headaches.

(3.52) *a.* Every professor gets a headache whenever a student he hates
is in class
b. Every professor gets a headache whenever there is a student
he hates in class

(Abusch (1994))

(3.53) *a.* Minden tanárnak meg-fájdul a feje,
Every professor-Dat pfx-ache-Inch the head-Poss3Sg,
"Every professor gets a headache
b. ha egy szemtelen diák az óráján *van*
if one insolent student the class-Poss3Sg-on is
if one of the insolent students is in his class"
c. ha az óráján *van* egy szemtelen diák
if the class-Poss3Sg-on is an insolent student
if there is an insolent student in his class"

So, I take indefinites in donkey-sentences to have strong readings. This is at odds with the claim made for Dutch by Rullmann in his 1988 paper; According to him, from the following pair, only the 'ordinary' sentence (3.54a) can have a strong reading:

(3.54) *a.* Als iemand te laat komt, wordt hij meestal niet binnengelaten
"If somebody is late, we usually don't let him in"
a. Als er iemand te laat komt, wordt hij meestal niet binnengelaten
"If there is somebody who is late, we usually don't let him in"

According to Rullmann, the 'ordinary' sentence (3.54a) quantifies over situation–latecomer pairs, whereas the existential sentence (3.54b) quantifies over situations only, since the indefinite is (assumed to be) bound by existential closure. This, according to him, gives rise to what may be called a 'proportion ambiguity', from the so-called proportion problem that arises with donkey-sentences that contain for instance *most* rather than *every* (Kadmon (1990)). According to Rullman, this ambiguity is the following: To check the truth of (3.54a), one has to count count event–individual pairs. With (3.54b) it is sufficient to count events only.

So, according to Rullmann, (3.54a) is true if, say, there are fifty people who come late, such that forty of them come at once and are not let in, and ten of them come separately, and are let in. (3.54b) on the other hand is said to be false in this scenario: of eleven latecoming events, the participants of only one event are not allowed in.

Here I would like to note that Rullmann's judgments are not shared by other native speakers of Dutch, in that (3.54b) has been judged true in the given scenario, just like (3.54a). But this does not mean that the adverb (or other quantifier) may bind the indefinite in an existential sentence. Rather, these donkey readings may arise the event/state descriptions (that, according to my assumption, bind the indefinite) are distributive: in Rullmann's scenario, for instance, if there is an event of late arrival with forty participants, then this event will have one subevent for each participant.

According to Hans Kamp, who provided me with this example, (3.55), which is less distributive than (3.54), does indeed count occasions, regardless of the number of people who participate in bottle-bringing. This is presumably because of the propositional anaphor *het* in the nuclear scope. Another reason may be that (3.55) counts bottle-bringing events (and hence bottles?), and not their agents.

(3.55) Als er iemand een flees wijn mitbringt, is het meestal gezellig
If ER someone one bottle wine brings-along, is that usually fun
"If someone brings a bottle of wine, this is usually fun"

Implicit restrictors: as in English, the indefinite in Hungarian cannot be understood as part of the (mostly) implicit restrictor of an adverb of quantification (Kim (1996)).

In (3.56a-b), the indefinite is understood as belonging to the restrictor of *always*: all events that involve a cat/some cats are such that it/they land(s) on it/their feet.[4] By contrast, (3.56c) can only mean that in all contextually given situations or events one finds a cat that lands on its feet.

(3.56) *a.* Cats always land on their feet
b. A cat always lands on its feet
c. There is always a cat that lands on its feet

((3.56a) is from Schubert and Pelletier (1989).)

One finds the same in Hungarian, as seen in (3.57):

(3.57) *a.* [Egy macska]$_T$ mindig [$_V$a tető-n *van*]
A cat always the roof-on van
"One of the cats is always on the roof"
b. [Mindig]$_Q$ [$_V$*van*] egy macska a tető-n
Always is a cat the roof-on
"There is always a cat on the roof"

Of course, in sentences like (3.56c) or (3.57b), the indefinite cannot have widest scope, either. It has be part of the nuclear scope.

Obviously, if an existential sentence is in the restrictor of a quantifier, the object *NP* can (and has to) be part of the restrictor. This could be seen in (3.51). Then the generalization is that in an existential sentence the indefinite has to be in the same quantificational "niche" (restrictor or nuclear scope) as its verb.

Weak Crossover Following Chierchia (1995), one can use the Weak Crossover test to see whether there are implicit quantifiers in some construction.[5] Although the 'ordinary' sentence (3.58a) is not perfect, either, its existential counterpart, (3.58b) is markedly worse, according to most native speakers of English I have consulted. (And so is (3.58c), the corresponding sentence with *have*.) This is taken to indicate the presence of a binder for indefinites in existential sentences.

(3.58) *a.* ?Its owner has reported that a cat is up the tree
b. ???Its owner has reported that there is a cat up the tree
c. ???His$_i$ father told Jane$_j$ that she$_j$ has a$_i$ nephew

The absence of Weak Crossover in existential sentences was already remarked in Rullmann (1989), but I became aware of this only after constructing my own test. Here is Rullmann's original Dutch example:

(3.59) *a.* Een uur nadat hij uit zijn huis vertrokken was, stond
An hour after he his house left had, stood
b. (∗er) een oude studiengenoot bij mij voor de deur
(ER) an old fellow-student with me before the door
"After an hour he had left his house, an old fellow student was at my door"

(Rullmann (1989), ex. (50))

[4] Of course, in (3.56b) the indefinite can also have wide scope.
[5] I read Rullmann (1989) after the first drafts of this chapter were completed.

With respect to the WCO-test, Hungarian seems to behave like English or Dutch, although the data are less clear. Nevertheless (3.60b), the existential sentence is again markedly worse than its 'ordinary' counterpart (3.60a).

(3.60) *a.* ??A tulajdonosa$_i$ mondta, hogy egy macska$_i$ a fá-n *van*
The owner-Poss3Sg said+Def3Sg, that a cat the tree-on is
"Its owner said that a cat is in the tree"
b. ????A tulajdonosa$_i$ mondta, hogy a fá-n *van* egy macska$_i$
The owner-Poss3Sg said+Def3Sg, that the tree-on is a cat
"Its owner said that there is a cat in the tree"

Nonequivalence of existential and non-existential sentences:

Sentence pairs like (3.61a-b) indicate that existential sentences are not necessarily equivalent to their 'ordinary' counterparts, an assumption held in the earlier Generalised Quantifier Theory literature on *there*-insertion (e.g. in Keenan (1987)).

(3.61) *a.* There is a hole in my pocket
b. ??A hole is in my pocket
c. John's clothes are old and full of holes
c. One of the holes is in his pocket

Hungarian (3.61a) also seems to point at the necessity of an additional, location-like discourse referent that the *NP* is dependent on.

(3.62) *a.* Van egy lyuk a zsebe-m-ben
Is one hole the pocket-POss1Sg-in
"There is a hole in my pocket"
b. ???##[Egy lyuk]$_{Top}$ van a zsebemben
One hole is the pocket+Def3Sg-in
Intended: "One of the holes, there is it in my pocket"
c. OK: [Egy lyuk]$_{Top}$ [a ZSEBEMBEN]$_F$ van
[One hole]$_{Top}$ [the POCKET-Poss1Sg-in]$_F$ is
"One of the holes is in my pocket"

This thesis does not have an account of (3.61). This example is used to show that existential sentences are not equivalent to their ordinary counterparts. In fact, this could already be seen from the scope facts. Accordingly, a proper analysis of the Definiteness Effect should have this logical property.

Event-dependent readings: There are a number of other phenomena that show that weak *NP*s may be dependent on an event description in their clause in a way that strong NPs are not. Here, they are evoked to argue that *there*-sentences are but a special instance of the indefinite's being dependent on an event or situation description.

As discussed in Krifka (1990b) (and also in Doetjes and Honcoop (1997)), (3.63a) has a reading that (3.63b) lacks. This is the reading where the *NP* is used to count events and not individual ships. In a manner similar to the effects of Hungarian Focus on the Definiteness Effect, once Focus is added to such a sentence with a strong *NP*, the event reading becomes available for the strong *NP* as well. Thus (3.63c) can mean that all events of passing through the lock occurred at night.

(3.63) *a.* Four thousand ships passed through the lock
b. Every ship passed through the lock
c. Every ship passed through the lock [AT NIGHT]$_F$

Another event-dependent phenomenon is the use of the adjective *new*.

(3.64) *a.* I have written with/switched to a *new* pen.
b. #I have written with every new pen

As discussed in Moltmann (1996), the adjective in the indefinite ((3.64a)) can be understood relative to the event, meaning *different, one not used before*. If *new* occurs within a strong *NP*, it cannot have this construal.

In Hungarian there is an effect that may be called predicative novelty, and which was first noticed by Anna Szabolcsi. This is the following. Take a scenario where a table is needed, and the speaker brings e.g. a cardboard box to serve as a table. The existential sentence (3.65a) can be used to describe this event, the other sentence with the prefixed verb *be-hoz* 'in-bring' cannot. Again, this shows that indefinites can be made dependent on the relevant verb or construction, since it is only the Definiteness Effect verb *hoz* 'bring' that has this property.

(3.65) *a.* Hoztam (egy) asztalt
Brought-1Sg (one) table-Acc
"I have brought a table
b. *Be*-hoztam egy asztalt
In-brought-1Sg one table-Acc
"I have brought in a table

One can look at predicative novelty from two points of view. (i) One could emphasize the performative aspect of (3.65a), as Szabolcsi herself did. That is to say, an object is renamed or assigned a property in virtue of the utterance of such a sentence. (ii) Alternatively, one can stress the opacity properties of these verbs (opacity will receive some discussion in Chapter 4). That is to say, with this kind of opacity, *NP*s can be seen to contribute both a property and a discourse referent, in a manner that can sever the property from the referent, and often the referent can be contributed by another constituent in the sentence, as in *Mary found a devoted disciple in him*, or in *Suddenly, I recognized the genius in him.* (The latter example is from Moltmann (1997).) In the case of (3.65a) this would mean that the property *asztal* 'table' may refer back to something salient in discourse, and the sentence then says that the discourse referent (which, after all, has the property of being a cardboard box) is attributed that property.

Conclusions: This inventory has shown that indefinites in existential sentences introduce discourse-new referents that are bound to the verb or to the expletive+verb complex. Binding results in narrow scope and in event-dependent readings.

This inventory contains data that show the similarities of English and Hungarian indefinites in existential sentences. The remainder of this chapter focuses on less usual phenomena that interact with, or accompany, the Hungarian Definiteness Effect. These include bare nominals, the effects of Focus and the Focus-sensitivity of certain *NP*s.

3.2.4 Incorporation: Bare Nominal Arguments

This part presents the properties of Hungarian bare nominals in argument roles. These nominals are relevant for two reasons. First of all, their semantics is nonstandard, from almost every respect, which makes their case a puzzle for current accounts of bare plurals (Chierchia (1998a)). Second, these nominals are relevant for this thesis because of incorporation. The argumentation is the following:

- Bare nominals are said to be incorporated into their so-called host verbs at some (rather abstract) level of structure.

- The host verbs are light verbs; the Definiteness Effect verbs studied in this thesis are a proper subset of the class of light verbs.
- Definiteness Effect verbs will be composed with their full *NP* internal arguments with a generalisation of a method that has become known as Semantic Incorporation (van Geenhoven (1996)).
- Given these factors, it is important to distinguish between 'genuine' incorporation of bare nominals[6] and the case of full *NP*s, where the term 'Incorporation' is (mostly) a label for a particular method of semantic composition.

  Thus, Chapter 6 will have to provide a proper distinction for the the following:

(3.66) *a.* János macskát talált $N \prec V$
John cat-Acc found
"John found some cat(s)"
b. János talált egy macskát $V \prec NP$
John found one cat-Acc
"John found a cat"

Beside the more usual bare plurals, Hungarian also has bare nominals unmarked for number. These will be called numberless rather than singular, because in Hungarian it is the singular which is unmarked (as in Armenian: Vaux and Sigler (1997), or in Hindi: Dayal (1999)). Thus (3.67a), the sentence with the plural nominal can only mean that John found at least two cats. The sentence with the numberless nominal, (3.67b), means that John found one or more cats.

(3.67) *a.* János macská-ka-t talált
John cat-Pl-Acc found
"John has found cats"
b. János macská-t talált
John cat-Acc found
"John found a cat/cats"

Numberless nominals and plurals usually occur in immediately preverbal position, as in (3.67). This will sometimes be called their base position. Provisionally, bare nominals may be classed among indefinites. According to Hungarian linguists (Szabolcsi (1986), Kiefer (1990–91), É.Kiss (1998b)) and to Helen de Hoop (de Hoop (1992)), these nominals are incorporated into the verb at some level of linguistic structure. (It is clearly not the full, surface incorporation found in languages like West Greenlandic.)

The class of so-called host verbs can be described with a reasonable degree of precision: it includes the majority of unaccusative and transitive event verbs, and a number of statives (e.g. *tart* 'keep', *van* 'is' a.s.o.). As mentioned earlier, Definiteness Effect verbs are a proper subset of incorporating verbs. Chapter 4 contains a list of light verbs that do not show the Definiteness Effect (e.g. *töröl* 'wipe', or *ftp-z* '(do) ftp').

Verbs that do not take (numberless) bare nominals are unergatives (e.g. *szalad* 'run') and certain statives, like *ismer* 'know', *szeret* 'love', 'like' (É.Kiss (1998a)). For instance, the sentences in (3.68) are ungrammatical with a flat, unmarked intonation, which indicates that the nominal is not in

[6] I am aware that Hungarian bare nominals are not 'truly' incorporating. Nevertheless, these nominals come closer to being incorporated than full NPs.

Focus position.

(3.68) *a.* ∗János barnát szeret
John brown-Acc loves
Intended: "John loves some brunette(s)"
b. ∗Mari tételt ismer
Mary theorem-Acc knows
Intended: "Mary knows some theorem(s)"
c. ∗Gyerek szaladt a réten
Child ran the meadow-on
Intended: "Some children were running in the meadow"

In the Hungarian literature bare nominals are usually analysed as sole head Ns or deviant NPs, since they cannot take complements, adjuncts or determiners. This is seen from (3.69), where the sign # indicates that the sentence becomes acceptable if the relevant NP receives Focus stress, in which case it is analysed as occupying the Focus position. On the intended 'flat' intonation contour, and the syntactic structure that goes with this contour, the sentences are unacceptable.

(3.69) *a.* ∗#János egy almát eszik
John one apple-Acc eat-3Sg
Intended: "John is one-apple-eating"
b. ∗#János piros almát eszik
John red apple-Acc eat-3Sg
Intended: "John is red-apple-eating"

As regards grammatical function, bare nominals can be arguments of the verb or secondary predicates. The distribution of numberless nominals is more restricted than that of bare plurals. Numberless nominals usually serve only as subjects of unaccusatives, objects of transitives, or as secondary predicates/obliques.

(3.70) *a.* Vendég érkezett — S. of unaccusative
Guest arrived
"A guest/some guests arrived"
b. János macskát tart — O. of transitive
John cat-Acc keeps
"John keeps a cat/some cats"
c. János orvos-nak tartja/hiszi Marit
John doctor-Dat keeps+Def3Sg/believes+Def3Sg Mary-Acc — 2ndary predicate
"John believes Mary to be a doctor"
d. ∗Fiú tart egy macskát — ∗S. of transitive
Boy keeps one cat-Acc
Intended: "Some boy(s) keep(s) a cat"

Bare plurals can also serve as subjects of unergatives:

(3.71) *a.* ∗/#Gyerek játszik az udvaron
Child plays the yard-on
Intended: "Some child(ren) is/are playing in the courtyard"
b. Gyerekek játszanak az udvaron
Child-Pl play-3Pl the yard-on
Children are playing in the courtyard

In this brief discussion I will be concerned with bare nominals as internal arguments.

As mentioned in passing in Chapter 2, bare nominals do not share the distributional freedom of Hungarian indefinites, or other NP types. This may indicate that they are not referring terms (nor can they have the 'discourse reference' of indefinites). For one, bare nominals may not occur

in a wide scope Topic position, which is *the* position for referring or discourse-linked expressions in Hungarian:

(3.72) *[Fát]$_T$ [tegnap]$_T$ vágott János
[Wood-Acc]$_T$ [yesterday]$_T$ chopped John
Intended: "John chopped wood yesterday"

Their distribution is restricted to Contrastive Topic position (from where they are reconstructed to their preverbal 'base' position), to the Quantifier position (just in case they come with the particle *is* 'too'), and to Focus. They have to appear postverbally if there is something else in Focus. The distribution pattern in (3.73) also shows that if these nominals are incorporated, it is at some more abstract level of representation, which does not prevent their separation from the host verb in certain contexts.

(3.73) *a.* [Fát]$_{CT}$ tegnap nem vágott János—Contrastive Topic
[Wood]$_{CT}$ yesterday not chopped John
"John has chopped up no wóod yesterday"
(but he may have done or chopped up something else)
b. [Minden diák]$_Q$ [fát is]$_Q$ [MARINAK]$_F$ vágott—Quantifier
[Every boy]$_Q$ [wood-Acc too]$_Q$ [MARY-Dat]$_F$ cut
"Every boy has chopped wood only for Mary, too"
c. János [FÁT]$_F$ vágott—Focus
John [WOOD]$_F$ cut
"John was chopping WOOD"
"It was wood that John was chopping (and not concrete)"
d. [JÁNOS]$_F$ vágott fát—*Focus* $\prec$ *V* $\prec$ *N*
[JOHN]$_F$ chopped wood-Acc
"It is John who has chopped/was chopping wood"

Another property of Hungarian bare nominals is that they cannot have generic readings. As shown in É.Kiss (1998a), Hungarian generic statements usually have a (*Subject of predication*) (*Predicate*) structure, with a plural definite in Topic position serving as the subject of predication. Thus, statements like *Mice are rodents/hunted by cats* are rendered (only) in the following form in Hungarian, where a plural definite in Topic position serves as a logical subject.

(3.74) *a.* [Az egerek]$_T$ rágcsálók
[The mouse-Pl]$_T$ rodent-Pl
"Mice are rodents"
b. [Az egerek-re]$_T$ [MACSKÁK]$_F$ vadásznak
[The mouse-Pl-onto]$_T$ [CATS]$_F$ hunt-3Pl
"Mice (,they) are hunted by CATS"

Note that (3.74b) cannot be understood as a doubly generic or an underspecified generic statement about mice *and* cats, even though the bare plural *macskák* 'cats' does have a kind name reading.[7] But, as shown by Katalin É. Kiss, this reading is coerced by Focus.

[7] A question from Ede Zimmermann is whether one can have *two* plural definites in Topic position, and whether in this case one does indeed get a 'doubly generic' statement, or a statement about about a *pair* formed from kinds. This is indeed the case with some generic statements, but this would need further investigation.

(*ii*) *a.* [Az egereket]$_T$ [a macska]$_T$ elkergette—episodic
[The mouse-Pl-Acc]$_T$ [the cat]$_T$ away-chased+Def3Sg
"The cat has chased away the mice"
b. [Az ember]$_T$ [a tigrisekre]$_T$ mindig is szívesen vadászott
[The man]$_T$ [the tiger-Pl-onto]$_T$ always too heartily hunted—generic
"Man has always been keen on hunting tigers"
"Tigers have always been passionately hunted by man"

For instance, (3.75) below could be understood as a generic/habitual statement about boys, but in fact it can also be taken about those who like maths in school (and who are said to be boys).

(3.75) Az iskolában a mateket FIÚK kedvelik
The school-in the maths-Acc BOYS like-3Pl
"In school, it is (the) boys who like maths"

(É.Kiss (1998a))

In (3.75), the bare nominal seems to be in what may be called the nuclear scope of the quantifier associated with Focus: if someone likes maths in some school, that person is a boy. And, in order to reconstruct alternatives, the bare nominal is to be coerced to a kind name (or group name). This reading does not arise from the intrinsic semantics of the bare plural. Rather, it is a consequence of the semantics of Hungarian Focus: the bare plural is not in the restrictor (Focus Frame), but in the nuclear scope (Focus). And the maximality effect that accompanies it follows from the exhaustive listing property of Focus.

Hungarian numberless nominals have another property, which they share with nominals from Armenian (Vaux and Sigler (1997)) or Hindi (Dayal (1999)), and which distinguishes them from genuinely incorporated nominals in West Greenlandic (Bittner (1994), van Geenhoven (1996)) or Iroquoian languages (Baker (1995)). This is the fact that they do not license pronominal anaphora. This is shown in (3.76) below:

(3.76) János fát vágott. ????#Kemény volt.
John wood-Acc chopped. Hard was.
Intended: "John was chopping wood. It was hard."

Bare plurals have the same syntactic distribution as their numberless counterparts; the main difference between them and their numberless counterparts is that they license pronominal anaphora. Then it can be conjectured that in Hungarian the plural suffix *-k* is responsible for the introduction of a plural discourse referent.

(3.77) János macská-k-at talált a padláson. Éppen egerésztek.
John cat-Pl-Acc found the attic-on. Just mouse-Past-3Pl
"John found (some) cats in the attic. They were mousing."

This part is concerned with numberless nominals, so what I have to say about bare *plurals* is deferred till an excursus at the end of this part.

What we see e.g. in West Greenlandic is that incorporated objects can antecede anaphoric pronouns:

(3.78) Aani qimmi-qar-p-uq. Miki-mik ati-qar-p-u-q
A. dog$_i$-have-IND-[-tr]3Sg. *pro*$_i$ M-INS name-have-IND-[+tr]-3Sg
Aani has a dog$_i$. It$_i$ is called Miki.

(Bittner (1994) ex. (38): 67)

The difference between (3.76) and (3.78) suggests, then, that (i) West Greenlandic incorporated nominals are like genuine indefinites[8], and (ii) Hungarian nominals do not resemble indefinites, which means that they do not introduce discourse referents on their own, nor is the verb seen as providing one. This will be taken up in the analysis provided in Chapter 6.

As opposed to West Greenlandic, then, Hungarian nominals resemble the so-called anaphoric islands constituted by relational nouns (Postal (1969)) or compounds (Heim (1982)):

(3.79) *a.* John is an orphan. *They died when he was six.
b. *Every donkey$_i$-owner beats it$_i$

[8]Even if they have narrowest scope (Bittner (1994), van Geenhoven (1996)).

In Hindi, bare nominals disallow pronominal anaphora, just as in Hungarian. Yet Hindi and Hungarian are different, in that bare nominals may get a definite construal, as shown in (3.80). Thus, (3.80a) can mean that Anu is reading some book, or that he is reading the book. On the incorporating reading of (3.80a), the continuation (3.80b) is disallowed.

(3.80) *a.* anu kitaab paRh rahii hai
Anu book read-PROG PR
"Anu is reading a book/the book"
b. ∗vo bahut acchii hai
It very good-be PR
"It is very good"

(Dayal (1999))

As opposed to Hindi, Hungarian bare nominals cannot get a definite construal. This is presumably (i) due to the morphosyntactic properties of Hungarian incorporating verbs, and (ii) with incorporated objects, the verb would be marked for definiteness agreement with its objects, and such 'agreeing' verbs cannot be incorporating. (And these definiteness suffixes require an overtly definite object *NP*, which requirement cannot be satisfied by a bare nominal. Such a bad example is shown in (3.81a) below: The previous sentence was in no way an argument or a hypothesis. It merely serves to draw attention to the grammaticalisation of definiteness in Hungarian.)

(3.81) *a.* ∗János macskát hoz-t-a
John cat-Acc bring-Past-+Def3Sg
Intended: "John was bringing the cat"
b. OK: János hoz-t-a (a macskát)
John bring-Past-+Def3Sg (the cat-Acc)
"John was bringing it/the cat"

Hungarian bare nominals resemble modifiers in another respect: They do not contribute to the aspectual properties of the *VP*, as genuine internal arguments do (Tenny (1992)). This is non-contribution is shown in (3.82) below. Rather, numberless bare nominals only serve to narrow down the verb's meaning: for instance, wood-chopping is a kind of chopping activity.

(3.82) *a.* János almát evett
John apple-Acc ate
"John was eating some apple(s)"
b. János (∗egy hétig) bolhát talált a kutyáján
John (one week-till) flea-Acc found the dog-Poss3Sg-on
"John found some fleas on his dog (on one occasion)"
Not: "John found fleas on his dog for a week"

What (3.82) shows is that bare nominals do not have an aspectual contribution. The relevant example is (3.82b). On the basis of aspectual composition in English-type languages, one would expect a bare nominal to contribute to an iterated durative reading, as is the case with the original example *John found fleas on his dog for weeks* (Dowty (1979/1991)). This is not so: the complex *bolhát talált* 'flea-found' describes a single event.

The following is an argument from Kiefer (1990–91) against moving or stranding the nominal from a (covert) indefinite that has the syntactic structure of a full *NP*. In simpler terms, it is an argument in favour of independent head status for the nominal; it is also intended as an argument against movement, at least against an operation that moves the head *N* out of a full NP. This is based on the following observation: many combinations with bare nominals cannot be related to sentences

with a proper indefinite (Kiefer (1990–91)):

(3.83) *a.* János hajat mosott (Marinak)
John hair-Acc washed (Mary-Dat)
"John washed his hair"
Or, "John washed Mary's hair"
b. A diplomaták kezet fogtak
The diplomats hand-Acc caught-3Pl
"The diplomats shook hands (with each other)"
c. Mari szájat festett
Mary lip-Acc painted
"Mary applied makeup to her lips"

In (3.83a), the nominal has a possessive interpretation. By default, the possessor is linked to the subject. That is, the sentence cannot mean *John was washing an amount of hair.* In (3.83b), the nominal has a reciprocal–possessive construal. (3.83c) too contains an example with an implicit possessive. Furthermore, *szájat fest* 'lip-paint' is noncompositional, in that the painting activity described is narrowed down to applying makeup. I chose this example because the corresponding sentence with a full, non-possessive *NP* means something very different: the preferred meaning of *fest egy szájat* is 'create a representation of a pair of lips'. In all, combinations like (3.83) are relatively rare in Hungarian, but they show (i) that the bare nominal has a meaning of its own, (ii) it has head status, and (iii) that nominal and verb describe a single event (=the nominal does not contribute to iterated readings), which in turn tallies with its other modifier-like properties.

From a semantic point of view, then, Hungarian bare nominals are indefinite-like, yet nonreferring terms. On their own they have at most an existential reading. With a creation verb, or other intensional verbs, for instance, they will lack existential import altogether (as in *házat épít* 'house-build', or *unikornist keres* 'unicorn-seek'). Since they serve to modify the event description contributed by the verb, and do not contribute to aspect, from a semantic point of view they resemble modifiers rather than genuine arguments. The lack of pronominal anaphora seems to reinforce their modifier-like status. (In the sense of being a modifier within a compound-like structure.)

At the level of argument structure, however, Hungarian nominals clearly serve to saturate the appropriate argument slot of the verb. This is shown by the impossibility of so-called classifier incorporation. In languages where classifier incorporation is grammatical, as in (3.85) or (3.86) below, the incorporated element does not fill the verb's argument slot, hence the acceptability of an additional constituent that does serve as the appropriate argument.

(3.84) *a.* János macskát tart (*egy plüsscirmost)
John cat-Acc keeps (one tabby-Acc)
Intended: "John keeps a plush tabby for a cat"
b. Vendég érkezett (*egy hölgy)
Guest arrived (one lady)
Intended: "A lady arrived as a guest"

Classifier incorporation is quite common in languages that have genuine incorporation (i.e., where nominal and verb do indeed form one morphological word). The following is a Mohawk example from Baker (1995):

(3.85) Kikv rabahbot wa-ha-its-a-hniun' ki rake-'niha
This bullhead fact-MsS-fish-buy-punc this my-father
"My father bought this bullhead"

The following is a Chamorro example from Ladusaw (1999):

(3.86) Găi-[patgun] un lahi i taotao
Agr-have-child a son the person
"The man has a son"

The presence or lack of classifier incorporation in a given language usually serves as a test for distinguishing syntactic from lexical incorporation. Where Hungarian is concerned, I wish to remain agnostic on this issue. Here, the lack of classifier incorporation in (3.84) is meant to show that Hungarian bare nominals do indeed saturate an argument position of their host verb.

Examples (3.83) have shown that bare nominals cannot be given a simple full indefinite meaning. The following shows that they cannot originate in full *NP*s, i.e. in Hungarian one cannot move out a nominal from an *NP* and leave the 'rest' of that *NP* stranded:

(3.87) *János almát$_i$ evett [$_{NP}$két szép t_i]
John apple-Acc ate [$_{NP}$two nice t_i]
Intended: "John ate two nice apples"

Such stranding is possible in West Greenlandic (or in other languages with genuine incorporation):

(3.88) Esta nuuta-mik aalisagar-wi-v-u-q
E-Abs fresh-Inst-Sg fish-buy-Ind-tr-3Sg
"Ester bought fresh fish"

(van Geenhoven (1996):166)

Hungarian (3.87) shows that bare nominals cannot be related to a full *NP* at deep structure. They are constituents on their own.

In all, the syntactic and semantic properties of Hungarian bare nominals are not homogeneous, so to speak:

1. From a semantic point of view they resemble modifiers, yet Accusative nominals or subjects of unaccusatives fill an argument position in the verb's argument structure.

2. The lack of classifier incorporation and the separability of nominal and verb seem to indicate some kind of movement process. But nominals have other properties that are indicative of Hungarian incorporation being lexical. For one, they cannot be stranded from full *NP*s, nor do they correspond to simple indefinite meanings. An argument in the spirit of Mithun is that, according to Kiefer (1990–91), most nominal–verb combinations describe institutionalised activities; thus, *fát vág* 'chop wood' is much more acceptable than *tölgyet vág* 'chop oak'. Or, to use Kiefer's own example, the combination *szomszédot bosszant* 'neighbour–harrass' will become acceptable just in case the corresponding activity is recognized by the speech community. An argument closer to linguistics is that nominal–verb combinations can easily enter derivation processes, as e.g. with n *fa-vág-ás* 'wood-cutting', which in turn is suggestive of a lexical process.

The second of these dilemmas is in fact typical of Hungarian secondary predicates in general, and is the subject of an ongoing debate in the syntactic literature on Hungarian. This issue will be discussed at some length in Section 4.6 of the following chapter. Here I would like to dwell on the parallel between Hungarian bare nominals and prefixes. Like nominals, prefixes have to be separated from their host verb in roughly the same environments: for instance, when the verb is preceded by Focus or by the negative particle *nem*.

(3.89) *a.* *János nem fát vágott — **Neg N V*
John not wood-Acc chopped
Intended: "John did not chop wood"
b. *János nem meg-evett egy almát — **Neg PV V*
John not MEG-ate one apple-Acc
Intended: "John did not eat up an apple"

In spite of syntactic separability, many prefix+verb combinations show lexical symptoms, so to speak, in that they have an argument structure which is different from that of the host verb, or

constitute idiosyncratic, noncompositional units of meaning. For instance, *be-rúg* lit. in-kick means 'get drunk', and is intransitive, while *rúg* 'kick' itself is transitive.

Anticipating the discussion from 4.6, one can say about bare nominals and other preverbal elements in Hungarian that

- their host verbs can be compared to light verbs from other languages, in that these verbs are deficient at least as regards subevent structure, and need to be preceded by exactly one element that serves to complete their meaning. Bare nominals and prefixes represent two ways of providing such a preverbal element.
- These 'modifying' elements share some properties of arguments *and* adjuncts. In fact, it is argued in Komlósy (1994) that (since the verbs are deficient) these elements are complements, meaning that they are higher-order arguments;
- All these elements need to be separated from the verb under certain syntactic conditions; hence, they are said to form one unit with the verb at some abstract level of representation (see also Ackerman and Webelhuth (1997) for a similar argument).
- Where (numberless) bare nominals are concerned, their (non-Focus) semantics is seen to follow from the following factors:[9] (i) the nominal contributes nothing but a property; (ii) it combines with a deficient verb that expects exactly a property type internal argument; (iii) neither the nominal nor the verb is seen to introduce an individual level discourse referent that could be picked up by a pronoun in subsequent discourse.

Excursus: Hungarian Bare Plurals

In this excursus I would like to provide a little more information about bare plurals, and give a sketch of the contribution of the plural suffix *-k*. Strictly speaking, all this has little to do with the thesis proper, except for the overall need to have a suitable fragment for Hungarian as a background. Yet this part would be incomplete without this sketch, I think.

It could be seen that Hungarian bare plurals share several properties with numberless nominals, including syntactic distribution. They differ from unmarked nominals in that they allow for pronominal anaphora, as seen in (3.77) earlier. So, syntactically they behave like incorporated numberless *N*-s, and from a semantic point of view they behave like full *NP*s, as they seem to introduce an available discourse referent. In fact, it is the plural suffix *-k* which seems to behave like a determiner in the semantics, and which seems to leave the categorial status of the *N* unaffected.

In Hungarian, the unmarked number is the singular, as opposed to e.g. English, where it is the plural which is marked (Maleczki (1992), Anna Szabolcsi (p.c.), Farkas and Swart (2001)).

The following is a test from Maleczki (1992). It is intended as the Hungarian counterpart of a test for English by Manfred Krifka: *Do you have children? Yes, I have a son.*

(3.90) *a.* Van gyerek-e-d?
Is child-Poss2Sg?
Lit.: "Do you have child?"
In fact: "Do you have child*ren*?

b. Van, kettő
Is, two
"Yes, I have two"

One can see that Hungarian is the reverse of English: the query involves a singular noun, which can be answered by referring to a set with more than one member.

Hungarian has no dependent plurals (Anna Szabolcsi (p.c.); the example is mine). I take (3.91b) to show that the bare plural denotes a group with at least two members (or, in the terminology of Link (1983), the extension of the predicate, minus the atoms). The bare singular on the other

[9] A proper analysis will be given in Chapter 6.

hand will contribute what English plural N'-s are taken to contribute: the entire extension of the predicate, with atoms and all.

(3.91) *a.* Az unicikliknek kerek-e van
The unicycle-Pl-Dat wheel-Poss3Sg is
Lit.: "Unicycles have wheel"
De facto: "Unicycles have wheels"
b. *#Az unicikliknek kerek-e-i-k vannak
The unicylce-Pl-Dat wheel-Poss3Pl-Pl are
Intended: "Unicycles have several wheels each"

As shown in Bende-Farkas and Verkuyl (1997), the plural suffix *-k* is in complementary distribution with other determiners, but not with the definite article *a(z)*:

(3.92) *a.* a fiú-k
the boy-Pl
"the boys"
b. *két fiú-k
two boy-Pl
c. *a legtöbb fiú-k
the most boy-Pl
intended: "most boys"

On the basis of these facts, one can define the plural suffix as a function from CN-s to CN-s that introduces a collective discourse referent:

(3.93) *a.* *Category:* $CN\backslash CN$;
b. *Translation:* $\lambda P.\exists X.[P^*(X) \wedge |X| \geq 2]$

The output of (3.93b) cannot combine with a determiner for logical reasons, since that would lead to binding the relevant variable twice over.

3.2.5 Word Order and Information Structure

Ultimately, this part is about the information structure of Hungarian and English existential sentences. First, the word order possibilities of Hungarian 'Definiteness Effect' *NP*s are described. This is to be understood in opposition with the verb's other arguments, which have the usual freedom of word order. The following subpart presents *NP*s that seem to be exempt from the Definiteness Effect, in that they have to occupy either the Focus or the PredOp position. At least some of these *NP*s can be said to be Focus-sensitive, in that they involve a presupposition–assertion division typical of Hungarian Focus. The third subpart contains observations concerning the information structure of English and Hungarian existential sentences.

Distribution of Internal Argument NPs

Internal arguments of Definiteness Effect verbs are 'prototypical' weak, narrow scope *NP*s. Therefore, one would expect their preverbal distribution to be restricted, since the preverbal positions of Hungarian are earmarked for semantic properties that do not seem to be compatible with weakness. Or, one could guess that the constraints imposed by the verb prevent these *NP*s to acquire the construals typical of these positions. In particular, the Topic and the Quantifier position seem to be suspect, because Topics confer partitive, discourse-linked construals to indefinites, and the Quantifier position is (typically) reserved for strong ($MON\uparrow$) quantifying *NP*s. In fact, as the data will show, these *NP*s are barred in fact only from the Topic position. They can occur even in the Quantifier position, just in case they contain *(még ...) is* 'too'/'even'.

As noted in Chapter 2, *Contrastive Topics* can resemble either Topics, or they can correspond to a partial version of Focus. Moreover, they are often interpreted as reconstructed into their base

position (which is assumed to be postverbal). Then one would expect *DE-NP*s to freely occur in this position. What one sees that an indefinite can occur in the Contrastive Topic position if it has a Focus-like construal, but not when it resembles a Topic:

In (3.94b), the contrastive Topic contributes to a partial answer to (3.94a), and is perfectly acceptable. Note also that the indefinite has narrow scope relative to the universal quantifier.

(3.94) *a.* Mit hoztak a fiúk?
What-Acc brought the boy-Pl?
"What did the boys bring?"
b. Hát, [egy-egy széket]$_{CT}$ mindegyik hozott, de [mást]$_{F}$ már nem
Well, [(one-one) chair-Acc]$_{CT}$ each brought, but [other-Acc]$_{F}$ already not
"Well, they have brought one chair each(B-accent), but nothing else"

(3.95b) contains a contrastive Topic that resembles a Topic, in that it picks out an arbitrary member of a previously introduced collection. (3.95b), if not ungrammatical, is certainly very odd.

(3.95) *a.* János házában sok volt az antik bútor
John house-Poss3Sg-in much was the antique furniture
"There was a lot of antique furniture in John's house"
b. ###[Egy széket]$_{CT}$ adott Marinak, [egy asztalt]$_{CT}$ pedig Katinak
One chair-Acc gave Mary-Dat, one table-Acc PRT Cathy-Dat
Intended: "One of the chairs(B), he gave to Mary, and one of the tables(B) to Cathy"

From the case of (3.95) one could draw the conclusion that *DE-NP*s cannot appear in Contrastive Topic position when they resemble Topics. This is not always so, because kind names/mass terms can appear in this position, even on a Topic-like construal:

(3.96) *a.* Kefirt és vajat kerestem
Kefir-Acc and butter-Acc sought-1Sg
"I was looking for kefir and butter"
b. [Kefir]$_{CT}$ nem volt az üzletben, de [vaj]$_{CT}$ igen.
Kefir not was the shop-in, but butter yes
"There was no kefir in the shop, but they did have butter"

(Based on a Russian example from Borschev and Partee (n.d.))

What (3.96) also shows is reconstruction, since the mass term *kefir* can be understood as being in the scope of the negative particle *nem* on its right. (Alternatively, the name may be said to have wide scope, and negation concerns instances of that kind.)

Topicalisation:

(3.97) ???[Egy széket]$_{Top}$ hozott tegnap János
[One chair-Acc]$_{Top}$ brought yesterday John
OUT: "One of the chairs, John brought it yesterday", or
OUT: "There is one of the chairs here, John brought it yesterday"

(3.97) shows that the internal argument of a Definiteness Effect verb cannot be Topicalised. This may be due to two factors. One factor may be a ±novelty clash: indefinites in Topic position are partitive-specific, whereas DE-NPs have to be novel. I am not entirely sure this is the right reason, since overt partitives are acceptable in Hungarian existential sentences, albeit in postverbal position:

(3.98) *a.* János evett egyet a Mari almáiból
John ate one-Acc the Mary apple-Poss3Sg-Pl-from
"John ate one from Mary's apples"
b. A Mari almáiból János evett egyet
The Mary apple-Poss3Sg-Pl-from John ate one-Acc
"From Mary's apples John ate one"

The other possible reason for the unacceptability of Topicalisation may be a breach of a locality constraint. If it is assumed along with Katalin É.Kiss that the primary division of Hungarian sentences is into Topic (subject of predication) and Predicate/Rheme, and DE-NPs are bound to their verbs (which are part of the Rheme), then they are not expected to occur outside of the Rheme.

The impossibility to topicalise the relevant *NP*s in Hungarian contrasts with languages like English or Dutch, where both orders are possible (with the appropriate readings):

(3.99) *a.* Ik hoop dat een oude vriend van mij morgen op bezoek komt
b. Ik hoop dat er *een* oude vriend van mij morgen op bezoek komt

((3.99a) is from Rullmann (1989).)

Of course the reason for this contrast is that the Definiteness Effect has different sources in Dutch or English and in Hungarian. In English or Dutch there is free variation between two constructions, and hence between the presence or absence of the Definiteness Effect. In English *there*-insertion, or in Dutch *er*-sentences the *NP* is postverbal precisely because the subject position is occupied by the expletive, and one has the canonical Definiteness Effect. And, of course, if there is no expletive in the sentence, and there is no Definiteness Effect, then the indefinite may be in a sentence-initial position, and, in Dutch, it can acquire a partitive–specific or generic reading. In Hungarian on the other hand the binding mechanism is located in the verbs themselves, hence the impossibility to topicalise these *NP*s.

Note, on the other hand, that Topicalisation or dislocation to the left of *there* or the verb *have* is quite hard to get in English, too:

(3.100)*a.* ∗#An owl, I think that there is in the garden
b. #??A sister, everyone knows that John has

That is, if the binder is present in an English sentence, dislocation or Topicalisation is no longer possible.

The Quantifier Position:

If the Quantifier position is filled with proper quantifiers, this obviously has no effect on Definiteness Effect verbs (unless the internal argument itself is a quantifying *NP*, but this is even more obvious, if possible). Sentences with the Quantifier position filled by a quantifying *NP* or adverb do not count as existential, but their nuclear scope may be said to contain an existential statement, or the nuclear scope in the representation will be an existential subformula:

(3.101)*a.* [Minden fiú]$_Q$ adott egy szál virágot Marinak
Every boy gave-3Pl one stem flower-Acc Mary-Dat
"Every boy gave Mary a flower"
b. [A fiúk]$_T$ [többször is]$_Q$ adtak egy-egy szál virágot Marinak
The boys many-times too gave-3Pl one-one stem flower-Acc Mary-Dat
"Several times, the boys gave Mary a flower each"

Internal arguments of Definiteness Effect verbs are not expected to occur in the Quantifier position. Yet they can do so, iff they are of the form *(még) NP is* '(even) *NP* too', i.e. iff they come with the *too*-kind of presupposition:

(3.102)*a.* [János]$_{Top}$ hozott egy szekretert is
[John]$_{Top}$ brought one secretaire-Acc too
"John brought a secretaire too"
b. [János]$_{Top}$ [egy szekretert is]$_Q$ hozott
[John]$_{Top}$ [one secretaire-Acc too]$_Q$ brought
—same—

(3.102a/b) assert that there was an event of John bringing a secretaire. They presuppose that there was an event of John (or someone else) bringing something else. It is to be noted that the internal

argument discourse referent in these sentences is new, and so is the event discourse referent. That is, *this* kind of presupposition–assertion division does not affect existential readings. (Nor does *egy másik* 'another', just like its English counterpart: *There is another cat on the roof.*)

Focus:

Hungarian Focus can interact in two ways with the Definiteness Effect. First, if a sentence contains Focus, the Definiteness Effect is 'neutralised', or lost (Szabolcsi (1986)). Second, certain quasi-weak *NP*s have to occur in Focus (Focus loosely meaning Focus proper or PredOp). These *NP*s (better said, their determiners) involve a presupposition–assertion division of their sentence that results in the loss of the existential reading. The following subsection will be entirely devoted to this phenomenon. Here I will concentrate on the first phenomenon, viz the loss of the Definiteness Effect if *anything* is in Focus.

It was noted already in Szabolcsi (1986) that Focus neutralises the Definiteness Effect This can be seen in (3.103b-c). [10]

(3.103)*a*. *[János]$_{Top}$ hozott minden könyvet
[John]$_{Top}$ brought every book-Acc
"John brought every book"

b. [JÁNOS]$_{Foc}$ hozott minden könyvet
[John]$_{Foc}$ brought every book-Acc
OK: "For every book, it is John who brought it"
NOT: "It is John who brought every book"

c. János [a KÖNYVEKET]$_{Foc}$ hozta
John [the BOOKS-Acc]$_{Foc}$ brought+Def3Sg
"It is the books that John has brought"

Now the neutralisation of the Definiteness Effect with Focus is the 'complement' of the the requirement that existential sentences describe a new eventuality. Cases with Focus like (3.103b-c), or (3.104), involve a presupposition–assertion division of the non-Topic part of the sentence. (3.103b) for instance presupposes that John brought something, and asserts that it was the books he brought. That is, in canonical examples like (3.103), the verb is part of the presupposition, and usually so is its internal argument.

When the internal argument itself is in Focus, as in (3.103c), the presupposition part will still contain a discourse referent that serves to saturate the internal argument slot of the verb. This discourse referent then gets equated with that introduced by the appropriate *NP* from the Focus DRS, but is by no means identical to it. Details will be given in Chapter 6.

(3.104)[A MACSKA]$_{Foc}$ van a tetőn
[The CAT]$_{Foc}$ is the roof-on
"It is the cat that is on the roof"

A Great Many

Szabolcsi's original presentation of the Hungarian Definiteness Effect needs some correction. This is apparent, for instance, from Katalin É.Kiss', István Kenesei's, or László Hunyadi's syntactic work (László Hunyadi (1986), Kenesei (1986), É.Kiss (1987), É.Kiss (1994)), or from Szabolcsi's own (much later) typology of Hungarian *NP*s (Szabolcsi (1997a)).

The point is, that in Hungarian not all weak *NP* types appear in the postverbal position that is usually associated with existential sentences. In fact, there are two main such *NP* classes: Negative *NP*s can appear in a preverbal position, where they receive strong stress. According to earlier models of Hungarian syntax, this position was said to be Focus. More recent models however posit a separate $NegP$ projection to the left of Focus, and negative *NP*s are then said to move to $NegP$.

[10] According to Szabolcsi herself, the internal argument of a Definiteness Effect verb cannot be in Focus; this has been shown to be incorrect, in É.Kiss (1998a), among others. (3.103d) shows that indeed, internal argument *NP*s can in fact occur in Focus position.

Other $MON \downarrow$ *NP*s, as well as cardinal *sok* 'much'/'many' and $MON \uparrow$ *NP*s with numeral modifiers have to appear in Focus

(3.105)*a*. János nem kapott *semmit *(sem)*
John not received nothing-Acc SEM
"John has not received anything"
b. *János kapott *legfeljebb/legalább/több mint, hat könyvet*
John received at most/at least/more than six book-Acc
Intended: "John received at most/at least/more than six books"
c. *János kapott *sok könyvet*
John received much book-Acc
"Intended: John received many books"

Negative NPs like *semmi(t)* 'nothing(-Acc)', or *egy könyvet sem* 'not a single book(-Acc)' have to occur either preverbally, as in (3.106a), or postverbally, as in (3.106b). In the earlier models of Hungarian (e.g. in É.Kiss (1987)) preverbal negative *NP*s were said to occur in Focus. In more recent work by Anna Szabolcsi and others, an independent projection $NegP$ is assumed, which precedes Focus, and which sometimes, but not always, merges with Focus. (The reader may recall the discussion from Chapter 2).

(3.106)*a*. János semmit/egy könyvet sem *kapott/írt*
John nothing-Acc/one book SEM received/wrote
"John has written/received nothing/no books"
b. János nem *kapott/írt* semmit sem/egy könyvet sem
John not received/wrote nothing-Acc SEM/one book SEM
"John didn't receive/write anything/any books"

That negative XPs indeed occupy a position distinct from Focus is shown in (3.107), where the negative NP is followed by one in Focus:

(3.107)[Egy széket sem]$_{NegP}$ [János]$_F$ hozott
[One chair-Acc SEM]$_{NegP}$ [John]$_F$ brought
"None of the chairs was brought by John"

Following a sugggestion by Hans Kamp,[11] I take *nem* and *sem* as polarity markers. This means that negative *NP*s do not necessarily involve a presupposition/assertion division of the sentence, at least not of the type that is ussually shown by more typical Focus constructions. This is supported by the contrast between (3.108a-b).

(3.108)*a*. János egy széket sem hozott
John one chair-Acc SEM brought-3Sg
"John has not brought a single chair"
b. ??János egyik széket sem hozta
John one-of(-the) chair-Acc SEM brought+Def3Sg
"John has brought neither/none of the chairs"

(3.108b), the variant with a "definite" or discourse-linked negative expression is markedly worse than (3.108a). It may only improve in a context that makes it clear that it is not to be understood as existential. For instance, (3.108b) can belong to the Hungarian equaivalent of the following question–answer pair:

(3.109)*a*. **A:** Which of the chairs has JOHN brought?
b. **B:** John(B accent) has brought NONE of the chairs

[11] This suggestion concerns the semantics of *nem*, and is based on Reis and Rosengren (1997).

Many

Sok N' 'many/much *N'*', or *rengeteg N'* 'a great many', 'a lot' cannot appear in the postverbal position associated with the Definiteness Effect (this is not noted in Szabolcsi (1997a)). Rather, they seem to be confined to the preverbal positions of Topic, Quantifier or Focus, all of which are marked from a discourse point of view. (3.111b), with *sok N'* in Focus, can be seen as amount quantification (Kroch (1989)), involving a pressupposition—assertion division of the sentence. So, although *sok* is a weak-looking *NP*, (3.111b) would not qualify as an existential sentence, on account of its Topic–Focus articulation. Nor does (3.111c), on account of Focus. Note that *sok* can only have a proportional reading when in Topic. *Sok* may after all be qualified as only half-strong. This is because it can be Topicalised only if the sentence contains Focus, cf. the contrast between (3.110a–b):

(3.110)*a*. ???∗[Sok széket]$_T$ [tegnap]$_T$ hozott János
[Much chair-Acc]$_T$ [yesterday]$_T$brought John
Intended: "Many of the chairs, yesterday John brought them here"

b. [Sok széket]$_T$ [TEGNAP]$_F$ hozott János
[Much chair-Acc]$_T$ [YESTERDAY]$_F$ brought John
"Many of the chairs, it is yesterday that John brought them here"

On the basis of these data one can say that the two construals of *sok* are correlated with its syntactic distribution:

The more usual proportional reading (as in (3.110b)) is correlated with the Topic position. On this reading, *sok* qualifies as only quasi-new; also, it cannot occur postverbally, yet it is appropriate only when the sentence contains Focus. The other reading of *sok* is an "amount" reading, which obtains when it is in Focus position. Then it involves a presupposition—assertion division: (3.111b) presupposes that John has brought a number of chairs, and asserts that this number is "many".

(3.111)*a*. ∗János hozott sok széket
John brought much chair-Acc
"John has brought many chairs"

b. János [SOK széket$_{Foc}$] hozott
John [MUCH chair-Acc]$_{Foc}$ brought
"John has brought MANY chairs"

c. [Sok széket]$_{Top}$ [JÁNOS]$_{Foc}$ hozott
[Much chair-Acc]$_{Top}$ [JOHN]$_{Foc}$ brought
"Many of the chairs, it is John who brought them"

This in turn means that the information structure of sentences with *sok N'* and non-negative $MON\downarrow$ NPs is not of the standard type seen for instance in (3.16a). The presence of these *NP*s in Focus position overwrites the initial existential/presentational information structure of a typical Definiteness Effect sentence like (3.16a).

At Least and At Most

Non-monotone and non-negative $MON\downarrow$ *NP*s cannot occur postverbally (unless they are negated or there is something else in Focus position):

(3.112)∗János hozott *legfeljebb/legalább/több, mint két könyvet*
John brought at most/at least/more, than two book-Acc
Intended: "John brought at most/at least/more than two books"

As shown in (3.113), they can occur in Focus position (again, Focus meaning Focus proper or PredOp).[12]

(3.113)János legfeljebb/pontosan KÉT könyvet *kapott/írt*
John at-most/exactly two book-Acc received/wrote
"John received/wrote at most/exactly TWO books"

[12]These NPs differ as to whether they can also occur in the Quantifier position. For a full inventory, see Szabolcsi (1997a).

As discussed in Chapter 2, I take (3.113) to be an instance of amount quantification (Kroch (1989), Szabolcsi (1997a)). The fact that in (3.113) the object *NP* is in syntactic Focus position suggests that such determiners involve a presupposition/Focus partitioning of the sentences in which they appear. (3.113) presupposes that there is a set of books John wrote/received, and it asserts that the cardinality of this set is at most/exactly two.

As seen in (3.114), it is indeed awkward to coordinate postverbal $MON\uparrow$ and $MON\downarrow$ *NP*s in Hungarian. I take it as a sign of semantic incompatibility.

(3.114)*a*. ???János *kapott/írt* egy regényt és legfeljebb három verset
John received/wrote a novel-Acc and at-most three poem-Acc
Intended: "John received/wrote a novel and at most three poems"

b. ?János *kapott/írt* egy regényt és pontosan három verset
John received/wrote a novel-Acc and exactly three poem-Acc
"Intended: John received/wrote a novel and exactly three poems"

In the case of $MON\uparrow$ *NP*s I take the presupposition to be the existence of a lower n to the amount of entities involved in the relevant event. The focused numeral is then said to provide the value of that limit. The construction as a whole should not presuppose the existence of a relevant event, or that of entities involved in that event.

This discussion on *NP*s with modified numerals and on *sok* 'many' has shown that in Hungarian these do not behave as the weak *NP*s of other languages. From now on, the term 'weak *NP*' will usually be confined to those Hungarian weak *NP*s that can appear postverbally in 'canonical' existential sentences.

3.3 The Specificity Effect in Prefixed Verbs

This parts presents semantic properties of certain prefixed verbs and their internal arguments in Hungarian. The verbs are prefixed counterparts of Definiteness Effect verbs.

The phenomenon (called the Specificity Effect É.Kiss (1995a)) can approximation be described as follows: The internal arguments of the relevant prefixed verbs have to be familiar or partitive-specific in the sense of Enç (1991): If such a complex verb has an indefinite internal argument, the indefinite will contribute a new discourse referent, but that referent will have to belong to a familiar, previously introduced context set. Definites or quantificational *NP*s also have to be anaphoric, or discourse linked: thus *minden macskát* lit. 'every cat' will be construed as 'every one of the cats from a familiar context set'. Thus Specificity Effect verbs present a clear and morphologically marked contrast with Definiteness Effect verbs. A first illustration is (3.115) and (3.116):

(3.115)János (meg-)talált egy macskát
John (MEG-)found one cat-Acc
BARE V: "John found/came across a cat" (cat new, finding unexpected)
PREFIX-V: "John found one of the cats"

(3.116)(Meg-)született egy gyerek
(MEG-)was-born3Sg one child
BARE V: "A child was born"; unexpected event or neutral perspective
PREFIX-V: "One of the babies was born"; event/baby expected

This chapter presents the main data and previous analyses of the Specificity Effect. It is in the next chapter that the lexical semantics of the complex verbs that trigger the Specificity Effect is revealed. Subsection 3.3.1 presents some background information on prefixation in Hungarian. Subsection 3.3.2 presents the Specificity Effect proper; subsection 3.3.2 contains a brief and informal discussion on possible aspectual and lexical differences between the two verb classes. Presentation will sometimes stray from the *NP*s proper into speculations concerning the aspectual properties and subevent structure of these verbs. The reasons for doing so will become apparent as the data are presented.

3.3.1 Background: Verbal Prefixes in Hungarian

Historically, verbal prefixes are adverbs with a spatial meaning. From old Hungarian onwards, they became agglutinated to the verb stem. In many cases there can be a second adverbial (or *PP*) in the sentence whose case ending may be like an agreement marker, as in *be-megy a szobá-ba* lit. into-go the room-into 'go into the room'. More recent prefixes convey also non-spatial meanings (e.g. *össze-* 'together', *szét-* 'apart', *ket-té* 'in two', as in *ket-té-tör* 'break in two'). *Meg-*, the prefix chiefly responsible for the Specificity Effect, originally meant 'fully', 'completely'; now its contribution primarily aspectual, and it is also a specificity marker. The second most salient contribution of prefixes is aspectual, as it is apparent from the contrast between bare, progressive *megy* 'go' and prefixed, terminative *be-megy* lit. into-go, 'enter'.

What most prefixes have in common (regardless of the aspectual class either of the host verb or that of the prefixed verb) is the semantic effect noted in the introduction to this subsection: they do not exhibit the Definiteness Effect, and in many cases they exhibit the so-called Specificity Effect shown in (3.115–3.116).

As in other languages, for instannce, Russian or German (Spencer and Zaretskaya (1996), Ackerman (1992), Wunderlich (1997a)), Hungarian prefixes can change the argument structure of their host verb. In the case of locative alternation verbs, for instance, prefixes narrow down the argument linking possibilities of the host verb. As shown in (3.117), the direct object of the bare verb *rak* 'place', 'load' can alternate between the Theme and the container. The prefix *fel-* 'up' allows the object to be linked only to the Theme, whereas the prefix *meg* allows it to be linked only to the container. (That is to say, the 'inversely linked' variants of (3.117c-d) are ungrammatical.)

(3.117)*a*. János rakta a szénát a szekérre—progressive
John put+Def3Sg the hay-Acc the cart-onto
"John was loading hay onto the cart"

a.′ János rakta a szekeret szénával—progressive
John put+Def3Sg the cart-Acc hay-with
"John was loading the cart with hay"

b. János fel-rakta a szénát a szekér-re—terminative
John up-put+Def3Sg the hay-Acc the cart-onto
"John loaded the hay onto the cart"

c. János meg-/tele-rakta a szekeret szénával—terminative
John MEG-/full-put+Def3Sg the cart-Acc hay-with
"John loaded the cart (full) with hay"

Prefixes can contribute to more radical changes in argument structure. For instance, they can contribute arguments that are not subcategorised for by the host verb (e.g. *fel-ugat* lit. 'up-bark', 'bark awake'). They can also suppress one argument (e.g. *be-rúg* lit. 'in-kick' means 'get drunk'), or introduce one argument and suppress one of the verb's arguments (e.g. *ki-issza a poharát* lit. 'out-drink his glass', meaning 'drink his/her glass empty').

In the light of these data, the Specificity Effect can be seen as a special instance of the changes in argument structure that prefixes can contribute. Superficially, the Specificity Effect can be regarded as an alteration of the discourse semantics properties required from the internal argument, while everything else may remain unchanged. For instance, *talál* 'find' and *meg-talál* assign the same case and Thematic roles to the same overt arguments, while they differ in the ±familiarity requirements they impose on their Themes. Nevertheless, in Chapters 4 and 7 the Specificity Effect will be seen to involve a change in argument structure, in that *meg* will be taken to introduce a (usually covert) Source argument as part of a presupposition. The partitive-specific character of the Theme will follow from a dependency on this Source argument.

3.3.2 The Specificity Effect

As mentioned in the introduction to this section, the Specificity Effect (SE) is the dual of the Definiteness Effect (DE), for two reasons: (i) The unprefixed variants of the relevant class of verbs

are Definiteness Effect verbs. (ii) Prefixed verbs require that their arguments should be familiar or specific, as opposed to Definiteness Effect verbs that require indefinite/weak *NP*s as arguments. The specificity requirement of prefixed verbs is seen to follow from their lexical semantics.

Prefixed verbs have been defined as satisfying existence presuppositions by Ferenc Kiefer (1983) and Katalin É.Kiss (1995a). Considering the contrast between unprefixed and prefixed verbs, it is easily conjectured that the presupposition is triggered by the prefix.

It is argued in fact in Kiefer (1983) that only a subclass of such verbs (verbs with affected objects) can be said to trigger existential presuppositions comparable to those of factive verbs. Another subclass (verbs with effected objects, or verbs of creation) may be related to plans or conjectures (following a statement in Kiefer (1983)).

Prefixation and familiarity

The internal arguments of certain prefixed Hungarian verbs introduce discourse referents that are in some sense familiar from previous context. The point is, the familiarity of arguments of *prefixed* verbs is clearly related to the verb itself.
The following is the inventory of relevant phenomena. Specificity Effect sentences will be called *meg*-sentences, because it is chiefly the prefix *meg* which is responsible for this semantic effect. *Meg*-sentences are presented in tandem with their existential counterparts.

(3.118)*a*. Érkezett egy vendég
Arrived one guest
"There arrived a guest"
b. Meg-érkezett egy vendég
pfx-arrived one guest
"One of the guests has arrived"

((1986))

The relevant difference between (3.118a) and (3.118b) involves the novelty—familiarity properties of subject *NP*s. The indefinite in (3.118b) is partitive–specific: the sentence says that some member of a previously defined (i.e. invited) set of people has arrived. Therefore it is argued in Szabolcsi(1986) that only (3.118b) is appropriate in a European cultural setting. Since the discourse referent in (3.118a) is newly introduced into the discourse this referent could not have belonged to the set of previously invited people (if there exists such a set: the sentence gives no clue on that). Hence, as noted by Szabolcsi, (3.118a) is appropriate only in settings where any unexpected arrival is accepted as a guest. (According to István Kenesei (p.c.) (3.118a) is appropriate in contexts where new arrivals (i.e. clients) are accepted, and even expected, e.g. as uttered by hotel staff.) It should be noted here that the subjects of the unaccusative verbs *érkezik* ("arrive") and *meg-érkezik* (pfx-arrive) are involved in the same contrast as the direct objects of (3.119a–b) and (3.120a–b) below.It is therefore appropriate to speak of ±familiarity properties of *internal* arguments.

The following pair seems two involve the familiarity–novelty distinction both at the level of individuals and at the level of predicates:

(3.119)*a*. Anna hozott egy asztalt
Anna brought one table-Acc
"Anna has brought a table"
b. Anna be-hozott egy asztalt
Anna pfx-brought one table-Acc
"Anna has brought in a table"

(Inspired by Anna Szabolcsi)

As expected, the object *NP* in (3.119a) introduces a new discourse referent, whereas the direct object of (3.119b) can be taken to be either familiar or specific. In addition the discourse referent of

(3.119a) can "extend" the extension of *asztal*. It was already briefly mentioned in 3.2.3, that (3.65), repeated as (3.119a) is appropriate in a situation where for instance a cardboard box is brought in. That object will be said to belong to the extension of *asztal* in virtue of the utterance of (3.119a).

By contrast, no such thing is possible with (3.119b): the discourse referent of this sentence has to be known to be in the extension of *asztal* prior to the utterance of the sentence. Also, it has to be a proper table, or at least a previously "renamed" other object, i.e. an object accepted as a member of $[\![table]\!]$. The phenomenon in (3.119a) can be termed as *predicative* novelty: some new discourse referent is newly introduced in the extension of a predicate as well. "Being new in the extension of a predicate" sounds strange, for obvious semantic reasons, but it becomes less strange if predicate extensions are allowed to change in time, or to be relativised to the context of utterance. Predicative novelty is but one of a number of properties that verbs with affected objects share with verbs of creation in Hungarian. In fact, Hungarian verbs with affected objects are more like verbs of creation in disguise—this will be made explicit in Chapter 4.

Arguably under certain pragmatic conditions (3.118a) can also have the predicative novelty property. If any newly arriving person is accepted as a guest in some culture then (3.118a) is appropriate and the newly introduced discourse referent indeed adds to the extension of the predicate *vendég* 'guest', and we have a similar effect as with (3.119a).

Predicative novelty however implies an additional factor in the semantics of Definiteness Effect verbs. In a situation where a table is brought in and (3.119a) is uttered, the discourse referent introduced in (3.119a) will be just as new in the (context-dependent) extension of *table* as a cardboard box. We cannot say however that in this situation this object will be renamed as a table by uttering (3.119a). The utterance of (3.119a) in the situation of bringing a cardboard box has a strong performative effect.

(3.120)*a*. János talált egy hibát a programban
John found one error-Acc the program-in
"John found an (arbitrary) error in the program"

b. János meg-talált egy hibát a programban
John pfx-found one error-Acc the program-in
"John found an error (one of a previously known set)
in the program"

(3.120a–b) is perhaps the clearest example of the novelty—familiarity contrast between Definiteness Effect verbs and their prefixed counterparts.

(3.120a) introduces a new discourse referent for *egy hiba*, conveying the information that the existence of an error becomes known after and *because of* John's finding it. (3.120b) provides a discourse referent which is an arbitrary member of a previously known set of errors. If described with a *meg*-sentence, the finding event merely *confirms* previous knowledge concerning the existence of a set.

(3.121)*a*. János keresett egy unikornist
John sought one unicorn-Acc
"John sought a unicorn"

b. János meg-keresett egy unikornist
John pfx-sought one unicorn-Acc
"John searched for (and found) a (certain) unicorn"

(3.121a) is the Hungarian variant of the classical example with an intensional verb. (3.121b) however contains an existence presupposition about unicorns, and the indefinite is partitive–specific.[13] In

[13] *Meg-keres* ("search and retrieve") involves some notion of purposeful activity which is lacking from their bare variants. This component of their lexical meanings will not be dealt with here.

addition, *meg-keres* describes a culminated process; hence the information about finding the unicorn.

(3.122)*a*. János lopott egy kutyát
John stole one dog-Acc
"John stole a dog"
b. János el-lopott egy kutyát
John pfx-stole one dog-Acc
–same–

The sentences in (3.122) show the same novelty/familiarity contrast as (3.120) or (3.121). The difference between say (3.120b) and (3.122b) is that the indefinite in (3.122b) can inherit its specificity properties from other participants or parameters of the event. Apart from the case when *egy kutyát* is a genuine specific indefinite, it is sufficient for its specificity if the location of the event or the owner of the dog is previously known. According to András Komlósy (p.c.) (3.122a) can be used to highlight that now John has a dog, and (3.122b) can be used to stress that now a dog is missing from some location, or from someone. Using the localistic terminology of Gruber (cf. Verkuyl–Zwarts (1993)), the Goal of the event is more important with *b*-sentence, and with the *meg*-sentence it is the Source which is highlighted. In Chapter 4 this contrast will be exploited in the lexical decomposition of ± prefixed verbs.

Prefixed verbs of creation, as in (3.123b), are different from all previous examples in that their internal argument denotes a new individual in the model, yet it also gets a specific construal. On another interpretation, the entire event described by (3.123b) can be termed as familiar, or at least expected.

(3.123)*a*. Született egy gyerek
Born-past one child
"A child was born"
b. Meg-született egy gyerek
Pfx-born-past one child
–same–

According to Perrot (1966) (3.123b) describes an expected event. This would mean that at least part of the event described by the sentence is familiar to the speaker/hearer. Since both direct objects in (3.123a) and (3.123b) denote individuals that are "new" in the model, one might try to construct scenarios where only one sentence would be appropriate. (3.123a) can describe an unexpected event (occurring for instance in an airplane) or it can be used if the perspective on an event is neutral (as in statistics). (3.123b) on the other hand is appropriate in situations where the parents are familiar, and childbirth is expected. For instance, (3.123b) can be uttered by a doctor about one of his/her patients, if s/he assumes that the mother and the pregnancy are familiar to the hearer. (3.123b) in a sense shows the indirect Specificity Effect that could be detected with (3.122b): it is also appropriate if one participant in the event is familiar.

In É.Kiss (1995a), prefixed verbs are said to uniformly trigger existence presuppositions. On this issue I accept the distinction from Kiefer (1983): verbs of creation are said to verify past plans or the speaker's conjectures about these plans. (Obviously, with *meg-születik* 'is born' plans are out of the question; what one has is the speaker's conjectures or expectations.) According to this view, *meg*-sentences assert that the current world is such that (at speech time, the latest) part of the plan is carried out, and the speaker's conjectures are confirmed.

In (3.124), the event of writing (up) a book is in some sense expected. This is because (with hindsight) the meeting with the publisher, described in the first sentence is seen as the cause of John's forming a plan about writing a book, and the cause of the speaker's guesses about John's

plans.

(3.124)*a*. János tárgyalt a kiadóval, és
John discussed the publisher-with, and
"John had a meeting with the publisher, and

b. hat hónap múlva meg-írt egy könyvet
six month passed(Part) MEG-wrote one book-Acc
six month later he wrote up a book"

Pseudo-verbs and Change

To end the discussion on the Specificity Effect, I comment on Anna Szabolcsi's analysis of ± prefixed verbs. This is intended also as a link between this *NP*-centred chapter and the following one, which will discuss the event structure of ±prefixed verbs.

As a preliminary, I would like to say that aspect proper is separate from the Specificity/Definiteness Effect distinction proper. This is necessary because Hungarian prefixes are best known for their contribution to terminative or inchoative aspect, and therefore the most tempting way for handling the SE/DE contrast is in terms of aspect. This can be overcome if the pair *talál* ("find") and *meg-talál* (same) is considered: both contribute to terminative aspect, yet it could be seen from (3.120a–b) that they show the DE/SE contrast. If one still does not want to dismiss aspect altogether one can say that the SE/DE contrast may have to do with the fine structure of aspect.[14] This is also supported by the following reconstruction of Szabolcsi's analysis.

