

Multiple Operator Movements in Hungarian

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Multiple Operator Movements in Hungarian

Meervoudige Operatorverplaatsingen in het Hongaars
(met een samenvatting in het Nederlands)

Proefschrift

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Violának

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I cannot adequately represent my gratitude to Viola. Only she knows exactly what these years have been, and that without her, nothing would have been possible. I dedicate this thesis to her.

Chapter 1

Introduction: Preparing the ground

The present study is concerned with multiple operator constructions in Hungarian from a minimalist perspective. This language has been recognised as one where operators, understood here as A-bar elements creating quantificational dependencies, raise in overt syntax—a generalization that has been reached on the basis of examining individual operator movements. Multiple operator constructions exhibit a different, more complex pattern. This study investigates the interaction of movements of operators, both of the same and of different classes, as well as various correspondences between movement patterns and interpretational options.

It will be argued that functional heads play a much more limited role in the syntax of operator movements in Hungarian than currently assumed, and that the descriptive burden is carried instead by the interaction of independent principles governing structure building and movement with head movement and lexical properties of operators, resulting in both empirically more accurate and theoretically superior analyses of multiple operator constructions.

1 Minimalism

The Minimalist Program, initiated by Chomsky (1993, 1995), abstracting away here from the occasionally opaque phraseology, pursues the well-established methodological motive of Ockham's razor in generative syntactic theory: at the centre of its research agenda is an optimally elegant theory of human syntactic competence. In this sense, it should be viewed as the direct continuation of work conducted in the framework of the Principles and Parameters approach,¹ the origins

¹ The approach is also called the Government and Binding framework, after Chomsky's (1981) seminal monograph. See Chomsky and Lasnik (1993) for a discussion of terminology. For a time, government appeared to become a unifying notion of the framework, playing a fundamental role in

of which date back at least to the late seventies. The principal innovation of that approach was the radical departure from construction- and language-specific rules and the mechanism of direct generation in favour of the modular interaction of general principles and the mechanism of filtering. The success of the approach depended on the narrow research space defined by the tension resulting from the opposing requirements of descriptive and explanatory adequacy. Although, retrospectively, this theoretical development was a shift in an extremely fruitful direction, the move was only partial. Probably the most severe inadequacy of the approach resulted in its demise: the lack of a theory of (i.e. well-founded restrictions on) what can be principles, as well as what can be parameters.

Minimalism represents a reaction to these inadequacies inasmuch as it programmatically resolves these issues in an explicit way; however, at the same time it has a much broader scope. This is because it not only provides a—rudimentary—theory of principles as well as parameters, in fact it attempts to restrict syntactic primitives in general. It seeks to reduce syntactic objects (e.g. representational levels, symbols in P-markers) and relations to the bare minimum through a strategy of postulating only such primitives that are motivated by some cognitive system externally interfacing with syntax, and through deriving the putative effects of the rest of the former primitives by relying only on those. Also, principles are limited to requirements that are motivated at some interface, i.e. all purely syntax-internal principles are ideally to be dispensed with. As for parameters, they have no special status in minimalism. Given that principles are interface principles, and since the cognitive subsystems interfacing with syntax are commonly assumed not to be subject to variation, there can be no parameters built into principles. The only locus of variation is lexical arbitrariness; of special relevance are language-specific properties of functional morphemes of the lexicon, in particular, as far as word order variation is concerned, the so-called weak/strong property. One crucial principle relating the lexicon and syntax is the Inclusiveness Condition, which demands that syntactic computations should be driven solely by lexical properties of participating items, and no syntactic objects be introduced in the course of derivations.

In short, minimalism seeks to reduce universal aspects of syntax to what is independently necessary due to the hypothesis that syntax is embedded in a system of cognitive modules. The central, independently necessary condition on the output of syntactic derivations is legibility, namely that interface instructions be fully legible to the connecting external systems (Full Interpretation). Chomsky (2000, 2001) sharpens and strengthens this research agenda by moving towards what ultimately could result in the unification of syntactic competence theory and theories of language use (e.g. performance, i.e. theory of how syntactic representations are computed). Of clear relevance to this issue is operative complexity (e.g. minimal look-ahead comparison), which should matter if derivations are in fact also quasi performance objects, that is, if syntax is also optimal with respect to systems of use. Economy of structure or structure building—a reflection of minimizing operative complexity—has been a notion of considerable interest and use in a great number of

several modules. However, this notion ultimately failed to be unified itself, and also it was too complex and arbitrary to be a proper primitive—hence its disposal in minimalism.

analyses, but it falls in place only if the competence system is geared towards satisfying the needs of performance systems as well. There is more than one way in which a system like human language can be optimal, or elegant: it remains a general objective of the minimalist approach to discover the *actual* ways in which human language in fact is.

2 Background

2.1 The syntax of operators in Hungarian

A few notes are in order here on basic word order generalisations in Hungarian,² as well as how they are captured in current analyses. Hungarian is a language with *ex-situ* focus, with the contrastively (i.e. exclusively, cf. Kenesei 1986, Szabolcsi 1994³) focussed constituent moved overtly to the left and followed immediately by the verb, cf. (1). In clauses without focus or negation, the verb is typically immediately preceded either by a prefixal particle, or by some incorporated complement (commonly termed Verbal Modifier, VM; cf. e.g. Ackerman 1984, É.Kiss and Kiefer 1994), cf. the neutral sentences in (2). We will refer to the shift in the position of the verb from the right to the left of the VM element as verb-inversion. Negation also triggers verb-inversion, cf. (3).

- (1) a. JÁNOS jött el a buliba
 J.-nom came along the party-to
 ‘It’s John who came along to the party’
- b. A BULIBA jött el János
 the party-to came along J.-nom
 ‘It’s the party that John came along to’
- (2) a. János el jött a buliba
 J.-nom along came the party-to
 ‘John came along to the party’
- b. János haza jött a buliból
 J.-nom home came the party-from
 ‘John came home from the party’

² For a comprehensive survey, see É.Kiss (1994, to appear).

³ I use the term contrastive and exclusive synonymously. É.Kiss (1998c), who terms exclusive focus ‘identificational’, uses the term ‘contrastive focus’ to refer to the use of exclusive focus occurring in some languages where an overt mention of the alternative(s) to the focussed element must be made within the sentence.

- (3) a. János nem jött el a buliba
 J.-nom not came along the party-to
 ‘John didn’t come along to the party’
 b. *János nem el jött a buliba

Negation can both precede and follow a preverbal focus:

- (4) a. JÁNOS nem jött el
 J.-nom not came along
 ‘It’s John who didn’t come along’
 b. Nem JÁNOS jött el
 not J.-nom came along
 ‘It’s not John who came along’

Hungarian routinely relies on topicalisation, i.e. a left-peripheral displacement of constituents receiving a topic interpretation. Topicalised material precedes focus and negation.

- (5) a. A verset JÁNOS olvasta fel
 the poem-acc J.-nom read up
 ‘As for the poem, it’s John who read it out’
 b. A verset nem olvasta fel János
 the poem-acc not read up J.-nom
 ‘As for the poem, John didn’t read it out’

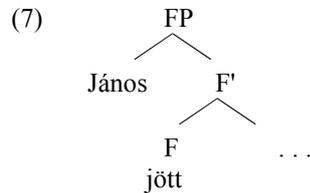
Universal quantifiers can overtly raise to the left of the VM position, and also to the left of preverbal focus.

- (6) a. Minden verset fel olvasott János
 every poem-acc up read J.-nom
 ‘John read out every poem’
 b. Minden verset JÁNOS olvasott fel
 every poem-acc J.-nom read up
 ‘For every poem, it’s John who read it out’

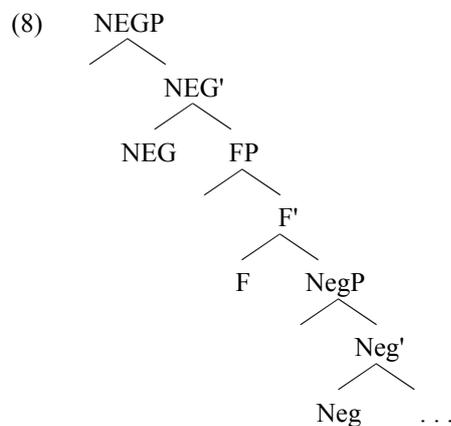
Constituent order in the postverbal field of a clause appears to be rather free.

Contemporary analyses of the Hungarian operator field employ an articulated hierarchy of functional projections. Brody (1990), building on Choe (1987), proposes to treat the syntax of focussing in terms of a focus functional phrase, FP.⁴ The focussed constituent moves to specifier of FP, and verb inversion places the verb into the head F, by virtue of a Focus-Criterion, akin to Rizzi’s (1990) Wh-Criterion. (7) is a partial representation of (1a) above:

⁴ Brody (1990) suggests that FP of Hungarian corresponds to IP in English-type languages.



Negation is also hosted by a specialised projection, NegP in accounts of Puskás (1994, 1996, 2000), É.Kiss (1998b, to appear) and Olsvay (1998, 2000). NegP is projected both above and below FP (cf. (4)), differing in strength—Olsvay coins the negative phrase above FP as NEGP, as distinct from NegP below FP:



Puskás (1995) argues that topics are hosted by a recursive TopP projection. É.Kiss (1998b) introduces QP into Hungarian clause structure, a recursive projection above FP which houses fronted universal quantifiers. QP roughly corresponds to DistP of Szabolcsi (1997).⁵ Szabolcsi proposes a further projection, PredOpP, projected at the position of FP, housing counting quantifiers. In the analysis of the Hungarian left periphery functional projections play a key role, with their stipulated hierarchical order and feature strength properties.⁶

Functional projections have been playing a key role in syntactic analyses for more than one and a half decades. In the Principles and Parameters approach, from the mid-1980s onwards we have been witnessing what has come to be termed a functional explosion. A central thesis of this trend is that the domain of X-bar theory is identical to the full set of all possible structures. Thus, Stowell, Chomsky and others introduce phrases of InflP and CP in accordance with X-bar theory, which projections cover the two major functional fields of sentence structure. Pollock in his seminal work (Pollock 1989) argues in favour of splitting of InflP, invoking

⁵ Brody (1990) proposes an IsP projection, with the head *is* 'also', projected above QP. See also Puskás (1996, 2000).

⁶ Bartos (2000) discusses the functional structure of the Hungarian nuclear clause, in view of verbal suffixation and the Mirror Principle.

AgrP and TP. At the same time, Abney (1987) proposes to treat the structure of the nominal phrase in terms of a functional projection DP, headed by determiners. Before long, in the description of functional and semi-functional elements (and beyond), functional projections proliferate.⁷

The developments in the domain of functional heads raise certain methodological questions, which have been resolved in different ways by different researchers. These questions are centred round the restrictedness of the theory. The introduction of functional projections in the mid-eighties was simply a step in the direction of extending an already existing module of the theory to apply to a broader range of elements than before—the elements themselves had been present in representations already, only they did not conform (or not in all respects) to principles of X-bar theory. In this sense, generalizing X-bar theory was a simplifying move.

However, it appears obvious that introducing *novel* primitive entities to the lexicon and sentence structure enhances the descriptive power of the theory. This gain in descriptive power is matched with a reduction of the degree of explanation, particularly if we are forced to assume empty elements in one position of the functional projection or the other. Researchers take on methodological restrictions of differing strength in this respect: the element in question must appear at both interface levels (PF and LF); or: it is sufficient for it to appear only at one of the two interfaces; or: it may or may not appear at either of the two levels (e.g. the AgrP family (cf. Chomsky 1995), or Kayne's (1998) WP). As far as language variation is concerned: is the inventory of functional elements universal? Or: although the inventory is universal, languages are parametrized with respect to which elements they actually select for use? And: is the order of these elements universal? Of course, if language variation includes parametrizing the presence or order of functional heads, introducing a novel functional head entails a number of novel options in cross-linguistic description, reducing the degree of explanatory adequacy. It holds true for any of the combinations of the possible views above that the introduction of novel projections should require strong arguments deriving from investigation of individual languages as well as cross-linguistic comparisons. In fact, there is a recognizable intention in Chomsky (1995) to reduce the by now rather baroque clausal architecture to a minimum.

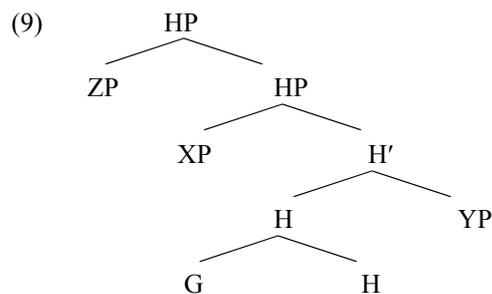
A related issue is that of the admissible phrase structural configurations. Kayne (1994) in his seminal work argues for the Linear Correspondence Axiom (LCA), an axiomatic principle matching hierarchical (c-command) and precedence relations. On Kayne's definition of c-command, a derived consequence of LCA is that maximally one phrase can be adjoined to a projected category. This adjoined phrase in Kayne's approach represents the canonical specifier position. In effect, the LCA derives the uniqueness of specifiers on the given definition of c-command. However, the naturalness of the LCA as an axiom has been questioned (cf. e.g. Brody 2000). Also, in fact there is a clear trade-off between the restriction on specifiers and the number of potentially empty functional heads: a clausal structure

⁷ For instance, Laka's Σ P, Rizzi's ForceP and FinP, Cinque's adverbial projections, the AspectP, VoiceP, PredP, NumP, DefP and so on.

with the number of specifiers limited to one becomes rather baroque with respect to the number of (partly empty) functional projections involved. Rather trivially, the consequence at issue (i.e. the uniqueness of specifiers) hinges on Kayne's version of the definition of c-command, in which he crucially relies on the distinction of segment versus category. A definition of c-command not relying on a segment–category distinction may result in preserving a restricted phrase structure in all other relevant respects (e.g. without right-adjunction/right-specifiers), but not derive unique specifiers. Thus, Chomsky (1995) upholds the LCA—envisaging it as a filter at the PF interface—and at the same time maintains that the computational system creates multiple specifier configurations. Multiple specifiers are a device that can effectively cut down the number of functional projections to be postulated, and in particular, it facilitates the elimination of empty syntactic heads.

2.2 Head movement and the Criteria tradition

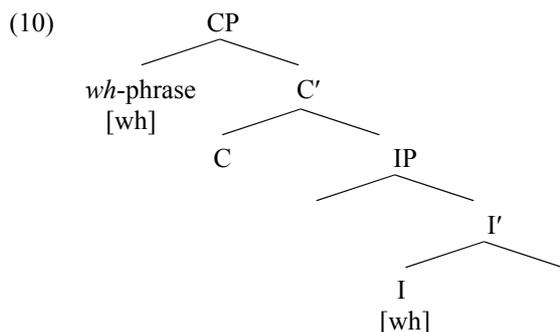
A fundamental conception of minimalist grammar is that syntactic operations are forced (Last Resort; this contrasts with Affect Alfa of the Government and Binding approach). Chomsky (1993) introduces checking theory as a general theory of movement trigger, as such a subtheory of Last Resort. Movement is forced by (functional) features that are uninterpretable at the (PF or LF) interface. Such offending features must be checked, i.e. eliminated (or valued in Chomsky 2000, 2001) before the interface level(s). Checking is licensed in a well-defined set of syntactic configurations. Chomsky (1993) defines this set negatively: a functional head H bearing a formal feature F is in a checking configuration with feature F' if F' is in the domain of H, but not in the complement domain of H. This set in (9) is {ZP, XP, G}.



Significantly, however, this negatively defined set does not appear to be uniform/homogeneous. This in fact is contrary to what is expected of a primitive notion at the heart of the theory of syntactic movement on general methodological grounds. Building blocks of a theory are generally characterized by simplicity and symmetry, unlike in the case of checking theory of Chomsky (1993). Developments in Chomsky (1995) modify the picture, only to bring out the real problem. There, maximal level (i.e. XP-) adjunction is accommodated structurally as an outer

specifier. Then we have a disjunction of two checking configurations that feature F of head H can participate in: syntactic specifier of H, or a head adjoined to H by head movement—a disjunction of two very different configurations. This state of affairs calls for revision.

In the realm of head movement, checking theory is inadequate in ways that the Criteria tradition which it grew out of was not—and the relevant aspect of checking theory is left unchanged in Chomsky’s later papers as well. The empirical domain checking theory as applied to head movement fails to treat properly is head movement dependent on phrasal movement, as typical in many syntactic operator constructions. To illustrate, consider English root *wh*-questions. These constructions are defined by a fronted *wh*-expression in [Spec,CP], and a verbal head raised to C from an Infl node (subject–auxiliary inversion). Now Rizzi (1996) derives the fact that auxiliary inversion is dependent on *wh*-operator fronting⁸ by assuming that the relevant [wh]-feature is on Infl (or [tense] of Infl): his Wh-Criterion forces the *wh*-operator and Infl to be in specifier–head relation, and thereby forces Infl to raise (cf. (10) below).



No such (mutual) dependency can be formulated under Chomsky’s version of checking theory: there movement to the specifier and the head position of a single functional projection are by definition dissociated. This is because movement to the specifier of a head H is triggered by a feature F1 of H, and the raising of a head element to H is required by a completely independent feature F2 of H; i.e. such an interdependency is effectively unexpressible in this system. If such mutual dependency of movements to the same projection exist, the view of head movement is, once again, to be reconsidered..

In fact, adjunction of a head to another by movement proves highly problematic on different grounds as well, as has been pointed out repeatedly. Chomsky (2000) makes an attempt to locate such head movement in the PF component (hence outside syntax), however, it is unlikely that this picture can be maintained generally (for instance, head movement does not seem to be uniformly semantically inert, cf. e.g. Zwart 2000).

⁸ In root yes/no-interrogatives, a silent *whether*-type operator is thought to move to [Spec,CP].

The major complications surrounding head movement are the following (cf. e.g. Brody 2000, Fanselow 2002). It apparently violates the Extension Condition (cf. Chomsky 1993), i.e. it is counter-cyclic. It necessitates a complication of the definition of c-command for (any counterpart of) the Proper Binding Condition on ‘traces’ to apply. Also, the locality of head movement is unmatched in the domain of established syntactic movements (of phrases): this is because head movement appears to be strictly local in the sense that only the closest c-commanded head is able to raise, no skipping of head positions is possible, regardless of the type of the heads involved, in other words, the effect of the Head Movement Constraint (HMC) (Travis 1984) (or any principle(s) from which those effects are derived) is widely attested. The idea that head movement cannot ‘excorporate’ plays a crucial role in accounting for HMC effects—if a head could excorporate from the amalgam of a complex head, then this would be a way of moving across another head by first incorporating into it, and then excorporating from it. Nevertheless, the ‘no excorporation’ restriction is not properly derived from an independent source, and remains stipulative. Head movement *qua* adjunction also incurs complications with respect to the Uniformity Condition on chains of Chomsky (1995), a distant descendant of the principle of Structure Preservation (Emonds 1970). For, a head chain is not uniform *stricto sensu*: the lower link projects, whereas the higher one is non-projecting.

Adjoining head movement appears to be significantly problematic in several important regards. One recent reaction to this state of affairs is to suggest that syntactic head movement does not exist. As we have seen, Chomsky (2000) initiates the relocation of head movement phenomena to the PF branch of grammar, which suggestion follows the line of research pursued in the model of Distributed Morphology (Morris and Halle 1993). A number of researchers reanalyse apparent head movement phenomena as resulting from remnant phrasal movement (e.g. Sportiche 1999, Koopman and Szabolcsi 2000, Mahajan 2001), complicating derivations to a significant extent. Brody (1997) suggests that head movement does not syntactically exist: it is merely an effect of variability of the position a morphologically complex word gets spelled out in.

However, a more conservative response is also possible; we come to this in Section 3.2.