Prefixed verbs with the Specificity Effect have been termed pseudo-verbs in Szabolcsi (1986), for the following reasons. The bare counterparts of these verbs share a component of their lexical meaning, paraphrased by Szabolcsi as "something became known/available/created in virtue of the event I describe". Prefixed verbs do not convey new information of this sort: it could be seen from the inventory in the previous part that they confirm previous knowledge about dicourse entities, hence the label "pseudo-verb", expressing the intuition that prefixed verbs do not describe "genuine" change. "Bare" Definiteness Effect verbs are said to contain an $EXIST$ meaning component in their entries (which prefixed verbs are said to lack). $EXIST$ is comparable to Milsark's existential quantifier in *there be*: it is said to bind the relevant *NP*, and/or to contribute to the tautology/contradiction reading of strong *NP*s (Barwise and Cooper (1981)).

This division is comparable to empirically significant decomposition analyses and verb classes from the formal semantics literature. The first parallel that comes into mind is the aspectual classification in Dowty (1979). Dowty's decomposition analysis involves the separation of verb meanings into non-logical constants (the predicates at the stative "core" of verb meanings) and logical operators (DO, $CAUSE$ and $BECOME$). Szabolcsi's postulation of a logical constant as part of a lexical entry is comparable to Dowty's approach. Nevertheless Szabolcsi's $EXIST$ is orthogonal to Dowty's lexical decomposition, for the following reasons: (i) Szabolcsi in fact builds upon Dowty's (Vendlerian) aspectual classification—this is clear from her classes reproduced earlier in 3.2.2;
(ii) $EXIST$ is said to be present with all these classes, and (iii) were the analysis cast in a precise formal framework, $EXIST$ would presumably be a variable binding device. Something else: on the basis of *their semantic properties alone* prefixed verbs can also be said to belong to Szabolcsi's classification (although this is denied by Szabolcsi herself), yet they obviously come without $EXIST$.

So, prefixed verbs come without $EXIST$, and are said to be pseudo-verbs. This on account of the fact that their internal argument is known to exist (well, to be planned or under discussion with verbs of creation) prior to the event. But then, if a Definiteness Effect verb describes what becomes existent/available, and its prefixed counterpart conveys but familiar information, then prefixed verbs involve no change. This is Szabolcsi's analysis in three sentences. It obviously has to do with one kind of change, namely, with context change. Change in the world (in the model) is ignored, or

[14] In the following chapters, 'fine structure' will amount to lexical decomposition: verbs are assigned a complex subevent structure in the lexicon, and this structure will depend on aspectual class — cf. Dowty (1979/1991), Moens and Steedman (1988), or Pustejovsky (1991).

considered to be irrelevant. Now bare and prefixed verbs can be used to describe the same event.

(3.125)*a*. János talált egy hibát
John found one error-Acc
"John found an error", or,
"There is an error John has found"
b. János meg-talált egy hibát
John MEG-found one error-Acc
"John found one of the errors"

The difference between (3.125a-b) is a difference in information available to discourse participants (or presumably a difference in the speaker's cooperativity). Nevertheless both sentences describe the event of John finding an error, and this information has to be there in the representation of both sentences.

Or, to have a more "dynamic" example, consider (3.126):

(3.126)*a*. János hozott egy széket
John brought one chair-Acc
"John has brought a chair"
b. János be-hozott egy széket
John in-brought one chair
"John has brought in a chair"

Both sentences describe the event of John bringing a chair to the reference location. In addition, the hearer can know that after the event a chair is to be found that location. (And that the chair was elsewhere prior to the event.) The additional information conveyed by the *meg*-sentence (3.126b) is that (i) the chair in question is one of a familiar set at some "source" location, and that (ii) the reference location (where the chair ends up) is IN, relative to the source location. The existential sentence (3.126a) contains no information, neither about the internal argument, nor about the source location. (Of course, a locative phrase can always be added to (3.126a); my point is that in the *meg*-sentence the verb itself is sufficient to provide some information about the Source.)

A similar example is (3.122), repeated here as (3.127):

(3.127)*a*. János lopott egy kutyát
John stole one dog-Acc
"John stole a dog"
"There is a dog John has stolen"
b. János el-lopott egy kutyát
John away-stole one dog-Acc
"John stole a dog (from someone/someplace)"

As remarked earlier, the existential sentence and the *meg*-sentence highlight different participants in (possibly the same) event. The existential sentence says after the stealing event, John has a dog. The *meg*-sentence says that as a consequence of the event, a dog is now missing from someone or from some location.

Supposing that the two sentences in (3.127) describe the same event, this entails that this event is preceded and followed by the same states in the world. Namely, prior to the event the dog was with someone else, and not with John. After the event the dog was no longer with its previous owner; it was with John instead. The bare verb and the prefixed verb differ in terms of the information they contain concerning these states. The point is, even though bare and prefixed verbs indeed differ in their representational status, as predicted by Szabolcsi, this difference does not concern the description of the transition proper. It concerns the description of the states that precede and follow the transition.

The picture that emerges is then the following:

- Entries of Definiteness Effect verbs and prefixed verbs alike contain information about the transition described.
- Definiteness Effect verbs contain no information about Source locations (or Possessors), nor do they contain information about the state of the relevant discourse referent *prior to the event*; by contrast, entries of prefixed verbs do contain information of this kind.
- Definiteness Effect verbs contain some binding device responsible for the novelty and narrow scope properties of internal arguments.
- Prefixed verbs trigger a presupposition that involves the internal argument; as a consequence, if the interal argument *NP* is an indefinite, it will have a partitive–specific construal.

As a consequence, we now have two testable empirical questions:

1. Whether Definiteness Effect verbs contain "prior" information at all, or whether they do convey such information, only this has a somewhat unusual format.
2. Whether the presupposition of prefixed verbs is to be related to the "prior" information they convey, or whether it resides in some other component of their subevent structure (or whether it is in fact independent from subevent structure).

These questions will then be the point of departure for the following chapter.

Chapter 4

The Phenomena(ii): Event Structure

4.1 Introduction

The previous chapter has shown that there is a connection between the lexical semantics of Hungarian ± prefixed verbs and the semantic properties of their internal arguments. Also, it is quite clear that these two contrasting dependencies are related in some way to the (sub-)event structure of the two verb classes.

At the end of Chapter3 bare and prefixed verbs have been found to differ precisely with respect to the representations of the states that precede and follow the event. The findings were that bare and prefixed verbs describe a transition/a change in the world — contra Anna Szabolcsi's tenet that prefixed verbs are pseudo-verbs, because they only describe what is known to exist/to be available. These verbs do in fact differ in the information they make available; but it is information concerning the internal argument, the Source and the Goal location, and it 'resides' in the (descriptions of the) precondition and consequent states. That is, these verbs do differ in the amount of contextual information they require or repel, as claimed by Szabolcsi, but this is not in the description of the transition proper.

Another, related starting point for subevent analysis is Szabolcsi's original description and classification of Hungarian Definiteness Effect verbs (reproduced in Chapter 3). This classification contains several points/assumptions that need to be explicated, explication involving a systematic contrast with prefixed verbs and with English. In brief, Definiteness Effect verbs say that something comes into existence or becomes (newly) available in virtue of the event they describe. By contrast, the Themes of prefixed verbs are in some sense available (a.k.a. familiar) from discourse.

The first such assumption in Szabolcsi's and my discussion was that with 'durative' Definiteness Effect verbs (e.g. *hoz* 'bring', *fest* 'paint' or *tesz* 'put'), the Definiteness Effect is present in the terminative construal of these verbs. It is a further question, then, what happens when these verbs have a durative construal.

The second point concerns argument structure: Szabolcsi's description seemed to imply that a verb shows the Definiteness Effect only if its Theme argument has the relevant property, viz it is newly created or made available. This is relevant, because there may be variation in the argument linking of one and the same verb type. For instance, the object *NP* of *fúr* 'drill' can denote either the hole created by drilling, or the 'container' in which the hole is created. Such variation is quite regular in Hungarian, and then one may ask the question whether the Definiteness Effect is an inherent property of *verbs* and their direct objects, or whether it is manifest only if the direct object has Szabolcsi's properties, i.e. only on the relevant instantiation of the verb's argument frame.

The following point concerns discourse novelty: Szabolcsi calls the prefixed counterparts of Definiteness Effect verbs pseudo-verbs, since their Theme argument has the property of being known prior to the event described by the verb. By contrast, Definiteness Effect verbs could be called

surprise-verbs, since their Theme becomes accessible and known only in virtue of the event described by the verb (and in virtue of the existential sentence being uttered). Now ±prefixed verbs alike can describe the same real-world event, and then their differences obviously concern their discourse properties. If this is so, then one can (and has to) resort to methods developed in DRT.

The last issue concerns syntax, or morpho-syntax, since the Definiteness Effect in Hungarian is shown only with simple, nonprefixed verbs. In more general terms, the Definiteness Effect is shown by verbs that are not modified by a complex predicate. (The reader may recall that Hungarian prefixes are understood as a subspecies of secondary predicates—Komlósy (1994) contains an overview, and some discussion will also given in Section 4.6 here). Given this fact of Hungarian, one needs to account both for the Definiteness Effect in unprefixed verbs, and also for this particular side-effect of prefixation, the loss of the Definiteness Effect and the emergence of the Specificity Effect.

In the light of these issues (argument frames, aspect, discourse novelty, complex predicate formation), the Definiteness Effect in Hungarian will be seen to follow from the interactions of different factors. That is, it is not an intrinsic, inalienable property of verbs. In order to make these interactions clear, each of the relevant factors needs to be discussed in (relative) isolation.

This chapter first contains a discussion on the necessary and sufficient *lexical* conditions for the Definiteness Effect, including a comparison of Definiteness Effect event verbs[1] and their prefixed counterparts in terms of aspectual class and subevent structure (and the variable binding properties and contextual links that follow from this structure).

Sections 4.3 and 4.4 are about the subevent structure of the relevant verbs. They contain tests with negation, with adverbs like *almost* and *again*, and mini-discourses where coherence is expected from anaphoric connections between subevent discourse referents from the verbs' entries. As expected, bare and prefixed verbs will be shown to differ in terms of what is available for modification or for anaphoric connections. In fact, it will be shown that bare, Definiteness Effect verbs describe change in a manner that is quite different both from the way English (or German) verbs describe change, and from the way event verbs have been analysed in formal semantics since Dowty (1979/1991).

Part 4.5 sums up the findings from Sections 4.3–4.4, and discusses two issues that are seen to be connected to the lexical semantics of these verb classes. One is the issue of *profiling* (Lakoff, Goldberg), or highlighting one aspect or another of the meaning of an expression. Unlike English, profiling one component or another of the event structure of these Hungarian verbs is not optional, but is in fact conditioned by the peculiarities of their lexical semantics. The other issue is that of opacity: Hungarian Definiteness Effect verbs and their English counterparts, including *find, choose, aquire* and *bake* are said to be opaque verbs, comparable to *seek* and *need*.

Section 4.6 is in a way an appendix, or an excursus: it presents the syntactic or lexical-syntactic background of Definiteness Effect verbs and some of the issues concerning prefixation.

4.2 Aspect and Argument Structure

This part contains discussion on three necessary (lexical) conditions for the Definiteness Effect in Hungarian, and on a parallel between Hungarian verbs of creation and so-called 'make available' verbs. ('Make available' designates a subset of so-called affected object verbs: in *drill through the wall, the wall* designates an affected object, but it is not of the 'make available' type.) Prefixed verbs will receive relatively less attention.

The first condition is related to aspect: the Definiteness Effect is seen only if a verb (phrase) from the appropriate class has terminative aspect. The second condition has to do with alternative types of argument linking with the same verb: the Definiteness Effect is found only if the internal argument denotes something newly created, made available or 'individuated'. This is the case with *fúr* 'drill' 'bore through', which shows the Definiteness Effect only if the direct object denotes the hole created by drilling, or with *vág* 'cut', as in *cut a slice of bread* or *cut a branch (from a tree)* (and not when *vág* means 'make an incision, or 'cut/slice up'). The third condition concerns the presence

[1] This is understood as an implicature: *stative* Definiteness Effect verbs like *van* 'is' *tart* 'keep' or *akad* 'occur', 'chance to be' will not be discussed.

of a distinguished argument that can serve as Goal, Beneficiary or Possessor. The necessity of such an argument is shown by verbs like *mos* 'wash' or *vasal* 'iron'. These verbs exhibit the Definiteness Effect only if the sentence contains an overt Beneficiary.

The verb *varr* 'sew' is a good example for the second and third conditions: it shows the Definiteness Effect only if (i) it is a verb of creation, its object denoting the thing created by sewing, or (ii) it has a 'make something be with something' reading, in which case it requires an overt Goal phrase (as in *sew a button on(to) a shirt*).

The latter two conditions on argument frames are not independent from aspect: if the verb does not have the appropriate construal, it cannot have terminative aspect, as seen in (4.1), which is based on Kálmán (1995):

(4.1) János fúrt egy falat egy órán keresztül/*egy óra alatt
John drilled one wall-Acc one hour-on through/one hour under
OK: "John kept boring through a wall for an hour"
Out: "John bore through a wall in an hour"

In the Hungarian literature, Definiteness Effect verbs with 'made available' objects have been known for some time to resemble creation verbs in several respects (Wacha (1974),Wacha (1976), Wacha (1979)). In this part, one aspect of this parallel will be discussed, that of being a one time only predicate (de Swart (1992), Szabolcsi and Zwarts (1993)). Another aspect of this issue will be discussed in Section 4.4, followed by some general remarks in Subsection 4.5.2

4.2.1 Definiteness Effect Verbs, Aspect and Arguments

Terminativity

An assumption implicit in the discussion at the end of the previous chapter was that in the case of 'durative' Definiteness Effect verbs (e.g. *hoz* 'bring', *fest* 'paint' or *tesz* 'put'), the Definiteness Effect is present in the terminative construal of these verbs. Then one can inquire about the connection of the Definiteness Effect and terminativity.

The relevance of terminative aspect for the Hungarian Definiteness Effect is supported (indirectly) by a parallel with English. In English, *there be* is stative, expressing a relation between an individual discourse referent and (usually) a location (referent) τ (cf. Freeze (1992)). *Have* represents a special case, as τ is a (human) Beneficiary. Or, one has the Definiteness Effect with expletive+ event verb complexes (*there arrived, there appeared*) whose consequent state (usually) describes the same, viz there being a (new) individual at a Goal location, or at some distinguished reference location. Verbs whose consequent state is a version of *have* (*acquire, find, choose*) also show a (quasi-)Definiteness Effect (Burton (1995)).

In view of the English data, it is reasonable to expect Hungarian Definiteness Effect verbs to contain a state description in their subevent structure, with comparable information (viz something is newly created/made available at a Goal/with a Beneficiary). If this is indeed the case, then the durative/progressive construals of these verbs are not expected to show the Definiteness Effect. And this is indeed what we find: as shown in Szabolcsi (1986), progressive readings of the relevant verbs do not exhibit the Definiteness Effect. As seen from the contrast between (4.2) and (4.3), if the verb can have a progressive construal, then its argument may be a definite. A bakcground fact about Hungarian is that with a large verb class (that overlaps the class of Definiteness Effect verbs) the enclitic suffix that marks the definite object will trigger an atelic reading. This is the case e.g. in (4.3).

(4.2) János hozott egy széket/*a széket/*minden széket
John brought one chair-Acc/the chair-Acc/every chair/Acc
"John brought a chair/the chair/every chair"

(4.3) János (éppen) hozta a széket
John (just) brought+Def3Sg the chair-Acc
"John was just bringing the chair

Verbs like *kap* 'receive' cannot have a progressive or durative construal, as apparent from the contrast between (4.3a) and (4.4a). Accordingly, the object of *kap* may not be definite.

(4.4) *a.* János éppen könyvet kapott
John just book-received
"John has/had just received a book"
NOT: "John was just receiving a book"
b. *János éppen kapta a könyvet
John just received+Def3Sg the book-Acc
Intended: "John was just receiving the book"

The contrast between (4.2) and (4.3) has prompted Szabolcsi to state that progressive readings suffice to neutralise the Definiteness Effect altogether. Now this is not entirely correct on a superficial view, that reduces the Definiteness Effect to the absence of strong *NP*s. The reason is that only nonquantificational strong *NP*s are admitted in such cases. Quantifying strong *NP*s are just as bad as with the achievement or accomplishment readings of these verbs. This is shown in (4.5).

(4.5) *a.* János hozta (őt)/Annát/a széket
John brought+Def3Sg (him-Acc)/Anna-Acc/the chair-Acc
"John was bringing him/her/it/Anna/the chair"
b. *János hozta az összes/a legtöbb széket
John brought+Def3Sg the all/the most chair-Acc
"John was bringing all/most chairs"

The ungrammaticality of (4.5b) may be due to an incompatibility in types (or their DRT equivalent) and the semantics of the progressive. The English equivalent of (4.5b) is at least odd, too: ??*John was bringing every chair.* To my knowledge, these English cases have lacked an analysis so far. Perhaps one can conjecture that the progressive is an intensional, or opaque tense. Now it has been argued for opaque verbs like *seek* in Zimmermann (1992/93) that their 'natural' internal argument is a property type, and if their object position is filled by a quantifying *NP* that cannot be reduced to a property/predicative type, this will yield only a de re reading. Where the English progressive is concerned, a similar argument taking mechanism may be conjectured.

Returning to Hungarian, and the comment on Szabolcsi's observation illustrated with (4.5), it has to be pointed out that the observation about the absence of the Definiteness Effect with durative construals is correct, because (4.5a) is not an existential sentence. This can be seen if the "diagnostics" from the previous chapter are applied: the object *NP* can be Topicalised, it can have wide scope and so on.[2] Szabolcsi's observation has been strengthened by László Kálmán, according to whom the Definiteness Effect is present in Hungarian iff the relevant verb has terminative aspect and describes a new event (Kálmán (1995)). So, aspect is seen as a necessary (but not sufficient) condition for the Definiteness Effect. The issue of event novelty will be discussed in more detail in Section 4.4.

Linking variants: effected objects

The internal arguments of non-stative Definiteness Effect verbs are Themes that are made available or created by the relevant transition. This needs to be stressed, because, as it was pointed out by László Kálmán, the converse is also a valid observation (Kálmán (1995)), even with different valency frames of the same verb. That is, if a Hungarian verb (of the relevant kind) can have a frame that includes an argument created by made available, that 'frame' will exhibit the Definiteness Effect. If the same verb has another frame where the direct object does not denote something made available or created by the event, then that 'frame' will not exhibit the Definiteness Effect. A case in point is the verb *fúr* 'drill', 'bore (through)'. As shown by László Kálmán, the Definiteness Effect is

[2]For reasons of space, examples are omitted. The reader is kindly requested to accept this, or test it with a native informant of his/her choice.

exhibited only (i) if the Theme is the hole created by the drilling activity and (ii) if the verb has a terminative construal:

(4.6) *a.* Egy óra alatt fúrtam egy lyukat/∗a lyukat
One hour under drilled-Sg one hole-Acc/the hole-Acc
"In an hour I drilled a hole/#the hole"
b. #Egy óra alatt fúrtam a falat
One hour under drilled-1Sg the wall-Acc
Intended: "In an hour I bore through the wall"
c. Egy órán át fúrtam a lyukat/a falat
One hour-on through bored-1Sg the hole-Acc/the wall-Acc
"I kept drilling the hole/the wall for an hour"

The point with (4.6) is the following. On both 'frames', *fúr* has a durative/progressive construal, under which it admits a definite internal argument (as seen in (4.6c)). It can have a terminative construal only if the Theme is effected (viz it denotes the orifice created by the drilling activity)—this is seen in the contrast between (4.6a) and (4.6b). On its 'verb of creation' construal, and when it has terminative aspect, *fúr* shows the Definiteness Effect: a definite Theme is no longer acceptable, as seen in (4.6a).

Kálmán's original observation concerns verbs of creation, but it extends to 'make available' verbs to as well: Verbs of the 'drill' class include *varr* 'sew', *másol* 'copy', *ás* 'dig', *vág* 'cut', *tölt* 'pour' a.s.o. Their direct object can denote something created by the event, as in the Hungarian equivalent of *dig a hole*, or something 'individuated' or separated from its source, as with the Hungarian equivalent of *cut a slice of bread* or *pour a glass of wine*. With *tölt*, the internal argument can be e.g. *egy pohár bort* 'a glass(-ful) of wine', and the *VP* then says that a glass of wine has been presented, as it were. To add another example, *kavar* 'stir', 'mix' is not a Definiteness Effect verb when its object denotes the entire amount of substance that is (being) stirred; it becomes one when its object denotes something that is added by mixing:

(4.7) *a.* Mari kavarta a levest
Mary mixed+Def3Sg the soup-Acc
"Mary was stirring the soup"
b. Mari kavart egy kanál /∗minden kanál tejfölt a levesbe
Mary mixed/stirred one spoon/every spoon sour-cream-Acc the soup-into
"Mary stirred one/every spoonful of sour cream into the soup"

Even typical verbs of creation like *fest* 'paint', or *draw* 'rajzol' show the same variation. These verbs show the Definiteness Effect only if their Theme denotes (part) the representation created. There is no Definiteness Effect if the object denotes the model.[3]

(4.8) *a.* János egy óra alatt rajzolt egy lányt, #???aki elfáradt
John one hour under drew one girl-Acc, who away-got-tired
"In an hour John drew a girl who got tired (in the meantime)"
OK: a drawing of a tired girl was created
OUT: the *model* of the drawing got tired
b. János rajzolta a lányt, aki közben elfáradt
John drew+Def3Sg, who meanwhile away-got-tired
"John was drawing the girl, who got tired in the meantime"
both variants OK

Verbs of becoming available also show a similar pattern. For instance, the direct object of *vág* 'cut' can denote either a (new) individual separated from its Source, as it were (as in *cut a slice of*

[3]One can rescue 'odd' reading of (4.8a), where the direct object denotes the model, with the addition of the prefix *le-*. In fact, the prefixed verb *le-rajzol* is such that its direct object can only be either the model, or some imagined scene.

bread), a shape created by cutting (*cut a hairdo*), an amount made available by cutting (*cut = chop up a basketful of wood*), or the object/Patient that has been cut into/incised (*cut bread/wood*). As expected, the Definiteness Effect is present only with the 'make available'/'individuate' construal of this verb:

(4.9) *a.* ∗János vágta a kosár fát
John cut+Def3Sg the basket wood-Acc
Intended: "John chopped up the basketful of wood"
b. ∗János vágta az ágat a fáról
John cut+Def3Sg the branch-Acc the tree-from
Intended: "John cut off the branch from the tree"
c. ∗János vágta a Mari frizuráját
John cut+Def3Sg the Mary hairdo-Poss3Sg
Intended: "John made Mary's hairdo"

Other verbs of this kind are *tör* 'break', *szakít* 'pluck', 'tear', *hasít* 'rip off'. The curious thing about them is that on their other construal they cannot take indefinite direct objects (unlike *fúr* 'drill'), but can only take bare nominals or definites, as shown in (4.10) below. I have no account for this phenomenon, so it is left as a puzzle.

(4.10) *a.* János kenyeret vágott
John bread-Acc cut
"John was cutting (slicing) bread"
b. János vágta a fát
John cut+Def3Sg the wood-Acc
"John was chopping up the wood", or
c. ???????János vágott egy fát
John cut one wood/tree-Acc
Intended: "John chopped up/felled a tree"

The Additional Argument

The other proposal I wish to make has not so far been introduced in the literature for Hungarian. This is the following: I take Hungarian Definiteness Effect verbs to have an additional argument (often implicit) that can be linked to the Beneficiary, to the Goal or to the new Possessor.

This is obvious with verbs like *kap* 'receive', *lop* 'steal', *hoz* 'bring', *érkezik* 'arrive', or *vásárol* 'buy'. I would like to claim however that it has to be posited with the other Definiteness Effect verbs as well, including *ír* 'write' or *fest* 'paint'.

The rationale for this is not merely a convenient crosslinguistic parallel with recent analyses of the Definiteness Effect (Freeze (1992)), which posit a location or Possessor argument in these constructions. The necessity to postulate a distinguished argument is supported by several types of Hungarian data.

(i) First, there is the contrast between unprefixed verbs of arrival or bringing. Unprefixed motion verbs that contain a Goal argument are Definiteness Effect verbs (and the Goal argument is assumed to be bound to the reference location). Departure verbs, i.e. where it is the Source that is bound to the reference location, are not Definiteness Effect verbs. (I owe this point to Hans Kamp). Most verbs of departure have a prefix so they cannot be Definiteness Effect verbs to begin with; these include *el-megy* lit. 'away go', *el-hagy* lit. 'away-leave' or 'away-desert'. There is one non-prefixed verb of departure, *távozik* 'depart', 'take leave'. It can be seen from (4.11) below that it is not a Definiteness Effect verb:

(4.11) Távozott a vendég/minden vendég
Departed the guest/every guest
"The guest/every guest departed"

Verbs of buying and selling show a similar asymmetry: *vesz* 'buy'/'take' *vásárol* 'purchase', and *szerez* 'acquire' are Definiteness Effect verbs. *Árul* 'keep on sale' and *el-ad* lit. away-give

'sell'/'complete a sale' are not. This is consistent with the generalisation that the factor relevant for the Definiteness Effect is the Goal (Levin and Rappaport-Hovav (1995)), whereas verbs of selling highlight the Source of the event. By 'highlighting' I mean that the Source argument is distinguished with respect to binding and event structure in the lexical entry of the verb (viz, *el-ad* 'complete a sale' does not become a Definiteness Effect verb if an overt Beneficiary is added).

Excursus: Where verbs of departure are concerned, a curious case is that of the verb *hagy* 'leave'. When it is unprefixed and subcategorises for an *NP* object, it is equivalent to English transitive 'leave', and is a Definiteness Effect verb:

(4.12) *a.* János hagyott egy könyvet az asztalon/Marinak
John left one book-Acc the table-on/Mary-for
"John left a book on the table/for Mary
b. *János hagyta a könyvet az asztalon
John left+Def3Sg the book-Acc the table-on
Intended: "John left the book on the table"

When prefixed with *el-* 'away', (*el-*)*hagy* is equivalent to English 'desert', and is no longer a Definiteness Effect verb (and will typically take an animate direct object). But all this is pretty obvious. What is less obvious is that the prefix *meg-* can change the argument structure of this verb in a manner which will later be shown to be typical of this prefix. *Meg-hagy* means 'leave alone/not to take away someone's possessions', as seen from (4.13).

(4.13) A betörő elvitte a tévét, de meg-hagyta az ezüstöt
The burglar away-took the TV-Acc, but meg-left+Def3Sg the silver-Acc
"The burglar took the TV-set, but he left (=didn't take) the silver"

That is, *hagy* and *meg-hagy* are said to differ in argument linking. An oblique or an implicit reference location is linked to the Goal with *hagy*, and to the Source with *meg-hagy*.

The asymmetry between Hungarian verbs of arrival and departure is similar to English locative inversion: if the reference location of the sentence corresponds to the Goal, locative inversion is markedly judged as better than when the reference location corresponds to the Source of the event:

(4.14) *a*1. ?We were chatting in the room,
*a*2. We were chatting on the lawn,
b. when out of the window jumped a dashing young man

(Levin and Rappaport-Hovav (1995))

(ii) *Visz* 'carry', 'take along' *hord, cipel* 'carry' are not Definiteness Effect verbs, as opposed to *hoz* 'bring' or *tesz* 'put', 'place'. The reason for this is that with these verbs the reference location is not the Goal (I think they lack a Goal altogether), but whatever location the Agent is at. (That is, I take their reference point to follow the trajectory of the Agent.)

(4.15) János vitt/cipelt egy széket a szobába egy óráig/*egy óra alatt
John carried one chair-Acc the room-into one hour-till/one hour under
OK: "John was carrying a chair to(wards) the room for an hour"
Out: "John carried a chair into the room in an hour"

(iii) Other verbs with affected objects, such as *mos* 'wash' or *vasal* 'iron' do not show the Definiteness Effect if they lack a Beneficiary argument:

(4.16) *a.* János egy óráig/*egy óra alatt mosott/vasalt egy inget
John one hour-till/one hour under washed/ironed one shirt-Acc
OK: "John kept washing/ironing a shirt for an hour"
Out: "John washed/ironed a shirt in an hour"
b. János egy óráig mosta/vasalta az inget
John one hour-till washed/ironed the shirt-Acc
OK: "John kept washing/ironing the shirt for an hour"

So as seen in (4.16), *mos* 'wash' and *vasal* 'iron' on their own are durative and do not exhibit the Definiteness Effect. If a Beneficiary is added, they behave like other Definiteness Effect verbs, as shown in (4.17).

(4.17) János egy óra alatt mosott/vasalt *magának* egy inget/∗minden inget
John one hour under washed/ironed *himself-Dat* one shirt-Acc/every shirt-Acc
"John washed/ironed a shirt/every shirt for himself in an hour"

Strictly speaking, such verbs ought not to be Definiteness Effect verbs in the first place, because their objects do not denote what becomes available. (That is, they belong to the *bore through the wall* kind.) The addition of the Beneficiary may change precisely this aspect of their meanings. (4.17) then means that a clean/newly ironed shirt became available (for the Beneficiary/for some purpose).

(iv) Another example concerning the presence of a (covert) Goal or Beneficiary is the verb *lő* 'shoot'. It is almost in a class of its own, as the data will show. On its Definiteness Effect construal it is in fact an achievement verb like *talál* 'find' or *kap* 'receive'.

As a Definiteness Effect verb (with a terminative reading and a quantised *NP* for internal argument) it can only mean 'shoot with a purpose/as prey' or 'hunt'. This is the reason for the strangeness of (4.18b): according to world knowledge, policemen rarely shoot protesting students for prey. (4.18c) is just as strange, even though deliberate action may be part of shootings by gangsters. The intended meanings of (4.18b-c) are not compatible with the lexical meaning of Definiteness Effect-*lő*.[4]

(4.18) *a.* János lőtt egy medvét (vacsorára/a bőréért)
John shot one bear-Acc (dinner-onto/the skin-Poss3Sg-for)
"John shot a bear (for dinner/for its skin)"
NOT: "John shot a bear by accident"
b. ##???A rendőrök lőttek egy tüntető diákot
The policemen shot-3Pl one protesting student-Acc
Intended: "The policemen accidentally shot a protesting student"
c. ##???A gengszterek lőttek egy árulót
The gangster-Pl shot-3Pl one traitor-Acc
Intended: "The gangsters shot (=eliminated) a traitor"

(4.18a) means that a bear became available (for some purporse) in virtue of John's shooting it. It <u>can</u> <u>not</u> mean that John (accidentally) shot at or wounded a bear that was 'there' prior to the shooting event. Such meanings are confined to prefixal combinations: *meg-lő* means 'wound (or kill) by shooting', *rá-lő* lit. onto-shoot means 'shoot at', and *le-lő* lit. down-shoot means 'incapacitate or kill by shooting'. Or, *bele-lő* lit. into-shoot means 'shoot into a mass (of individuals)' (as in *The soldiers shot into the crowd*).[5]

The case of *lő* is telling, I think, because the Definiteness Effect version of this verb has the meaning component deemed relevant by Szabolcsi, viz becoming available for some Beneficiary.

In light of these data, and generalising to the worst case,[6] I take verbs of creation such as *ír* 'write' or *fest* 'paint' to contain an additional, distinguished argument as well. This argument can be linked to a location, a Beneficiary, or can remain a domain variable.

[4]Concerning their argument-taking capabilities, the sentences (4.18b-c) are unlike the 'cut'- or 'break'-type, in that they don't even take bare nominals when these nominals are in the Accusative. Other case markers are marginally possible, as in
(*i'*) A rendőrök diákokra lőttek
The policemen student-Pl-onto shot
"The policemen shot <u>at</u> students"

[5]So, (4.18b) becomes acceptable with the addition of the prefix *meg-* (if the shooting was accidental); for (4.18c), it is the prefix *le-* 'down'.

[6]Actually, this need not be a generalisation to the *worst* case, since there are quite a few verb classes that have this distinguished argument, as oppposed to one class, i.e. creation verbs, where its presence is not quite obvious.

A word of caution: in the analyses of Chapters 5 and 6, the Theme being with the Goal/Beneficiary will be treated as 'extensional', in the sense of the Theme actually being at the Goal, or with the Beneficiary. This is an oversimplification, since this information (especially in Beneficiary cases) can have the status of an implicature, as seen from an example by Graham Katz (p.c.):[7]

(4.19) John wrote a letter to Mary, but he didn't send it

One Time Only

As first noted by Balázs Wacha, in Hungarian 'make available' verbs pattern with creation verbs in several respects. The Definiteness Effect is one of their shared properties: a 'make available' verb says that a new, previously unavailable Theme is now available and accessible. [8]

The parallel between affected-object Definiteness Effect verbs and verbs of creation means that they are one time only predicates (de Swart (1992), Szabolcsi and Zwarts (1993)), in the sense to be made precise below. One consequence of being a one time only predicate is scope relative to *again*. This will be discussed in Section 4.3. What I am going to show here briefly is scope relative to Focus.

As first discussed in Szabolcsi (1986), Hungarian Focus neutralises the Definiteness Effect. As noted by Szabolcsi, if the main verb of a sentence with Focus is a Definiteness Effect verb, the range of readings is more constrained than with sentences that contain 'ordinary' predicates.

(4.20) *a.* [Minden könyvet]$_Q$ [JÁNOS]$_F$ kapott
[Every book-Acc]$_Q$ [JOHN]$_F$ received
"For every book x: it was John who received x"

b. ##[JÁNOS]$_F$ kapott minden könyvet
[JOHN]$_F$ received every book-Acc
Intended: "It was John who received every book"

c. ##[ANDRÁS]$_F$ írt minden verset
[ANDRÁS]$_F$ wrote every poem-Acc
Intended: "For every poem x, it was András who wrote x"

d. [JÁNOS]$_F$ látott minden filmet
[JOHN]$_F$ saw every film-Acc
"It was John who saw every film"
(Other saw proper subsets of the same set)

Szabolcsi's observation is the following: with the verb *kap* 'receive', the question *Who received every book?* is just as inappropriate as the question *Who wrote every poem?*, which (4.20c) is intended to answer.[9] This is the reason why (4.20b), which is intended as a Hungarian answer to this question, is at least inappropriate, if not ungrammatical. According to Szabolcsi, the reason behind this is that both *ír* 'write' and *kap* 'receive' are one time only predicates. *Kap* 'receive' is a one time only predicate even when its internal argument is an indefinite.[10] Consequently, Hungarian *kap* 'receive' cannot express multiple receiving events for the same book. For instance, a scenario like the following

[7] One can say for such cases that the argument introduced by the verb does not get bound.

[8] This is corroborated by a piece of anecdotal evidence. I circulated the following sentence among Hungarian speakers via the e-mail:

(*ii*) Minden nyelvész, aki *talált* egy gombát, büszke volt rá
Every linguist, who found one mushroom-Acc, proud was of-it
"Every linguist who found a mushroom was proud of it"

The sentence was intended to test strong donkey-readings, and the intended meaning of *talál* 'find' was the usual one, viz 'come across'. One of my informants however took it in the sense of 'discover (a kind)', with the specimen found taken to represent a new species. This is obviously not a verb of creation-reading (unless one is committed to the social construction of science), but it is closer to it than the intended 'come across any old mushroom'-reading.

[9] My comment: except when the head noun *book* receives contrastive stress, but this does really affect Szabolcsi's main point.

[10] Standardly, it is a VP with *receive* and a uniquely referring expression that would count as one time only, and not one with an indefinite object.

is ruled out: John received every book, Mary received two, and Cathy three.[11] This is contrasted with (4.20d), which is perfectly acceptable, since *lát* 'see' is not a one time only predicate.

A closer investigation of these data shows that (4.20b–d) are double Focus sentences in disguise ('disguise' being necessary for *minden* 'every', since it cannot be a syntactic Focus). Also, such sentences become much more acceptable if the determiner is changed. *János kapott két könyvet* 'It was John who got two books' is for instance perfectly acceptable. This sentence presupposes that there was someone who got two books, and asserts that this person is John. By implication, then, others from the alternative set received sets of books whose cardinality is not two. Returning to the case of *minden*, it seems that the use of this determiner suffices to exclude everything else from the set of alternative 'issues' (i.e. that others from the alternative set may have received a number of books). So, even if a proper analysis of these sentence types is difficult to provide, it may become clear that the reason for the oddness of (4.20b) is the underlying one time only property of the verb *kap*.

Thus accepting Szabolcsi's observation, I would like to add that Hungarian Definiteness Effect verbs (verb phrases) with non-created Themes are one time only predicates as regards *discourse*. What I mean by this is that they resemble *die* or *receive this letter* only in their discourse properties. The event described by *kapott egy könyvet* 's/he received a book need not be unique, neither relative to the individual denoted by the Agent, nor relative to that denoted by the Theme. In simpler terms, one can imagine scenarios where the same books circulate within a small group of individuals. Yet the *discourse referent* introduced by the Theme *NP* has to be new (and unique) relative to the event discourse referent introduced by the verb. So, this is *token*-uniqueness, or dependent uniqueness, if you like, and need not be preserved in the interpretation. This will be supported by the discussion on *again* in Section 4.3.

To conclude this brief part, a note on the contrast between (4.20a) and (4.20b) is in order: At first sight this pair is deceptive, because of the normally scopeless proper name that occupies the Focus position. Once we look at the presupposition structure (or the open proposition) left after abstracting the filler of the Focus position, the differences between the two sentences are revealed:

(4.21) (4.20*a*) For every book x, there is a maximal entity α that received x
(4.20*b*) There is a maximal entity α that received every book
and maybe others (from the alternative set) received
proper subsets of the set of books

Verb Subclasses

In this subpart I present a detailed classification of Hungarian non-stative Definiteness Effect verbs, based on Szabolcsi's initial classification and the discussion from this section.

Traditionally, these verbs have been classified according to two criteria.

(i) According to the thematic role of the internal argument, they are a subclass of verbs with objects 'made available' (like *talál* 'find'), and effected (created) objects (like *épít* 'build'). According to Hungarian linguistic terminology, these are 'directional objects' and 'resultative objects' (or 'objects of result'), respectively.

(ii) The other criterion is the aspectual class of the verb on its own, or when modified by a bare nominal. (Or, which is almost the same, the ability of the verb to take on a definite internal argument and thus have a progressive or process construal.) *Épít* 'build' on its own is durative, and can take a definite object. *Talál* 'find' is terminative, and cannot take a definite object.

The following classification combines the two criteria, and adds two new subclasses. One subclass is an intermediate class between affected object verbs and verbs of creation. Verbs from the other class show the Definiteness Effect only if they have an overt Goal or Beneficiary argument. They are the 'wash'- or 'iron'-type verbs introduced in the previous subpart.

1. The *bring*-type: these verbs are durative if they have a preverbal bare nominal internal argument, terminative (perfective) if the internal argument is postverbal.

[11] Unless *book* stands for a type, e.g. a title rather than a copy.

2. Verbs of the *find*-type are achievements, even if they combine with preverbal bare nominals.

3. Verbs of the *wash*-type are durative, even if their internal argument is a full *NP*; they are terminative only if there is an overt Beneficiary.

1. The type of *hoz* 'bring'. This comprises three subclasses:

   (a) verbs with affected objects made available (*hoz* 'bring', *jön* 'come', *tesz* 'put', 'place', *vesz* 'take'); these are typically motion verbs, and the distinguished argument is usually linked to the Goal of the event described;

   (b) verbs that may be called verbs of quasi-creation; the reason is, full *NP* arguments denote new quantities or shapes created by the event, as it were; such verbs are e.g. *vág* 'cut', *nyír* 'shear', 'make a haircut' or *szed* 'pick' (as in *pick an apple*, but not with *pick the basket full*):

   (4.22) *a.* ?János frizurát vágott Marinak
   John haircut-Acc cut Mary-Dat
   intended: "John was cutting Mary's hair into a hairdo"

   b. János vágott Marinak egy divatos frizurát
   John cut Mary-Dat one fashionable hairdo-Acc
   "John cut Mary's hair into a fashionable hairdo"

   (c) verbs with effected objects, or creation verbs (*épít* 'build', *fest* 'paint', *rajzol* 'draw', *főz* 'cook', 'prepare a dish', *varr* 'sew', *metsz* 'engrave', *sző* 'weave', *alakul* 'be formed' a.s.o.). As noted by László Kálmán, and discussed earlier, many verbs belong to this group only on their verb of creation construal, i.e. only if the object *NP* denotes the thing created. These verbs include *fúr* 'drill (a hole)', *varr* 'sew (a dress)', *főz* 'cook (a dish)', *ás* 'dig (a hole)' *másol* 'make a copy'. That is, argument frames instantiated by the following are excluded: *bore through a wall, sew a button on(to) a shirt, boil (*főz*) water, dig (up) the garden, copy (*másol*) PTQ*). 'Excluded' means either that on its other construal(s) the verb is not a Definiteness Effect verb, or that it may be one only if certain other conditions are met. *Varr* 'sew' is a case in point, it will be mentioned again in the *wash*-subclass.

   The possibility of multiple linking for the object *NP*, and the restriction of the Definiteness Effect to only one linking variant is quite regular. Even some 'genuine', prototypical verbs of creation can be ambiguous in this sense. For instance, the direct object of *rajzol* 'draw' or *fest* 'paint' can be the *model* of the activity described. And then these verbs do not have a terminative construal, and are not Definiteness Effect verbs. This was shown in example (4.8).

   Eszik 'eat' and *iszik* 'drink' can also be classed in this group, although they are usually analysed as verbs of destruction. Their inclusion among *bring*-type verbs is motivated by (i) the fact that they are Definiteness Effect verbs, unlike other Hungarian verbs of destruction, privation or termination,[12] (ii) *Eszik* 'eat' and *iszik* 'drink' can be re-analysed as describing a process by means of which the consumed Theme ends up being "with" the Beneficiary (this is essentially Jackendoff's analysis of English *eat*).

   The verbs in this group have a durative (process or progressive) construal if their internal argument *NP* is a preverbal bare nominal. They have terminative (experiential/normal Perfect)

[12] Such verbs are *le-rombol* 'demolish', *ki-rabol* 'rob', *ki-foszt* 'plunder'. These are all prefixed verbs, therefore they are not subject to the Definiteness Effect. It was noted earlier that unprefixed verbs like *vesz* 'take' or *lop* 'steal' highlight the consequent state, viz the Beneficiary's having the Theme. In order to highlight the negation of the precondition state, i.e. the fact that the Source/the previous owner is missing the Theme, one has to use such prefixed verbs like *el-lop* 'steal away from', or *el-vesz* 'take away from'.

construal if their object is postverbal (bare nominal or full *NP*):

(4.23) *a.* János éppen/egész nap [széket hozott]—[N V]: durative
John just/whole day [chair-brought]
"John was chair-bringing just then/all day"
b. János (már) [∅ hozott] széket—[V] N: Perfect
John (already) [brought] chair-Acc
"John (has) (already) brought chairs"
c. János [hozott] három széket—[V] NP: achievement
John brought three chair-Acc
"John (has) brought three chairs"

2. *Talál* 'find' type verbs are like terminative *hoz*, only, with this class the consequent state is contributed by the verb itself. This is the same for *ad* 'give', *kap* 'receive', *szerez* 'acquire', *ajándékoz* 'give as a gift', or *hagy* '(transitive) leave for'. Only, with these verbs the distinguished argument is by preference a Beneficiary or a Possessor.

   The following example is merely a reminder that (i) with these verbs of this class bare nominals do not contribute to durative (iterated) readings, and (ii) durative readings triggered by the definiteness object suffix are not possible, either.

(4.24) *a.* János (∗/#egy hétig) bolhát talált a kutyáján
John (one week-till) flea-Acc found the dog-Poss3Sg-on
"John found fleas on his dog (for a week)"
b. ∗János találta a könyvet
John found+Def3Sg the book-Acc
Intended: "John was finding the book"

3. *Vasal* 'iron' type verbs are durative if there is no overt Beneficiary in the sentence:

(4.25) János (∗egy óra alatt) vasalt/mosott egy inget
John (one hour under) ironed/washed one shirt-Acc
"John was ironing/washing a shirt"
not "John ironed/washed a shirt in an hour"

   In the presence of an overt Beneficiary, these verbs acquire a terminative construal and exhibit the Definiteness Effect:

(4.26) *a.* János egy óra alatt vasalt magának egy inget
John one hour under ironed himself-Dat one shirt-Acc
"John ironed a shirt for himself in an hour"
b. ∗János vasalt magának minden inget
John ironed himself-Dat every shirt-Acc
"John ironed every shirt for himself"

   Verbs of this type include *mos* 'wash', *szab* 'tailor', and *varr* 'sew' on an affected object construal. Only, in the case of *varr* the additional argument is a Goal (as in *sew a button on(to) a shirt*). *Ragaszt* 'stick' (TV), *akaszt* 'hang' (TV) are like *varr* in this respect.

Non-Definiteness Effect Verbs

After presenting the necessary conditions for the Definiteness Effect, one can ask if it can be known what verbs or verb frames are not Definiteness Effect verbs. Hence, a makeshift list is provided below. Its inclusion was prompted by a query by Mats Rooth, who wanted to learn about the distribution of Hungarian verbs in general.

1. First, certain attitude- or psych-verbs are not Definiteness Effect verbs. These are *szeret* 'love', *gyűlöl* 'hate', *kedvel* 'like', *tud* 'know', *ismer* 'be acquainted with' a.s.o. These verbs are discussed in É.Kiss (1998a).

2. The best-known intensional verbs are not Definiteness Effect verbs, either, e.g. *látszik* 'seem', *tűnik* 'seem', 'appear', or *tartozik* 'owe'. *Keres* 'seek' can be classed among inherently durative, Goal-less verbs, so it belongs to class 6 below. Strictly speaking, *tartozik* does not show the Definiteness Effect because it is neither transitive nor unaccusative; it requires an oblique argument beside the subject:

   (4.27) János tartozik Mari-nak egy macská-val/∗egy macskát
   John owes Mary-Dat one cat-Instr/one cat-Acc
   "John owes Mary a cat"

   Other intensional verbs (constructions) also have obliques (or Nominatives) for arguments that in English would be objects in Accusative case:

   (4.28) *a.* Mari-nak kell egy macska/∗egy macská-t
   Mary-Dat must one cat/one cat-Acc
   "Mary needs a cat"
   b. Mari-nak szüksége van egy macská-ra/∗egy macská-t
   Mary-Dat need-Poss3Sg is one cat-onto/one cat-Acc
   —same as above—

3. (Construals of) verbs where the object *NP* denotes something affected, but not made available, by the event. From earlier examples, one could see that on one construal, *fúr* 'drill', 'bore through', *varr* 'sew', *vág* 'cut' a.s.o. do not show the Definiteness Effect. In these cases, the direct object NP denotes either the Source or the 'container' (in the sense of e.g. the wall containing the hole being created).

4. Verbs whose distinguished argument is the Source (and not the Goal); I know of one unprefixed verb of this type, it is *távozik* 'depart'; it was shown earlier that it can combine with strong *NP*s; this verb is inherently terminative.

5. Verbs without a Beneficiary: these were *mos* 'wash', or *vasal* 'iron'.

6. Verbs that lack a Beneficiary can be said to be unified with a far larger class, characterised by the lack of a Goal argument. Such verbs include *söpör* 'sweep', *töröl* 'wipe' (in general, motion verbs that describe contact with some surface), or *visz, cipel* 'carry' a.s.o; these verbs are inherently durative, and I take them to lack a temporal Path, in the sense that e.g. quantised direct objects are not sufficient to 'measure out' a Telic, culminated reading, as opposed to a verb like *hoz* 'bring', which acquires a telic reading just in case its direct object is a quantised, non-definite *NP*.[13] The absence of the Definiteness Effect with these verbs underlines the necessity of the Goal argument for the cases that do show the Definiteness Effect.

   Goal-less verbs do not behave uniformly when a Beneficiary or a Goal is added. This seems at first to suggest that Beneficiaries and Goals cannot be lumped together (as has been assumed so far).

   (4.29) *a.* Mari *a sarokba* söpörte a morzsát
   Mary the corner-into swept+Def3Sg the crumb-Acc
   "Mary swept the crumbs into the corner"
   b. ∗#Mari vasalta *magának* az inget
   Mary ironed+Def3Sg self-Dat the shirt-Acc
   Only: "Mary was ironing the shirt for herself"
   Intended: "Mary ironed herself the shirt"

[13] This can be shown with the *in an hour*-test, which is omitted here.

The difference between (4.29a-b) involves the following: (4.29a) contains a Goal expression, and does not show the Definiteness Effect. (4.29b) contains a Beneficiary, and shows the Definiteness Effect: the intended reading with terminative aspect is not available. The question then is, how come the addition of a Goal phrase cancels the Definiteness Effect, and the addition of a Beneficiary doesn't. First of all, there is a difference in the status of the Goal/Beneficiary arguments in (4.29): the Goal phrase in (4.29a) is preverbal, and counts as a preverbal secondary predicate. Consequently, the Goal phrase +verb complex does not show the Definiteness Effect for the same reason as prefix+verb complexes. This issue will be discussed in Section 4.6.

Second, I think that another relevant factor is the content of the consequent state and the role played by the direct object: the verb+Beneficiary in (4.29b) says that a shirt (in a particular state) has become available for the Beneficiary. (4.29a) does not have this reading, even though it does contain a Goal phrase (i.e., the sentence does not mean that the corner now has some crumbs in it). So, what (4.29) serves to show is that Goals or Beneficiaries on their own are insufficient for the Definiteness Effect; an added condition is the availability of the Theme at the Goal, or for the Beneficiary. To wit, if a *sweep* or *wipe* type verb can have the 'available for the Beneficiary' construal, it does show the Definiteness Effect. The relevant reading of (4.30) is *a plate has been made available for Mary by wiping it* (e.g. in a scenario where Mary needed to eat, and all plates were either dirty or wet).

(4.30) Töröltem Marinak egy tányért/∗minden tányért
Wiped-1Sg Mary-Dat one plate-Acc/every plate-Acc
"I wiped Mary a plate/every plate"

Strictly speaking, Goal-less verbs ought not to show the Definiteness Effect anyway. Typically, their object *NP* does not denote what becomes available. That is to say, *söpör* 'sweep', *töröl* 'wipe' or *vasal* 'iron' belong to the 'bore through the wall' class. Why some of these verbs can be coerced to have the 'make available' reading is a question far beyond the scope of this thesis.

4.2.2 Prefixed Verbs

Prefixed Verbs and Aspect

Hungarian prefixes have been known as markers of perfective aspect. They can combine with verbs from any aspectual class, yielding a complex verb with terminative (perfective) aspect.[14]

With stative verbs prefixes typically yield inchoative aspect, as in the case of *meg-tud* lit. meg-know, 'find out', or *meg-ismer* lit. meg-know, 'become acquainted with'. Some stative Definiteness Effect verbs, like *van* 'be', *tart* 'keep' need not or cannot be coerced into inchoatives. *Meg-tart* lit. meg-keep means 'decide to keep', or '(manage to) keep in spite of opposition'. In the present work I have no account for this.

With process and accomplishment verbs, prefixes yield complex verbs with terminative aspect (accomplishments or achievements), like *be-megy* lit. in-go, 'enter', or *tele-rak* lit. full-load, 'load (full)'. Many such combinations have resultative meanings, e.g. *ki-fütyül* lit. out-whistle, 'whistle x off y', or *fel-ugat* lit. up-bark, 'bark awake'.

Achievement verbs can also be prefixed, as seen from *ki-ad* lit. out-give, meaning 'hand out' or 'publish', or *be-talál* lit. in-find, meaning 'find one's way into'. On the basis of Levin and Rappaport-Hovav (1995), prefixed achievement verbs are not expected to have resultative meanings of the type *bark awake* or *whistle off the stage*. With Hungarian achievement verbs, however, some kind of coercion into resultatives is possible. The full range of meanings with these verbs is the following:

(i) The contribution of the prefix may be purely spatial, as with *be-ad* lit. give in, meaning 'hand in'. (ii) The prefix may be purely presuppositional, presupposing a preceding state, or a plan or expectation, as in the case of *meg-talál* lit. meg-find, meaning 'find some from a previously known

[14] One notable exception is *fel-olvas* lit. up-read, 'read out', which is a process verb.

set of (missing) objects', or *meg-ad* 'give someone something, as promised/agreed previously'. As seen from these examples, such complex verbs show the Specificity Effect in a fairly conspicuous (if not dramatic) manner. (iii) The prefix+verb combination is noncompositional. This is the case e.g. with *ki-ad* lit. out-give, when it means 'publish'. Or, *ki-talál* lit. out-find, may mean 'make a lucky/accurate) guess'. (iv) A prefix with a directional meaning may coerce *talál* 'find' into a resultative motion verb, as with *be-talál* lit. into-find 'find one's way into', or *ki-talál* lit. out-find 'find one's way out of'. In these cases, and with their English counterparts as well, the individual denoted by the subject has to cover the distance from Source to Goal, whereas *find*, on its own need not involve actual movement (cf. *John found Paris on the map* vs *John found his way to Paris*).

Aspectual properties of Hungarian ±prefixed verbs are problematic, and not only for this thesis. Also, the same problem emerges with other languages that have perfective prefixes (see e.g. Singh (1998) for Hindi). The problem in fact has two facets, depending on the aspectual class of the host verb.

Unprefixed accomplishment verbs such as *hoz* 'bring' or *eszik* 'eat' have a terminative construal iff their object is a quantised (non-definite) *NP*. This implies two things. First, the contribution of the object *NP* will depend on the ±prefixed status of the verb. With unprefixed verbs, the *NP*'s contribution is decisive for terminative aspect, whereas with prefixed verbs this is not so. Second, *hoz* 'bring' and *el-hoz* (roughly the same) can describe the same event, so the difference is not interpretational but, rather, representational. Indeed, ±prefixed verbs will be shown to differ in the kind of discourse connections they make possible.

After these general remarks, I would now like to contrast prefixed verbs with the findings about prefixless verbs from the previous subsection.

- Many unprefixed verbs were said to be inherently durative, especially if their object *NP* does not denote something created or made available by the event. The main example was *fúr* 'drill', 'bore'. If the object *NP* denotes the object subjected to drilling, *fúr* does not show the Definiteness Effect, and cannot have terminative aspect. If one wants to decribe a completed event, highlighting the object subjected to drilling, the way out is prefixation: *ki-fúr* lit. out-drill 'pierce by drilling', 'make a hole by drilling' is one possibility.

  Also, the verb *vasal* 'iron' was said to be durative in the absence of a Beneficiary. Again, the addition of a prefix yields terminative aspect: *ki-vasal* lit. out-iron means 'iron completely'.

  It was conjectured about unprefixed verbs that they (or at least a great many of them) lack a temporal Path, in the sense of describing a transition from some Source (state) to a Goal (state). Prefixes are then seen as contributing a full Path to the event structure of these verbs. E.g., *visz* 'carry (along)' was said to lack a Path; *be-visz* 'take in' or *ki-visz* 'take out' are by contrast complex verbs with a full Path. With coerced achievements like *be-talál* lit. into-find 'find one's way into' the prefix is also seen to add a Path, with the additional information that the Agent covers the distance from Source to Goal.

- It can be conjectured that prefixes can be seen to introduce a Source argument, possibly as part of the description of a preparatory state. This is the case *meg-hagy* 'leave alone' from this section, and also with *el-lop* lit. away-steal, discussed in the previous chapter. As opposed to prefixless *hagy*, where an oblique is linked to a Goal location or to a new Beneficiary, with *meg-hagy* the oblique was seen to be linked to the 'original' location or Beneficiary. In addition, it will be seen later in this chapter that with many prefixed verbs the direct object is linked optionally or obligatorily to the Source. To anticipate fuller discussion, two examples of this re-linking are *ki-issza a poharát* lit. out-drink one's glass 'drink one's glass empty', or *meg-szedi a fát* lit. MEG-pick the tree, meaning 'pick the tree bare'. This phenomenon will be discussed more systematically in part 4.4.4.

4.3 Decomposition(i): Static Tests

One of the main tasks in this chapter is to draw a proper distinction between unprefixed, Definiteness Effect verbs and their prefixed counterparts. One of the puzzles presented by prefixation is that a

Hungarian prefixless achievement verb and its prefixed counterpart (say, *talál* and *meg-talál*) can be used to describe the same event.[15] Other verbs can have this property at the level of the VP, as with *evett egy almát* 'he ate an apple' versus *meg-evett egy almát* 'he ate (up) one (of the) apple(s)'. Yet these ±prefixed pairs clearly differ in other properties, and it was conjectured earlier that this difference is due to their subevent structure. (And that this may be the relevant factor in the Definiteness Effect and in the Specificity Effect.) The task is then to resort to lexical decomposition.

4.3.1 Background

According to many aspectual theories (Dowty (1979/1991), Moens and Steedman (1988), Pustejovsky (1991)), events (=transitions) described by verb(phrase)s are not primitives; rather, they correspond to a cluster of states/events. The following will be a recapitulation of what may be called conventional wisdom (accumulated since the days of Generative Semantics). I will adhere to it, except for a few specific points, where Hungarian data seem to require a different handling.

Following Dowty (1979/1991), Kamp and Roßdeutscher (1994b), Kratzer (1994), and others, I will take event verbs to contain a precondition state, an event that corresponds to the transition proper, and consequent/target state. Sometimes a process part of the transition will also be invoked (as Moens–Steedman's preparatory phase).

Subevents (and the appropriate non-logical constants that describe these subevents) are linked to the corresponding arguments of the verb (Levin and Rappaport-Hovav (1995)). Following them, Kamp and Roßdeutscher (1994b) and Kratzer (1994), I will assume Agents to be linked to the main eventuality, and Themes to the consequent state.

In addition, it will be assumed that transitions can be described as changes (Paths) from Sources to Goals (Jackendoff (1990/91)). That is, precondition states and consequent states are assumed to have some predetermined content, and that these states in some sense express a relation between the Theme argument and another, distinguished argument. That is, at least the relevant Hungarian ± prefixed verbs will be taken to contain at least one distinguished argument, such that for instance the consequent state describes a relation that holds between the Theme and one of these arguments, as a result of the event. Sources will assumed to be linked to precondition states, and Goals to consequent states. As with Jackendoff, Sources and Goals are intended in a very general sense, corresponding to a variety of actual participants in the event. For instance, with *bring* the Goal is linked to the reference location, with *give* to the (new) Possessor, and so on.

Returning to the over-all properties of decomposition, predicates (=non-logical constants) corresponding to subevents are connected by means of logical operators ($DO, CAUSE$ and $BECOME$—this has been standard practice since Dowty (1979/1991)).

$BECOME$ has a property that becomes relevant only when it is transposed into a dynamic framework, in which anaphoric relations may be established through subevent structure. $BECOME$ presupposes prior knowledge about the Theme, because it links two state descriptions, both of which contain the direct object variable.[16] This is because what (4.31) yields is a variable that is part of the precondition state description already, i.e. one which is familiar in the local context of the consequent state. That is, it corresponds to the perspective of someone to whom the object in question was familiar prior to the event. If one stretches things a little, this perspective may be said to be that of an omniscient narrator—by contrast, (Hungarian) existential sentences convey the perspective of someone who actually *acquires* the relevant information only as part of the consequent

[15] Moreover, verbs from the *talál* class can be said to belong to the same aspectual class as their prefixed counterparts.

[16] If one looks at the definition (4.31) only, is not obvious why Ψ will contain the direct object variable: Ψ is a state description, and says that the individual denoted by the direct object has some property. More precisely, the property will be ascribed to some witness of the direct object quantifier, which has to scope over $BECOME$. The discussion of possible scope orders among the operators and the direct object quantifier is found on pp. 275–276 in Dowty (1979/1991).

state description.

(4.31) $[\![BECOME\Psi]\!]_{M,w,i,g} = 1$ iff
(i) for some $j \in I$ *s.t.* $l.b.(i) \subseteq j, [\![\Psi]\!]_{M,w,j,g} = 0$;
(ii) for some $k \in I$ *s.t.* $u.b.(i) \subseteq k, [\![\Psi]\!]_{M,w,k,g} = 1$;
(iii) $\nexists i' \subset i$ *s.t. (i)-(ii)* hold for i'.

(Dowty (1979/1991):352)

Because of the information about the Theme variable it contains, transposing $BECOME$ into DRT is in principle not unproblematic. DRT analyses of English and German verbs have in fact made use of $BECOME$ without major problems; it is with Hungarian (or with certain English verbs—predictably, verbs of creation) that these problems become apparent. One problem concerns the introduction site of the Theme variable. The other problem (which is in fact a deeper aspect of the first problem) concerns this so-called 'narrative', or discourse, omniscience. Anticipating the following section, one can say that with Hungarian Definiteness Effect verbs, the unavailability of information is grammaticalised. Accordingly, decomposing them with a tool that presupposes omniscience is inappropriate. But all this will become apparent later. (The following section will contain a brief discussion of $BECOME$).

4.3.2 Modification of Subevents: English and Hungarian

Perhaps the most compelling (and longest-known) piece of evidence for complex subevent structure comes from modification with *almost, again* and negation (Dowty (1979/1991)). To this one may add some instances of *too* as well.[17]

Almost, negation: **English**

"Sublexical" scope with respect to these modifiers provides a test that distinguishes accomplishment verbs from achievement verbs (Dowty (1979/1991)). In (4.32a-b) negation and *almost* can modify only the preparatory stage of the event. That is, both sentences may mean that John began, but did not quite finish, eating an apple.

(4.32) *a.* John did not eat an apple
b. John almost ate an apple

Achievement verbs cannot have this 'partly modified' reading. That is, the sentences in (4.33) cannot mean that there is a partly (but not completely) found error.

(4.33) *a.* John did not find an error
b. John almost found an error

The reason for the lack of this reading is, according to Dowty (and, e.g. to Moens and Steedman), is that the entries of achievements lack the relevant information on the process stage of the event. Nevertheless this information can be *added* to the subevent structure of some achievement verbs

(4.34) *a.* John did not (quite) reach the top
b. John almost reached the top (but he had to turn back at the last stage).

[17] In the following, *almost* and *again* will sometimes be understood as the English lexical entries proper, and sometimes as the corresponding modifiers/operators in semantic representations.

Almost, negation: **Hungarian**

Hungarian *majdnem* 'almost' and *újra* 'again' are said to occur in the preverbal Quantifier position. The negative particle *nem* 'no' is said to be in the head of $NegP$, which may precede Focus (for the subtleties of Focus and negation see Szabolcsi, and the remarks in Chapter 1).

(4.35) *a.* János nem evett egy almát *(sem)
John not ate one apple-Acc SEM
"John has not eaten any apples"

b. ??Itt van, érintetlenül
Here is, untouched-Adv
"Here it is, untouched"

c. ???Itt hagyta, félig megéve
Here left+Def3Sg, half-till pfx-eaten
"He left it here, in a half-eaten state"

Negation has wide scope with Definiteness Effect verbs, both w.r.t. subevents and w.r.t. the internal argument. That is, (4.35) cannot mean that there is an apple John has not eaten, nor that John has eaten part of an apple (but not all of it). It can only mean that there aren't any apples John has eaten any amount of. Wide scope relative to the internal argument is indicated by the obligatory presence of the negative concord marker *sem*: on a "flat", "neutral" intonation the sentence is ungrammatical without it.

(4.36) *a.* János nem evett meg egy almát sem
John not ate MEG one apple-Acc SEM
"John has eaten none of the apples"

b. János nem evett meg egy almát
John not ate MEG one apple-Acc
"One of the apples, John has not finished eating it"

With prefixed verbs, it is possible to have narrow scope negation, both relative to the internal argument (as in (4.36b)), or relative to event structure (one reading of (4.36a-b)). The negative concord marker *sem* can be freely inserted or omitted, yielding a narrow scope or wide scope reading, respectively. As regards scope relative to event structure, both sentences in (4.36) can have either reading.

As expected from the negation test, *majdnem* 'almost' is to scope over the entire event structure of Definiteness Effect verbs:

(4.37) *a.* János majdnem festett egy képet
John almost painted one picture-Acc
"John almost painted a picture"

b. ??Itt van a majdnem kész vászon
Here is the almost ready canvas
"Here is the canvas of the almost finished painting"

With prefixed verbs *majdnem* can scope over either the full event structure, or over the preparatory stage only:

(4.38) János majdnem meg-evett egy egész pulykát
John almost MEG ate one entire turkey-Acc
"John almost ate/finished eating an entire turkey"

I take these tests with negation and *almost* to show that the event/preparatory phase component of Definiteness Effect is inaccessible for modification. This is taken to mean that Definiteness Effect verbs (on their terminative construal) are achievement verbs. This is supported by the awkwardness of such verbs with manner adverbs that modify the preparatory phase:

(4.39) János (??gondosan/ügyesen) evett egy almát
John (??carefully/skilfully) ate one apple-Acc
"John ate an apple (carefully/skilfully)"

Also, there is a minimal pair, discovered by Anna Szabolcsi, that supports (indirectly) the classification of (terminative) Definiteness Effect verbs as achievements:

(4.40) *a.* Szerveztem egy konferenciát
Organised-1Sg one conference-Acc
"I organised a conference" (OK: director, secretary)
b. Meg-szerveztem egy konferenciát
MEG-organised-1Sg one conference-Acc
"I organised a conference" (OK: secretary only)

Szabolcsi's point was that only the existential sentence (4.40a) can be uttered by someone who did not participate directly in the process of organisation (but, who, say, initiated the conference, or determined that there should be one). (4.40b), the non-existential variant, can only be used by someone who participated directly in the organisational process, from beginning to end.

Again in English, German, Hungarian

Like *almost*, *again* too can modify only part of a verb's event structure. Only, in this case it picks out the consequent state, and not the preparatory process. In addition, it does not distinguish between accomplishment and achievement verbs. Unlike *almost*, *again* is a presupposition trigger (presupposing a preceding eventuality of the appropriate type — cf. a reference to S. Kripke in Soames (1989), von Stechow (1996), Kamp and Roßdeutscher (1994a)); accordingly, it can also be used to test for contextual links among eventualities. In this subsection however I will concentrate on its sentence-internal properties.

Returning to the issue of subevent modification, it can be seen that the sentences in (4.41) have two readings (cf. von Stechow (1996), Kamp and Roßdeutscher (1994a)). On the so-called repetitive reading, (4.41a) asserts that John caught Jerry, and presupposes that there was an earlier event, either by John or by someone else, of Jerry being caught. On the restitutive reading the sentence presupposes that Jerry was in a state of captivity before. It does not necessarily presuppose that that state was the result of a catching/capturing event. For instance, the sentence can be true if Jerry was a lab mouse born in captivity, who escaped exactly once during its lifetime. (And its being caught by John restored the initial state of captivity.)

(4.41) *a.* John caught Jerry again
b. John found Jerry again

As in the case of negation, the verb's arguments can be 'involved' in the presupposition of *again*, depending on word order, as noted in Kamp and Roßdeutscher (1994b):

(4.42) *a.* weil wieder ein Assistentenarzt einen Patienten von einer Krankheit
geheilt hat
because (again) an intern has cured a patient of a disease (again)
b. weil ein Assistentenarzt wieder einen Patienten von einer Krankheit geheilt hat
because an intern has again cured a patient from a disease
c. weil ein Assistentenarzt einen Patienten wieder von einer
Krankheit geheilt hat
because an intern has cured a patient from a disease again

(Kamp and Roßdeutscher (1994a):198, ex. (42))

In (4.42), the *NP*s to the left of *wieder* 'again' are outside its 'scope'. Meaning that both the presupposed and the asserted eventualities share the discourse referents of these *NP*s as instantiating their appropriate thematic Roles. Better said, since in (4.42a) there is no *NP* to the left of *wieder*, the 'presupposed' and the 'asserted' cure may involve distinct participants. In (4.42b), where the subject is to the left of *wieder*, the Agent of the two eventualities has to be the same. In (4.42c), where subject and object are both to the left of *wieder*, the Subject and the Theme have to be shared.