2.3 Optionality in displacement and the status of covert movement

Given Last Resort as a fundamental economy principle⁹ of minimalist grammar, in general, syntactic optionality is a potential problem for description as well as for

⁹ Last Resort if understood as ‘an operation is illicit unless it serves avoidance of non-convergence of the derivation,’ then it is not an economy principle *per se*, since it is inviolable (like Shortest Move of Chomsky 1993 is not an economy principle proper, hence its effect is incorporated into the definition of Move in Chomsky 1995). However, it can be easily formulated as a (violable)

explanation. This is in sharp contrast with Government and Binding models, where optionality is the default case in syntax. With regard to movement, there are two kinds of optionality possible. One is the optionality of the movement operation itself. The two cases most widely discussed in this connection are scrambling and Quantifier Raising (QR). The other kind of optionality is the free choice of the overt or covert nature of the movement operation (in models, such as Chomsky's (2000, 2001) where this distinction continues to exist in some form).

Two leading strategies with respect to apparent syntactic optionality are taken in the literature. One strategy is to deny that the apparent optionality is real. This is made possible for instance if the set of competing derivations is defined in such a way that derivations involving the movement in question do not compete with derivations without that operation. This is the case if the set of competing derivations is derived from an initial set of lexical items and features (i.e. a Numeration, or Lexical Array) and this initial set is different for each case of the perceived optionality. Such lexical differences may include a simple presence versus absence, or strong versus weak characterization of a formal feature. Also, lack of competition is often claimed to be the case if the two or more derivations result in distinct semantic interpretations (and in the case of scrambling, discourse semantic difference is also alleged to be relevant). This approach is generally unavailable if optionality is limited to the overt versus covert nature of the movement, assuming that both options end up with the same interpretation.

The other strategy is to define the grammar in such a way that the different syntactic options count as equally economical. A common technique is to maintain that the movement in question is costless (for instance, it involves Form Chain without Move in terms of Chomsky (1993) (cf. Poole 1996); or it involves category movement but not feature movement (cf. Agbayani 1999)). Often, however, these attempts run counter the primitive concept of Last Resort in the grammar—frequently by virtue of limiting the scope of Last Resort to a subset of syntactic operations, exempting others.

An important point pertaining to the issue of the optionality of overt/covert nature of a movement is that of the *status* of covert movement. Covert movement, traditionally referred to as LF movement, was an innovation originating before the inception of Government and Binding theory (cf. Chomsky 1976, May 1977). There has seemed to be a diverse set of evidence that movements akin in terms of effects and syntactic restrictions to those occurring in overt syntax take place in a covert way too (although some of the evidence has been subject to debate, and some of the formerly assumed covert movements have turned out to involve non-movement dependencies). The result of covert movements is that the created syntactic representation (Logical Form) becomes a relatively transparent interface representation serving as input to the semantic component. Covert movements have an effect for instance on (co-)reference (i.e. binding) possibilities, may block variable binding as well as can extend quantifier scope beyond the surface c-command domain. In Government and Binding theory as well as in Chomsky's

economy principle: 'don't carry out an operation.' Then, this principle will be violated in exactly those cases where it is necessary for convergence.

early executions of his minimalist programme (Chomsky 1993, 1995), all covert movements are assumed to take place after all overt movements, i.e. they are two-cycle systems. Most competing current alternatives can be taken as one-cycle models. Brody (1995b) puts forward a radically representational theory with a single level of representation, Lexico-Logical Form, which encodes both overt and covert movements. Bobaljik (1998), Groat and O’Neil (1996) and Pesetsky (1998), in differing ways all suggest—similarly to the relevant aspect of Brody’s conception—that the overt/covert distinction is a matter of pronouncing chain links. Epstein et al. (1998), Uriagereka (1999) and Chomsky (2000, 2001) advocate a radically derivational model of syntax where spell-out proceeds cyclically, in parallel with the syntactic derivation. Chomsky (2000, 2001) eliminates a significant redundancy in Chomsky’s (1995) system in terms of the status of covert movement. For Chomsky (1995), covert movement takes place after the point of Spell-Out and consists in pure feature movement, thus doubly encoding its phonologically non-visible nature.¹⁰ Chomsky (2000, 2001) holds that the relation of Agree (corresponding to movement) is established both in case of phonologically overt and covert movement, and overt movement is different from covert movement merely in terms of an extra category displacement (triggered technically by a generalized EPP feature¹¹). In this sense, in Chomsky’s model, covert movement is the basic and overt movement is the operationally more complex case; nevertheless neither is designated by the system as marked.¹² It is to be noted finally that while mainstream transformational syntax maintains a distinction between overt and covert movement in some form or another, Kayne’s (1998) programme is to derive the effects of putative covert movement (and its apparent lack of effect on surface word order) through an increased application of overt movement (in many cases, of remnant categories) in an enriched syntactic structure.

3 Goals: hypotheses and empirical proposals

3.1 Restricting functional projections

As pointed out in Section 2.1, functional projections as descriptive primitives should necessitate strong empirical arguments. In this relation, the present thesis argues that the theory of the Hungarian operator field can—and therefore should—dispense

¹⁰ It is an unsettled issue whether covert category movement is still necessary. Pesetsky (2000) argues that in fact both feature movement and covert category movement exist, with different empirical consequences (e.g. in the domain of antecedent contained deletion phenomena).

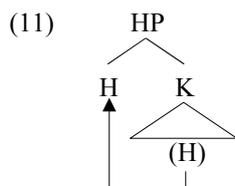
¹¹ Chomsky (2001) identifies the optional EPP feature of strong phases as a P(eripheral)-feature. He maintains that displacements have a “surface semantic effect,” i.e. influence discourse-semantic interpretation of the displaced constituents. It is not clear, however, whether it is only *overt* movements (actual displacements) that can have such surface semantic effects; on the other hand, it seems sufficiently well-established that not all displacement incurs such semantic effects.

¹² Reinhart (1995) identifies QR as a marked operation, strictly speaking violating economy. Note that this does not imply that covert movement is marked in general; rather, it is movements unforced in narrow syntax that are marked operations in that system.

with the rather complex functional architecture postulated in competing current accounts, eliminating a number of phonologically empty functional heads, without significantly complicating the grammar of Hungarian elsewhere. In establishing this claim, I will make use of projections with multiple specifiers (cf. Koizumi 1994, Chomsky 1995, Ura 1996, Richards 1997). I show, contra Szabolcsi (1997), that Hungarian *fails* to furnish suggestive evidence that its A-bar projections include a specialised projection to host increasing distributive quantifiers (labelled DistP), and maintains the view that a semantically well-defined subset of quantifiers can raise without a triggering checking requirement. I demonstrate that PredOpP of Szabolcsi (1997) reduces to focussing, and is therefore eliminable. Further, I argue that focussing, negation and negative quantifiers do not have corresponding dedicated functional projections with a fixed hierarchical position in the left peripheral clausal geometry, but instead, the hosting functional phrases are projected by the raised verb itself. This relates to the treatment of head movement assumed in this thesis.

3.2 Head movement and structure building

The problematic nature of adjoining head movement has led to a number of recent alternative attempts: relocating head movement to outside syntax, or to deny the existence of head movement as such and emulate its effects through (remnant) phrasal movement. A more conservative response is available, however, and will be explored in the present study. One—somewhat anachronistic, yet suggestive—formulation of the leading idea of this reaction essentially characterizes head movement as substitution, instead of adjunction.¹³ In minimalist terms, this means that under the right conditions a head H can be moved out of the current phrase marker K, merging H with K and projecting H, as below:



This move, while demanding a reconsideration of some of the assumptions made in Chomsky (1993, 1995), eliminates the critical complications that adjoining head movement has given rise to, and at the same time retains head movement in syntax. Similar ideas have been pursued elsewhere, partly for different reasons; for instance in Ackema, Neeleman and Weerman (1993), Koenenman (2000), Bury (2001) and at the time of writing this thesis, in Fanselow (in progress). In particular, I argue, following some recent work, that each maximal projection is a phase in Chomsky's (2000, 2001) terms, and that head movement is driven by the Phase Impenetrability

¹³ In the Government and Binding model, head movement could be either of the substituting or of the adjoining type within a bi-partitioned typology of movement.

Condition (PIC) (we come to this in Chapter 5), i.e. ultimately by the radically derivational character of syntax.

This move in fact potentially eliminates the disjunction in the negative definition of checking domain, inasmuch as a head is not moved to check some feature of another head, and at the same time it derives mutually dependent head and phrasal movement in the operator field. This latter result is achievable if we assume that the relevant operator feature [op] is not on an empty functional head which the verbal element (the verb in Hungarian, like in verb second Germanic) raises to, but instead [op] is carried by the verbal element itself. If this view is embraced, then the verbal element will be raised precisely to project a phrase whose specifier will check [op]: without raising the verb, such a phrase is not projected and [op] remains unchecked, causing the derivation to crash. The present study holds that head movement, in this sense, is crucially involved in structure building itself.

3.3 Optionality of movement again

We have seen that syntactic optionality poses a potential problem for minimalist models incorporating Last Resort. In this thesis, I will argue that quantifier raising in Hungarian is a movement operation that applies optionally overtly or covertly. It will also be argued, contra Szabolcsi (1997), that the raising of distributive universals is not driven by needs of feature-checking, and that no DistP functional projection plays a role in the syntax of the Hungarian clause. It is tentatively conjectured that there is a consequence relation between these two theses: I claim that it is because of its non-checking nature that QR can be optionally either overt or covert in a Hungarian-type language, presenting an attempt to explain how Hungarian is different from languages with covert QR. This conjecture is confirmed by data from a further optionally overt/covert A-bar movement in Hungarian, that of the hitherto unnoticed wide scope focus occurring in embedded interrogatives associated with a focus marker in the matrix clause. The conclusion we reach here too is that focus displays optionally overt/covert movement precisely in a syntactic context where its movement (is licensed and at the same time) does not carry out feature-checking. (In this way, the analysis confines feature checking of functional heads to overt syntax, in line with the Kaynean programme (cf. Kayne 1998).)

Minimalist models ought to be viewed as preserving the ‘overgeneration plus filtering’ property of natural language grammar characterizing Government and Binding theory, whereby syntactic operations are optional by default, though heavily filtered. I maintain a treatment of the overt/covert status of syntactic movement according to which even though checking requirements impose the application of an overt or covert movement in the overwhelming majority of cases, in the absence of checking needs we fall back on default optionality.

4 An outline of the thesis

This thesis has a converging set of objectives derived from a particular execution of the minimalist approach summarized in Section 1, in reaction to the inadequacies of current analyses and theoretical considerations laid out in Section 2. The set of theoretical hypotheses are matched with particular innovations in the analysis of Hungarian multiple operator constructions, which are shown to represent substantial improvement in empirical coverage unmatched by existing alternatives.

Chapter 2 discusses sentences with multiple foci in Hungarian, like that in (12).

- (12) CSAK PÉTER fizet elő CSAK A LINGUISTIC INQUIRY-RA
 only P.-nom subscribe-3sg Pref only the Linguistic Inquiry-to
 ‘It’s only Peter who subscribes only to Linguistic Inquiry’

After establishing the existence of such constructions, a non-trivial matter, I turn to two previous analyses, that of Brody (1990) and that of É.Kiss (1998a) (cf. also É.Kiss 1992). Brody (1990) assimilates multiple foci in Hungarian to English-type multiple *wh*. In contrast, É.Kiss (1998a) holds that each focussed element moves overtly to an A-bar specifier position. I argue that Hungarian syntactically realises two interpretively distinct types of multiple focus in two syntactic configurations, one akin to that suggested in Brody (1990), the other akin to the one suggested in É.Kiss (1998a). The case where an *n*-tuple of foci apply to a common background together (termed ‘complex focus’ by Krifka 1991) is realized syntactically as occurrences of focus operators moving to the same functional projection: the movement of one focus is overt, the movement of the rest is covert. In the case of true multiple foci I establish that the correct empirical generalisation is that while the primary focus operator moves overtly, secondary foci move covertly to a position independent of the primary focus.

In the remainder of Chapter 2, Szabolcsi’s (1997) Predicate Operator class is examined. Szabolcsi (1997) holds that counting quantifiers raise to a specialised quantifier projection coined PredOpP. I argue that Szabolcsi’s analysis faces numerous complications, and on closer inspection, counting quantifiers are to be properly analysed as a subcase of focus. An interesting difference between regular focus and counting quantifiers in their interaction with the negation operator is highlighted and derived based on what will be referred to as the operation of default focussing.

In Chapter 3, we turn to another type of A-bar movement in Hungarian, the raising of universal quantifiers, involved for instance in (11) below.

- (13) Minden cikket két bíráló olvasott el
 every article-acc two reviewers-nom read-past-3sg Pref
 ‘Two reviewers read every article’ ($\forall > 2$, $*2 > \forall$)

After a review of the main issues the general phenomenon of quantifier movement has raised in the literature, I critically examine a recent approach to the differential scope-taking options of various quantifier classes presented in Beghelli and Stowell (1994/1995) in terms of formal feature checking movements in a clause structure augmented by quantifier class specialised functional projections. I show that this account suffers from serious theoretical as well as empirical drawbacks. I also discuss Szabolcsi's (1997) model of Hungarian, who builds on the theory of Beghelli and Stowell (1995) and claims that Hungarian provides strong overt evidence for Beghelli and Stowell's analysis. I show that this model, when applied to a wider range of data than considered by Szabolcsi, causes more complications than it is designed to solve.

I outline an approach to differences in the scopal behaviour of quantifier classes in terms of availability of Quantifier Raising, A-bar movement and A-reconstruction, and existential closure. Hence, I argue for the viability of an account involving Quantifier Raising, with the proviso that it is a semantically well-defined subclass of quantifiers that undergo such movement.

A standard description of Hungarian quantifier movement (cf. É.Kiss 1987, 1992, 1994) is brought under scrutiny according to which the apparent optionality in the fronting of universal quantifiers to the preverbal field or pronouncing them postverbally (but with wide scope) is relegated to the stylistic (PF) component. I point out the inadequacies of this treatment. I raise and reject the possibility that the overt fronting of increasing quantifiers can be derived as cases of topicalisation or focussing. I conjecture that QR is characterized as optionally occurring either overtly or covertly in Hungarian.

Chapter 4 is devoted to negative operators, their interplay, as well as their interaction with focus. First, standard accounts of the syntax of negation in Hungarian are reviewed. Countering these accounts, I argue that the negation particle is not a head element, but in fact a specifier category. Further, I propose that the negation particle and preverbal focus occupy multiple specifiers of the same single projection.

With these results in mind, I turn to explore the syntax of multiple negative operators (like English *nobody*). According to Puskás's (1998, 2000) view, negative indefinites in this Negative Concord language—also termed n-words (cf. Laka 1990)—carry logical negation and check their [neg] feature in a NegP projection covertly; whenever they are overtly raised, this involves focussing. On É.Kiss's (1998b) and Olsvay's (2000) account, Hungarian negative indefinites are not semantically negative, and are never focussed. I argue first that Hungarian n-words are to be properly factored into two morpho-syntactic classes: bare and modified (by the *sem* particle), and it is exclusively the members of the latter class that are both semantically negative and carry an (interpretable) [neg] feature (by virtue of the modifying particle). Next, I explore the interaction of negative indefinites with focussing, finding that negative indefinites themselves are focusable. I claim that similarly to other downward entailing quantifiers, negative indefinites are in fact focussed by default, which explains a salient discrepancy in its interaction with preverbal focus from that of the negation particle. Their focusability creates a paradox in the semantic analysis of these elements as quantifiers: neither a uniform

universal quantifier, nor a uniform existential quantifier treatment will be shown to be tenable. Carrying out careful empirical testing based on the relevant literature I establish that in fact both an existential and a universal reading are available to n-words, though the distribution of each reading is restricted. I argue that the pattern reflects an ambiguity between a universally quantified vs. a non-quantified (Heimian) n-word. In particular, existential closure applies in the scope of logical negation, and in case a Heimian indefinite occurrence of an n-word gets focussed, the sentence receives a scalar interpretation, a proposal tying in with some recent work on negative polarity. With regard to the movement pattern of negative operators then, these items can be moved either *qua* universal quantifiers by QR, or by focussing, or by the need of checking [neg] on a functional head, where the latter two are checking movements occurring invariably in overt syntax. The apparent optionality of overt movement reduces on the one hand to the optionality of overt QR in Hungarian, and to the choice in focussing, and on the other hand, to an ambiguity in the lexical semantics of the n-words themselves.

In Chapter 5 we step back from the analyses we have put forward and raise some more general questions related to structure building and movement. Pointing out severe complications with adjoining head movement, I will argue for a ‘substitution’ view of head movement, where clause structure is built cyclically hand in hand with verb raising: the cyclically raising verb projects its unsaturated features into functional phrases. In particular, then, it is suggested that operator features are carried by the verb in Hungarian. On this assumption, the proposed account of head movement derives the simultaneity of focussing and verb movement as well as verb inversion accompanying negation and preverbal negative operators. Further, it is spelled out how this view of the relation between head movement and structure building eradicates pre-determined functional projections like FocP or NegP in Hungarian clause structure. It is demonstrated how this account derives the generalisation that secondary focus movements targeting an A-bar position lower than primary focus apply in covert syntax.

I will consider a possible account of the optionality of overtness or covertness of QR in Hungarian, arguing for a view of the overt/covert distinction in which there is no economy preference of either overtness or covertness of movement. This is made possible by developments within the minimalist programme: overt or covert status of movements is exhaustively determined by formal features involved in checking. This view predicts the availability of optionally overt or covert movement precisely in those marked cases where the overt/covert status of the operation fails to be coerced by formal checking properties. Quantifier Raising in Hungarian is argued to be one such case. To conclude the chapter, I extend this account to another—as yet not studied—construction type in Hungarian, wide scope focusing in focused embedded interrogatives. I demonstrate that the optionality of overt/covert movement that such focusing exhibits can be reduced to the same basis as before, i.e. lack of a coercing checking feature in the ‘attracting’ functional head.

Chapter 6 demonstrates that the picture presented in Chapter 5 extends to multiple *wh*-operator constructions as well, a non-trivial matter. Multiple *wh*-fronting, mostly of the Slavic type, has received considerable attention in recent

minimalist literature as an instance of what seems to be multiple movements to the same syntactic projection. On the other hand, *wh*-in-situ—both of the English type and of the Chinese type—has also induced a revival of interest in recent years, although for different reasons. The central issue in this domain concerns the mechanism of the interpretation of the *wh*-element in situ, and more generally, the nature of the relation between *wh*-in-situ and Comp. Hungarian features both what appears to be Slavic-type multiple *wh*-fronting and what appears to be English-type *wh*-in-situ, hence the raising of secondary *wh* appears to involve opitonicity in Hungarian. Boskovic (1997b, 1998, 2000a,b) argues that Superiority-violating multiple *wh*, exhibited also by Hungarian, results from the fact that such constructions involve overt [foc]-checking instead of [wh]-checking, the latter of which remains covert. Lipták (2001) also presents an account of Hungarian multiple *wh*-fronting in which no overt [wh]-checking occurs ([wh]-checking is covert), and essentially adopts É.Kiss's (1992, 1993) treatment of the fronting of linearly non-last *wh*-elements as cases of universal quantifier raising. I counter these accounts, highlighting their inadequacies in the treatment of Hungarian data, and argue that the checking of the 'attracting' [wh]-feature (claimed to co-occur with [foc] on the raised verb) is invariably overt, and put forward the straightforward assumption in terms of checking theory that the [wh] feature of *wh*-elements themselves is strong in Hungarian (this contrasts with [foc] of focussed elements, which is assumed to be weak). The apparent optionality resulting from the concurrent presence of both the English and the Slavic pattern of multiple *wh*—keeping to the null hypothesis that the attracting functional head Foc is identical in the Slavic and in the English pattern within Hungarian—is claimed to follow from the simultaneous availability of overt movement as well as introducing a choice function variable (cf. Reinhart 1998), both serving the saturation of the strong [wh] property of the *wh*-item. The distribution of choice function variables will be shown to be responsible for the syntactic arrangements as well as the resulting interpretations, along the single pair versus pair list parameter. Covert focus movement of *wh*-elements and binding of choice function variables will interact to derive the rather complex pattern of available readings. A significant repercussion of the account is that both covert movement and choice functions may co-exist within the grammar of one and the same language. In the context of the results of Chapter 5, this chapter essentially demonstrates that the apparent optionality of overt versus covert movement of secondary *wh*-elements reduces not to non-checking, but to different strategies of checking a strong [wh] feature.