As said earlier, *again* does not distinguish between accomplishment and achievement verbs. There is (at least) one verb class, however, that is distinguished by *again*. This is the class of creation verbs. (As shown in (4.43d), verbs of destruction show a similar behaviour.) These verbs have two distinctive properties where *again* is concerned: (i) *again* by necessity has scope over the internal argument: since verbs of creation and destruction are one time only predicates, the same individual cannot be subjected to the same creation (or destruction) process twice. (ii) Restitutive readings seem to be unavailable.

(4.43) *a.* Mary painted a portrait/?the portrait again
b. Mary wrote a letter/?the letter again
c. Mary baked a cake/?the cake again
d. ??Mary shattered the vase into fine powder again

The sentences in (4.43) cannot restore a prior state of (non)existence of their direct objects (unless some very advanced technology is assumed for (4.43d)), because these verbs by definition are about newly created objects. For instance, (4.43a) cannot mean that there was a portrait, destroyed later, which came to exist again because of Mary's painting it.

The class of creation verbs, I would like to argue, is not the only verb class that has the properties (i)–(ii). I will take up this issue after a brief detour on Hungarian; the reason being that these properties (with these other verb classes) have originally been detected with Hungarian examples. So, in a sense, the Hungarian data have temporal precedence.

A detour: Hungarian *újra* 'again'

The tests with negation and *almost* have shown that the preparatory stages of Hungarian Definiteness Effect verbs are not accessible for 'narrow' scope modification, whereas the preparatory stage of a prefixed verb is accessible. Also, negation takes scope over the internal argument of Definiteness Effect verbs. With prefixed verbs this is not necessarily the case. With *újra* 'again' one finds a similar pattern.

To begin with prefixed verbs, they can easily have restitutive readings, and their internal argument can just as easily scope over *again*.

(4.44a) is a sentence where the internal argument scopes over *again*, as shown by the appropriateness of the continuation of (4.44b).

(4.44) *a.* János újra meg-talált egy macskát
John again MEG-found3Sg one cat-Acc
"John has found a cat again"
b. Szerencséje van, hogy János mindig meg-találja
Luck-Poss3Sg is, that John alwas MEG-find+Def3Sg
"It (the cat) is lucky that John always manages to find it"

The following example has been chosen because the real-life scenario allows for a restitutive reading only.

(4.45) A környezetvédők újra betelepítették a bölényt Erdélybe
The environmentalists again pfx-introduced+Def3Sg the bison Transylvania-into
"Environmentalists have reintroduced the bison into Transylvania"

In the current world, (4.45) can only have a restitutive reading (which is false): there was a state of the bison occuring (naturally) in Transylvania, which has been restituted by environmentalists.[18]

[18]Bisons used to live in Transylvania until the 17th century. In the second half of the 20th century a few specimens were brought from Poland, but this happened because of a government decree, and not because of environmentalists' initiatives. Moreover, these specimens were (are?) kept in a theme park, so they are not part of the 'natural' fauna. All this was mentioned to show that the presupposition of (4.45) is true in the current world, only its assertion part is false.

Both *again* and prefixed verbs are presupposition triggers. One may then wonder what happens when these presuppositions interact. One example is shown in (4.46), where the fourth sentence, (4.46d) contains two presupposition triggers, the prefix *meg* and *újra* 'again'.

(4.46) *a.* Marinak elvesztek az állatai
Mary-Dat away-were-lost-3Pl the animal-Poss3Sg-Pl
"Mary's pets were lost"
b. János meg-talált egy macskát
John MEG-found one cat-Acc
"John found one of the cats"
c. Másnap [A KATI]$_F$ állatai vesztek el
Next-day [THE CATHY]$_F$ animal-Poss3Sg-Pl were-lost-3Pl away
"The following day CATHY'S pets were lost"
d. ???János újra meg-talált egy macskát
John again MEG-found one cat-Acc
"John found one of the cats again"

The problem with (4.46d) is that the intended antecedent for *again* (=(4.46b)) diverges from the antecedent required by the prefix, which is (4.46c). This suggests that there is a very strongly preferred order in which these presuppositions are to be bound. This case will be discussed in more detail in Chapter 7.

So, as regards *again*, Hungarian prefixed verbs behave as expected. The main problem posed by these verbs is that of presupposition interaction, but this is of no immediate concern here. Unprefixed, Definiteness Effect verbs also behave in a way that was to be expected on the basis of the negation test. In fact, their behaviour confirms Szabolcsi's observation, in that they are one time only predicates. If they are one time only predicates, then the existential sentences that contain them cannot convey the information that the same individual was twice subjected to the event they describe.

Indeed, although (4.47) can be true in a scenario where the same cat has been found twice by John, the sentence offers no clue for this, and the intended continuation is inappropriate.

(4.47) *a.* János újra talált egy macskát
John again found one cat-Acc
"John has found a cat again"
cannot mean: "There is a cat John has found again"
b. #Mi lehet vele, hogy mindig a János útjába akad?
What can-be with-it, that always the John path-Poss3Sg-into chance
#"Why should it always come across John?"

That is, as regards discourse, the internal argument of *talál* behaves as if it were the argument of a creation verb:

(4.48) János újra írt egy verset
John again wrote one poem-Acc
"John has written a poem again"

My point here is that (4.48), containing a creation verb, parallels with (4.47), which contains a 'make available' verb. Yet this parallel cannot be interpretational: the same poem cannot be written twice, whereas it is perfectly possible to find the same cat (at least) twice. Hence the observation that the parallel between 'make available' and creation verbs lives in discourse, so to speak.

As regards English Definiteness Effect and creation verbs, these too show the same scope behaviour with respect to *again*, in that their relevant argument has narrow scope relative to *again*.

(4.49) *a.* There is a cat on the roof again
b. ?I wonder why it is always there

(4.50) *a.* John has a cat again
b. ?It always comes and goes

(4.51) *a.* Gereon baked a cake again
b. ???He had to bake it once more, because he had forgotten the cinnamon

In addition, there is another class of English verbs that shows the same behaviour. This class includes e.g. *find* (as in *find a disciple*), *acquire* or *choose* (again, on one reading). These verbs (labelled as resultative verbs in Moltmann (1997)) exhibit a quasi-Definiteness Effect, as discussed in Burton (1995). This quasi-Definiteness Effect is comparable (in some respects) to Hungarian 'make available' verbs. Indeed, the internal argument of these verbs has narrow scope relative to *again*.

(4.52) *a.* Mary has found a husband again
b. Mary has acquired a cat again

In the case of Hungarian, narrow scope of the object *NP* relative to *again* is taken as a symptom of a special relationship between object and verb that results in the verb(phrase's) being a one time only predicate. A precise analysis for Hungarian will be given in Chapter 6, where these scope phenomena with *again* will be seen to follow from the way the entries of the relevant verbs are defined.

In English, too, Definiteness Effect verbs (expletive+verbs) are like creation verbs as regards scope relative to *again*. The status of so-called resultative verbs is less clear. If their internal argument is an indefinite of the right type, then it has narrow scope relative to *again*, i.e. in this case the verb phrase can be taken as a one time only predicate as regards discourse. This can be seen from *Mary has found a husband again*. If the internal argument *NP* is, for instance, a definite, these verb(phrase)s behave like the more usual English verbs:

(4.53) Mary has acquired the (same) house again

Before concluding this part, I would like to include a brief discussion about the possibility of restitutive readings with Definiteness Effect and creation verbs. Usually, the restitutive examples one finds in the literature involve a wide scope object *NP*, as in *John caught Jerry again*. On the basis of such examples it is easy to assume that a prerequisite of restitutive readings is that the relevant *NP* always have wide scope.

Now this is not so: restitutive readings are in fact possible with the relevant *NP* in the scope of *again*. Only, this sort of restitutive reading requires two conditions.

One of these conditions is the presence of an antecedent sentence of the right kind in preceding discourse. (4.54b) restitutes the state of cognac-ownership with John, as it were; the restitutive reading is made possible, I think, by the presence of the sentence (4.54a), whose state description acts as a suitable antecedent for the consequent state of *receive*. By this I mean that the state description in (4.54a) is sufficient, and there is no need to coerce it into an event.[19]

(4.54) *a.* Jánosnak volt egy üveg konyakja, amit Marinak adott
John-Dat was one bottle cognac-Poss3Sg, which-Acc Mary-Dat gave
"John had a bottle of cognac, which he gave to Mary"
b. A születésnapjára újra kapott egy üveg konyakot
The birthday-Poss3Sg-onto again received one bottle cognac-Acc
"He received a bottle of cognac again for his birthday"

The English version of (4.54) was not found perfectly acceptable by my informants, whereas the Hungarian version is appropriate. This may indicate that English and Hungarian 'make available' verbs are different in their relationship with their internal arguments.

The other condition for restitutive readings with such verbs is the presence of a Goal or Beneficiary:

(4.55) *a.* John bought a cake and ate it all
b. The following day Mary baked him a cake again

[19] I mention this because in German (apparently) the verb *receive* would in fact coerce *have* to mean *have as a consequence of a prior receiving event* (Peter Krause p.c.)

In (4.55b) (found slightly better than (4.54)) what is restituted is the state of John having a cake. But then, apparently, the consequent state of *bake [him]* will say that there is a cake which is with John. That is, this is a consequent state of the 'Hungarian' type.

To conclude this subsection on subevent structure, the following can be retained:

Modification tests show that the preparatory phase (or the transition phase) of Hungarian Definiteness Effect verbs is inaccessible for negation or for *almost*. I take this to mean that these verbs (on their terminative construal) are achievement verbs and not accomplishment verbs (even verbs like *eszik* 'eat' or *hoz* 'bring').

The inaccessibility of the preparatory phase confirms an observation by Anna Szabolcsi, viz the idiosyncratic lexical content of these verbs is *bleached*, or backgrounded. Better said, the results of these tests help to make her intuition or conjecture more precise. According to Szabolcsi, what is relevant with these verbs is that something comes into existence or becomes available, and their idiosyncratic meaning components are taken to be irrelevant, or almost absent. This may seem too strong. If, however, her intuition is translated into decomposition terminology, 'bleaching' may be nothing else but what the tests and data in this chapter have shown. That is, the preparatory stage is unavailable for modification, and there is by necessity a precondition state that is felt to be highlighted, or profiled.

Again scopes over the internal argument of Definiteness Effect verbs, just as it does with the internal arguments of (English) one time only verbs and verbs of creation. In fact, with Hungarian verbs this is seen to follow from the one time only property of these verbs, including verbs like *talál* 'find' or *hoz* 'bring'. This is not absolute uniqueness; rather, this is token-uniqueness that has to live in the representation, and the uniqueness of the Theme discourse referent is dependent on the event discourse referent introduced by the verb.

With prefixed verbs, modifiers can have narrow scope both w.r.t. event structure and w.r.t. the internal argument; in some cases, this seems to be the preferred option. This entails that prefixed verbs are accomplishment verbs (at least those whose host verb is inherently durative). This is consonant with the discussion in the previous section, in that prefixes are seen to add a temporal Path to (many) bare verbs. That is, the subevent structure of prefixed verbs is in a sense more articulate(d) than that of bare verbs.

To sum up these conclusions in one paragraph, it could be seen that (i) Definiteness Effect verbs are achievement verbs: their preparatory stage is inaccessible, and the most prominent component of their event structure is the consequent state. In addition, tests with *again* confirm their one time only status. (ii) Prefixes are seen to contribute a temporal Path to their hosts, and, consequently, their subevent structure is readily accessible for modification. They are clearly not one time only predicates (except for creation verbs like *meg-ír* 'write up', of course).

Where English is concerned, *there be*, *have* and verb *phrases* of result have been found to resemble verbs of creation as regards *again*. I take this to indicate that *there be* and *have* are time only predicates as regards discourse (just like Hungarian 'make available' verbs). Resultative verbs like *acquire* or *find* are almost one time only predicates. Chapter 6 will present a brief analysis that goes some way toward accounting for their dual or almost one time only status.

4.4 Decomposition(ii): Context

4.4.1 Motivations

This part tests the subevent structure of ±prefixed verbs in another manner, by checking possible discourse antecedents for sentences containing ±prefixed verbs. This is necessary for the following reasons:

1. Discussions in this chapter have uncovered a Source/Goal asymmetry between ±prefixed verbs: Definiteness Effect verbs are said to contain obligatorily a Goal (Beneficiary/Possessor) argument, and in many cases prefixes are said to contribute a Source. So, one can ask the question whether the entries of Definiteness Effect verbs contain a Source argument at all. Since Sources are by preference introduced in precondition states, one may ask something stronger,

viz whether the entries of Definiteness Effect verbs contain a precondition state at all. Now clearly the 'static' tests from the preceding section cannot be used here. Instead, one can construct sentence pairs where the intended anaphoric link is obtained by binding the precondition state of one event description to the consequent state of a preceding event description.

2. An assumption implicit in the discussions throughout this chapter was that there is some kind of novelty constraint on Definiteness Effect verbs and their internal arguments. The property of being a one time only predicate, or having narrow scope w.r.t. *again* can all be seen as related to this constraint, and so is the necessity of the object *NP* to denote what becomes (newly) created or available by the event (as opposed to object *NP*s that denote what has been 'there' prior to the event). This 'novelty hypothesis' can be tested either in discourse, or with context-dependent constructions such as Focus or ellipsis.

3. As shown in Chapter 3, prefixed verbs exhibit a Specificity Effect, which amounts to their being presupposition triggers. In order to learn about content of this presupposition or its ±anaphoric nature, one has to resort to discourse.

4.4.2 Background

Hungarian existential sentences are said to describe what is newly available or newly created—then one may suspect that they are not appropriate as continuations to certain types of sentences. Sentences with prefixed verbs on the other hand are said to contain an anaphoric presupposition, and this implies that they *require* certain types of antecedent sentences. These suspicions can be best checked by comparing the Hungarian data to (i) the corresponding data in English, and to (ii) what is commonly assumed or used in the formal semantics literature. So, this subsection is about the 'English' way of describing change, the 'English' type of discourse connections established through subevents, and some implications of commonly used formal decomposition methods.

Static Theories, *BECOME*

What I call the standard "English" way of describing change can be illustrated with the narrative discourses in (4.56)–(4.58).

(4.56) *a.* Ten cats were lost
b. John found one of the tabbies

(4.57) *a.* John travelled from London to Paris
b. From there he went on to Strasbourg

(4.58) *a.* The floor was quite dirty, so *b.* Mary swept it clean

The common property of these three discourses, is that they describe a transition undergone by the relevant individual, from an initial state to a final state, brought about by the transition. In narrative discourses, where the order of the sentences matches temporal order, the initial state or location can be specified by a (directly) preceding sentence, as in (4.56) or (4.57).

Formal semantics since Dowty (1979/1991) has followed the "English" pattern:

- take a generalised quantifier $\mathcal{Q}x$ that binds variable x as the translation of the internal argument;
- take a state that holds of the value assigned to that variable (a witness of $\mathcal{Q}x$): $\phi(x)$ at t;
- take a state that is in some sense the opposite of the previous state, s.t. it holds at t' ($t < t'$, and the interval (t, t') is in some sense minimal);
  $\neg\phi(x)$ at t';
- conjoining the two formulae amounts to having a transition operator $BECOME$;

- quantifiers are to be assigned wide scope over $BECOME$ for semantic considerations. So, what we have is $\mathcal{Q}x.BECOME(\phi(x))$, as exemplified in (4.59).

(4.59) *a.* A door opened $\rightsquigarrow$
b. $\exists x.[door(x) \wedge BECOME(open(x))]$

It is argued in Dowty (1979/1991) that the Theme quantifier has by necessity wide scope over $BECOME$, otherwise one gets wrong truth-conditions. So, (4.60d) is to be excluded from among the scope options (4.60a-d) for for $CAUSE$, $BECOME$, DO and the Theme quantifier.

(4.60) *a.* $\lambda\mathcal{P}\lambda x.\mathcal{P}.\{\hat{y}\ \exists P.[P\{x\}\ CAUSE\ BECOME\ open'(y)]\}$
b. $\lambda\mathcal{P}\lambda x.\exists P.\mathcal{P}\{\hat{y}.[(P\{x\}\ CAUSE\ BECOME\ open'(y))]\}$
c. $\lambda\mathcal{P}\lambda x.[P\{x\}\ CAUSE\ \mathcal{P}\{\hat{y}[BECOME\ open'(y)]\}]$
d. $\lambda\mathcal{P}\lambda x.\exists P[P\{x\}\ CAUSE\ BECOME\ \mathcal{P}\{\hat{y}[open'(y)]\}]$

(Dowty's (62) from p. 275, notation slightly altered.)

(4.61) John opened every window
a. $\forall y.[window'(y) \rightarrow \exists P.[P\{j\}\ CAUSE\ BECOME\ \ open'(y)]]$
b. $\exists P.\forall y.[window'(y) \rightarrow \exists P.[P\{j\}\ CAUSE\ BECOME\ \ open'(y)]]$
c. $\exists P.[P\{j\}\ \ CAUSE\ \ \forall y.[window'(y) \rightarrow BECOME\ open'(y)]]$
d. $\exists P.[P\{j\}\ CAUSE\ BECOME\ \forall y.[window'(y) \rightarrow open'(y)]]$

(Dowty's (64'): 276, with somewhat altered notation.)

(4.60d), where the quantifier has narrow scope relative to $BECOME$, is unsuitable for 'standard' change in the manner of, say, (4.56), because it says that the Agent's action causes there to be $\mathcal{P}$ objects (in the state of being open). Then, in the pre-state negation will have scope over $\mathcal{P}$, which will yield wrong truth-conditions. (4.61d), for instance, will be true if not all windows were shut before John opened them. The translation chosen by Dowty is (4.60a) (see Dowty (1979:276–277)).

One could argue that (4.60a) and (4.60d) can each serve as the translation of a verb class: (4.60a) for 'ordinary' verbs like *open* and (4.60d) for creation verbs, since (4.60a) is quite clearly unsuited for them, especially in a logic where formulae are evaluated relative to intervals. This can be read off of (4.62b). Thus, one can opt for (4.60d), for creation verbs, and translate *John built a house* as in (4.62c). This is indeed the line taken by Dowty himself.

(4.62) *a.* John built a house
b. $\exists y.\exists P.[P\{j\}\ CAUSE\ BECOME\ [house'(y) \wedge exist'(y)]]$
c. $\exists P.[P\{j\}\ CAUSE\ BECOME\ \exists y.[house'(y) \wedge exist'(y)]]$

But this is not viable, as shown by Arnim von Stechow: (4.62c) is true iff there are no houses prior to John building one. (For an analysis of English and German creation verbs the reader is referred to von Stechow (2000b). This paper will be discussed in Chapter 6.)

So, now there is one English verb class that does not lend itself to a typical 'English' type analysis. One can then ask whether Hungarian Definiteness Effect verbs or their English counterparts (mentioned in the brief part on *again*) require a different analysis as well. The answer is, predictably, yes. English *there be* will be analysed in Chapter 5, and an analysis will be sketched for *acquire* as a typical resultative verb in Chapter 6. Here I would like to point out one aspect of (4.59) which is at odds with the intuitive meaning of the (quasi-)Definiteness Effect, or that of Hungarian Definiteness Effect verbs. According to Anna Szabolcsi's dictum (which could indeed be the leitmotif of this thesis) these verbs describe what is newly created or newly available (at some Goal location or with some Beneficiary or Possessor). Now (4.59), repeated here as (4.63) describes transitions from the perspective of 'narrative omniscience', or at least from the perspective of someone for whom the Theme is familiar, at least in the local context of the consequent state description.[20]

(4.63) *a.* A door opened $\rightsquigarrow$
b. $\exists x.[door(x) \wedge BECOME\ (open(x))]$

[20]Implicit in this comment was a leap to a quasi-dynamic framework, indicating the option of simply supplementing Dowty's system with a dynamic module.

To see that *BECOME* involves omniscience (or 'I know more than you do'), here is the relevant translation by Dowty for English *find*, when it means *come across*:

(4.64) $\lambda\mathcal{P}.\lambda x.\mathcal{P}y[BECOME\ [know'(x,[exist'(y)])]]$

(Dowty (1979/1991):365)

(4.64) says that there is something whose existence was not known to the Experiencer before the event, and it becomes known to him/her after and because of finding it. In other terms, such sentences convey discourse-new information, describing the way the relevant individual becomes known to the Experiencer. This however cannot be handled in a static framework, because the precondition state (from the Experiencer's perspective) involves *lack* of information rather than negative information. I would like to state that this acquisition process, as it were, cannot be handled in a dynamic framework that builds on Dowty's logic, either. (I.e. in a logic with a Montagovian syntax, and dynamics in the interpretation.)

Decomposition in DRT

In the previous part it was said of the *BECOME* operator that it renders the Theme discourse referent familiar in the local context of the consequent state. To be exact, this is a property of *BECOME* when made part of a dynamic framework ('dynamic' meaning both DRT and versions of Dynamic Predicate Logic). That this is so is shown by the DRT analysis of discourses like (4.56)–(4.58) from the previous part, or the analysis of (4.65) below. (The representation of (4.65) in (4.66) follows the methodology of Kamp and Roßdeutscher (1994b), Kamp and Roßdeutscher (1994a), the first publications in what may be called lexical/sublexical DRT). The reason is, precondition states are said to enter anaphoric connections with (verbs from) previous sentences, and then, obviously, the Theme discourse referent will be familiar in the local context of the consequent state.

According to more recent analyses (Sæbø (1996), Roßdeutscher (2000)) precondition states have the status of a presupposition, and this is the reason why they can enter anaphoric relationships with such ease. The case of Hungarian ±prefixed verbs adds some complexities to the hypothesis that precondition states are presuppositional. These (the complexities) will become apparent in the course of the following subsections.

The following is a typical instance of narrative discourse, where the order of sentences matches temporal order, and coherence is established through anaphoric connections between the object *NP*s and subevents:

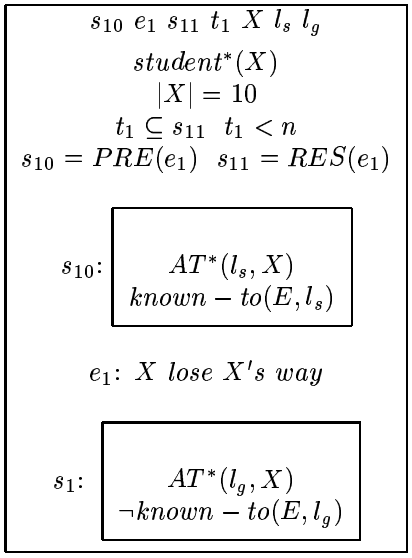
(4.65) *a.* Ten students lost their way
b. John found one of the girls

Both event descriptions in (4.65) contain a precondition state and a consequent state. The consequent state of the first event (say, not knowing the students' whereabouts) is identified with the precondition state of the second event[21] (that of a girl being at an unknown location). The following is a rough representation of the two sentences from (4.65). In particular, the particle verb *get lost* is analysed in such a way that ignores both (i) what it means to know where someone is, i.e. issues of spatial location and reasoning, and (ii) questions related to the cognitive Agent(s): whether the Experiencer, the person(s) supposed to be in the know, is identical to the person who gets lost, or whether there are others to whom this spatial knowledge may be relevant. In fact, in (4.66) an Experiencer discourse referent E is assumed, such that both X (representing the group of people lost) and John, the Agent of the second sentence, are assumed to belong to it.

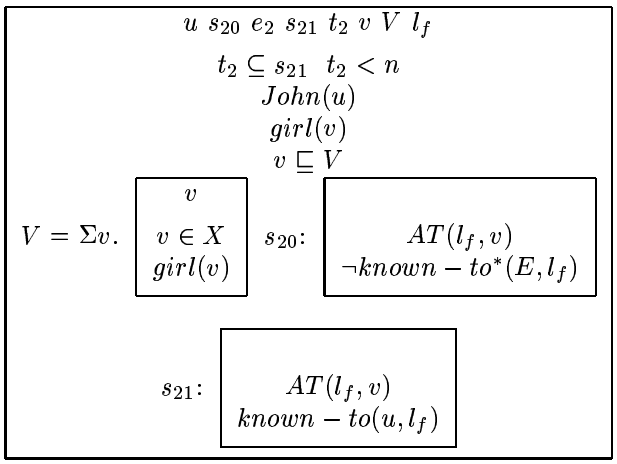
[21] To be exact, the precondition state of the second sentence is a *sub-state* of the consequent state from the first sentence.

Despite its coarseness, (4.66) may still be sufficient as a starting-point for cross-linguistic comparison:[22]

(4.66) a.



b.



In prose, (4.66) conveys the following information. (4.66a) says that there is a group X of ten students, who in state s_{10} had been at a known location l_s, and who, as the result of an event e_1 came to be at an unknown location l_g—this corresponds to the consequent state s_{11} of e_1. The referent E is shorthand for Experiencer. The initial group X, is taken to belong to it, and so is u (=John).

(4.66b) says that a girl v was (in state s_{20}) at an unknown location l_f, and as a consequence of John finding her, her location becomes known (this is state s_{21}). The intended anaphoric connections between the two representations are the following: the precondition state s_{20} of the second DRS is bound to s_{11}, the consequent state from the first DRS (better said, it is a substate of s_{11}); the context set V for the indefinite is bound to a subset of X, and l_f is bound to l_g. V is defined as that subset of X that contains girls only. As pointed out by Hans Kamp (p.c.), to whom I owe this improvement on (4.66), this covers both the case when V is a proper subset of X, i.e. it is a case of non-monotone anaphora, and the case when $X = V$.

The aim of this exercise was to show that subevents from the entries of English verbs can and do enter anaphoric connections. The question is, what happens to Hungarian Definiteness Effect verbs. Or, to English opaque (quasi-Definiteness Effect) verbs. And, how these verbs are to be analysed in DRT.

[22] Note also that the precondition states s_{10}, s_{20} do not have presuppositional status, following the original papers by Kamp and Roßdeutscher.

4.4.3 Hungarian Existential Sentences

In narrative sentence-pairs like (4.65), coherence is seen as the outcome of anaphoric connections between individual and (sub)event discourse referents. What we find with Hungarian existential sentences is that their verb cannot enter such connections. First, here are two Hungarian counterparts of (4.65):

(4.67) *a.* Tíz diák eltévedt
Ten student away-got-lost
"Ten students lost their way"
*b*1. ???János talált egy lányt
John found one girl-Acc
Intended: "John found one of the girls"
*b*2. János meg-talált egy lányt
John MEG-found one girl-Acc
"John found one of the girls"

The continuation (4.67b2), which contains a prefixed verb, is perfectly appropriate. This was to be expected, on account of the Specificity Effect. In turn, the existential sentence (4.67b1) is inappropriate. (4.67b1) is felt to be disconnected from (4.67a), even if the girl John found is in fact one of the lost students. Even in such a scenario the sentence can only mean that John came across some girl or another. That is, it conveys, as it were, the perspective (or information state) of someone who lacks the relevant information. The information missing from (4.67b1) can be added *afterwards*, as an Elaboration:

(4.68) Később kiderült, hogy az elveszett diákok közül való
Later out-was-found-out, that the away-got-lost students from-among VALÓ
"Later she was found out to be one of the missing students"

The following is another example of an infelicitous narrative. I will concentrate on this example in what follows:

(4.69) *a.* Az előtérben állt pár bútordarab
The lounge-in stood a-few piece-of-furniture
"There was some furniture in the lounge"
b. #János *hozott* egy széket
John brought a chair-Acc
"John brought a chair"

(4.69) can have two readings, depending on the relationship between the locative phrase in (4.69a) and the Goal of the event described in (4.69b).

On one reading, the locative phrase from the first sentence is taken as the Goal of *hoz* 'bring' from the second sentence. (4.69b) then means that John brought a chair into the lounge. In this case (4.69) is borderline-acceptable, but the indefinite in (4.69b) needs to be linked to the first sentence by means of some discourse particle such as *is* 'too', in order to signal the connection between furniture and chair.

The relevant, intended reading of (4.69) is the one where the locative phrase in (4.69a) is intended as the Source for the event in the second sentence. So, the intended reading of (4.69b) is *John brought a chair from the lounge, from among the furniture that was there.* This, however, is not possible for (4.69b) on its own. The point is, the chair mentioned in (4.69b) is not understood as a subset of the group mentioned in (4.69a). Nor is the lounge mentioned in (4.69a) understood as the Source of the event described in (4.69b). (Unless this is made explicit, e.g. by adding the anaphoric adverbial *onnan* 'from-there' to (4.69b).) That is, (4.69a) is not understood as providing the precondition state of the event in (4.69b).

The kind of link that *is* allowed is to a previously introduced location that serves as the Goal for the Definiteness Effect verb:

(4.70) *a.* Ebben a szobában sokáig nem volt bútor,
This-in the room-in for-a-long-time not was furniture,
"For a long time there was no furniture in this room,
b. amíg János nem *hozott* egy széket
until John not brought a chair-Acc
(this was the case/that is,) until John brought a chair"

(4.70) shows that the adverbial in the first sentence provides the Goal of the event described in the second sentence. Indeed, the state in (4.5.1a) describes a state that precedes the event in (4.70b). (This was the case with the irrelevant reading of (4.69) as well.) The question is whether in this case one can speak of a connection established at the level of event structure as part of the entries of the verbs, in the manner seen for the English case (4.65) and its DRT-analysis in (4.66).

The answer to this question is that such examples are in fact taken to indicate that Hungarian Definiteness Effect verbs lack precondition states. If a state description in preceding discourse is 'felt' to be the precondition state of such a verb, this may be due to bridging through temporal or locative anaphora. (4.70) can be seen as a case of 'locative' bridging, since the location of the state from the first sentence is the Goal of the event from the second. The following may then be a case of 'temporal' bridging:

(4.71) *a.* János addig járt-kelt az erdőben,
John till ambled the forest-in,
"John ambled in the forest,
b. amíg talált egy szál kosbort
until found one stem orchid-Acc
till he found an orchid"

(4.71a) can be seen to describe the precondition state (or preparatory stage) to the event of orchid-finding from (4.71b), since being in the forest may be seen as a precondition to finding (some species of) orchids. But here, I think, the connection is provided by the complex connective *addig ... amíg* 'until'. Indeed, in (4.72), which lacks this connective, the sentences are felt to be (more) disconnected:

(4.72) *a.* János járt-kelt az erdőben.
John ambled the forest-in,
"John ambled in the forest,
b. (És) talált egy szál kosbort
found one stem orchid-Acc
(And) he found an orchid"

The most important point (in my opinion) as regards 'antecedent' sentences like (4.71a) is that they may not contain information about the Theme discourse referent, not even indirectly:

(4.73) *a.* János addig írt,
John until wrote,
"John kept writing,
b. ???amíg írt egy levelet
till wrote one letter-Acc
till he wrote a letter"

(Kálmán (1995))

(4.73) is infelicitous, presumably because links through the the *subevent* structure of the verbs are not possible—this in turn supports the conjecture that possible links may be only temporal or

spatial, as seen in the preceding examples with *addig ... amíg*. Indeed, (4.73b) can be anteceded by a sentence that provides a temporal link:

(4.74) *a.* János addig ült az asztalánál,
John till sat the table-Poss3Sg-at,
"John sat at his desk
b. amíg írt egy levelet
till wrote one letter-Acc
till he wrote a letter"

The question whether Hungarian Definiteness Effect verbs lack a precondition state (or whether they have one, but it is different from typical English-style precondition states) is a subsidiary of the observation that these verbs do not describe change in the typical 'English' manner. That is, instead of describing the transition of a given Theme from Source to Goal, these verbs describe change *at a given Goal* (or with a given Posssessor/Beneficiary). This way of describing change has been, I think, amply illustrated in the examples from this part. But, if change for these verbs means what is new with some Goal, and not how a given Theme passes from one state to the next, then these verbs cannot have English type precondition states—simply because 'English' type precondition states concern par excellence the Theme.

I will in fact assume that non-stative Hungarian Definiteness Effect verbs lack a precondition state altogether. The reason for this is that the one way of defining a precondition state that I know of will yield undesirable results. Suppose that this state (say, s_p) says that there is a (possibly collective) discourse referent α *AT* Goal γ (s_p: $AT^*(\gamma, \alpha)$). Then the Theme discourse referent, say, β, can be seen as an addition to α. The only problem with this definition is that it clearly yields absurdities if the antecedent sentence explicitly says that prior to the event there was *nothing* at γ.To conclude, I think it is safer to assume no precondition states for Hungarian Definiteness Effect verbs, and to take the few cases of felicitous discourse connections as instances of anaphoric links between non-event type discourse referents.

In light of the data and the conclusions from this part, one can see why Dowty's *BECOME* and his overall decomposition template is not suited to decompose Hungarian Definiteness Effect verbs. This is because *BECOME* provides a precondition state of the 'English type', with the direct object having wide scope over the (complex) event description. In addition, the direct object variable is familiar in the *local context* of the consequent state description. In the context of a dynamic framework this corresponds to what has been termed as 'narrative omniscience', which is at odds with the discourse-novelty of existential sentences.

If one were to use some version of *BECOME* for Hungarian *hoz*, the (implicit) Goal argument would have to scope over this operator, since such verbs describe what changes at a *fixed* location or Goal. (And the Theme argument would only appear in the consequent state.) I will not attempt such a redefinition of *BECOME*, so in Chapter 6 a different analysis will be proposed. This analysis will be quite uniform for Hungarian verbs and English *there be*. Where English creation and resultative verbs are concerned, it is not clear at this point whether their similarities to Hungarian Definiteness Effect verbs would allow for a (perfectly) uniform analysis.

Event Novelty

The lack of subevent-level discourse connections for Definiteness Effect verbs implies that the events described by these verbs are to be new in discourse. The discussion will be based on Kálmán (1995).

If the Definiteness Effect is seen as a novelty constraint on the relevant *NP*, then in Hungarian *NP*-novelty follows from the novelty of the event discourse referent(s) introduced by the verb. (An added assumption is that the verb contains a binder that makes the Theme *NP* dependent on it.)

The event novelty constraint was in fact first formulated in Kálmán (1995). According to László Kálmán, the Definiteness Effect in Hungarian is present with nonstatives if and only if the verb has terminative aspect **and** describes a new event. This is taken to mean that the event structure of Definiteness Effect verbs consists in a transition (perparatory phase) and a consequent state, and

that the novelty of both subevents (and that of the complex event formed by these two) counts as a sufficient condition for the Definiteness Effect.

That the novelty constraint is indeed a sufficient condition to the Definiteness Effect can be seen from the fact that if the relevant eventuality referent is not new, or at least not foregrounded in some sense, then there is no Definiteness Effect. The precise status of this constraint is not clear at this stage of research; what it certainly does show (in my opinion) is that the Definiteness Effect is indeed a novelty constraint. That is, it lends support to those analyses (Ward and Birner (1995), Blutner (1993), McNally (1998)) that retrace the weak–strong distinction among *NP*s to the discourse new (or familiar) status of variables.

The best-known case as regards the cancellation of the Hungarian Definiteness Effect is with Focus (this could be seen in the previous chapters, too):

(4.75) Minden levelet [JÁNOS]$_F$ írt
Every letter-Acc [JOHN]$_F$ wrote
"For every letter x, it was John who wrote x"

Hungarian Focus is a presupposition trigger (this was discussed in Chapter 2), and the verb is said to be part of the presupposition of Focus.

In addition to Focus, Kálmán shows the loss of the Definiteness Effect in relative clauses. This is seen in (4.76a), which is Kálmán's original example. His intuitive explanation for (4.76a) is that verbs in relative clauses describe familiar, or at least backgrounded eventualities, and this is why they do not show the Definiteness Effect.

(4.76) *a.* Minden levél, amit János írt
Every letter, which-Acc John wrote
"Every letter John wrote"
b. Minden levél, amit $*$ írt János
Every letter, which-Acc wrote John
Intended: same as above
c. Minden levél, amit írt
Every letter, which-Acc wrote
"Every letter s/he wrote"

In (4.76a), indeed there is no Definiteness Effect. But the preverbal *NP* looks suspiciously like a second occurrence Focus, which casts some doubt on the discourse status of verbs in relative clauses. My point is that verbs in relative clauses may need additional 'support' from Focus in order to convey genuinely backgrounded information. It is as if the syntactic environment of the relative clause were insufficient for backgrounding. This suspicion is supported by (4.76b), where the relevant *NP* is in postverbal position, and the sentence is indeed felt to be very odd. position. On the other hand, (4.76c), with a *pro* subject, is perfect. I will leave the issue of relative clauses as a puzzle for the future.

There is no Definiteness Effect in sentences that stand in an Elaboration discourse relation to a preceding sentence (which may or may not be an existential sentence). To my knowledge, this has not been noted in the literature so far:

(4.77) Érkezett egy orvos, és hozta a feleségét is
Arrived one doctor, and brought+Def3Sg the wife-Poss3Sg-Acc too
"There arrived a doctor, and he brought along his wife (too)"

The last instance of the loss of the Definiteness Effect is ellipsis or gapping. To my knowledge, this too has been absent from the literature so far.

(4.78) János kapott egy macskát és Mari a kölykeit
John received one cat-Acc and Mary the kitten-Poss3Sg-Pl-Acc
"John received a cat and Mary its kittens"

If the Definiteness Effect is seen as a novelty constraint on the relevant *NP*, then in Hungarian *NP*-novelty is seen to follow from the novelty of the event discourse referent(s) introduced by the verb. (An added assumption is that the verb contains a binder that makes the Theme *NP* dependent on it.) This will be made formally precise in Chapters 5-6.

4.4.4 Prefixed Verbs

What is in the Precondition State

The tests with negation and modification with *again, almost* have shown that *meg*-sentences have a subevent structure with accessible subevents. Then it comes as no surprise that prefixed verbs describe change in the typical 'English' way (with some additional familiarity properties), and can be part of coherent mini-discourses like (4.79).

(4.79) *a.* Az előtérben állt három szék és két fotel.
The lounge-in stood three chair and two armchair
"There were three chairs and two armchairs in the lounge"
b. Aztán János *be-hozott* két széket
Then John in-brought two chair-Acc
"Then John brought in *two of the chairs*"

On one reading of (4.79), the Source of the event described in (4.79b) is the lounge mentioned in the first sentence. Note that the indefinite *két széket* ('two chairs') in the second sentence has a partitive-specific interpretation, paraphraseable as *two chairs from the lounge*, so this is a typical instance of the Specificity Effect.

In fact, one has something stronger: *meg*-sentences *require* that at least their precondition state should be provided from preceding discourse. Now this goes hand in hand with the requirement that prior context contain an antecedent for the *internal arguments* of these verbs. So, one can advance the hypothesis that the antecedent of the internal argument discourse referent be introduced in a sentence/clause that describes the precondition state (or preparatory process) of such a verb. In other words, the presupposition that involves the Theme concerns in fact the precondition state. I take this to be in fact an analysis-friendly refinement of an observation made as early as 1966 in Perrot (1966): Hungarian prefixed verbs describe familiar or expected events. In this thesis event familiarity in fact means the familiarity of the precondition state.

The antecedent-seeking nature of prefixed verbs can be shown by the negative (odd) example from (4.80b). The oddness of this sentence as a continuation of (4.80a) shows that the Theme discourse referent (the *pro* subject from (4.80b)) may not be introduced without an appropriate temporal/subevent level connection. (4.80b) requires an antecedent whose time is within the time of the (expected or predicted) pregnancy.[23]

(4.80) *a.* Másfél éve meg-mondtam, hogy Marinak gyereke lesz
1,5 year-Poss3Sg MEG-said+Def1Sg, that Mary-Dat child-Poss3Sg will-be
"One and a half years ago I predicted that Mary was going to have a child"
b. #Tegnap meg is született
Yesterday MEG IS was-born3Sg
"Indeed, it was born yesterday"

Another infelicitous example is (4.81). The oddity of (4.81b) is seen to follow from the unavailability of an appropriate state description. The point is, (4.81a) is not a suitable antecedent for the verb *meg-talál* from (4.81b), even though (4.81a) introduces a group that can be construed as the antecedent of the indefinite from (4.81b). That is, an anaphoric connection between individuals is insufficient for the Specificity Effect shown by *meg-talál*. This verb requires a suitable state description as antecedent as well, and this is not provided by (4.81a). In simpler terms, (4.81b) needs to be

[23] An added twist to this example is that the subordinate clause in the first sentence means *Mary was pregnant* and not *Mary would have a child some day.*

linked to a state that says that some people were lost, and this is not provided by the first sentence: if someone finds their way back to camp, then they are not lost anymore.

Anticipating the (formal) lexical decomposition from Chapter 7, one can say that (part of) the presupposition of (4.81b) is that there is a collective discourse referent in the state of being lost, or "unavailable", and this is not provided by (4.81a).

(4.81) *a.* Tíz diák el-tévedt, majd magától vissza-talált a táborhelyre
Ten student pfx-lost3Sg, then self-from back-found3Sg the camp-to
"Ten students lost their way, then they found their way back to camp by themselves"

b. ???János meg-talált egy lányt
John MEG-found3Sg one girl-Acc
"John found one of the girls"

(4.81) can also serve to show that the presupposition triggered by *meg* is anaphoric. One cannot accommodate the existence of another group that lost its way, that is.

Prefixed verbs can also be bridged to appropriate discourse antecedents, as shown in (4.82). In fact, bridging itself need not involve the eventuality discourse referents; rather, it involves the indefinite from (4.82b), which is bridged to the possessive description from the first sentence.

(4.82) *a.* János fel-kereste egy festő műtermét, és
John up-sought one painter studio-Acc, and
"John visited a painter's studio, and

b. meg-vett egy képet
MEG-bought one painting-Acc
bought one of the paintings there"

At this point, one can say more about the precondition states of prefixed verbs, and about the anaphoric connections that involve the Themes of these verbs. This is the following: (i) Prefixed verbs (especially those with the prefixes *meg* or *el* 'away') introduce a (presuppositional) Source argument in the precondition state. (ii) The Theme discourse referent is linked to preceding context with the mediation of the Source argument. In the case of (4.82), things work as claimed here: the Theme of *meg-vesz* is bound to the Source location (a painter's studio).

At first sight, the verb *meg-talál* from (4.81b) seems to be a counterexample, since the Theme from the second sentence is bound to a context set, and not to a locational/possessional Source. In fact, *meg-talál* itself can be seen to conform to the 'connect through Source' generalisation: with the verb *meg-talál*, I propose that the context set itself serves as Source. This is because the actual linking mechanism of the Source, as well as the nature of the relation between Source and Theme, depends on the properties of the host verb itself. This will become apparent when the inventory in 4.4.4 is considered.

With *meg-talál* 'meg-find', *meg-hoz* 'meg-bring' (bring as promised), *meg-kap* 'meg-receive' (receive as promised), and several other verbs, the Source serves as context set for the Theme, and they stand in a mereological part-relation to each other. With verbs like *el-lop* 'away-steal', *el-hoz* 'away-bring', the Source can be a location or the former Possessor, and the relation between Source and Theme is either ownership, or being located at some location.

Prefixation can then be seen as a switch between Source and Goal, meaning a change in argument linking. In the case of the verb *hagy* 'leave', discussed earlier in this chapter, this means a change in linking an oblique or a locative phrase. Without a prefix, Definiteness Effect *hagy* is understood as leaving something at the Goal/for the Beneficiary. The complex verb *meg-hagy* on the other hand means 'not to take away something from the Source'. In other cases, the Source may be linked to the direct object, and the Theme may be optional, or may not surface altogehter. An example of this latter type of linking *ki-issza a poharát* lit. out-drink his glass(Acc) 'drink his/her glass empty'. The following part, which concludes this subsection, contains a systematic description of variations in the contribution of *meg*, depending on the properties of its host verb. But there is one more thing one can do without that systematic analysis of (host) verb classes, and that is to note that there

is a difference between 'make available' verbs and creation verbs, as regards their presuppositional behaviour when prefixed with *meg*.

An example with a creation verb is shown (4.83) below. (4.83) serves two purposes. First, this example, too, can be seen as an instance of an indirectly provided antecedent (if John has a meeting with the publisher, it is reasonable to infer that they discuss plans for publication). The other issue concerns the discourse antecedents for prefixed *creation* verbs. With prefixed creation verbs, discourse properties are at odds with denotational properties: their Theme is newly created, yet it needs to have an antecedent from discourse. (4.80) and (4.83) show that antecedents are contained typically in statements that express plans, conjectures, or predictions. According to Kiefer (1983), these antecedents are modal statements. The sentence with the prefixed verb then says that the current world (at speech time, the latest) is such where at least part of such a statement is verified.

(4.83) *a.* János tárgyalt a kiadóval
John talked the publisher-with
"John had a meeting with the publisher"

b. Hat hónap múlva írt egy könyvet
Six month passed wrote one book-Acc
"Six months later he wrote a book"

c. Hat hónap múlva meg-írt egy könyvet
Six month passed he MEG wrote one book-Acc
"Six months later he wrote up a book"

In the case of (4.83), the modal statement would be *it is possible/conceivable that John will produce something for the publisher*. The writing of a book can be seen as a partial realisation of that plan—the indefinite may be seen as a cue for (possible) partiality. The notion of perspective, understood as information relative to someone's knowledge state, is relevant for the Specificity Effect — just as relevant as in the case of Definiteness Effect verbs. The necessary extra information for prefixed creation verbs is (i) a (conjectured) plan as regards the future action and its envisaged outcome, and (ii) the speaker's belief that the event that actually takes place is a realisation of that plan. That is, (4.83a,c) can describe the information state of someone who does not have direct access to the meeting between John and the publisher, but who nevertheless makes an educated guess as to what may have happened then. Hence the label 'conjecture' as regards the use of (4.83c). If someone has full(er) knowledge about the meeting, then s/he can use (4.83c) to describe the realisation of an actual plan or agreement between John and the publisher.

That *meg* can express some realisation or fulfilment relation is shown by certain psych-verbs that become veridical when *meg* is added to them, in the sense that their argument denotes or describes an event that does indeed take place. For instance, *meg-álmodik* 'meg-dream' means to have a premonitory dream, confirmed by later events. *Meg-jósol* 'meg-fortune-tell' also involves a true prediction. Or, *meg-vár* 'meg-wait/expect' means to wait until something happens or someone comes.

The Meaning of *Meg*(i): What Different Combinations Mean

In this chapter the conditions for the Definiteness Effect have received a fairly full description. By contrast, the Specificity Effect has received comparatively little attention. It may seem from the discussion so far that any prefix, with any host verb may be a presupposition trigger. Other passages of the discussion seemed to imply that this is so only when the host verb is a Definiteness Effect verb, and the prefix is *meg* or *el* 'away'. A full inventory of possible constraints is unfortunately not within the scope of this thesis. Here, however, I would like to list some representative cases. The typical Specificity Effect prefix is *meg*, possibly due to the relatively unconstrained manner in which it can combine with verbs. Presumably this is because of its impoverished meaning contribution. The examples below show that it means something like fullness (or its denial), or fulfilment, realisation. The prefix *el* also shows the Specificity Effect, but it cannot combine with many verbs, possibly because of its original spatial meaning ('away').

The following list is an inventory of complex verbs prefixed with *meg*.[24] There are many other cases when *meg* merely contributes a final state to an otherwise purely durative verb. Some examples are *meg-etet* 'feed', *meg-ágyaz* 'make the bed', *meg-nyír* 'make a haircut', *meg-mos* 'wash'. In other cases the final state entails reaching some contextually established measure or threshold: *meg-nő*: 'grow up'. But all these cases are relatively simple and straightforward, as compared to those in the following list. (True, the list itself contains cases of 'reach a contextually given standard'.)

The purpose of presenting this list is to sketch a background, or context, against which the analysis of some prefixed verbs can be evaluated. Also, this list serves to demonstrate that the actual contribution of the prefix (in terms of aspect, argument structure and presuppositionality) depends to a significant extent on the host verb itself. (This much was apparent from earlier examples, but this list may serve to reveal some regularities.)

meg-talál 'meg+find'; find/retrieve what is lost/missing/or whose location is unknown (errors in a program, a new but predicted element in the periodic table etc.); **DE, P**.

meg-keres 'meg+seek': search and retrieve; this is a fully extensional verb, as opposed to unprefixed *keres* 'seek'. **P**.

meg-vesz 'meg+buy': buy something available (in shop e.g.) or something planned/intended to be bought a.s.o.; **DE, P**;

meg-szerez 'meg+acquire': acquire something (i) familiar, or (ii) planned or promised; **DE, P**.

meg-lop 'meg+steal' cause someone not to have something, or not to have all of his/her possessions anymore; the smallest amount is sufficient; arg. frame: subject: agent; object: Source (Maleficiary); oblique (optional): the thing stolen; **DE; P:?**;

meg-hagy 'meg+leave': not to take something from Source (location, owner); **DE; P**;

meg-tesz 'meg+do/place' carry out action (as planned/promised/requested); **DE, P:?**;

meg-hoz 'meg-bring' bring something (as) promised/requested/ commissioned; deliver; **DE, P**;

meg-ad(ja magát) 'meg+give' +fake reflexive: surrender;

meg-ad 'meg+give' give something as promised/requested (DEBTS!); **DE, P:?**;

meg-ajándékoz 'meg+give-present'; arg. frame: subject: Agent, object: Beneficiary, oblique (instrumental): Theme (optional); with prefixless *ajándékoz*, the object is the Theme, and a Dative oblique is Beneficiary;

meg-érkezik/jön 'meg-arrive/come': arrive according to plan/invitation; **DE, P**;

meg-vág 'meg+cut' cut (surface/body), make an incision; smallest cut sufficient to break surface; **DE; P(?)**;

meg-lő : 'meg+shoot': shoot, wound by shooting; **DE; P:?**;

meg-tör 'meg-break': 'break surface/resistance/silence'; **DE**;

meg-tölt 'meg-fill' fill (direct object: container only); **DE; P:?**;

meg-rak 'meg-load' load full, burden; (direct object: container; adjunct(optional): thing loaded); **DE; P:?**;

meg-szed 'meg-pick': pick full (container, basket); or: pick bare (e.g. tree, vine); this latter is dialectal, to the best of my knowledge; **DE; P:?**;

meg-szedi magát 'meg-pick' +fake reflexive; become well off gradually (by picking at this and that); slightly pejorative;

[24] **DE** marks Definiteness Effect host verbs; **P** marks presuppositionality.

meg-eszik/iszik 'meg-eat/drink': consume full amount of; **DE; P**;

meg-rendel 'meg-order': order acc. to plan; subscribe to; **DE; P**;

meg-vár 'meg-wait': wait until something happens/someone comes; **P**(acc);

meg-álmodik 'meg-dream': have a premonitory dream confirmed by (later) events; **P**;

meg-győz 'meg-win': convince;

meg-beszél 'meg-speak': discuss;

meg-beteg-szik 'meg-become-ill': fall ill, lose health;

meg-gyógyul 'meg-become-cured': recover, regain (full) health, as opposed to *ki-gyógyul* 'out-become-cured', which means cure from one (specific) illness;

meg-énekel 'meg-sing': create an artistic representation of (esp. in literature or music); sing someone's praise/laud; **DE**;

meg-ír 'meg-write': (i) write up (as planned etc); (ii) portray/describe/express in writing (e.g. ideas, experience); same with *fest* 'paint', *rajzol* 'draw'; **DE, P**;

meg-szül 'meg-give-birth-to': give birth to a child; state of pregnancy familiar, child expected; **DE, P**; (same with *meg-születik*, 'meg+be-born');

meg-alak-ul 'meg-be-formed': be formed, constituted (as planned); **DE; P:**; (same with *meg-alak-ít*, its transitive causative counterpart);

meg-varr 'meg-sew': (i) create, by sewing, a new article of clothing, as planned; (ii) mend an existing article of clothing (or, mend a hole/gash); **DE, P**;

meg-él 'meg-live': eke out a living, survive, be able to grow/live in a habitat;

meg-szeret 'meg-love': come to love/like;

meg-gyűlöl 'meg-hate': come to hate;

meg-tud 'meg-know': find out;

meg-ismer 'meg-know': become acquainted/familiar with;

meg-van 'meg-is' (i) be recovered; (ii) to be still there; **DE, P**;

meg-tart 'meg-keep': keep according to plan or contrary to plans; **DE, P**;

meg-marad 'meg-remain': remain—contrary to expectations, or in contrast with another group (e.g. *John lost many heads of cattle, but a few still meg-remained to him*); **DE; P:?**.

This list contains a significant partitioning of Definiteness Effect host verbs, in that not all of them are in fact robust presupposition triggers. The generalisation is that such a complex verb is shows the Specificity Effect just in case the argument linking properties of the host verb do not change. *Meg-talál* 'meg-find' or *meg-hoz* meg-bring 'deliver', 'bring as promised' preserve the argument frame of their host verb, and they are indeed presupposition triggers, in that they survive the negation and conditional tests:

(4.84) *a.* János nem talált meg semmit, ##??? hiszen nem is veszett el semmi
John not found MEG nothing-Acc, since not IS was-lost away nothing
"John has found none of the missing things, since there is nothing missing"

b. Ha János megtalál egy hibát, akkor örül
If John MEG-find-3Sg one error-Acc, then is-glad
"If John finds one of the errors, he is glad"

The list above contained several verbs whose presuppositional properties were questioned. These included e.g. *meg-lop* lit. meg-steal 'rob of something', or *meg-szed* lit. meg-pick 'pick full'. With these verbs the direct object has a Source or Goal (container) role, whereas the host verbs themselves link the direct object to the Theme. Here I would like to report that (i) in simple sentences these verbs do have a 'specific' flavour to them, but (ii) this is lost under negation or in conditionals:

(4.85) *a.* János nem lopott meg senkit, mert ma nem járt itt senki
John not stole MEG no-one-Acc, because today not walked here no-one
"John hasn't stolen from anyone, because nobody has been here today"
b. Ha János meg-lopott valakit, szólni kell a rendőrségnek
If John MEG-stole someone-Acc, tell-Inf must the police-Dat
"If John has stolen from someone, we have to notify the police"

Neither of the sentences above says that there is someone John has stolen from. Nor do they convey the information that John must have had some plan for stealing. That is, verbs with this type of argument linking trigger at most pragmatic presuppositions, which are easily cancellable.

The Meaning of *Meg*(ii)

On the basis of the list from the previous part, *meg* is seen to have at least the following contribution(s). (The items listed below are alternatives to each other. English verbs enclosed in ' ' are in fact pointers to Hungarian complex verbs.)

- The Theme/Goal(?) reaches a state of 'completion' or 'completeness'; this may be a contextually given measure ('grow', 'improve', 'heal'), or simply the fullness of a container: 'pick', 'fill', 'load';
- the Theme/Source reaches a state that is the opposite of 'fullness' or 'completeness'; in most cases the smallest missing object/the smallest act is sufficient, as with 'steal', 'cut', 'break';
- the (familiar) Theme becomes available for the Beneficiary/epistemic agent, **and** is no longer with the Source: 'find', 'seek', 'buy', 'acquire'; this is also the case with *el-*; a subcase: when the Theme has been promised for, or ordered by, the Beneficiary, as in the case of 'give' ('meg-give' is used almost exclusively in connection with debts) or 'bring';
- verbs of creation: something is created according to previously made plans, promises or conjectures; the event described by the sentence is a (possibly partial) execution of these plans or promises;
- 'proper' stative verbs: a transition occurs, a consequence of which is the state described by the host verb: 'know', 'be familiar with', 'love', 'hate';
- the Beneficiary/Goal has something (available), contrary, or according to, previous plans: 'be', 'keep', 'remain'.

On the basis of these possibilities, I take *meg* to introduce two arguments. One of these is invariably a (deep) object; if overt, it is the Theme. The other may be a Source or a Goal (Source/Goal being a cover term for Recipient/Beneficiary/Possessor as well). The linking of these arguments to those of the verb can vary from verb to verb. Some regularities will be discussed below.

On the roughest paraphrase, *meg* says that the Theme is in, or has reached, a state labelled as meg. As with the resultative combinations shown earlier (*fel-ugat* lit. up-bark, meaning 'bark awake'), the content of this label depends on the host verb. With *meg-talál*, this is being available, or at a known location. With *meg-lop*, it is the Victim/Source missing some of his/her possessions. Perhaps the clearest and most spectacular case of the host verb lending content to *meg* is that of stative verbs. *Meg-szeret* 'meg-love' for instance says that (as a consequence of a transition) the relevant state is that of (being in) love.

After these more general observations, one can now focus on nonstative Definiteness Effect host verbs.

These verbs describe transitions of the Theme from Source to Goal. (Transitives have an external Agent argument.) (4.86) shows linking possibilities of some of these verbs. (*Meg-ad* 'give (something promised)', *meg-érkezik* 'arrive (someone expected)', *meg-hoz* 'bring/deliver (something promised)' are also like *meg-talál* or *meg-vesz*.) Although the contribution of *meg* is not uniform, with this group of verbs it is regular enough for a first analysis.

The following table summarizes argument linking possibilities for a sample of transitive prefixed verbs. (The hosts are Definiteness Effect verbs.) To be exact, the list contains a verb of creation (*ír* 'write'), two verbs of possession change (*meg-lop* '(quasi-)rob', and *meg-vesz* 'buy'), a verb of location change (*hoz* 'bring'), a locative alternation verb (*meg-szed* 'pick bare/full'), and an Experiencer verb (*meg-talál* 'find'). That is, the verbs can all be taken to contain an argument position for an Agent, a Theme, a Source and/or Goal (or both).

The table is intended to contain syntactic information (which thematic role is linked to which grammatical function), and some semantic information, by marking presuppositional status for the discourse referent with a given role. Parantheses indicate optional status, in the sense that there need not be an overt constituent with some thematic role *within the same sentence.*

(4.86)

	Agent	**Theme/Patient**	**Source**	**Goal**
meg-talál (find)	subject	object specific	oblique presupposed	(subject)
meg-hoz	subject	object specific	(oblique) presupposed	(oblique)
meg-vesz (buy)	subject	object specific	(oblique) presupposed	(subject)
meg-lop (rob/steal from)	subject	$\emptyset$ presupposed(?)	object	subject(?)
meg-szed (pick full/empty)	subject	(oblique)	object presupposed?	object
meg-ír$_1$ 'write up'	subject	object *specific*	presupposed or planned	'domain'
meg-ír$_2$ 'express in writing'	subject	$\emptyset$ (oblique)	object	'domain'

This concise table contains the following information:

- If the Theme or Patient is overt and linked to the direct object, then it is partitive–specific. This is the case with *meg-talál* 'find', *meg-vesz* 'buy' or *meg-ír* when it means 'write up'.
- The Goal is either 'there', in virtue of the meaning of the host verb, as with *meg-lop* '(quasi-)rob', or made overt as direct object (with locative alternation verbs like *meg-szed* 'pick full', or *meg-rak* 'load full').
- With the Source, there are several options, both regarding its semantic properties and its linking possibilities.
  - The Source is either presuppositional, and then it is a familiar superset/context set for the Theme ('find', 'bring', 'buy', 'steal'),
  - or it is made overt as object ('pick bare', 'steal from', express in writing/painting).
  - The relation between Source and Theme (or Goal and Theme, in the case of locative alternation verbs) is conditioned by the host verb. With *meg-talál*, it is the mereological part relation: the Theme is a member or a subset of the Source-context set. With e.g. *meg-vesz* 'buy (from)' it is either the mereological part relation (buy two of the chairs), or ownership (buy two of a painters' paintings), or being *AT* some location (buy two

paintings from a gallery). With *meg-lop* ('steal from') it is ownership. With creation verbs, it is some sort of 'realisation', or execution, since the Source is understood to be a plan, and the Theme as a (partial) realisation of that plan.

What one can see here is that the regularities in the contribution of *meg* are conditioned by regularities *within* subclasses of potential host verbs. From this it is clear that a substantial part of the content of *meg* is conferred by the host verb, including the content of the relevant states, the relation between Theme and Source (or Theme and Goal), the ±presuppositional status of the precondition state, and the kind of presupposition triggerered.

4.4.5 Summary

This section can in a way be regarded as a bridge between informal, descriptive work on Hungarian verbs and a proper formal analysis.

In the case of Definiteness Effect verbs the relevant (in)formal constraint is event novelty (event novelty meaning the novelty of the entire event complex contributed by the verb). In Chapter 6 this will mean novelty as a technical term of DRT. The contribution of this section is that Definiteness Effect verbs are found to describe what changes with the Goal, and are assumed to lack a precondition state. These two factors are necessary conditions, I think, for the novelty of the Theme argument in the local context of the consequent state.

By contrast, prefixed verbs have been said to describe expected events (Perrot (1966)), or to be presupposition triggers (Kiefer (1983)). Here it is shown that not all Definiteness Effect host verbs show the Specificity Effect when *meg* is attached to them. The generalisation was that a necessary condition for the Specificity Effect is that the argument linking properties of the verb should be preserved. If a *meg*-verb (re-)links the direct object to the Source or Goal of the event, the resulting complex verb triggers at most a pragmatic presupposition.

With genuine Specificity Effect verbs, the presupposition involves part of their event structure, namely, the precondition state. With verbs like *meg-talál* 'find and retrieve', the presuppositional component is more salient. With creation verbs or other 'make available' verbs (e.g. *meg-hoz* 'bring as promised', 'bring as commissioned'), plans and expectations are more salient. Indeed, these plans belong to the presuppositions of these verbs.

If one attempts a more general characterisation of these two verb classes, one can say that

- in both cases, the semantic properties of the Theme *NP* are tied to subevent structure; anticipating Chapter 6, with Definiteness Effect verbs, Themes are taken to be bound in the consequent state; with prefixed verbs, the presuppositional status of the consequent state (and the relationship between Theme and Source) makes the Theme *NP* dependent.
- Speaking of precondition states, their presence or absence is marked morphologically in Hungarian: a verb (from the relevant semantic class) has one just in case it is prefixed, and lacks one just in case it is not prefixed. This is to be understood in contrast with English, where event verbs are usually said to have precondition states. Hungarian shows that the English state of affairs is not universal. A comparison of the two languages also shows that the presuppositional 'strength' of precondition states can also vary from language to language: accommodation is possible in English, but not in Hungarian (when the host verb is a Definiteness Effect verb).

4.5 Tying Up; Consequences

Summing Up

Hungarian Definiteness Effect verbs and their prefixed variants have been found to have the following properties relevant for the semantics of their internal arguments:

Definiteness Effect verbs have the following properties:

- They show the Definiteness Effect if and only if
  - they have terminative aspect, and
  - their direct object denotes something created, made available or individuated by the event described; this entails that if they have an argument frame where the direct object has a different thematic role, on that frame they do not show the Definiteness Effect; a case in point is the verb *fest* '(cover in) paint': if the direct object denotes the Goal (the object covered in paint), there is no Definiteness Effect;
  - the event discourse referent introduced by the verb is new.
- They have a distinguished argument that can serve as Goal, Beneficiary or Possessor.
- Their entry lacks a precondition state;
- Their event (or preparatory stage) is inaccessible for negation or the adverb *almost*.
- They are uniformly one time only predicates, including verbs of becoming available (with this latter class, being one time only is a discourse property). Among other things, this entails that their Theme has narrow scope relative to *again*. Speaking of *again*, restitutive readings with this adverb are restricted.

By contrast, prefixed verbs are characterised by the following properties:

- Their transition (preparatory stage) component is available for negation and *almost*.
- With *again*, restitutive readings are readily available; the direct object may have wide scope relative to *again*.
- Their entry contains a precondition state; if the host verb is a Definiteness Effect verb, the precondition state has the status of an anaphoric presupposition, comparable to the presupposition triggered by *too* and *again*; with verbs of creation, the presupposition concerns previous plans or expectations. The latter sentence is a refinement of Perrot's observation, viz prefixed verbs describe expected events.
- The presupposition triggered by prefixes contains a distinguished Source argument. In the examples from the previous subsection, the Source could be linked to a context set the Theme is part of, to a location, or to the (original) Possessor. or as a context set for the Theme; indeed, in many cases, the direct object of the prefixed verb will be linked to this argument; in these cases the Theme may be suppressed, or linked to an oblique phrase; with *meg-lop* lit. meg-steal, meaning 'cause someone not to have *all* of his possessions by stealing', the Theme is suppressed; with *meg-szed* lit. meg-pick 'pick full', it can optionally be expressed with an Oblique bearing Instrumental case;
- when expressed by the direct object, the Theme argument has a discourse-linked or specific (partitive-specific) construal, even with verbs of creation.

From a crosslinguistic perspective, Hungarian ±prefixed verbs are relevant because they show two clusters of properties. One concerns the relative 'prominence' of the precondition state or that of the consequent state. The other issue concerns the semantic properties of (subclasses of) opaque verbs (Zimmermann (1992/93), Moltmann (1997), von Stechow (2000b)). At first sight these two properties have very little to do either with each other, or with the Definiteness/Specificity Effect. My point is that both can be seen to follow from the lexical structure (argument structure and event structure) of the verbs themselves. Thus, if an analysis is able to capture the right kind of lexical structure, then it should also predict the profiling and opacity effects that accompany these verbs.

4.5.1 Profiling

In English, with verbs like *receive* or *steal*, either the precondition state or the consequent state may be felt to be highlighted, or 'profiled' (Lakoff, Goldberg). Taking the case of *steal*, the entry of one and the same verbal form is said to contain the information that (i) prior to the event, the Theme is not with the Beneficiary (i.e. it is with the Maleficiary), and, (ii) as a consequence of the event, the Theme is now with the Beneficiary/new Possessor, and (iii) not with the Patient/Maleficiary. Then, 'profiling' is a matter of speaker choice and/or available discourse information.

In Hungarian these options for profiling are made explicit by the presence or absence of a prefix. *Lop* 'steal' on its own serves to highlight the consequent state (the Beneficiary has something new in its possession). *El-lop* on the other hand highlights another aspect of the consequent state: this verb says that the individual denoted by the Theme is missing from the Source location or from its original owner.

Profiling, Hungarian style, can be traced back to the subevent structure of ± prefixed verbs. Definiteness Effect verbs lack a precondition state, and this accounts for the fact that they can only highlight the consequent state. Also, Definiteness Effect verbs lack information on the Source of the event; therefore they can only convey information on the Goal.

With prefixed verbs, the precondition state is presuppositional. This presupposition contains a Source discourse referent that needs to be bound to preceding context—this is seen as the source of the profiling effect. Viz one can either highlight the precondition state, or that component of the consequent state that says that the Theme is no longer with the Source. Alternatively, different prefixes contribute to different profiling effects. With *meg-ajándékoz* 'meg-give-present', for instance, the direct object is linked to the Beneficiary, highlighting the fact that the Beneficiary now has something given as a present. With *el-ajándékoz* 'away-give-present', the object is linked to the Theme; what is highlighted is that the Source does not have something, because that thing has been given away as a present.

In view of this systematic and morphologically marked contrast, the study of Hungarian verbs is useful (apart from being interesting in its own right), since it can help reveal ranges of meaning that in other languages are related to a single form (and wich are accordingly harder to uncover).

In the case of English *steal, take* or *receive*, the verb is assumed to have one entry, containing both a precondition state and a consequent state. Profiling is then seen as a matter of choice, or may depend on discourse factors. There are other English verbs, however, that share some properties with Hungarian.

Find, for instance, can have two, more or less prominent readings (apart from the quasi-Definiteness Effect resultative reading, which in my opinion is quite marked). It can 'highlight' the precondition state, and in this case it means that something previously unavailable has been found (more precisely, its location is now known). Or, it can highlight the consequent state, and then it means that the Experiencer now knows about the Theme, or about its location. In simpler terms, *find* can be synonymous with either *come across* or with *recover, retrieve.*

In Dowty (1979/1991), the two meanings of *find* are translated as follows:

(4.87) *a.* $\lambda\mathcal{P}.\lambda x.\mathcal{P}\{\hat{y} \bigvee z.[place'(z) \wedge BECOME\ [know'(x, \hat{}[be - at(y, z)])]]\}$
b. $\lambda\mathcal{P}.\lambda x.\mathcal{P}\{\hat{y}[BECOME\ [know'(x, \hat{}[exist'(y)])]]\}$

(Dowty (1979/1991):365)

(4.87a) corresponds to the *recover* or *find out where something is* reading. (4.87b) corresponds to the the *come across*, *learn about* reading. Note that this translation corresponds to the perspective of someone to whom the Theme is familiar. This is because implicit in (4.87b) is a precondition state, which says that there is a witness y of the Theme quantifier $\mathcal{P}$, and that the Experiencer x does not know about the existence of Theme y. If the Experiencer's own perspective were adopted, either the precondition state would have a different content, or there would be no precondition state at all. (N.b. it would have to be the Experiencer's information state *at the time* of the finding event.)

The notion of novelty (and novelty as dependent on perspective and information available) and the ± presence of a precondition state leads in fact to the second issue, that of opacity.

4.5.2 Opacity

What Kind of Opacity

If Hungarian affected object verbs are like creation verbs, then they are expected to be opaque verbs (Zimmermann (1992/93), Moltmann (1997), von Stechow (2000b), Burton (1995)), comparable in some respects to verbs like *seek, need* or *owe*). The assumptions behind this expectation are that (i) English creation verbs are opaque (von Stechow (2000b)), and (ii) Hungarian and English creation verbs share some fundamental semantic properties (because of the ontological properties of the events they describe).

Now what I would like to emphasise here is that Hungarian and English verbs have more in common than what would be expected from ontological or interpretational similarities. This has been apparent from the discussion on *again*; here, I would like to add a little depth to this issue, so to speak. Adding depth may mean (i) a performative speech act (attaching the label 'opaque' to certain verb classes), and exploring the consequences of that speech act. (Or at least charting a possible strategy for further explorations.)

Opacity with these verbs is not understood as the lack of existential import, or the failure of subsitution for equivalent expressions. Rather, it is opacity understood as the Theme *NP*'s dependency on the event described by the verb. This dependency can come in several varieties, which differ only as to whether they live in the interpretation or whether they are contextual.

(i) With creation verbs, the relevant individual exists only after and because of the event. (ii) Likewise, with expressions like *find a husband* or *acquire a disciple* an individual acquires the relevant property because of the event. (iii) With Hungarian make available verbs (as with *talál* 'find' or *kap* 'receive') opacity is as *contextual* or *perspectival*: It is understood as conveying that person's perspective or information state, for whom both the event and the referent made available by that event are new, i.e. who learns about the Theme after and because of the event. It was seen in this chapter that with the internal arguments of these verbs certain types of anaphoric connections to preceding context are disallowed, and certain types of background knowledge are not available (viz information about the state that precedes the event). In a limited sense, this can be seen as a form of context-dependent opacity, if you like, since existential sentences can be seen to create a local context with restricted information, from which certain kinds of information from a larger context are excluded.

Parallels

One aspect of the issue of opacity is the parallel between creation verbs and become-available verbs. For Hungarian this was first discussed by Balázs Wacha, in descriptive terms, and was taken up again by Anna Szabolcsi. According to Szabolcsi this similarity is to be understood as involving, among other factors, the one time only property, which is seen as a consequence of the newly created/newly made available property of the Theme.

The similarity of creation verbs and some become-available verbs has been discussed in the English literature of the early nineties as well. The parallel between English creation verbs and so-called 'resultative' verbs, or verbs of acquisition (*find, choose, acquire*) is in fact one of the main findings of Moltmann and Burton. Discussion by these authors focused on referential opacity (with Moltmann), or, with Burton, on the implications of having *have* as a component of event structure. According to Burton, this is the chief source of the relevant meaning effects with resultative verbs.

To this I will add that English Definiteness Effect verbs (expletive+verb complexes) are also opaque. In fact the literature on the English Definiteness Effect contains all the necessary evidence, without the label *opaque* having been attached to this kind of construction. So, English *there be* and *have* will be classed as opaque, along with Hungarian stative Definiteness Effect verbs like *van* 'is', or *tart* 'keep'.

So, one has now three relatively new subclasses of opaque verbs, verbs of creation, Definiteness Effect verbs and 'resultative' verbs. In English and in Hungarian, they are said to share some important properties, and one also has a crosslinguistic parallel. The questions to ask are (i) whether these three classes share properties that differentiate them from all other opaque verbs, and (ii)

what crosslinguistic differences there may be between the verbs of Hungarian and those of English (given the assumption that they share properties that differentiate them from other verbs in both languages).

It was said earlier that with Definiteness Effect verbs, verbs of creation and resultative verbs, opacity is not to be taken as the lack of existential import. Rather, these verbs conform to other diagnostics (the tests are from Moltmann (1997)): narrow scope for the relevant *NP*, unavailability of pronominal anaphora when embedded under quantifiers or operators (as a consequence of narrow scope), and paraphraseability with impersonal relative and interrogative pronouns.

(4.88) *a.* John thinks that there is a cat in the garden. #It is black.
b. Every cat knows that there is a mouse in the attic. #It likes corn.
c. John thinks that Mary acquired/found a husband. #He is a stockbroker
d. John thinks that Mary painted a picture. #It is a still life.

(4.89) Mary found what John has found: an efficient secretary
Mary has what John does not have: a Russian Blue cat

(4.90) *a.* #Who is there in the pub?
b. What kind of people are there in the pub?

(Heim (1987))

Within these classes, resultative verbs are singled out by the fact that their relevant construal depends on the object *NP*. The point is, the object *NP* has to be relational, otherwise there is no opacity:

(4.91) *a.* John thinks that Mary has acquired/found a house.
b. It used to belong to his family

In (4.88c), the discourse referent of the object *NP a husband* becomes Mary's husband after and because of the event described by the sentence. The entire VP is opaque, as shown by the inappropriateness of the anaphoric pronoun. By contrast, (4.91a) contains a nonrelational noun, and so opacity is lost. (And, obviously, the sentence does not mean that something became a house because Mary acquired it.) It needs to be added here that this reading of *find* is clearly distinct from the two more usual readings of this verb (*come across* and *find x's location*). It seems to me that some kind of coercion is involved here, and in the case of *choose* as well, since *Mary found/chose a cat* does not necessarily mean that Mary has a cat.

Definiteness Effect verbs, resultative and creation verbs have a property in common, not shown by other opaque verbs like *seek* or *need*. It is a a phenomenon that (to my knowledge) has received little attention so far in the case of English or German, except for Strang Burton' s dissertation (which however lacks a formally explicit analysis), and recent work by A. von Stechow.[25] This is a quasi-Definiteness Effect with English creation verbs and resultative verbs. It can in effect divide opaque verbs into two natural classes (contra Moltmann's assumptions viz a unified treatment is sufficient for all opaque verbs).

(4.92) *a.* *#Mary had every cat
b. #Mary acquired/found every disciple
c. #Gereon baked every cake (A. von Stechow, p.c.)

This (quasi-)Definiteness Effect can be seen both in Hungarian and English. The difference between the two languages is that in Hungarian this is not a *quasi*-Definiteness Effect, but is grammaticalised. This grammaticalisation has been amply illustrated in this chapter and the previous one.

One of the consequences of this (quasi-)Definiteness Effect is a one time only property: with creation verbs it is an ontological property, with the other verbs from this class it is a discourse property, with the object having a property of token uniqueness relative to the event.

[25] It has been part of linguists' conventional wisdom, though.

Both in Hungarian and in English the (quasi-)Definiteness Effect can be cancelled by certain discourse/information structure factors. Again, in Hungarian, these are grammaticalised (in the sense that the presence of preverbal Focus is obligatory). As seen from (4.93), these factors are (loosely speaking) anaphoricity and Focus.

(4.93) *a*1. Mary had several pets.
*a*2. She had each of the cats for a good many years. (Based on I. Heim (p.c.))
b. Mary had several loyal disciples. She acquired every one of them after a seminar she gave.
c. Gereon baked every cake WITHOUT BAKING POWDER

In Hungarian, the corresponding sentences all have to contain Focus (the Focus-less variants of (4.94) are ungrammatical):

(4.94) *a*. Mari minden követőjét [EGY SZEMINÁRIUMON]$_F$ szerezte
Mary every follower-Poss3Sg-Acc [ONE SEMINAR-ON]$_F$ acquired+Def3Sg
"Mary acquired every follower of hers AT A SEMINAR"
b. Gereon minden tortát [SÜTŐPOR NÉLKÜL]$_F$ sütött
Gereon every cake-Acc [B-POWDER WITHOUT]$_F$ baked
"Gereon baked every cake WITHOUT BAKING POWDER"

Concerning the distinctive properties of these quasi-Definiteness Effect verbs within the class of opaque verbs, I would like to suggest that this is in fact the (quasi-)Definiteness Effect itself.

True, the strong–weak distinction is relevant with *seek*-type verbs, too. As shown Zimmermann (1992/93), if a *seek*-type verb has a quantificational *NP* as internal argument, this will only yield a de re reading.

(4.95) *a*. Ede resembles/seeks a syntactician de re, de dicto
b. Ede resembles/seeks every every syntactician de re only

The point I wish to make here is that even though the weak–strong or ±quantificational distinction is relevant for *seek*-type verbs, it is manifest only in the presence or absence of one reading, but with these verbs a combination with a quantifying *NP* does not yield oddity or ungrammaticality. On the other hand, it is precisely oddity or ungrammaticality what one gets with a (quasi-)Definiteness Effect verb and a strong *NP*.

If the the property that distinguishes *have*, *acquire* and *bake* from *seek* or *resemble* is the (quasi-)Definiteness Effect, then it is expected that the analysis of Hungarian Definiteness Effect verbs will be relevant for their English counterparts as well. In fact, the data on the interactions of these verbs with *again* have been inspired by Hungarian. But one can take things a bit further, and conjecture that (like their Hungarian counterparts), the relevant English verbs (i) show the (quasi-)Definiteness Effect just in case the event discourse referent they introduce is new, and (ii) they combine with their direct objects in a distinctive manner (i.e. incorporate their object *NP*s, which amounts to the binding of the object discourse referent). Opacity or intensionality with these (English and Hungarian) verbs will follow from two factors: (i) from verb and object forming one semantic unit (one semantic word, as it were), and (ii) from the dependency of the internal argument on the event (or situation) discourse referent introduced by the verb.

The discussion of opacity will be taken up again in Chapter 6, a chapter which will also offer a formal analysis of Hungarian Definiteness Effect verbs, together with a brief sketch of *acquire* as a representative of resultative verbs.

4.6 Light Verbs in Hungarian: Some Background Issues

4.6.1 Lightness in Verbs

The remainder of this chapter contains some background information on the syntax and 'structural' semantics of the relevant verbs. This is relevant for semantic composition—semantic composition in

turn is relevant because of contrasts of the type shown here:

(4.96) *a.* *János vasalt Marinak minden inget
John ironed Mary-Dat every shirt-Acc
Intended: "John ironed every shirt for Mary"

b. János *ki*-vasalt Marinak minden inget
John out-ironed Mary-Dat every shirt-Acc
"John ironed every shirt for Mary"

The problem is that (4.96b) does not show the Definiteness Effect, even though it has all necessary conditions for it: the verb *ki-vasal* has terminative aspect, the sentence contains a Beneficiary, and can be taken to mean that some shirts became available for Mary. *Ki-vasal* may even be taken to describe a new, unexpected event. In spite of the presence of all these conditions, (4.96b) does not show the Definiteness Effect, and this is because the prefix has changed the lexical properties of the host verb. Therefore I take the contrast in (4.96a-b) to show the relevance of (very local) semantic composition, which has to be different for prefixed and unprefixed verbs. These differences in turn have to follow from (i) the lexical properties of unprefixed verbs and (ii) the method of composing prefix and verb.

Concerning (i), event structure and argument structure (as discussed in the previous sections) are not sufficient. An additional, interface-related property needs to be invoked. This is the following.

For quite some time, Hungarian Definiteness Effect verbs have been known to be a subset of light verbs. That is, in some respects they are comparable to English *take* or *have, give* (in expressions like *take a nap, have a shower, give a push*, or to light (aspectual) verbs in languages like Hindi (Butt (1998), Butt and Geuder (n.d.)). This analogy means that part of these Hungarian verbs' meaning is to be supplied by another expression.

In languages like English, lightness is more a matter of content, in that for instance *take a shower* has the same meaning as the verb *shower*. Where Hungarian is concerned, lightness at first sight more 'structural' than in English, because a verb like *hoz* 'bring' or *parkol* 'park' has its own meaning. By structural lightness I mean that Hungarian light verbs are to be immediately preceded by an expression, dubbed as a "modifier" in the literature by Hungarian linguists ((Komlósy 1994)). This modifier is a secondary predicate, and its meaning contribution(s) range from completing the event structure of the host verb (4.97a) to introducing new arguments (4.97a), or forming a new, noncompositional and idosyncratic meaning unit with the host verb.

(4.97) *a.* János tele-ette magát—terminative aspect, fake reflexive
John full-ate himself-Acc
"John ate himself full"

b. János be-rúgott—noncompositional
John in-kicked
"John got drunk"

The inventory of preverbal scondary predicates comprise bare nominals (usu. with Accusative or oblique case), resultatives, depictive adverbials, locative phrases(!) verbal prefixes and nonfinite

verbs:

(4.98)	*a.*	János almát evett John apple-Acc ate "John was apple-eating"	bare nominal
	b.	János katonának állt John soldier-Dat stood "John became a soldier"	oblique bare nominal
	c.	János okosnak tartja Marit John clever-Dat keep+Def3Sg Mary-Acc "John regards Mary as clever"	oblique adjective
	d.	János zöld-re festette a kerítést John green-onto painted+Def3Sg the fence-Acc "John painted the fence green"	resultative
	e.	János részeg-en látta Marit John drunk-on saw+Def3Sg Mary-Acc "John saw Mary drunk"	depictive adverbial
	f.	János a szőnyeg alá söpörte a morzsát John the rug under-to swept+Def3Sg the crumb-Acc "John swept the crumbs under the rug"	Goal adverbial
	g.	János fel-csengette Marit John up-rang+Def3Sg Mary-Acc "John woke Mary by ringing the doorbell"	prefix
	h.	János menni akar John go-Inf wants "John wants to go"	Inf $\prec$ Aux
	i.	János el akar menni John away(pfx) wants go-Inf "John wants to leave"	prefix and auxiliary "preverb climbing"

The presence of exactly one preverbal position is supported by the psycholinguistic experiment reported in Pléh (1992)). In a repetition task, preschool children were presented the ungrammatical sentoid (4.99a), with two preverbal elements, intended to be composed as (*wood* (*up*(*chop*)). This was not accepted by the children, who responded with a repaired version of the original sentence, essentially removing one or the other of the offending elements. (4.99b-c) represent the children's repair strategies: either the prefix was dropped, or the bare nominal was substituted for a postverbal definite *NP* (which is no longer a secondary predicate):

(4.99) *a.* ∗A mosolygó óriás fát fel-vágott az udvaron
The smiling giant wood-Acc up-cut the courtyard-on
"The smiling giant chopped up wood in the courtyard"

b. A mosolygó óriás fát vágott az udvaron—bare nom.
The smiling giant wood-Acc cut the courtyard-on
"The smiling giant was chopping wood in the courtyard"

c. A mosolygó óriás fel-vágta a fát az udvaron—prefix
The smiling giant up-cut+Def3Sg the wood-Acc the courtyard-on
"The smiling giant chopped up the wood in the courtyard"

Modifiers can and have to be separated from their host verbs under certain conditions. (These modifiers behave uniformly as regards these conditions. See also Ackerman (1987), Ackerman (1992), Ackerman (1995), Ackerman and Webelhuth (1997). Prefixes can be separated under certain other

conditions, as well.)

(4.100)*Focus* [MARI]$_F$ festette pirosra a kerítést
[MARY]$_F$ painted+Def3Sg red-onto the fence-Acc
"It was Mary who painted the fence red"
∗[MARI]$_F$ pirosra festette a kerítést

Negation Mari nem festette pirosra a kerítést
Mary not painted+Def3Sg red-onto the fence-Acc
∗Mari nem pirosra festette a kerítést
Mary not red-onto painted+Def3Sg the fence-Acc
"Mary did not paint the fence red"

Auxiliaries Mari pirosra akarja festeni a kerítést
Mary red-onto wants+Def3Sg paint-Inf the fence-Acc
∗Mari akarja pirosra festeni a kerítést
Mary wants+Def3Sg red-onto paint-Inf the fence-Acc
"Mary wants to paint the fence red"

A property shared by most modifiers is the loss of the Definiteness Effect. For the sake of brevity, and following standard practice in linguistic notation, the examples all say that the sentence is ungrammatical without the relevant modifier:

(4.101)*a.* Mari [∗(piros-ra) festett] minden kerítést — resultative
Mary [(red-onto) painted] every fence-Acc

b. Mari [∗(az asztal alá) tett-e] a könyvet — Goal phrase
Mary [(the table under-onto) put+Def3Sg] the book-Acc
"Mary put the book under the table"

c. Mari [∗(meg-)vett] minden könyvet — prefix
Mary [(meg-)bought] every book-Acc
"Mary bought every book"

The facts presented here are relevant for this thesis for the following reason. From a syntactic point of view, the Definiteness Effect and the Specificity Effect are seen to have the same source, viz the deficient character of the host verb. This entails that objects of Definiteness Effects verbs will resemble secondary predicates.

Combinations involving a prefix, a resultative predicate, a bare nominal or the perfective operator are instances of the same mechanism that yields a complex verb. This entails that all these modifiers are to combine with the verb in uniform manner at the level of DRS-construction.

The 'light' character of Definiteness Effect verbs, the need for them to be preceded by a modifier seems to be at odds with all Definiteness Effect examples so far. The reason is, in Definiteness Effect cases the object *NP* is postverbal, and the distinguished modifier position remains empty. This can be remedied in two ways. One is to follow a suggestion by Ede Zimmermann (p.c.) and postulate a covert perfectivity operator as a special preverbal modifier. The other option is a proposal made by Anna Szabolcsi in her 1986 paper, and assigns modifier status to the object NP itself.

The presence of a preverbal perfective operator is motivated by the following data, where the aspectual properties of the VP depend on the syntactic position of the object N(P).

(4.102)*a.* János [széket hozott]—durative
John [chair-Acc brought]
"John was chair-bringing"

b. János [hozott] széket—terminative
John [brought] chair-Acc
"John has done some chair-bringing"

In (4.102b), there is no covert preverbal element to complete the structure of the host verb, and yet the sentence has terminative/perfective aspect. (As opposed to (4.102a), which has a progressive/process construal.) Given these two factors, it is useful to postulate a covert perfectivity

operator in (4.102b), which completes the event structure of the verb by adding an end-point to the process described by the verb. The nature of this end-point depends on the object *NP*: if it is a bare nominal, as in (4.102b), it is a non-culminated but bounded process. If the *NP* is postverbal and quantised (as seen in several previous examples), the consequent state will be that of a culminated process.

Alternatively, the perfectivity operator can be related to an individual type empty category coindexed with the object *NP*, as in Szabolcsi (1986). In contemporary syntactic terms, preverbal e_i and the indefinite in (4.103) form one syntactic chain, and share most of their properties. In the case of existential sentences this means that the quantifier inherent in the verb (Szabolcsi's $EXIST$) directly binds the preverbal empty category, but this binding will also be felt by the postverbal *NP*. (For a similar proposal concerning English *there*-sentences see e.g. Cardinaletti (1997).)

(4.103)János [e_i evett] egy almát$_i$
John [e_i ate] one apple-Acc$_i$
"John ate an apple"

At first sight Szabolcsi's empty category and the perfectivity operator proposed here have little in common. They will turn out to be quite similar, however, because the perfective operator (as defined in Chapter 5) will contain placeholders for the discourse referent *and* for the predicate contributed by the *NP*. It will also contain a discourse referent of its own which will bind the one introduced by the *NP*. This corresponds to the intuition that existential constructions involve incorporation. The main difference between the two proposals concerns the relationship between the members of the chain: in Szabolcsi's syntactic analysis they retain their autonomy, whereas in the semantic analysis proposed in Chapter 5 their representations will be merged into one.

(4.104) *evett egy almát*
(s/he ate an apple)
a. [e_i ate] an apple$_i$
b. [*Perf*(i) ate] an apple$_i$

4.6.2 Syntactic Issues

This subsection presents the options for a syntactic (or interface-minded) analysis of complex predicate formation. After outlining the two main alternatives from the Hungarian literature, I present (very briefly) my own comments and choices.

The literature on Hungarian contains two main strategies for handling 'modifier'+verb complexes. According to the first strategy, secondary predicates are taken to be heads that are incorporated into their host verbs. This in turn implies that the verbs themselves are incomplete: they expect a head (X), with which they form a $V^{(\prime)}$ (Ackerman (1987), Ackerman (1992), Ackerman and LeSourd (199x), Ackerman and Webelhuth (1997), Komlósy (1994), É.Kiss (1998b), Dalmi (n.d.)). Indeed, this may help to define natural classes among Hungarian verbs: attitude verbs (such as *szeret* 'love' or *gyűlöl* 'hate') cannot be preceded by secondary predicates, and do not show the Definiteness Effect (É.Kiss (1998a)).[26]

According to the second strategy, secondary predicates are taken to be full projections (XPs) that occupy a specifier position of some functional projection ZP at surface structure, with the verb in the head position of the same ZP (É.Kiss (1987), Koopman and Szabolcsi (n.d.), Koopman and Szabolcsi (2000)). This entails that verbal prefixes are also assigned the status of XPs, although they are said to be deviant, in that they project no arguments.

There is a third option, which has received little attention by Hungarian linguists (with the exception of Gabriella Tóth), although there are at least two subclasses of the data for which it could be useful. This option is to analyse (at least some) modifiers as small clause predicates that project their own arguments.

[26]These verbs can take prefixes, however, as with *meg-szeret* lit. 'meg-love', 'come to love/like', or *el-hisz* lit. 'away-believe', meaning 'come to believe', 'accept', or 'become convinced'.

The relevant set of data involve (i) prefixes that introduce new arguments and (ii) secondary predicates with host verbs like *lát* 'see', *hisz* 'believe' or *tart* 'keep'/'regard':

(4.105)János [*okos-nak tartja*] Marit
John [*clever-Dat keep+Def3Sg*] Mary-Acc
"John considers Mary clever"

The parallel with small clauses is supported by Hungarian/English pairs like (4.106) and (4.107). All of these examples contain object *NP*s that are not subcategorised for by the host verb (all three host verbs are intransitive).

(4.106)Mari ki-sírt egy sereg engedményt a főnökéből
Mary out-cried one host concession-Acc the boss-Poss3Sg-from
"Mary whined several concessions out of her boss"

(4.107)*a*. A politikust ki-fütyülték az emelvényről
The politician out-whistled-3Pl the podium-from
"The politician was whistled off the podium"
b. Az énekesnőt vissza-tapsolták a színpadra
The singer-Fem-Acc back-applauded the stage-onto
"The singer was applauded back on stage"

The point of these examples is, the same meaning is conveyed by a prefixed complex verb (Hungarian) and by a verb+small clause combination (English). So, there must be at least one level of semantic representation with this 'shared' meaning.

If the prefixes in (4.106) and (4.107) were analysed as full (if degenerate) XPs, one would have to account for the presence of object NPs in these sentences. Note that if one adopts the specifier strategy, one cannot say that prefix and verb form one complex verb—for that, they would have to be sisters at some level of structure.

I think that the inventory of modifiers is in fact not uniform as regards categorial status (head or possibly defective XP) and syntactic position at surface structure. Prefixes and certain secondary predicates (when combined with *consider*-type host verbs) resemble small clause heads, and can be taken as sisters to the verb. Accusative bare nominals are arguments of the verb; I take them to be sisters of the verb, irrespective of whether they are N heads or degenerate full NPs.[27]

Locative phrases (such as *az asztal alá* 'under the table'), on the other hand, are full PPs. Their positioning in surface structure is less clear. They could in principle be analysed as sisters to the verb, if modifier status in Hungarian is taken to be conditioned by semantic type rather than syntactic category. It has been known among Hungarian linguists for some time that locative phrases are appropriate as modifiers only if their NP is nonquantificational, or is not heavy (in the usual sense of NP-weight). But this entails that quantificational and nonquantificational PPs are to be assigned different types.

(4.108)*a*. János [*az asztal alá* söpörte] a morzsát
John [*the table under-onto* swept+Def3Sg] the crumb-Acc
"John swept the crumbs under the table"
b. #/ ∗ János [*két/minden asztal alá* söpörte] a morzsát
John [*two/every table under-onto* swept+Def3Sg] the crumb-Acc
"John swept the crumbs under two tables/every table"

[27]In fact, on the basis of the data presented in Chapter 3, I take them to be N heads: the lack of pronominal anaphora suggests that they contain no null determiner. By contrast, bare *plurals* in Hungarian are said to contain a null determiner, since they do allow pronominal anaphora. Neither unmarked nor plural nominals can be incorporated when modified by an adjective, however:

(*i*) *a*. János (∗piros) almát evett
John (red) apple-Acc ate
"John was eating (red) apple(s)"
b. János (∗piros) almá-k-at evett
John (red) apple-Pl-Acc ate
"John was eating (red) apples (more than one)"

(4.108b) can be grammatical only with the variant with two tables, and even then the *PP* is felt to be Focus rather than a plain modifier. That is, the *PP két asztal alá* 'under two tables' is preferably analysed as Focus here, and not as a preverbal modifier—which, of course, is hard to decide, given the complementary distribution of modifiers and Focus.

The semantic treatment proposed in Chapters 6 and 7 is sympathetic to the incorporation view, or to one version of the small clause view. This is harmless, since the disputed locative *PP*s will not be included in the discussion.

The reason for favouring the head-and-sister option has to do with semantic composition: the contributions of the modifier and the verb are merged to yield a complex verb. If the secondary predicate were in a specifier position (i.e. its sister would be some Z'), it would be impossible or at least highly unprincipled to combine it with the head of Z' first, and combine the output with the remainder of Z'.

The proposal to take the prefix as sister to the verb is at odds with some analyses proposed for Slavic prefixes. Slavic prefixes are often analysed as aspectual operators or quantifiers (Partee (1995), Filip (1996), Verkuyl (1999)). This is because part of the contribution of Slavic prefixes is to *lend* definiteness properties to their internal argument, or to actually distribute over it. That is, Slavic prefixes can sometimes have 'stronger' effects on their internal arguments than Hungarian prefixes.

(4.109)Petr u-pekl housky
Petr Perf-baked roll-Pl-Acc
"Petr baked (all) the rolls"

((11a) from Filip (1996):46)

(4.110)Jana Po-rozbijela (∗najednou) šalky v myčce
Jana perf-broke (all at once) cup-Pl-Acc in dishwasher
"Jana broke all the cups in the dishwasher (one group after the other)"

((17a) from Filip (1996):47)

In Hungarian, too the prefix needs to access the internal argument. The Specificity Effect can be seen as an instance of this: the Theme discourse referent is dependent on the presupposition triggered by the prefix. In addition, Hungarian has prefixes that are comparable to certain Slavic prefixes. For instance, *össze-* 'together' imposes a collective reading on the internal argument. It is clear therefore that in Slavic languages, and in Hungarian as well, the prefix has access to the internal argument, and this seems to favour the 'specifier' view on secondary predicates.

Nevertheless 'access to the internal argument' does not necessarily involve assigning specifier status to the prefix. The composition method proposed in Chapter 7 yields the necessary semantic effects (i.e. binding the object *NP*) without assigning specifier status to the prefix. This is motivated by two factors:

One, if the prefix were a specifier of some ZP, then it could c-command a coordinated Z', with *two* verbs of which it is a prefix (this is the objection against the specifier analysis of prefixes from É.Kiss (1998b)). This is not possible in Hungarian, and presumably it is not possible in Slavic languages either:

(4.111)*a*. ∗János [$_{ZP}$[be-] [$_{Z'}$[$_{Z'}$-ment a szobába] és [$_{Z'}$vitte a macskát]]]
John [[$_{ZP}$[into-] [$_{Z'}$[$_{Z'}$-went the room-into] and [$_{Z'}$took+Def3Sg the cat-Acc
Intended: "John went into the room and he took the cat in"

b. OK: János be-ment a szobába és be-vitte a macskát
John into-went the room-in and into-took+Def the cat-Acc
—same as above—

The other factor concerns agreement: object agreement suffixes show up on the verb, even with unsubcategorised objects:

(4.112)*a*. A kutya fel-ugatt-**a** a szomszéd-ok-at
The dog up-barked+Def3Sg the neighbour-Pl-Acc
"The dog barked the neighbours awake"

b. ∗A kutya fel-ugatott-∅ a szomszéd-ok-at
The dog up-barked-∅ the neighbour-Pl-Acc
Intended: the same

In (4.112), the host verb is intransitive, and the object *NP* is seen as contributed by the prefix. Yet the definite-object marker **-a** has to show up on the verb, otherwise the sentence is ungrammatical. (Per def., it cannot appear on the prefix itself.) I take this to indicate that *fel-ugat* has complex verb status.

Where quantificational readings of prefixes are concerned, as in (4.110), I think it is perfectly plausible to envisage complex verbs with a quantificational component, which are capable of binding the variable contributed by the object *NP*.

A last issue concerns the status of the prefix in relation to the verb: whether it is a head that takes the verb as argument, or conversely, or whether it is a (sublexical) adjunct of the verb, as proposed in Wunderlich (1997a).

In the previous subsection, the inventory of combinations with *meg* has shown that the contribution of this prefix depends on its host verb.

In my opinion, this dependency of prefixes on their hosts makes them difficult to classify unambiguously as either heads (taking verbs as arguments) or complements/adjuncts of a verbal head. True, prefixes can be analysed as functions from verbs to verbs, and in Hungarian one can answer a question by repeating the prefix only.[28] This may seem to indicate head status for the prefix. On the other hand, in Hungarian the better part of nonstative host verbs are light verbs, which require a 'modifier'—then the prefix is more like a complement to the verb, as assumed in Komlósy (1994), where 'complement' is taken to mean a higher-order argument.

But these are syntactic issues, and even if they are settled, one still has a long way to go in accounting for the meaning effects of prefix+verb combinations. Accordingly, the composition method proposed in Chapter 7 is sympathetic to what may be called copredication (Spencer and Zaretskaya (1996)): the prefix and the verb serve to complete each other's meanings.

To conclude, I take prefix and verb to form one complex verb. The analysis I adopt does not hinge on assigning (syntactic) head/complement or adjunct status either to the verb or the prefix. If the host verb is a light verb, it is sensible to take it as the complement of the verb in some sense, as it is seen to 'complete' the verbs's event structure.

[28] *Meg-találtad?* 'Have you found it?' can be answered with *Meg.* In a way, this is like English do-support, so it could be dubbed as prefixal support.

Part III

The Analyses

Chapter 5

The Definiteness Effect(i): English

5.1 Introduction

This chapter offers a DRT-based analysis of the Definiteness Effect in English. Its inclusion in the thesis is motivated by its cornerstone status, so to speak. By this I mean that the Definiteness Effect in English has been extensively studied, and formal analyses have been available for a long time. In addition, most of the relevant English verbs (or expletive+verb combinations) are much more simple in terms of sublexical event structure than Hungarian Definiteness Effect verbs. So, an analysis of the English Definiteness Effect has the advantage of (relatively) simpler and better understood material, and the formal proposal itself can be compared to previous approaches from the literature, with the added advantage of a unified analysis for the two languages.

One of the findings of Chapter 4 was that Definiteness Effect constructions have properties that class them as a subspecies of opaque constructions. In the case of these verbs (as opposed, for instance, to *seek* or *owe*,) opacity amounts to (i) dependence of the internal argument on the relevant eventuality discourse referent, and (ii) binding by the verb(al complex). Thus, the weak/strong distinction will amount to amenability to this particular form of binding. Consequently, the analysis proposed here essentially contains two main components. (i) *there be* is taken to be a state description that 'says' that the relevant discourse referent is at the distinguished Coda location, and (ii) a special form of semantic composition is assumed, which is a unification–based version of Semantic Incorporation (van Geenhoven (1996)).

This chapter first reviews previous analyses: section 5.2 discusses the determiner-centred analysis of Keenan (1987), and Zucchi (1995), as a recent instance of the presuppositional analysis of the weak/strong distinction. This is followed in Section 5.3 by a discussion of proposals that derive the Definiteness Effect from the special relationship between *there be* and the *NP*: According to Musan (1996) it is the temporal/episodic character of *there be*, while according to van Geenhoven (1996) it is the special method for semantic composition, viz Semantic Incorporation. Concerning the original Semantic Incorporation analysis, it is argued that the initial intuition is to be maintained, albeit with a different implementation, namely, by making use of unification both as a local binding procedure and as a semantic word formation method. The section also contains a discussion of Blutner (1993), since this is a proposal that also comes very close to incorporation, and it can also be seen to provide the formally most precise method for semantic composition that relies on function application. Section 5.4 contains some background on unification, together with some discussion of the application proposed here. The chapter concludes with an analysis of the core Definiteness Effect cases. So-called list readings will be set aside, since they impose different requirements on context, and hence they necessitate a different analysis.

Meaning Effects

The following is a brief recapitulation (from Chapters 3 and 4) of the 'secondary' meaning effects that accompany the Definiteness Effect in English. These phenomena are listed once more because

some of them will be used to evaluate, or judge, the analysis presented here. Other phenomena will not receive an analysis here, but they are included for the sake of the argumentation.

In existential sentences, the relevant indefinite may only have narrow scope (Milsark (1977), Heim (1987)). For instance, the indefinite in the existential sentence (5.1b), the indefinite can only have narrow scope, whereas in the 'ordinary' sentence (5.1a) the indefinite can have wide, intermediate or narrow scope.

(5.1) *a.* Every cat believes that a mouse is in the attic
b. Every cat believes that there is a mouse in the attic

As noted in Kim (1996), an indefinite in an existential sentence cannot be part of the (mostly implicit) restrictor of an adverb of quantification (if the expletive+copula complex is part of the nuclear scope). That is, (5.2c) cannot have the reading that for every eventuality ε that involves a cat x, there is a state in which x has the property of landing on its feet. Rather, (5.2c) only has the reading where the indefinite is introduced in the nuclear scope of the quantifier.

By contrast, the indefinite in the 'ordinary' sentence (5.2a) has the usual freedom of indefinites, so it can also be part of the restrictor of the adverb of quantification. The bare plural in (5.2b) (the well-known example from Schubert and Pelletier (1989)) is understood as part of the restrictor.

(5.2) *a.* A cat always lands on its feet
b. Cats always land on their feet
c. There is always a cat that lands on its feet

The Weak Crossover test for implicit quantifiers (Chierchia (1995)) reveals that English *there*-insertion contexts contain some binder: the pronoun *its* in (5.3b) may not 'cross over' the indefinite from the *there*-sentence.

(5.3) *a.* Her mother suspects that a kid is smoking behind the woodshed
b. ??Her mother suspects that there is a kid smoking behind the woodshed

The same Weak Crossover behaviour was reported for Dutch *er*-sentences in Rullmann (1989). These data are seen to support Milsark's and Williams' proposals, viz *there (be)* is a quantifier/scope marker.

Dutch:

(5.4) Een uur nadat hij uit zijn huis vertrokken was, stond
One hour after he from his house left had, stood
(∗er) een oude studiengenoot bij mij voor de deur
(ER) one old fellow-student with me before the door
"An hour after he left his house, an old fellow student
was at my door"

(Rullmann (1989): ex. (50))

Nevertheless, in these contexts MON↑ *NP*s are good antecedents for anaphora, which is indicative of the non-bound status of the discourse referent contributed by these *NP*s. The conclusion is then that the (expletive+verb) contains a binder that 'captures' the free discourse referent contributed by the weak *NP*.

If the sentence contains *again*, the *NP* is to have narrow 'scope' relative to it. It was argued in Chapter 4 that this is a property *there be* and *have* share with verbs of creation, and that this is related to their one time only property. In the case of *there*-sentences this is in fact a representational property: both (5.5a-b) can be true in a scenario that involves the same cat, but existential sentences fail to convey this information.[1] Of course, genuine verbs of creation have this property in the model.

(5.5) *a.* There is a cat on the roof again
b. John has a cat again
c. John baked a cake for Mary again

[1] A potential counterexample to this observation is the sentence *There is a cat which is on the roof again.* But in this sentence the property of being on the roof again is part of the descriptive content of the *NP*.

As shown in Strang Burton's dissertation (Burton (1995)), certain English verbs can exhibit properties very much akin to the Definiteness Effect. According to Burton, these are verbs that can be analysed as containing *have* in their consequent state. This is of course closely related to the Definiteness Effect, since *have* on its basic, non-custodiary construal is also a Definiteness Effect verb (Partee (2000)).

(5.6) *a*. Mary acquired/got a secretary
b. */?Mary acquired every secretary in town

Acquire-type English verbs will be discussed in the next chapter. Here, the reader is reminded of the fact that these so-called quasi Definiteness Effect verbs admit strong *NP*s as internal arguments only in special contexts.

In Chapter 4 *there*-insertion was classed as an opaque construction, within the subclass of (Quasi) Definiteness Effect verbs or constructions. This is supported by the above scope facts, the felicity of impersonal *wh*-expressions and the unavailability of pronominal anaphora when embedded under a quantifier or operator (*Every cat believes that there is a mouse in the attic. #It likes corn.*). The questions that arose in connection with opacity were (i) to what extent the analysis of these verb classes may be similar to that of intensional verbs, such as *owe* or *seek*, and (ii) what it is in this subclass of opaque constructions that does not admit strong *NP*s. The tentative answer to (i) was that the distinctive property of these verbs is precisely their (Quasi-) Definiteness Effect. The answer to question (ii) will hopefully (begin to) emerge in this chapter and in the following one.

5.2 Previous Analyses(i)

Formal semantic accounts of the Definiteness Effect have tended to concentrate on the strong-weak distinction as such (Barwise and Cooper (1981), de Jong and Verkuyl (1985), de Jong (1987) Zucchi (1995), Keenan (1987), Prince (1981), Ward and Birner (1995)). In the more recent literature[2] one can see two main strategies. According to one strategy, the distinctive property of strong *NP*s is that they are presupposition triggers (de Jong and Verkuyl (1985), Lumsden (1988), Zucchi (1995)). According to the other strategy, the characteristic property of weak *NP*s is their discourse new status (Prince (1981), Blutner (1993), McNally (1998)). The presupposition and the novelty strategy are closely related. First of all, they represent a shift towards pragmatics after the algebraic analyses of Barwise and Cooper (1981) or Keenan (1987). Both approaches define the weak–strong distinction in terms of an *NP*'s relations with preceding context (correction: quantifying *NP*s represent a special case for the novelty approach). Accordingly, at first these two approaches may appear to be mere notational variants of each other This is not so, however: later in this chapter important differences will emerge between the 'novelty' strategy and that variant of the presupposition strategy that builds on the so-called satisfaction theory of presuppositions (Heim (1983)).

Musan (1996) represents an original formulation of the novelty hypothesis, in that the fundamental property of weak *NP*s is said to be their propensity to quantify over stages of individuals. The fact that existential sentences admit only *NP*s that introduce new discourse referents is taken to be an epiphenomenon, or a consequence of the more fundamental stage-quantifying property of these *NP*s.

A further option is to derive the Definiteness Effect from the properties of the expletive+verb construction (Milsark (1977), Williams (1984), Rullmann (1989), Blutner (1993), van Geenhoven (1996)). To my knowledge, Blutner (1993) and van Geenhoven (1996) are the first analyses that assign a formally precise semantics to *there be*, and derive the Definiteness Effect as a failure of semantic composition with strong *NP*s. The present proposal, like that in Blutner (1993), can be seen as a mix of the novelty and the derive-from-the-expletive view, in that the expletive (+be) is defined as a binder, such that it will admit *NP*s that come with a free variable—and the class of *NP*s that come with a free variable is the class of *NP*s that introduce discourse-new referents.

Other proposals have focused on the information structure of *there*-sentences (notably, Ladusaw (1994) and Kim (1996)). According to Ladusaw (and Sasse (1987)), *there*-sentences express

[2]'More recent' meaning 'not cast in Generalised Quantifier Theory'.

thetic judgments, viz they are about some all-new situation. In this thesis, however, codas in *there*-sentences will be taken to function as Topics. This is based on the arguments in Levin and Rappaport-Hovav (1995), Reinhart (t.a.) and Abusch and Rooth (t.a.), and also own, new data that show that the type of *NP* that can be part of a locative coda is fairly constrained. At least one subclass of existential sentences is then taken to express categorical judgments, with the coda functioning as a Topic or as a logical subject. This is supported (indirectly) by the finding from Chapter 4, viz Hungarian Definiteness Effect verbs describe what changes at a given Goal. That is, the Goal is kept constant, and the Theme is introduced as a result of the relevant transition. If this is indeed the case, then in English *there*-sentences too the coda is expected a to have a distinguished role.

5.2.1 Generalised Quantifier Theory

The empirically most accurate and also the mathematically most precise formulation of weak or existential determiners is offered in Keenan (1987) (for more detailed mathematical investigations see also Keenan and Westerståhl (1995), Keenan (1996) or Keenan (2001)). Here, I reproduce his definitions with very little comment.

Keenan's Constraint:
The *NP*s that can occur in *there*-insertion contexts are the basic existential ones.

1. A basic determiner is existential iff it is always interpreted by an existential function;
2. a function f from propreties to sets of properties is existential iff for all properties A, B:

(5.7) $B \in f(A)$ iff $1 \in f(A \cap B)$

(Keenan (1987), Def. 1: p. 291)

1. A determiner is called existential iff either it is a basic existential determiner, or it is built up from basic existential determiners by Boolean combinations, composition with adjective phrases, or the exception determiner operator (... *but John*);
2. (a) a basic existential *NP* is one formed from an existential determiner and the appropriate number of *NP*s;
   (b) the existential *NP*s are the basic existential ones together with those formed from them by Boolean combinations.

(Keenan (1987), Def. 2-3: p. 293)

One of the merits of Keenan's analysis is the attention accorded to determiner complexity: his analysis correctly excludes complex determiners that are not admitted in existential sentences, although they as a complex denote existential functions. This is the case with *every or else not every*, which is not acceptable in *there*-sentences, although it denotes an existential function. Keenan's definition correctly excludes *every or else not every* from the class of weak *NP*s, because its component determiners do not denote existential functions.

Keenan takes the expletive to be semantically empty, and hence existential sentences and their 'ordinary' counterparts are taken to be equivalent. That this is not (necessarily) so is shown by the following examples. The first example is the dependency of a common noun on the coda and on the construction itself. The other example concerns scope.

(5.8) *a*. There is a hole in my pocket
b. #A hole is in my pocket

(Barbara Partee)

(5.9) *a.* Every cat thinks that there is a mouse in the attic
b. Every cat thinks that a mouse is in the attic

From these examples it can be concluded that (i) the expletive is not semantically empty, and (ii) because of the non-emptiness of the expletive, and also because of scope facts, existential sentences are not equivalent to their non-existential counterparts. This non-equivalence cannot be detected with simple existential sentences (barring dependencies like those in (5.8)): It is with subordinate clauses that the difference emerges. If one operates with generalised quantifier denotations alone, and takes the existential property of functions to hold with any two sets, then one assign the following, otherwise prohibited, interpretation to (5.9b). It is to be recalled that the definition of existential functions explicitly states that the relevant property holds for *any* two sets A, B, so (5.10b-c) are nothing but the application of Keenan's definition to an alleged wide scope case (i.e. the intended but unavailable reading of (5.10a) would be a wide scope, de re reading).

(5.10) *a.* Every cat thinks that there is a mouse in the attic
b. $f_a(mouse')(\{b \mid \textit{every cat thinks that } b \textit{ is in the attic}'\}(:= B)) \Leftrightarrow$
c. $f_a(mouse' \cap B)(E)$

In order to block the reading (5.10b), one has either to constrain the range of possible second arguments to f_a in the syntax or at the syntax–semantics interface (say, by postulating a 'blocking effect' in the expletive), or one has to take variables into account, and note that (5.10b-c) contain a bound variable in disguise — this is disallowed in *there*-insertion contexts (Heim (1987)).

Returning to more general comments on Keenan's analysis, one can conclude from the conjunction of the earlier observations (i) and (ii) that the expletive is to contain the binder responsible for narrow scope readings and for the exclusion of non-existential *NP*s. Keenan's constraint will then be seen to follow from the semantics of the expletive.

A remark for future work: the existential property of determiners has not been re-defined in DRT or other dynamic frameworks, nor will this thesis provide such a definition. Yet the methodological desideratum would be to preserve Keenan's results in DRT.

5.2.2 Presuppositional Analyses

In this part I discuss the presuppositional strategy for analysing the weak–strong distinction, focusing on Zucchi (1995) as a recent and formally explicit representative. Zucchi builds on the work of Fransicka de Jong and Henk Verkuyl, who were the first to propose that the defining characteristic of strong *NP*s is their presuppositional nature (de Jong and Verkuyl (1985); see also Lumsden (1988)).

Zucchi (1995) is in fact a middle ground between those analyses that focus exclusively on the semantics of determiners and those that focus on the contribution of *there be*. That is, Zucchi takes *there be* to impose a constraint on the *NP*'s connections to preceding context, but he has relatively little to say about the origins of that constraint. Also, he formulates this constraint in terms of presuppositions about the descriptive content/the extensions of N'-sets of *NP*s.

In a nutshell, the presuppositional approach to the weak/strong distinction says that strong *NP*s are presuppositional, (typical) weak *NP*s are not. (This is my comment: And then the relevant constituent in the existential sentence is seen to impose a non-presuppositionality constraint on the *NP*.)

In terms of Generalized Quantifier Theory, the framework of de Jong and Verkuyl (1985), presuppositionality is encoded as the definedness condition $A \neq \emptyset$, where A is the restrictor set of the quantifier. Of course, certain determiners/*NP*s impose additional conditions (e.g. *both*, or *neither* — see Barwise and Cooper (1981)).

Zucchi (1995) presents in fact a hybrid approach, one in which *NP*s are uniformly analysed as generalised quantifiers, and yet where the relevant condition for definites and proper names is stated in terms of their discourse referent (or referential index). That is, with definites and proper names

the condition is that the common ground already *entail* the information that the denotation of their index i, $g(i)$, belong to the *CN* set $[\![N']\!]$. Thus, Zucchi's definition of presupposition conforms to the satisfaction theory of presuppositions (Heim (1983)).

Obviously, the condition $g(i) \in [\![N']\!]$ can only be satisfied if the common ground contains the information that $[\![N']\!]$ is not empty. That is, this condition relies on the overall presuppositionality condition as formulated in Generalised Quantifier Theory.

These refinements aside, the presupposition approach basically handles all strong *NP*s in a uniform manner, whether they are definites or *NP*s with determiners such as *every*.

My first remark concerning the presupposition strategy has to do with presupposition projection. Suppose that the relevant *NP* is a complex, such that the presuppositions of the some later member of this complex are filtered out by a previous one. The prediction of the presupposition approach is that such *NP*s are acceptable in existential sentences. This, however is not always the case.[3]

One case of presupposition projection is when the *NP* contains a complex determiner of the form Det_1 *Conn* Det_2, where Det_1 filters out the presuppositions of Det_2 (Heim (1983), Sandt (1992)).

(5.11) *There are some but not all students in the garden

If *but* is assigned the same truth-conditions as *and*, then the presupposition of *all* is filtered by *some*. This sentence is therefore predicted to be acceptable.

The other instance of presupposition projection is with conjoined *NP*s, where the presupposition(s) of the second conjunct are filtered by the first one.

(5.12) *a.* ??There are some cats and their kittens on the roof
b. *There are some cats and all/most of their kittens on the roof

According to the presupposition strategy, both sentences in (5.12) ought to be grammatical. What we see instead is that (5.12b) is totally unacceptable, and (5.12a) is neither fully acceptable, nor fully unacceptable. The status of (5.12a) as a counterexample might be contested by saying that a piece of background information (viz cats being likely to have kittens) may be sufficient to license the presuppositional *NP their kittens* 'locally' — hence the partial acceptability of (5.12a). To this one can say in turn that background knowledge is insufficient to make (5.12a) perfectly acceptable, and that this was not the point of the example at all. The point is, (5.12a) is predicted to be *perfectly* acceptable on the presupposition approach.

(5.12a) is problematic for most analyses (including analyses of conjunction, which are obviously not confined to existential constructions). The reason is the partial (un)accepability of this sentence: on a simpleminded conjunction reduction approach it should be perfectly ungrammatical, whereas with other techniques it should be perfectly acceptable. Part 5.5.2 contains a more detailed discussion of this case.

(5.12) also shows that definites or *NP*s containing pronouns are markedly different from 'quantificational' strong *NP*s. The presupposition strategy, however, is not sufficiently fine-grained in this respect. (Musan (1996) also arrives at this conclusion, although with different examples.)

A further problem posed by the presupposition strategy is that it may predict ungrammaticality for empty N'-sets (Lappin and Reinhart (1987), Reinhart (t.a.), Abusch and Rooth (t.a.)). This will be the case if they operate with a rich context that is assumed to contain background knowledge. Zucchi's analysis is especially prone to this problem, since truth-conditions are in fact defined relative to a common ground. Thus, the following are predicted to be uniformly ungrammatical:

(5.13) *a.* There were two American kings at the party
b. *There were all American kings at the party

The problem is, (5.13a), which contains a weak *NP*, is grammatical but false, whereas (5.13b) is ungrammatical,

Further problems involve Zucchi's particular formulation of the Definiteness Restriction. This is because in the formulation of the relevant presupposition he assumes the N'-set to be restricted by $[\![XP]\!]$ as a context set. His definiteness restriction is formulated as follows

[3] *Another* and *too* are allowed in existential sentences. In Section 5.5 it is argued that this is because the presuppositions triggered by these particles do not affect the status of the main discourse referent of the *NP*.

> "*There*-sentences are felicitous only in contexts which entail neither that the intersection of the set denoted by the N' of the postverbal NP with the set denoted by the XP is empty nor that it is nonempty."
>
> Zucchi (1995):51)

Strong NPs presuppose that their N' set (relativised to $[\![XP]\!]$ as context set) is nonempty. The presupposition of an utterance is to be entailed by the preceding context c. Hence, strong NPs are said to be felicitous in contexts where *there*-sentences are not.

The need to resort to restriction with $[\![XP]\!]$ arises from sentences such as the following:

(5.14) *a.* There are some students who object to that proposal.
b. There are some students who object to that proposal in the pub.

That is, if the definiteness restriction were formulated on N'-sets alone, (5.14b) would be predicted to be ungrammatical in the context of (5.14a). If the definiteness restriction is formulated as it is by Zucchi, (5.14b) is correctly predicted to be grammatical, since the common ground (here understood as preceding context) contains no information about the set of students who object to that proposal and who are currently in the pub.

But note that an NP with an empty N'-set may still predicted to be ungrammatical, if the common ground is assumed to contain the information about the emptiness of that set:

(5.15) *a.* There was an American king at the party
b. There were no American kings at the party

The fundamental problem with Zucchi's formulation of the Definiteness Restriction is, I think, the folllowing. The *intention* behind his formulation of the Definiteness Restriction is that (grammatical) *there*-sentences impose no familiarity or presuppositional constraints on preceding context. This is why he claims, correctly, that *There is a king of France* is grammatical but false. Now the problem is that the way the Definiteness Restriction is formulated will contradict the initial intention: thus if a context entails that the set of kings of France is empty, *There is a king of France* will be ungrammatical.[4]

For instance, the following two-mini-discourses are predicted to be unacceptable under Zucchi's constraint. The point is, both *b*-sentences should be unacceptable, because the preceding sentence is precisely about the (non-)emptiness of the set of cats with the coda-property. Both (5.16b) and (5.17b) are acceptable, however. Now it is true that they express inferences from their antecedents, and there is a special discourse relation between e.g. (5.16a) and (5.16b). To the best of my knowledge, the role of such discourse relations in suspending or preserving the Definiteness Effect has not been sufficiently studied yet, so their status as counterexamples cannot firmly established at this point.[5]

(5.16) *a.* A cat is meowing her heart out on the roof
b. So, there is a cat on the roof

(5.17) *a.* All the cats are on the roof
b. So, there is no cat in the tree

A more general problem related to this analysis concerns the concept of the common ground. The paper contains very few hints as to whether it is to be understood merely as information from preceding context, or whether it is taken to be information from the linguistic context *and* background knowledge. For instance, if the common ground is taken to contain only information

[4] A similar remark is made in Keenan (2001): with Zucchi's formulation of the Definiteness Restriction, logical and grammatical properties of sentences will be expected to vary according e.g. to choice of context set for NPs, or, as noted here, according to the choice of contextual background.

[5] Zucchi himself acknowledges a similar problem with the mini-discourse *There are some mistakes in the paper. In fact, there are four mistakes.*

from linguistic context, then (5.13a-b) are predicted to be grammatical *if and when* uttered out of the blue. But, true enough, their grammaticality does not change when they are preceded by a sentence like *There are no kings in America.*

Some of the problems with Zucchi's analysis persist even if the common ground is taken to contain linguistic information only. One of these is the failure to distinguish between anaphoric and non-anaphoric, uniquely referring definite *NP*s in *there*-sentences, even though there is a fairly robust contrast in the acceptability of these *NP*-types (Ward and Birner (1995)).

(5.18) *a.* I saw the President of France/several Presidents the other day
b. #/ ∗ There is the President of France chatting in the foyer

(5.18b), which contains a uniquely referring expression, is quite acceptable on its own, but it becomes much less acceptable once it is preceded by a sentence like (5.18a) (hence the marking #/∗). The presuppositional analysis of *there*-sentences does not distinguish between these cases, unless it draws a distinction between linguistic context and background knowledge.

Yet another problem stems from resorting to restriction with the coda-set itself. That is, this is problematic for Zucchi's particular formulation of the definiteness restriction. This version of the definiteness restriction admits discourse referents that were introduced in previous discourse without any reference to the coda-set. For instance, according to Zucchi's restriction, (5.19a) should provide an appropriate context for (5.19b), as it gives no information about the set of men in the garden. (5.19b) is therefore predicted to be grammatical, which it is not.

(5.19) *a.* John met a man yesterday
b. ∗There's the man John met in the garden

If one compares (5.19) to (5.14), it can be seen that if one resorts to restriction with the coda set, then the problem posed by (5.14) can be solved, but then a wrong prediction is made with respect to (5.19). Conversely, if the restriction concerning $[\![XP]\!]$ is dropped, the problem of (5.19) is solved, but then the problem of (5.14) emerges.

The last remarks on the presuppositional strategy concern the role of the coda in semantic composition. First, codas have a restrictive role anyway, and this property should follow from the composition of *there*-sentences. This is evident from Keenan's definition of existential determiners, or from Higginbotham (1987). Second, codas may as well be quantificational, as in (5.20), and then their restrictive role is not yielded by simple conjunction or set intersection (similar examples were introduced already in Keenan and Faltz (1985)).[6]

(5.20) *a.* There is a gnome in every garden
b. There is a hen boiling in every farmer's pot

The very last remark concerning presuppositional analyses is that if they are fine-grained enough, then they are subsumed by that type of analysis that formulates the Definiteness Restriction in terms of discourse referents. By this I mean the following: Zucchi's presuppositional analysis does not take context change and anaphoric links into account. A careful reading of his paper reveals that he assumes a static theory throughout, and anaphoric links are disregarded. This is to be expected: since he adopts the satisfaction theory of presuppositions, he does not operate with bindings of the form $\alpha = \beta$, wher α is contained in preceding context, and β is a discourse referent related to a strong *NP*. If, however, one attempts to implement the presuppositional analysis of strong *NP*s into an *anaphoric* theory of presupposition (as e.g. Sandt (1992)), my guess is that in this case the presuppositional strategy will be undistinguishable from the strategy that analyses the Definiteness Effect in terms of binding (except possibly for the analysis of quantificational *NP*s).

So, even if the presuppositional approach were unpoblematic, it is simpler and more to the point to formulate the Definiteness Restriction in terms of a binding constraint on variables/discourse referents in the first place.

[6] A minor problem for Zucchi's account posed by (5.20) is that he initially takes *PP*s to denote sets of individuals, which is hard to maintain if the *PP* contains a quantificational *NP*. Translating *in every garden* as $\lambda x.\forall y.garden(y) \rightarrow IN(y,x)$ is obviously out of the question. Presumably the solution is to have existential closure over x in the nuclear scope, and to factor out the contribution of the *NP* from that of the preposition. This will be the line taken in the analysis in Subsection 5.5.2.

5.3 Previous Analyses(ii)

This section reviews three proposals that share certain properties with the analysis in this chapter. According to Musan (1996), the copula and expletive contain a variable that ranges over situations or spatiotemporal locations; this results in the exclusive stage-level readings of weak *NP*s in *there*-sentences. This proposal is briefly reviewed in 5.3.1. In 5.3.2 this is followed by a discussion of the Semantic Incorporation proposal, as originally formulated in van Geenhoven (1996). The significance of van Geenhoven (1996) for this thesis cannot be underestimated, since the analysis presented here is based on the core concept of Semantic Incorporation. Only, because of technical and methodological problems, a novel formulation will be proposed in 5.5, in which the main device for semantic composition is term unification rather than function application. This section concludes with a discussion of Blutner (1993) in 5.3.3, the formally clearest proposal to analyse the expletive as a placeholder for the *NP*.

5.3.1 Temporal Stages

Musan (1996) proposes that (i) weak determiners are those that quantify over temporal stages of individuals (this might be called Musan's Correlation), and that (ii) *there be* contains a variable over spatiotemporal locations, which is related to the temporal variable contained in the *NP* in such a manner that weak *NP*s (and mostly those, partitives and list-definites are exceptions) only have temporally dependent reading in *there*-sentences. If I understand correctly, this amounts to saying that quantification over stages is such that the *NP*'s (spatio-)temporal argument is related to the event or situation argument of the verb.

(5.21) $DET \quad [_{RC}\ N' \ \&\ XP \ \&\ there] \quad \exists_s[_{NS}\ exist\ at\ s]$

(Musan (1996): (30) on p. 177)

(5.21) is the overall schema for *there*-insertion contexts. It is said to be a quantificational structure 'induced' by the (weak) determiner *Det*. This corresponds to the intuition that *there*-constructions represent quantification over temporal stages.

As I understand it, (5.21) resembles the Generalised Quantifier analysis of Keenan (1987), only, the existence predicate is relativised to (the time of) a situation s. This is an attractive intuition, but (5.21) is redundant in several respects. First, the situation variable s is introduced independently in the nuclear scope, whereas it may be contributed by *there* (or the coda). Second, the restrictor is said to contain both *there* and the coda XP. Now if the coda is, for instance, a locative *PP*, then the expletive merely serves as a kataphor to it, and is hence superfluous in (5.21).

The analysis proposed in Section 5.5 will yield the relevant dependent readings of *NP*s, because *NP*s will be said to contain a state variable that will be bound to the state discourse referent introduced by *there be*.

As a last note, it needs to be remarked that the range of event- or stage-dependent readings for weak determiners is not confined to *there*-insertion. It seems to me that in these cases (reviewed in 5.1) the event-dependent reading is not necessarily brought about by the weak determiner, even if Musan's correlation between event-dependent readings and the class of weak determiners is correct. By this I mean that the source of the event-dependency may as well be the verb, or the interaction between the verb and the *NP*. In fact, I take Musan's correlation to support the DRT view of indefinites introducing free variables. If the variables introduced by ($MON\ \uparrow$) weak *NP*s are not bound by their determiners, then they are expected to enter into dependencies with other variables.

5.3.2 Van Geenhoven's Original Proposal

The Analogy

Veerle van Geenhoven's analysis of existential constructions relies on an analogy between English *there*- and *have*-constructions and West Greenlandic noun incorporation (van Geenhoven (1996),

McNally and van Geenhoven (1997)). According to van Geenhoven, existential constructions are incorporating *in the semantics*, meaning that expletive, verb and *NP* form one semantic unit which is very close to (semantic) wordhood. If this is so, the semantics of existential constructions will be essentially the same as that of constructions where incorporation already takes place in the syntax/morphology.

The motivation for this analogy comes from a number of similarities between the two constructions: both involve narrow scope for the nominal, and come very close to predicative/attributive readings.

Semantic incorporation stands for a novel composition method, and a switch, so to speak, in the roles traditionally attributed to verbs and their arguments.

Discussion

At first blush, Semantic Incorporation means that the verb and the relevant *NP* are to be combined by a rule that is 'stronger' in some sense than the usual rules of semantic composition, which usually preserve the autonomy of constituents. The initial motivation was provided by syntactic or lexical incorporation in languages like West Greenlandic, where the verb and the relevant N' form one morphological word:

(5.22) Arnajaraq ipili-tur-p-u-q
A.ABS apple-ate-IND-[-tr]-3Sg
"Arnajaraq ate an apple/apples"

Semantic Incorporation is seen as a semantic correlate to word-formation (without being committed to the 'word' status of the output). It can also be seen as transposing a lexical/syntactic analogy into the realm of semantic composition.

Someone familiar with the literature on Hungarian can remark that this language provides independent crosslinguistic motivation for applying semantic incorporation to existential constructions. Hungarian lacks syntactic or lexical incorporation of the kind seen in West Greenlandic or Iroquoian languages. Nevertheless, there is an early proposal by Anna Szabolcsi (Szabolcsi (1986)) to the effect that Hungarian Definiteness Effect verbs and their internal arguments are composed via (some version of) incorporation (see also de Hoop (1992) and van Hout (1998)).[7] Szabolcsi's proposal was not cast in a mathematically precise framework, since the right tools were not available in the nineteen-eighties. Yet her programmatic article contains very clear arguments for semantic incorporation.

In this context, van Geenohoven's formally precise analysis can be seen to provide the tools for several earlier proposals and conjectures. The core idea behind this proposal is that the discourse referent-introducing capacity of a weak *NP* is relegated to the verb (to the complex *there be* in this case). As seen in (5.23a), an incorporating (intransitive) verb is a function from properties into sentences; the variable corresponding to the (internal) argument is introduced (and existentially quantified over) by the entry of the verb.

This schema is intended to account for at least part of the dependencies and constraints exhibited by the Definiteness Effect construction, and precisely by postulating an existential quantifier in the entry of the verb, that is, by conforming to Milsark's original conjecture.[8]

Here I would like to point out a number of technical (and partly methodological) shortcomings of Semantic Incorporation as originally proposed by van Geenhoven. I do this in order to show that if one is to preserve the attractive intuitions behind this proposal, a different formalisation is called for.

The main schema of semantic incorporation is the following (cf. van Geenhoven (1996)):

(5.23) *a.* incorporating IV: $\lambda P.\exists x.[P(x) \wedge V(x)]$
b. incorporated N′: $\lambda y.[P(y)]$

[7] A Hungarian-specific consequence of this proposal is a parallel between bare nominals (which come closer to incorporation in surface syntax) and 'full' *NP*s. This was mentioned in Chapter 3, and some remarks will follow here and in Chapter 6.

[8] Attributing quantificational force to the verb goes back to Carlson (1977).

(5.23a) is an expression in static logic, without variables over times or eventualities. It can be adopted in DRT in several ways, depending on the introduction of eventuality discourse referents, and one's translation of *be*.

For *there*-insertion, van Geenhoven proposes (5.24a). (5.24b) is my "translation" into λ-DRT. LOC, or $\mathcal{L}$ is a predicate over locations, presumably a placeholder for the coda. I suppose in case there is no coda an abstract predicate may serve to close off the sentence (e.g. a dummy predicate provided by *there*).

(5.24) *a.* $\lambda P.\lambda LOC.\exists x.[P(x) \wedge LOC(x)] \Rightarrow$

b. $\lambda P.\lambda\mathcal{L}.$ $\boxed{\begin{array}{c} x \\ \hline P(x) \\ \mathcal{L}(x) \end{array}}$

(5.25) *a.* There is a gnome in the garden $\rightsquigarrow$

b. $\boxed{\begin{array}{c} x \\ \hline gnome(x) \\ in\_the\_garden(x) \end{array}}$

A closer scrutiny and some crosslinguistic comparison reveals the following properties of (5.24):

Semantic Incorporation is a sufficient, but not a necessary condition for the Definiteness Effect. This is shown by several types of data. First, incorporated nominals in Mohawk may have a definite construal:

(5.26) **Mohawk** : Wa'-ke-nakt-ahninu'
fact-1sS-bed-∅-buy-punc
"I bought the/a bed"

(Baker (1995), (1) on p.5.)

Second, as discussed in Chapter 3, in Hungarian bare nominals incorporate into their host verb, without yielding Definiteness Effect constructions. As shown in Chapter 4, there is no Definiteness Effect if the verb has a process construal, and verbs (those from the *bring*-class) have precisely this construal with a bare nominal:

(5.27) János (egy órá-ig/∗egy óra alatt) széket hozott
John (one hour-till/one hour under) chair-Acc brought
"John chair-brought" OK: for an hour/Out: in an hour

Third, it was also shown in Chapter 4 that there is no Definiteness Effect in Hungarian if the internal argument does not denote something newly created or made available by the event. This was the case e.g. with the verb *fúr* 'drill', 'bore through', when its direct object denotes the thing subjected to drilling (viz *falat fúr* lit. 'wall-drill'). The point here is that with some verbs one can have incorporated nominals that do not contribute to an existential construction (as opposed to *lyukat fúr* 'hole-drill', for instance).

Four, (5.24a) yields wrong results with Hungarian bare nominals, because it incorrectly allows the nominal to be an antecedent for pronominal anaphora. As seen from the preceding chapters, Hungarian bare nominals cannot antecede pronouns. Both versions of (5.24) predict (wrongly) that bare nominals always license pronominal anaphora. That this is not the case is shown for Hungarian by (5.28a). Moreover, Hungarian is not an isolated case: there are other languages, such as Armenian

and Hindi, where bare nominals do not license pronominal anaphora, either (Dayal (1999), Vaux and Sigler (1997)).

(5.28) *a.* János kismacskát talált. #Fekete volt.
John kitten-Acc found. Black was
"There has been kitten-finding by John. It was black."
b. János talált egy kismacskát. Fekete volt.
John found one kitten-Acc. Black was.
"John found a kitten. It was black."

An additional problem posed by (5.28) is that in Hungarian proper full indefinites are not interchangeable with bare nominals, whereas the Semantic Incorporation schema (5.24a) would reduce such indefinites to properties. This, however, is to be avoided. Thus Hungarian *NP*s are problematic for any method that treats 'full' *NP*s and bare nominals on a par.

Constituent negation is problematic for (5.24a), as it is for most analyses that do not resort to decomposing *no* or German *kein* into a negation operator and an indefinite. On its own, (5.24a) will assign the verb's discourse referent wide scope over constituent negation:

(5.29) There are no students in the pub

(5.30) *a.* There are: $\lambda P.\lambda\mathcal{L}\ .\ \boxed{\begin{array}{c} X \\ \hline P^*(X) \\ \mathcal{L}^*(X) \end{array}}$

b. no students$_{pred}$: $\lambda y.\ \boxed{\begin{array}{c} \\ \neg\ \boxed{\begin{array}{c} \eta \\ \hline student^*(\eta) \\ \eta = y \end{array}} \\ \\ \end{array}}$

c. in the pub : ...

d. (5.29) : $\boxed{\begin{array}{c} X \\ \hline in\_the\_pub^*(X) \\ \neg\ \boxed{\begin{array}{c} \eta \\ \hline student^*(\eta) \\ \eta = X \end{array}} \end{array}}$

(5.30b) says that there some people in the pub, who are not students. This is not the intended meaning of (5.29). (It can be checked that in general $MON\downarrow$ *NP*s will gain unwanted existential force when combined with (5.24).) In a proper representation negation should have wide scope over the discourse referent. Geenhoven herself invokes a decomposition of *no* in the style of the decomposition usually invoked for German *kein* or Dutch *geen*. In fact, in 5.5 a similar decomposition method will be assumed for the unification method, as well.

An assumption behind (5.24a) is that weak *NP*s are predicative. In fact, this is the main claim of McNally and van Geenhoven (1997) and also McNally (1998). According to the first paper, the weak–strong distinction corresponds to the ±predicative distinction.

Defining weak *NP*s as predicative leads to results that are not entirely clear, or require some explanation. This is because the class of weak *NP*s is not identical to the class of *NP*s that appear in predicative position. (This problem is independent from the problem of collapsing Hungarian full *NP*s into bare nominals.)

An additional problem arises from the particular composition method resorted to. McNally and Geenhoven obtain predicative *NP*s from generalised quantifiers by means of Richard Montague's type-shifting functor **BE**, employed for more general in Partee (1986).

(5.31) **BE** : $\lambda\mathcal{Q}.\lambda y.[\mathcal{Q}(\lambda x.[x = y])]$
BE(a man) : $\lambda y.[man(y)]$

Indeed, many weak *NP*s can be used predicatively (e.g. *a man, no doctor* a.s.o.). The problem is, there are weak *NP*s that are not predicative, or at least **BE** does not yield a well-formed result for them. This is the case with *many*, for instance.[9] Conversely, there are predicative *NP*s that are strong. In (5.32b-c), one sees strong *NP*s in *there*-sentences. (The #-sign indicates that they are appropriate only in certain contexts, under certain conditions.)