Chapter 7 recapitulates the main results obtained in the thesis.

Chapter 2

Multiple foci

The first multiple operator construction to be examined is multiple foci. The issue in the centre of interest will be the proper syntactic analysis of postverbal focus in Hungarian. We begin by reviewing some fundamental notions in the domain of the phenomena of focusing, as well as different kinds of focus (Section 1). Then we turn to multiple foci constructions, arguing that two main interpretational types exist. É.Kiss (1998a) presents an analysis of Hungarian multiple foci in terms of recursive FocP projections. I argue here that the two interpretational types in fact correlate with two distinct syntactic configurations (Section 2). É.Kiss (1998a) proposes that the movement of postverbal instances of focus to recursive FocP projections is overt in Hungarian. In Section 3 I present arguments to the effect that such postverbal foci in fact raise only in covert syntax, pointing out what problem this poses for a feature-checking analysis of focus movement. In the remainder of the chapter, Szabolcsi's (1997) Predicate Operator class of quantifiers is examined (Section 4). Szabolcsi (1997) holds that counting quantifiers raise to a specialised quantifier projection coined PredOpP. I argue that Szabolcsi's analysis comes with numerous complications, and on closer inspection, counting quantifiers are to be properly analysed as a subcase of focus. An interesting difference between regular focus and counting quantifiers in their interaction with the negation operator is highlighted and derived based on what will be referred to as the operation of default syntactic focussing.

1 Focus: basic notions and facts of Hungarian

Focus in the most general sense is commonly thought to subsume phenomena of prosodic prominence paired with pragmatic and/or semantic functions of interpretational prominence. What exactly the nature and proper analysis of this

‘interpretational prominence’ is has been a subject of continued research. The leading account of this correlation of phonological and semantic/pragmatic prominence is one where it is mediated through syntax in terms of a syntactic focus feature: it is this syntactic focus feature which is interpreted in phonology and in semantics/pragmatics as associated with the respective properties characterizing focus (this interpretive genre of account dates back at least to Jackendoff 1972).

At the PF level, the prominence is typically manifested in terms of a pitch accent located within the focused expression (although other phonological/phonetic correlates are also attested). The interpretational effects are much murkier. The focus structure of a sentence is intimately related to discourse. In one approach, the focus of a sentence is the discourse-new part (vs. discourse-old). Sometimes (in some languages) discourse-old elements (also called theme) are separated from discourse-new elements (also called rheme) syntactically at the surface—languages that are strictly sensitive to (a form of) this distinction are (to varying degrees) discourse-configurational (i.e. the syntax of their sentences is determined partly by discourse properties of the elements involved). Such a distinction is a central one in the Prague school (cf. e.g. Hajicova 1984, Hajicova and Sgall 1987). In fact, most typically, discourse-old and discourse-new are not syntactically isolated in the shape of distinct constituents in surface sentence structure. In different terminologies, distinctions similar to the one at issue are also called topic/comment, topic/focus, presupposition/focus, focus-frame/focus, or background/focus. However, it appears that not all of these pairs of notions cut the information structure of the sentence in the same way.

There are at least two distinct pairs of notions that are necessary, as Partee (1991) and Krifka (1991) point out. One is what can be referred to as topic/comment. This arises in sentences where topic is ‘locally’ marked (to follow Partee’s phrasing), typically by fronting a constituent (or several constituents). These topicalized constituents are strictly discourse-old/‘given’ and function as logical subjects of a predication (É.Kiss 1991, 1994). The rest then is the comment. A second, independent distinction is that commonly referred to as focus/background, with one (or more) locally marked focus. The background part is presuppositional. Neither the comment of the topic, nor the background of the focus need be a surface syntactic constituent (vs. the focus, cf. Krifka 1991: 152–153). If they were analysed (at some representational level, as in Hajicova and Sgall 1987) as a constituent, in semantic terms they would be open expressions. Then two conceptions of background are possible in principle. Either the background of focus is all that is not focus (that is, including topic(s) as well), or the background is only the non-focus part of the comment, and the choice will depend on the semantic theory of focus/background structure we assume. Here I opt for the first option, following Rooth’s theory of focus semantics (Rooth 1985).

In fact, Hungarian is known to be distinctly discourse-configurational (cf. e.g. É.Kiss 1995). In this language both topic/comment and focus/background divisions are reflected in surface syntax. The prototypical surface structure of sentences in this language can be schematised as below:

- (1)

topic
background

comment
focus
background

Let us illustrate with two sentences.

- (2) a. Jánost AZ IGAZGATÓ mutatta be Marinak
 J.-acc the director-nom introduced Pref M.-dat
 ‘As for John, it’s the director who introduced him to Mary’
 b. Marinak JÁNOST mutatta be az igazgató
 M.-dat J.-acc introduced Pref the director-nom
 ‘As for Mary, it’s John who the director introduced to her’

As can be seen from the English paraphrases, *Jánost* ‘John’ functions as the topic in (2a), but it functions as the focus in (2b). *Marinak* ‘Mary’ is part of the comment and also of the background in (2a), but it is the topic in (2b). (2a) is a felicitous answer to the question in (3a), and (2b) to (3b).

- (3) a. Talking of John, who introduced him to Mary?
 b. Talking of Mary, who did the director introduce to her?

The first obligatory accent in Hungarian sentences falls on the first element of the comment; i.e. topics do not bear an obligatory accent.¹

As we expect, entities coming into being as a result of events reported in the sentence (i.e. entities that cannot have been present in the discourse) cannot appear in topic position (cf. 4a). Also, an indefinite in topic position will be necessarily interpreted as specific (in the sense of Enc 1991). The indefinite expression *egy autó* ‘a car’ is felicitous in (4b) only if it is the member of a previously introduced set of cars (i.e. has a partitive reading).

- (4) a. #Egy autót 'rajzolt János [É.Kiss 1998b: 22]
 a car-acc drew J.-nom
 ‘John drew a car’
 b. Egy autó a ház előtt állt
 a car-nom the house in-front-of stopped
 ‘A car stopped in front of the house’

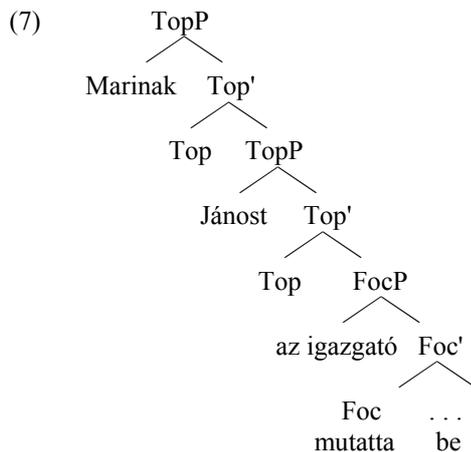
Of course, neither a topic, nor a focus is obligatory in the sentence. For instance, (5) contains neither a topic nor a focus.² On the other hand, there is a distinction in the preverbal domain between topic and focus: topic is recursive, focus is not. Accordingly, (6a) is possible, while (6b) is out.

¹ Krifka (1991) notes (cf. also Jacobs 1984) that it might be necessary to posit focus–background structure within the topic as well.

² Topicless sentences are often identified as beingthetic judgments (cf. Maleczki 2002 for recent discussion of relevant Hungarian facts).

- (5) Megláttam Jánost
 Pref-saw-1sg J.-acc
 ‘I saw John’
- (6) a. Marinak Jánost AZ IGAZGATÓ mutatta be
 M.-dat J.-acc the director-nom introduced Pref
 ‘As for Mary, (and) as for John, it’s the director who introduced him to her’
- b. *Marinak JÁNOST AZ IGAZGATÓ mutatta be

In current syntactic models with functional projections specialized for topic and for focus (e.g. Szabolcsi 1997, É.Kiss 1998a,b, Puskás 2000), the representation of a sentence like (6a) would be along the lines of (7). (Verb-inversion is analysed as raising of V to F(oc), following Brody 1990.)



In the foregoing, I have illustrated the conception that Hungarian is discourse-configurational in the sense that it reflects syntactically both topic/comment and focus/background information structures. I have said that topic (in the sense employed here) is characterized in Hungarian by syntactically being fronted to the left, and being recursive; phonologically bearing optional stress; and (discourse) semantically being strictly discourse old/‘given’ and functioning as a logical subject of predication.

As for focus, I have pointed out that it bears emphatic stress in Hungarian; syntactically, it is fronted to the immediate left of the verb, and it is preverbally non-recursive. Let us now concentrate on the interpretation of focus. In fact, it does not hold that preverbal focus must be discourse-new. Consider the discourse in (8).

- (8) A: Ami Jánost illeti, észrevették *pro* a lányok?
 what J.-acc concerns notice-took-3pl him the girls-nom
 ‘As for John, did the girls notice him?’

B: Nem, JÁNOS vette észre ŐKET
 no J.-nom took-3sg notice them
 ‘No, it’s John who noticed them’

In the reply in (8), John is definitely discourse-old, in fact, in the expected answer, it would be an ideal topic element. Nevertheless, in B’s reply, John functions as focus. Preverbal focus in Hungarian then is not necessarily discourse-new.

There appears to exist a further kind of focus in Hungarian. This kind is also characterized by emphatic accent, but it does not raise to the preverbal position; cf. (9).

(9) Az esküvőn megjelent MAGA AZ IGAZGATÓ
 the wedding-at Pref-appeared-3sg himself the director-nom
 ‘The director himself showed up at the wedding’

This type of focus, cannot be discourse-old, however:

(10) A: Mi történt az igazgatóval?
 what happened the director-with
 ‘What happened to the director?’
 B: #(9)

In fact, we are dealing with two distinct types of focus. It has been recently emphasized by É.Kiss (1998c) in an important paper that in the literature on focus more generally, we face a pervasive and confusing lack of differentiation between these two kinds of focus. The two kinds are often called *narrow* or *contrastive* focus and *wide* or *presentational* focus (cf. Halliday 1967, and in particular, Rochemont 1986); É.Kiss uses the terms *identificational* focus and *information* focus.³ Information focus (as in (9) above) is characterized by a different set of syntactic and semantic properties than identificational focus. As we have seen, in Hungarian (but more generally too) information focus must be discourse-new, while identificational focus may or may not; information focus does not undergo obligatory syntactic movement, information focus does. Information focus does not correlate with a truth-conditional difference compared to the neutral sentence variant, while identificational focus does. (For a five-grade grouping of focus-sensitivity effects from mere contextual (in)felicity through differences in presupposition to truth-conditional consequences, see Hajicova, Partee and Sgall 1998.) One aspect of the truth-conditional impact of identificational focus concerns exhaustivity, and the other focus-sensitive particles. It has been a long-standing observation that Hungarian preverbal focus (i.e. identificational focus) results in ‘exclusion by identification’ (cf. Kenesei 1986, Szabolcsi 1994). É.Kiss (1998c: 249) sums up this view of the interpretation of identificational focus informally as in (11).

³ See Gundel (1999) for a different characterization of distinct focus types in the literature.

- (11) An identificational focus represents a subset of the set of contextually or situationally given elements for which the predicate phrase can potentially hold; it is identified as the exhaustive subset of this set for which the predicate phrase actually holds.

This is fully consonant with Rooth's (1985) theory of focus semantics in terms of alternatives. In Rooth's theory syntactic expressions have a focus semantic value. The focus semantic value of a sentence like (12a) is (12b).

- (12) a. Ede wants COFFEE
 b. the set of propositions of the form "Ede wants *x*"

(12a) identifies the proposition in the set of (12b) which is true. Szabolcsi shows in an early paper (Szabolcsi 1981) that Hungarian preverbal focus is exhaustive, through the simple minimal pair in (13).

- (13) a. Mari egy kalapot és egy kabátot nézett ki magának
 M.-nom a hat-acc and a coat-acc picked out herself-
 for
 'It was a hat and a coat that Mary picked for herself'
 b. Mari egy kalapot nézett ki magának
 M.-nom a hat-acc picked out herself-for
 'It was a hat that Mary picked for herself'

(13b) is not among the logical consequences of (13a); in fact (13b) contradicts (13a) (either (13a) or (13b) is true, but not both). Such a truth-conditional difference obtains also with the particle *only* (cf. Rooth 1985, Krifka 1991). In general, focus-sensitive particles like *only*, *even*, *too*, etc. produce truth-conditionally distinct interpretations in analogous ways when they are associated with different foci in the sentence.⁴

⁴ (i) illustrates the a truth-conditional difference brought about by the interaction of a focus-sensitive adverb with focus:

- (i) a. Mary always took JOHN to the movies
 b. Mary always took John to the MOVIES [Partee 1991]

Other familiar examples of focus determining different truth-conditions include the following ((ii) and (iii) are cases of what is called *free* or *unbound* focus, cf. Jacobs 1984):

- (ii) a. DOGS must be carried
 b. Dogs must be CARRIED [Halliday 1967]
 (iii) a. Clyde gave me the TICKETS by mistake
 b. Clyde gave ME the tickets by mistake [Dretske 1972]
 (iv) a. The largest demonstrations took place in PRAGUE in November (in) 1989
 b. The largest demonstrations took place in Prague in NOVEMBER (in) 1989
 [Partee 1991]

Identificational focus, as we have seen, is moved to the left periphery (and induces verb inversion). This movement has the typical properties of A-bar movement, as reviewed by Puskás (2000) (e.g. weak crossover and parasitic gap licensing) and is a quantificational dependency (cf. Rizzi 1997 for contrasting focalization and topicalization in this regard). In other words, Jackendoff's (1972) and Chomsky's (1976) insight that focus phenomena is to be seen as analogous to quantifier scope phenomena⁵ holds for identificational focus.^{6,7}

2 Multiple foci

It is widely attested that multiple foci may occur within a single sentence. Let me illustrate with examples from English:

- (14) a. John only introduced SUE to BILL
(He didn't introduce Mary to Fred) [Wold 1998]
- b. A: John only introduced SUE to Fred
B: John also only introduced SUE to BILL [Krifka 1991]
- c. A: I think John and Bill both fell in love only with SUE
B: Only JOHN fell in love only with SUE

Such constructions are not only intricate to process, but they have posed a difficulty for semantic analyses of focus as well (for instance, Lyons and Hirst 1990 exclude them *expressis verbis* from their analysis because they are “semantically complicated”). Different approaches to focus describe multiple foci in their own terms. Partee (1991), working on the assumption that focus is the nuclear scope of a tripartite operator–restrictor–nuclear scope structure (where restrictor equals focus-frame, i.e. background), characterizes them as involving *recursion* of tripartite structures. Krifka (1991) proposes to analyse multiple foci within the structured meanings framework (cf. Klein and von Stechow 1982, Jacobs 1983).

⁵ And as such, it was assumed to involve Quantifier Lowering, a mechanism available for Q-scope in the theory assumed then.

⁶ Although Rooth's (1985, 1992) analysis is an ‘in-situ’ one (i.e. it does not involve focus raising or the like), the treatment of focus in terms of focus value and alternatives can be carried over to ex-situ as well.

⁷ Languages apparently differ with respect to whether they move their focus—meaning not only whether they move focus overtly or covertly, but that they move it syntactically *at all*. Foci associated with focus particles in English apparently does not raise, given that it is possible for a scope island boundary to separate the focus particle from the associated focus (cf. Rooth 1996) (e.g. an adverbial clause boundary).

2.1 Multiple foci in Hungarian: the basics

2.1.1 The uniqueness of preverbal focus

Let us turn now to examples in Hungarian, a language with *ex situ* preverbal focus:

- (15) a. JÁNOS evett meg CSAK KÉT SÜTEMÉNYT
 J.-nom ate-3sg Pref only two cookies-acc
 ‘It was John who ate only two cookies [É.Kiss 1998a: 11]
- b. JÁNOS hívta meg egy sörre PÉTERT,
 J.-nom invited-3sg Pref a beer-to P.-acc
 és nem PÉTER (hívta meg egy sörre) SANYIT
 and not P.-nom invited-3sg Pref a beer-to S.-acc
 ‘JOHN treated PETER to a beer,
 and it’s not the case that PETER treated ALEX to a beer’
- c. *JÁNOS CSAK KÉT SÜTEMÉNYT evett meg
 J.-nom only two cookies-acc ate-3sg Pref
- d. *JÁNOS PÉTERT hívta meg egy sörre,
 J.-nom P.-acc invited-3sg Pref a beer-to
 és nem PÉTER SANYIT (hívta meg egy sörre)
 and not P.-nom S.-acc invited-3sg Pref a beer-to

The most salient syntactic generalization we can make is that only a unique preverbal focus is allowed. I will assume that this follows from the nature of [foc]-checking, i.e. the checking of the focus feature. Adopting now a functional focus phrase treatment (cf. Brody 1990; see Chapter 1) in which a functional focus head F(oc) contains an uninterpretable [foc] feature which attracts the focused expression to its specifier,⁸ we can simply characterize the uniqueness of preverbal focus as a consequence of the checking mechanism: once [foc] of the F(oc) head is checked, it cannot attract any more focused expressions.⁹

2.1.2 Postverbal focus can be identificational

The issue now is: what is the proper analysis of the secondary¹⁰ focused phrase in (a) and (b) above? In particular, two questions arise. First, is secondary focus to be

⁸ Brody’s (1990) original proposal of a FocP in Hungarian is in terms of a Focus Criterion (in the style of Rizzi’s (1990) Wh-Criterion). Brody (1995a) adopts a focus feature checking approach.

⁹ Szendrői (2000) applies Neeleman and Reinhart’s (1998) analysis of the correspondence between constituent order and focusing in a language like Dutch in terms of default sentence stress to Hungarian. A possibility that this approach leads to, as explored in Szendrői (2002), is that no focus feature is present in syntax in Hungarian.

¹⁰ For the primary vs. secondary distinction in multiple operator constructions, see Brody (1995b) as well as Richards (1997). For Richards, a primary operator is one that carries out feature checking in an operator projection *first* in the derivational process, and secondary operators carry out feature

analysed as true identificational focus, or it is merely information focus? Second, if it turns out that secondary focus can be identificational, then what is its syntactic position? Let us address the first question first.

Given that both information focus and identificational focus generally bear emphatic stress, it may appear that the fact that the secondary foci above are emphatically stressed does not distinguish the two options. This, in itself, is of course true. However, the correct generalization is not that secondary focus must bear emphatic stress, but that it can: deaccenting is possible, depending on the previous discourse. Take the (somewhat redundant) dialogue in (16) as illustration.

- (16) A: Ki választotta desszertnek A FAGYIT,
 who-nom picked-3sg pudding-for the ice-cream-acc
 és nem AZ ALMÁSPITET?
 and not the apple pie-acc
 ‘Who picked ICE-CREAM for pudding, and not APPLE PIE?’
 B: JÁNOS választotta desszertnek A FAGYIT /a fagyit
 J.-nom picked-3sg pudding-for the ice-cream-acc
 ‘It was John who picked the ice-cream’

The secondary focus in B’s answer may or may not bear emphatic stress. The same is true of (15a) above. Information focus in general cannot be deaccented. Then the observation of optional deaccenting argues in favour of analysing secondary focus not as information focus, but as identificational focus. Note, however, that such deaccenting is allowed in no context in (15b). Either the postverbal focus is informational, or there is some other reason for why it must bear emphatic stress. I will argue below for this latter explanation.

A second argument that secondary focus can be identificational comes from the very fact that *only*-expressions can function as secondary focus. For, it seems to be the case that *only*-expressions—clearly, due to their contrastive identificational semantics—can only function as identificational focus in Hungarian. In single focus sentences, such expressions invariably must be fronted (unlike information focus, cf. (9)):

- (17) a. *Az esküvőn megjelent CSAK AZ IGAZGATÓ
 the wedding-at Pref-appeared-3sg only the director-nom
 b. CSAK AZ IGAZGATÓ jelent meg az esküvőn
 only the director-nom appeared-3sg Pref the wedding-at
 ‘Only the director himself showed up at the wedding’

A third fact that supports the view that secondary focus can be true identificational focus comes from the interpretation of superlative predicative adjuncts. Farkas and É.Kiss (1995) show that in such superlative constructions the

checking later. In this chapter, I will be using the term secondary neutrally to simply designate postverbal instances of foci, which are not overtly raised to a preverbal position, unlike the primary focus operator.

focus operator introduces the set that serves as the ordering domain for the ordering property denoted by the adjective or adverb appearing in the superlative. É.Kiss (1998c) makes use of this conjecture in testing for focushood of postverbal emphatic constituents: the superlative expression selects the extreme element from the (ordered) set of elements that is introduced by the focus (i.e. the set of alternatives). Now, if a superlative predicative adverb can be interpreted with reference to the postverbal emphatic element (or more precisely, its set of alternatives), then that element functions as focus.

- (18) A: Mikor énekelt el MARI a népdalt a legszebben?
 when sang-3sg Pref M.-nom the folk song-acc the most beautifully
 ‘When did MARY sing the folk song the most beautifully?’
 B: MA énekelt el MARI a népdalt a legszebben
 today sang-3sg Pref M.-nom the folk song-acc the most beautifully
 ‘It was today that MARY sang the folk song the most beautifully’

For our purposes, it is important to add that information focus behaves differently.

- (19) *Az esküvőn megjelent MAGA AZ IGAZGATÓ
 the wedding-at Pref-appeared-3sg himself the director-nom
 a legkorábban
 the earliest
 ‘The director himself showed up earliest at the wedding’

All in all, we can conjecture that secondary focus can be identificational.¹¹

2.2 The syntax of postverbal focus

The question I address in this section concerns the proper syntactic analysis of postverbal foci. *A priori*, a number of alternatives are conceivable. One view would be to propose that the secondary focus raises to the site of the primary focus in covert syntax. This view is suggested in Brody (1990)—although without argument (and this treatment is also adopted in Puskás 2000). Another view would be to propose that secondary focus raises to a second FocP, on the assumption that more than FocP can be projected in a clause. This is the view put forward in É.Kiss (1998a). In particular, É.Kiss (1998a) argues that the movement of secondary foci to lower FocP-s occurs overtly. A third conceivable alternative is that secondary focus does not undergo movement at all. In the context of checking theory, this is possible if we adopt the plausible assumption that focused expressions carry interpretable

¹¹ A further indication that this is the case comes from scope effects. É.Kiss (1998c) notes that Hungarian information focus does not take scope, it has no scopal properties. Inasmuch as secondary focus can behave as a scope-taking operator, this indicates that it can be identificational. Evidence to this effect will appear in the next section.

[foc]. Interpretable features do not need to be checked, therefore there is no checking need for movement. I will argue that in fact both the first and the second views are correct, but not the third one. Movement of secondary focus to FocP occupied by the primary one, and movement of secondary movement to a second FocP co-exist in the grammar of Hungarian—and they correspond to two distinct interpretations.

As a first step, let me introduce the two interpretations. One is illustrated by (14a) above, repeated here as (20), on the reading which says that the only pair of persons such that John introduced the first to the second is Bill and Sue.

- (20) John only introduced SUE to BILL
(He didn't introduce Mary to Fred)

In this case we appear to have two phonological foci, but they are related to only one focus operator. Such multiple foci have been discussed widely (cf. Taglicht 1984, Rooth 1985, von Stechow 1989, Jacobs 1988, Krifka 1991). As Krifka (1991) notes, to treat cases like these, at any rate we have to allow for backgrounds to be applied to more than one focus. This can be achieved by allowing ordered tuples (like pairs) and lists of these (like pair-lists) in the semantic representation.¹² This kind of multiple focus is termed by Krifka (1991) as 'complex focus'. In a sense then, we are not dealing with real multiple semantic foci in such examples.

This needs to be distinguished from cases of what Krifka terms 'true multiple focus', i.e. cases of multiple semantic foci, as discussed for instance by Jacobs (1984, 1988), and illustrated in (14b,c) above, repeated here as (21a,b).

- (21) a. A: John only introduced SUE to Fred
B: John also only introduced SUE to BILL [Krifka 1991]
b. A: I think John and Bill both fell in love only with SUE
B: Only JOHN fell in love only with SUE

B's sentence in (21) says that the property that John introduced only Sue to him is also true of Bill, i.e. we first compute the property, involving an *only*-associated focus and then we plug in the second focus in the semantic representation. B's sentence in (21b) is associated with an analogous semantic derivation: the property of falling in love only with Sue (in the past) is such that it holds only of John, i.e. application of the two focus operators at two different points of the semantic derivation. Krifka (1991) provides a compositional semantic derivation in essentially this vein. (20) then was different from these examples of true multiple foci in that it focuses a pair, not two times one individual. The distinction exists in

¹² Krifka's (1991) representation in a structured meanings framework for a sentence like (20) would be:

(i) $\text{only}(\langle \lambda x \bullet y.\text{introd}(j,y,x), \mathbf{s} \bullet \mathbf{b} \rangle)$,

where $\mathbf{s} \bullet \mathbf{b}$ is a list of two names, $x \bullet y$ a list of two variables, and $\mathbf{s} \bullet \mathbf{b}$ is the focus.

Hungarian: in fact, (15b) above (reproduced here as (22a)) is of the pair-focusing sort (complex focus), while (15a) (reproduced below as (22b)) is an instance of true multiple foci.

- (22) a. JÁNOS hívta meg egy sörrre PÉTERT,
 J.-nom invited-3sg Pref a beer-to P.-acc
 és nem PÉTER (hívta meg egy sörrre) SANYIT
 and not P.-nom invited-3sg Pref a beer-to S.-acc
 ‘JOHN treated PETER to a beer,
 and it’s not the case that PETER treated ALEX to a beer’
- b. JÁNOS evett meg CSAK KÉT SÜTEMÉNYT
 J.-nom ate-3sg Pref only two cookies-acc
 ‘It was John who ate only two cookies’

Although complex focus as in (20) can also receive a stepwise compositional semantic derivation with no syntactic movement of the elements involved (cf. Krifka (*ibid.*)), it is tempting to entertain the possibility that complex focus is represented syntactically in a language like Hungarian. Hungarian is syntactically highly sensitive to the focus of the sentence: it essentially fronts to a preverbal syntactic position the constituent that is interpreted as focus (abstracting away from focus projection/percolation now). If in cases of complex focus we are dealing with focus on a semantic unit comprised of two components, then we should be wondering if that semantic unit is not represented at the appropriate level of syntactic representation, i.e. LF, in some way as forming one complex focus. The syntactic mechanism to achieve this is some kind of syntactic association of Foc, the head syntactically responsible for focusing, with both the preverbal and the postverbal focus at the same time. The preverbal focus is associated with Foc via movement (corresponding to Agree of Chomsky 2000, 2001). The issue now is whether the postverbal focus in (22a=15b) is also associated with Foc via (covert) movement in Hungarian.

Let me demonstrate first that a non-movement approach to secondary focus in Hungarian is inadequate. If secondary focus does not undergo movement, then we expect it to be licensed to appear inside strong islands. In fact, focus in languages like English is known to be able to scope out of strong islands, and this is taken to argue in favour of a non-movement description of the association of focus and the focus-sensitive operator (here: *only*) in these languages. Consider, for instance, (20).

- (23) a. Dr. Svenson will only complain if BILL doesn’t finish his job
 b. Dr. Svenson only complains when BILL leaves the lights on
 c. Dr. Svenson rejected only the proposal that JOHN submitted
 [Rooth 1996: 283]

(23a) illustrates focus in an if-clause, (23b) the case of an adverbial clause, and (23c) a complex NP. Similar insensitivity to scope islands has been observed for

indefinites and for in-situ *wh* (cf. e.g. Abusch 1994; Huang 1982, Lasnik and Saito 1992, Reinhart 1998), and has been described in terms of non-movement accounts.

Now, let us see whether secondary focus of in cases of complex focus can appear in strong islands. Before we can do that, it is necessary to note the following independent fact about focus. It appears that a significant empirical generalization is that if there is at least one focus within a clause, then FocP must be projected in that clause (and hence, one focus is attracted to the left periphery). Take the contrast in (24) as an example (where sentences (a), (b), (c) and (d) are responses to A's question):

- (24) A: What surprised you?
- a. B: Az, hogy KEVÉS főnök akar
 that-nom that few boss-nom want-3sg
 túlóráztatni KEVÉS alkalmazottat
 work_overtime-cause-inf few employees-acc
 és nem SOK főnök SOK alkalmazottat
 and not many boss-nom many employee-acc
 'That FEW bosses want to make FEW employees work overtime,
 and not MANY bosses (want to make) MANY employees (work
 overtime)'
- b. B: Az, hogy MARI akarta, hogy
 that-nom that M.-nom wanted-3sg that
 eljöjjön KATI, és nem fordítva
 Pref-come-subj-3sg K.-nom, and not the_other_way_around
 'That MARY wanted that CATHY should come along,
 and not the other way around'
- c. B: Az, hogy nekem MARI mesélte, hogy
 that-nom that I-dat M.-nom told-3sg that
 megbukott KATI, és nem fordítva
 Pref-failed K.-nom and not the_other_way_around
 'That MARY told me that CATHY had failed (the exam),
 and not the other way around'
- d. B: *Az, hogy MARI sértődött meg, mert
 that-nom that M.-nom got_hurt-3sg Perf because
 elment KATI, és nem fordítva
 Pref-went-3sg K.-nom and not the_other_way_around
 'That MARY got hurt because CATHY left,
 and not the other way around'
- e. B: *Az, hogy MARI hallotta a hírt, hogy
 that-nom that M.-nom heard-3sg the news-acc that
 megbukott KATI, és nem PÉTER hallotta
 Pref-failed-3sg K.-nom and not P.-nom heard-3sg
 a hírt, hogy megbukott JÁNOS
 the news-acc that Pref-failed-3sg J.-nom
 'That MARY heard the rumour that CATHY failed (the exam),
 and not PETER (heard the rumour) that JOHN failed (the exam)'

There is a perceived contrast between the island-free (a), (b) and (c) examples on the one hand, and examples (d) and (e) involving an island on the other.

Another test we can perform is based on what has been termed intervention effects. Beck (1996) argues that covert *wh*-movement in German is sensitive to a certain class of interveners, which include negation and some quantifiers (such as universals). If a member of the intervener class would be crossed over by the covert movement necessary for convergence, then that movement is ruled out. Chang (1997) observes that *wh*-in-situ is not allowed in French if the in-situ *wh*-expression is preceded by negation, certain quantifiers or modals. Now, if secondary focus in Hungarian is of the same type of A-bar movement as *wh*-movement (a standard assumption in the literature, going back at least to diagnostics of *wh*-type movements discussed in Chomsky 1977; cf. also Puskás 2000 for Hungarian focus movement), then we expect it to be sensitive to the same set of interveners. Indeed, if we add interveners to sentences like (24a), (24b) and (24c), they become severely degraded.

- (25) a. *Az, hogy KEVÉS főnök akar minden nap
 that-nom that few boss-nom want-3sg every day
 túlóráztatni KEVÉS alkalmazottat
 work_overtime-cause-inf few employees-acc
 ‘That FEW bosses want to make FEW employees work overtime
 every day’
 relevant reading: want > every day
- b. *Az, hogy MARI akarta, hogy minden alkalommal
 that-nom that M.-nom wanted-3sg that every occasion-with
 eljöjjön KATI, és nem fordítva
 Pref-come-subj-3sg K.-nom, and not the_other_way_around
 ‘That MARY wanted that on every occasion CATHY should come
 along, and not the other way around’
- c. ?*Az, hogy nekem MARI nem mesélte, hogy
 that-nom that I-dat M.-nom not told-3sg that
 megbukott KATI, és nem fordítva
 Pref-failed-3sg K.-nom and not the_other_way_around
 ‘That MARY didn’t told me that CATHY had failed (the exam),
 and not the other way around’

It appears then that secondary focus in complex focus constructions is sensitive to quantificational interveners, i.e. produce Beck-effects.

If the secondary focus in complex focus moves to the site of the primary one, we also expect Weak Crossover (WCO) effects to occur systematically. Although Hungarian does not display WCO effects within a single clause even with overt *wh*-movement (cf. (26a) below), it does exhibit such effects in long focus movement constructions, i.e. where focus is moved to a higher clause, as in (26b).

- (26) a. Kit_i szeret az *pro*_i (saját) anyja?
 who-acc love-3sg the *pro* (own) mother-poss-3sg-nom
 ‘Who is such that his (own) mother likes him?’ [Brody 1995a]
- b. ?*ATTILÁT_i mondta a *pro*_i (saját) szolgája,
 A.-acc said-3sg the *pro* (own) servant-poss-3sg-nom
 hogy Emőke szereti
 that E.-nom love-3sg
 ‘*His (own) servant said that Emőke likes ATTILA’
 [adapted from Puskás 2000]

Before we apply the WCO test to secondary focus in an embedded-to-matrix domain (that is, the domain where it works in the light of (26)), we should be convinced that a pronoun in a matrix clause is able in the non-focus case to corefer with a name in the embedded clause. This is testified by (27).

- (27) Context: Peter, a parent summoned by the teacher, entered the classroom
 Nem javasolta a *pro*_i (saját) lánya
 not suggested-3sg the *pro* (own) daughter-nom
 hogy Pétert_i hívjam
 that P.-acc in-call-subj-1sg
 ‘Her (own) daughter did not suggest that I should summon Peter’

Let us construct an example with secondary focus in the embedded clause, and a pronoun intended to corefer with it in the non-focus part of the the matrix.

- (28) *NEKEM javasolta a *pro*_i (saját) lánya,
 I-dat suggested-3sg the *pro* (own) daughter-nom
 hogy látogassa meg PÉTERT_i, és nem fordítva
 that visit-subj-3sg Pref P.-acc and not the_other_way_around
 ‘His (own) daughter suggested to ME that I should visit PETER,
 and not the other way around’

While in (27) the pronominal is able to corefer with *Peter*, coreference with *Peter* is ruled out in (28). This test again indicates covert A-bar movement of secondary focus to the primary focus site.

Now, if we analyse complex focus as movement of the secondary focus to the primary focus operator, this will be fully analogous to the standard analysis of English-type multiple *wh*-constructions. Higginbotham and May (1981) propose the rule of Absorption at the syntax–semantics interface, which forms a complex quantifier out of a sequence of quantifiers in [Spec,CP]. In particular, Absorption creates out of *n* unary quantifiers a complex *n*-ary quantifier, within which the original restrictions on the unary quantifiers are conjoined as a complex restriction (and to which all the variables bound by the input quantifiers are bound). Now, in accordance with Krifka’s (1991) analysis of complex focus presented briefly above (in terms of lists of *n*-tuples), we can extend Absorption to cover instances of complex focus as well—this will derive a semantic representation, which is

essentially a notational variant of Krifka's (see Footnote 10). Then, the difference between a complex focus and a true multiple focus reading of an example like (29a) below (i.e. (29b) and (29c), respectively) reduces to whether Absorption, and the covert movement creating the structural adjacency required for absorption (cf. Higginbotham and May 1981), applies or not.

- (29) a. JÁNOS nem vette észre PÉTERT
 J.-nom not took-3sg notice P.-acc
 'JOHN didn't notice PETER'¹³
 b. It's the pair <John, Peter> for which it holds that
 it is not in the denotation of NOTICE
 c. It's John for whom it holds that it's not Peter who he noticed

This Absorption-based treatment sheds light on why some complex foci are severely degraded. For instance, the complex focus reading of (30a,b) is extremely difficult to get, if possible at all.

- (30) a. KEVESEN nem vették észre JÁNOST
 few_ones-nom not took-3pl notice J.-acc
 'FEW people did not notice JOHN'
 b. JÁNOS ette meg csak a FINOM süteményeket
 J.-nom ate-3sg Pref only the delicious cookies-acc
 'JOHN ate only the DELICIOUS cookies'

On the complex focus reading, (30a) would be interpreted roughly as "it's the pair of quantity and individual <few, John> for which it holds that x people (x a quantity) did not notice y (y an individual)." The case of (30b) on the complex focus reading is analogous: a pair of individual and quality (property) is focused. Such readings are next to impossible. Now, this in fact is predicted on the Absorption analysis we have adopted, given the general restriction of Absorption on the type of

¹³ Note that negation occurring in the same clause as secondary focus apparently does not act as an intervener. This is the same, however, in cases of overt A-bar movements, which are expected to be selectively sensitive to the presence of intervening negation, cf. e.g. Relativized Minimality of Rizzi (1991). While this works as expected in English, it does not extend to Hungarian, cf. (i). However, the intervention effect of negation is manifest in long A-bar movement, both overt (cf. (ii) vs. (iii)) and covert (cf. (25c) above).

- (i) KÉTHETENTE nem jön
 two weekly not come-3sg
 'It's every second week that he does not come'
 (ii) KÉTHETENTE szeretném, ha jönnél
 two weekly like-cond-1sg if come-COND-2sg
 'It's every second week that I would like you to come'
 (iii) *KÉTHETENTE nem szeretném, ha jönnél
 two weekly not like-cond-1sg if come-COND-2sg
 'It's every second week that I would not like you to come'
 [Tóth 1995]

operators that can undergo Absorption (cf. May's 1990 S-Invariance): only operators of parallel types are proper inputs. This, then, is what rules out the complex focus interpretation of (30a,b). We have in effect obtained indirect evidence for the Absorption analysis, which depends on structural adjacency of operators, which in turn is the result of covert movement of secondary focus to the site of the primary focus.

Let us turn now to true multiple foci. As a first step, I will show that it does not have the same structural description as complex foci, i.e. secondary focus does not raise to the primary one. One indication that secondary focus in true multiple foci does not get moved to the primary focus is that quantificational interveners do not result in ungrammaticality, cf. (31). Now, if the secondary focus is in an embedded clause, then it must be fronted to a focus position within that clause, cf. (32), and once again, quantificational interveners do not lead to crash.

- (31) JÁNOS eszik minden reggel CSAK ALMÁT
 J.-nom eat-3sg every morning only apple-acc
 'It's John who eats only apples every morning'
 JOHN > every > ONLY APPLES
- (32) a. KEVÉS főnök akar minden nap
 few boss-nom want-3sg every day
 KEVÉS alkalmazottat túlóráztatni
 few employees-acc work_overtime-cause-inf
 'FEW bosses want to make FEW employees work overtime every day'
 relevant reading: want > every day
- b. MARI akarta, hogy minden alkalommal
 M.-nom wanted-3sg that every occasion-with
 KATI jöjjön el
 K.-nom come-subj-3sg Pref
 'It's Mary who wanted that on every occasion
 it's CATHY who should come along'
- c. Nekem MARI nem mesélte, hogy KATI bukott meg
 I-dat M.-nom not told-3sg that K.-nom failed-3sg Pref
 'It's Mary who didn't tell me that it's CATHY who had failed
 (the exam)'

In fact, secondary focus in a true multiple foci construction can be located within an island too:

- (33) MARI hallotta a hírt, hogy KATI bukott meg
 M.-nom heard-3sg the news-acc that K.-nom failed-3sg Pref
 'It's Mary who heard the rumour that it's Cathy who failed (the exam)'

We can conclude that secondary focus in true multiple foci constructions appears not to syntactically raise to the site of the primary focus.