(5.32) *a.* There are many students in the pub—weak, nonpredicative
b. */# There is the student in the pub—strong, predicative
c. */#There is John (to meet)—strong, predicative

In their joint paper, van Geenhoven and McNally argue that admitting predicative strong *NP*s in *there*-sentences is in fact not a shortcoming of the Semantic Incorporation approach, since definites are acceptable in *there*-sentences. My comment on this is that one needs to distinguish between several sorts of *there*-sentences, which are appropriate in very different contexts. The reader may recall that typical (presentational/existential) *there*-sentences do not allow strong *NP*s, except for unique, non-anaphoric definites, such as superlatives. So-called list-sentences like (5.32c) on the other hand do allow definites, but (as pointed out in Ward and Birner (1995)) these definites must not be anaphoric (or at least their antecedent must not be in a directly preceding sentence). (5.24a) on the other hand does not distinguish between anaphoric and non-anaphoric definites.

(5.33) *a.* I wonder if the peonies in my garden need looking after
b. */#There are now the peonies to water

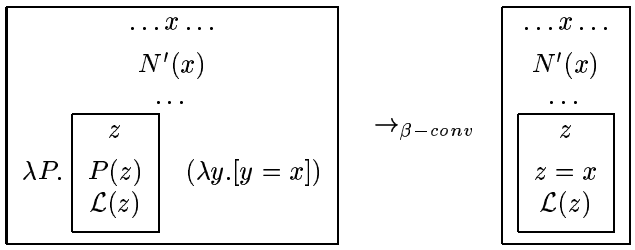
In other terms, from the nonformal literature it has been clear for some time that *there*-sentences that admit certain kinds of strong *NP*s are quite special in the constraints they impose on preceding context, and can be quite different from 'ordinary' existential sentences. This in turn means that one unified schema cannot and need not cover all types of *there*-sentences, as intended in (5.24a).

Returning to the issue of the application of **BE**, one has to note that this functor is superfluous in DRT, where most weak *NP*s are predicative in the first place. But even in DRT one has to distinguish between weak and strong predicative *NP*s, and for this (5.24) is still insufficient.

Scope: Several earlier examples have shown that indefinites in existential sentences have obligatory narrow scope. Now, strange as it may seem, the Semantic Incorporation framework *does* permit indefinites to have wide scope, or to be bound non-locally.

Such readings can be obtained if (i) the relevant *NP* introduces a discourse referent (say, x) in a superordinate DRS, and (ii) the property argument of the incorporating verb is saturated with the placeholder property $\lambda y.[y = x]$, as shown in (5.34):

(5.34)

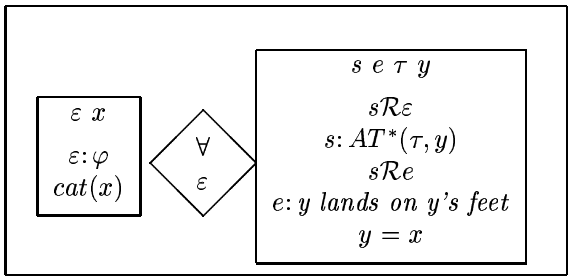


[9] **BE** can apply to *many* just in case it is defined as quantifying over collections:
(μ) *a.* *many* N' : $\lambda P.\exists\gamma.[|\gamma| \geq \xi \wedge N'^{*}(\gamma) \wedge P^{*}(\gamma)]$
b. **BE**(*many* N') : $\lambda\gamma.[|\gamma| \geq \xi \wedge N'^{*}(\gamma)]$
The problem is, (μ) incorrectly predicts *many* to be felicitously used in copula constructions, which is not to be desired (*/#???*Those men are many doctors*).

(5.34) closely mirrors the existential disclosure of Dekker (1993), with the difference that the 'disclosed', or excorporated discourse referent z is re-captured by the referent x from the superordinate DRS. (5.34) for instance can yield (5.35b), a reading which the sentence (5.35a) does not have:

(5.35) *a.* There is always a cat that lands on its feet

b.



In fact, one version (5.34) is used by Ede Zimmermann (Zimmermann (1992/93)), precisely to obtain wide scope, de dicto readings for indefinites in opaque contexts. According to Zimmermann, intensional verbs like *seek* or *owe* subcateogrise for proprerty type internal arguments. De re readings are obtained by saturating the internal argument slot of these verbs with the property $\lambda y.[x = y]$, where x is the variable bound by the wide scope quantifier:

(5.36) *a.* Ede seeks a unicorn
b. $seek(e, \lambda x.unicorn(x))$ de dicto
c. $\exists x.[unicorn(x) \wedge seek(e, \lambda y.[y = x])]$ de re

One might try to argue here that the initial, static formulation (5.24a) does not work like (5.34) and (5.36), because (5.24a) contains a quantifier, whereas (5.34) and (5.36) do not involve quantification (because of DRT and because of the semantic type of the verb, respectively). But it can be seen that the same problem arises with (5.24a), too:

(5.37) *a.* $\exists x.[N'(x) \wedge \ldots \lambda P.\exists y.[P(y) \wedge L(y)](\lambda z.[z = x])]$
b. $\exists x.[N'(x) \wedge \ldots \exists y.[(\lambda z.[z = x])(y) \wedge L(y)]]$
c. $\exists x.[N'(x) \wedge \ldots \exists y.[y = x \wedge L(y)]] \Leftrightarrow$
d. $\exists x.[N'(x) \wedge \ldots L(x)]$

The (im)possibility of excorporating the indefinite and generating the unwanted reading (5.35b) hinges on a corollary of the Definiteness Effect formulated in Heim (1987):

(5.38) $*$There be x , where x is an individual variable

(5.38) serves to exclude pronouns and traces from *there*-insertion contexts. As just shown, (5.24a) on its own does not obey (5.38). means that any alternative incorporation-based account of existential constructions on Semantic Incorporation will have to be strenghtened, in order to ensure that (5.38) is obeyed.

The existential disclosure shown in (5.34) in fact hinges on another assumption, namely, that weak *NP*s can and do introduce discourse referents, whereas the Semantic Incorporation schema denies them this possibility. This does not undermine (5.34), however. This is because Semantic Incorporation does in fact allow weak *NP*s to be ambiguous between a property and a non-property construal. The reason is that a good many verbs themselves are non-incorporating (i.e. do not introduce a discourse referent for one of their arguments), and many other verbs are said to have both (incorporating and 'ordinary') construals.[10] But then it is obvious that a weak *NP* can combine with an ordinary verb (or, say, an ordinary preposition) only if it introduces a discourse referent.[11]

[10] See also van der Does and de Hoop (1998).

[11] Of course a wide scope, excorporated *NP* is not introduced in a higher DRS for the sake of combining with a verb. My point is, either weak *NP*s can have non-predicative construals, and then the referent x introduced in (5.34) is the *NP*'s own referent, so to speak. Or, one can still take weak *NP*s as predicative, and simply assume a mechanism of existential closure for top-level discourse referents.

Conjunction is also problematic for (5.24); in fact, the source of the problem is the Semantic Incorporation schema itself. Here I would like to show that the neither Boolean or non-Boolean conjunction offer a satisfactory solution.

On the Boolean approach, predicative *NP*s need to be lifted to a type that expects an incorporating verb as argument: *A cat*, for instance, will be translated as $\lambda\mathcal{P}.\mathcal{P}(\lambda x.[cat(x)])$. (The type $(((et)(et))(et))$ is obtained by generalising Montague's raising operator: lifting et to $(((et)(et))(et))$ is a special case of lifting a to $((ab)b)$). Then *two cats and five owls* will be translated as follows (assuming the generalised conjunction of Partee and Rooth (1983)). $\mathcal{P}$ is a variable of the type $(((et)(et))(et))$, that is, a placeholder for *there are*. (Greek letters stand for collective discourse referents. $5, 10$, etc. are assumed to be cardinality predicates.)

(5.39) $\lambda\mathcal{P}.[\mathcal{P}(\lambda\alpha.[cat(\alpha) \wedge 10(\alpha)]) \wedge \mathcal{P}(\lambda\beta.[owl(\beta) \wedge 5(\beta)])]$

If $\mathcal{P}$ is replaced with $\lambda P.\lambda\mathcal{L}.\exists\gamma.[P(\gamma) \wedge \mathcal{L}(\gamma)]$ from (5.24a), one gets the following:

(5.40) *a.* $\lambda\mathcal{P}.[\mathcal{P}(\lambda\alpha.[cat(\alpha) \wedge 10(\alpha)]) \wedge \mathcal{P}(\lambda\beta.[owl(\beta) \wedge 5(\beta)])](\lambda P.\lambda\mathcal{L}.\exists\gamma.[P(\gamma) \wedge \mathcal{L}(\gamma)]) =_{\beta-conv}$
b. $\lambda\mathcal{L}.[\exists\alpha.[cat(\alpha) \wedge 10(\alpha) \wedge \mathcal{L}(\alpha)] \ \wedge \lambda\mathcal{L}.[\exists\beta.[owl(\beta) \wedge 5(\beta) \wedge \mathcal{L}(\beta)] =_{conj.rule}$
c. $\lambda\mathcal{L}.[\exists\alpha.[cat(\alpha) \wedge 10(\alpha) \wedge \mathcal{L}(\alpha)] \wedge \exists\beta.[owl(\beta) \wedge 5(\beta) \wedge \mathcal{L}(\gamma)] =_{conj.rule}$

(5.40b) yields the intended translation, but only if the *NP*s are shifted to a higher type This takes away much of the elegance and simplicity of the main idea.

An added complication comes from the application of **BE**. A rather rigid order of operations has to be assumed, otherwise one gets absurdities (the reader can check that Boolean conjunction of properties is not allowed). In order to avoid these asburdities, it has to be stipulated that in the first step, **BE** applies separately to the conjuncts. In the second step the conjuncts are lifted separately, and the conjunction rule can apply only after *that*, as a third step.

The point is, one cannot conjoin the generalised quantifiers first and apply **BE** after that, because one will get precisely the absurd reading of something being both ten cats and five owls. This is shown in the (very schematic) (5.41) below:

(5.41) *a.* $\lambda P.\exists x.[N_1(x) \wedge P(x)] \wedge \exists y.[N_2(y) \wedge P(y)]$ *apply* **BE**:
b. $\lambda z.\exists x.[N_1(x) \wedge \lambda u.[u = z](x)] \wedge \exists y.[N_2(y) \wedge \lambda u.[u = z](y)]$ $\lambda - conv$:
c. $\lambda z.[N_1(z) \wedge N_2(z)]$

With the non-Boolean approach, the problem is that the conjuncts fail to provide the discourse referents that are to serve as summands. (The assumption being that *there are* introduces a group discourse referent, which is understood as the sum of the conjuncts.)

(5.42) below presents the problem, and the non-Boolean solution to it, which nevertheless creates its own problems. For the sake of convenience I use static logic, but the problem is the same in (λ-)DRT:

(5.42a) is the (non-DRT) translation of *there are*: it expects a property type argument that holds of a collection X. (5.42b) is the 'simpleminded' translation of *ten cats and five dogs*: it is to be noted that the conjuncts do not share any variables. If they did, one would get something that is both ten cats and five owls. One way to make (5.42b) compatible with *there are* is to abstract a variable U, which is the non-Boolean sum of the two other variables Y and Z. This yields (5.42c). This however is of the wrong type, viz. a function from individuals into properties, while (5.42a) expects a property type argument. Moreover, note that (5.42c) is ill-formed, since it is the conjunction of two properties with a formula $(U = Y \oplus X)$.

To make (5.42c) compatible with *there are*, and to remedy the type mismatch, existential closure needs to be performed on the conjuncts—this yields (5.42d).

(5.42) *a.* $\lambda P.\lambda\mathcal{L}\exists X.[P^*(X) \wedge \mathcal{L}^*(X)]$
b. $\lambda Y.[cat^*(Y) \wedge |Y| = 10] \wedge \lambda Z.[owl^*(Z) \wedge |Z| = 5] =???$
c. $\lambda U.[\lambda Y.[\ldots Y \ldots] \wedge \lambda Z.[\ldots Z \ldots] \wedge U = Y \oplus Z]$
d. $\lambda U.\exists Y.\exists Z.[\ldots \wedge U = Y \oplus Z]$

Now the methodological problem created by this solution stems from existential closure over the conjuncts. My point is, if one allows existential closure as a repair operation, then the fundamental idea of Semantic Incorporation is weakened considerably. Or, existential closure may be disallowed, for the sake of uniformity, but then conjunction can only be handled by means of type-lifting, another unattractive option, which undermines the simplicity of the initial hypothesis.

The discussion of Semantic Incorporation as defined in (5.24) concludes with the following.

(i) The ±predicative distinction is neither necessary nor sufficient to characterise the weak–strong distinction.

(ii) The present formulation of Semantic Incorporation in (5.24) is not sufficient to ensure that weak *NP*s in *there*-insertion contexts get only narrow scope readings. This in turn suggests that *there be* contains an implicit quantifier or operator that binds/anchors the discourse referent of the *NP*, and that this binding is achieved by means other than simple existential quantification (which in DRT is not even quantification).

(iii) The problem posed by conjunction suggests that weak *NP*s are to be allowed to introduce their own discourse referents, contrary to (5.24). Then *there be* should contain a binder that can 'capture' these referents.

5.3.3 The Expletive as Placeholder

In 1993 Reihnard Blutner proposed a Dynamic Montgue Grammar (Groenendijk and Stokhof (1990)) analysis of *there*-insertion (Blutner (1993)). Like McNally and van Geenhoven after him, he identifies the weak–strong distinction with ±predicativity. The relevant predicative readings are obtained by applying the (dynamic version of the) **BE** operator to dynamic generalised quantifiers. This is shown in (5.43–5.44) below. An additional constraint in the meaning of *there* (cf. (5.45) below) serves to distinguish weak predicative *NP*s from strong ones, such as definites, pronouns or proper names.

(5.43) $\mathbf{BE}(\mathcal{P}) =_{df} \lambda u.\mathcal{P}(\ ^{\wedge}\lambda v.\uparrow\ ^{\vee}v = \ ^{\vee}u)$

(Blutner (1993) (53):54)

(5.44) $\mathbf{BE}(\lambda\mathbf{P}.Ed_i[\uparrow STUD(d_i);\ ^{\vee}\mathbf{P}(\ ^{\wedge}d_i)]) = \lambda u.Ed_i[\uparrow STUD(d_i);\uparrow d_i = \ ^{\vee}u]$

(Blutner (1993) (54):54)

It can be seen from (5.44) that dynamic **BE** preserves the dynamic existential quantifier E—this is as should be, because of the special properties of discourse markers in dynamic theories (cf. Vermeulen (1995), van Eijck and Kamp (1997)).

Blutner argues for a dynamic logic analysis of *there*-sentences, because of the novelty constraint imposed on *NP*s, and also because the nature of the binding relation he posits between the indefinite and the expletive. He proposes to assign *there* the type of a dynamic generalised quantifier. As reproduced in (5.45), *there* is translated as a type-lifted pronoun, with the additional constraint that its discourse marker is new relative to preceding context.

(5.45) $[_{NP}there_i] \quad \hookrightarrow \quad \lambda\mathbf{P}.\ ^{\vee}\mathbf{P}(\ ^{\wedge}d_i)$

$\langle\ d_i$ *new w.r.t. previous context*$\rangle$

(Blutner (1993) (45g):55

The informed reader may note a similarity between Blutner's analysis of *there*-insertion and Barbara Partee's analysis of *have* (Partee (2000)). In both analyses, the element responsible for the Definiteness Effect is a placeholder for an *NP*, and this is rendered by translating it as a λ-term that denotes (almost) an identity function. With Partee, *have* is translated as $\lambda R.[R(\lambda x.[x = x])]$, where R is of type $((et)(et))$, so *have* is of type $(((et)(et))(et))$. R is bound by the object *NP*, which is assumed to be relational.

These translations can be taken to correspond to the intuition that *there (be)* and *have* are incorporating elements, even though this is not made explicit by the authors. Accordingly, these analyses can also be seen as versions of the incorporation strategy, even if they do not attribute existential force to *there* or to *have*. Rather, the incorporating function will inherit the properties of the *NP*'s determiner, as seen from the sample derivation reproduced in (5.46). (Recall that dynamic **BE** preserves the quantifier of its argument.) This is seen as a technical advantage over van Geenhoven's original formulation of Semantic Incorporation, since it avoids the problems caused by negation and by $MON \downarrow NP$s.

(5.46) $[_S[_{NP} there_i]$ *is* $[_{NP} a_i\ [_{N'}$ *student hungry*$]]]$

$$\lambda \mathbf{P}.\ ^{\vee}\mathbf{P}(\ ^{\wedge}d_i) \qquad \lambda \mathbf{P}.Ed_i[\uparrow STUD(d_i); \uparrow HUNGRY(d_i);\ ^{\vee}\mathbf{P}(\ ^{\wedge}d_i)]$$

$$\mathbf{BE}$$

$$\lambda u.Ed_i[\uparrow STUD(d_i); \uparrow HUNGRY(d_i); \uparrow d_i =\ ^{\vee}u]$$

$$FA$$

$$Ed_i[\uparrow STUD(d_i); \uparrow HUNGRY(d_i); \uparrow d_i = d_i]$$

(Blutner (1993) p.57)

Blutner's analysis can be seen to avoid another problem, which van Geenhoven's original proposal suffers from, viz the possibility to assign wide scope to the indefinite. In principle, here, too, the indefinite might be assigned wide scope, and *there* might be saturated with the dummy property $\lambda u.\ ^{\vee}u =\ ^{\vee}d_i$ (where d_i is the discourse marker of the indefinite). Thus, one might in principle get a structure like (5.47):

(5.47) $Ed_i[\uparrow STUD(d_i); \ldots \lambda\ ^{\vee}\mathbf{P}.[\mathbf{P}\ ^{\wedge}(d_i)](\lambda u.\uparrow\ ^{\vee}u =\ ^{\vee}d_i); \ldots] =_{\beta-conv.}$
$Ed_i[\uparrow STUD(d_i); \ldots\ \uparrow^{\vee} u = d_i \ldots]$

This possibility is not discussed in (Blutner (1993)). As far as I can see, it can be blocked, if the notion of 'preceding context' is made more precise. The novelty condition on *there* can be understood with respect to local context: then in (5.47) the discourse marker d_i will not count as new in the *local context* of *there*.[12]

Blutner's analysis (like most analyses of *there*-insertion) is problematic with respect to conjunction. The source of the problem is the presence of the discourse marker in the translation of *there*, and the fact that Boolean conjunction of properties yields wrong results. (The same problem could be seen with van Geenhoven's approach.)[13]

(5.48) *a.* $\mathbf{BE}(\lambda\ ^{\vee}\mathbf{P}.[Ed_i.[\uparrow STUD(d_i); \mathbf{P}(\ ^{\wedge}(d_i))]; Ed_j[\uparrow PROF(d_j); \mathbf{P}(\ ^{\wedge}d_j)]] =_{df}$
b. $\lambda u.[Ed_i.[\uparrow STUD(d_i);\ \uparrow\ ^{\vee}u = d_i]\ ;\ Ed_j.[\uparrow PROF(d_j);\ ^{\vee}u = d_j]]$

(5.48b) is the result of applying **BE** to *a student and a professor*, and it corresponds to the set of individuals who are both students and professors.

This problem can be overcome if one operates with non-Boolean conjunction $\oplus$. Then the translation of, for instance, **BE***two professors and three students* is the following (γ_i stands for a collective discourse marker).

(5.49) $\lambda u.E\gamma_3.[E\gamma_1.[\uparrow PROF(\gamma_1); \uparrow 2(\gamma_1)]\ ; E\gamma_2.[\uparrow STUD(\gamma_2); 3(\gamma_2)]\ ; \uparrow \gamma_3 = \gamma_1 \oplus \gamma_2; \uparrow \gamma_3 =\ ^{\vee}u]$

The pronominal discourse marker d_i (or γ_i, in the case of *there are*) in the translation of *there* will then be equated with the γ_3, the sum of the markers $\gamma_{1,2}$. This solution is not entirely satisfactory

[12] This can be seen as the converse of the prohibition against variables in *there*-insertion contexts, formulated in Heim (1987).

[13] Syncategorematic Boolean conjunction will work, though, provided the *NP* is lifted to a function that expects a generalised quantifier (pronominal *there*) and returns a formula: $\lambda\mathcal{Q}.\mathcal{Q}(\lambda u.Ed_i.[\uparrow STUD; u = d_i]$. That is, $\mathcal{Q}$ is of type $((sedd)(d))$, where d is the type of 'dynamic' formulas and s is the type of states. This type-lifting operation, however, is even more complicated than the lift required for Semantic Incorporation.

in the case of $MON \downarrow NP$s. In these cases one presumably has to operate with null discourse markers.[14]

Blutner's analysis of the Definiteness Effect has two further problems. One is related to the reduction of weak *NP*s to predicative expressions, the other concerns the role of the coda in semantic composition.

The source of the first problem is the application of **BE** in existential sentences: Blutner's analysis incorrectly excludes nonpredicative weak *NP*s like *many* or *few*. As noted in connection with van Geenhoven's Semantic Incorporation (in a footnote on 153), *many* can be made to yield well-formed output with **BE**, just in case it is said to operate on collections. But if this move is adopted, *NP*s with *many* will be incorrectly predicted to appear in copula constructions.[15]

The second problem concerns the role of the coda: like many others before him, Blutner takes the coda *PP* to express nothing but a property of the 'main' individual discourse referent (e.g. *on the roof* corresponds the individuals on the roof). This assumption is problematic with codas that contain a universal quantifier (as in (5.20)), and, in general, in the many cases when the coda outscopes the *NP*, as in *There are no cats on a roof* (more examples will be provided in Section 5.5).

5.4 Term Unification

This section first outlines the motivations for a unification-based incorporation analysis of existential sentences, in 5.4.1. This analysis rests in fact on two assumptions/premisses: (i) In existential sentences the verb–*NP* relationship can be modelled with a semantic analogue of incorporation, or complex predicate formation. The rationale: the opacity properties of these constructions, as demonstrated in the preceding chapters. (ii) Semantic incorporation can best be rendered with term unification, rather than λ-abstraction. The motivation for this is provided by the discussion of related analyses from the preceding section.

Unification-related definitions are presented in 5.4.2. 5.4.3 contains discussion of some logical and empirical issues that arise with the unification method.

5.4.1 Incorporation as Unification: Motivations

1. The output of semantic incorporation is such that *there be* and the *NP* form one semantic word, or one complex predicate. This is motivated by Szabolcsi's observation that Hungarian Definiteness Effect verbs and their internal arguments resemble complex predicates rather than the usual type of verb—argument relationships. Independent motivation is provided by the narrow scope and event-dependent properties of English and Hungarian existential sentences.

   Incorporation then will be said to yield a complex [expletive-verb-Determiner-N']. This complex can be regarded alternately as a verb with additional information about a location and an individual, or as an *NP* with additional temporal and locational information. This will become apparent in the worked-out cases of the following section: since the descriptive content of the *NP* is made part of an event description, what one gets is a discourse referent x that has property N' relativised to state s. With Hungarian creation and make available verbs one also has the information that the state s is the result of some event e.

   Incorporation accounts for the opacity of Definiteness Effect constructions, as discussed in Chapter 4: this subtype of opacity is understood as dependency on an eventuality discourse referent, resulting, among other things, in the (representational) one time only property of the construction. and in what feels like an attributive reading for the weak *NP*.

2. Both *there be* and the *NP* are said to introduce an individual discourse referent. These two referents are equated by means of unification, as a version of anaphoric binding. The main motivations for this move stem from (i) the difference between bare nominals and full *NP*s

[14] $MON \downarrow NP$ will be problematic in the analysis developed in 5.5, as well.

[15] It is an additional mystery why *many* on its own is slightly better in a copular sentence than a full *NP* with *many*, cf. ????*Those men are many doctors* vs *My friends are many/numerous.*

in Hungarian, and (ii) the technical difficulties that arise with incorporation modelled with λ-abstraction.

3. Following van Geenhoven (1996) (and the overall strategy of Zimmermann (1992/93) for opaque verbs), the relevant verbs or verbal complexes, including *there be*, are said to expect a property level argument; only, on this analysis, the representation of *there be* will contain a pronominal property disocurse referent P, which will be equated with the descriptive content of the *NP*; so, this analysis will involve two bindings, that of the individual discourse referent, and also that of the property discourse referent.

4. The proposal that incorporation can be handled with a mechanism of anaphora resolution is consonant with recent work on other complex predicate constructions (resultatives, serial verbs), where predicates are combined sentence-internally with methods originally developed for discourse anaphora (Bittner (1999), Bittner (2001)).

5. The unification approach to semantic composition underlines the incompleteness of meaning contributions by certain constituents. That is, function application with λ-terms gives the impression that such constituents have a complete and independent meaning contribution, even if the λ-terms in question may be identity functions.

6. Higher order (term) unification has been employed in ellipsis resolution (Dalrymple, Shieber and Pereira (1995)), and serves to copy the relevant values from the antecedent to the VP-anaphor. It is thus seen to operate long-distance, and to leave the antecedent intact, so to speak.

   By contrast, the unification employed here yields one semantic unit: the appropriate variable/term substitutions are performed, *and* the DRS contributed by the verb and that contributed by the *NP* are merged into one DRS. So, in fact it is unification and DRS-merge (Muskens (1996), van Eijck and Kamp (1997)) in one. In addition, this operation is strictly local, being the output of a construction rule tailor-made, so to speak, for 'light' verbs (or 'light' expletive-verb complexes). Ultimately, all verb-argument combinations can be handled with unification and underlying merge (with some fine-tuning for quantificational *NP*s). This is in fact one of the mechanisms underlying bottom-up DRS-construction, and has been worked out in varying degrees of detail in recent work on DRT (Kamp and Roßdeutscher (1994b), and also in Kracht (1999).)

5.4.2 Definitions

The following contains the definitions necessary for this work. The 'standard' definitions related to unification are the following:

1. A *substitution* θ is a finite set of the form $\{v_1/t_1, \ldots v_n/t_n\}$, where the v_i-s are variables (distinct from each other), and each t_i is distinct from the corresponding v_i; the elements v_i/t_i are called bindings for v_i.

2. Given a substitution θ and an expression (term or atomic/quantifier-free formula) E, $E\theta$, the *instance* of E by θ is the expression obtained from E by simultaneously replacing each occurrence of the variable v_i in E by the term t_i.

3. Given a finite set S of expressions $\{E_1, \ldots E_n\}$, then $S\theta$ is $\{E_1\theta, \ldots E_n\theta\}$.

4. If S is a finite set of simple expressions (terms or atomic formulae), a substitution θ is a *unifier* for S if $S\theta$ is a singleton.

(Lloyd (1987):20–23)

The *unification* of a set S of formulae $\{\varphi_1, \ldots \varphi_n\}$ with unifier θ is the conjunction (or merge, in DRT) $\varphi_1\theta \& \ldots \varphi_n\theta$. In DRT this can be generalised to 'simple' (quantifier-free) DRS-es.

For this thesis, a quasi-operation $\mathcal{U}$ is defined in the following manner.

1. $\mathcal{U}(K_1, K_2)$: defined iff $K_{1,2}$ do not contain quantificational or conditional sub-DRS-es.

2. $\mathcal{U}(K_1, K_2)$ is shorthand for the following: if there exists a unifier θ for the set $\mathcal{K}:= \{K_1, K_2\}$, $\mathcal{K}\theta$ will be a singleton.

3. The terms in θ (the new values to be substituted for) are supplied locally, from the universes of $K_{1,2}$.

4. The merge of K_1/θ and K_2/θ is automatic, as K_1, K_2 are representations of constituents that stand in the head/complement relation.

   K_1 is contributed by the entries of English *there be, have*, and Hungarian Definiteness Effect verbs; K_2 is the entry of the internal argument.

5. $\mathcal{U}$ corresponds to a construction rule: if K_1 and K_2 are as above, then the DRS of the corresponding V' is obtained by applying $\mathcal{U}$.

On the surface, then, $\mathcal{U}$ amounts to the merge operation of DRT, and at first sight may merely serve as an interface rule for semantic composition. In other terms, the use of unification and related mechanisms may seem superfluous. This is not so, however. Merge and the intended bindings can be performed only if the operands have a common unifier θ. (And the added linguistic twist is that the terms of the unifier are provided locally, by the operands themselves.) Thus unification is seen as the underlying logic for the merge of DRS-es contributed by syntactic constituents.

5.4.3 Some issues

In this part I discuss some potential hurdles for unification. These include conjunction, negation and presupposition triggers in the operands. From the notation it will become apparent that the version of DRT assumed here is that from van Eijck and Kamp (1997), in that conditions will be on a par with DRS-es proper. (A condition can be regarded as a DRS with an empty universe.) As in Kamp (2001), presuppositional DRS-es will be rendered as an ordered pair of DRS-es $\langle K_p, K_a \rangle$.[16] Such ordered pairs are also said to be DRS-es. For a full definition the reader is referred to the original article Kamp (2001).

Conjunction

The first problem for the unification approach is conjunction. Let K_2 (which is intended to be contributed by a Theme *NP*) be a conjunction, say, of the form K_{21} $\langle and \rangle$ K_{22}. It can easily be seen that K_1 and K_2 do not have a common unifier in this case, because K_2 will provide not one but *two* constants for the variables of K_1 to unify with. (This is a problem discussed in Moore (1989), and taken up in Beaver (1997a)).

In handling conjunction and unification within DRT, two alternatives can be pursued (but see Beaver (1997a)). One is to 'declare' conjunction (better said, merging) to distribute (per def.) with respect to unification. The other is to form the non-Boolean sum (Partee and Rooth (1983), Link (1983), Krifka (1990a)) of the conjunct disocurse referents, and subject *that* to unification (for a similar approach, albeit without unification, see Landman (1999)).

1. Distribution:

   (5.50) $\mathcal{U}(K_1, (K_{21}; K_{22})) =_{df} \mathcal{U}(K_1, K_{21})\ ;\ \mathcal{U}(K_1, K_{22})$

   According to (5.50), merging is defined as distributive relative to unification. This is in fact the distribution or conjunction reduction method proposed in Kamp and Reyle (1993): Ch. 2.

[16] To be precise, the presupposition component is a set of DRS-es.

At first sight this seem to be too much: the reason is, if two *verbs* are coordinated, they do not do not usually distribute over their argument(s):

(5.51) *a.* John fed a cat and patted a cat $\not\models$
b. John fed and patted a cat

The English cases discussed in this chapter do not pose this kind of problem. *There is*, other verbs that can occur in *there*-insertion contexts, and *have* are not coordinated with other verbs:

(5.52) *a.* *There arrived and (there) remained/is a man
b. ???There arrived and (still) is a man
c. ???Mary acquired and has a cat

Hungarian Definiteness Effect verbs cannot be coordinated, unlike their prefixed counterparts.

(5.53) *a.* */???János kapott és hozott egy könyvet
John received and brought one book-Acc
"John received and brought along a book"
b. */????János írt és adott egy levelet Marinak
John wrote and gave one letter-Acc Mary-Dat
"John wrote and gave/handed a letter to Mary"
c. János meg-kapott és be-hozott egy könyvet
John MEG-received and in-brought one book-Acc
"John received and brought along one of the books in question"
(e.g. one of those he had ordered or had been promised to him)

I take these data to show that verb coordination (whatever the categorial status of the conjuncts) can be seen as a subspecies of complex verb formation, and that Definiteness Effect verbs are not amenable to it. The reason may be that verb coordination may involve some (default) connections between the variables contributed by the conjuncts, whereas the variables contributed by Definiteness Effect verbs have to remain unconnected, so to speak.

The data also shed some light on the status of (5.50): on its own this formula does not exclude coordinated verbs, let alone coordinated Definiteness Effect verbs. The relevant constraint comes from the syntax: (5.50) is taken not to receive bad input.[17]

2. Summation:

Summation between conjuncts corresponds to the following: for all relevant discourse referents $\alpha_{i1,i2}$ within K_1 and K_2, respectively, take $\alpha_i = \alpha_{i1} \Sigma \alpha_{i2}$, where $\Sigma \in \{\oplus, \sqcup\}$, and let the terms within θ be the 'sum' α_i-s.

This does not seem to work in cases of 'temporal distribution' over the conjuncts.

(5.54) *a.* Over the years, Mary had ten cats and two guinea-pigs.
b. She had the cats before she had the guinea-pigs

In cases like (5.54), one needs at least two states, one for each conjuncts, whereas the verb provides only one. So, it seems that the representation of (5.54a) yields only one state, which 'covers' the (sub-)states needed for the conjuncts. (Viz, it could be the smallest state that has both as sub-states.)

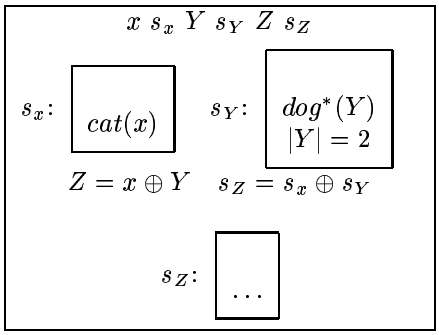
On a closer scrutiny one sees however that these 'conjunct'-states are available, after all. This is because *NP*s are analysed as containing a state discourse referent (anticipating the

[17] If one wishes to combine all verbs and their arguments via unification, (5.50) will need to be modified accordingly.

next section). In the case of conjunction the states contributed by the conjunct *NP*s are not consumed, and hence still available, after summation.

(5.55) *a.* a cat and two dogs

b.

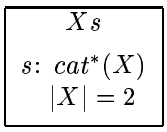


The point is that the conjuncts themselves provide the discourse referents needed for continuations like (5.54b).

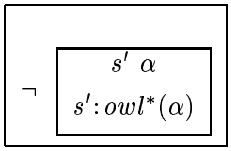
Nevertheless, the summation approach is not as unproblematic as it may at first sight seem:

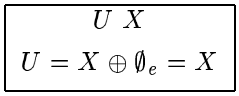
- the appropriateness of *but* is suggestive of sentential conjunction: *there are two cats but no owls on the roof.*
- In case one of the conjuncts is a negative *NP*, as in *There are two cats and no owls on the roof*, it contributes a DRS with an empty universe. Then conjunction is either undefined, or the second argument of $\oplus$ is to be the null discourse referent $\emptyset_e$:

(5.56)



and

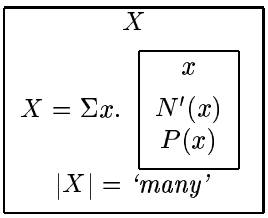




- Summing $MON\uparrow$ and $MON\downarrow$ *NP*s, e.g. *two cats and few owls*, can easily collapse into summing with *no N'*. The reason is, the main DRS for the*NP few owls* has an empty universe, just like the DRS representing *no N'*. Then this too is a case of summation with the null discourse referent $\emptyset_e$, which yields the same outcome as summation with *no N'*. This can be overcome in the following manner: assume that $MON\downarrow$ *NP*s are in fact composed from their $MON\uparrow$ counterparts, plus negation. So, *few N'* is taken to correspond to *not many N'*. *many N'* in turn is represented as follows:

(5.57) *a.* many N':

b.



Now there are two scope options for introducing negation for *few N'*: wide scope negation scopes over X, and yields *it is not the case that there are many X-es.* Negation can have

narrow scope, when it includes only the cardinality condition $|X|$ = *'many'*. Then the reading is *there are some X-es, and their number is not many.* I know this goes against the grain of many analyses, but it does prevent *few N'* to be collapsed with *no N'*, at least in some cases.

- In the analysis of the Definiteness Effect, the descriptive content of the *NP* will be unified with a pronominal property referent P in the entry of *there be.* If *there be* is to be unified with a conjunction, and conjunction is analysed as summation, then the danger is that P is to be unified with the union of the predicates from the conjuncts. Thus, in the case of *two cats and three owls*, P would be bound to $cat \sqcup owl$. This is implausible in itself, but the case of *two cats and no owls* is even more implausible: one would need to assume a zero predicate $\emptyset_P$ for *no owls.*

  Again, there is the way to remedy that: the relevant (binding) property contributed by the sum-discourse referent is that it is the sum of two other discourse referents. That is, P will be bound to $(\lambda U.)U = \alpha \oplus \beta$.

3. In some cases, summation is necessary as a local strategy, if one of the conjuncts contains a plural pronoun whose 'antecedent' is to be constructed from preceding conjuncts:

   (5.58) A man, a woman and their child

   In this case, a 'dummy' antecedent needs to be constructed for the plural pronoun, and this is clearly the sum of the two discourse referents introduced by the preceding conjuncts. And then one can argue that it is simpler and more straightforward to use summation for the entire coordinate structure.

The preliminary conclusion on conjunction is that (i) the conjunction reduction approach seems forced at first sight, but on second sight it seems more principled than summation, especially after the technical difficulties of summation have been revealed. Nevertheless, a set of data (of the type (5.12a), introduced in 5.2.2) with presupposition projection from one of the conjuncts will reveal problems with *this* approach in the following section. (ii) Summation seems simple and elegant at first sight, yet it runs into problems with $MON \downarrow$ *NP*s. Yet these problems are worth solving, because of the same set of data.

Negation:

Negation in existential sentences (as in other contexts) can be particle (sentence) negation or constituent negation.

(5.59) *a.* There aren't any owls on the roof
b. There are no owls on the roof

For negation, the rules in (5.60) are introduced. Preverbal, 'particle' negation poses no problems, because it applies to the output of unification. For negation with the determiner *no* on the *NP*, decomposition is tacitly assumed in (5.60b).

(5.60) *a.* $\neg\, \mathcal{U}(K_1, K_2) =$ obvious
b. $\mathcal{U}(K_1, [\neg K_2']) =_{df} [\neg(\mathcal{U}(K_1, K_2'))]$

Constituent negation presents a version of the familiar problem of scope. This is illustrated in (5.61) below:

(5.61) *a.* Macavity thinks that no owls are on the roof
b. Macavity thinks that there are no owls on the roof

Negation in the determiner *no* has been known to have scoping possibilities on its own. The 'ordinary' sentence (5.61a) can for instance have a wide scope reading (*Of no owls does Macavity think that*

they are on the roof), a narrow scope, de dicto reading, and an additional, split reading (*Macavity does not think that (some) owls are on the roof*) (see de Swart (2000) and the references cited there).

In the existential sentence (5.61b), negation does scope over *there are*, but it may not scope further. That is, (5.61b) lacks both the de re reading and the split reading. The stipulation in (5.60b) is correct in this respect, but, still, it is a stipulation. I will return to this issue in the next section.

Presupposition

This part is about the interactions between the operation $\mathcal{U}$ and presupposition(s) in its operands. Strictly speaking, this is an empirical and not a logical problem, since presuppositions are relevant for the phenomenon studied here. Yet it presuppositions are mentioned here, because I intend to discuss them in a more general manner.

The task is to establish what happens (or what one has to do) when one of the expressions to be unified is presuppositional. Following Kamp (2001), this can be noted as $\langle K_p, K_a \rangle$: an expression containing a presupposition is represented as an ordered pair of DRS-es, where the first DRS stands for the presuppositional part and the second DRS for the assertional part.

Since $\mathcal{U}$ serves a construction rule, there are two options as regards its interaction with presuppositions in its operands. K_p and K_a can distribute with respect to unification, as in (5.62a), or unification can be a hole for presuppositions, as in (5.62b):

(5.62) *a.* $\mathcal{U}(K_1, \langle K_p, K_a \rangle) =_{df} \langle \mathcal{U}(K_1, K_p), \mathcal{U}(K_1, K_a) \rangle$
b. $\mathcal{U}(K_1, \langle K_p, K_a \rangle) = \langle K_p, \mathcal{U}(K_1, K_a) \rangle$

The motivation for (5.62a) is given by cases with *another* and *too*, as in *there is another cat in the attic*. These presuppose the existence of another discourse referent (not necessarily in the same location, though).

There are two problems with (5.62a). First, it does not take the possibility of local accommodation into account. But local accommodation *is* necessary in possessive descriptions whose possessor-Determiner is a weak *NP* as in *the cat of a linguist*). Possessive descriptions will not be analysed in the thesis itself. The reader is referred to Barker (2000), Poesio (1994), and to Krause and Bende-Farkas (2000).

In these cases local accommodation in effect introduces the presupposition of the possessive description into the 'assertion' or new information slot of its strictly local context.

The second problem with (5.62a) is that it subjects the presuppposition to the Definiteness Effect by binding it to K_1, the DRS contributed by the verb. This is of course too strong, and this is why (5.62b) is to be chosen. The point is, the antecedent of *another* or *too* need not occur in an existential sentence: *I saw a cat on the roof yesterday. Now there is another cat on the roof.*

According to the other option, (5.62b), unification acts as a hole for presuppositions. At first sight this seems contradictory, as the defining property of the Definiteness Effect is novelty or non-presuppositionality. A closer look at the ±acceptability of various triggers in existential sentences reveals however that there is one type of presupposition that is in fact possible in existential sentences. Typical triggers are *too, again* or *other* (just in case the determiner preceding it is weak). I take partitives to belong to this class, too.

(5.63) *a.* *There is he/his cat on the roof
b. There are two of her cats *(on the roof)
c. There are two other cats and also three owls on the roof

A detailed, case by case analysis of presupositions in existential sentences will be given in the next section. Here I would only like to stress again that it is not the general schema (5.62b) that excludes (certain) presupposition triggers from existential sentences. Rather, (un)grammaticality will follow from the properties of the expressions containing the triggers.

An assumption implicit in both variants of (5.62) is that the DRS contributed by the verb is not presuppositional. This is indeed so in existential sentences. One may confine discussion to such

cases only, and think about extending the analysis to verbal triggers such as *regret* as future work. But there are cases when Definiteness Effect verbs themselves are presuppositional or anaphoric, as in the the earlier example (5.54), which is based on a personal communication by Irene Heim. (5.54) is repeated here as (5.64):

(5.64) *a.* Over the years, Mary had ten cats and two guinea-pigs.
b. She had the cats before she had the guinea-pigs

These cases are relevant, since they show the cancellation of the Definiteness Effect just in case the relevant verb describes an eventuality familiar from discourse. The by now familiar Hungarian cases of no Definiteness Effect with Focus also belong to this genus. Accordingly, the following chapter will contain some discussion on unification with verbal entries that are to be bound to a discourse antecedent.

5.5 Incorporation as Unification

5.5.1 Introduction

This part contains the analysis of English *there*-insertion. As outlined in the introduction to the previous section, the aim of the analysis is to retain the initial intuition behind Semantic Incorporation, and develop a different framework that resorts to unification instead of function application.

The analysis is based on the following preliminaries:

- The distinctive property of weak *NP*s (or exceptional strong *NP*s licensed in *there*-insertion contexts) is the discourse-new or hearer-new status of the main discourse referent. As shown later, novelty lives in the representation module, and not in the interpretation.
- Novelty also means unbound status, which is based on the premiss that indefinites are not quantificational. As motivated by the scope and Weak Crossover data, the new discourse referent contributed by the *NP* gets bound by the (expletive+) verb.
- Strong *NP*s are those whose discourse referent is bound by a quantifier or to an antecedent in preceding context.
- *There* is taken to contribute a locational discourse referent τ, which needs to be bound, either in the discourse, to a familiar coda, or by a quantifier; this is consonant with the crosslinguistically motivated syntactic proposal from Freeze (1992). In coda-less, or more 'abstract' existential sentences τ is taken to be a domain or a world variable.
- The coda (if locative) has the status of a Topic. in existential sentences it is a 'plain' Topic. It is a Contrastive Topic in presentational sentences, which will be ignored here (*There is Jóhn drunk at the BAR(B-accent)* — cf. Comorovski (1995)).
- Following Freeze (1992), I take the relevant state to say that the discourse referent contributed by the *NP* is '*AT*' the distinguished referent τ; only, *AT* will be defined as a function from state-location pairs—this accounts for the (discourse-level) one time only property of existential sentences.
- *There be* is also taken to introduce a (pronominal) property discourse referent; this referent is unified with the predicate contributed by the NP. This is consonant with the analysis of opaque verbs in Zimmermann (1992/93), and makes the descriptive content of the *NP* dependent on the state contributed by *there be*. This serves to capture the event- or state dependent readings of *NP*s in these contexts.
- The method for semantic composition is higher order term unification, by means of the quasi-operation $\mathcal{U}$ defined in the previous section. It has the status a lexicon–syntax–semantics rule:

- If the relevant syntactic configuration is $[Expl - V][NP]$, then apply $\mathcal{U}$ to the DRS-es contributed by these constituents;
- or, if the main verb of the sentence is *have*, with an *NP* (and not a small clause) as complement, then apply $\mathcal{U}$ to the DRS-es contributed by *have* and the *NP*.

Novelty

It has been shown in the descriptive work of Ward and Birner (1995) that *NP*s in existential sentences introduce discourse-new or hearer-new discourse referents. This is first illustrated in (5.65):

(5.65) *a.* John met a man in the library yesterday
b. *There is the man John met in the library sitting on the fence

The following sentence contains a specific indefinite: this example shows that what is relevant for existential sentences is the hearer-new status of the discourse referent (see also Fodor and Sag (1982), the remarks in Chapter 3, and also in this chapter).

(5.66) There is a man I know in the library

The necessity of hearer-new status is made evident by the case of definites. Definites are (exceptionally) licensed in (certain) *there*-insertion contexts just in case they are not anaphoric (disregarding list readings):

(5.67) *a.* I spoke to the President of Peru yesterday
b. #There is the President of Peru in this picture

The point is, (5.67b) on its own is felicitous, because the content of the description by itself suffices to denote a unique referent. If, however, it is preceded by a sentence like (5.67a), it is no longer acceptable, precisely because such context makes the definite in the second sentence anaphoric.

(5.68) and (5.69) are meant to illustrate that bridged definites and *covert* partitive readings are disallowed, as well.[18]

(5.68) *a.* A couple entered the pub
b. *#There is the man sitting at the bar

(5.69) *a.* Five students entered a pub
b. Two girls are at the bar now
c. There are two girls at the bar now
d. There are two of the girls are at the bar now

In (5.69b-d), the *NP*s are intended to denote a subset of the set of five students mentioned in the first sentence. The point of this example is that the 'simple', unmodified *NP two girls* from the existential sentence (5.69b) cannot have this construal.

Possessive descriptions with synthetic Genitives are accepted in existential sentences just in case the possessor is a weak *NP* (Barker (2000)):

(5.70) *a.* There is a linguist's bicycle in the garden
b. *#There is the linguist's bicycle in the garden
c. *There are all linguists' bicycles in the garden

Possessive descriptions with analytic, of-genitives are acceptable under roughly the same conditions (Poesio (1994)). These are problematic for the novelty account of the Definiteness Effect, because the head noun is marked explicitly as a definite. If the possessor is a weak *NP*, one has

[18] About the lack of covert partitive readings see also Rullmann (1989).

to assume local accommodation for the possessor, and the definite is bound in the context of the original context updated by the possessor.

(5.71) *a.* (?)There is the bicycle of a linguist in the garden
b. There is the father of a linguist in the dean's office
c. There is the editor in chief of *The Economist* in the pub

It was stated earlier that novelty is a property of the representation. Intuitively, this is motivated (for instance) by *again* having wide scope over the *NP* in existential sentences, as discussed in Chapter 4. The sentences in (5.72) can be true in scenarios where the same cat participates both in the 'asserted' and in the 'presupposed' eventuality, but these sentences do not convey this information.

(5.72) *a.* There is a cat on the roof again
b. John has a cat again
c. János újra talált egy macskát
John again found a cat-Acc
"John has found a cat again"

In the representations for (5.72a-c), the presupposition of *again* will contain a copy of (the representation of) the relevant V', which includes a copy of the discourse referent contributed by the *NP*. Being in the 'scope' of *again* was found to be a characteristic property of creation verbs and existential sentences in Chapter 4.

My original point with (5.72) is not that novelty *can* be defined in the representation language, but that it *has* to be defined there. The representation of all three sentences of (5.72), contains a 'presupposed' and an 'asserted' discourse referent for *a cat*, say, x_p and x_a. These need to be kept distinct in the representation, even though both can be mapped onto the same individual in the model. If novelty 'lived' in the interpretation, the denotations of the two referents were forced to differ, excluding precisely cases when the two events involve the same individual, but the sentence fails to convey this information.

To see that this is so, suppose that one wants to mark the value of the 'asserted' discourse referent x_a (i.e. $f'(x_a)$) as new, where f' is an assignment function that extends the domain of the immediately preceding function f at least with $\{x\}$. Then it will necessarily differ from the value of the presupposed referent ($f(x_p)$), and this is precisely what we do not want.

Conversely, if one sets out from the identity of the two individuals, then one is committed to the familiarity of $(f)(x_a)$. Or, what one gets is a reading where the NP 'outscopes' *again*: (5.72a), for instance, will be taken to mean *A cat is on the roof again.*

These observations are relevant in the light of some interpretational definitions of novelty from the current literature.[19]

It is not only in existential sentences that novelty is a representational property. Quite generally, one can speak of novelty relative to a new 'subject' (Ede Zimmermann (p.c.), see also Dekker (1996)). The formal, or technical problem is the same as with (5.72). Only, this time it surfaces as the relationship between two overt indefinites.

In the following discourse (provided there are sufficient intervening sentences between (5.73a-b) and (5.73c)), the indefinite from (5.73c) can refer to any of the individuals that the previous indefinites refer to. Yet this indefinite is appropriate because it introduces a new *subject*, that which has the property of (being a man) and ordering a Martini with mustard.

(5.73) *a.* A man and a woman entered the pub
b. Five men were leaning against the bar
...
c. At nine o'clock sharp, a man ordered a Martini with mustard

[19] According to Krahmer (1995), for instance, non-familiarity is defined as follows:
$[\![Familiar(x,\Phi)]\!]^- = \{g || \hat{x}.[\![\Phi]\!]_g| \neq 1 \& \forall v \in Dom(g)(v \neq x \Rightarrow g(v) \neq g(x))\}$

(Krahmer (1995) Df. (7) on p. 160.)

The reader can check that according to this definition every indefinite in a piece of discourse will denote a distinct individual.

The Coda

According to Levin and Rappaport-Hovav (1995), locative inversion sentences and *there*-sentences have a 'perspectivising' effect, by highlighting or distinguishing a particular location. In linguistic terms this is manifest in the marked preference for this location to have a Goal role in an event that takes place there (as opposed to being the Source):

(5.74) a_1. ?We were chatting in the living-room,
a_2. We were chatting in the garden,
b. when out of the window (=from indooors) jumped a handsome young man

(Levin and Rappaport-Hovav (1995): 6.4.)

The same Source–Goal asymmetry holds for *there*-sentences with verbs other than *be*:

(5.75) a. There arrived a man to/at the party
b. *There departed a man from the party

(Levin and Rappaport-Hovav (1995))

Intuitively, such constructions describe what is newly available at the Goal (and not what is removed from it). The reader may recall from Chapter 4 that Hungarian Definiteness Effect verbs describe change in the same manner, which suggests a fairly robust parallel between existential constructions in the two languages. They also suggest that in *there*-sentences the coda has a Topic discourse function.

This is further supported by (i) the suspension of oddness judgments of 'empty domain' *NP*s in *there*-sentences (Lappin and Reinhart (1987)), and by (ii) the distribution of *NP*s within locative codas.

(i) It was noted in Lappin and Reinhart (1987) (see also Reinhart (t.a.), Abusch and Rooth (t.a.)) that in existential sentences the oddness judgments of 'empty domain' *NP*s are suspended. According to Lappin and Reinhart this is due to the Topic discourse function of the coda. That is, Lappin and Reinhart derive the lack of oddness judgments in *there*-sentences from the status of the coda, which they take for granted. Here, this point is reversed, so to speak: the fact that oddness judgments are suspended is taken as an indicator of the status of the coda. In (5.76) **F** indicates falsity and **O** oddness.

(5.76) a. Two American kings were at the party **F; O**
b. There were two American kings at the party **F (O)**

(5.76b) is said to be evaluated relative to a domain restricted to the coda set, and not necessarily relative to the entire bulk of discourse participants' background knowledge. Abusch and Rooth disagree with the assessment procedure proposed in Reinhart (t.a.), but they agree with Reinhart that in existential sentences the coda has a Topic discourse function.

(ii) Another argument for assigning Topic status to the coda comes from the distribution of *NP*s that can be part of coda *PP*s. This distribution is restricted, in that $MON\downarrow$ *NP*s are strongly dispreferred in affirmative sentences:

(5.77) a. There is a cat on a roof
b. on the roof
c. ?on at least two roofs
d. on every roof/most roofs

(5.78) a. There is a cat *on no roofs
b. *on few roofs
c. *on at most two roofs

The sentences in (5.77) and (5.78) show the following:

(*a*) The coda has scope over the *NP*; this is apparent from the universal quantifier in (5.77d), and from the slight oddness of the modified nominal *at least two roofs*, of which it has been attested independently that it rarely takes inverse scope (Liu (1990)). The wide scope of the coda can also be seen from examples like *There are no cats on a roof*, where negation in the 'logical subject' *NP* has narrow scope relative to the coda.

(*b*) $MON \downarrow$ *NP*s in the coda are ungrammatical, or at least semantically ill-formed (in affirmative sentences). This I take to be an indication of the 'aboutness' function of the coda, which is indeed a characteristic feature of Topics. This is further supported by the special status of bare plurals in the coda *PP*. ((5.79) was inspired by Hungarian: the reader may recall from Chapter 2, for instance, that Hungarian bare nominals may not be Topicalised.)

At present it is a mystery to me why (5.79a) cannot be understood as a generic or habitual statement about roofs (saying that they tend to have two cats on them). The status of (5.79b) is less clear, the possibility of the *PP* being part of the *NP* should not be ruled out. (To wit, locative inversion is odd: *?On roofs (there) are cats.*)

(5.79) *a*. #There are two cats on roofs
b. There are cats on roofs

This thesis does not provide an independent analysis for Topicalisation (but see the schema (2.92) for Hungarian Topicalisation in Chapter 2). Accordingly, for the time being, the Topic status of a locative coda will amount to being assigned wide scope relative the rest of the existential sentence, and to binding the variable introduced by the expletive.

Excursus: The coda and negation.

(5.80) *a*. ∗There are cats nowhere
b. Nowhere are there (any) cats
c. There aren't any cats anywhere

(5.80b-c) may seem to question the Topic status assigned to the coda. Possibly, that what is relevant in the contribution of the coda is its wide scope relative to the *NP*. Codas with $MON \uparrow$ *NP*s may acquire an additional Topic-like status as a *consequence* of their taking wide scope.

5.5.2 The Analysis

In this part I present a unification-based analysis of *there*-sentences. It consists in the following components:

- *There* is taken to be a placeholder that

  (i) introduces a discourse referent τ, to be bound by the coda. In the simplest cases, τ is bound to a location, but it can also be understood as a domain variable (in case the coda is missing, or it does not denote a location).

  (ii) *There* is also said to contain a state discourse referent s, to be bound to a discourse referent introduced by the verb. In 'plain' existential sentences the binder is the state discourse referent introduced by *be*. The prediction is that other verbs are compatible with *there* just in case they contain a state description, one of whose 'parameters' is compatible with the referent τ.

  (iii) *There* can also be seen to require an individual argument, intuitively, the individual(s) that are in the state of being at τ. (ii) and (iii) correctly predict the possibility of verbs like *come* or *arrive* in *there*-sentences. The problem is how to exclude transitive verbs from combining with *there*, as in ∗*There baked Mary a cake.*

  Apparently, there is considerable variation in Germanic languages as to what the expletive is compatible with: in Dutch and Icelandic transitive verbs can occur in existential sentences, whereas in Swedish transitives are licensed only when passivised (cf. Rullmann (1989), Maling (1987), Vangsnes (1995)). English *there* seems to be the most restrictive in this respect. So,

there will be taken to expect a state description that contains a one-place property. *There* can be said to be a placeholder *both* to the coda and to the *NP*. Only, the status of placeholder variables it contains is not symmetric, so to speak: τ is a quasi-indexical variable that functions more like an anchor, and the individual discourse referent is made dependent on it.

- *Be* introduces a state discourse referent s; (in fact, *there be* is taken as one semantic constituent). The descriptive content of s (the eventuality-DRS) says that a new, locally introduced discourse referent β stands in the AT-relation to s (and, ultimately, to τ).
- β is the value of a functor AT_f from states and locations into individuals; it yields the (set of) individual(s) (with property P) at τ, and in state s. As a consequence, the discourse referent contributed by the *NP* will be maximal and unique relative to the state discourse referent s and to τ. This property will be inherited by the discourse referent contributed by the *NP*, which accounts for the intuition of 'disconnectedness' with *there*-sentences discourse

(5.81) *a.* There are some birds in that tree
b. There are two kestrels and three falcons, and no other birds

The sentences in (5.81) are about the same collection birds, yet the sentences themselves seem to speak about distinct collections.

Taking AT as functional, and making β dependent on s and τ also corresponds to the intuition that in existential sentences (or, indeed, with the class of (quasi-)Definiteness Effect verbs) the discourse referent plays a secondary role as compared to the property contributed by the *NP*. That is, β (and the referent bound to it) stands for a new, 'non-particular' representative of property P.[20]

There be is therefore assigned the following representation after the composition step that combines *there* with *be*. Underlining indicates variable (pronominal) status.

(5.82) *a.* there be:

b.
$$\boxed{\begin{array}{c}\underline{\tau}\ s\ \underline{\beta} \\ \hline \tau = \mathcal{L}(s) \\ (\beta = AT_f(s)) \\ s{:}\ P^*(AT_f(s))\end{array}}$$

(5.82b) says that some entity β with property P is in state s, and that the location of s is some τ. (In brief, there is some β with property P at τ.) β has special status, in that it is a(n existentially quantified) discourse referent in its own right, but which has to be unified with the discourse referent contributed by the *NP*. In other words, it is (syntactic) argument in the sense of being a placeholder, *and* an autonomous referent.

P is a pronominal property variable, to be bound to the descriptive content of the *NP*. In (5.82), P (and, ultimately, the descriptive content of the *NP*) is made dependent on the state s and (through τ) on the coda.

The functor AT_f is related to a predicate AT_P by means of postulate $\mathcal{P}$:[21]

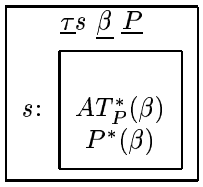
(5.83) $\mathcal{P}$ $\quad AT_f(s) = \beta \quad$ *iff* $\quad \beta = \Sigma\beta'.$
$$\boxed{\begin{array}{c}\beta'\ s' \\ \hline s' \subseteq s \\ s'{:}\ AT_P^*(\beta')\end{array}}$$

[20] 'Non-particular' is a hint at McNally (1998).
[21] This is an improved version of $\mathcal{P}$, suggested by Hans Kamp.

In prose, β is the value of the function AT_f just in case it is the sum of all β'-s that have the property P. β is therefore unique (maximal) relative to the state discourse referent s (and relative to P). This property is just a side-effect of introducing the function AT_f; the initial motivation has been to capture the event-dependent, 'attributive' reading conferred to the *NP*.[22]

(5.82b) is then equivalent to the following:

(5.84)



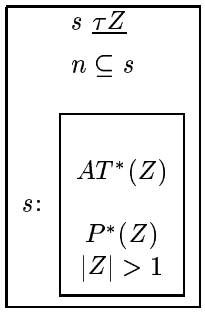
- The means of combining *there be* and the *NP* is higher order term unification. The aim is to preserve the attractive intuition behind the Semantic Incorporation proposal, without its weak points concerning formalisation (as discussed in Section 5.3). Also, the intuition behind higher order incorporation is that *there be* is like the light Definiteness Effect verbs of Hungarian —that is, its meaning contribution is incomplete without that of its *NP*.

To see how the proposed method works, here is a sample merge, that of *there are* and *two cats*. (5.85) below shows the two main constituents that are to be unified.

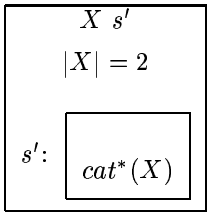
An added assumption is that (weak) *NP*s are taken to introduce stative discourse referents, as argued independently in Musan (1995) or Musan (1996). This is also motivated by the event-dependent or stage-dependent properties of existential sentences.

(5.85)

There are



two cats



The common unifier for the two DRS-es in (5.85) is θ in (5.86) below. s' does not stand for the entire lifetime of the cats X. It is that substate of their 'lifetime' state which overlaps the state s introduced by *there be*.

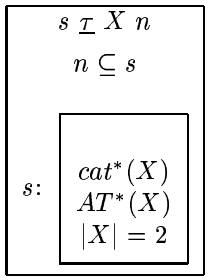
(5.86) $\theta = \{s'/s, \beta/X, P/cat\}$

[22] Token-uniqueness or -maximality are nevertheless useful properties, as seen from the following discourse: *There are some cats in the tree. They are hunting birds. There are some other cats in the tree, too. They are snoozing.*

After substituting the appropriate terms, we get (5.87):

There are two cats

(5.87)



The representation (5.87) has some verb-like properties, eventuality information and, indirectly, tense information, along with *NP*-like properties. From the syntactic side, considering the input categories, this is not surprising at all. But, nevertheless, this 'hybrid' has a number of important semantic properties. The discourse referent X, contributed by the weak determiner, 'scopes' locally over the state description that incorporates the descriptive content of the *NP*. This has the effect of the (contribution of the) determiner scoping over the entire verbal structure. Schematically, this is $Det(there + V + N')$.

This is an important result, because it is a formally precise (semantic) rendering of a kind of syntactic analysis. On the first version of this analysis, in Safir (1987), the expletive *there* and the *NP* are said to form one syntactic chain, such that the properties of the *NP* are also 'felt' at, or inherited by, the expletive. Now the analysis proposed here assigns a meaning of its own to the expletive, but unification can be seen as a method to 'promote' *NP* information and combine it with information from the expletive and the verb.

On the second version of this analysis, in Cardinaletti (1997), the expletive inherits the information from the weak *determiner* (and not from the entire *NP*). A similar suggestion is made in Abusch and Rooth (t.a.): in that paper, too, the weak determiner is said to scope over the expletive+verb complex (but this scoping property is conjectured to follow from Focus semantics). On *this* DRT-based account this is so, because the discourse referent β contributed by *there be* is to be replaced by the referent contributed by the determiner. This is precisely what has been schematised as $Det(Expl + V + N')$.

In Bende-Farkas (1999b) the same result was achieved in a much more complicated manner. In brief, the determiner was separated from the N', and allowed to combine with the expletive+verb complex first. This yielded a complex determiner with additional indexical information. In effect, a determiner like *three* was turned into *there be three*, where *there be* contributed essentially the same indexical information as on the present analysis (viz a state discourse referent s, and a kataphoric spatial discourse referent τ).

That approach had some unattractive aspects: (i) all NPs were taken to have the type of (dynamic) generalized quantifiers. So, strong determiners were not in principle disallowed to combine with *there be*, but merely yielded absurd results. By contrast, the present approach is a return to the original DRT view that indefinites and definites are not quantifiers.

In Bende-Farkas (1999b), 'determiner composition' meant function composition in a λ-DRT framework. Higher order unification is perceptively simpler than that.

(ii) The 'determiner composition' technique runs into serious problems with conjunction. Without going into techincal details, the reason for this can be summed up as follows: if *there be* is to combine with an NP of the form $[Det_1\ N'_1]$ *and* $[Det_2\ N'_2]$, 'extracting' Det_1 and Det_2 will violate the Coordinate Structure Constraint. Even if one does not care for syntactic constraints in the semantics, and is prepared to violate them, the technical solution may either be too convoluted, or may yield absurd results. True, conjunction will also be problematic for the unification based approach, but these problems are far less aggravating.

After this excursus on the implications of (5.87), I would like to return to the analysis proper. The coda is taken to introduce two discourse referents, y and l, that stand in the appropriate spatial

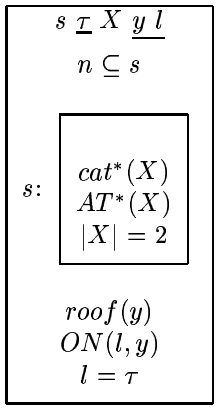
relation with each other. Since in (5.88) *the roof* is a definite, y is a familiar discourse referent.[23] l, the spatial region 'ON' y, is new, however. In a word, it is a fairly rudimentary analysis of prepositions,[24] but for the purposes of this work it will have to do. What matters (I think) is the introduction of two discourse referents, and the Topic status of the coda itself. Note that in principle the coda, too, could be subjected to unification with *There be NP*: l could be substituted for τ, and AT (which would now be a pronominal relation) with ON. This move requires a fair amount of caution, because it can yield *very bad* results if the coda is quantificational (as in *there is a cat on every roof*).

Also, unifying the coda and *there be* is to be avoided, since the coda has the status of a Topic. Here it simply means that it has wide scope over the rest of the sentence, and binds the variable τ in it. This will become more conspicuous when the case of negation (*there are no owls on the roof*) will be taken into account.

The full representation of an existential sentence with a locative coda has the form of (5.88): The *NP*, including its descriptive content, has been incorporated into the state description contributed by *there be*, and the coda has remained independent.

There are two cats on the roof

(5.88)



5.5.3 Worked-out Cases

In this part I show how the proposed analysis works. Basic, 'benchmark' cases (strong ±quantificational *NP*s, presupposition triggers) are followed by others that are relevant for the logical aspects of the analysis (negation, conjunction).

Scope

It is a well-known property of indefinites in existential sentences that they can only have narrow scope. A minimal pair was given in (5.1a-b) in the introductory part of this chapter.

It was also noted earlier that *NP*s in existential sentences are confined to the same quantificational niche as *there be*: this is a slightly modified formulation of the observation in Kim (1996). Kim's point was that in a sentence like (5.2b) (here repeated as (5.89)) the indefinite cannot be part of the restrictor, either:

(5.89) There is always a cat that lands on its feet

Under this incorporation-as-unification framework, the scope properties of indefinites follow from the output of unification, which yields one single semantic constituent (a.k.a. subsentential DRS). This was demonstrated in (5.85–5.87) earlier in this chapter.

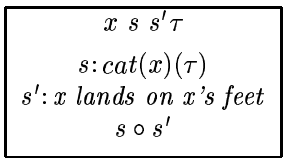
[23] Strictly speaking, *(on) the roof* triggers a presupposition. For the sake of simplicity, this aspect of its interpretation is ignored.

[24] Also, I had to ignore matters of 'everyday' physics involved in the difference between *on* and *over*.

For clarity, here is the representation of *a cat that lands on its feet* (assuming that s' is the result state of the cat's landing on its feet, and ignoring the details of the event structure of *land*):

(5.90) *a.* *There is a cat that lands on its feet*

b.



The indefinite in (5.90) has been merged with the expletive and *be*, and this this 'unified' DRS cannot be separated into the contribution of the verb and the *NP* anymore. The descriptive content of the indefinite is made part of the state description of *there be*, as in a complex predicate, and this is what prevents the discourse referent of the NP to scope independently. The point is, this analysis exploits a fundamental property of DRT, in that discourse referents cannot be 'separated' from their descriptive contents. It will be seen presently that it is this property of the incorporation procedure that also prevents strong *NP*s from combining with *there be*.

The (discourse level) one time only property of existential constructions follows from the analysis in a straightforward manner. This is shown by reductio ad absurdum: Suppose that there are two representations of existential formulae, containing the state discourse referents $s_{1,2}$, and the individual discourse referents $\beta_{1,2}$. Since it is not stipulated that the function AT_f should be injective, it can be supposed that $\beta_1 = \beta_2$. In this case unification will still fail, because of the syntatic rule underlying the operation $\mathcal{U}$: The *NP* will be required to bind its descriptive content into two event descriptions, which is not possible.[25] In brief, the relevant factors for the one time only property are incorporation, and the fact that β can be unified only with discourse-new discourse referents.

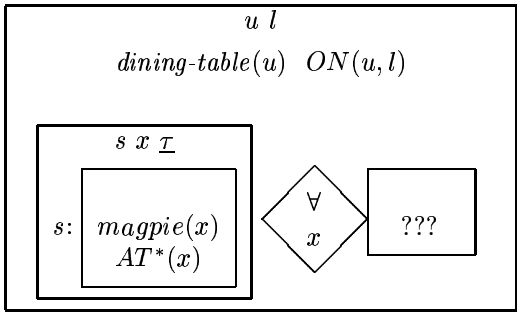
Quantifying NPs

Quantifying *NP*s cannot unify with *there be*. One can try two strategies for combining a quantificational NP with *there be*, and both fail. First, one can try to combine the entire *NP* with *there be*. This fails, because the *NP* does not provide the requisite variables for unification. In fact, in this case unification is not defined (cf. the definitions on page 159).

Or, one could try to combine the restrictor of the NP with *there be*, assuming that the open proposition $[x\ s|s{:}\,cat(x)]$ in the restrictor is unifiable with *there be*. This will not work, either, because the nuclear scope will be left empty, resulting in an ill-formed structure. (5.91 This can be seen in (5.91):

(5.91) *a.* ∗There is every magpie on the dining-table

b.



[25] A fully worked out representation for *again* will be provided in Chapter 6, on page 211. The reasons for having it in that chapter have to do with the way research on this issue has proceeded.

Anaphoric or anchored *NP*s

Anaphoric *NP*s, such as the definite in (5.92b) fail to unify with *there be* for the following reason.

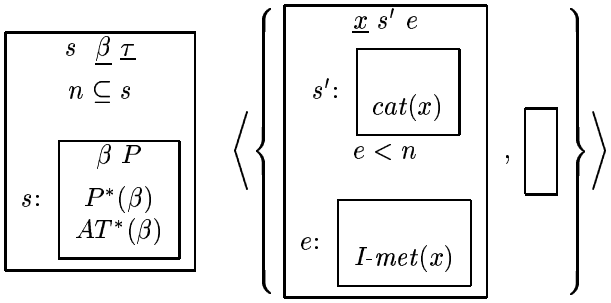
(i) their representation is said to consist in a presupposition and an assertion part, as in (5.93b) (cf. Kamp (t.a.) and Kamp (2001)). The presupposition part is ready, so to speak, to be bound to an antecedent (Sandt (1992)).

(ii) According to definition (5.62b) on page 164, $\mathcal{U}$ merges the representation of *there be* with the assertion part of the *NP*. The presupposition part is not affected by $\mathcal{U}$, i.e. it gets passed up, as through a hole.[26] Because of (5.62b), unification will fail in (5.93b).

(5.92) *a.* I met a cat yesterday
b. *There is the cat I met/it on the roof now

a. (5.92*b*)

(5.93) *b.*



Unification in the case of (5.93b) will not yield a well-formed DRS: the presupposition-DRS of the *NP* will be bound to its antecedent, and the verbal complex has nothing to merge with.

The same holds for *proper names*, as with (5.94) below: the proper name contributes to a top-level DRS, and comes with a so-called external anchor (Kamp and Reyle (1993), Kamp and Reyle (Forthcoming)), which precludes binding by *there be*.

(5.94) *There is Macavity on the roof

Non-anaphoric definites such as uniquely identifying descriptions or certain possessive descriptions are assumed to be accommodated in the local context of the existential sentence. This thesis does not offer an accommodation mechanism; what is tacitly assumed is accommodation in the manner of Krause (2001) and Krause and Bende-Farkas (2000).

It has to be noted that a prerequisite of unification failure for (5.93b) is access to preceding context. In other words, the presuppositional DRS in (5.93b) has to 'know' that the referent x has an antecedent in preceding discourse. Likewise, if (the presupposition of) a definite can be accommodated in a *there*-sentence, accommodation needs to precede unification of *there be* and the definite. That is, variable (non-)binding and presupposition justification have to precede unification.

Other presupposition triggers in the NP

Obviously, not all presupposition triggers are excluded from existential sentences. The descriptive generalisation is that if a trigger does not affect the ±bound status of the relevant discourse referent, then it can felicitously occur in an existential sentence. This is the case with *another*, *too* and *again*. Somewhat surprisingly, partitives also seem to belong in this class:

(5.95) *a.* There is another cat on the roof
b. There is a cat, too, on the roof
c. Again there is a cat on the roof
d. There are two of Mary's/each linguist's cats on the roof

[26] (5.62b) is not as stipulative as it may at first sight seem: the reader may recall the discussion on other presupposition triggers in the *NP* from 5.4.3.

In possessive descriptions with synthetic genitives the relevant discourse referent is dependent on the referent introduced by the possessor. The generalisation in Barker (2000) is that it is the weak/strong properties of the possessor that are relevant for the acceptability of the entire construction. This is seen in (5.96):

(5.96) *a.* There is a linguist's cat/the cat of a linguist on the roof
b. There is no linguist's cat on the roof
c. *There is the/every linguist's cat on the roof
d. *There is his cat on the roof

Analytic, of-genitives are more puzzling than synthetic genitives. This is because with analytic genitives the head noun is marked with the definite article *the*, which does not make this class a good candidate for *there*-insertion contexts (these are the so-called weak definites from Poesio (1994)). Yet, analytic genitives are acceptable in *there* sentences, and under (roughly) the same conditions as synthetic genitives, as seen from (5.97). The difference is, cases where the relation involves a unique possessee are felt to be better than with relations that do not involve uniqueness. Thus, (5.97b) has been judged as somewhat better than (5.97a).

(5.97) *a.* There is the bicycle of a linguist in the garden
b. There is the father of a student in the dean's office
c. *There are the cats of most linguists on the roof

The following is a sample of cases with different presupposition triggers:

- Another, too do not affect free/bound status of the relevant discourse referent. In the case of (5.98b), the assertion component of *another cat* has been bound to *there is*, and its presupposition component has been inherited by the sentence.

  (5.98) *a.* There is another cat on the roof

  b. $\left\langle \left\{ \boxed{\begin{array}{c}\alpha \\ cat^*(\alpha)\end{array}}, \boxed{\begin{array}{l} s \underline{\tau}\ x\ \ y\ l \\ n \subseteq s \\ s\text{:}\ \boxed{\begin{array}{c} cat(x) \\ AT(x) \\ x \neq \alpha \end{array}} \\ roof(y) \\ ON(l,y) \\ l = \tau \end{array}} \right\} \right\rangle$

- As regards synthetic Genitives (*a linguist's cat*) (i) Barker's analysis of possessive descripitions is assumed, but (ii) the possessor *NP* is assigned the status of a Genitive determiner, as in Partee (1997). (For analytic Genitives, like *the cat of a linguist*, I assume the presupposition accommodation accommodation mechanism from Krause (2001).)

  The issue of the ±presuppositional status of possessive descriptions will not be discussed in detail. As remarked earlier, their presupposition is assumed to be accommodated locally. (It is even questionable whether a synthetic Genitive with a weak Possessor, such as *a linguist's cat*, is presuppositional at all.)

What is relevant for this discussion is that the novelty or familiarity of a possessive construction is 'inherited' from the novelty/familiarity of the possessor (Barker (2000)). If the possessor is a strong/weak NP, then so is the entire possessive description, as shown in (5.99) below:

(5.99) *a.* There are some/two/many/few/no linguists' cats on the roof
b. *There is his/John's/every linguist's cat on the roof
c. *There are all/most linguists' cats on the roof

According to Barker, if the determiner of the possessor phrase is a quantifying *NP*, then this determiner binds *both* the possessor and the possessee variables. Something similar may be the case when the determiner is a weak *NP* (although in this case one cannot speak of binding by the determiner). Only, in this case the indefinite in the possessor *NP* can be taken to introduce an ordered pair $\langle x, y\rangle$ of free variables (see also Partee (2000) for a relational analysis of determiners in Genitives). This is supported by (5.100) and (5.101). In these examples, the *b* and *c*-sentences are intended as paraphrases of the *a*-sentences, and only the *b*-sentences seem to work. This is taken to indicate that the possessor and the possessee have to remain at the same level of DR structure.

(5.100)*a.* There is a linguist's cat on the roof
b. There is a linguist whose cat is on the roof
c. **NOT** There is a linguist and his cat is on the roof

(5.101)*a.* There are no linguists' cats on the roof
b. There are no linguists whose cats are on the roof
c. **NOT** There are no linguists, and their cats are on the roof

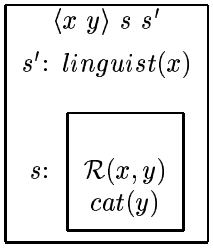
This observation is further strengthened by (5.102):

(5.102)*a.* There is always a linguist's cat on the roof
b. It is always the case that a linguist's cat on the roof
c. **NOT** There is a linguist, and his cat is always on the roof

The following is the representation of *a linguist's cat*, after the presupposition of *'s* (if there is one) has been locally resolved, and the entire *NP* has been accommodated:

(5.103) *a.* a linguist's cat:

b.



As said before, the possessor determiner is taken to introduce the ordered pair $\langle x, y\rangle$ of free variables. β is unified with y (assuming that it has access to individual members of the pair). P will be bound to the property of *being a cat that belongs to x*. Note that the determiner status of the possessor is crucial for this type of analysis: in effect, this is the factor that keeps the contribution of the possessor *NP* at the one DRS level with that of the possessee.

The unacceptability of possessive descriptions with strong possessors is due to the same factors that rule out 'simple', non-possessive strong *NP*s:

In case the possessor is a pronoun or a definite, as in *his cat* or *the linguist's cat*, there are two possibilities: either the possessee itself has an antecedent (cf. *John has a cat. His cat is black.*), or it may be the case that only the possessor has an antecedent (cf. *John is fond of animals. His cat has the run of the house.*). In the first case it is obvious why e.g *his cat* is ungrammatical in a *there*-sentence. In the second case the presence of the bound variable x in the term *x's cat* is responsible. Presumably, very local accommodation is not possible in such cases.[27]

If the possessor is a quantificational *NP*, e.g., *every linguist's cat*, unification fails for the same reason as with 'simple' quantifying *NP*s (cf. (5.91) earlier in this section). This is because (following the analysis in Barker (1995)) the entire possessive construction will be entered into the restrictor of *every*, and both the possessor and possessee variables will be bound by it.

- Partitives are taken to be modifiers with the status of a separate ('wide scope') presupposition. In contrast with possessors, the partitive phrase enters a separate (superordinate) niche. This is supported by the fact that *There are always two of Mary's cats on the roof* can be paraphrased as *Mary has some cats, and there are always two of them on the roof* (as opposed to (5.102), where possessor and possessee both had to remain in the nuclear scope). The relation between the 'partitive context set (the entire set of Mary's cats, say) and the collection introduced by the head (the discourse referent for 'two') is that of a proper subset. I assume that *this* does not affect the free status of the 'head' discourse referent. Accordingly, *two of Mary's cats* will be represented as in (5.104) (state discourse referents are omitted for the sake of brevity).

(5.104) *a.* two of Mary's cats

b. $\left\langle \left\{ \begin{array}{|c|} \hline m\ X \\ \hline Mary(m) \\ cat^*(X) \\ \mathcal{R}^*(X) \\ \hline \end{array} , \begin{array}{|c|} \hline Z \\ \hline |Z| = 2 \\ Z \subset X \\ \hline \end{array} \right\} \right\rangle$

According to the presuppositions–as–holes rule (5.62b), it is the assertion part of (5.104b) that will be merged with *there are*. This will yield an 'acceptable' structure, as opposed to (anaphoric) definites or pronouns, which are said to come with an empty assertion slot, and unification fails precisely because of the emptyness of that slot.

Negation

Indefinites in *there*-sentences have narrow scope relative to negation (as they have narrow scope relative to everything else). This is seen from the following minimal pair:

(5.105) *a.* It is not true that a student of yours is in the pub
b. It is not true that there is a student of yours in the pub

In the account proposed here, narrow scope with respect to unification follows directly from unification: the indefinite has to combine locally with *there be*.

The case of wide scope constituent negation (as in (5.106a)) presents the well-known problem of 'separating' negation from its host constituent, as it were. In this work, the problem is to unify a negation-free DRS with one that contains negation.

(5.106) *a.* There are no owls in the attic
b. There are no maths students' sisters in the pub

[27] The relevant reason for the ungrammaticality of *his cat* may be the determiner-like status of the possessive pronoun—to wit, strong *NP*s as modifiers of weak *NP*s are possible in *there*-sentences, e.g. *There is a cat that belongs to John/to him on the roof.*

In (5.60) on 163 the following negation rules were given:

(5.107)*a*. $\neg\, \mathcal{U}(K_1, K_2) =$ obvious
b. $\mathcal{U}(K_1, [\neg K_2']) =_{df} [\neg(\mathcal{U}(K_1, K_2'))]$

(5.107b) stipulates that *no* is to be decomposed into *not ... a*. It still keeps the scope of negation local enough, which is suitable for cases like (5.108b):

(5.108)*a*. John believes that no cats are on the roof
b. John believes that there are no cats on the roof

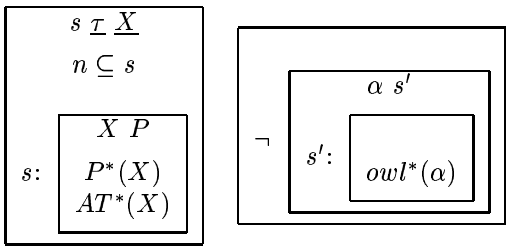
The 'ordinary' sentence (5.108a) can have a de re and a de dicto reading, and also a so-called split reading (Swart (2000)), paraphraseable as *John does not believe that a cat is/some cats are on the roof*. (5.108b), the existential sentence can only have a de dicto reading. According to my non-native intuitions, (5.108b) cannot have a split reading (which would be paraphraseable as *John does not believe that there are cats on the roof*). (no de re or split reading). (5.107) takes care of that, albeit stipulatively.[28]

If the lack of split readings is accepted as a working hypothesis, and (5.107b) is accepted as a way to assign constituent negation not-too-wide scope, then there may be a way to make (5.107b) less stipulative. In earlier discussion, the configuration $[Expl - V]\ [NP]$ was said to assign wide, but local, scope to the determiner of the *NP*; this can be schematised as $Det(Expl - V - N')$.[29] Then in (5.107b) negation can be seen as contributed by *no*, in the same way as the 'genuine' discourse referent in the case of *a cat* is contributed by the indefinite article *a*.

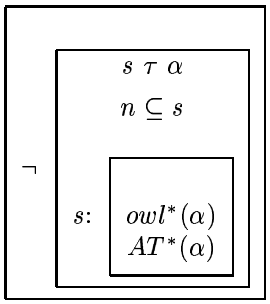
At present, however, this proposal is not worked out in detail. The problem is that the operand of $\mathcal{U}$ is the DRS of an *entire NP*, disregarding the internal structure of that *NP*. If, however, determiner and N' are also taken to be composed by means of $\mathcal{U}$, then, by associativity, $\mathcal{U}(K_{there}, \mathcal{U}(K_{Det}, K_{N'})) = \mathcal{U}(\mathcal{U}(K_{there}, K_{Det}), K_{N'})$. A detailed analysis along these lines is work for the future, however.

So, for the time being, the accepted rule for constituent negation is (5.107b). If the operands are those in (5.109), then it yields (5.110) below:

(5.109)



(5.110)

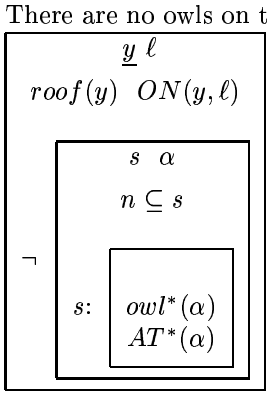


[28] At this stage it is not settled definitively that existential sentences with constituent negation lack a split reading. According to Hans Kamp (p.c.) split readings are possible for Dutch *er*-sentences with *geen*.

[29] The reader may also recall the syntactic proposals to this effect, e.g. Cardinaletti (1997). Blutner (1993), too, is an instance of this schema.

Adding the contribution of the coda to (5.110) yields (5.111). In this simple framework the Topic status of the coda amounts to its having wide scope with respect the 'rest' of the representation. In fact, (5.111) represents but one possibility of analysing the coda. The discourse referent ℓ is taken to denote the entire surface or region that stands in the ON-relation with the roof. Then it can safely scope over negation, and (5.111) can say that the entire region ℓ is such that there are no owls on it.

(5.111)



ℓ could also denote the smallest region ON the roof that contains (some) owl (it is reasonable to assume that it is a proper part of the entire region ON the roof). Then ℓ would have been entered *within* the scope of negation, because the sentence means that there is no part of the region on the roof that has owls on it. (And not that there is a proper part of this region that has no cats on it.) Such a 'splitting' of the contribution of the coda would be ad hoc in terms of the analysis, so I chose ℓ to denote the entire region with the corresponding spatial property and thus to have wide scope over negation.

Conjoined NPs

In 5.4.3 two alternatives were introduced as regards the interaction of conjunction and unification.

One alternative is essentially conjunction reduction:

(5.112) $\mathcal{U}(K_1, (K_{21}; K_{22})) =_{df} \mathcal{U}(K_1, K_{21}); \mathcal{U}(K_1, K_{22})$

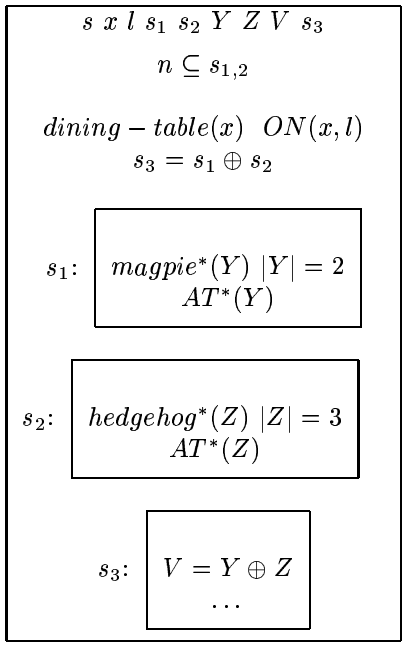
According to (5.112), *there are two cats and three owls* is the same as *there are two cats and there are three owls.*

The other alternative is to form the non-Boolean sums of the conjunct discourse referents, as in

(5.113b):

(5.113) *a.* There are two magpies and three hedgehogs on the dining table

b.



Summation was found problematic, and some corrective measures have been proposed:

- summation is problematic for the property discourse referent P: in (5.113) for instance one could take the complex property *magpie* $\sqcup$ *hedgehog*; instead, the proposal was to bind P to $(\lambda U.)U = \alpha \oplus \beta$;
- if one of the conjuncts contains negation, or is $MON\downarrow$, summation is not exactly easy; moreover, as pointed out in 5.4.3, conjunction with $MON\downarrow$ NPs may easily collapse into conjunction with *no* N';

  the proposed 'remedy' was to decompose *few* N' (for instance) into *not many* N', where negation has two scope possibilities; then it is not necessary for such NPs to be collapsed with negation anymore;
- the lack of an accessible discourse referent with $MON\downarrow NP$s presents another problem, namely, that the property P will be bound to will be $(\lambda U.)U = U$ (assuming that the other conjunct in $MON\uparrow$ and that it introduces the discourse referent U).

Given all these problems of summation, the technically simplest solution would be to adopt conjunction reduction. The reason why non-Boolean conjunction is not rejected will become clear when more data are taken into consideration.

Conjunctions and presupposition

In 5.4.3, a set of data was promised as a testing ground for the reduction and the summation approach to conjunction. Here they are — they are the same set of data that were found problematic for the presupposition analysis of existential sentences (cf. (5.12) in 5.2.2).

(5.114) *a.* ?There is a cat and her kitten on the roof
b. ???There are two professors and their students in the pub
c. ???There are two PMs and their baby-sitters in the TV-studio
d. ??There arrived a doctor, an engineer, and the doctor's wife
e. ?There arrived a doctor, an engineer, and their child

These examples were expected to decide between the reduction and the summation approach. On one version of the reduction approach, they should be unacceptable, and they should be (perfectly) acceptable if one assumes summation of the conjuncts. The problem is, the sentences were not found to be either. My informants found them gradually more acceptable as they were repeatedly exposed to them, but their status has not improved so as to reach perfect acceptability.

Here I am going to outline two strategies for each conjunction variant. Both go some way toward explaining the partial (un)acceptability of these sentences, but the matter is far from settled at the time being.[30]

The first-but-one strategy predicts (5.114a-e) to be totally unacceptable. This is to apply conjunction reduction *before* binding the presuppositions. This is not to be pursued, because of the midway-acceptability of these sentences.

The first strategy, then, is to bind presuppositions first, and then apply conjunction reduction. (That is, one can make use of the textbook property of conjunction, viz it is a filter for presuppositions.) Then one has the following rule ordering:

1. given a conjunction of the form $K_{NP_1}; K_{NP_2}$, bind the presuppositions of the second conjunct to the first (if you can); this yields $K_{NP_1}; K'_{NP_2} (:= K_{NP})$;
2. unify K_V with K_{NP}; in this case, distribute K_{NP_1} and K'_{NP_2} over K_V; this will yield $\mathcal{U}(K_V, K_{NP_1})$; $\mathcal{U}(K_V, K'_{NP_2})$

In the case of (5.114) not all presuppositions can be bound off, as shown in the representation(s) of *two professors and their students*:

(5.115) *a.* two professors ; their students

b. $\boxed{\begin{array}{c} X \\ |X| = 2 \\ professor^*(X) \end{array}}$; $\left\langle \left\{ \left\langle \left\{ \boxed{\begin{array}{c} U \\ |U| > 1 \end{array}} \right\} , \boxed{\begin{array}{c} Z \\ |Z| > 1 \\ students - of^*(U, Z) \end{array}} \right\rangle \right\} , K_\emptyset \right\rangle$

c. $\boxed{\begin{array}{c} X \\ |X| = 2 \\ professor^*(X) \end{array}}$; $\left\langle \left\{ \boxed{\begin{array}{c} Z \\ |Z| > 1 \\ students - of^*(X, Z) \end{array}} \right\} , K_\emptyset \right\rangle$

d. $\boxed{\begin{array}{c} X \\ |X| = 2 \\ professor^*(X) \end{array}}$; $\boxed{\begin{array}{c} Z \\ |Z| > 1 \\ students - of^*(X, Z) \end{array}}$

(5.115b) shows the presuppositional structure of *their students* (assuming conventional wisdom(s) from the subfield of presupposition studies, cf. Beaver (1997b), Kamp (2001), Sandt (1992)): it is said to contain two (embedded) presuppositions, one triggered by *they* and another, triggered by *'s students* (assuming some simplifications and decomposition). The 'assertion' or 'new information' slot is said to be the empty DRS $K_\emptyset$. (5.115c) shows the conjunct-DRS-es after *they* has been bound to *two professors*. The DRS for the second conjunct is still all-presuppositional.

As a final step, local accommodation is assumed to take place: the remaining presupposition is accommodated 'into' the second conjunct, as it were. It is not accommodated in the context of the first conjunct, because this would destroy the structure of conjunction.

Assuming that my informants could accommodate this presupposition, the remaining problem is the familiarity of the referent X in the DRS for the second conjunct. This may be the factor

[30] During the summer of 2001 several native speakers of English found (5.114a-e) to be perfectly acceptable. This means that at least in their dialect conjunction corresponds to summation.

responsible for the status of these sentences. One further conjecture is that speakers may reanalyse conjunction as ellipsis. Some evidence comes from examples like the following:

(5.116) *a.* In the pub (there) are two professors and their students
b. There are two cats on the roof, and their kittens too
c. Mary has a cat and John its kittens

In (5.116a), which was judged as perfectly acceptable, the *PP* is sentence-initial, which facilitates ellipsis. (5.116b-c) are examples of ellipsis and gapping, where the Definiteness Effect does disappear.

It is a question for future research, however, to determine whether the original sentences are indeed reanalysed as ellipsis. Even if it were so, a full treatment of ellipsis in terms Focus (gapping = extreme deaccenting) would have to be worked out.

I will now turn to the summation approach to conjunction with presupposition. This involves two steps: (i) binding the presupposition and (ii) forming the sum discourse referent of the conjunct discourse referents. (5.117) shows the summation variant (state discourse referents have been omitted for the sake of simplicity).

(5.117) *a.* two professors and their students

b. $\left\langle \left\{ \left\langle \left\{ \begin{array}{|c|}\hline U \\ |U| > 1 \\ \hline \end{array} , \begin{array}{|c|}\hline Z \\ |Z| > 1 \\ student-of^*(U,Z) \\ \hline \end{array} \right\} \right\rangle \right\} , \begin{array}{|c|}\hline X \\ |X| = 2 \\ professor^*(X) \\ \hline \end{array} \right\rangle$

c. $\left\langle \left\{ \begin{array}{|c|}\hline Z \\ |Z| > 1 \\ student-of^*(X,Z) \\ \hline \end{array} , \begin{array}{|c|}\hline X \\ |X| = 2 \\ professor^*(X) \\ \hline \end{array} \right\} \right\rangle$

d. $\begin{array}{|c|}\hline X\ Z\ V \\ |X| = 2 \\ professor^*(X) \\ |Z| > 1 \\ student-of^*(X,Z) \\ V = X \oplus Z \\ \hline \end{array}$

So, on the summation approach, the conjuncts are in one presupposition–assertion structure. As with the reduction approach, the pronoun's discourse referent (U) is bound to X, the discourse referent of the first conjunct: this is shown in (5.117c). The remaining presuppositional DRS (corresponding to *their students*) is accommodated in the context of the first conjunct, as seen in (5.117d). Then the discourse referent V is entered as the value of the sum of X and Z.

In this context, the familiarity of X in the condition $student^*(X,Z)$ should not be a problem, and the sentences in (5.114) should be perfectly acceptable. Under this approach, the reason for their imperfect status may be that the conjuncts do in fact retain some of their autonomy, and speakers have difficulty in processing *their*, even if its NP is seen as dependent on the first conjunct.[31] So, these sentences may be like garden-path sentences without a way back. Their partial acceptability does in fact hinge on the weakness of the first conjunct: to see this, here is an example where the first conjunct is a strong NP, and the second one is weak:

(5.118) *There are the professors and some students in the pub

So, it could be seen that both approaches may go some way toward accounting for the partial acceptability of conjunction and presupposition in existential sentences. A final answer, however,

[31] This is an issue I have avoided so far: speakers gave higher grades, as it were, to sentences where there was some conventionalised relation between the contents of the conjuncts, as with *professor* and *student*, or *cat* and *kittens*. (5.114c), containing *Prime Minister* and *babysitter*, was found to be odder than the rest.

requires a substantial amount of work on both strategies: with reduction, it is the link between gapping and Focus, and Focus and the Definiteness Effect that needs to be worked out. With summation, it is the processing aspects that need to be elucidated.

Conclusion

This chapter has presented a unification-based analysis of existential sentences, assimilating the expletive+verb – *NP* complex to an incorporating construction. This has been motivated by the opacity properties of the construction.

The use of unification has been motivated in order to avoid the problems inherent in treating weak *NP*s as genuinely predicative, in the sense of not introducing a discourse referent at all. Rather, *NP*s have been analysed in the usual DRT-manner here. It was the complex *there be* that was assigned special properties, in that it was said to contain an existentially bound discourse referent that had the capacity to bind the discourse referent contributed by the *NP*. In addition, *there be* was said to incorporate the descriptive content of the *NP*.

The unacceptability of strong *NP*s in *there*-sentences was seen to follow from unification failure, and from the basic requirement of DRT that discourse referents are not to be entered at a higher level of structure than their descriptive content.

Negation, $MON \downarrow$ *NP*s and conjunction have been seen to present open, or partially solved, problems.

Chapter 6

The Definiteness Effect(ii): Hungarian

6.1 Introduction

This chapter consists in two main parts: In the first part the unification-based treatment of the English Definiteness Effect from Chapter 5 is extended to Hungarian, with an excursus on the English quasi Definiteness Effect verb *acquire*. This is followed by a brief analysis of the interaction of the Hungarian Definiteness Effect with Focus.

The chapter is structured as follows: Section 6.3 presents lexical entries for Hungarian Definiteness Effect verbs, based on the informal analysis of event structure and aspectual properties from Chapter 4; this is followed by a brief compendium of worked-out cases. This will be complemented in 6.4 by a brief comparison with English resultative, quasi Definiteness Effect verbs. Section 6.5 is about the cancellation of the Definiteness Effect in the presence of Focus.

In the extension of the analysis from the preceding chapter to the Definiteness Effect in Hungarian, the following are preserved as core properties of the Definiteness Effect (and its analysis):

• English and Hungarian existential sentences have a distinguished (usually familiar or bound) additional 'parameter'; this can be either a reference location (the spatial location of a state, the Goal location of an event), a Beneficiary or a Possessor (with English *have*, and Hungarian equivalents of *receive, take, buy, steal* a.s.o.). In Chapter 4 this parameter has been referred to as a (generalised) Goal (in the sense of Jackendoff (1990/91)).

• The relevant *NP* is taken to introduce a discourse referent which is new (i) relative to the main eventuality described by the sentence, (ii) relative to the 'Goal' parameter, and (iii) relative to preceding context as well.

• In 'canonical' existential sentences, the main eventuality discourse referent is new, and, consequently, so is the discourse referent for the consequent state. In fact, the novelty of the event discourse referent is inseparable from the novelty of the relevant *NP*. This has been assumed throughout Chapter 5, even though the novelty of the state discourse referent in *there*-sentences did not play a prominent role. In fact, the novelty of this referent has been taken for granted.

• The verb (+expletive) acts as a binder for the *NP*; this is not the usual type of quantificational binding, however—if this were so, the *NP* could not be an antecedent for pronominal anaphora. Both in Hungarian and in English, it is in fact a state description that is responsible for binding. Only, for Hungarian achievement verbs this is their consequent state (and obviously not the discourse referent for/of the entire eventuality).

• Verb and *NP* are combined by means of higher order term unification; the motivations are the same for both languages. With Hungarian achievement verbs the weak *NP* is unified with a proper part of the verb's lexical entry (the consequent state); yet this has the effect of binding the *NP* to the entire event structure of the verb.

As regards the second part of the chapter, its main theme is the cancellation of the Definiteness Effect in the presence of Focus.

The loss of the Definiteness Effect under certain contextual or information structure conditions in not confined to Hungarian. (6.1b) shows a comparable English case based on a personal communication by Irene Heim.

(6.1) *a.* [János]$_T$ [A KÖNYVET]$_F$ kapta
John$_T$ [THE BOOK-Acc]$_F$ received+Def3Sg
"John, it was the book he received"
*b*1. Mary had a cat and the dog
*b*2. She had the cat before she had the dog

Data like (6.1) are relevant, because they show that the novelty of the discourse referent contributed by the *NP* depends on the novelty of the relevant event description. Thus (6.1) lends support to those analyses of the Definiteness Effect that define it as a novelty constraint (Ward and Birner (1995), McNally (1998), among others). (6.1) shows in fact a constraint on that constraint, so to speak: The novelty constraint on a Theme discourse referent is operable only if the main eventuality discourse referent itself is new, and not presupposed or backgrounded.

This in turn entails that (i) existential constructions are to be analysed in a framework that is sensitive to context in the right way, so to speak. — That is, one that has to be able to account for the loss of the Definiteness Effect under the special information structure conditions in (6.1). In addition, (ii), the proper analysis of (6.1) must not involve lexical ambiguities in the entries of the verbs. Rather, the loss of the Definiteness Effect is to follow from the contextual/Focusing properties of the sentences. This thesis does not provide a full-blown analysis for (6.1), but the present chapter does contain a sketch of the interaction of Hungarian verbs with Focus. As usual, Hungarian will be a convenient benchmark, because of the syntactic markedness of Focus, and the clarity of the presuppositional structure it induces.

Endnote: Many of the phenomena presented in this chapter will receive a simple, homegrown formalisation. This holds in particular for the case of negation and presuppositional, quasi-strong *NP*s, or Topic–Focus articulation. The reason is that these have not received a systematic formal semantic analysis so far.[1] Developing a full-scale framework for Hungarian semantics is well beyond the scope of this work. My aim is to focus on the interaction of these phenomena with the Definiteness Effect, and for this, these toy systems are sufficient.

A Note on Decomposition

On the basis of the findings in Chapter 4, it has been clear that a proper formal analysis of Hungarian Definiteness Effect verbs must involve some form of lexical decomposition. For one thing, their consequent state needs to contain information comparable to that of English *there be* or *have* (or stative Hungarian verbs, obviously). Since my primary aim is to locate the binding mechanism responsible for the Definiteness Effect, I will not have much to say about lexical decomposition as such.

In fact, I will assume a very rough and simple template, based on conventional wisdom from the literature, and on the DRT-based analysis in Kamp and Roßdeutscher (1994b) and Kamp and Roßdeutscher (1994a): Achievements correspond to event complexes *ec*, that consist in a transition proper (in Hungarian this would be a process ε that corresponds to the atelic construals of many of these verbs) and a consequent state s. In fact an operation is assumed that joins ε to s, yielding *ec*, and which is obviously more restricted than the join operation on the event semilattice (from the underlying ontology). For one thing, a function RES is assumed to link map the event ε to its consequent state s[2] (hence, RES incorporates a version of $CAUSE$). The counterpart of RES is

[1] The analysis of Focus in this thesis is indebted to Szabolcsi (1981). Indeed, it can be seen as a DRT-based reconstruction of that analysis. The main difference is that in this thesis Focus is taken to be presuppositional, with everything that a DRT-based analysis of presuppositions entails.

[2] In the original paper Kamp and Roßdeutscher (1994b) RES and PRE are predicates. The choice of taking them to be functional corresponds to the intuition that certain, but not all, results of events are lexicalised by language.

the function PRE, mapping ε to its precondition state. PRE and RES are omitted from the entries themselves, because they are assumed to be always 'there'.[3] (For some recent proposals regarding the formal semantics of event structure the reader is referred to Krifka (1992), Blackburn, Gardent and de Rijke (1996), or Naumann (2000)).

To illustrate the main assumptions concerning 'English' type event structures, here are two sample entries for the English verb *arrive*. The only difference between them concerns the status of the precondition state s_1: in (6.2b) its contribution is assertional as in Kamp and Roßdeutscher (1994b), whereas in (6.2c) it is presuppositional.

(6.2) *a. arrived:*

b.

$t\ ec\ s_1\ \varepsilon\ s_2\ \underline{l_r}$
$t \prec n$
$t \subseteq s_2$
$s_1 = PRE(\varepsilon)$
$s_2 = RES(\varepsilon)$
$ec = s_1 \oplus \varepsilon \oplus s_2$
ec: $s_1: \neg(AT(l_r, \alpha))$, $\varepsilon: P^*(\alpha)$, $s_2: AT(l_r, \alpha)$
$\alpha = Theme(ec)$

c. $\left\langle \left\{ \begin{array}{|c|}\hline s_1 \\ s_1 = PRE(\varepsilon) \\ s_1: \neg AT(l_r, \alpha) \\ \hline \end{array} \right\} , \begin{array}{|c|}\hline t\ ec\ \varepsilon\ s_2\ \underline{l_r} \\ t \prec n \\ t \subseteq s_2 \\ s_2 = RES(\varepsilon) \\ ec = s_1 \oplus \varepsilon \oplus s_2 \\ ec: \begin{array}{|c|}\hline \varepsilon: P^*(\alpha) \\ s_2: AT(l_r, \alpha) \\ \hline \end{array} \\ \alpha = Theme(ec) \\ \hline \end{array} \right\rangle$

(6.2b-c) contain the following information: a temporal discourse referent t is introduced, to locate the event(s) in time; with past tense forms, t precedes the utterance time n; in addition, with telic verbs, t is a temporal part of the result state s_2. The verb introduces an event complex discourse referent ec, which is the 'sum' of three subevents: the precondition state s_1, the transition/preparatory phase ε, and the consequent state s_2. Here, the functions RES and PRE that relate $s_{2,1}$ to ε are made explicit, but they will be omitted from now on.

α stands for the deep object of *arrive*; it is not entered into the universe of the DRS, because it serves as a placeholder for the referent contributed by the *NP*. I will follow this practice throughout the thesis: placeholder variables will only appear in conditions (see also Koenig (1999) and Farkas and Swart (2001)). Alternatively, placeholders could be introduced into the universe of their DRS as (anaphoric) pronouns with special binding conditions.

Returning to the content of (6.2): l_r is the Goal location of the arrival event. With some hesitation, I entered it into the main universe, because (in the absence of an overt Goal adverbial in the sentence) it is to be linked to a location salient from discourse. Hence the underlining, which indicates pronominal status (the need for an antecedent). The main event description says that in state s_1, α was not at the location l_r; this was followed by a process ε in which α was involved, and that this resulted in the state s_2 of α being at the location l_r.

[3]Person and number features are also assumed to be 'there', because of the pro-drop property of Hungarian.

As opposed to (6.2), the verb 'templates' that will be introduced later for Hungarian have a few important features that are nonstandard relative to other decomposition analyses and relative to the type of analysis exemplified in (6.2). These have been motivated by the results of the contextual 'tests' from Chapter 4.

1. Hungarian Definiteness Effect verbs lack precondition states in their representations altogether. This is because they describe change in the 'Hungarian' way, viz they describe what is new at some (familiar) Goal, instead of describing the change undergone by the Theme. The real (or possible) world events described by these verbs obviously need to be preceded by a state of the appropriate type. It is only the *representations* of the verbs' entries that lack information about these states.

2. Transitions are NOT described by means of a dowtyan $BECOME$ operator, because this operator would force the introduction of a precondition state, containing 'prior' information about the Theme. And this is precisely what is to be avoided, because this would make the Theme discourse referent familiar *in the local context* of the consequent state. What is worth retaining, then, is that decomposition tools from an underlying static logic cannot always be straightforwardly and seamlessly adopted into a dynamic framework.

3. Definiteness Effect verbs require a property type internal argument. On the durative readings of these verbs, or with bare nominals, this property acts like a modifier in a compound (e.g. *chair* and *bring* yields *chair-bring*). On terminative, Definiteness Effect readings, an individual discourse referent is introduced as the value of a function from consequent states (and properties) into individuals, and is said to have the relevant property P. This captures the intuition(s) that (i) *atelic* light verbs are opaque verbs with weaker binding properties, or no binding properties at all, and, (ii), with *telic* verbs, the consequent state contains a state- and Goal-dependent discourse referent that will bind the internal argument *NP*. Thus both atelic and telic verbs will be taken as incorporating their internal argument. With atelic verbs this is considerably weaker than the Semantic Incorporation schema proposed in van Geenhoven (1996), whereas with telic verbs it is considerably stronger.

4. Entries of the relevant verbs are said to contain the additional 'Goal' parameter/argument γ. γ plays a role in determining the content of the consequent state. By contrast, the verbs are said to lack a Source argument in their entries; hence, the consequent states of these verbs contain information only on what is new at the Goal, and not on what is missing from the Source. (This is the systematic 'profiling' effect of these verbs classes, discussed in Chapter 4.)

6.2 Lexical Entries

As shown in Chapter 4, Hungarian Definiteness Effect verbs come in several subclasses, depending on their aspectual class. I assume however that all subclasses share the following properties, which were discussed in detail in Chapter 4.

- Definiteness Effect verbs are a proper subset of so-called light verbs. In this case, lightness means a morpho-syntactic deficiency (the need to be preceded by a secondary predicate), and incompleteness with respect to subevent structure.[4]

- The Definiteness Effect is present if and only if the verb has a terminative/telic construal, the direct object denotes an individual created or made available by the verb, and the verb describes a new eventuality.

[4]The reader may recall from Chapter 4 that many light verbs are inherently atelic. Definiteness Effect verbs are those that can have a telic/terminative construal if the internal argument is a full *NP*. Other light verbs can have a telic construal only when they enter complex predicate constructions. This is the case e.g. with *söpör* 'sweep', which can be perfectivised only by adding a resultative predicate (*tisztára söpör* 'sweep clean') or a prefix (*le-söpör* 'sweep off').

- They have a (sometimes covert) additional argument that can be linked to a Goal location, a Beneficiary or to a (new) Possessor. They are said to lack a comparable Source argument.
- Definiteness Effect verbs (and light verbs in general) can take either bare nominal or full *NP* internal arguments; bare nominal arguments (those that are unmarked for number) disallow pronominal anaphora.
- Definiteness Effect verbs subcategorise for a property type internal argument, which in existential sentences is supplied by the descriptive content of the internal argument *NP*. In this way, the descriptive content of the internal argument becomes part of the representation of the verb's event structure. This accounts for the opacity properties of these verbs, and also corresponds to the intuition that object *NP*s in this case resemble secondary predicates rather than typical argument phrases.
- Definiteness Effect verbs describe change in the same way: they provide information on what is new at/with the Goal as a consequence of the event they describe.
- Definiteness Effect verbs create opaque contexts for their internal arguments; opacity is to be understood as event dependency, for creation verbs and for 'make available' verbs alike.
- Definiteness Effect verbs determine the word order possibilities of their internal arguments (except for quasi-strong *NP*s like *legalább két macska* 'at least two cats', or *NP*s with *is* 'too').

In Chapter 4, nonstative Definiteness Effect verbs were divided into the following subclasses:

1. The *bring*-type. Verbs from this class are durative if it they have a preverbal bare nominal internal argument, and terminative (perfective) if the internal argument is postverbal. This class has been further subdivided into verbs with make available objects (like *hoz* 'bring' itself), verbs of creation (like *épít* 'build', or creation construals of verbs like *varr* 'sew'), and verbs of quasi-creation (where the full *NP* internal argument denotes a shape or conventional amount created or 'individuated' by the event, e.g. *nyír* 'cut (and fashion) hair' or *tölt* 'pour (out)' (e.g. a glass of wine)).
2. *Find*-type verbs describe achievements, even with preverbal bare nominals (if the nominal is unmarked for number, iterated readings are not possible). Apart from *talál* itself, these are typically change of possession or make available/acquire type verbs.
3. *Iron*-type verbs have terminative aspect and show the Definiteness Effect only in the presence of an overt Beneficiary. Otherwise they are durative and do not show the Definiteness Effect (even if the internal argument is a full *NP*).

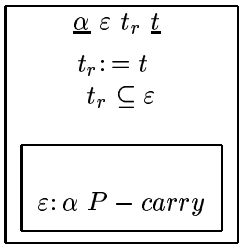
Light Verbs

As a preliminary to the analysis of Definiteness Effect verbs, here is a sample entry for light verb that is not a Definiteness Effect verb. This is *visz* 'carry'. In Chapter 4 it was classed as an inherently durative verb that lacks a Path, in the sense that it does not describe a carrying event from one location to another. Rather, it describes a process of carrying. If it has a reference location (at all), it does not coincide with a Goal location (as is the case with *bring*, for instance), it coincides with the location the Agent is at at a given reference time t_r. Note also that such event descriptions presuppose a familiar reference time: (6.3b) says that a carrying type event is (was) going on at reference time t_r. This is consonant with the meaning and formal semantic analyses of the French Imparfait, or imperfect tenses as in Romance languages in general (see e.g. Kamp and Rohrer

(1983)).

(6.3) *a.* *visz* (carry):

b.



In (6.3b), α is a pronominal discourse referent that stands for the subject. (As elsewhere, underlining is taken to indicate the want of an antecedent or binder.) Since Hungarian is pro-drop, α is taken to be contributed by the subject suffix on the verb.[5] P is a property discourse referent that is to be bound to the (N'-component of the) internal argument. Essentially, composing (6.3) with a direct object *NP* will yield a compound-like structure (e.g. *chair-carry*). Note that there is no placeholder variable for the discourse referent contributed by the internal argument *NP*. In case the internal argument is a numberless bare nominal, as in *széket visz* ('chair-carry'), the nominal will not contribute a referent, anyway. In case the internal argument is a full *NP* (as in *vitt egy széket* 's/he was carrying a chair') the referent of this *NP* may be entered coercively into the DRS universe, as a result of its descriptive content having been merged with P. This, I think, is the reason why atelic light verbs can have nonquantifying strong *NP*s as internal arguments (as in *vitt-e a széket* 's/he was carrying the chair').

The entry for *bring*-type verbs (on their durative versions) will be essentially the same, except that *bring*-type verbs are said to have a Goal argument.

The *bring*-type

The verbs in this group have a durative (process or progressive) construal if the internal argument *NP* is a preverbal bare nominal. They have terminative (experiential/normal Perfect) construal if their object is postverbal (a bare nominal or a full *NP*):

(6.4) *a.* János éppen/egész nap [széket hozott] — $[NV]$: durative
John just/whole day [chair-brought]
"John was chair-bringing just then/all day"

b. János (már) [∅ hozott] széket — $[V]N$: Perfect
John (already) [brought] chair-Acc

c. János [∅ hozott] három széket — $[V]NP$: terminative
John brought three chair-Acc
"John (has) brought three chairs"

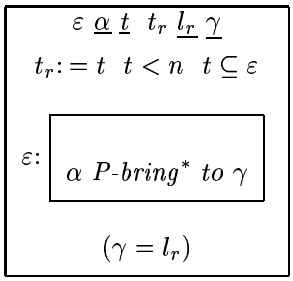
The entry for durative *hozott* 'brought' can be seen in (6.5). It is assumed that this reading of *hoz* is the basic one, and the telic reading is obtained by *adding* a perfective operator. In other words, the atelic reading is not derived from the telic one by means of a Progressive operator (as it

[5] In this case it is a null third person singular subject. Number and person features are ignored here, although all entries are assumed to contain them.

is ususally the case with analyses of the English Progressive).

(6.5) *a.* durative *hoz-ott* 'brought':

b.



As with the durative only *visz* 'carry' in (6.3), in (6.5b), the reference time t_r is equated with a time t familiar from context. (6.5b) thus says that a process of P-bringing was going on at t. As with *visz* 'carry', the property variable P is to be bound to the descriptive content of the internal argument.

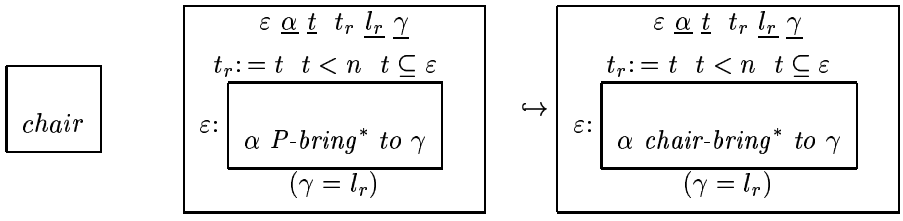
$\underline{\gamma}$ is the additional argument relevant for the Definiteness Effect. (It corresponds to the location variable τ from the analysis of the English Definiteness Effect in the preceding chapter.) l_r is the reference location understood as part of the entries of verbs like *bring* or *come*. In the absence of information to the contrary, the additional argument γ gets resolved to l_r. It is necessary, however, to keep l_r distinct from γ. The reason is that if there is an overt Beneficiary, γ may be resolved to *that*, as in e.g. the Hungarian equivalent of *John brought a chair for Mary*. With creation verbs, γ can be left either unspecified, or left to act as a domain variable linked to a context set. Trivially, γ can be resolved to the spatial 'projection' of the consequent state or that of the main eventuality.

It has often been emphasised that *hoz* and all Hungarian light verbs are taken to subcategorise for a property type internal argument P. This is motivated in part by their opaque semantics, in part by their morphosyntactic 'deficiency'. This 'deficiency' can then be seen as a lexicalisation of a form of opacity.[6] Taking light verbs to expect a property type argument is in accordance with their incorporating properties, and matches the type of the bare nominals that can combine with them. It also tallies with the analysis for opaque verbs proposed in Zimmermann (1992/93).

Having a property type internal argument is not a sufficient condition for the Definiteness Effect. In these durative cases, the property P serves mostly to capture the compound-like properties of nominal+light verb combinations. If (6.5b) is combined with the entry of a bare nominal, the result will be a complex event description, without access to the individual involved in the event. If the verb is not a creation verb, one can of course infer from such a sentence that at least one object must be involved in the event, but this information is missing from the sentences themselves (and should also be missing from their representations).

(6.6)

széket	*hozott*	↪ *széket hozott*
(chair(-Acc))	(brought)	(chair-brought)



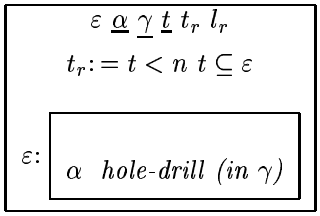
It was discussed in Chapter 4 that light verbs may also incorporate objects that do not denote what is created becomes available, even if this kind of incorporation is more restricted than with the 'become available/created' type of object. A case in point was the minimal pair *lyukat fúr* 'hole-drill' vs *falat fúr* 'wall-drill'.

[6]Other secondary predicates may also bind P: this will be seen in Chapter 7, in the analysis of prefixation.

So, one and the same entry for e.g. *fúr* 'drill', 'bore through' should combine with both kinds of object. This is seen in (6.7)–(6.8). The verb is assumed to have the same lexical entry in both cases. The difference lies in argument linking. Although thematic information is suppressed in (6.7)–6.8) (and elsewhere in the thesis), it should be clear that *lyuk* 'hole' contributes a (created) Theme in (6.7) and *fal* 'wall' contributes what may be labelled a Container. The relevant differences emerge in the manner individual discourse referents are bound in case the internal argument is a full *NP*. This will be discussed in greater detail in the following subsection.

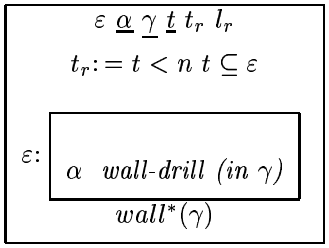
(6.7) *a.* *lyukat fúrt:*
(s/he was hole-drilling)

b.



(6.8) *a.* *falat fúrt:*
(s/he was wall-drilling)

b.



The main difference between (6.7b) and (6.8b) is that in (6.7) the Theme *falat* 'wall(-Acc)' does not contribute a discourse referent, and γ remains unsaturated, whereas (6.8b) involves two bindings: in addition to P being bound to *falat* 'wall-Acc', the thematic role of *falat* licenses the introduction of the condition $wall^*(\gamma)$. This issue will be taken up again in the following section.

As first demonstrated by Anna Szabolcsi, terminative aspect is one of the necessary conditions of the Definiteness Effect. With *bring*-type verbs, terminativity is conditioned by the postverbal position of the object (iff the object denotes something created/made available). This was shown e.g. in example (6.4). In Chapter 4, a covert postverbal perfectivity operator was postulated as the source of terminative readings. This move was motivated by the aspectual contrast between preverbal and postverbal bare nominals. As shown in (6.4), with a preverbal bare nominal the sentence has durative aspect, whereas if a bare nominal is in postverbal position, the sentence has perfect(ive) aspect. Now perfective aspect with the postverbal nominal, as in (6.4b), is unusual, given the 'standard' properties of aspectual composition in English, cf. Dowty (1979/1991), Krifka (1992), Verkuyl (1993). According to conventional wisdom on aspectuality, bare nominals are expected to contribute to durative (progressive or iterated) aspect (but see Eberle (1998)). Hence the need to postulate a covert (preverbal) operator that contributes an end-state (since e.g. the contribution of the nominal alone is not decisive for aspect). As proposed in 4.6 on (page 4.103), the binder responsible for the Definiteness Effect will inhabit the state description contributed by this operator.

Returning to the discussion of the data: When terminative, *hoz*-type verbs can have either an experiential or an 'ordinary' perfect reading. The experiential perfect essentially has an 'anytime in the past' reading, such that the consequent state does not by necessity hold at the reference time t_r or at speech time. With the 'ordinary' perfect reading the consequent state is assumed to hold at some contextually relevant time. On the experiential perfect reading it is not necessary for the event to have been culminated (seen from the continuation in (6.9c)). In terms of the internal

argument this means that there need not be an object made available or created by the event. The 'ordinary' perfect reading (see the continuation in (6.9b)) does mean that something was created or made available by the event.

(6.9) *a.* János sütött (már) kenyeret
John baked (already) bread-Acc
"John has done bread-baking"
b. Tehát van, mit ennünk
Therefore is, what-Acc eat-Inf-1Pl
"So we have something to eat"
c. Tehát van tapasztalata, jóllehet az áramszünet
miatt nem lett kenyér
Therefore is experience-Poss3Sg, yet the power-shortage
because no came-to-exist bread
"So, he has some experience, even though no bread was made
because of the power shortage"

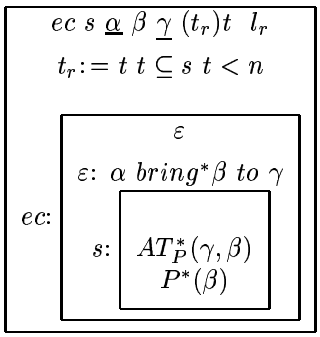
The various subtypes of the *bring*-class may prefer one perfect reading or the other — this is a matter for future work. Here, I would like to remark the obvious: they will be rendered with two distinct representations:[7] (6.9b) is indicative of a past culminated event, whereas (6.9c) is merely a past (unculminated) process.

For the case of (6.9c), I take the perfective operator to contribute a new reference time, which follows that of the run-time of the eventuality (coercing the run-time to have an upper bound is a by-product of this). (This is a simple operation, and will be omitted here.)

The 'culminated' reading of *hoz-ott* 'brought' involves rather more: the introduction of a consequent state (and the subsequent 'composition' of a complex event ec from ε and s), and the introduction of an (existentially bound) internal argument discourse referent β. The output is seen in (6.10):

(6.10) *a.* terminative *hoz-ott* 'brought':
or,$(\emptyset_{Perf}(hoz\text{-}ott))$:

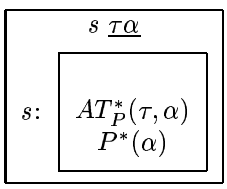
b.



The consequent state in (6.10b) is almost identical to the state description contributed by English *(there) be*, as introduced in the previous chapter:

(6.11) *a.* *There be:*

b.

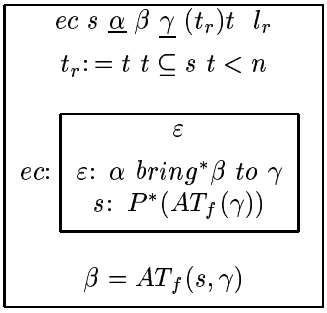


[7] Underspecification in the lexicon is well beyond the scope of this thesis.

The consequent state in (6.10b) and the state description (6.11b) both say that the Theme (β or α) is $AT\ \gamma$ (with τ, respectively). β, like 'English' α, is both a placeholder for the internal argument, and a discourse referent in its own right. Also, the descriptive content of the Theme is made event-dependent by being introduced within the event description DRS. The only difference between (6.10b) and (6.11b) is that in the Hungarian case the property discourse referent P occurs also in the description of the eventuality ε. This is intended as the link between the durative and terminative/telic construals of Hungarian verbs.

As in the previous chapter, I assume a function AT_f from state-Goal pairs into individuals, yielding *all* the individuals with property P, at γ and which have been affected or created by the event in question. (In other words, β has the property of uniqueness relative to the variable tokens γ and s.) AT_f is linked to the predicate AT_P in (6.10b) by means of the meaning postulate (5.83) from Chapter 5. Alternatively, the condition s: $AT_P(\gamma, \beta)$ can be replaced with the functional variant of AT_P, and then (6.10b) is altered as follows:

(6.12)



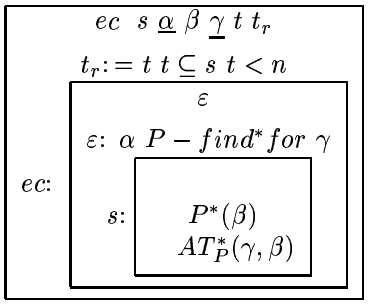
The *find* type

Talál 'find' is like terminative *hoz*, only, the consequent state is contributed by the verb itself. This is the same for *ad* 'give', *kap* 'receive', *szerez* 'acquire'. Only, these other verbs being change of possession verbs, the additional argument γ is by preference a Beneficiary or a Possessor. With *talál* on the other hand γ is by preference linked to a Beneficiary, or to an Experiencer.

Talál-t '(s/he) found' is assigned the following entry:

(6.13) *a.* *talál-t* (s/he found):

b.



Entries for verbs that describe change of possession (e.g. *kap* 'receive', *lop* 'steal', *szerez* 'acquire') are taken to differ from *talál*, in that their consequent state is to be completed with a two-place

relation rather than a (one-place) property. That is, they are taken to be of the form (6.14b):

(6.14) *a.* *kap-ott* (s/he received):

b.

$$\boxed{\begin{array}{c} ec\ s\ \underline{\alpha}\ \beta\ \underline{\gamma}\ t\ t_r \\ t_r{:=}\ t\ t \subseteq s\ t < n \\ \boxed{\begin{array}{c} \varepsilon \\ \varepsilon{:}\,\alpha\ R-getfor\gamma \\ s{:}\,R(\gamma, AT_f(s,\gamma)) \end{array}} \\ \beta = AT_f(s,\gamma) \\ (\alpha = \gamma) \end{array}}$$

In (6.14b), R is supplied by the descriptive content of the object *NP*. This relies on the assumption that this *NP* is coerced into a relational interpretation, as it is in Genitive constructions or when it is the argument of *have* (Jensen and Vikner (1994), Burton (1995), Partee (2000)). From this perspective, having both the placeholder R and the function AT_f may seem redundant. This is not so, for two reasons. One, the descriptive content of the *NP* needs a niche to slot into: R serves that purpose. Two, R alone is insufficient for Hungarian Definiteness Effect verbs. What is needed, I think, is the information that the object discourse referent β is maximal and unique relative to the variable tokens s and γ. That is, the function AT_f yields the objects γ has as a consequence of the event ec (and which are Rs). Without this additional condition, *kap* would be indistinguishable from English *receive*.

In general, the novelty and event-bound property of the internal argument with this class has two consequences: 'make available' objects will be newly found or newly acquainted. This will be the reason why (unlike English *find*) *talál* cannot mean 'to retrieve what is known to have been lost'.[8] It can only mean 'to come across'.

The 'profiling' effect of these verbs is accounted for by the lack of a precondition state (and the lack of a Source argument). *Lop* 'steal', for instance, conforms to A. Komlósy's observation, cited in Chapter 4: Because of the lack of a precondition state and, with it, the lack of event-initial information on the object, unprefixed *lop* can only make one aspect of the consequent state prominent, viz that the Beneficiary has something (new) as a consequence of the event. The information about the Maleficiary now lacking something is not present in the entry of *hoz*.

The *iron* type

As shown in Chapter 4, *vasal* 'iron' type verbs are durative without an overt Beneficiary in the sentence. In this case they do not show the Definiteness Effect:

(6.15) *a.* János (∗egy óra alatt) vasalt/mosott egy inget
John (one hour under) ironed/washed one shirt-Acc
"John was ironing/washing a shirt"
not "John ironed/washed a shirt in an hour"

b. János egy óráig vasalta az inget (mégsem fejezte be)
John one hour-till ironed+Def3Sg the shirt-Acc (yet-not finished+Def3Sg in)
"John kept ironing the shirt for an hour (and yet he did not finish it)"

In the presence of an overt Beneficiary these verbs acquire a terminative construal and exhibit the Definiteness Effect:

(6.16) *a.* János egy óra alatt vasalt magának egy inget
John one hour under ironed himself-Dat one shirt-Acc
"John ironed a shirt for himself in an hour"

b. ∗János vasalt magának minden inget
John ironed himself-Dat every shirt-Acc
"John ironed every shirt for himself"

[8] See Dowty (1979/1991) and the discussion in Chapter 4 for the two main formal paraphrases of *find*.

Verbs of this type include *mos* 'wash', *szab* 'tailor', and *varr* 'sew' on an affected object construal (as in *sew a button*). Only, in the case of *varr* the additional argument is a Goal (as in *sew a button on(to) a shirt*). *Ragaszt* 'stick' (TV), *akaszt* 'hang' (TV) are like *varr* in this respect.

Clearly, the Beneficiary (or Goal) has a role comparable to that of the covert perfectivity operator with the *bring*-class, in that it coerces the aspectual type of the verb (phrase).

At this stage I leave it open whether it is the lexicon or the syntax which is responsible for this phenomenon, viz whether the argument structure of the verb can be coerced to accept the Beneficiary (and then it has to be ensured that it does not remain covert). The wary reader may ask now what happens if an iron-type verb has complements with conflicting aspectual properties: a bare nominal (that does not change the durative aspectual type of the verb) and a Beneficiary (which coerces the verb (phrase) to have terminative aspect). The answer is that such combinations are very odd with iron-type verbs, unless the nominal+verb combination is lexicalised, or at least conventionalised:

(6.17) *a.* ??????János inget vasalt magának
John shirt-Acc ironed himself-Dat
??? "John shirt-ironed/was shirt-ironing for himself"

b. ??János almát mosott magának
John apple-washed himself-Dat
??John washed/was washing some apple(s) for himself"

c. János hajat mosott Marinak
John hair-Acc washed Mary-Dat
"John washed Mary's hair"
Marginal: "John washed his hair for Mary's sake"

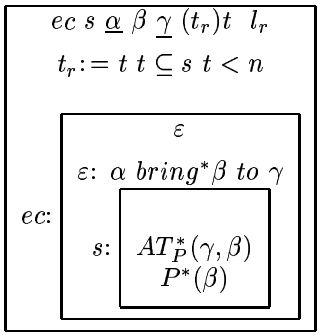
I take the entries for durative and terminative *vasal* to resemble those of *hoz*. The difference is that durative *vasal* is said to lack the distinguished argument γ.

Excursus: Verbs of Creation

In this brief excursus, I contrast the best-known analyses on creation verbs from the literature (Dowty (1979/1991), von Stechow (2000b)) with the analysis that this thesis provides for Hungarian creation verbs.

(6.18) *a.* terminative *hoz-ott* 'brought':
or,$(\emptyset_{Perf}(hoz\text{-}ott))$:

b.



(6.18) says nothing about the limitations on the life-span of the internal argument referent β. That is, it does not exlude β's existence prior to the event, although the fact that β is the value of a function from the consequent state into individuals may be a step in the right direction.

Dowty (1979/1991) provides two ways of decomposing creation verbs: One is according to his general template for accomplishment and achievement verbs (this is shown in (6.19b)). The other is inherent in his analysis of *make*, and was in fact generalised in von Stechow (2000b) (this is shown in (6.19c)). Apart from the fact that Dowty's analysis is inappropriate for Hungarian Definiteness

Effect verbs in general (this was discussed in Chapter 4), both variants in (6.19) pose problems, irrespective of the language they are applied to. (See in particular von Stechow (2000b) for a detailed discussion).

(6.19b), obtained by applying Dowty's general method, says that there is a house, which did not exist before John built it. The problem is, that the truth of this sentence is evaluated at an interval that *properly includes* the time when the house came into existence — thus the interpretation of (6.19b) says that the house existed before John built it. One can see here that the source of the problem is the wide scope assigned to the quantifier that corresponds to *a house*, in an interval semantics that is not fine-grained enough.

(6.19c) represents the option that takes creation verbs as a distinct subclass. It is inherent in Dowty's analysis of *make*, and has been generalised in von Stechow (2000b). Here, the object quantifier is assigned narrow scope with respect to the $BECOME$ operator, and the formula says, correctly, that a house came to exist because of John's building it. The problem now is that this formula is true only if there were no houses before John built one.

(6.19) *a.* John built a house
b. $\exists y.\exists P.[P\{j\}\ CAUSE\ BECOME\ [house'(y) \wedge exist'(y)]]$
c. $\exists P.[P\{j\}\ CAUSE\ BECOME\ \exists y.[house'(y) \wedge exist'(y)]]$

Because of the problems that arise with (6.19), von Stechow (2000b) proposes to analyse creation verbs in such a manner that the existence of individual created by the event (and the consequent state of the event) is relativised to the event itself. (6.20) represents the first version of von Stechow's analysis. (BEC is a version of the $BECOME$ operator relativised to events, the definition of the predicate **created-by** is given below.)

(6.20) *a.* John painted a picture
b. $\exists e.[painting_{we}(John) \wedge BEC_{we}(\lambda w.\lambda t.\exists x.[picture_{wt}(x) \wedge created\text{-}by_{wt}(e)(x)])]$

(von Stechow (2000b) (39): 13)

(6.21) *a.* **created-by** is of type $(s,(i,(ev,et)))$;
b. $[\![\textbf{created-by}]\!](w)(t)(e)(x) = 1$ *iff*
$\lambda w.\lambda t.O_w(e)$ causes $[\![\lambda w.\lambda t.exist_{wt}(x)]\!]$ in w at t, for any w,t,e and x.

(von Stechow (2000b) (41): 14)

In this manner, the time of the consequent state is the lower bound of the time-span of the object created by the event.

Von Stechow proposes to analyse creation verbs as expecting property type internal arguments: existential closure is performed within the entry of the verb, in the scope of BEC:

(6.22) $\textbf{paint}^P = \lambda w.\lambda e.\lambda P.\lambda x.[painting_{we}(x) \wedge BEC_{we}(\lambda w.\lambda t.\exists y.[P_{wt}(y)$
$created\text{-}by_{wt}(e)(x)])]$

This is a deliberate choice, based on the analysis of other opaque verbs from Zimmermann (1992/93). To this I can add that local existential closure by the verb is a subspecies of Semantic Incorporation. One can also add that this analysis correctly predicts the Quasi-Definitenesss Effect properties of creation verbs (*#John painted every picture*), but is not particularly well suited for cases like *John painted every picture in oil*, where the *PP in oil* is assumed to be foregrounded, or have Focus status. The reader can check that it also is prone to the by now familiar problems of conjunction (*John painted two landscapes and no portraits*).

However, as noted by Alex Zepter (see the discussion of Zepter (2000) in von Stechow's paper), (6.20) poses another problem, because of the conjunction in the scope of BEC. The following amendment is then proposed in von Stechow (2000b), where the individual created by the event is yielded by a choice function f relativised to times and worlds. In particular, the time argument of the function

is an interval I that abuts ($><$) the event time t. This ensures that the choice for the created individual is made only at the end of the event.

(6.23) *a.* John painted a picture
b. $\exists t[t \prec n \wedge \exists I.[t >< I \wedge \exists f.[ch_{wI}(f) \wedge$
$\lambda w.\lambda t.[paint_{wt}(j)]CAUSE_w \lambda w.\lambda t.[BEC_{wt}(\lambda w.\lambda t.exist_{wt}(f(picture)))]]]]$

(von Stechow (2000b) (92): 31)

In (6.23), the result of creation is no longer relativised to the event itself. In fact, events are missing from (6.23) altogether. One could retain events, however, introduce an overt consequent state s, and relativise choice to *that*.

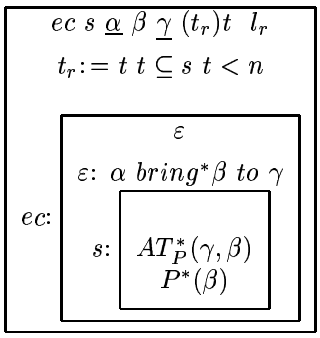
(6.23) (or its event-related variant) has a number of problems, some of them related to the choice function strategy (and pointed out by von Stechow himself in von Stechow (2000a)). For instance, $f_{wI}(picture)$ will be inaccessible to pronominal anaphora. Another problem is presented by strong *NP*s in sentences like *John painted every picture in oil.* There, presumably, the quantifier takes scope over the event description, and the argument of the choice function can be $\lambda x.[x = y]$. — That is, unless one says that a sentence like that has a complex Theme—Rheme structure, and the value of the choice function is a set of paintings known to have been painted by John (in some manner). Technical details and choice functions aside, this corresponds to the line taken in the analysis of Hungarian Focus with Definiteness Effect verbs. For English the matter is far from being settled.

Returning to the main goal of von Stechow's analysis, i.e. the provision of a satisfactory interpretation for creation verbs, it has to be stressed that this paper achieves this goal in an insightful and elegant manner. It has the added merit of placing creation verbs in the class of opaque verbs by defining them as temporally opaque. The discussion of the opacity properties of (quasi) Definiteness Effcts from Chapter 4 clearly owes the basic insight to von Stechow (2000b).

Concerning the analysis in this chapter, the reader may recall that the discussion of the so-called *bring*-class contained one sample DRS, for the verb *hoz* 'bring'. Yet creation verbs are also said to belong to this class, and their interpretation is quite different from those of make available verbs like *hoz*. The motivation for this sparseness is the discourse level parallel between Hungarian make available verbs and creation verbs. The aim of the analysis was to provide a uniform representation for *both* classes. Thus the template for telic *hoz* (reproduced here under (6.18) may serve for creation verbs like *ír* 'write' as well.

(6.24) *a.* terminative *hoz-ott* 'brought':
or,$(\emptyset_{Perf}(hoz\text{-}ott))$:

b.