However, there is indication that secondary focus always undergoes movement nevertheless, only to a lower position than that of the primary focus. That this is so is sufficiently clear in sentences where secondary focus is in an embedded clause: here, it raises to a focus position overtly within that clause. What I argue now is that such movement also happens when the secondary focus is in the same clause as the primary one—however, in those cases this movement is covert.

Evidence for this latter claim comes from Antecedent Contained Deletion (ACD) phenomena (cf. Sag 1976, May 1985, Larson and May 1990, Kennedy 1997). Pesetsky (2000) argues that ACD with apparent *wh*-in-situ is a diagnostics of covert full category movement, inasmuch as ACD gaps are licensed only by movement of a full category. Now the same can be extended to secondary focus. If secondary focus stays in situ at LF, it will not license ACD, if it moves as a category before LF, then it will be expected to license ACD. The fact is that secondary focus of true multiple foci does license ACD:

- (34) Melyik tanár mutatott be Pálnak
 which teacher-nom introduced-3sg Pref P.-to
 csak EGY olyan lányt, akit János még nem [_{VP} e]?
 only ONE such girl-acc who-acc J.-nomyet not
 ≈‘Which teacher introduced to Paul only one such girl who Peter hadn’t’

In fact, our prediction is that even if we combine the intervener test with the ACD test, the result will still be grammaticality if secondary focus raises to a position which is lower than the primary focus. This is indeed borne out:

- (35) Melyik tanár mutatott be minden fiúnak
 which teacher-nom introduced-3sg Pref every boy-to
 csak EGY olyan lányt, akit János még nem [_{VP} e]?
 only ONE such girl-acc who-acc J.-nomyet not
 ≈‘Which teacher introduced to every boy only one such girl who Peter hadn’t’

É.Kiss (1998a) proposes (although on different grounds) that the movement of secondary focus targets a second (third, etc.) FocP projection in Hungarian (in what we have been referring to as true multiple focus constructions; she does not consider ‘complex focus’). This is in line with our results.

In this section I have argued that multiple foci constructions must receive either of two structural descriptions: one, covert raising of secondary focus to primary focus (cf. Brody (1990), and the other, raising of secondary focus to a lower A-bar position, a second FocP (cf. É.Kiss 1998a). The proposal we entertain is that Brody’s (1990) and É.Kiss’s (1998a) analyses coexist in the grammar of Hungarian, and in fact they characterize two types of multiple foci: ‘complex focus’ and true multiple foci, respectively.

3 The overt/covert status of secondary focus movement

Thus far in the discussion, I pointed out that secondary focus in ‘complex focus’ constructions raises covertly (to the primary focus), and secondary focus situated in an embedded clause in a true multiple foci construction raises overtly to a second FocP, but I have remained agnostic with respect to the overtness/covertness of the movement of secondary focus in true multiple foci constructions where secondary focus is in the same clause as the primary one (all that mattered is that it should raise (as a category) *before* LF). É.Kiss (1998a) analyses this movement as happening in overt syntax. In fact the evidence we adduced in favour of the movement of secondary focus at the end of the preceding section in terms of ACD is neutral with respect to the overt/covert distinction. Overt focus movement licenses ACD just as well:

- (36) Csak EGY olyan lányt mutattott be Pálnak a tanár,
 only ONE such girl-acc introduced-3sg Pref P.-to the teacher-nom
 akit János még nem [VP e]
 who-acc J.-nom yet not
 ≈ ‘The teacher introduced only one such girl to Paul who John hadn’t’

However, there is reason to believe that movement of secondary focus in fact is covert.

First, the positioning of the verbal prefix (or verbal modifier, VM) becomes problematic if secondary focus movement is overt. It appears to be a proper generalization that at least two types of idiolects exist within Hungarian with respect to the placement of the verbal prefix (Pref) in sentences where verb-inversion has taken place (as verb-inversion takes place after negation, focus and *wh*-expressions, cf. Chapter 1).¹⁴ For one group of speakers, Pref cannot be separated from the verb even after verb-inversion has taken place: Pref will immediately follow the inverted verb (call this group of speakers the ‘verb-adjacent Pref group’); cf. (37a). For other speakers, Pref can be further away from the inverted verb (though individual variation seems to exist regarding the distance allowed between the verb and Pref) (call these speakers the ‘stranded Pref group’); cf. (37b).

- (37) a. FOC₁ V Pref . . . FOC₂ . . . [verb-adjacent Pref]
 b. FOC₁ V . . . (XP) . . . Pref . . . FOC₂ . . . [stranded Pref]

Now, essentially, two types of analyses appear in the current literature of the verbal prefix. According to one type of analyses, the verbal prefix is in fact a phrasal element in a specifier position to the left of the base position of the verb (e.g. [Spec,VP] in É.Kiss 1992, 1994, [Spec,AspP] in Puskás 2000, [Spec,PredP] in É.Kiss 2002a; cf. also Koopman and Szabolcsi 2000). According to the other family of analyses, Pref is adjoined to the verb, i.e. it is in an incorporated position (e.g.

¹⁴ I am not aware of evidence suggesting that this variation can be ascribed to dialectal differences.

Brody 1990, É.Kiss 1998b). Now, if movement of secondary focus is overt, as assumed in É.Kiss (1998a), then there are two options.

In one case, we adopt the incorporated Prefix analysis—this is the choice in É.Kiss (1998a). Then, to account for the ‘stranded Pref group’, given that Pref can appear in a position which is not adjacent to the inverted verb, but which is to the left of secondary focus (cf. 37b), we need to assume that Pref is excorporated at some intermediate stage of the movement of the verb (as done in É.Kiss 1998a). There are at least two complications this involves. First, we need to assume that excorporation exists as a syntactic possibility—although this is disallowed by current restrictive theories of phrase structure. Second, we need intermediate functional head positions as head-extraction sites. É.Kiss (1998a) posits that material that intervenes between secondary focus and primary focus (i.e. XP in (37b)) is in specifiers of TopP-s, and Top heads are the needed excorporation sites. However, the evidence for these TopP projections, as well as the topic status of the phrases they would host is rather questionable (cf. Chapter 3 for detailed arguments).

Let us turn to the other case now: that of adopting the phrasal analysis of Pref. According to that family of analyses, Pref is in the specifier of some dedicated syntactic projection, which projection is generally assumed to be relatively low in the clausal architecture above the VP. Now, É.Kiss argues in a series of works (É.Kiss 1992, 1994, 2002a,b) that the Pref element originates inside the VP and is moved to this VP-external position only if neither focus nor negation are present in the clause. That is, in all the sentences under scrutiny, Pref is VP-internal. On this view, in the presence of preverbal focus, the difference between the ‘verb-adjacent Pref’ and the ‘stranded Pref’ group of speakers is simply prosodic: for the former group of speakers, Pref is a phonological clitic, cliticizing onto the verb, for the latter group, it is a phonologically independent element. In both cases, Pref remains VP-internal; in the case of the ‘stranded Pref’ group, freedom of the positioning of Pref comes about as a result of the well-known freedom of postverbal constituent order in Hungarian (cf. Chapter 1). If we analyse secondary focus movement as covert, the picture remains unaltered. However, if secondary focus movement is claimed to be overt, then we are left without an analysis of Pref positioning (Pref would then be necessarily VP-external, occurring above the second FocP hosting the secondary focus).

Hence, assuming secondary focus movement to be overt seems to result in problems for the syntactic description of Pref positioning. However, there is another fact that appears to argue against the overt status of secondary focus movement. It is a standard observation that (for most speakers) focus movement in Hungarian can be long, i.e. it can target a FocP which is in a superordinate clause; cf. (38).

- (38) PÉTERT szeretném minden áron, hogy meghívjuk
 P.-acc like-cond-1sg at all costs that Pref-invite-subj-1pl
 ‘It’s Peter who I would like at all costs that we should invite’

Now, if movement of secondary focus is overt, then we expect that secondary focus movement can also be long in overt syntax. The prediction is that a long-moved

secondary focus will surface to the right of the inverted verb in the superordinate clause, but to the left of other low material in that clause. That is, for (39), a minimal pair of (38) in the relevant regard, it is predicted that the long moved second focus surfaces to the left of the adverbial *minden áron* ‘at all costs’ in the higher clause. This prediction is not borne out:

- (39) *ÉN szeretném (csak) PÁLT minden áron, hogy meghívjuk
 I-nom like-cond-1sg (only) P.-acc all all costs that Pref-invite-subj-1pl
 ‘It’s me who would like at all costs that we should invite (only) PAUL’

This problem as well as the previous one disappear once we assume secondary focus movement to a second focus position within a clause to be covert. In fact, there is strong evidence that such secondary focus movement in some cases must be happening covertly, which supports our analysis. The relevant evidence comes from scope interaction phenomena. If secondary focus movement is overt, then we expect that quantificational elements that precede secondary focus should invariably take scope over it. This is true of the primary focus: if we focus a quantificational expression, that will scope (and potentially distribute) over the secondary focus:

- (40) KÉT fiú ivott CSAK SÖRT
 two boy-nom drank-3sg only beer-acc
 ‘It’s two boys who drank only beer’
 (not: ‘It’s only beer that TWO boys drank’)

However, the same is not necessarily true of another quantificational element in the postverbal field to the left of secondary focus. If there is a universal quantifier to the left of the secondary focus, secondary focus is able to take scope (and distribute) over it:

- (41) Melyik nap mutattál be mindenkit csak KÉT tanárnak
 which day introduced-2sg Pref everybody-acc only two teachers-dat
 ‘Which day did you introduce everybody only to two teachers’
 every > only two / only two > every

Significantly, (41) allows a reading paraphrasable as ‘Which was the day when there were only two such teachers to whom you introduced everybody?’—this reading is generated if the *only*-expression moves covertly above the scope position of the *every*-quantifier (but not if the movement of the *only*-phrase is overt).¹⁵ The same holds true if instead of the *every*-QP, we have another secondary focus, as below:

¹⁵ For how the other scope order is generated, see Chapter 3.

- (42) Miért beszéltél PONT HÁROMSZOR csak KÉT vezetővel
 Miért talked-3sg exactly three-times only two leader-with
 ‘Why did you talk only to two leaders exactly three times’
 exactly three > only two / only two > exactly three

If both secondary foci are raised overtly, we would expect only direct scope order to be generated; however, inverse scope of the two occurrences of quantified secondary foci is available.

Taking the inverse scope facts together with the two complications discussed above that an overt movement analysis of secondary focus would bring about, I conjecture that the raising of secondary focus in true multiple foci constructions to a lower FocP is covert.

To conclude this section, let me point out what problem this generalization causes for a feature checking analysis of focus movement. Recall from Section 2.1.1 that overt movement of primary focus (as well as its uniqueness) is derived as checking of [foc] of Foc. Now, for the case of true multiple foci within a single clause, we have shown that the movement of secondary focus is covert. If this movement is also triggered by a [foc] feature of a second FocP, then we expect that it should be overt, similarly to the movement of primary focus. If we now entertain the possibility that [foc] of Foc can also be weak, not only strong (or having any equivalent property), then the question concerns what regulates the specific distribution of the strong and weak varieties of the [foc] feature that characterizes Hungarian, i.e. why should it be the case that secondary Foc heads must be weak, and the primary Foc head must be strong, and further, why is this pattern of the strong and weak properties confined to cases of multiple foci occurring within the same clause (recall that if secondary focus in a true multiple foci construction is in an embedded clause, it has to raise overtly)? I leave these questions open for now; we will address them in Chapter 5 in detail.

4 Counting quantifiers

4.1 Szabolcsi’s PredOpP

Let me turn now to a class of quantifiers called that have been termed counting quantifiers (cf. Szabolcsi 1997). This class includes quantifiers like *kevés* N ‘few N’, *hat* N ‘six N’, *hatnál több* N ‘more than six N’, *kevesebb mint hat* N ‘less than six N’.

As has been observed (e.g. Ioup 1975, Liu 1990), scope options for quantifiers show considerable variation across quantifier classes. This fact appears to go against the conception that all quantifiers are taken to the very same positions by the very same movement operations. Beghelli (1993) and Beghelli and Stowell (1994, 1995) approach this problem for a QR view of quantifier scope by introducing quantifier class specialised functional projections (for English).

Modified numeral expressions like *more than n N* and indefinites with an unstressed noun like *few N* do not target a specialised functional projection in English; instead, they move only to respective AgrP (Agr_SP and Agr_OP) projections, from where they optionally reconstruct at LF to their base positions. Now, in Hungarian, such quantified expressions often have to move to a preverbal position.¹⁶ Szabolcsi (1997) proposes that they move to a specialised projection in Hungarian which she terms PredOpP (the expressions that move here are referred to as predicate operators, carrying out a counting operation on the denotation of the predicate phrase). This analysis is embedded in Szabolcsi's goal to argue that Hungarian overtly realizes quantifier class specialised functional projections that English has only covertly (i.e. the movement to these projections is covert in English, but overt in Hungarian). We are not concerned with this general claim here (which will be taken up in detail in Chapter 3), we only limit the present discussion to the proposal of PredOpP.

In this section, I argue that PredOpP does not exist as a functional projection in the syntax of Hungarian (and therefore no evidence is furnished that an analogous projection should be posited in other languages). Instead, I show that counting quantifiers are in fact properly analysed as a special subcase of focus operators.

An initial problem for the PredOpP analysis of the fronting of counting quantifiers concerns the putative parallelism of a language like English and Hungarian. For, PredOpP would correspond to AgrP projections in Beghelli and Stowell's analysis of English; however, PredOpP and AgrP projections have distinct syntactic properties. Crucially, AgrP-s are the locus of phi-feature checking and are A-positions, while neither is true of PredOpP.

Second, for Szabolcsi's analysis to go through, she is forced to stipulate that PredOpP and FocP are mutually exclusive projections in the Hungarian clausal architecture (i.e. only one of the two can be projected). On closer inspection we find that we also need the further technical assumption that whenever both a PredOp operator and a focus operator are present in the clause, out of PredOpP and FocP, it is always the projection corresponding to the operator with the wider scope that gets projected. In (43), the choice is PredOpP, since *kevés harmadikos* 'few third graders' has wider scope:

- (43) Kevés harmadikos evett CSAK A LEVESBŐL
 few third-grader ate-3sg only the soup-from
 'Few third-graders ate only from the soup'

¹⁶ This is the case in the sentence below, for instance.

- (i) Kevés női szereplőt láttam a darabban
 few actresses-acc saw-1sg the play-in
 'I saw actresses in the play'
 (ii) *Láttam kevés női szereplőt a darabban
 (iii) *Láttam a darabban kevés női szereplőt
 (iv) *A darabban láttam kevés női szereplőt

This type of construction poses a further problem: postverbal occurrence of focus is normally licensed by the presence of a preverbal focus. In this respect, sentences like (43) stick out as exceptional.

A possible resolution of these issues is to propose that PredOp counting quantifiers in fact function as focus. The semantics of counting quantifiers render them eligible to fulfill such a function. Consider the sentence below:

- (44) A postás öt levelet vitt ki
 the postman-nom five letter-acc took-3sg Pref
 ‘The postman delivered five letters’

It is true that the expression *öt levelet* ‘five letters’ does not necessarily identify the set of things delivered by the postman—the reason why Szabolcsi (1994), followed in this regard by Szabolcsi (1997), does not consider such expressions to be focus. However, the focus-structure of this sentence type can be given an alternative analysis: informally, the presupposed part of (44) is that the postman delivered some letters, and the focus of the sentence is merely the quantity. In this conception, the function of a counting quantifier is the identification of cardinality: again, informally speaking, out of alternative quantities, it identifies the quantity q for which it holds that q quantity of the (member of the) set denoted by the common noun is in the denotation of the predicate. That is, such quantities can be seen as individuals—they can be individuated and identified to the exclusion of other quantities. That is, the paraphrase of (44) can be (45a), and its focus value (in terms of Rooth’s focus semantics) can be given as in (45b):

- (45) a. The number of letters that the postman delivered is five
 b. $F(44) = \{S: \exists q [S = \text{the postman delivered } q \text{ letters}]\}$

It is important to note that (as is invariably the case with identificational (contrastive) focus interpretation) the focus operator only identifies a member of the *contextually relevant* set, excluding the other members of *that* set. Thus, each sentence of (46a–c) can well be true at the same time:

- (46) a. A postás öt levelet vitt ki [= (44)]
 b. A postás kevés levelet vitt ki
 the postman-nom few letter-acc took-3sg Pref
 ‘The postman delivered few letters’
 c. A postás hatnál kevesebb levelet vitt ki
 the postman-nom fewer than six letter-acc took Pref
 ‘The postman delivered fewer than six letters’

In (46a–c), the relevant sets differ. The case is similar to that of the pair of sentences below:

- (47) a. Egy SZŐKE fiú bukott meg a vizsgán
 a BLOND boy-nom failed-3sg Pref at the exam
 ‘It was a blond boy that failed the exam’
 b. Egy MAGAS fiú bukott meg a vizsgán
 a TALL boy-nom failed-3sg Pref at the exam
 ‘It was a tall boy that failed the exam’

(47a) and (47db) can hold at the same time, since the set of alternatives of the identification operation are non-identical in the two cases. According to Krifka (1999), natural scales (like natural numbers and other quantities) form constant, low-salience alternative sets, which are always available irrespective of the given context. Then, counting quantifiers carry out an exclusive identification operation (i.e. focusing) on the elements of such alternative sets.

There are other arguments to support the focus status of counting quantifiers. It is a known fact that in some languages focus manifests itself in the form of the predicate of a pseudo-cleft. We can observe that exactly those quantifiers can function as predicates in Hungarian which are PredOp operators for Szabolcsi:

- (48) a. Nyolc több mint hat
 eight more than six
 ‘Eight is more than six’
 b. *Nyolc legalább hat
 eight at least six
 ‘Eight is at least six’
 c. Hat fiú kevés
 six boy few
 ‘Six boys is few’
 d. *Péter, János és István minden fiú
 P.-nom, J.-nom and I.-nom every/all boy
 ‘Peter, John and Steven are all the boys’

It is important to further note the fact that the stress pattern of preverbal PredOp operators and the verb that follows them is identical in the relevant respect with the stress pattern of the focus followed by the verb: the preverbal operator bears emphatic stress, accompanied by a subsequent stress reduction on the verb. (In (49) below, ' marks emphatic stress, ⁰ indicates lack of stress, while unmarked items carry neutral stress.)

- (49) a. A postás 'öt levelet ⁰vitt ki [cf. (44)]
 b. *A postás 'öt levelet vitt ki
 c. A postás 'csak csomagokat ⁰vitt ki
 the postman-nom only parcels-acc took Pref
 ‘The postman delivered only parcels’
 d. *A postás 'csak csomagokat vitt ki

Based on these arguments, we can conclude that counting quantifiers are focus operators.

4.2 Counting quantifiers as default focus

There remains, however, an interesting difference between counting quantifiers and focus operators. Szabolcsi (1997: 149) cites the following pair of sentences, identifying (50b) and the negation of (50a):

- (50) a. Kevés fiú ment el
 few boy-nom went-3sg Pref
 ‘Few boys went along’
 b. Nem ment el kevés fiú
 not went-3sg Pref few boy-nom
 ‘It’s not the case that few boys went along’

While we can accept (50b) as a possible sentence, it should not be overlooked that (51a), following the pattern of negated focus (cf. (51b)) is also grammatical.