(6.24) says nothing about the limitations on the life-span of the internal argument referent β. That is, it does not exlude β's existence prior to the event, although the fact that β is the value of a function from the consequent state into individuals may be a step in the right direction.

An argument for a uniform analysis of make available verbs and creation verbs is provided by the the verb *varr* 'sew'. This verbn can have either a 'make available' or a creation reading, both of

which trigger the Definiteness Effect. This is shown in (6.25).

(6.25) *a.* János varrt egy gombot/∗minden gombot az ingre
John sewed one button-Acc/every button-Acc the shirt-onto
"John sewed a button/every button on the shirt"

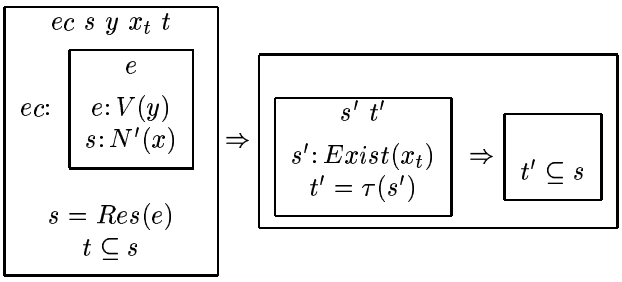
b. János varrt egy zakót/∗minden zakót
John sewed one jacket/every jacket-Acc
"John sewed a jacket/every jacket"

Both sentences in (6.25) are existential, meeting every necessary criterion for the Definiteness Effect.[9] Given the two readings in (6.25), it makes sense to assign *varr* 'sew' one and the same lexical entry, and to differentiate between the readings by means of additional tools.

Before suggesting what these tools may be, I would like to discuss how (6.24b) compares to Dowty's and von Stechow's analyses. (6.24b) obviously overcomes the scope problem posed by Dowty's (6.19), because it is not claimed that there were no paintings before John painted one. (6.24b) however does not exclude the existence of the created object prior to the event. True, the Theme referent is the value of function AT_f from the consequent state s and Goal γ into individuals, but AT_f is not compelled to take its values from among individuals that exist prior to the event. (In fact, with make available verbs the choice has to be made from among individuals that exist prior to the event.)

A proper characterisation of creation verbs is an issue for further work. A possible strategy is to follow a suggestion by Hans Kamp (p.c.), and enrich DRT with the following: (i) Allow the discourse universe U to grow in time, having in fact for every instant t a universe U_t of the individuals that exist at t or have existed prior to it. (Assuming that for any $t, t', t \prec t'$, $U_t \subseteq U_{t'}$.) (ii) Index individual discourse referents x with a temporal discourse referent t: this is taken as an instruction to embed x_t in U_t. (iii) The internal arguments of creation verbs are indexed to a time t included in the time of the consequent state s of the creation event: $t \subseteq s$, and, if x_t is the internal argument discourse referent, then $f(x_t) \in U_t$. An additional postulate, such as the one in (6.26), will then say that all times when that individual exists are included in the state s (assuming that the life-span of a 'created' individual coincides with the consequent state of the event of creation).[10]

(6.26)



With make available verbs on the other hand one is to ensure that the individual β picked by the function AT_f exists before the event.

6.3 Unification as Semantic Composition: Worked-Out Cases

This section presents applications of the unification method to benchmark Hungarian cases. Cases where Hungarian and English are the same (full *NP* indefinites and their scope properties, anaphoric definites, quantificational *NP*s) will be dealt with rather summarily. My focus will be on some of

[9] *Varr* 'sew' has another, non-Definiteness Effect reading, shown in verb phrases of the kind *sew the pocket/the hole*, i.e. when it means 'sew *at* something', or 'mend by sewing'. This reading is of no concern here, nor are other, locative alternation type readings of Definiteness Effect verbs, since these do not exhibit the Definiteness Effect — as in *drill/bore through the wall*, or *load the cart*.

[10] Alternatively, one could say that all times at which this individual exists are times that follow the run-time of the creation *process*.

the 'specialities' of Hungarian, e.g. incorporation of bare nominals, the difference between drilling a hole and drilling through the wall, and quasi-strong *NP*s of the type *legalább n N'* 'at least n N''. As regards non-anaphoric, uniquely identifying definites and possessive descriptions, Hungarian and English differ rather dramatically, in that Hungarian disallows all these *NP* types in existential constructions. Apparently, Dutch and other Germanic languages are like Hungarian in this respect. Here, I will unfortunately have very little to say about such descriptions, except for a few remarks and suggestions.

Basic Cases

Incorporation of bare nominals

It is now reasonably well-known to the linguistics community that Hungarian allows the incorporation of bare nominals by juxtapposition (a term from Mithun (1984)), and that numberless nominals do not license pronominal anaphora. This is one of the accompanying phenomena of the fact that in Hungarian, bare singulars are licensed almost exclusively as incorporated into their host verbs (even if they can or have to be separated from their verbs in the syntax). That is, they cannot have definite or generic construals.[11][12]

Implicit in the present account of Hungarian incorporation is the assumption that it depends on a lexical factor, i.e. on the 'light' property of the host verb. This is an assumption shared by several Hungarian linguists, since it has been shown by Katalin É.Kiss (in e.g. É.Kiss (1998a)) that there is in fact a sizeable verb class (typically, dispositional verbs like *szeret* 'love' or *gyűlöl* 'hate') that does not allow at least numberless bare nominals:

(6.27) *a.* ∗János süteményt szeret
John cake-Acc likes
Intended: "John likes cakes"

b. ∗János tételt tud
John theorem-Acc knows
Intended: "John knows theorems"

The reader may recall from the incorporating cases briefly introduced in the previous section that the analysis provided here crucially makes use of the way in which the 'lightness' property of verbs is analysed. These verbs have been claimed to subcategorise for a property type internal argument, and the primary motivation of this move was to capture their opacity properties. (For non-Definiteness Effect, atelic verbs and for Definiteness Effect, telic verbs alike.) The analysis of Hungarian incorporation (as conditioned by the lightness properties of a verb class) will then be seen as a spinoff, or consequence, of this type of analysis.

A necessary ingredient for the analysis of Hungarian incorporation is the added assumption that numberless bare nominals contribute properties. This has to be taken for granted: this thesis does not offer an explanation for the lack of generic readings with Hungarian bare nominals, nor for the lack of definite construals (as one finds in Hindi, cf. Dayal (1999)), nor for the inability of the nominal to occur independently from the verb.

The final representation yielded by the method proposed here will be very similar to that in Farkas and Swart (2001), although that analysis does not rely on any specific assumptions about the lexical semantics of incorporating verbs. The similarity hinges on the adoption by these authors and by myself of placeholder variables (Farkas and de Swart's so-called *thematic arguments*) that correspond to argument positions of verbs.

The main differences between this account and the analysis found in Farkas and Swart (2001) concern (i) the lexical semantics of the verb, as hinted previously, and (ii) classifier incorporation.

As acknowledged by the authors, Farkas and Swart (2001) predicts the possibility for so-called classifier incorporation (when the incorporated nominal is 'doubled' by an independent constituent,

[11] The only case of non-incorporation for a bare nominal is when it is Focus. Some relevant examples were discussed in Chapter 3.

[12] Farkas and Swart (2001) note that bare plurals, but not bare singulars, are possible in a postverbal argument position. I wish to leave this issue open at this stage.

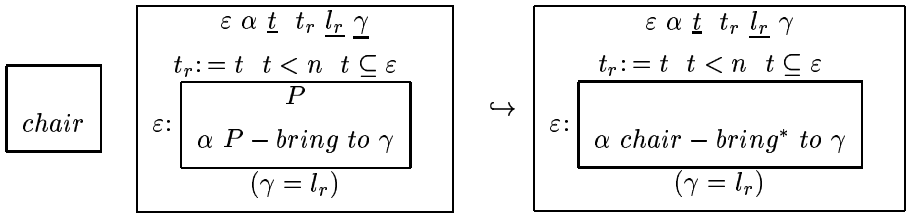
as in non-English equivalents of *John dog-keeps a sheltie*, meaning that John keeps a sheltie for a dog). In cases of classifier incorporation the incorporated nominal serves as modifier to the verb; the actual argument position in the verb's entry is saturated by the independent constituent.

As regards classifier incorporation, Farkas and Swart (2001) is more general than the account presented here, and could in principle be extended to languages that have this form of incorporation, e.g. Chamorro or Mohawk (the reader is referred to Chapter 3 for examples). Hungarian on the other hand does not allow for classifier incorporation (this too was shown in Chapter 3). The authors conjecture that this may be because of the case marking on the nominal.

The analysis presented in this section is more restrictive than Farkas and Swart (2001): classifier incorporation is ruled out. This is because in this language the nominal saturates an argument position in the verb's entry: namely, it binds the placeholder P. This again hinges on this particular characterisation of lightness/opacity in Hungarian, namely, subcategorising for a property type internal argument. In this respect, then, this analysis cannot be readily generalised to languages where incorporation is indeed independent from the lexical properties of the host verbs (as attested for Hindi in Dayal (1999)). It could however be generalised to languages that have well-defined classes of incorporating verbs.

Turning now to the analysis proper, here is (6.6), repeated as (6.6), (6.28), which shows the 'basic' case of combining a preverbal bare nominal with its host verb. By basic I mean the atelic, non-existential reading of the verb.

(6.28) *széket hozott* ↪ *széket hozott*
((he) was chair-bringing)



(6.28) and (6.29) show the incorporation of a preverbal ('base position') and postverbal bare nominal, respectively. The output of the combination is a 'compound verb' *chair-bring*. These representations differ in the aspectual properties of the host verb: in (6.28) it is a durative (process or progressive) description, and in (6.29) it is a terminative (perfect) event complex. In the case of the durative construal, there is no individual discourse referent for the internal argument at all.

Bare nominals are taken to introduce nothing but a property. To emphasise once more, this is motivated (i) by the impossibility of pronominal anaphora, and (ii) the lack of universal or generic readings.I take this to mean that bare nominals in Hungarian do not come with a discourse referent that could be bound, for instance, by a generic operator. This in turn means that in Hungarian *NP*s it is the determiner which is responsible for the introduction of a discourse referent.[13] This is in fact the conclusion reached independently in Farkas and Swart (2001). Since the Hungarian data are quite clear and convincing, this may be another case of crosslinguistic variation, i.e. as to which subconstituent of an *NP* is responsible for the introduction of a discourse referent.

Returning to (6.28) itself, the entry of the nominal could have analysed as containing a placeholder individual discourse referent. In that case one would have had the condition $chair^*(\gamma)$, but γ would not have been introduced in the universe of the DRS contributed by *szék* 'chair'.

[13]The reader may recall from Chapter 3 that the plural marker *-k* can be seen as a determiner in its own right, because (i) it licenses pronominal anaphora, and (ii) it is in complementary distribution with other determiners, but not with the definite article:

(*i*) *a.* János macská-k-at talált. Éppen egerésztek.
John cat-Pl-Acc found. Just moused-3Pl
"John found (some) cats. They were mousing."

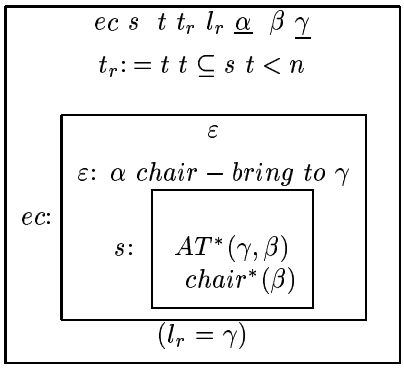
b. macská-k /∗két macská-k/∗sok macská-k/OK: a macskák
cat-Pl/∗two cat-Pl/∗many cat-Pl/OK: the cat-Pl

Another feature of (6.28b) is that the nominal is made part of the event description-DRS ε:.... This event dependency is lacking from Farkas and Swart (2001), for instance. Yet, I think, it is a necessary ingredient of Hungarian incorporating constructions, because of their 'intensional' flavour, meaning that an incorporating construction may be truthfully used in situations where there is no corresponding individual involved in the relevant event (or, even, there is no event at all). This is the case with *bélyeget gyűjt* 'stamp-collect', *autót lop* 'car-steal', or, quite often, with creation verbs.

(6.29b) shows incorporation in case the verb is telic (as indicated by the postverbal position of the nominal).

(6.29) *a.* *hozott széket*
((he) has brought some chair(s))

b.

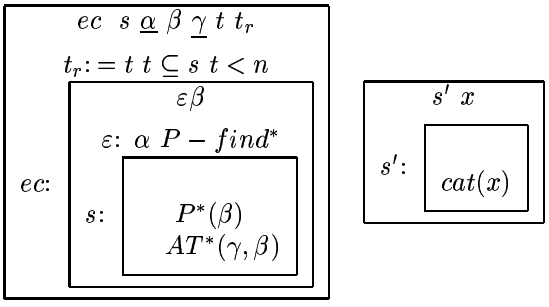


The important features of (6.29) are (i) the presence of the discourse referent β (since this is the perfective construal of the verb), and (ii) the absence of a discourse referent for β to unify with. (ii), I think, is the reason why (6.29) does not license pronominal anaphora: β on its own is insufficient to be anaphorically liked to a pronoun.

Indefinites

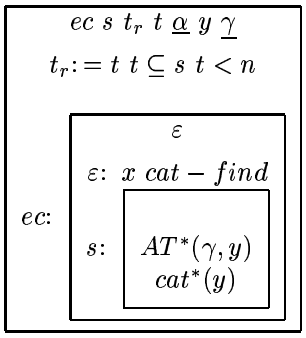
Hungarian indefinites compose with Definiteness Effect verbs essentially in the same manner as English indefinites with *there be*. Unifying the DRS (6.30) for *talál* 'find' with that for *egy macskát* 'a cat' yields (6.31):

(6.30) *talál-t:* 's/he found' — *egy macskát* 'a cat'



(6.31) *a.* *talált egy macskát*
's/he found a cat'

b.



As in English, the relevant indefinite can only have narrow scope, and unification takes care of that. In the representation in (6.31b), the discourse referent cannot be introduced higher than its descriptive content, which is made part of the verb's (modified) entry.

Hungarian indefinites in existential constructions have (at least) two properties that require some discussion. One is the problem of aspect, or the problem of the indefinite's interaction with the verb's subevent structure. The other problem concerns word order possibilities for 'plain', unmodified, $MON\uparrow$ indefinites like *egy macska* 'a cat'.

(i) Indefinites and aspect:

So far, it has been taken for granted that if an indefinite (with the right thematic role) combines with a Definiteness Effect verb, that will be on the telic construal of the verb. This becomes apparent if one considers *bring*-type verbs, i.e. verbs that can have both a telic and an atelic construal. In my dialect, *hozott egy széket* lit. 's/he brought a chair' can only describe a culminated event.

From the point of view of aspectual composition in English there is nothing surprising in this: Such an indefinite is quantised (in the terminology of Krifka (1992)), and is therefore *expected* to contribute to a telic reading. The telic reading of *hozott egy széket* becomes unexpected, or at least nontrivial, in the context of other Hungarian data. The reader may recall from the classification in Chapter 4 that with many non-Definiteness Effect light verbs, for instance, indefinites do not contribute to telic readings at all: for instance, *törölt egy tányért* lit. 's/he wiped a plate' can only have an atelic reading. Definiteness Effect verbs themselves can only have atelic readings if their internal argument does not denote what becomes available or what is created. This was briefly mentioned in the discussion in Chapter 4 (the main case was *wall-drill* as opposed to *hole-drill*), but was not elaborated upon at length. Apparently, the necessary conditions (or their failure to hold) for the Hungarian Definiteness Effect are not entirely independent from each other. If the internal argument *NP* does not have the right thematic role, then the verb cannot have a telic reading, either.

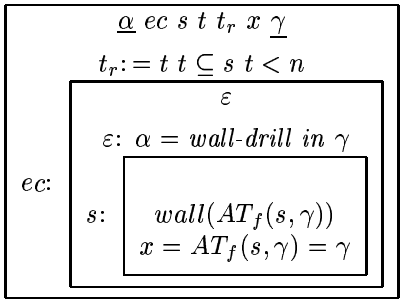
The problem is, then, why the telic or atelic construal of a *bring* type Definiteness Effect verb should depend on the thematic role of its internal argument. This thesis can offer an answer to one part of the problem, i.e. why such verbs can have only atelic readings in the *wall-drill* type of case. At this stage, however, I have no answer to the question as to why (in my dialect) an *NP* with the 'right' thematic role cannot contribute to an atelic reading.

The solution to the *'wall-drill'* part of the problem involves reductio ad absurdum. Suppose that *fúrt egy falat* lit. 's/he drilled through a wall' can have a telic reading (meaning something like 'a

wall has been pierced/drilled all the way through'). Then it will receive the following representation:

(6.32) *a.* *fúrt egy falat* (lit. 's/he drilled through a wall'):

b.



(6.32b) is seen as a violation of the θ-criterion, in that the discourse referent x is bound to β, i.e. to what is newly introduced as part of the consequent state, and to the 'Container' variable γ as well.

(*ii*) Word order possibilities:

Hungarian indefinites may have varying construals, depending on the preverbal position they occupy (see e.g. Szabolcsi (1997a), or Chapter 2). Here I will be concerned with the Topic and Quantifier positions.

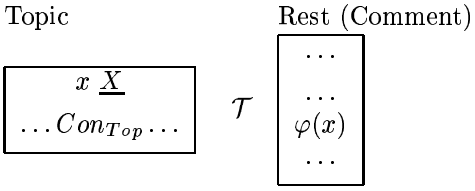
Where the Topicalisation of internal arguments is concerned, it was mentioned in Chapter 3 that internal arguments of Definiteness Effect verbs cannot be Topicalised. This is seen for instance in (6.33) below.

(6.33) ???[Egy széket]$_{Top}$ hozott János
[One chair-Acc]$_{Top}$ brought John
"One of the chairs (here), John brought it"

In this unification-based framework this is rendered by means of a conflict in terms of introduction sites and variable binding:

A Topicalised indefinite is enetered in a distinguished 'Topic'-DRS, distinct from the 'Rest'-, or 'Comment'-DRS, where it is to bind a variable:

(6.34)



The reader can check for himself that unification fails in a case like (6.34): according to the operation $\mathcal{U}$, the verb expects its internal argument to 'complete' its entry in the 'Comment'-DRS, in such a way that $\mathcal{U}$ yields a *single* DRS. When in Topic, an indefinite can only provide a (bound) variable within the 'Comment' part, so unification fails.

In this respect, Topicalised indefinites are like wide scope indefinites, even though Topicalisation does not create hierarchical structures. Rather, it is more like the 'coordinate' structure created by presupposition. A full account of Theme–Rheme articulation in Hungarian is beyond the scope of this thesis: for the Definiteness Effect, it suffices to note that this kind of ban on Topicalisation is practically a special case of the overall scoping constraint on indefinites in existential sentences.

Those Contrastive Topics that are to be copied back into the Comment-DRS are expected to be acceptable (when indefinites), which they indeed are:

(6.35) [Egy széket]$_{CT}$ tudom, hogy hozott János
[One chair-Acc]$_{CT}$ know-1Sg, that brought John
"I know that John has brought a chair(B-accent)"
(but, for all I know, he may have brought nothing else)

So, the reason for non-topicalisation is said to be a matter of non-locality, rather than the partitive-specific property of Topics.

'Quantifiers': it was pointed out in the previous chapter that (contrary to expectations) internal arguments of Definiteness Effect verbs may in fact occur in the preverbal Quantifier position. This is possible just in case the object *NP* is a ($MON\uparrow$) indefinite with the discourse particle(s) *(még) ... is* ('(even)...too'):

(6.36) *a.* [János]$_T$ hozott egy szekretert is
[John]$_T$ brought one secretaire-Acc too
"John brought a secretaire too"

b. [János]$_T$ [egy szekretert is]$_Q$ hozott
[John]$_T$ [one secretaire-Acc too]$_Q$ brought
—same—

(6.36b) shows that the Quantifier position belongs to the Comment part of Hungarian existential sentences. The representation of (6.36b) can then proceed in the usual manner, and nothing prevents the object to unify with the verb.

The Quantifier and Topic positions thus share an important (and rather abstract) property: Semantic composition with light verbs is excluded (Topics) or made possible (certain Quantifiers) because of the status of these positions in the Theme–Rheme articulation of the sentence, and not because of the inherent properties of these particular *NPs*, nor because of the semantic/pragmatic construal imposed by these positions on their fillers.

With Topics this is easier to see: An indefinite in Topic position cannot unify with its verb, because of conflicting binding/unification constraints. So, the failure of Topicalisation is not due primarily to the discourse-linked construal of Topics. With Quantifiers this proposal seems outrageous at first sight: after all, this position typically hosts strong quantifying *NP*s, which are barred from existential sentences:

(6.37) ∗János valamennyi/mindegyik/a legtöbb könyvet hozta
John all/each/the most book-Acc brought
"John brought all books/each book/most books"

My point is that it is not inherently the Quantifier position that makes unification impossible. If this were so, weak *NP*s with *too* could not occur there, and (6.36b) would be ungrammatical. Rather, it is the structure of strong *NP*s themselves which prevents them from unifying with Definiteness Effect verbs.

Strong NPs

As regards the admission of strong *NP*s in existential sentences, Hungarian is more restrictive than English. The reader may recall that Hungarian disallows practically all strong *NP*s from these constructions. (And so does, according to informants at *ESSLLI* in the summer of 2001, Danish, Dutch or Swedish.) The analysis presented here is not fine-grained enough to capture this variation (but see Bende-Farkas and Kamp (2001)).

As regards Hungarian quantifying *NP*s and *anaphoric* definites the reason for unification failure is essentially the same as with the English cases. Quantifying *NP*s involve a mismatch in predicational structure that leaves the nucleaer scope empty. Anaphoric definites, proper names, pronouns are presuppositional, and thus provide nothing in the assertion part of their entry to unify with. The formal details are essentially the same as with the English cases, so they will be omitted here.

As opposed to what is found in English, definites or possessive descriptions may not occur in

Hungarian existential sentences, not even if they are not anaphoric, or if the possessor is a weak *NP*:

(6.38) *a.* ∗Van a francia elnök a kocsmában
Is the French president the pub-in
Intended: "There is the president of France in the pub"
b. ∗Van egy nyelvész biciklije a kertben
Is one linguist bicycle-Poss3Sg the garden-in
Intended: "There is the bicycle of a linguist in the garden"

At present I do not have a coherent account for the ungrammaticality of (6.38a-b). Where non-anaphoric definites are concerned, the Hungarian Definiteness Effect is presumably either sensitive to familiarity relative to background knowledge (since one may argue that the *concept* of being the president of France may be familiar to discourse participants), or that the Definiteness Effect is more robustly grammaticalised in Hungarian than in English: As shown in Ward and Birner (1995), the English Definiteness Effect seems to be more sensitive to discourse anaphoric factors.

Concerning possessive descriptions, the conjecture is that the difference between the ±acceptability of such descriptions with weak possessors is presumably due to a difference in the syntactic structure of *NP*s in Hungarian and in English. Most notably, Hungarian possessee variables are not bound by possessor determiners (cf. Barker (1993), Szabolcsi (1994)).[14] This conjecture is supported indirectly by Dutch. Dutch is like Hungarian as regards definites (i.e. it does not admit any nonquantificational strong *NP* in existential sentences), but it is more like English where possessive descriptions are concerned:

(6.39) *a.* ∗Er is/zit de President van Peru in de kroeg
"There is/sits the President of Peru in the pub"
*b*1. Er is een linguist z'n fiets in de tuin
Lit. 'There is a linguist his bicycle in the garden'
*b*2. Er is een fiets van een linguist in de tuin
"There is a bicycle of a linguist in the garden"
*b*3. ?Er is de fiets van een linguist in de tuin
"There is the bicycle of a linguist in the garden"

The Dutch sentences in (6.39) are taken to indicate that the ±acceptability of definites and possessive descriptions in a language can be independent from each other. Dutch Genitive phrases can be said to be of the 'English' type as regards their internal structure, and they are acceptable in existential sentences roughly under the same conditions as their English counterparts. Definite descriptions and proper names are on the other hand just as bad in Dutch existential sentences as they are in Hungarian. The conclusion from this is that Hungarian Genitive phrases may indeed be excluded from existential sentences on account of their internal structure.

Quasi-strong *NP*s

In Hungarian, *NP*s of the form *at least/at most/exactly n N'*, or *more/fewer than n N'*, as well as *sok* 'much'/'many' are quasi-strong in the sense that they do not combine with Definiteness Effect verbs in the same manner as plain indefinites do. Since the problems posed by these *NP*s are tangential to the subject matter of this thesis,[15] I would only like to concentrate on only one aspect of their interpretation, viz their Focus sensitivity when they serve as internal arguments of Definiteness Effect verbs.

In non-existential sentences such *NP*s usually occur preverbally. The $MON\uparrow$ *NP*s alternate between the Quantifier or Focus positions, and the $MON\downarrow$ ones occur only in Focus (see Szabolcsi (1997a) for a detailed discussion). *Sok* alternates between the Topic and Focus positions. These

[14] More precisely, in Hungarian possessor *NP*s are not determiners at all, since they can co-occur with determiners that bind the possessee, as in *minden nyelvész minden macskája*, 'every linguist's every cat. See Szabolcsi (1994) for details.

[15] Cf. Krifka (1999) for English, or Szabolcsi (1997a) for Hungarian.

distribution facts indicate that the *NP*s in question are (i) quantifying *NP*s, at least when in Quantifier position, and (ii) that they can trigger some kind of presupposition–assertion division (when in Focus).

In existential sentences these *NP*s can only occur in Focus (including the $MON\uparrow$ ones):

(6.40) *a.* János [mindig]$_Q$ [legalább két széket]$_F$ hozott
John [always]$_Q$ [at-least two chair-Acc]$_F$ brought
"John always brought at least two chairs"

b. $*$János [legalább két széket]$_Q$ [egyszer]$_Q$ hozott
John [at-least two chair-Acc]$_Q$ [once]$_Q$ brought
Intended: "John brought at least two chairs on one occasion"

c. $*$???János hozott legalább két széket
John brought at-least two chair-Acc
Intended: "John brought at least two chairs"

The observation is that the 'quantifying' construal of these *NP*s is incompatible with Definiteness Effect verbs. Instead, they combine with these verbs on their Focus-sensitive construal.

There are several Focusing possibilities for these *NP*s, as expected (ranging from all-Focus readings to narrow, possible corrective, Focus on one of their subconstituents). The reading relevant for this thesis is their unmarked reading, with narrow focus on the numeral (as in *legalább KÉT szék* 'at least TWO chairs'). This is the typical case which is discussed in Szabolcsi (1997a).

Here I would like to propose that on this reading, these *NP*s express amount quantification: it is presupposed that an amount η of $[\![N']\!]$ was involved in the predication, and it is asserted that this amount stands in the appropriate relation (expressed by the modifier) with the amount denoted by the numeral. Resorting to the analysis of Focus proposed in Chapter 2, this is expressed in the following manner:

(6.41) *a.* *legalább két szék* (at least two chairs):

b.
$$\left\langle \left\{ \begin{array}{|c} \eta\ C' \\ C'^*(\eta) \\ \eta = \Sigma\eta' \boxed{\begin{array}{c}\eta' \\ chair^*(\alpha) \\ P^*(\alpha) \\ \eta' = |\alpha|\end{array}} \end{array} \right\} , \boxed{\eta \geq 2} \right\rangle$$

(6.41b) is the key ingredient in the representation of a sentence that answers a question of the kind *How many chairs were brought by John?*. It does not exclude other objects (non-chairs) being involved in the same type of event.

Note that (6.41b) presupposes only the existence of an amount η, which is maximal relative to the number of chairs with property P. (P, as usual, is a placeholder for the 'rest of the sentence'.) The presupposition part contains no accessible individual discourse referents: (6.41b) is a uniform representation for $MON\uparrow$ and $MON\downarrow$ *NP*s alike, since it contains no existence commitment for actual individuals being involved in the event.

(6.41b) is also seen as a formally precise rendering of Anna Szabolcsi's intuition viz these *NP*s do not introduce individual discourse referents (Szabolcsi (1997a)), since typically sentences that contain such *NP*s are not 'about' ordinary individuals.[16]

[16]My comment is that this is the case only with narrow Focus on the numeral. Presumably, things are different when the entire *NP* bears the Focus feature (and the sentence is seen as an answer e.g. to *What did John bring?*).

Negation

In Chapter 4 negation was said to have scope over both over the entire event structure of Definiteness Effect verbs, and over their internal arguments. This is one of the relevant properties of negation in existential English and Hungarian sentences. The other is negative concord, which is a characteristic of Hungarian. This latter fact entails that the 'English' negation rules given in Chapter 6 are not applicable in Hungarian. Instead, negative particles will be assumed to be concord markers (with the added assumption that indefinites without such a concord marker are positive polarity items).

Where negation in existential/incorporational sentences is concerned, the simplest and most straightforward case is presented by by bare nominal arguments:

(6.42) János nem evett almát
John not ate apple-Acc
"John has not eaten apples"

Banre nominals can also be 'decorated' with SEM, the particle that will figure quite prominently in the discussion of negated full NPs. Only, in this case, SEM means *neither*, or *not ... either* (which is its basic meaning). Thus (6.43) below means *John hasn't eaten apples, either.* In such sentences one can negate either the 'kind' or the activity.[17]

(6.43) János nem evett almát sem
John not ate apple-Acc SEM
"John has not eaten apples, either"

If the internal argument *NP* is a full indefinite, a number of complications arise, because of negative concord and because of the quasi-Focus properties of Hungarian negation.

First, see that the indefinite (i) has to be 'decorated' with the negative concord marker SEM (cf. the contrast between (6.44a,b) and (6.44c)), and (ii) it may either occur postverbally, or in preverbal *NegP* position. If it is in preverbal, the *NP* may stand on its own, without the support of the negative particle *nem.* If the *NP* is postverbal, *NegP* is to be filled by the negation particle *nem* (or some other suitable 'negative' element, e.g. *senki sem* 'no-one'—this is omitted here).

(6.44) *a.* János nem evett egy almát sem
John not ate one apple-Acc SEM
"John has not eaten any apples"
b. János egy almát sem (∗nem) evett
John one apple-Acc SEM (not) ate
–same–
c. ∗János nem evett egy almát
John not ate one apple-Acc
Intended: "There is an apple John has not eaten"

As expected, in Hungarian existential sentences it is only the internal argument *NP* that has to have narrow scope w.r.t. negation:

(6.45) *a.* Egy fiú nem hozott egy könyvet ∗(sem) egy lánynak
One boy not brought one book-Acc (SEM) one girl-Dat
"One of the boys has not brought any books for one of the girls"
b. Egy lánynak nem hozott egy könyvet ∗(sem) egy fiú
One girl-Dat not brought one book-Acc (SEM) one boy
—roughly the same—

In (6.45), the subject and the Beneficiary both have wide scope w.r.t. negation, even when they are in postverbal position. (Had they been marked with SEM, they would have had to have narrow scope themselves.)

[17] Cf. discourses like *John hasn't eaten pears. He hasn't eaten apples, either.*, vs *John does not heed the doctor's advice. He hasn't eaten apples, either.*

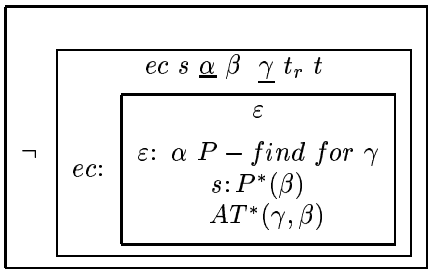
The point I then wish to make is the following: in Hungarian, SEM-less indefinites are *positive polarity elements*. In the context of this thesis, this simply means that they may not occur in the scope of negation. This, I think, is the reason why SEM-less internal argument indefinites (as in (6.44c)) cannot occur in existential sentences: unification would compel them to have narrow scope, which they cannot have.

This thesis has no full account of the semantics of Hungarian negation. A few hints and suggestions follow, confined to negation in existential sentences. What is central in all cases is that preverbal negation is assumed to compose with the entry of the verb, yielding a negative verb.

(6.46b) below shows the representation of the 'negative verb' *nem talált*:

(6.46) *a.* *nem talált* ((s/he) did not find):

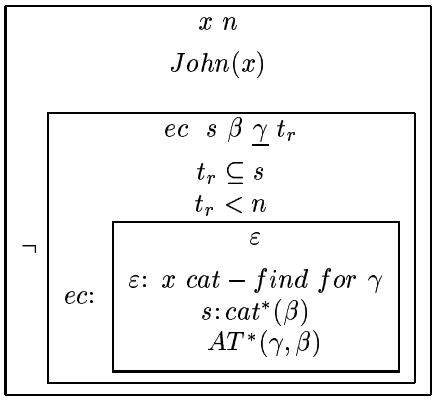
b.



The following is the representation of the simplest case, that of preverbal *nem* and an incorporated nominal:[18]

(6.47) *a.* *János nem talált macskát*
(John did no cat-finding)

b.



(6.47) is unproblematic, as the nominal is assumed to yield a property constant, and that is that. Note that in the case of bare nominals the negative particle *nem* is not a mere polarity marker but a negation operator in its own right.

Another option for obtaining the representation of (6.47a) is to assume that incorporation takes place first, and negation applies after incorporation. This ordering would be confined to genuine, bare nominal-incorporation only, since it is assumed to take place at a non-semantic level of representation as well. Full *NP*s on the other hand are incorporated only at the level of DRS(-composition), and this is why they are assumed to combine with the verb at a later stage — which entails that these *NP*s are to be marked with the concord marker *sem*.

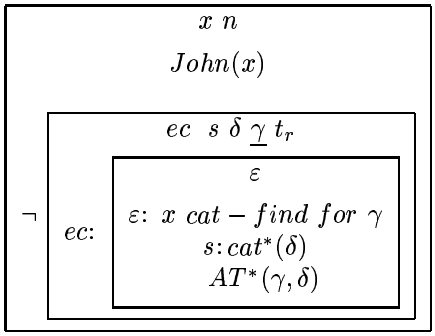
In (6.48), the *NP egy macskát sem* is taken to contribute a negative term, which then unifies

[18]The reader may recall that if there is negation in the sentence, bare nominals and all other secondary predicates have to occur postverbally.

with the negative verb *nem talált*, yielding (6.48b).

(6.48) *a.* *János nem talált egy macskát sem*—neg. concord
(John has not found any cats)

b.

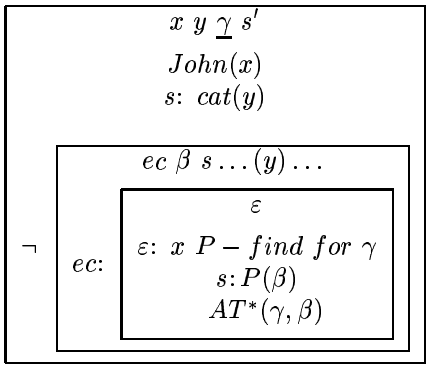


In case the SEM-marked indefinite occurs preverbally, I take the negation in *sem* to have wide scope, in a manner similar to Dutch *geen* or German *kein*.

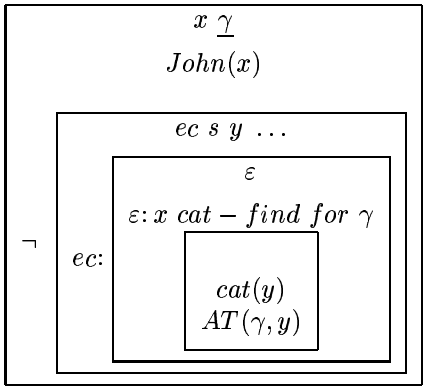
As regards the *positive* polarity properties of (SEM-less) indefinites, at present I do not have the right tools to mark or derive them. What can be recorded, is the intended ill-formed representation for (6.49a), which comes in two versions:

(6.49) *a.* */#*János nem talált egy macskát*
(John did not find a cat)

b.



c.



(6.49b) represents the case when the *NP* outscopes negation, resulting in failure for unification. (6.49c) is the case when the *NP* is in the scope of negation, and unifies with the verb. This in turn contradicts the positive polarity property of the *NP*.

Presuppositions in Existential Sentences: *újra* 'again'

As described in Chapter 4, in existential sentences *again* has scope over the internal argument, meaning that the presupposition and the assertion part of such sentences cannot involve the same, 'asserted' discourse referent. Instead, the presupposition part of the sentence has to contain a copy, as it were, of the internal argument discourse referent.

In brief, (6.50a) below cannot mean that there is a cat that John found again.

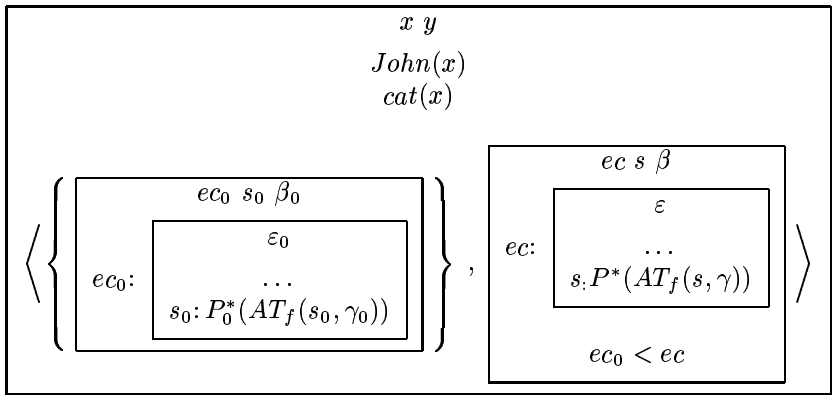
(6.50) János újra talált egy macskát
John again found one cat-Acc
"John (has) found a cat again"

This 'wide scope' property of *újra* is not due to surface order (i.e. this is not because *újra* precedes the relevant NP). To wit, an internal argument *NP* in the same position can outscope *újra* if its verb is a prefixed one, which is made evident by the second sentence of (6.51b):

(6.51) *a.* János újra meg-talált egy macskát
John again MEG-found one cat-Acc
"John has found one of the cats again
b. Szerencséje van, hogy János mindig meg-találja
Luck-Poss3Sg is, that John always MEG-find+Def3Sg
"It is lucky to be always found by John"

Going back to *újra* in existential sentences, it has to be noted that its wide scope (in such sentences) follow in a straightforward manner under the unification approach. To see this, here is (6.52), representing the missing reading of (6.50), the reading where the Theme argument has wide scope:

(6.52)

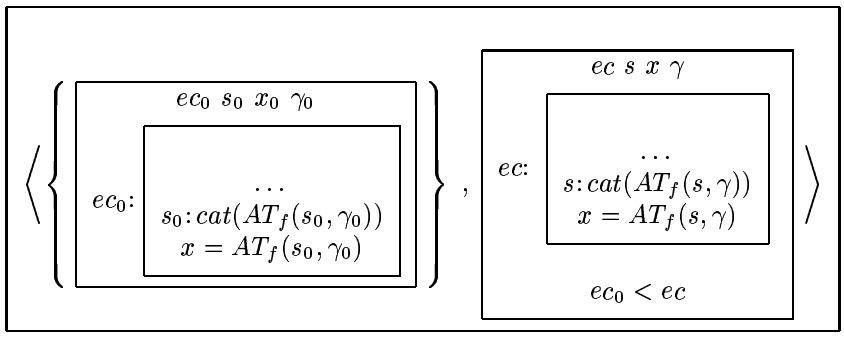


In principle, it ought be possible to unify β_0 and P_0 with x and *cat*. But this is ruled out on syntactic grounds: the contribution of *again* is added *after* the VP is processed, i.e. after the entry of the verb has been unified with the *NP*.

For a reading like (6.52) to be available, the *NP* ought to contribute to the top level DRS, independently of the verb. This, however, is impossible. The reason should be clear from the introductory part and the previous subsection..

(6.53) below shows the relevant reading of (6.50):

(6.53)



The two discourse referents, x and x_0 may as well refer to the same individual, only this information is missing or not made explicit.

6.4 English *Acquire*

Introduction, Data

In Chapter 4, some English counterparts of Hungarian Definiteness Effect verbs were found to have properties comparable to Hungarian (even if these are less robustly grammaticalised). Beside creation verbs, this class contains so-called verbs of result, e.g. *find, choose, get* or *acquire*. According to Burton (1995), these verbs have the properties they have, because their consequent state is in effect the verb *have*, viz a relation variable R that serves as placeholder for the descriptive content of the internal argument.

This section contains a comparison of Hungarian light verbs and English *acquire*, as the representative of verbs of result. The data and part of the analysis will be based on (or inspired by) Burton (1995).

o O o

Several English verbs (e.g. *find, choose, get, acquire*) have event-dependent readings just in case their internal argument is of the right sort (cf. Burton (1995), Moltmann (1997), von Stechow (2000b)). These readings come very close to those of Hungarian Definiteness Effect verbs, and English creation verbs. To wit, the referents of the internal arguments in (6.54) *become* husbands or loyal followers *because of* the event these sentences describe. These verbs also show a quasi-Definiteness Effect:

(6.54) *a.* Mary has acquired/got a husband/a loyal follower
b. #Mary has acquired every husband/loyal follower
c. #Mary has acquired her husband/loyal follower

According to Burton, the reason for this is that these verbs contain *have* in their consequent states. And *have* is nothing more than a pronominal relation discourse referent (I have jumped to a DRT-paraphrase here), which should be supplied by the descriptive content of the internal argument (cf. Higginbotham (1983), Partee (2000), Bende-Farkas (1999a)). In terms of the analysis this means that the descriptive content of the internal argument is made part of the verb's consequent state, as in the case of *there be* or Hungarian Definiteness Effect verbs.

Another respect in which these verbs resemble verbs of creation is their intensional, or quasi-intensional nature. The following is Burton's own example, and is intended to resemble cases like *there is no bread at home, but Mary is going to bake some.* (The intended similarity is that bread will come into existence or some persons will become secretaries because of Mary's actions.)

(6.55) There are no secretaries in this town, but Mary is going to get one

I agree with Burton's observation, but I think that (6.55) is not the most felicitous example, because *secretary* can have a nonrelational construal (simply denoting a profession, or a type of training). The following are better examples, I think:

(6.56) *a.* Mary doesn't have a secretary at the moment, but she will get one
b. Mary has no fans in this town, but she will acquire some
when she has given her concert

It was also noted by Burton, the relational discourse referent in the entries of these verbs may be saturated either by a contextually salient relation, or by a small clause predicate.

(6.57) *a.* Mary acquired a secretary
b. Mary acquired/got a secretary (for a dancing partner)

In the context of a dancing event, (6.57a) can easily mean that Mary danced with a secretary.

Another feature of these verbs is that this quasi-Definiteness Effect can disappear when they are anaphoric or backgrounded. Again, this is a property they share with *have*. (6.58b) is expected to be ungrammatical, but it is not, and the reason is that the *VP*s *had the lover* and *had the husband* are 'anaphoric':

(6.58) *a.* Mary had a husband and a lover
b. She had the lover before she had the husband

(Irene Heim (p.c.))

Here is a variation on Irene Heim's original example, this time with *acquire*:

(6.59) *a.* Mary had several lovers
b. She acquired every lover when on holiday

As in the case of *have*, in the context of the first sentence, (6.59b) is perfectly acceptable, in contrast with (6.54b).

In the following section I will assign a lexical entry to *acquire* as a representative member of this verb class. Before doing so, I will present some new data that require a fine-grained analysis sensitive to the properties of the internal argument. In fact, one may say that the relevant level of analysis is that of the VP; it is here differences between *acquire* and light verbs proper become apparent.

1. Event-dependent readings of the *acquire*-class are not uniform. They come with a scale, so to speak, depending on the descriptive content of the internal argument:

   (6.60) *a.* Mary acquired a husband/a fan/a disciple/a loyal follower
   b. Mary acquired a secretary/a lawyer/a bodyguard
   c. Mary acquired a house/some bonds/a car

   Full event-dependent or creational readings arise only with (6.60a): someone becomes a husband or a fan only in virtue of some event. Where (6.60b) is concerned, someone may be the member of a profession *prior to* the relevant event. What is new there is that they become *someone's* lawyer or secretary. And, as far as (6.60c) is concerned, what is new is only the ownership relation (or being owned by someone other than the previous owner).

2. It is useful to note that fully relational nouns with *acquire* can only have narrow scope, quite like the case of the Definiteness Effect:

   (6.61) *a.* John believes that Mary has recently acquired a husband.
   b. #He is a stockbroker

3. If its argument is nonrelational (*car, house, bond*) or mildly relational (*lawyer, secretary*), *aquire* does not show the (quasi) Definiteness Effect:

   (6.62) *a.* Mary (has) acquired every house in the street
   b. Mary (has) acquired every bond available
   c. Mary (has) acquired every available secretary (for her department)

   Also, indefinites of this kind need not have narrowest scope only (unlike *husband*-type indefinites):

   (6.63) *a.* John believes that Mary has acquired a house
   b. His own aunt used to live in it.

   (6.64) *a.* Every broker wanted to acquire a package of bonds
   b. It was Mary who got it

4. the relational referent in the entry of *acquire* (let us earmark it as R_a) is more constrained than *have* proper. For one thing, it is odd to say that *Mary acquired a daughter* (for natural childbirth, without too much modern technology). It is equally odd to say that *Mary acquired a husband and a stepdaughter*. My points are: (i) the internal argument of *acquire* must have existed prior to the event, and (ii) R_a is exclusive. By this I mean that by contrast, *have* with kinship terms is symmetric and transitive in the way that is made clear by the following examples: *John has a sister, Anna. So, Anna has a brother. Anna has a daughter, Cathy. Cathy too has a daughter. So, Anna has a granddaughter.* In what follows, the constraints on R_a will not be taken into consideration.

The Entry for *Acquire*

In this section *acquire* will be assigned an entry that is to accommodate both event-dependent and event-independent, non-Definiteness Effect readings.

I propose that the significant difference between Hungarian light verbs and English *acquire*-type verbs is that the latter have proper precondition states. Moreover, these states can be supplied from previous context, as with other English verbs.

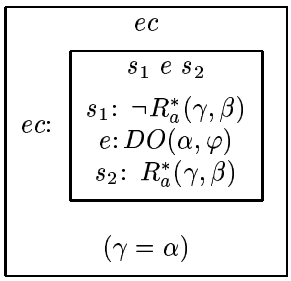
(6.65) *a.* The neighbour had a fancy car, which Mary had coveted for a long time
b. First the neighbour would not sell it, but
c. in the end, Mary acquired it/was able to acquire it.

English *acquire* in fact corresponds to *two* Hungarian verbs: to Definiteness Effect *szerez* and Specificity Effect *meg-szerez*. For instance, in the 'anaphoric' sentence (6.65c) *acquire* would have to be rendered with *meg-szerez*. Accordingly, I take English *acquire* to share some properties of both Hungarian verbs, or to be some kind of lowest common denominator to them. At this stage of work, 'lowest common denominator' means having a precondition state, and lacking the strict binding mechanism of *szerez*.

So, *acquire* will be assigned the following entry:

(6.66) *a.* *acquire:*

b.



In (6.66b), α, β correspond to subject and object, respectively. γ is the Beneficiary of the event, and it is by preference bound to α. (In what follows, γ will be assumed to be bound to α, and will therefore be omitted.)

R_a is a higher-order placeholder variable. The entry says that there is an individual that did not stand in R_a to the Beneficiary prior to the event, and after and because of the event, it stands in the R_a-relation with him/her. In effect, this looks like English-type change, analysable with Dowty's $BECOME$.

As far as I can see, there are two points to discusss with *acquire* in the context of this thesis. (i) Its quasi-Definiteness Effect with proper relational object *NP*s, and (ii) the absence of said Definiteness Effect with non-relational *NP*s such as *a car* or *a house*.

Acquire and Relational Nouns

The 'clearest' case of the event-dependency of *acquire* is shown by a *VP* like *acquire a husband*. It is represented as follows. The internal argument is taken to have introduced a state discourse referent, which gets bound to s_2.

(6.67)
$$\boxed{\begin{array}{l} ec\ \ x \\ ec\text{:}\ \boxed{\begin{array}{c} s_1\ e\ s_2 \\ s_1\text{:}\ \neg\ husband-of(\alpha,x) \\ e\text{:}\ DO(\alpha,\varphi) \\ s_2\text{:}\ husband-of(\alpha,x) \end{array}} \end{array}}$$

In contrast with Hungarian light verbs, I do not assume the internal argument discourse referent of *acquire* to be bound to the consequent state. That is, R_a is not taken to be functional, and hence β is *not* taken to be the value of a R_a-function relative to s_2 and α. Rather, β is a mere placeholder variable, on a par with α, which is the placeholder for the subject. Yet the indefinite *a husband* can only take narrow scope, as seen from (6.61). The reason for its scope properties is not the $\pm$ bound status of its discourse referent. Rather, it has to have narrow scope because its descriptive content has been made part of the verb. This, I claim, is sufficient to yield the opacity properties of a *VP* like *acquire a husband*, and yet it is weak enough to account for the absence of opacity for nonrelational *NP*s.

If *acquire* combines with a fully relational definite, like *the husband*, this is appropriate either (i) if R_a has been saturated by material from preceding context, as seen from (6.68) below, or (ii) if (part of) the entry of *acquire* is anaphoric, with its antecedent in the same 'locus' as the definite itself, and the referent for the definite is (quasi-)uniquely identifiable (as in (6.58), or its cousins with *acquire*).[19]

(6.68) *a.* A couple advertised their services as cook and gardener
b. Mary acquired/hired the husband, and John, the wife

The question is why *acquired the husband* is appropriate only under the conditions above. For instance, the following discourse is ill-formed, if the definite *a husband* is (intended to be) resolved to the indefinite *a man*. The intended paraphrase of (6.70) is that Mary encountered a man (inferred: that man was not married to Mary when they met), and, after some scheming from Mary's part, that man became Mary's husband.

(6.69) *a.* Mary met a man she liked
b. #She acquired the husband
c. OK: She married *him*

Curiously enough, (6.69a) *can* be continued with *she married him*. In *marry*, the relation *spouse* is incorporated into the entry of the verb. And this, I conjecture, is responsible for the greater freedom of the object discourse referent of this verb.

(6.70)
$$\left\langle \left\{ \boxed{\begin{array}{c} \underline{s}\ \underline{x} \\ s\text{:}\ husband-of(y,x) \end{array}} \right\} ,\ \boxed{\begin{array}{l} ec\ \ z \\ Mary(z) \\ ec\text{:}\ \boxed{\begin{array}{c} s_1\ e\ s_2 \\ s_1\text{:}\ \neg R_a(z,\beta) \\ e\text{:}\ DO(m,\varphi) \\ s_2\text{:}\ R_a(z,\beta) \end{array}} \end{array}} \right\rangle$$

[19]The reader could see that I ignore cases of unique, non-anaphoric definites, as in *Mary acquired the most loyal followers in the world.*

In (6.70) I assume the definite to be presuppositional, and the verb to contribute to the assertion part of the *VP*. (For convenience, the presupposition of *she* is shown as already bound to the name *Mary*. The condition *Mary(z)* is present in (6.70) merely to facilitate reading.) The entry for *the husband* says that there is an entity x (in search for an antecedent) that in state s stands in the husband-relation with an implicit discourse referent y.

The relevant factor in the non-binding of (6.70) is, I think, the temporal/state component in the entry of *husband*. In (6.70), *the husband* is represented as describing a state, and I take this 'presupposed' state $\underline{s}$ to need an antecedent, too. In the case of (6.69) the need to bind both $\underline{s}$ and $\underline{x}$ is the source of conflicting information.

What I mean by this is that the formal issue of the non-binding with (6.70) tallies with an actual tendency in the way temporal connections are reconstructed by speakers. This is the tendency to interpret predicates whose discourse referent is anaphoric as cotemporaneous with the time frame of the antecedent: Here is, for instance, an example from von Stechow (2000b), which is similar to (6.69): *In year X I met Francis. She was my wife.* The intended meaning of this discourse is that the speaker met Francis, who was to become his wife. Yet the discourse conveys the information that Francis was the speaker's wife already at the time when they met.

Returning to the initial question why binding does not work in (6.70), suppose that (6.69a) licenses the inference that at the time of the meeting the man in question was not Mary's husband. Let's write it as $s_0{:}man(u)$; $\neg husband-of(z,u)$, where u is the discourse referent introduced by the indefinite. Binding the presupposition in (6.70) will yield a contradiction: (i) x will be bound to u, the referent introduced by the indefinite; (ii) y will be bound to z (Mary), and (iii) s will be bound to s_0, saying that u is and is not Mary's husband. Or, s is a state that precedes and abuts the acquiring event $e(c)$.

We get the same nonsense if we tackle things from another perspective: the precondition state of *ec* in (6.70) can be bound to (information from) (6.69a). So, in (6.70), if we bind the definite to the same information from (6.69a). It is in effect binding to the precondition state s_1, whereas the verb expects it to contribute to the consequent state s_2. Again, what we get is that there is a state s_1 in which u is and is not Mary's husband.

The upshot of this discussion is that definite *the husband* (on the intended reading) is a suitable direct object for *acquire* just in case the state s of being a husband is bound to the same antecedent as the individual discourse referent. That is, binding is possible to antecedents in which the referent in question is in the appropriate state (of being the Agent's husband). Predictably, *acquire/find the husband* will be appropriate in the following discourse, which is a variation on (6.58):

(6.71) *a.* Mary had/acquired a lover and a husband
b. She acquired the lover before she acquired the husband

A full representation of (6.71) is outside the scope of this thesis, because of the Background–Focus articulation presupposed for the second sentence. Abstracting away from the role of backgrounding, the mechanism of binding is quite clear: The definite will be bound to the appropriate antecedent, and its state referent (=the consequent state of *acquire*) will be bound to the appropriate state in (6.71a). In fact, the binding of the two sorts of discourse referents goes in tandem.

But binding is only one part of a proper analysis for (6.71), which will have to be supplemented with a model of information structure. This is because *acquire the husband* belongs to the Theme, or Focus-Frame, as it contains no new information relative to its antecedent in the first sentence. In the case of (6.71b), the Focus is *before*. That is, the new information is the relative ordering of two familiar events. And all this dovetails with the loss of the Definiteness Effect with proper Definiteness Effect verbs, if the verb and its internal argument convey familiar or presupposed information.

The last-but-one case on my checklist is (6.68) ((6.57) is of the same type). Here, the relational referent R_a from the entry of *acquire* is taken to be bound to *gardener*. Thus the definite *the husband* can be bound independently from the verb. It will be in fact bridged to (part of) the representation of *a couple*. The precise mechanisms that govern such binding(s) are not clear, but their intended effect is, and so is the range of possible bindings.

The Nonrelational, Non-Opaque Case

Nonrelational noun(phrases) like *a car* are assumed to be coerced into a relational interpretation (Barker (1991), Jensen and Vikner (1994), Partee (2000)). *A car* on its possessive interpretation will then be represented as follows:

(6.72) *a.* *a car:*

b.

$x\ s_x\ s_{Poss}$
s_x: $car(x)$
s_{Poss}: $Poss(\alpha, x)$
$(s_{Poss} \subseteq s_x)$

(6.72) assigns *two* distinct states to the representation of such noun phrases : the state of being a car, and the state of being owned by someone. There are two options when such *NP*s combine with a verb like *acquire*. On the first alternative, these state descriptions are assumed to enter distinct representation levels. I assume that it is only the possessive state description s_{Poss} that is incorporated into subevent structure, and the state s_x that holds of N' remains outside of it. The other alternative is to assume that the contribution of the *entire NP* is entered outside the event description DRS, and the binding of the possessor relation is a version of redundant anaphora resolution.

(6.73) *a.* *acquire a car:*

b.

$ec\ x\ s_x$		
s_x: $car(x)$		
	ec:	$s_1 \varepsilon\ s_2$
		s_1: $\neg Poss(\alpha, x)$
		ε: $DO(\alpha, \varphi)$
		s_2: $Poss(\alpha, x)$

b.

$ec\ x\ s_x\ s_{Poss}$		
s_x: $car(x)$		
s_{Poss}: $Poss(\alpha, x)$		
	ec:	$s_1 \varepsilon\ s_2$
		s_1: $\neg Poss(\alpha, x)$
		ε: $DO(\alpha, \varphi)$
		s_2: $Poss(\alpha, x)$
		$s_2 = s_{Poss}$

(6.73b) says, correctly, that there a car that was not owned by Agent α prior to the event, and, after (and because of the event) it is owned by α. This, however, is achieved at the cost of violating lexical integrity, i.e. splitting the contribution of the *NP*. (6.73c) does preserve lexical integrity, but at the cost of assuming a version of anaphora resolution. Neither of these is very principled, but, first, they are necessary, and, second, there is some evidence for their necessity.

Firstly, strong, nonrelational *NP*s are acceptable internal arguments of *acquire*.[20] For instance, *Mary acquired every house* is significantly better than *Mary had every house*. The proper representation of this sentence would (in my opinion) mean having the nonrelational part of the *NP* in

[20]True, these *NP*s are less acceptable with English creation verbs, or with (the relevant construal of) *find* or *choose*, as seen from the oddness of the following: *Mary baked every cake*, or *Mary chose every disciple*.

the restrictor, and the possessive, or latent Genitive part would enter the nuclear scope. True, even with *acquire*, such sentences require some additional material that licenses the strong *NP*: this can be either a link to preceding discourse, or a restrictive modifier. (*Mary acquired every house in this street* is felt to be better than its unmodified counterpart.)

The exact conditions under which such licensing works are not clear; presumably, they may involve a (very weak) Background–Focus partitioning of the sentence. If this turns out to be the case, it may provide sounder motivation for a sound motivation for 'splitting' the content of the *NP*, or for assuming some version of anaphora resolution with copying.

Second, the placeholder relation variable contained in *acquire* may be bound, not to the descriptive content of the *NP*, but to a relation salient from context (Burton (1995)). This is apparent from the earlier example (6.57): in the context of a dancing event, *Mary acquired a secretary* may as well mean that Mary's dancing partner was a secretary. The mechanisms of this kind of anaphoric binding are less than clear, but they certainly point at a certain amount of flexibility in the way the relation variable R_a can be bound.

To conclude this section, I would like to outline the differences between English verbs of result and their Hungarian counterparts, both with regard to 'raw' data and to the subevent structure assigned to the verbs.

1. English verbs have proper precondition states; this enables them to take nonrelational strong *NP* direct objects; that is, the arguments of these verbs (when nonrelational) can refer to previously introduced discourse referents. By contrast, the lack of a precondition state for Hungarian verbs entails that the internal argument discourse referent has to be introduced as part of an event description. This yields a 'perspectivising' or surprise effect, even with nonrelational *NP*s.

2. In English, but not in Hungarian, parts of subevent structure can be bound to preceding context.

3. English verbs have a greater freedom in binding the higher order discourse referent. In Hungarian on the other hand (or with English *there be, have*), binding P or R is a strict argument realisation rule. In terms of a formally precise analysis, the strict existential cases are quite straightforward to handle, and it is the looseness of *acquire* which is hard to account for.

4. With English *acquire*, the internal argument discourse referent is free, as opposed to proper existential constructions. The opacity effects exhibited by *acquire* are in fact yielded solely by binding R_a to the descriptive content of the right sort of *NP*.

6.5 Information Structure

This section is about the interaction of Focusing with the Hungarian Definiteness Effect. The aim of this section is to provide at least a partial account for the loss of the Definiteness Effect in the presence of Focus:

(6.74) *a.* ∗János talált minden macskát
John found every cat-Acc
Intended: "John found every cat"

b. János [a macskát]$_F$ találta
John [the cat-Acc]$_F$ found+Def3Sg
"John, it was the cat he found"

c. Minden macskát[János]$_F$ talált
Every cat-Acc [John]$_F$ found
"For every cat x, it was John who found x"

The analysis will rely on the representation of Hungarian Focus proposed in Chapter 2. Two main cases will be distinguished: (i) when the relevant *NP* itself is in Focus, as in (6.74b), and (ii) when

some other constituent is in Focus, as in (6.74c). With both cases, the aim is to provide an analysis (or at least a preliminary to a proper analysis) without resorting to lexical ambiguity, i.e. without assigning every relevant verb an 'existential' and a Focus entry.

The guiding hypothesis for both cases is that the Definiteness Effect is satisfied within a presupposition (this is case (i)), or with the antecedent of the presupposition (this is case (ii)).

With case (i), where the internal argument is in Focus, the relevant argument slot of the verb will be saturated by a presupposed discourse referent. This is supported by the native speaker intuition that (6.74b) presupposes that there is something John found.

With case (ii) the *NP* itself is presuppositional, so the Definiteness Effect is said to be satisfied by verb *and NP*. By preference, the antecedent of the presupposition is an existential sentence. I.e. (6.74c) is assumed to presuppose that there is a number of cats at the reference location/with the Beneficiary. It may also be presupposed (although it may only be a question or issue salient in discourse) that for each of the cats in question there was an event that resulted in the cats being where they are. (6.74c) is then said to assert that for each such event, the unique Agent is John.

Excursus: Some Motivations

Before presenting the analysis proper, here are a few remarks to motivate the inclusion of this section in the present chapter.

First of all, it is intriguing enough in itself that information structure is seen to 'override' a grammaticality constraint imposed by the lexicon. Furthermore, as remarked several times, Hungarian is not an isolated case. One finds comparable cases in English, precisely when the Definiteness Effect is a lexical constraint.

The following have been the main English examples so far:

(6.75) *a.* Mary had a lover and a husband.
b. She had the lover before she had the husband.

(6.76) *a.* Mary had several loyal disciples.
b. She acquired each of them after a seminar she gave.

(6.77) Gereon baked every cake WITH CINNAMON.

(6.78) *a.* There were some students and professors in the pub
b. *There were the students for an hour
c. (?)Now there are only the students

Hopefully, Hungarian can help understand these English cases as well. Starting with Hungarian is useful, because in this language both the Definiteness Effect and Focusing are grammaticalised, with clear and systematic meaning effects.

A deeper reason for devoting some attention to these interactions is that they shed some light on the novelty requirements on the discourse referent introduced by the *NP*. What I mean by this is that looking at Focus may take us one step further than those theories that formulate the Definiteness Effect solely in terms of the novelty of the *NP* (cf. Ward and Birner (1995), Blutner (1993), McNally (1998)).

To reiterate the point made in Kálmán (1995) and discussed in Chapter 4: The novelty of the *NP*'s discourse referent hinges on the novelty of the relevant event description. If that event description is in some manner familiar or salient, then so is the referent contributed by the *NP*. This, I think, is a more accurate reformulation of the hypothesis/intuition that existential sentences correspond to thetic judgments. Only, it is not the entire sentence that corresponds to a thetic judgment. Rather, the *V+ NP* complex can be said to correspond to an open thetic proposition (with free variables for the Coda and possibly the Agent).

The Internal Argument in Focus

As noted in the introduction, two cases need to be distinguished in the interaction of Focus with Definiteness Effect verbs: when it is the internal argument *NP* which is in Focus, and when it is some other constituent. This part is about the first case, i.e. about sentences like (6.79):

(6.79) János [a macskát]$_F$ hozta
John [the cat]$_F$ brought-3SgDef
"It is the cat that John brought"
"It is the cat that John was bringing" (disregarded)

(6.79) presupposes that there is a unique maximal entity brought by John, and asserts that this entity is the cat. The Definiteness Effect is assumed to be 'satisfied' by the 'presupposed' discourse referent. This discourse referent in turn is equated with the one introduced by the *NP* itself. To emphasise once more, the novelty of this approach is that an argument position is assumed to be saturated by a presuppositional discourse referent, which is then equated with the contribution of an overt constituent.[21]

The analysis consists simply in composing the entry of a Definiteness Effect verb with the semantics for Focus proposed in Chapter 2, without additional stipulations or formal manoeuvres.

The definite *NP* is assigned the following Focus representation:

(6.80) *a.* [*a macskát*]$_F$ (the cat$_F$):

b. $\left\langle \left\{ \left\| \begin{array}{l} \alpha\ C' \\ C'^{*}(\alpha) \\ P(\alpha) \\ \alpha = \Sigma\alpha'.\ \boxed{\begin{array}{c}\alpha' \\ P(\alpha')\end{array}} \end{array} \right\| \right\} \right\| \left\langle \left\{ \boxed{\begin{array}{l}\underline{x}\ \underline{s_x} \\ s_x\colon\ cat(x)\end{array}} \right\} , \boxed{\alpha = x} \right\rangle \right\rangle$

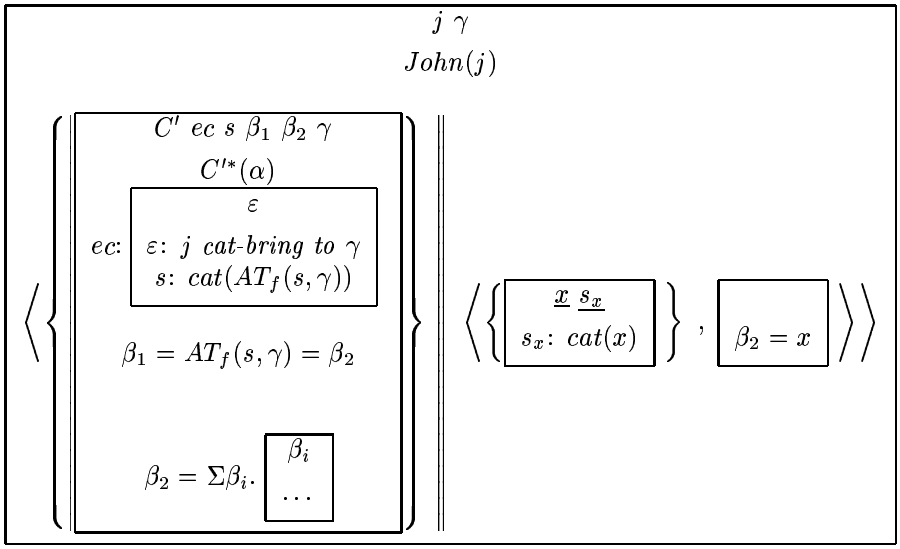
(6.80b) presupposes that there is a discourse referent α which is maximal relative to property P (to be contributed by the rest of the sentence). It asserts that α is identical to x, the 'ordinary' discourse referent contributed by the definite.

[21] The point is, this is different from cases when an *implicit argument* is familiar, and can be linked to an overt antecedent *from another sentence*, cf. Sæbø (1996).

To obtain the representation of (6.79), one needs to bind P to the property of being brought by John. This yields the following (disregarding temporal information):

(6.81) *a.* (6.79):

b.



(6.81b) presupposes that there was a maximal entity (marked with β_2) brought by John: That is, the object position of the verb is saturated with β_2 by binding it to β_1, the binder from the verb's entry. Finally, β_2 is bound to x, the referent contributed by the definite. In other words, the verb does not combine directly with the strong *NP*, and this creates the impression that the Definiteness Effect is lost, or cancelled. Also, (6.81b) is seen as an instance from binding *from* a presupposition.

Something Else in Focus

The second type of interaction between Focus and the Definiteness Effect is when it is not the internal argument *NP*, but something else which is in Focus. These cases are harder, since they create the impression that the verb combines directly with a strong *NP*. Worse, verb and *NP* can occupy distinct slots in the Theme–Rheme articulation of the sentence, as seen in (6.82). In these sentences the verbs are within the Focus frame, and the *NP*s are outside of this frame.

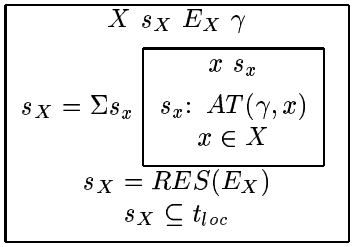
(6.82) *a.* [A macskát]$_T$ [János]$_F$ hozta
[The cat-Acc]$_T$ [John]$_F$ brought
"The cat, it was John who brought it"
b. [Minden macskát]$_Q$ [János]$_F$ hozott
[Every cat]$_Q$ [John]$_F$ brought
"For every cat x, it was John who brought x"

For this type of case I propose that the antecedent of the presupposition is an existential sentence (actually uttered in discourse), or at least a salient and familiar situation that can be described with such a sentence. This in turn means that this sentence also contains an antecedent for the *NP*. So, at least at the level of the antecedent, the relevant verbal and nominal material *are* in fact both presuppositional. This is supported by the observation that in sentences like (6.82b), quantifying *NP*s too have an 'anaphoric' or discourse-linked flavour, i.e. they too seem to require an antecedent.