- (51) a. Nem kevés fiú ment el
 not few boy-nom went-3sg Pref
 ‘It’s not the case that few boys went along’
 b. Nem MARI ment el
 not M. -nom went-3sg Pref
 ‘It’s not Mary who went along’

The question that arises is why (52) with *Mari* ‘Mary’ as focus is not grammatical:

- (52) *Nem ment el MARI
 not went-3sg Pref M.-nom
 ‘It’s not the case that it’s Mari who went along’

Szabolcsi merely observes this contrast (i.e. (50b) vs. (52)), however, her system cannot generate it. It remains an explanandum under the present proposal as well.

A key to resolve the issue is provided by the following pair of sentences:

- (53) a. Nem láthatta AZT A LÁNYT
 not saw-may-past-3sg that the girl-acc
 ‘He cannot have seen THAT GIRL’
 b. Nem AZT A LÁNYT láthatta
 not that the girl-acc saw-may-past-3sg
 ‘It’s not that girl that he can have seen’

(53a) is sentence minimally different from (52). The truth conditions of (53a) and (53b) are distinct. While for (53a) the relative scope relations are negation > epistemic modal > focus (i.e. “it’s *not* the case that it is *possible* that *it’s that girl* who he saw”), for (53b) the interpretation is negation > focus > epistemic modal (i.e. “it’s *not* the case that *it’s that girl* who he *possibly* saw”, with the presupposition of a set of alternatives to that girl for whom it potentially holds that he can have seen them, and with the implicature that there is at least one such girl for whom it actually holds that he can have seen her). That is, in the scope of negation, the postverbal and the preverbal foci result in potentially distinct interpretations.¹⁷

In contrast, in relation to (52) we can formulate the following claim: (51b) and (52) do *not* result in distinct interpretations, and this is what blocks (52). A possible explanation of this blocking effect is that, given that both structures (and derivations) target the same interpretation (and involve the same lexical items), the grammar selects the more economical one—and that is (51b). That competition set is restricted to derivations targeting the same interpretation is an assumption forcefully defended in work by Fox (1995, 2000) and Reinhart (1995, 1998). In the analysis of the interaction of negation and focus to be presented in Chapter 4, and to be modelled in a radically derivational framework in Chapter 5, (51b) involves *one* relevant functional projection (housing both preverbal negation and focus), while (52) involves two, thus the former is favoured by the grammar. The details of the relevant proposal are laid out in Chapter 5.

On the basis of this, we expect (50b) and (51a) to have distinct interpretations. Indeed this appears to be the case: (50b) is interpretable in a context where according to some proposition salient in discourse few boys went along, and (50b) negates the truth of this proposition; while (51a) (in the light of the discussion above) negates that the number of students who went along is few. The difference is

¹⁷ Csaba Olsvay (p.c.) pointed out (i) as an apparent counterexample to this analysis.

- (i) Nem tartok órát CSAK KÉT DIÁKNAK
not hold-1sg class-acc only two student-for
'I won't give a class to only two students'

In (i) there is no overt modal morpheme which scopally intervenes between negation and focus. However, as is apparent from *won't* in the English translation, there is some covert modality here too. Indeed, if we place the focus before the verb, the modal interpretation disappears, and only another reading is available.

- (ii) Nem CSAK KÉT DIÁKNAK tartok órát
not only two student-for hold-1sg class-acc
'It's not the case that I am giving/will give a class to only two students'

Indeed, on the non-modal interpretation, (i) is ungrammatical. This can be confirmed by transposing (i) to past tense:

- (iii) *Nem tartottam órát CSAK KÉT DIÁKNAK
not held-1sg class-acc only two student-for
intended: 'I didn't give a class to only two students'

clearly perceptible if we consider the fact that according to the existential presupposition generated by (51a), there are boys that went along. (50b) does not generate such a presupposition: it can be continued as in (54b). (54) is a coherent discourse:

- (54) a. A: Kevés fiú ment el [= (50a)]
 few boy-nom went-3sg Pref
 ‘Few boys went along’
 B: Nem ment el kevés fiú [= (50b)]
 not went-3sg Pref few boy-nom
 ‘It’s not the case that few boys went along’
 b. B: Valójában nem ment el senki sem
 in fact not went-3sg Pref nobody-nom SEM
 ‘In fact, nobody went along’

Such constructions are commonly referred to as cases of meta-negation (or external negation) in the literature (cf. Horn 1989 and references therein, as well as Chapter 4). Here, the counting quantifier is not interpreted as focus (no existential presupposition is generated), further, it cannot bear emphatic accent either (in contrast to its preverbal occurrences). This, in view of the data, is possible for counting quantifiers, but not for regular focus.¹⁸

It seems that the pattern for counting quantifiers is this: when a counting quantifier is preverbal, it functions as focus, when it is postverbal, it is not necessarily focused (cf. (50b), where it is not focused). The case we have reviewed is when in the discourse there is a salient assertion with the quantity expressed by the numeral of the counting quantifier identified by focusing, which assertion is then negated by metalinguistic negation (cf. the dialogue in (54a)). We have established that in this case counting quantifiers are not focused. In fact, as we have seen, regular focus cannot occur in such a construction (cf. 52).

The other case of postverbal occurrence of counting quantifiers is attested if there is a preverbal focus in the clause (cf. 55).

- (55) TEGNAP jött el kevés fiú
 yesterday came-3sg Pref few boy-nom
 ‘It was yesterday that few boys came along’

Let us raise the question whether these occurrences of postverbal counting quantifiers are focused or not. Note that (lack of) emphatic accent will not be decisive, given that (as we pointed out above) on the one hand, information focus

¹⁸ Then, given these postverbal counting quantifiers are not focused, we are not forced to maintain that negation in such sentences is an instance of meta-negation. This may be desirable if meta-negation in Hungarian is taken never to invert the verb (unlike ordinary descriptive negation). In any case, such ‘de-focusing’ (or non-focusing) of a counting quantifier in lack of a(nother) focus, and in the presence of negation is only licensed if there is a corresponding affirmation in the preceding context. See Chapter 4 for a brief discussion of meta-negation in Hungarian.

can also bear emphatic stress, and on the other hand, identificational focus in true multiple foci constructions may optionally be deaccented. Now, assuming that postverbal counting quantifiers in the presence of a preverbal focus are non-focused, this would mean that they are in the positions that they regularly occupy before focus movement. For argumental counting quantifiers, this is some A-position. In fact, Szabolcsi (1997) shows that if there is a postverbal universal quantifier preceding the postverbal counting quantifier in such examples, then inverse scope of the counting quantifier above the universal quantifier is extremely difficult.

- (56) Egy keddi napon harapott meg minden kutya kevés fiút
 a Tuesday day-on bit-3sg Pref every dog-nom few boy-acc
 ‘It was on a Tuesday that every dog bit few boys’ [=Szabolcsi’s (74d)]
^{OK} (a Tuesday >) every dog > few boys
 * (a Tuesday >) few boys > every dog¹⁹

This is taken to be analogous to the English (57) (cf. e.g. Liu 1990).

- (57) Every man read few books
^{OK} every man > few books
 * few books > every man

However, there are two qualifications we need to make. First, the parallelism between English and Hungarian at this point is deeper than Szabolcsi assumes, because in fact when the postverbal counting quantifier is a subject ((56) features an object), it can take scope over a postverbal distributive universal object (although of course direct scope remains preferred):

- (58) Ennél a cégnél ismer minden munkafázist kevés ember
 this-at the firm-at knows every work phase-acc few man-nom
 ‘It is this firm where few men know every work phase’
^{OK} (this firm >) every work phase > few men
^{OK} (this firm >) few men > every work phase

This is analogous to the English (59) (cf. Liu 1990):

- (59) Few men read every book.
^{OK} few men > every book
^{OK} every book > few men

We can derive this subject–object asymmetry if in Hungarian too subject asymmetrically c-command objects at some point in the derivation (perhaps only in A-positions outside the VP). If this asymmetry is real then this is evidence that postverbal counting quantifiers (in the presence of a preverbal focus) are not focused: when argumental, they are in their respective A-positions.

¹⁹ The second, inverse scope interpretation is claimed to be impossible in Szabolcsi (1997).

However, there is a second qualification to be made. Namely, it appears that the asymmetry in terms of inverse scope possibilities in the postverbal domain is not so robust as would seem from the discussion thus far. É.Kiss (p.c.) notes that the inverse scope reading, although with a degree of difficulty, can be achieved in sentences like (56) as well. (According to my informants, however, at any rate there is a difference between the ease of availability of inverse scope in (56) and (58).) If that is true then what this suggests is that although postverbal counting quantifiers may remain non-focused, there is nevertheless a possibility to focus them. Recall that we demonstrated in Section 3 above that movement of secondary focus is covert, hence secondary focus is able to take inverse scope above another postverbal quantified expression.²⁰ Then, if postverbal counting quantifiers *can* be focused, then their ability to take inverse scope is predicted. Inasmuch as, first, it is less marked to parse these postverbal counting quantifiers as non-focused, and second, even when focused, it is less marked to parse the secondary focus movement as targeting a position which does not alter surface scope relations, the direct scope relations remain preferred.

We can conclude then that counting quantifiers in the presence of a preverbal focus are non-focused in the unmarked case (but may be made secondary focus too). The picture we have arrived at then is this: counting quantifiers are necessarily focused only if there is no other focus in the clause (otherwise they may remain non-focused). When focused in lack of another focus, they get moved to the immediately preverbal focus position. Let me refer to this pattern of the behaviour of counting quantifiers as *default syntactic focusing*.²¹ The difference between (50b) and (52) above, then, simply reduces to the fact that counting quantifiers may remain non-focused (as is the case in Beghelli and Stowell's analysis of English), while regular focus cannot.²²

²⁰ In our examples (41) and (42) above, inverse scope is slightly easier to get presumably because the focus status of the expressions is overtly marked by the operator *csak* 'only'.

²¹ It appears plausible that focusing is available to counting quantifiers by default to begin with, because focusing does not change truth conditions in the case of these quantifiers (these quantifiers do not acquire or lose readings under focus, as pointed out by Beghelli 1993: 77).

²² In terms of features, counting quantifiers can be interpreted even if not bearing [foc], however, regular focus must bear a [foc] feature.

It is an intriguing task to model default syntactic focusing in an input-based framework, such as standard varieties of minimalism. One question the phenomenon raises is whether the syntactic [foc] feature is associated with counting quantifiers in NUM (Numeration) / LA (Lexical Array) (or in the Lexical Sub-Array)—and then: are there well-formedness restrictions applying to these lexical input sets—or [foc] is an inherent lexical property of counting quantifiers, which then may be 'underparsed' or deleted, given the right conditions. This is a task that I leave for further explorations.

- (61) a. Hiába csinálta meg a leckét
 in vain did-3sg Pref the homework-acc
 ‘He did the homework in vain’
- b. *Meg csinálta a leckét hiába
 Pref-did-3sg the homework-acc in vain
- c. Hiába A LECKÉT csinálta meg
- d. *A LECKÉT hiába csinálta meg
 intended: ‘It’s the homework that he did in vain’
- e. A LECKÉT csinálta meg hiába
 THE HOMEWORK-acc did-3sg Pref in vain
 ‘It’s the homework that he did in vain’
- f. HIÁBA csinálta meg (csak) A LECKÉT
 in vain did-3sg Pref only the homework-acc
 ‘It was in vain that he did (only) THE HOMEWORK’

Then, the phenomenon of default syntactic focusing is not specific to counting quantifiers, but is a more general operation.

To conclude this section, we have argued that Szabolcsi’s PredOp class is a special subcase of focus (dispensing with complications associated with PredOpP), with counting quantifiers identifying a quantity in a set of alternative quantities. These expressions are special syntactically as well, inasmuch as they serve as default syntactic focus. The treatment of counting quantifiers as focus, then, has shed new light on the interaction of counting quantifiers and focus with negation.

5 Summary

In this chapter I examined multiple foci in Hungarian, concentrating on multiple instances of identificational focus. I argued that two interpretations are available in this domain, and the two interpretations correspond to two syntactic structures. One interpretation of that of ‘complex focus’ (cf. Krifka 1991), where an n -tuple is identified within a set/list of alternative n -tuples—this interpretation is generated if secondary focus raises covertly to the syntactic site of primary focus. This movement was shown to be sensitive to islands, intervention effects and other indicators of covert (A-bar) movement. The other interpretation is true multiple foci, with multiple focusing operations. This interpretation is achieved when multiple instances of identificational focus raise to separate FocP projections. I argued that although secondary focus movement in such constructions is overt if secondary focus movement is confined to an embedded clause, it is covert if it occurs in the same clause that hosts the primary focus (contra É.Kiss 1998a). I pointed out in what way this detected pattern causes potential problems for a standard checking

(ii) *ROSSZUL csinálta meg (csak) A LECKÉT
 badly did-3sg Pref only the homework-acc
 ‘cf. (i)’

analysis in terms of multiple FocP projection within a single clause—an issue we address in Chapter 5 in detail.

Finally, I argued that Szabolcsi's (1997) PredOp operators (i.e. counting quantifiers) are in fact properly analysed as a subcase of focus, which rids us of the problems associated with PredOpP. I showed that counting quantifiers differ in their interaction with negation inasmuch as they serve as default syntactic focus: they undergo obligatory focusing only if there is no other focus in the clause.

Chapter 3

Quantifier movement

This chapter examines the distribution and scopal properties of several quantifier classes when co-occurring in a clause in Hungarian, with special attention to universal quantifiers of the *every*-QP type and their scope interactions with other operators. The scope of quantifiers and its relation to the mechanism of syntactic movement have figured prominently in the past three decades or so of generative research. The optimistic picture of an omnivorous rule of Quantifier Raising (cf. May 1977) has by now been replaced by a more complex approach sensitive to lexico-semantic properties of various quantifier classes, both in terms of options for movement and in terms of whether syntactic movement plays a role in determining their scope at all. Hungarian has figured in this discussion due to its merit of putatively realizing some of the covert movement operations associated in other languages with various quantifier classes in overt syntax. A recent influential approach to quantifier scope in Hungarian inspired by Beghelli's (1993) and, in particular, Beghelli and Stowell's (1994, 1995) work is Szabolcsi (1997). Beghelli and Stowell propose that quantifiers in fact move to check formal features, with different quantifiers classes bearing different features to be checked in different functional projections. The theoretical thrust of their proposal is that phenomena associated with QR is properly seen as feature-checking driven movement, and that the hypothesis formulated in minimalism (cf. Chomsky 1995) according to which all movement is driven by feature checking needs¹ is correct in as far as movement of quantifiers is concerned. Szabolcsi (1997) suggests that Hungarian furnishes

¹ One fundamental idea of Chomsky's minimalist programme is that syntactic operations are 'triggered', i.e. they occur only when necessary to satisfy some interface condition (the principle of Last Resort). A narrow interpretation of what interface conditions exist is to limit the syntactically relevant interface conditions basically to interpretability at the interface (the principle of Full Interpretation), which in turn enforces 'checking' (in Chomsky's original formulation: elimination) of offending features.

evidence from overt syntax for Beghelli and Stowell's view, and proposes to treat scopal interaction of quantifiers in Hungarian in terms of specialised functional projections analogous to Beghelli and Stowell's.

The contribution of this chapter to this discussion is twofold. First, after providing some background, it outlines a version of the QR-based theory that is able to treat the differential behaviour of quantifier subclasses, defending a view of quantifier scope in which a certain class of generalized quantifier expressions undergo QR, while existential closure is available to others, and only A-movement (and A-reconstruction) is available to a third group. Second, in the context of Hungarian, the present chapter argues that this language can be shown in fact *not* to furnish the relevant conclusive evidence for a feature checking based account of scope à la Beghelli and Stowell (1994/1995; 1997) and Szabolcsi (1997). Finally, I will also argue that QR optionally occurs either in overt or in covert syntax in Hungarian, and I will demonstrate that overt fronting of the 'QR-class' of QPs cannot be reduced to either topicalisation or to focusing. I will turn to how the pattern of optionality could be derived in Chapter 5.

1 Background and critical discussion of the underlying issues

1.1 Movement of quantifiers at LF

Quantifier Raising as a transformation (May 1977, 1985) was introduced as a movement operation that places quantifier phrases into their scope positions by a syntactic level not accessible from the PF side of the grammar, referred to as Logical Form (LF) (see also Chomsky 1976). In this way, scopal ambiguity of sentences like (1a,b) was resolved at the level of LF.

- (1) a. Some man likes every woman
 b. Every man likes some woman

The idea of disambiguation within syntax² is apparently in accordance with the principle of compositionality, which demands that a homomorphism relation should

² May (1977) made his proposal of LF-disambiguation in the footsteps of Montague (1974), where the different interpretations are generated directly by syntactic computation without subsequent movement per se.

Reinhart (1976, 1979) and Cooper (1979) took the line for the case of existential wide scope that in fact in such cases (as (1b), for instance) the inverse wide scope reading of the existential entails the direct narrow scope reading, and as such, needs not be represented separately (a 'vagueness' approach). However, this line was abandoned later. Among the main reasons was that when the existential occurs in the overt scope of a non-monotone quantifier (e.g. *exactly half/two* NP), then the narrow and the wide construals of the existential correspond to distinct truth conditions (cf. Fodor and Sag 1982 and Ruys 1992). The situation is analogous in the case of existentials inside an implication. As shown by Farkas (1981) and Abusch (1994), the wide scope construal of the existential does not entail the narrow construal in such contexts either. For detailed discussion, see Ruys (1992: Chapter 1); see also Reinhart (1997).

hold between syntactic and semantic representations (and it can be conceived as the ‘syntactization’ of a traditional approach in language philosophy, where natural language expressions are translated into an intermediate formal language that resolves the relevant ambiguity, a representation (resembling formulas of Predicate Calculus) that is conceived of as a linguistic level in work of generative semanticists, cf. e.g. Bach (1968), McCawley (1970) and Lakoff (1971)). QR would derive inverse scope in (1a) by moving the object *every woman* above the scope position of the subject *some man*. ‘Above’ here means a position that c-commands the LF position of the subject quantifier, i.e. scope is calculated on the basis of LF c-command relations.³ This is achieved by moving the object to adjoin to the nuclear clause S/IP. The object quantifier will need to move out of its base position even when it does not take inverse scope: in this case it needs to raise only to adjoin to VP. The idea is that generalized quantifiers (cf. Barwise and Cooper 1981) are of the type $\langle et, t \rangle$, while a transitive verb is $\langle e \langle et \rangle \rangle$, hence without the movement of the object quantifier, type clash would result for functional application. Evidence that quantifiers adjoin to VP-s as well (and not only to the sentence node) comes for instance from coordinations like (2b):

- (2) a. Some professor admires every student
 some > every / every > some
 b. Some professor admires every student and hates the dean
 some > every / *every > some

The direct scope interpretation in (2a) cannot necessarily involve the adjunction of the object quantifier to the sentence node, given that although the direct scope reading is available in (2b), the object cannot leave the VP, given (some equivalent of) the Coordinate Structure Constraint, which disallows the inverse reading in (2b).

Another transformation fixing quantifier scope applying at LF was assumed to be Quantifier Lowering (QL). The ambiguity of a sentence like (3a) is resolved by optionally applying QL to the matrix subject (cf. 3b,c).⁴

- (3) a. A unicorn seems to be in the garden
 b. [a unicorn_i seems [t_i to be in the garden]]
 c. [e_i seems [a unicorn_i to be in the garden]]

³ For the original definition of c-command, see Reinhart (1976). In discussions of scopal interaction, especially due to the status of QR as Chomsky-adjunction, the definition of (c-)command to be adopted has played a prominent role.