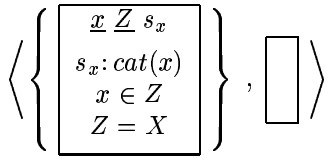
(6.82b) for instance is appropriate in a situation where it is known that there is a collection of things, in the state of being 'at' γ, s.t. the cat is one of them. It may also be part of the situation (although it may only be a question salient in discourse) that there was an event, or a collection of events, which resulted in that collection being at γ. (This is just saying that (6.82a) answers the questions *How did the cat get here?*, or *How did the pets get here?*.) It is then asserted that in the case of the cat, the unique Agent of the corresponding cat-bringing event is John.

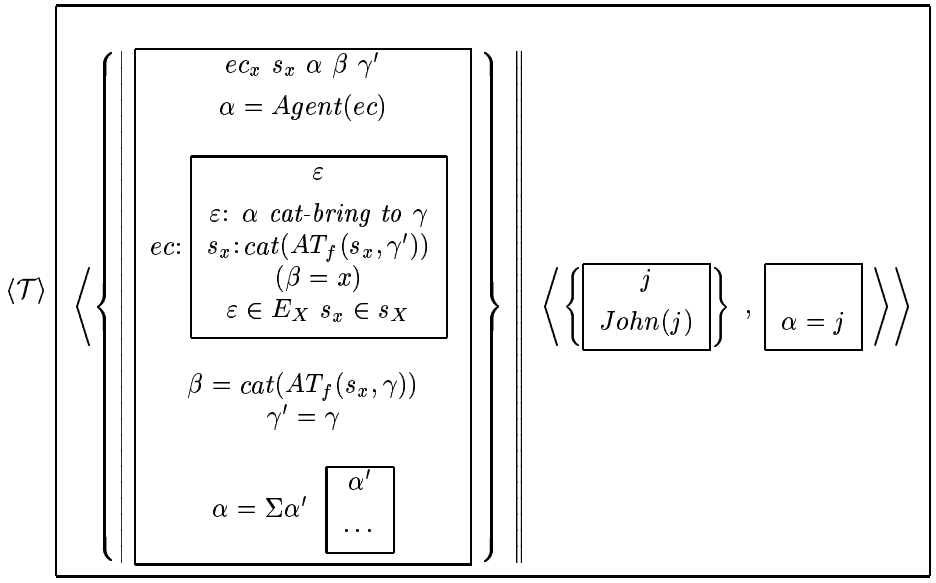
(6.82a) and its reconstructed antecedent are represented as follows:

(6.83) *a.*



b.





(6.83a) represents the intended antecedent for (6.82a): it says that a collection X is in the state s_X of being at Goal γ (again, γ can be either the reference location or the Beneficiary). The state s_X is the result state of a (possibly collective) event E_X.

(6.83b) is the intended representation of (6.82b). For the sake of completeness, the Topic *a macskát* 'the cat' has been separated from the rest of the sentence. ($\mathcal{T}$ is intended to mark a distinguished Topic relation between the two representations.) The representation of Focus is licensed because both the event description and the definite are linked to the same (collective) antecedent. At present the exact nature of this licensing mechanism is not known: Presumably it may involve reconstructing the contribution of the *NP* and that of the verb into one representation, which may serve as a bridge between the antecedent and the representation yielded from the surface form of the sentence.

Conclusion

This chapter has presented a fair variety of issues, from the basic cases of the Hungarian Definiteness Effect and from English *acquire* to Focusing. This is because the analysis of the basic Hungarian cases follows directly from the findings reported in Chapter 4 and from the analysis of English *there*-sentences in Chapter 5.

Hungarian Definiteness Effect verbs were said to possess a subevent structure that contained a distinguished Goal argument, a transition component, a consequent state, but no precondition state.

The consequent state was said to be the same as the state description contributed by English *there be*. In particular, this state was said to contain the special discourse referent responsible for the Definiteness Effect itself.

The analysis of Hungarian verbs has been compared to the structure assigned to English *acquire* as a sample quasi Definiteness Effect verb. *Acquire* was said to contain a precondition state in its subevent structure, and to lack the binding properties of Hungarian verbs. The opacity properties of *acquire* were attributed solely to its entry containing a relation discourse referent R_a that could (but did not always have to) be unified with the descriptive content of the object *NP*.

Lastly, this chapter has provided a first account of the cancellation of the Definiteness Effect in the presence of Focus. The key assumption was that the internal argument position of the verb is saturated with a discourse referent contained in a presupposition. This referent is then free to be bound to the discourse referent contributed by the *NP*.

Chapter 7

Prefixation: the Specificity Effect

7.1 Introduction

This chapter presents an analysis of the so-called Specificity Effect shown by Hungarian Definiteness Effect verbs when combined with the prefix *meg*.

(7.1) *a.* Érkezett egy vendég/∗minden vendég DE
Arrived one guest/every guest
"There arrived a guest/every guest"

b. Meg-érkezett egy vendég/minden vendég SE
MEG-arrived one guest/every guest
"One of the guests/every one of the guests has arrived"

The reader may recall from Chapters 3 and 4 that the internal argument of a verb prefixed with *meg* is partitive-specific, and the event described by the verb is expected in some sense. For instance, (7.1b) presupposes that a number of people have been invited and expected, and asserts that one of these/every one of these has arrived. The existential sentence (7.1a) does not have this reading.[1] Note also the absence of the Definiteness Effect in (7.1b).

As discussed in Chapter 4, the factor responsible for the Specificity Effect is clearly the prefix *meg* (and a few other prefixes such as *el* lit. 'away'). Like all other Hungarian secondary predicates, *meg* cancels the Definiteness Effect property of the host verb. The Specificity Effect is then seen as an additional property of *meg*.

The Specificity Effect can be called the dual of the Definiteness Effect, in that the same argument *NP* (the Theme) is now constrained to be partitive-specific rather than new in discourse. Both meaning effects are but ways in which a verb class is seen to impose (discourse) semantic constraints on one argument.

With the Specificity Effect, the quasi-creational, 'surprise' effect of existential sentences is replaced by what native speakers describe as 'confirmation', 'things happening as expected', or 'acting according to plan'. Both meaning effects are representational, since they require the absence or presence of additional *discourse* information about the relevant events. In fact, one and the same event (the finding of a cat or the writing of a poem) can be described with any of the sentence pairs below. The difference is perspectival: the existential sentence marks the absence of additional information, denying links to a larger context where that information may have come from. The

[1] (7.1a) describes an unexpected arrival, and is hence appropriate only in a 'service' context, e.g. in a hotel, where new arrivals automatically count as guests.

meg-sentence on the other hand conveys (and requires) additional information about the event.

(7.2) *a.* János talált egy macskát
John found one cat-Acc
"John found (came across unexpectedly) a cat"
b. János meg-talált egy macskát
John MEG-found one cat-Acc
"John found (=retrieved) one of the cats (which were known to be lost)"

(7.3) *a.* János írt egy szonettet — existential
John wrote one sonnet-Acc
"John wrote a sonnet"
b. János meg-írt egy szonettet — planned
John MEG-wrote one sonnet-Acc
"John wrote up one of the sonnets"

The main focus of this chapter is the analysis of the contribution of *meg* when attached to Definiteness Effect host verbs. The chapter is built up as follows. The next section recapitulates the main data the analysis will rely on: some side effects of secondary predication in Hungarian, the variations in the meaning of *meg* that are conditioned by host verbs, and the properties of the relevant presuppositions. Section 7.3 contains the analysis proper. The main tasks of that section are (i) developing a method for semantic composition that accounts for the loss of the Definiteness Effect, and (ii) providing the right format for the various presuppositions responsible for the Specificity Effect. Finally, there will be a brief discussion on the interactions of Specificity Effect complex verbs with quantifiers and other presupposition triggers in the sentence.

7.2 The Meaning of *MEG* (*i*)

This section is a compendium of phenomena that serve as background for the analysis in the next section. Part of the material from here is a recapitulation from Chapter 4. 7.2.1 is about complex predicate formation. 7.2.2 is about the variations in the contribution of *meg* which are conditioned by the verbs it combines with. These two subsections have no direct connections to the analysis proper, they serve as a general background. 7.2.3 on the other hand presents data and issues directly relevant for the analysis: it is about the status of the presupposition responsible for the Definiteness Effect. As established already in Chapter 4, *meg* adds a precondition state to the entry of a Definiteness Effect event verb, and it is this state that has the status of an anaphoric presupposition. Another relevant feature of this class of presuppositions is ±extensionality, in the sense that e.g. the presupposition of a creation verb like *meg-ír* 'write up' is intensional, as it connects to previous plans, goals or expectations concerning the writing event and its possible outcome.

7.2.1 The Side Effects of Complex Predicate Formation in Hungarian

The following is a very terse enumeration of the accompanying effects of complex predicate formation in Hungarian. It was included in order to place the Specificity Effect in a broader context. This context can be described as the area which is of concern both for argument structure studies (in the sense of LFG, Grimshaw (1992) or Levin and Rappaport-Hovav (1995)) and for what may be called variable management in formal semantics (on this 'interface area' see also Bittner (1999), Sæbø (1996), or Koenig (1999)).

The argument structure of a complex predicate can be different from that of the host verb (see Ackerman and Webelhuth (1997), Ackerman and Webelhuth (1998), and also Levin and Rappaport-Hovav (1995), Wunderlich (1997a), Spencer and Zaretskaya (1996) on English, German or Russian). For instance, a complex predicate may have an argument which the verb on its own does not subcategorise for, as in (7.4a), or grammatical functions may be linked to thematic roles in a manner which differs from the argument linking of the host verb, as in (7.4b). Or, the complex predicate

may lack one or more arguments of the host verb, as in (7.4c), where the complex verb *be-talál* 'find his/her way in' is intransitive.[2]

(7.4) *a.* A kutya fel-ugatta a szomszédokat
The dog up-barked+Def3Sg the neighbour-Pl-Acc
"The dog barked the neighbours awake"

b. János meg-lopta Marit/∗(#?)a táskát
John MEG-stole+Def3Sg Mary-Acc/the bag-Acc
"John robbed/deprived Mary/the bag of something"

c. János be-talált (∗az utat) a kamrába
John in-found (the way-Acc) the pantry-into
"John found his way into the pantry"

d. A tábornok meg-adta magát/∗a várost
The general MEG-gave+Def3Sg himself-Acc/the city-Acc
"The general surrendered himself"
Intended, not available: "The general surrendered the city"

The internal argument of a complex predicate construction may not remain implicit (even if the host verb does admit implicit arguments). To my knowledge, this was first pointed out in Kiefer (1994) for the case of Hungarian prefixes. Apparently, this observation is valid for all Hungarian secondary predicates; it seems to hold for English as well. If semantic composition takes the form of sentence internal anaphora resolution, then the relevant variables in the complex predicate's representations correspond to a special subclass of pronouns that need to be resolved locally. This is to be understood in contrast with verbs like *refuse*, whose object variable is pronominal, in the sense that it corresponds to a familiar discourse entity, but which can be resolved non-locally (as in *Cruella offered to buy the puppies, but the owners refused* — cf. Sæbø (1996) and the references cited there).

(7.5) *a.* Mari kötött (egy szoknyát)
Mary knitted (one skirt-Acc)
"Mary was knitting"/"Mary knitted a skirt"

b. ∗Mari hosszú-ra kötött
Mary long-onto knitted
Intended: "Mary knitted something to be long"

(7.6) *a.* János evett
John ate
"John was eating"

b. ∗János meg-evett
John MEG-ate
Intended: "John ate up something"

c. ∗János nyersen evett
John raw-ly ate
Intended: "John ate something raw"

A specialty of Hungarian is that the addition of a secondary predicate cancels the Definiteness

[2]Note that the corresponding English particle verb requires an object *NP* that refers to a spatial trajectory. Presumably the variable corresponding to this trajectory, or Path, is incorporated into the meaning of the Hungarian prefix *be-* 'in(to)'.

Effect, regardless of the type of that predicate:

(7.7) *a.* ∗János evett minden almát
John ate every apple-Acc
Intended: "John ate every apple"

b. János meg-evett minden almát — prefix
John MEG-ate every apple-Acc
"John ate (up) every apple"

c. János késsel-villával evett minden almát — instr.
John knife-with-fork-with ate every apple-Acc
"John ate every apple with a knife and fork"

d. János fejen állva evett minden almát — depictive
John head-on stand-Part. ate every apple-Acc
"John ate every apple while standing on his head"

7.2.2 The Meaning of *MEG* (*ii*)

4.4.4 contains a small survey on the variations in the contribution of *meg* and argument linking possibilities (confining attention to Definiteness Effect host verbs). To recapitulate briefly, the findings were that

- Where argument linking is concerned, *meg* may either leave the linking properties of the host verb intact, so to speak, in that the direct object will retain its Theme role, or it may involve a re-linking of the direct object to a Source or Goal. E.g. the direct object of *meg-talál* 'meg-find' is the Theme, whereas that of *meg-lop* lit. 'meg-steal' is a Maleficiary (a.k.a. Source). With locative alternation verbs such as *rak* 'load' or *tölt* 'fill' *meg* causes the direct object to be linked to the Goal or container of the event. These are the only alternatives for argument linking with *meg*-verbs, but they are quite regular and productive. (E.g. with creation verbs the direct object may be relinked to the source of inspiration, as with *meg-írta az életét* lit. 's/he meg-wrote his/her life'.)

- The precondition state of *meg* was said to contain a distinguished Source argument, comparable to the distinguished Goal argument of Definiteness Effect verbs. This was motivated by the linking alternations mentioned above, and also by bridging facts with verbs whose direct objects are Themes. A piece of indirect evidence was supplied by the pair *hagy* – *meg-hagy*. Definiteness Effect *hagy* means 'leave something somewhere/for someone', i.e. the distinguished argument is the Goal of a motion event. *Meg-hagy* on the other hand means 'leave something alone', i.e. it is not an event verb at all. Its distinguished argument is the original Source location or the original Possessor.

  Source and Theme were said to stand in an underspecified relation to each other. The content of this relation is fixed by the host verb, and the actual thematic role of the Source also depends on it. For instance, with *meg-talál* 'meg-find' the Source serves as a context set, and the relation is the mereological part relation. With *meg-vesz* lit. 'meg-buy' and other change of possession verbs the Source can be the former Possessor or a Source location.

- The presuppositional status of *meg* was seen to be confined to Definiteness Effect host verbs. The robustness of the Specificity Effect has been shown to vary according to the argument linking properties of the complex verb:

  The clearest cases were found to be those where prefixation does not change argument linking, in that the Theme is the direct object, as with *meg-talál* 'MEG-find' a.s.o. These complex verbs trigger (quite robustly) anaphoric presuppositions.

  In those cases where the prefix contributes to a re-linking of arguments (e.g. with *meg-lop* 'rob/deprive someone of something', or *meg-rak* 'load full'), the Specificity Effect is less robust. Complex verbs of this type may be said to trigger at most a pragmatic presupposition, which

can be accommodated or cancelled. These cases will be set aside in the discussion that follows. (Accordingly, use of the term 'Specificity Effect verb' and that of comparable terms will in fact mean 'Specificity Effect verb whose internal argument is the Theme'.)

7.2.3 The Presupposition of *MEG*

In the descriptive literature on Hungarian the Specificity Effect has been characterised in two ways. It was said to involve 'expected' events (Perrot (1966)), or to confer a presuppositional status to the Theme argument (Kiefer (1983)). It was also remarked (A. Komlósy (p.c.)) that prefixes with some remnant of their original locational meaning may also involve a familiar Source argument, and the specific character of the Theme may be a result of bridging the Theme to that Source: e.g. *el-lopott egy kutyát* lit. 's/he AWAY-stole a dog' conveys the additional information that the dog was taken from a familiar location or owner.

In Chapter 4 these aspects of the Specificity Effect were brought together in the following manner:

1. *Meg* adds at least a precondition state to its host verb; this addition has the status of an anaphoric presupposition.

   This was demonstrated by the infelicitousness of (4.81), repeated here as (7.8):

   (7.8) *a.* Tíz diák eltévedt, majd magától visszatalált a táborba
   Ten student got-lost, then self-from back-found the camp-into
   "Ten students got lost, then found their way back to camp by themselves"
   b. ??János meg-talált egy lányt
   John meg-found one girl-Acc
   "John found one of the girls"

   The reason for the inappropriateness of the continuation (7.8b) is that (i) the verb *meg-talál* needs to link to an appropriate state description (e.g. the location of the Theme is unknown), (ii) which is not provided by the first sentence.

   (7.8) is taken to indicate that (i) the presupposition of *meg* is anaphoric, and it resides in the precondition state of *meg-talál*; (ii) the presupposition involves the Theme and a context set for it.

2. The presupposition of *meg* contains a distinguished discourse referent (say, σ), which usually has a Source thematic role, and which is comparable in significance to the Goal argument of Definiteness Effect verbs. The presence of this argument is indicated by several types of data. The most conspicuous is perhaps *meg-lop* lit. 'meg-steal' and *meg-hagy* lit. 'meg-leave'. With *meg-lop* lit. 'meg-steal' the direct object is linked to the Maleficiary σ, and the Theme (the thing stolen) is marginally expressible with an adjunct.[3] The reader may recall from Chapters 4 and 6 that *lop* on its own lacks a Source or Maleficiary argument; it makes sense, then, to assume that the Maleficiary argument of *meg-lop* is introduced by *meg*.

   The case of *meg-hagy* lit. 'meg-leave' was briefly discussed in Chapter 4. Prefixless *hagy* corresponds to transitive eventive *leave* in English, on its Beneficiary reading (as in e.g. *The postman has been, and left a letter for Mary*). With *hagy*, then, the direct object denotes what is brought to, and left at, the Goal or Beneficiary. *Meg-hagy* by contrast means *leave alone*, at the the original location/Possessor (i.e. at the Source σ).

   The more general motivation for positing a distinguished (and presuppositional) argument is that often the consequent state of a complex *meg*-verb expresses a relation between Theme and Source.

[3] For those familiar with lexical semantics terminology, this is an instance of the *steal/rob* alternation, found also with Russian prefixation cf. Spencer and Zaretskaya (1996).

The presuppositional analysis of *meg* solves the problem of the partitive specificity of the Theme, and the 'familiarity' of the event, but, in turn, it raises a number of issues.

The first of these issues is the relationship of the internal argument *NP* to the presupposition triggered by *meg*. This *NP* conveys new information relative to the presupposition triggered by *meg*: From (7.9b), for instance, it can be inferred that the group of ten students contained at least one girl. The use of the indefinite signals either that possibly there was more than one girl in the group, or that the speaker is uncertain about there being a unique girl. This, however, cannot be called accommodation in the strict sense of the word, since the *NP* is not part of the presupposition, only its context set (the Source argument) is. This may be called a form of generalised bridging, since the familiarity or partitive–specific construal of the *NP* depends on the genuinely presuppositional character of another discourse referent. (If the object *NP* is a proper definite, as in the Hungarian equivalent of *John found* the girl, then of course that has to be accommodated; but this is not the general case.)

(7.9) *a.* Tíz diák elveszett
Ten student got-lost
"Ten students lost their way"
b. János meg-talált egy lányt
John MEG-found one girl-Acc
"John found one of the girls"

Proper bridging, as in (7.10), may be a special case of the dependency of the internal argument *NP* on a presuppositional discourse referent. In such cases the bridging effect is clearer, because the Source and Theme referents belong to distinct individual sorts: the Theme is an 'ordinary' individual, whereas the Source may be a location or an institution.

(7.10) *a.* János meg-látogatta egy festő műtermét, és
John MEG-visited+Def3Sg one painter studio-Poss3Sg-Acc, and
"John visited a painter's studio and
b. meg-vett/el-vitt egy képet
MEG-bought/away-took one picture-Acc
and bought/took away a painting"

Sentence (7.10b) contains two Specificity Effect verbs (*meg-vesz* lit. 'meg-buy' and *el-visz* lit. 'away-take'). Both license bridging the referent of the indefinite to the studio mentioned in the previous sentence.

The second issue is that of the extensional/intensional nature of the presupposition triggered by the complex verb. With pure creation verbs such as *meg-ír* 'write up' the presupposition is clearly intensional, and needs to be connected to preceding plans. This is because (obviously) these verbs cannot trigger existence presuppositions, i.e. the presuppositions cannot be about objects that exist prior to the events the verbs describe. Where 'make available' verbs are concerned, one would expect them to trigger extensional (existence) presuppositions, like *meg-talál* 'meg-find'. This, however, is not always so: the presuppositions of several 'make available' verbs always have an intensional component. This is the case, for instance, with *meg-hoz* lit. 'MEG-bring', which means 'bring as promised/requested/commissioned'. Another such case is *meg-ad* lit. 'MEG-give', which means 'give as requested/promised'. These 'mixed' verbs need antecedents that describe the appropriate speech acts or attitudes

Lastly, there is a question *whose* information or perspective these presuppositions convey.[4] Apparently, Specificity Effect verbs differ as to whether the Agent has to have the relevant information or not.

Verbs like *meg-talál* 'meg-find' can be felicitously used even if the Agent does not possess the relevant additional information at the time. For instance, in the scenario that corresponds to (7.9), the Agent John may not know that the girl he found was from a group known to be missing *to others*.

[4]This was elucidated in a discussion with Hans Kamp.

Given this lack of information, the Agent may felicitously use an existential sentence to describe the event of his finding a girl (this would be *Találtam egy lányt* 'I have found (=come across) a girl').

With creation verbs on the other hand the Agent himself has to be in the know, since the plan that is part of the presupposition has to belong to him/her.

A word of caution is in order here: in all these cases the use of an existential sentence is still a valid option, regardless of the information the Agent or the speaker may have. This brief discussion concerned *sentences* with Specificity Effect verbs: The question is, if one encounters such a sentence in discourse, and wants to reconstruct its presuppositions, then to whose information state these presuppositions are to be assigned.

7.3 Reconstructing the Specificity Effect

7.3.1 Basics

In the preceding section the contribution of *meg* was shown to vary according to certain properties of its host verb. When the host verb is a Definiteness Effect event verb, *meg* was said to contribute a presuppositional precondition state.[5]

Meg was also said to contain a Source and a Theme argument, σ and θ, respectively. The consequent state of *meg* simply says that θ is in a state labelled as meg: this is taken to be a lexicalised label, whose precise content is fixed by the host verb. With *meg-talál* 'meg-find', for instance, the label meg is shorthand for availability, being recovered or being at a known location. Source and Theme were said to be in some relation $\mathcal{R}$ to each other: again, $\mathcal{R}$ is determined by the host verb. With *meg-talál* it is the mereological part relation, with *meg-lop* 'meg-steal' (deprive/rob of) it is ownership, and so on.

The invariable component in the contribution of *meg* to Definiteness Effect host verbs can be represented in the 'template' (7) below. (7.11) is seen to rely quite heavily on some assumptions and constraints concerning the class of potential host verbs — this is apparent, among other things, from the presuppositional status of the precondition state.

(7.11)
$$\left\langle \left\{ \boxed{\begin{array}{c} \underline{s_0}\ \underline{\sigma}\ \underline{\theta} \\ \mathcal{R}(\theta,\sigma) \\ s_0{:}\neg MEG(\theta) \end{array}} \right\} , \boxed{\begin{array}{c} s \\ s_0 = PRE(\varepsilon) \\ s = RES(\varepsilon) \\ \mathbf{C}_V(\varepsilon) \\ s{:}\, MEG(\theta) \end{array}} \right\rangle$$

(7.11) expresses precisely what has been said of *meg* in the preceding paragraphs. What is relevant here is that the precondition state s_0 is relegated to the presuppositional slot of the representation, and so is the Source σ. The Theme θ too is introduced as a presupposed discourse referent in its own right. This is not quite accurate, since θ does not survive negation (e.g. in the Hungarian equivalent of *John did not find any of the missing objects*). The reason why θ has been entered provisionally into the presupposition slot is to mark its need to be bound, locally, to an overt constituent from the sentence. This was motivated by the fact that complex predicates do not admit implicit arguments (as shown in (7.7) earlier).

The presupposition of (7.11) looks purely extensional. The following subsection will present a modification for intensional or mixed presuppositions (e.g. for *meg-ír* 'write up' and for *meg-hoz* 'bring as requested/promised', 'deliver').

(7.11) seems to presuppose that between the two states s_0, s there was a transition ε, such that they are its precondition and consequent states, respectively. If one wants to consider stative verbs as well, this may be a bit too strong. The reason is, although prefixes indeed coerce many statives into inchoatives (this is what one would expect on the basis of (7.11)), there are cases when a prefixed stative verb does not describe any transition, at least not one in the current world. This is what one

[5] A minor correction: it was not stated explicitly, but it was taken for granted that *meg* contributes also a consequent state: it *is* a perfective prefix, after all.

finds with *meg-tart* lit. 'meg-keep', which means 'keep in spite of plans to the contrary', or simply 'decide to keep' (as in *Mary kept all the kittens*). Presumably, for *meg-tart* one can work out an intensionalised version of (7.11).

Returning to the discussion of (7.11), the condition $\mathbf{C}_V(\varepsilon)$ says that ε is an eventuality that belongs to a concept (or family of concepts) $\mathbf{C}_V$. At present, this is merely a pointer to an assumed representational level of lexical conceptual structure (Levin and Rappaport-Hovav (1995), Wunderlich (1997b)), which may serve to lend content to the labels MEG and $\mathcal{R}$. Now it is not entirely clear what the subscript V in $\mathbf{C}_V$ stands for: it may stand for the host verb alone, but it may as well represent the entire complex verb, and then $\mathbf{C}_V$ is a pointer to the concept expressed by the complex verb. The reason is, in several languages many prefix/particle+verb combinations are noncompositional (e.g. *fel-talál* lit. 'up-find' means *invent* (with concrete objects, procedures).

Complex Predicate Formation

Having provided a first representation for *meg*, the next task is to show how this representation can be composed with that of a Definiteness Effect verb. The principal aim is to show how the Definiteness Effect property of the verb is lost once it combines with a prefix.

In the preceding chapter, *talál* 'find' was assigned the following entry. As a light (opaque) verb, *talál* expects a property constant to replace P. Its entry contains the distinguished Theme discourse referent β, which both a placeholder for the internal argument and an existentially bound discourse referent in its own right. β is intrdoduced as the value of a function AT from consequent state–Beneficiary pairs into individuals. This is intended to capture the event-dependent, attributive readings of Theme NPs in existential sentences.[6] The task now is to cancel the binding effect of β, and to match the consequent state in (7.12b) with the consequent state provided by *meg* in (7.11).

(7.12) *a.* *talál-t* (s/he found):

b.

$$\boxed{\begin{array}{l} ec\ s'\ t\ \underline{\alpha}\ \beta\ \underline{\gamma} \\ t \subseteq s' \quad t < n \\ \\ ec\text{:}\ \boxed{\begin{array}{c}\varepsilon \\ \varepsilon\text{:}\alpha\ \textit{P-find for}\ \gamma \\ s'\text{:}\ P^*(AT_f(s',\gamma))\end{array}} \end{array}}$$

The intended outcome of combining (7.12b) with (7.11) is the following:

(7.13) *a.* *meg-talál-t* 's/he MEG-found':

b.

$$\left\langle \left\{ \boxed{\begin{array}{c}\underline{s_0}\ \underline{\sigma}\ \underline{\theta} \\ s_0\text{:}\neg Av(\theta) \\ \theta \sqsubseteq \sigma\end{array}} \right\} , \boxed{\begin{array}{l} t\ ec\ s\ \underline{\alpha}\ \underline{\gamma} \\ t \subseteq s \quad t < n \\ \\ ec\text{:}\ \boxed{\begin{array}{c}\varepsilon \\ \varepsilon\text{:}\alpha\ \textit{MEG-find for}\ \gamma \\ s\text{:}\ Av(\theta)\end{array}} \end{array}} \right\rangle$$

At this stage of work, the method for obtaining (7.13) is by applying a generalised version of the unification–merge operation $\mathcal{U}$ from Chapter 5. The result will be one preliminary DRS (i.e. a presupposition–assertion structure, cf. Kamp and Reyle (Forthcoming)) that has the following unifier: $\{\beta/\theta, s'/s, P/MEG\}$. The relevant substitution steps are the replacement of β with θ, and that of P with the label MEG. MEG in turn is interpreted as 'being available' (or 'being at a known

[6]The functions RES and PRE that relate subevents will be suppressed from now on. So will the label $\mathbf{C}_V$.

location'), hence the predicate Av in (7.13). The complex verb *meg-talál* inherits the presupposition of *meg* because (as the reader may recall) $\mathcal{U}$ has been defined as a hole for presuppositions.

The substitutions P/MEG and β/θ need some elucidation:

(*i*) P is replaced with MEG simply because *talál* is a light verb, with a deficient structure, and prefixation is but one of the ways in which this structure can be completed.

Deficiency has been modelled throughout Chapters 5 and 6 with the presence of the variable P in the verbs' entries. Only, discussion in those chapters seemed to suggest that P could only be bound to the descriptive content of the internal argument *NP* (and that therefore it was 'earmarked' with a certain Thematic role).

Here I would like to suggest that P can in fact be bound to any of the relevant Hungarian secondary predicates that may occur in the distinguished preverbal position. This tallies with the LFG-inspired analysis of Komlósy (1994), where preverbal 'modifiers' are said to be higher order complements of the verb. Given the wide range of possible preverbal 'modifiers', this implies that the verbs themselves, allow for a considerable degree of freedom, or polymorphism, as regards the instantiation of P.

Thus combining *talál* with a weak *NP* or with *meg* are but two possible instantiations of the same method for building complex predicates. Another example: in resultative constructions I assume P to be bound to the resultative adjective. So, in the complex *hosszú-ra köt* from (7.5) a compound verb of the form *long-knit* is assumed.

Substituting *meg* for P in the verb's entry has the additional effect that the verb will no longer incorporate the Theme *NP*, as in existential constructions. Apart from binding β to θ, this is one of relevant factors in the cancellation of the Definiteness Effect with prefixed verbs.

(*ii*) As regards replacing β with θ, the question is why and how this substitution is sufficient to cancel the Definiteness Effect.

First, note that it is θ, the discourse referent contributed by *meg* which will be 'visible' for further binding to the object *NP*. This is because the complex predicate will 'inherit' θ's need for being bound to an overt *NP*.

Second, there is some other (indirect) evidence that indeed it is θ which participates in further bindings. The first piece of evidence concerns the status of *meg* within the complex predicate: At one level of representation (where complementation for the verb is taken care of) it can be said to be the complement of a light verb. At the level of *composition*, however, *meg* can be analysed as a higher order entity that takes the verb as argument. What is relevant in this respect is that term answers with *meg* only are perfectly acceptable in Hungarian: The question *Megtaláltad?* 'Have you found it?' can be answered with *Meg.* That is, *meg* is comparable to English auxiliaries — and then it can indeed be taken as a function or predicate that takes the verb as argument.

With the unification method proposed here this predicate–argument relationship cannot be rendered elegantly. A more principled solution would be to adopt a truly bottom-up construction algorithm with variable storage,[7] such that *meg* and not the verb would provide the main DRS to be filled in by the contributions of other constituents.

Another factor is the status of β itself: apparently, its binding domain extends only to the representation of the event description, but not further. This allows for the possibility of the complex predicate to combine with strong *NP*s. The analogy I have in mind is that pronouns anaphoric to a quantifier do not inherit the binding properties of their antecedent:

(7.14) *a.* ∗There is the cat/it on the roof.
b. There is a cat on the roof. *The cat/It* is meowing.

Apparently, the situation with Hungarian complex predicates is analogous to (7.14b): the binder β has bound one variable, but that will not be visible when the verb is composed with other constituents. This is indeed a genuine instance of sentence-internal composition as anaphora resolution.

At this stage it is not yet clear how these two factors, the main predicate status of *meg*, and the locality of the binding domain for β, are related to each other. β's locality may be an independently

[7]Cf. Kamp (2001), Bende-Farkas and Kamp (2001).

motivated property of certain discourse referents, but it may as well follow from the fact that the verb's entry plays a secondary role in composing the two predicates.

7.3.2 The Presuppositions

The preceding section provided an initial template (7.11) for the presuppositions of *meg*. (7.11) was but the first approximation, however, since its presuppositional component was extensional. This is insufficient, since the presuppositions of *meg* may connect to (descriptions of) preceding plans or expectations, for which an extensional treatment is obviously inadequate. The task is then to introduce 'planned' or 'expected' discourse entities (including eventualities), and to define a link between these and 'actual' discourse referents, to the effect that the actual events and individuals correspond to the planned ones.

The Extensional Case

Verbs like *meg-talál* 'meg-find' or *meg-vesz* 'meg-buy' were said to trigger extensional presuppositions. 'Extensional' meaning a connection to previously existing entities, whose discourse referents are familiar, and do not occur in the scope of attitude reports. In this respect these presuppositions are less complicated than those triggered by *meg-hoz* lit. meg-bring 'deliver' or *meg-ír* lit. meg-write 'write up'. In this brief part I would like to show that even this simple case is not without some complications. The first complication comes from bridging, the second one comes from cases when the antecedent *is* in fact introduced in the scope of an attitude ascription.

Bridging

The reader may recall that the Theme argument of some *meg*-verbs may be bridged to a familiar Source (location or Possessor). In (7.15b) below, the partitive-specific character of the direct object is said to follow from the familiarity of the Source location.

(7.15) *a.* János meglátogatta egy festő műtermét, és
John MEG-visited+Def3Sg one painter studio-Poss3Sg-Acc, and
"John visited a painter's studio and
b. meg-vett egy képet
MEG-bought one painting-Acc
and bought one of the paintings"

In a proper representation of the connections between (7.15a–b) an intermediate inference step is needed (presumably delivered via accommodation), concerning the availability of things to be bought at the Source. My point is one that has been made several times in the literature on bridging: This piece of information is not to be entered in the representation of the antecedent. (E.g. (7.15a) can perfectly well be continued with a sentence that says: *but the painter had no paintings for sale, all his œuvre had been bought by the National Museum.*)

The analysis predicts, correctly, which 'extensional' Specificity Effect verbs admit bridging to a location or to a Possessor. *Meg-talál* 'meg-find' does not admit such bridging, for instance, nor do *meg-érkezik* 'meg-arrive' or *meg-jön* 'meg-come'.[8] The observation is that 'standard' bridging is possible with those verbs whose Source discourse referent σ corresponds to to a location or to a Possessor. The Source argument of *meg-talál* serves as context set for the Theme, i.e. it is a referent of the same individual sort as the Theme itself: this does not make bridging to a location or to a Possessor possible. Instead, of course, as remarked in 7.2.3, *meg-talál* involves a generalised type of bridging.

Attitudinal Antecedents

[8] An impossible example of this type would be
(*i*) János be-ment az erdőbe és meg-talált egy galócát
John into-went the forest-in and MEG-found one Amanita-Acc
"John entered the forest and found one of the Amanitas from there"
This sentence is plain silly when uttered out of the blue, even if forests are known to contain toadstools.

Triggers of 'extensional' presuppositions can in fact have antecedents in the scope of attitude descriptions:

(7.16) *a.* Mari szeretett volna egy háromszínű kandúrt
Mary liked Cond-Opt-Past one calico tomcat-Acc
"Mary wanted to have a calico tomcat"
b. János meg-talált-*a* ∗(neki)
John MEG-found+Def3Sg Dat-3Sg
"John found *it* for her"

The antecedent of the pronoun (the pronominal suffix) in (7.16b) is the indefinite in the scope of the attitude report from the first sentence: the tomcat John found is the one that Mary wanted.[9]

Note that the sentence with the *meg*-verb has almost the flavour of modal subordination, i.e. it is very strongly suggested that John found *the* cat (or the thing with *the* properties) Mary wished for. The cue for this is the obligatoriness of the oblique *neki* 'for-her'.

A satisfactory analysis of the anaphoric relationships involved in (7.16) would rely on either one of the following two assumptions (possibly, this is not exclusive *or*).

First, it could be assumed that the verb *meg-talál* is not ambiguous between an extensional and an intensional presupposition, i.e. its presupposition is invariably about a (possibly collective) familiar discourse referent, which is known to be unavailable, or to be at an unknown location. The first sentence in (7.16) *can* serve as an antecedent, just in case it the indefinite is interpreted as a higher order quantifier that has scope over the attitude context (cf. Zimmermann (1992/93), Zimmermann (2001)). (7.16a) could then be paraphrased as 'There was something/$\mathcal{Q}$ Mary wanted, namely, a tricolour tomcat'.[10]

Second, it has to be noted that individual concepts are exceptional in many respects. In Hungarian this exceptional behaviour involves, among other things, an apparent suspension of the anaphoricity requirement in the Specificity Effect. The following sentence is perfectly acceptable without any (linguistic) antecedent:

(7.17) Meg-találták a világ legöregebb emberét
MEG-found-3Pl-+Def3Sg the world oldest man-Poss3Sg-Acc
"They have found the oldest man in the world"

(7.17) is perfectly felicitous in a scenario that involves no directed search, i.e. when the finding is purely accidental. It could be argued that the *concept* of being the world's oldest person is familiar (whereas the individual who happens to have this property is not), and that his/her location has been unknown up to the finding event.

Intensional Presuppositions

The Problem, Once Again

The presuppositions triggered by creation verbs prefixed with *meg* can be said to have a modal dimension to them (Kiefer (1983)), in that they are seen to verify previous conjectures about possible courses of events and their outcomes. A creation verb with *meg* says that the current world at speech time is such that the relevant conjecture is at least partly verified in it. (Partiality is understood either in the sense that writing one book may be part of a plan to write several, or that the speaker

[9]The example is set up in such a way that the indefinite corresponds almost to an individual concept: For genetic reasons, calico tomcats are extremely rare.

[10]This issue will not be pursued here; nevertheless, here is an example that contrasts with (7.16). Apparently, no exportation is possible here:

(*ii*) *a.* Mari szeretett volna egy unikornist
"Mary wanted to have a unicorn"
b. ????János szomorkodott, mert nem találta meg
"John was sad, because he could not find it"

does not have sufficient information to determine whether the object created corresponds to all that has been planned.)

Given these considerations, the presupposition in the representation of a creation verb will contain an attitude ascribed to the Agent: This is typically an intention or a plan concerning future actions by the Agent. The assertion part of the verb's entry will contain a condition to the effect that the event described by the verb is the (partial) realisation of that plan — This condition will provide the necessary connection between the discourse referents in the attitude ascription and the 'actual' discourse referents of the event description.

Thus (7.18), a variation on an example by Hans Kamp, will involve both a desire to have a house of a certain type, and also a plan for building that house.

(7.18) Feketéék végre fel-építették álmaik házát
Black-Pl at-last up-built+Def3Sg dream-Poss3Pl-Pl house-Poss3Sg-Acc
"The Blacks have finally built the house of their dreams"

At this point one could object that plans and intentions cannot serve as the distinctive properties of *meg*, since the meanings of many agentive verbs (in practically any language) involve such plans and intentions. The distinctive property of the Specificity Effect is precisely the *status* of these plans, viz the presuppositional role they play in connecting the verb to preceding discourse.

To wit, here are two discourse discourse variants in (7.19). The second sentence, which contains the verb *megír* 'write up', can only be understood as John having written one book *for which he had an agreeement with Gallimard.* Thus the continuation (7.19c) is inappropriate, since it denies precisely this connection between the publisher and the writing of the book — even though the writing of *any* book involves intentions and plans. Only, in the case of *meg-ír* 'write up' there is this additional need for an antecedent in discourse.

(7.19) *a.* János tárgyalt/szerződést kötött a Gallimard-ral, és
John discussed/contract-Acc bound the Gallimard-with, and
. "John met/made a contract with Gallimard and
b. hat hónap múlva meg-írt egy könyvet,
six month after MEG-wrote one book-Acc,
and after six months he wrote (up) a book,"
c. ????de nem azt, amelyikre szerződött, hanem egy másikat
but not that-Acc, which-onto contracted-Refl, but one other-Acc
but this was not the book in the contract, it was another"

The special status of the attitude ascription contained in the entry for *meg* becomes clearer when compared to an existential sentence, such as (7.20b).

(7.20) *a.* János tárgyalt/szerződést kötött a Gallimard-ral, és
John discussed/contract-Acc bound the Gallimard-with, and
"John met/made a contract with Gallimard and
b. hat hónap múlva írt egy könyvet,
six month after wrote one book-Acc,
and after six months he wrote a book"

(7.20) can describe the same scenario as (7.19) (even though the existential sentence (7.20b) does sound awkward). But it may as well describe two unconnected events, or even a situation when the meeting in fact provided the poetic inspiration for John to write a book. In either case, the writing of a book necessitates planning, but does not require the particular type of connection between two eventualities which is quite robust with *meg.*

The Tools

The analysis of creation verbs with *meg* will rely on the tools and formalism developed in Kamp (1999) and Kamp (n.d.). The latter paper, in particular, outlines the methodology to represent

the intentional component in a verb's lexical entry, together with the information that the actual event described by the verb is in fact an execution, or realisation, of the plan in question. As in that paper, the analysis outlined here involves essentially three ingredients; the last two of these will be presented later in some detail. The specific difference of the present analysis lies in the presuppositional status of the relevant intention or plan, and its relatively underspecified nature, especially if the speaker is not the Agent himself or herself. It is assumed that the full content of the presupposition is provided by its antecedent and by the (bridging) inferences licensed by the antecedent.

Thus the analysis involves the following three components:

1. A representation of the *antecedent* of the presupposition. Ideally, this is to contain the representation yielded by surface syntax, as well as inferred or entailed information necessary for justifying the presupposition. In particular, the antecedent is to contain either the description of the Agent's plan or intention, or the description of an event/speech act that *causes* the Agent to form a plan — this, for instance, would be necessary for the analysis of example (7.19), where the event of meeting a publisher is seen as the direct (institutionalised, speechactified) cause for forming a plan to write some book(s).

2. The representation of the presupposition itself. Typically, it is to contain a partial (rather impoverished) representation of an attitude attributed to the Agent.

3. The information that the event described by the sentence, and the object created, correspond to *the* planned course of events and its desired outcome.

Plans are taken to be a subspecies of propositional attitude, and are repesented, as other attitudes, by means of structures that stand for attitude predicates, are rendered as ordered pairs of mode indicators and a DRS with the content of the attitude (cf. Kamp (1990), Kamp (1999), Kamp (1999)). The following is an attitude predicate, concerning the plan to write some poem(s) (Π is abbreviates 'plan').

(7.21) $$\left\{ \langle\, \Pi\,, \boxed{\begin{array}{c} e\ s\ \sigma \\ s = RES(e)\ e < n \\ poem^*(\sigma) \\ e{:}\,write(i) \\ s{:}\,exist^*(\sigma) \end{array}} \,\rangle \right\}$$

The indexicals i, n stand for the subject and the internal 'now' of the attitude, respectively. The content of the plan-DRS simply says that there will be a future writing event by the subject that will result in there being some poem(s). The consequent state s is taken to be the subject's *goal*, while the event e provides the means to achieve that goal. In more complex cases the 'means' component of the plan may involve a series $e_1, \ldots e_n$ of events. Not represented here is the subject's belief that carrying out the event e will result in the intended state s.

The presupposition of *meg-ír* 'write up' is assumed to be of the following form:

(7.22) $$\boxed{\begin{array}{c} \underline{s_a}\ t_a \\ t_a < n\ t_a \subseteq s_a \\ \\ s_a{:}\ ATT(\,\alpha,\, \left\{ \langle\, \Pi\,, \boxed{\begin{array}{c} e\ s\ \sigma \\ s = RES(e)\ e < n \\ e{:}\ write(i) \\ s{:}\,exist^*(\sigma) \end{array}} \,\rangle \right\}) \end{array}}$$

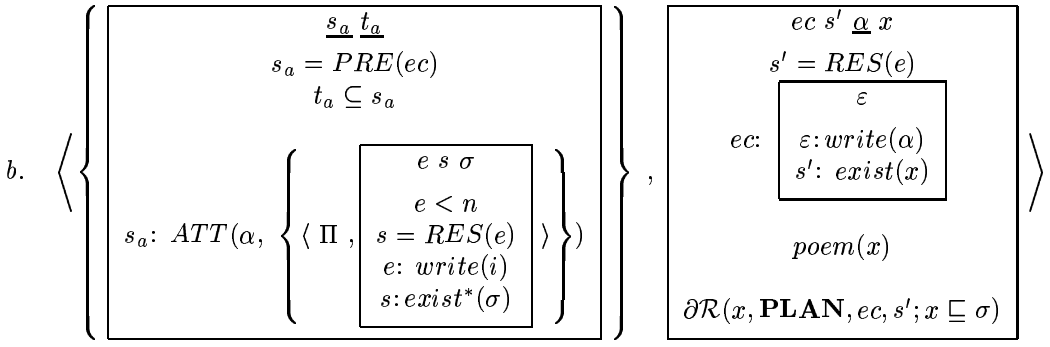
The precondition state s_a is that of the Agent α being in an 'attitudinal state' ATT (attributed to α by the speaker); s_a contains a plan to write σ. The antecedent of s_a is usually recovered through bridging: what preceding discourse typically provides is contracts, promises, requests, and so on. One may wonder whether the attitude report s_a: $ATT\ldots$ in (7.22) would need more anaphoric components, to signal its incompleteness, or its need to be bound.

Judging from the case of (7.19), where the cause for the relevant plan is a meeting between the author and a publisher, one might wish to say that with *meg*-verbs, the antecedent is the *cause* of the relevant plan. This, however, is not so, since it is perfectly appropriate for the antecedent merely to assert that the Agent has an intention or a plan.[11]

The representation of the full *VP meg-írt egy verset* 's/he wrote up a poem' can be seen in (7.23).

(7.23) *a.* *megírt egy verset* (s/he wrote up a poem):

b.



In (7.23), the assertion part contains the actual event description, and also the condition $\partial\mathcal{R}\ldots$. $\mathcal{R}$, shorthand for 'realisation', is a relation between the 'actual' discourse referents x, ec, s' and the content of the plan. It is used to specify that the event and its result are not accidental, but they represent the outcome of planned action. ∂ is intended to signal partiality: The use of the indefinite signals either that the plan involves the creation of several objects, of which x is but one, or that the speaker lacks information about the actual size and composition of σ.

The relation $\mathcal{R}$ can be taken as an attitude 'relation', possibly as part of a *de re* belief report from the speaker's part: The speaker believes that the 'actual' event ec and its outcome x are anchors for the discourse referents from the plan Π s/he attributes to the Agent.

Mixed Presuppositions

Certain 'make available' verbs always trigger 'mixed' presuppositions, which consist in an extensional and an intensional part. Such verbs are *meg-hoz* lit. meg-bring 'deliver', 'bring as promised', *meg-ad* lit. meg-ad 'give as promised/requested', or *meg-tesz* lit. meg-do 'do as promised/requested'. *Meg-születik* lit. meg-be-born 'be born' can also be said to involve a mixed presupposition, since one of its preconditions is an actual state of pregnancy. The intensional component with this verb

[11] As in the following discourse:

(*iii*) *a.* Mari halászlét akart (főz-ni)
Mary fish-stew-Acc wanted (cook-Inf)
"Mary wanted (to cook) fisherman's soup"

b. Kedden meg is főzte
Tuesday-on MEG IS cooked+Def3Sg
"She did cook it on Tuesday"

is not a plan, but an expectation or a prediction based on that state.

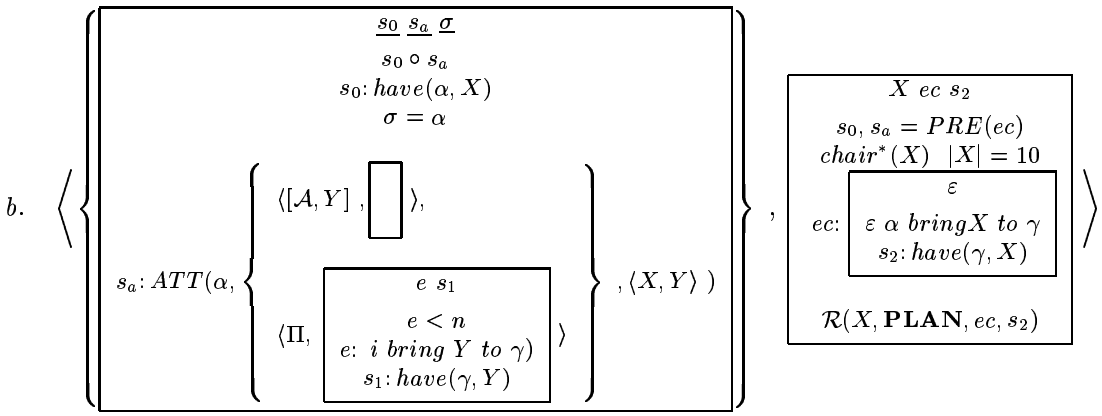
(7.24) *a.* Mari rendelt tizenkét széket Ilf és Petrovtól
Mary ordered twelve chair-Acc Ilf and Petrov-from
"Mary ordered twelve chairs from Ilf and Petrov"
b. Másnapra meg-hozták neki (mindet)
Following-day-onto MEG-brought-3Pl+Def3Sg to-her (all-Acc)
"They were (all) delivered to her the following day"

In (7.24b), the extensional part of the presupposition says that the Source(=Agent) has the Theme. The intensional part says that the Agent has a plan to bring Theme to Beneficiary. The event is seen as a (partial) execution of that plan. As with creation verbs, the discourse (7.24) involves in fact bridging: the Beneficiary's ordering ten chairs *causes* the Agent (the firm's representative) to form a plan of delivering the chairs.

Where the analysis is concerned, the difference between the purely intensional and the mixed case is that the attitude description in the latter contains externally *anchored* discourse referents, stating that the object representation in the plan has a corresponding physical object *prior to the event.* Thus in (7.25) below, the condition $\mathcal{A}\ldots$ marks the anchored status of the discourse refrent Y. Also, the attitude attributing predicate ATT now has three arguments: the additional condition $\langle X, Y\rangle$ marks the correspondence between the 'actual' referent X and the referent Y from the representation of the plan. (For the sake of simplicity, in (7.25b) the Source σ is identified with the Agent α. In a more realistic representation α would stand in some institutionalised relation to α — e.g. α would be an employee of the firm σ; or, σ could be the location of the firm, and so on.)

(7.25) (7.24 *b*) :

b.

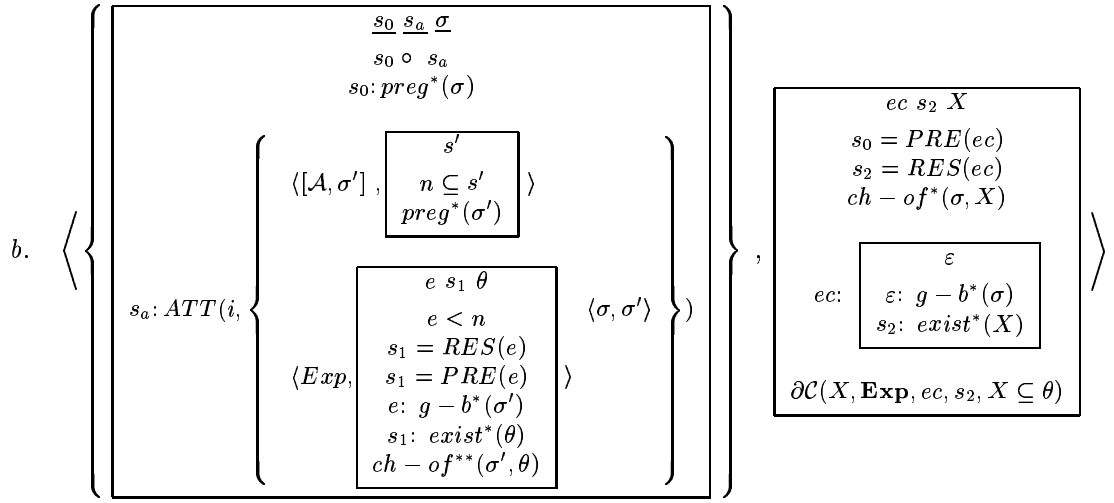


The case of *meg-születik* is different from all others because (i) the Source, but not the Theme is anchored externally (meaning that only the mother exists as a genuine individual prior to the event), and (ii) the relevant attitude is an *expectation* rather than a plan.

(7.26) *a.* Jánosnak volt tíz terhes páciense
John-Dat was ten pregnant patient-Poss3Sg
"John had ten pregnant patients"
b. Tegnap meg-született két gyerek
Yesterday MEG-was-born two child
"Two of the children were born yesterday"

The representation of (7.26b) is then the following.

(7.27) (7.26 *b*) :



(7.27b) presupposes an actual state s_0 of pregnancy (of the 'actual' mother(s) σ), and the speaker's attitudinal state s_a of expectation. The eventuality in the assertion part confirms that expectation, hence the label $\mathcal{C}$. (Again, the use of the indefinite is a cue for partiality, hence the presence of ∂.) Alternatively, the expectation could have been modelled as a sub-DRS in the scope of a possibility operator.

7.3.3 Presupposition and Scope

Proper Antecedents

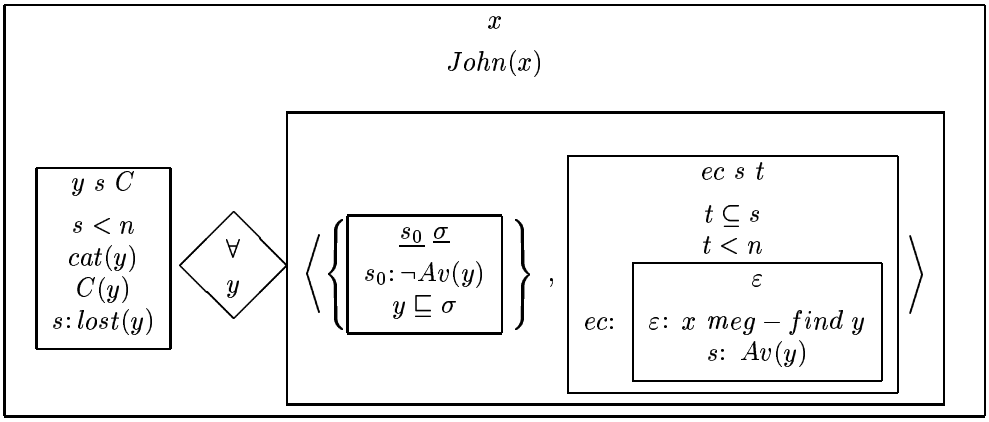
This brief part is about the binding site of *meg*'s presupposition: The question is, what happens if a verb with *meg* is in the nuclear scope of its Theme quantifier, and if that quantifier contains material that could in principle bind the presupposition. On a naive view on presupposition binding, *meg*-sentences with such configurations are expected to be acceptable, even when uttered out of the blue: The presupposition of the precondition state is bound locally, to material in the restrictor. Now this is not always the case: if that material is contributed by a participle, as in (7.28), this is still not sufficient to bind *everything* contained in the presupposition.

(7.28) János meg-talált minden elveszett macskát
John MEG-found every lost cat-Acc
"John found every lost cat"

The problem is, (7.28) is awkward when uttered out of the blue. It can be seen in its representation below that the state discourse referent s_0 in the presupposition slot can be bound to the state s in the restrictor. What is not bound, however, is the Source or context set referent σ, and this is seen as the reason for the inappropriateness of (7.28) when uttered out of the blue. σ can be bound to the context set variable C in the restrictor, but this is still insufficient: the sentence becomes fully

appropriate *only if* C (and, ultimately, σ itself) has an antecedent in preceding discourse.

(7.29)



Meg-verbs can, however, felicitously occur in the nuclear scope of an adverb of quantification:

(7.30) *a.* János mindig megtalált minden elveszett macskát
John always MEG-found-3Sg every lost cat-Acc
"John always found every lost cat"

b. Mari mindig időben megírt minden cikket
Mary always time-in MEG-wrote-3Sg every paper-Acc
"Mary always wrote up every paper on time"

In these cases, presumably, the presupposition can be bound to the covert content of the adverb's restrictor.

Presupposition Interaction

The last bit to conclude this chapter is about the interaction of *meg* with the presupposition triggered by *again*. The point is, there is a strong preference to bind both presuppositions (or at least their matching parts) to the same antecedent in discourse. This is illustrated with the following piece of discourse. The puzzle is that (7.31d) is inappropriate in such a context, even though both *újra* 'again' and *meg* have antecedents to connect to: The antecedent of *újra* is (7.31b) (there was a previous cat-finding event by John), and that of *meg* is (7.31c) (there was a set of pets that had been lost). But these (suggested) bindings do not render the intuitive meaning of (7.31d), according to which *both* cats found by John are from *the same* context set.

(7.31) *a.* Egy napon a Mari állatai el-kódorogtak
One day-on the Mary animal-Poss3Sg-Pl away-strayed
"One day Mary's pets ran away"

b. János meg-talált egy macskát
John MEG-found one cat-Acc
"John found one of the cats"

c. Másnap [a Kati állatai]$_F$ kódorogtak el
Foll.day [the Cathy animal-Poss3Sg-Pl strayed away
"The following day it was Cathy's pets that strayed"

d. #János újra meg-talált egy macskát
John again meg-found one cat-Acc
"John found one of the cats again"
Intended: repetitive reading,
"Again, John has found a cat"

(7.32) shows that the problem persists with other verbs as well. The fourth sentence is again inappropriate in this context, although both triggers have antencedents to be bound to. The intuitive

meaning of the sentence is that both writing events conform to the same plan, i.e., were caused by meeting the same publisher. And this again is at odds with the way in which binding would be reconstructed.

(7.32) *a.* Balassi tárgyalt a Gallimard-ral
Balassi met the Gallimard-with
"Balassi met (a representative of) Gallimard"
b. Egy hét múlva meg-írt egy istenes verset
One week after MEG-wrote one divine poem-Acc
"He wrote up a divine poem a week after that"
c. Utána a Holmival tárgyalt
After-Poss3Sg the Holmi-with discussed
"After that, he had a discussion with (the editor of) Holmi"
d. #Pár nap múlva újra meg-írt egy verset
A-few day after again MEG-wrote one poem-Acc
"A few days later he wrote up a poem again"

At present I do not have a complete account for such cases of presupposition interaction. The suggestion is that with (7.31d) *again* and *meg* are collected into one presuppositional structure: *újra meg-talált* 's/he MEG-found (it) again' would be represented as a nested structure $\langle\{\langle\{K_{meg}^{again}\}, K_V^{again}\rangle, K_{meg}\}, K_V\rangle (:= N)$, where the presupposition of *again* embeds a copy of the presupposition triggered by *meg*. Presumably, either the context set variables from these two copies of K_{meg} have widest scope (corresponding to the intuition that both cats found have to be from the same context set), or the most deeply embedded presupposition, K_{meg}^{again}, 'wants' to be bound to the event immediately preceding event description, i.e. to (7.31c).

Whichever of these alternatives is correct, the observation is that a relevant factor in this interaction is the complex presuppositional structure N built up from the two triggers. If another trigger, e.g. Focus, intervenes between *again* and *meg*, this will prevent the building of N, and the 'interaction' effect will disappear.

(7.33) Újra (csak) $[\text{János}]_F$ talált meg egy macskát
Again (only) $[\text{John}]_F$ found MEG one cat-Acc
"(Yet) Again it was John who found one of the cats"

The point is, (7.31a-c) *can* be continued with (7.33). This sentence does not require binding to the same context set. According to my guess, this is because here the presupposition of *again* cannot mingle with that of *meg*. The sentence asserts that there is a unique maximal Agent in an event of retrieving one of the missing cats from a context set, namely, John. The presupposition of *again* says essentially the same, i.e. that there was an earlier event of the same type, with John as Agent; this presupposition can now be bound to (7.31b).

7.3.4 Conclusions

The analysis of the Specificity Effect has provided a case study of the integration of complex predicate structures with presuppositions and attitude reports. It can be seen as a special instance of the binding (anaphoric or quantificational) of the internal argument *NP* from a secondary predicate.[12]

In order to achieve reliability, a more extensive study of a larger bulk of data has been necessary. The analysis of the Specificity Effect applies to a smaller set of well-circumscribed data.

As far as I can see, this work could be continued along two strategies. One would be to extend the coverage of the analysis, and attempt a more general semantic account of prefixation. The other strategy would be a fuller, in-depth investigation of the Specificity Effect (including the problems of presupposition interactions described in the previous subsection).

[12]See also Slavic *po*, which distributes over the internal argument (Filip (1996)).

Zusammenfassung

Diese These ist über die Interaktion zwischen die lexikalische Semantik und semantisch-pragmatische Eigenschaften wie Neuigkeit und Familiarität. Die Phenomäna die untersucht sind sind bestimmte ungarische Verben und die Neuheits- und Familiaritätsbeschränkungen der interner Argumente von diese Verben. Die Relevanz dieser Phenomäna liegt (i) in die robuste Grammatikalisierung in Ungarisch von pragmatische(r) Kategorien wie Neuheit oder Familiarität, und (ii) die Möglichkeit für eine komparative semantische Analyse: eine von dieser Beschränkungen ist in Englischem oder in Deutschem (zum beispiel) syntaktisch determiniert, während in Ungarisch ist sie rein lexikalisch. Trotzdem sind die semantische Effekte bemerkenswert ähnlich.

Diese Verben kommen in zwei, morphologisch explizit markierte Klassen (mit oder ohne Präfix). Diese Klassen, durch ihre sehr klar markierte semantische Eighenschaften, determinieren auch die Themen und Fragen die hier diskutiert sind.

Erstens, eine grosse Menge von ungarische Verben zeigt die sogenannte Definitheitsbeschränkung ("the Definiteness Effect", DB, Milsark (1977), Reuland and ter Meulen (1987), Szabolcsi (1986)). Die interne Argumente dieser Verben soll nicht sogenannte starke Nominalphrasen (*NP*) (z.b. *alle Katzen, die Katze, Murr*) sein. Sätze die diese Verben enthalten (die sogenannte existentielle Sätze) beschreiben neue, unerwartete Ereignisse; die Thema ist auch ein neuer Referent im Diskurs. In andere Wörter, die Äusserung eines solches Sätzes beschreibt wie ein Ereignis und ein Objekt bekannt werden.
Englisch:

(7.34) *a.* There are some/many/no/few cats on the roof
b. *There is every cat/the cat/that cat/Macavity on the roof
c. *There are all/most cats on the roof

Ungarisch:

(7.35) *a.* János talált/kapott egy macskát
Hans finden-Prät/bekommen-Prät ein Katze-Acc
"Hans hat eine Katze gefunden/bekommen
b. János talált-a/kapt-a az összes/a legtöbb/a macskát
Hans finden-Prät+Def3Sg/bekommen-Prät+Def3Sg die alle/die meiste Katze-Acc
"Hans hat alle/die meiste Katzen gefunden/bekommen"

Zweitens, die selbe Verben (wann sie ein bestimmtes Präfix bekommen) zeigen eine sogenannte Spezifizitätsbeschränkung (SB): die interne Argumente von der präfigierten Verben sind spezifisch oder partitiv-spezifisch (da ist keine DE mehr). Die Verben beschreiben Ereignisse die geplant oder erwartet sind. (Ähnliche Effekte findet man mit einige Partikelveben im Englishen, z.b. *write up*. Dieses Verb beschreibt ein geplantes Ereignis, und die Thema auch geplant ist.)

(7.36) *a.* János meg-találta az összes/a legtöbb macskát
Hans MEG-finden-Prät+Def3Sg die alle/die meiste Katze-Acc
"Hans hat alle/die meiste Katze gefunden"
(Katzen die verloren waren)
b. János meg-talált egy macskát
Hans MEG-finden-Prät+Def3Sg eine Katze-Acc
"Hans hat eine von der Katzen[sic!!!!] gefunden"

Es ist wichtig zu notieren, dass beide Beschränkungen representationell sind: Man kann das selbe Ereignis kann mit jedes Verb beschreiben. Die relevante Entscheidung zwischen den Gebrauch dieser zwei Verbformen ist die Information die im Diskurs erhältlich ist.

Das Ziel dieser These ist die Entwicklung einer formell präziser Analyse von die Verben in der Theore von Diskursrepräsentationen (DRT), und die Ableitung von dieser zwei Beschränkungen von der Ereignis- und Argumenstruktur die zu den Verben zugeordnet ist.

Die Prämisse von der Analyse ist das die beide Beschränkungen eigentlich spezielle Fälle von Variable-bindung sind. Die DE ist eine Form von Existentielle Quantifikation, und die SE ist eine Form von Präsuppositionalität, oder Anapherische Bindung (durch die Ermittlung von einer berühmte Variable).

Die Definitheitsbeschränkung im Ungarischen ist in Vergleich mit English analysiert. Das enthält die sogenannte *there*-Konstruktion (s. Beispiel (7.34)) und auch einige Verben die eine sogenannte quasi-DB zeigen (Burton (1995), Moltmann (1997)). In beiden Sprachen die DE ist als eine Neuigkeitsbeschränkung über den relevanten Diskursreferent analysiert (Ward and Birner (1995), Blutner (1993), McNally (1998)). Die Quelle für diese Beschränkung ist eine berühmte Variable in den lexikalischen Eintrag des Verbes. Diese Variable bindet den bei der *NP* eingeführten Diskursreferent. Diese Neuigkeitsbeschränkung ist selbst beschränkt: der beim Verb eingeführte Ereignisdsdiskursreferent soll selbst neu, oder nichtpräsupponiert sein (Kálmán (1995)): Da ist keine DE wann der Verb präsupponiert ist. Zum beispiel, Fokus neutralisiert die DE (weil Fokus in Ungarisch präsuppositionell ist):

(7.37) *a.* ∗János talált minden macskát
John found every cat-Acc
Intended: "John found every cat"

b. Minden macskát [János]$_F$ talált
Every cat-Acc [John]$_F$ found
"For every cat x, it was John who found x"

Die These enthält ähnliche Englische daten die zeigen dass auch in diese Sprache die DE kann abgesagt sein, genau dann, wann das Verb anapherisch oder präsupponiert ist.

Existentielle Sätze sind als eine neue Form von Opazität analysiert (das ist mit Teste für Opazität geprüft). Das ist eine kontextabhängige Variant von Opazität: Kontext ist eingeschränkt, so dass das Ereignis und auch die Thema in diesem Kontext neu sind, und die Thema ist vom Ereignis abhängig.

Die Methode für Analyse ist eine Version von semantische Inkorporation (van Geenhoven (1996), van Geenhoven (1998)). Die Beobachtung ist das in diese Konstruktionen Nominalphrasen nicht die Rolle übliche von Argumente sondern die Rolle von sekondäre Predikate spielen.

Die Quelle for die sogenannte Spezifizitätsbeschränkung ist die Präsupposition vom einiger Präfixe. Diese Präfixe beitragen einen sogenannten Prekonditionszustand (Dowty (1979/1991), Kamp and Roßdeutscher (1994b), Sæbø (1996)), der den Status einer anapherische Präsupposition hat. Die partitivspezifische Eigenschaften des Thema-arguments folgen von ihre Abhängigkeit von einer, in der Presupposition erhältende Variable.

Semantische Komposition spielt eine grundlegende Rolle in diese These. Die Grundannahme ist das satz-interne semantische Komposition kann als Anapher-resolution behandelt werden (s. Bittner (1999), Bittner (2001), Kamp and Roßdeutscher (1994b) oder Kracht (1999)). In diese These 'Anapher-resolution' nennt Unifikation mit Fusion ('merge') (van Eijck and Kamp (1997), Muskens (1996)). Die zwei Kompositionsprozesse die hier analysiert sind (unpräfigiertes Verb + Thema-NP, und Präfix + Verb) sind mit den selben Unifikationsprozess behandelt.

Diese waren die wichtigste Punkte in der These. Ausserdem, die These enthält Daten über Ungarisch, inklusiv ein klein formelles Model über Topik und Fokus in Ungaricsh.

Die Architektur der These ist die folgende:

Kapitel 2 präsentiert ungarische Satzstruktur, die Semantik von Topik und Fokus, und ihre DRT-Modell.

Kapiteln 3 und 4 zeigen die relevante Daten und empirische Testen. Kapitel 3 fokusiert über *NP*s; Kapitel 4 etabliert die Ereignis- und Argumentstruktur von ±präfigierte Verben, mit die semantische Konsequenzen von diese... Strukturen....

Kapiteln 5 und 6 entälten die Analyse der DB in Englischem und Ungarische... (inklusiv eine Hypothese über die Interaktion der DB mit Fokus und Präsuppositionen). Chapter 7 enthält die Analyse der Spezifizitätsbeschränkung.

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