⁴ The ambiguous (i) below is an analogous ‘lowering’ (or ‘reconstructing’) construction. Note that ‘lowering’/‘reconstruction’ is not possible in (ii) (the indefinite must take wide scope), given the independent conditions on anaphor/pronoun binding. Then, availability of ‘lowering’/‘reconstruction’ as apparent from scope readings correlates with options of binding (cf. Aoun 1982).

- (i) Someone seems to review every report
 (ii) Someone_i seems to himself_i / his_i; boss seems to review every report

QL appeared as an atypical movement in that it became clear that movements universally target positions that are higher up in the hierarchical structure, and lowering movements do not exist in natural language syntax. QL then gave way in Aoun and Li's (1991, 1993) to a definition of quantifier scope in terms of chain links, and in minimalism it fell under 'reconstruction' effects, which were conceptualized as a possibility ultimately provided by the copy theory of movement adopted (as a certain pattern of deletion of copies) (cf. Chomsky 1993).

Treating Q-scope as an LF phenomenon in languages like English served not only the purpose of disambiguation; in fact, various mechanisms are conceivable, and have been proposed, which take care of Q-scope without assuming covert movement, carrying out computations based purely on surface structure (cf. e.g. Hendriks 1987, Jacobson 1996). The idea behind the LF movement, however, is essentially that there appear to empirical effects related to Q-scope which make it look very similar to a movement dependency. Hence, inasmuch as QR has the properties of movement, it involves adding no extra machinery to the grammar if the movement rule of QR is added; and at the same time, this move renders the syntax–semantics mapping transparent with respect to Q-scope. Of course, in as far as QR has properties that are specific to it, but not shared by other, prototypical movement dependencies, these call for an explanation. We will return to this latter point below.

For instance, May (1977) argued that 'inversely linked quantification' (illustrated in (4)) is to be explained under QR by the independently motivated constraints of Proper Binding condition (requiring variables to be properly A'-bound) and Non-Vacuous Quantification (requiring all quantifiers to each properly bind a variable) (which are both respected by the representation (4b), but not by (4c)).

- (4) a. Somebody from every California city owns a Porsche
every > some / *some > every
b. $[_{IP} [_{\text{every California city}}]_i [_{IP} [_{\text{somebody from } t_i}]_j [_{IP} t_j \text{ owns a Porsche}]]]$
c. $*[_{IP} [_{\text{somebody from } t_i}]_j [_{IP} [_{\text{every California city}}]_i [_{IP} t_j \text{ owns a Porsche}]]]$

Further, it seemed that syntactic domains opaque to movement also do not allow contained quantifiers to take scope outside them (cf. (5b) vs. (5c)). For instance, a specific NP/DP is such an island, cf. (5a).

- (5) a. *Who did you see those pictures of?
b. Pictures of everybody are on sale
(possible: for everybody there is a picture which is on sale)
c. Those pictures of everybody are on sale

The 'inversely linked' interpretation available to (5b) remains disallowed in (5c), given the island nature of specific NPs/DPs. In fact, exactly when the quantifier cannot escape an island in order to take scope over the (open) proposition, we find that it will be unable to bind a variable pronoun:

- (6) a. A picture of everybody_i was sent to his_i mother
 b. *This picture of everybody_i was sent to his_i mother
 c. *That every boy_i left upset his_i teacher

Another case in point is the interaction of universal quantifiers and *wh*-phrases, whose pattern of interpretation is argued by May (1985) to follow from the Path Containment Condition of Pesetsky (1982) restricting movement in general.⁵ The putative covert movement of quantifiers also apparently respects the constraint against Weak Crossover:

- (7) a. *Who_i does his_i mother love?
 b. *His_i mother loves everyone_i

Note finally that the structures created by QR of the whole quantified phrase make the mapping more or less direct to semantic representations involving restrictive quantification (separate constituents corresponding to quantifier, restrictor and nuclear scope).^{6,7}

⁵ In fact, in treating a subject–object asymmetry in quantifier interaction with *wh*-expressions, May (1985) abandons the idea in May (1977) of full disambiguation of scope at LF and proposes that if two operators govern each other, they can be interpreted in either scopal order. On May's (1985) definition of scope interpretation (involving government), inverse linking cases do not need to involve movement of the subject-internal quantifier to adjoin to the sentence node (which movement is generally disallowed in overt syntax), it is sufficient for it to adjoin to the subject NP itself.

⁶ Bruening (1999) and Sauerland (1999) argue that QR in fact obeys another condition on movement, namely Superiority. Sauerland proposes, building on Fox's (1995, 1999) model of QR, that QR can violate superiority as much as needed for interpretability.

⁷ If Antecedent Contained Deletion (ACD) turns out to be licensed by QR, then ACD too can be taken as evidence for the existence of the operation of QR. However, the issue is subject to much controversy at the moment. For instance, Hornstein (1994, 1995) and Lasnik (1999) attempt to reduce licensing of ACD to (LF) movement to Case-checking positions—however, Lasnik acknowledges that his account needs to be compounded with allowing extraposition to also support ACD, and in fact one needs to allow for extraposition to take place in covert syntax as well in some cases. This latter one is clearly a problematic assumption. If extraposition is clause-bounded (the standard view), then even if we grant the covert extraposition account for the problematic cases (which are not treatable in terms of Case-driven A-movement), we still do not have an account for the fact that the scope of the quantifier containing the elided VP correlates with which of two VPs, where VP1 contains VP2, the gap takes as an antecedent (for the facts, see Fiengo and May 1990, 1994, Wilder 1995). A prediction of the A-movement account of ACD is that ACD-s are finite clause bound, a prediction contrary to fact:

- (i) John thinks that Mary is taller than Bill does [Wilder (1997: 434)]

Note that (i) is compatible with the QR account only if QR can raise above the matrix V. For these reasons, I do not consider either Hornstein's purely A-movement based or Lasnik's A-movement plus (overt and covert) extraposition based non-QR accounts of ACD to be adequate.

1.2 The struggle of QR

There are two significant respects in which QR appears to be different from prototypical syntactic movements. On the one hand, QR is generally held to be clause-bounded (cf. Farkas 1981, Fodor and Sag 1982, Abusch 1994, Beghelli 1993), if only roughly. The most well-known apparent exceptions to strict clause-boundedness are subjects of Exceptional Case Marking (ECM) constructions and control infinitives. At least these two, however, can be maintained to involve strictly clause-bounded QR. In the case of ECM subjects, this is because the topmost A-position of the ECM subject is in the superordinate clause ([Spec, Agr_oP] / [Spec, vP] (cf. Chomsky 1993; see Lasnik 1999 for extensive argumentation). In the case of control infinitives, scope over the superordinate subject of an embedded (non-subject) quantifier can be explained through scope of the embedded (non-subject) quantifier over the embedded PRO subject, and the identity relation between the superordinate subject and PRO (if we follow a recent trend in analysing PRO as resulting from A-movement, and provided we adopt Aoun and Li's (1991) definition of the Scope Principle in terms of chain links (see directly below), then in fact the apparent non-clause-boundedness follows without any stipulation).⁸

On the other hand, within a minimalist setting, where movement is triggered to meet the narrow requirement of interpretability at the interface (i.e. feature checking) (cf. Footnote 1) and optionality of movement is seen not to be allowed, QR sticks out as problematic: it is apparently an option for a quantifier to undergo QR, and it is not clear whether there is a formal feature that triggers this movement.

⁸ This locality of scope does not apply to all types of quantifiers, as will be pointed out below. However, so-called 'extrawide' scope readings seem to also exist in the case of quantifiers which otherwise appear in many cases to resist taking scope outside their clause (strong quantifiers, in general); i.e. a universal quantifier in a finite clause can take scope over an indefinite in a higher clause in some cases, for instance, in (i) (from Farkas 1995).

- (i) A student made sure that every invited speaker had a ride

In fact, Fox and Sauerland (1995) argue that such extrawide scope is only illusory. They discuss wide scope readings of universals over indefinites in generic contexts, such as (ii), and suggest that in these sentences the indefinite is bound by a generic operator, combined with the assumption that the situations quantified over by this operator may involve—in the case of (i)—single guide/tour pairs.

- (ii) In general, a guide ensures that every tour in the Louvre is fun

However, Farkas and Giannakidou (1996) point out that extrawide scope is real inasmuch as it also exists in episodic contexts. These authors argue that the condition on wide scope of a universal appearing in an embedded clause over an indefinite in a superordinate clause is that the sentence should entail a relation R in which the indefinite and the universal are related, i.e. in this sense, they are 'co-arguments' in R. This is possible if the indefinite is an external Agent bringing about an eventuality by action on the universal, which is an affected argument. Verbs allowing this to happen include *ensure*, *make sure*, *fix*, *arrange*, among others. This idea is then implemented in Farkas's (1995) indexical theory of scope and does not involve movement of the universal into the superordinate clause.

One approach to quantifier scope interaction that straightforwardly derives clause-boundedness of the scope of universal quantifiers is the approach of Kitahara (1996), and especially, Hornstein (1995). Hornstein builds crucially on Aoun and Li's (1989, 1991, 1993) chain-link based theory of scope interpretation. This theory of scope interpretation, in turn, was made possible by the advent of the VP-internal subject hypothesis (cf. Fukui and Speas 1986, Kitagawa 1986, Kuroda 1988 and Koopman and Sportiche 1991), according to which subjects originate inside the VP (various authors differed with respect to the exact nature of the position; consensus by now accepts the subject-in-[Spec,VP] analysis), and move (in English) to their surface position by A-movement. Aoun and Li propose the Scope Principle in (8).

- (8) Scope Principle (Aoun and Li 1991: 164)
 A quantifier A has scope over a quantifier B in case A c-commands
 a member of the chain containing B.

On this theory, a sentence like (1a) will have an LF representation along the lines of (9), where QR has applied.

- (9) $[_{IP} \text{some man}_i \quad [_{IP} t_i \quad [_{VP} \text{every woman}_j \quad [_{VP} t_i \text{ likes } t_j \quad]]]]]$

(9) does not disambiguate the two scope readings (unlike the theory of May 1977, but similarly to May 1985): since the VP-adjoined object quantifier c-commands the lowest link of the chain of the subject (in [Spec,VP]), the inverse scope reading is derived by (8); and since the higher two links of the subject chain c-command both links of the object chain, the direct scope is derived as well. Now, Hornstein (1995) claims that if we assume that not only the subject forms an A-chain in all sentences (by moving from [Spec,VP] to [Spec,IP], at least by LF), but also all objects form a similar A-chain in all sentences (by moving to check accusative Case in some VP-external position, such as [Spec,Agr_OP] or [Spec,vP]), then in fact QR movements are not necessary to derive scope interactions of subjects and objects (as well as their interaction with *wh*-operators), in case some version of Aoun and Li's Scope Principle is adopted. Then, the movement operation of QR is dispensable, and given its problematic nature (inasmuch as it seems not to do feature checking), it is to be eliminated from grammar.⁹

A potential problem for this treatment is the fact that it excludes wide scope out of some infinitival clauses, where wide scope in fact is available (cf. Ruys 1992). Another general complication is related to the fact that Case-checking A-movements can replace QR only for quantifiers that actually do A-move. It is not

⁹ On Hornstein's theory, the LF representation of (1a) is (i) below. Hornstein assumes a copy theory of movement (cf. Chomsky 1993), as well as Diesing's (1992) Mapping Hypothesis, which forces the deletion of the VP-internal copy of the universal.

- (i) $[_{AgrsP} \text{some man}_i \quad [_{AgrOP} \text{every woman}_j \quad [_{VP} \text{some man}_i \text{ likes } \text{every woman}_j \quad]]]]]$

The ambiguity results from the choice of which copy of the subject chain is interpreted for purposes of scope.

entirely clear what accounts for the scope of arguments receiving non-structural (inherent) Case; it is even less clear what derives the scopal interaction of non-arguments. It is a well-known fact that different quantifier types have different scope-taking abilities, a point we will return to. Another general setback of the account is that it fails to differentiate between classes of quantifiers.¹⁰

An approach that both treats the differential behaviour of certain quantifier classes and identifies quantifier movement as a (class of) feature checking operation(s) (but at the same time makes the clause-boundedness restriction stick out as hopelessly exceptional) is that initiated in Beghelli (1995), Beghelli and Stowell (1994/1995) (drawing on Beghelli (1993)), and developed in Beghelli and Stowell (1997). In this approach, quantifiers are endowed with syntactic features that are to be checked in quantifier-class specialised A-bar functional projections. This view is adopted in Szabolcsi (1997) for Hungarian, arguing that Hungarian furnishes overt evidence for the functional architecture proposed by Beghelli and Stowell for English. This treatment will be outlined in the following subsection, and will be examined in some detail in the context of Hungarian in the next section. I will argue, among other things, that Hungarian provides no conclusive evidence for the existence of a DistP projection housing distributive universal quantifiers and will defend an intermediate, conservative view which holds that QR applies to a certain semantic class of quantifier expressions (while no QR applies to other quantifier classes, a point we return to below).

In an approach that maintains QR, clause-boundedness may well be an economy effect inasmuch as quantifiers move only as far as the first full propositional node: quantifiers must move to the edge of a propositional constituent to be interpretable without type-shifting, but will not move further to keep the violation of economy (cf. Shortest Move) minimal, as suggested by Sauerland (1999: Section 3.3), Fox (1995) and Dayal (1996). If ultimately economy is responsible for the clause boundedness of the non-feature-checking movement of QR, this would be a welcome minimalist result. I will not attempt to resolve the open questions raised by such an explanation here, the details clearly need to be worked out. To my knowledge, clause-boundedness of QR remains a puzzle in current syntax (unless Hornstein's A-movement account turns out to be rescuable), no generally accepted explanation exists as yet.

Fox's (1995, 1999, 2000) and Reinhart's (1995) theories incorporate QR, but restrict it in both theoretically and empirically interesting ways. As Reinhart explicates, given that generalized quantifiers are in principle able to be interpreted in situ (that is, taking scope without raising), the question concerning the drive for QR in a minimalist setting arises even more sharply than it was suggested above. Building on the idea that QR is essentially an option, she proposes to limit QR to

¹⁰ The account as it stands, i.e. coupled with Diesing's (1992) Mapping Hypothesis, which is taken to force deletion of VP-internal copies of universal quantifiers (cf. the preceding Footnote) forces Hornstein to adopt the 'vagueness' approach to existential wide scope of an object over a universal quantifier subject (cf. Footnote 2). However, as we pointed out, the 'vagueness' approach cannot hold generally, hence Hornstein's has no account for existential wide scope over subject quantifiers for which the 'vagueness' approach cannot hold.

cases of apparent non-compositional scope, i.e. to cases where the (strong) quantifier takes wider scope than its overt c-command domain. Fox (1995), on the other hand, keeps the conception of obligatory QR and rules out cases of QR which are ‘longer’ than necessary for interpretation. Significantly, he suggests that QR of an object to adjoin to the sentence node only occurs if by its application an interpretation is achieved which without its application would not have been realized. Below, the first conjunct of (10a) is scopally ambiguous, with narrow or wide scope of the universal, while the first conjunct of (10b) remains unambiguous, with narrow scope of the universal (a fact noted by Sag (1976) and Williams (1977)).

- (10) a. A boy admires every teacher, and a girl does too
 b. A boy admires every teacher, and Mary does too

Fox explains (accepting the minimalist PF-deletion account of VP-ellipsis, cf. Chomsky and Lasnik 1993, Tancredi 1992) that the difference here is that in (10b) type examples QR of the object quantifier to a position adjoined to the sentence node is ruled out, given that this QR is longer (cf. Shortest Move) than QR of the object to VP and at the same time it does not result in an interpretation distinct from the derivation where the object quantifiers QR only as far as the VP node. In other words, ‘short’ and ‘long’ QR (to VP and to IP, respectively) are not interpretively distinct, and economy favours the shorter movement. Given the parallelism requirement on VP-ellipsis, QR cannot take the *every*-QP above the subject in the first conjunct of (10b) either, hence the unambiguous scope relations. In (10a) however, QR to IP of the object quantifier results in an interpretation that is distinct from ‘short’ QR to VP (given the referential dependability of the indefinite subject), hence it is allowed. Consequently, wide scope of the *every*-QP in the first conjunct respects the parallelism requirement, and thus is allowed.¹¹

Both Fox and Reinhart build on a formulation of the idea of global economy in Golan (1993) and Reinhart (1993), sharpened by Fox (1995) in the following manner:

- (11) *Reference set*
 The set out of which economy selects the most economical derivation includes only (convergent) derivations which end up with the same interpretation, i.e. the reference set consists of pairs of a numeration and *an interpretation*.

¹¹ For Reinhart, considering QR to be an option, the object quantifier does not raise to VP on its narrow scope interpretation, but stays in situ. This results in the same pattern of interpretations for (10a,b).

In case two derivations with an identical such pair are found, the more economical one of these blocks the less economical one. However, when two derivations end up with distinct interpretations, then the two derivations do not get compared by economy.^{12, 13}

An alternative line explored in Reinhart (1995) is that economy considerations apply only at the interface, not in the computational system itself. Derivations resulting in a wide scope object quantifier do compete in the same reference set as their narrow (in-situ) scope variety, and are *de facto* uneconomical. A potential consequence of this view is that such uneconomical derivations will be marked options—although markedness here is understood (and to be tested) in terms of processing or language acquisition (systems of use), rather than in terms of direct intuitions.¹⁴

This general view to QR is not trivially in accordance with a radical autonomy of syntax position (in current minimalist syntax articulated in terms of formal (i.e. morpho-syntactic) feature checking, cf. Chomsky 1993, 1995). Clearly, it is not, provided that it is the targeted interpretation that is conceived of as the ‘drive’ for the movement operation of QR. However, on Reinhart’s (1995) view of QR as an economy violation strictly speaking syntax remains autonomous.

1.3 QR and indefinites

It has been a central finding in the domain of quantifier scope that many indefinite noun phrases, which are all weak, or existential NPs in the sense of Keenan (1987), have a lot more freedom in scope-taking than would be predicted by a movement analysis (like QR). Crucially, the scope of existential weak NPs is unbounded: it is in fact insensitive to islands (like coordinations, *if*-clauses, or complex NPs, for instance). As Reinhart (1997) points out, this is also detectable in the case of *wh*-in-situ (cf. Reinhart 1993), and in the case of sluicing (Chung, Ladusaw and McCloskey 1994, Ross 1969).

¹² This conception of economy based on reference sets is akin to limiting the set of competing candidates in Optimality Theory (OT) syntax to those candidates that target the same interpretation (cf. e.g. Grimshaw 1997), although, clearly, competition plays a much more limited role here than in OT. In fact, under this view it becomes possible to raise the question whether Numerations are necessary at all (inasmuch as Numeration is an object introduced precisely to define a comparison set for economy).

¹³ Clearly, this conception of economy needs to be further restricted—although the formulation in (11) above limits it considerably: since only convergent derivations are compared, the issue of selecting an apparently uneconomical movement only arises with non-feature-checking movements (like QR, in the present conception). However, this view still allows for example for non-clause-bounded QR if that results in a distinct interpretation. One could try relativising reference set economy to clauses (a subtype of strong phases, cf. Chomsky 2001), yet it is not clear whether this is desirable for all cases of apparent economy violations other than those involving QR.

¹⁴ A famous example of Hirschbuhler (1982) where inverse scope is the most natural reading is (i):

- (i) An American flag was hanging in front of every building

Inverse linking cases discussed above are essentially analogous in this respect.

One line that furnished a potential explanation of the non-movement-like character of existential scope in the seventies was the one that treated existential wide scope as an entailment of the narrow scope reading (i.e. the wide scope reading was taken to be a special subcase of the narrow scope interpretation, hence no movement was necessary to represent the wide scope reading, given that it was taken not to have an independent representation at all (e.g. Reinhart 1976, 1979, Cooper 1979) (the ‘vagueness’ approach). Later this view turned out to be untenable, due to teasing apart the truth conditions of wide and narrow scope existentials as being distinct in a number of cases, and was then abandoned (cf. Footnote 2).

A popular approach in the 1980s was to suggest that QR, and covert movement in general is not subject to Subjacency (cf. Huang 1982 for *wh*-in-situ), maintaining that QR of strong quantifiers is clause-bounded (hence Subjacency violations occur with weak existentials only). However, there is a significant conceptual problem, made a virtual inconsistency by minimalist assumptions about syntax, and there are empirical complications as well with this view. On the theoretical side, inasmuch as QR of existentials is non-Subjacency-respecting movement, it is unlike movement. In fact, in a minimalist approach to syntax, with no S-structure/LF-parametrization of constraints is available, given the elimination of S-structure from syntax, the exceptionality is difficult to state.¹⁵ On the empirical side, it simply does not appear to be correct that covert movement is not Subjacency-respecting. Brody (1995b) argues extensively (examining [wh]- and [neg]-checking movements) that the right distinction is one between primary and secondary movements to a functional projection, irrespective of overt versus covert status. Comparatives, which are assumed to involve covert movement, appear to be sensitive to islands. Reinhart (1991) shows that *except* elliptic conjunctions too, on the one hand involve, covert movement, and on the other, this movement cannot cross an island boundary. It is a current consensus that movement is characterized by island-sensitivity throughout syntax.

Another line that sets out to explain the apparent unbounded scope of existentials originates with Fodor and Sag (1982), who argue that these indefinites are ambiguous between a quantificational (existential) reading and a referential/specific reading, the latter corresponding to wide scope interpretation (referential expressions, like proper names, can be interpreted in situ¹⁶). A prediction of this analysis is that so-called intermediate scope readings should not exist—a prediction held to be empirically correct by Fodor and Sag (1982). However, it has been demonstrated by Farkas (1981), Ruys (1992) and Abusch (1994) that such intermediate reading, illustrated in (12) do in fact exist

¹⁵ Although not completely impossible to attempt in principle, for instance in terms of pure feature movement vs. category movement in the model of Chomsky (1995). However, inasmuch as other pure feature movements are local (cf. covert head movement, covert A-movement), this seems like an empirical overgeneralization; and on the other hand, if pure feature movement is the defining aspect of movement *per se* (i.e. overt movement is pure feature movement plus pied piping, or Agree in Chomsky’s (2000, 2001) terms plus pied piping), the distinction itself is non-statable.

¹⁶ Some variants of this analysis involve unselective binding of the ‘specific’ indefinite by a remote, maximal scope existential operator.

((12b)=Ruys's (18), (12c,d)=Farkas's (1981) (17), and (12e)=Reinhart's (1997) (21a), which shows that a 'vagueness' approach, i.e. treating intermediate readings as a special subcase of the narrowest scope interpretation cannot be correct).

- (12) a. Every professor rewarded every student who read a recommended book
 b. Every professor will rejoice if a student of his cheats on the exam
 c. Each student has to come up with three arguments which show that some condition proposed by Chomsky is wrong
 d. Everybody told several stories that involved some member of the Royal family
 e. Most linguists have looked at every analysis that solves some problem

An approach that successfully accounts for both the fact that existential indefinites (and only they) have unbounded wide scope and that intermediate scope readings exist is based on unselective binding. Indefinites in Discourse Representation Theory (DRT) (Kamp 1981, Kamp and Reyle 1993; Heim 1982) introduce discourse referents by restricted free variables (instead of being quantificational expressions, cf. Lewis 1975). In Heim's model, these variables can then be unselectively bound by some operator (hence their quantificational variability). Their existential force is due to binding by an existential operator, which can be text-level or appended to the nuclear scope of true quantifiers. Then, the unboundedness of their existential scope as well as the availability of the intermediate scopes are derived, and as desired, no movement is involved.

A potential problem for this approach is posed by the fact that it leaves the restriction in situ. This means that assignments not satisfying that restriction (i.e. not being members of the N-set of the indefinite NP) will also be considered, failing to capture the correct truth conditions. (13a) is a frequently cited illustration of this point (Reinhart (1997) demonstrates that the problem is rather broad, involving not only overt implications, but also restrictive terms of universal quantifiers, the scope of negation, and it is relevant not only to regular indefinites, but also *wh*-in-situ and *wh*-expressions in sluicing as well):

- (13) a. If we invite some philosopher, Max will be offended
 b. $\exists x ((\text{philosopher}(x) \ \& \ \text{we invite}(x)) \rightarrow (\text{Max will be offended}))$

(13b) involves unselective binding of an individual variable, which is locally restricted by the predicate *philosopher* internal to the NP, which is in situ. This representation, however, is incorrect, given that implications are true vacuously if their antecedent clause is false: here any non-philosopher value for *x* will make the proposition true—contrary to fact. A QR representation of (13a), in contrast to (13b), would pull up the restriction, and hence, only philosophers would be considered when assigning a truth value to the implication—a correct result. In fact, Heim (1982) proposes that in such examples QR of the indefinite is at work. However, then we run into the Subjacency-problem: this instance of QR would not be Subjacency-respecting. As Reinhart (1997) points out, a further complication is

that if we QR an indefinite, we expect it to allow a distributive reading (plural indefinites in general do). However, indefinites scoping out of an island do not allow a distributive reading (as observed by Ruys 1992):

(14) If three relatives of mine die, I will inherit a house

According to the wide scope interpretation of the plural indefinite in (14), there are three relatives of mine and if all of them die, then I'll inherit a house. On the distributive wide scope reading, however, I will inherit a house even if only one relative of mine (of the three) dies—a reading actually unavailable in (14).¹⁷ Then, a movement (QR) analysis of wide scope indefinites is problematic in view of these facts as well.

Reinhart (1997) proposes a variety of the unselective binding approach which resolves this complication, and which avoids the problem illustrated in (13). Her proposal is that the existential quantification involved is over choice functions (cf. Reinhart 1992, Winter 1995), which apply to the NP-set (i.e. the predicate) denoted by indefinites, with the existential operator introduced much in the same way as in Heim's framework. Choice functions apply to any (non-empty) set and yield a member of that set. (13a) will receive a representation like (15):

(15) $\exists f(\text{CH}(f) \ \& \ (\text{we invite } f(\text{philosopher}) \rightarrow \text{Max will be offended}))$

(15) says that there is a choice function such that if we invite the philosopher that it selects, then Max will be offended. (In case of plural indefinites like *three relatives* the choice function will pick appropriate collectives from the denotation of the NP, i.e. a collective made up of three relatives in the case of $f(\text{three relatives})$.) This treatment predicts the lack of distributivity with island-external scope for existentials (cf. 14), inasmuch as the indefinite NP itself is not present outside the island in order to be distributed over. It straightforwardly resolves the problem of the interpretation of sentences like (13) inasmuch as a choice function can only output a member of the set denoted by the restriction (i.e. the NP it applies to) by definition.¹⁸

¹⁷ The same problem is potentially present in approaches where the existential scope of the indefinite is dissociated from a separate distributive operator, which predicts that it is possible for the indefinite in (14) to take scope outside the island (via unselective binding), but distribute only inside it. However, it needs to be determined what makes the presence of a distributive operator in the main clause unavailable. If this is explained based on the assumption that the NP containing the restriction stays within the island, and the distributive operator can only distribute outside the island over its N-set if the N-set itself has been moved out of the island too (which movement is not available due to Subjacency) (unlike the representation in Reinhart's (1997: 64)) (I myself see no other way in a model like Beghelli and Stowell's/Szabolcsi's), then we are back to the problem described in relation to (13) in terms of incorrect truth conditions.

¹⁸ Reinhart also argues that applying existentially bound choice function variables to plural indefinites derive their collective reading, hence such readings do not require an independent semantic treatment. This appears to be in support of the choice function analysis.

In this picture, we have (i) unselective binding of choice function variables, which strategy is available only to existential indefinites, and it is the only one that is available to achieve island-external scope for these elements, and (ii) QR for strong generalized quantifiers. A question that is still open is the treatment of existential indefinites *inside* an island boundary (or in lack of one), in a clause-bounded domain. Reinhart (1997) suggests that QR is available to them as well, due to her assumption that they also have a generalized quantifier (GQ) interpretation¹⁹, alongside the choice-function interpretation; that is, she entertains an ambiguity treatment.

There is a crucial subject/object scope asymmetry with existential indefinites reported in the literature (a generalization that Reinhart is doubtful about (cf. p. 369 and her Footnote 24, Footnote 35)): namely, the distributive scope of existentials is limited to their overt scope, no inverse distributive scope is possible for them.

(16) Three men lifted two tables

(16) has at least these two readings: on one reading, the three men distribute over sets of tables of the cardinality of two, while on the other reading there are two tables such that three men lifted them, i.e. non-distributive wide scope of *two tables*. A frequent view in early literature is that the object indefinite cannot have *distributive* scope over the subject here. Provided that a GQ interpretation, hence QR, is available to existential indefinites (as claimed by Reinhart 1997), we in fact expect a distributive wide scope interpretation to also be present in (16)—Reinhart suggests that this is indeed the case.²⁰ This conclusion seems to be suggested by existential distributive wide scope in Hirschbuhler-type examples (cf. Footnote 14) like (17a), as she points out, as well as by examples like (17b) (from Liu 1990 and Beghelli 1993), where again the object may distribute over the subject:

- (17) a. A guard is standing in front of two buildings
b. Two students passed four classes

I will follow Reinhart (1997) and Beghelli (1993) here in taking inverse distributive scope of existentials involving bare numerals available, hoping that sufficiently sophisticated tests can confirm the intuition.²¹

¹⁹ The GQ interpretation is due to a typically covert existential determiner.

²⁰ As she points out there is no clear difference with respect to the availability of inverse scope in (16)-type examples versus (i)-type sentences, the latter of which are generally taken to allow inverse scope in the literature.

- (i) Some tourists visited every museum

²¹ Beghelli (1993) provides the following context to make (17b) less strongly dispreferred. “Classes in this department are becoming incredibly tough; it has gotten to the point where maybe three students would pass. Last month has been the worst ever: two students passed four classes.”

I believe it is considerably easier to get the distributive inverse scope reading in (16) too if we make the direct scope reading pragmatically implausible:

However, there is a class of existential indefinites that indeed defy wide scope readings over a quantifier that overtly c-commands them (cf. Liu 1990, Beghelli 1993): plural indefinites with modified numerals like *less than five N*, *fewer than five N*, *exactly five N*, *at least five N*, *more than five N*, *at most five N*, *only five N*, etc., and indefinites with a distressed noun like *few N*, *no N*. So, for example, observe the sentences below ((18c)=Beghelli (1993), (13)):

- (18) a. Every student read exactly five articles
 b. Two students read less than five articles
 c. More than five students passed fewer than six classes

In each sentence in (18), (i) the object expressions cannot take scope over the subject, and (ii) the subject and the object do not produce the independent reading. The independent reading (cf. Liu 1990) is one where both the subject and the object are taken to refer to unique sets of individuals, and each member of the set denoted by the subject is matched with each member of the set denoted by the object (a reading available in (16) and (17b) above).

Now, Beghelli (1993) and Reinhart (1997) consider a semantic characterization of this class of QPs to be elusive (they do not form a natural class in terms of monotonicity properties, for instance), and resort to a syntactic explanation for what groups these QPs together. In the case of Beghelli (1993), neither QR nor existential closure can apply to these quantifiers, hence they take scope in situ (i.e. in their A-position). Let us consider existential closure first. On any account of indefinites in general that incorporates unselective binding of indefinites via existential closure, it needs to be ruled out that existential closure should be able to determine the scope of the class of existential indefinites under discussion (otherwise clause-internal, as well as clause-external wide scope would be available). Beghelli's (1993) solution is to rely on the assumption that these indefinites (in contrast to bare numeral indefinites like *four classes*) do not contain a free variable that can be bound by existential closure. Bare numerals (including *a*, *some*) are taken to be cardinality predicates, following Milsark (1977), which only restrict, but do not bind the given variable²² (which is taken to an individual variable, as is standard). On the other hand, modified numerals, *few* and *no* do not get interpreted as cardinality predicates, but as GQs, and hence do not leave the relevant variable unbound, hence it is not available for existential closure.

Reinhart's view is similar: these QPs resist choice function application because modified numerals, as complex (phrasal) determiners, occupy [Spec,DP], precisely the position that is occupied by choice function variables. Hence, for her, modified numerals are in complementary distribution with choice function variables,

(i) In the gigantic group contest, three men carried twenty-five tables

²² A usual notation for an indefinite like *four classes* is $\{X \mid \text{classes}(X) \ \& \ |X| = 4\}$. The numeral leaves the X variable unbound, hence it is available for existential closure, therefore wide scope in general is possible for unmodified numeral indefinites.

hence the unavailability of existential closure of choice function variables, which in turn results in lack of extra-clausal wide scope for these QPs.²³

As for the availability of QR, Beghelli (1993) and Reinhart (1997) express opposing views, although building on conflicting data. Reinhart (1997) appears to believe that clause-internal inverse scope is in fact available for the class of QPs under consideration as well (not only to bare numeral plural indefinites). Given that modified numerals are treated as GQ-s, QR should be available to this QP class—at least if being a GQ-QP is a sufficient condition for being able to undergo QR (a view to be challenged below). This then directly predicts the possibility of clause-internal inverse scope for them (which Reinhart believes to be available). Very simply, following the standard view here, I will take the unambiguity of examples like (18) for a fact. Then, the indefinites involved should not be able to undergo QR, contra Reinhart. This begs the question: what rules out QR of this class of GQ-QPs?

The complication is much the same in Beghelli's (1993) model. In fact, this property of these QPs is merely stipulated in Beghelli (1993): QR by definition is restricted to distributive universals only. This problem, however, dissolves in Beghelli and Stowell (1994/1995), where QR is eliminated as such.

We turn now to Beghelli and Stowell's (1994/1995) analysis of Q-scope and the classification of scope-bearing NPs. After a brief presentation of the basic assumptions of the model, I will point out what complications arise for a Beghelli and Stowell style analysis of quantifier interaction. Then, in section 2, based on their and some of Szabolcsi's (1997) results, it will be suggested that a QR view can be maintained, and that (i) there may be an essentially discourse semantic characterization that delimits modified numeral N, *few* N and *no* N indefinites versus bare numeral indefinites in terms of their inverse scope options, and (ii) we can maintain that all (and only) GQ-NPs can in principle undergo QR that fit the semantics associated with QR.

1.4 A checking approach to Q-scope and the problems it faces

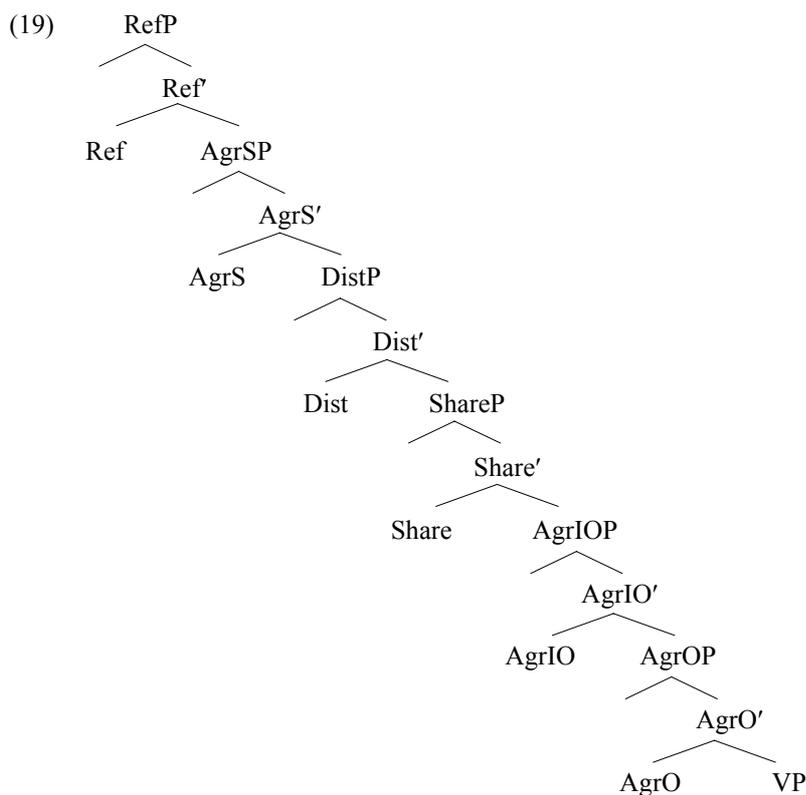
Beghelli and Stowell (1994/1995) (B&S) propose an account of quantifier scope in terms of movement to quantifier-class specialised functional projections (hence the

²³ Reinhart's syntactic complementary distribution account of why choice functions cannot apply to such indefinites is not fully convincing. It is not a standard view in the domain of the syntax of nominal expressions that numerals occupy a different position in the case they are modified ([Spec,DP]), and in the case they are unmodified ([D]). In fact, even if this is stipulated, we would still have no account for why *few* N and an *no* N indefinites belong to this class, both involving unmodified numerals (in fact both *fewer than five* N and *few* N belong to this group).

For Beghelli, existential closure binds individual variables, however, for Reinhart, it binds choice function variables. This makes it difficult to transpose Beghelli's account of the unavailability of existential closure to Reinhart's model directly (the idea for Beghelli is that GQ modified numerals bind the individual variable of the NP, and so make it unavailable for binding by existential closure).

What we would need to achieve is that choice functions should not be able to apply to GQ-NPs, only to indefinite NP predicates. I assume this to be workable.

phrase that quantifier movement is ‘directional’). QR no longer exists in this picture, all quantifier movement is driven by formal feature checking. Szabolcsi (1997) argues that Hungarian provides evidence for such a model—a view that I will argue against in the next section in some detail. The following hierarchy of specialised functional projections is posited, where each functional projection serves as the landing site for a certain group of quantifiers.



A given functional specifier can be filled multiply, its content undergoes absorption. Definites move to [Spec,RefP], distributive universals move to [Spec,DistP]. [Spec,ShareP] hosts bare numeral indefinites. Bare numeral indefinites (including *some* N, *several* N) can also move to [Spec,RefP], and they can also stay in [Spec,AgrSP] / [Spec,AgrIOP] / [Spec,AgrOP]. It is assumed that they cannot reconstruct to their VP-internal base positions. This is in contrast to modified numeral indefinites and decreasing QPs like *few* N, which move only to their respective AgrP-s, but may reconstruct into VP.

Let me illustrate with a few sentences how this model works. Consider (20):

(20) Every student read less than five articles

As pointed out above, such sentences with a modified numeral indefinite in object position do not allow an inverse scope interpretation. On B&S's approach, this is because such indefinites do not target a specialised quantifier landing site, so they cannot raise higher than their Case-checking A-position; at the same time *every*-QPs move to DistP:

- (21) [_{DistP} every student . . . [_{AgrOP} less than five articles . . .]]

Consider now (22a,b) on their attempted inverse scope reading:

- (22) a. Every student read five articles
 b. Two students read less than five articles [= (18b)]
 c. Less than five students read every article
 d. More than three men read more than six books

(22a,c,d) do have an inverse scope reading ((22d)=Szabolcsi (1997), (17)), but (22b) does not. Let us consider their (partial) representations in turn. (23a) corresponds to (22a) on its inverse scope reading, (23b) and (23b') to (22b) on its solely available direct scope reading (recall: bare numerals, in contrast to modified numerals, are assumed not to be able to reconstruct to VP according to B&S), (23c) to (22c) on its inverse scope interpretation (where bracketing indicates A-reconstruction), and finally, (23d) to (22d) on the inverse scope interpretation again.

- (23) a. [_{RefP} five articles [_{DistP} every student . . .]]
 b. [_{AgrSP} two students . . . [_{AgrOP} less than five articles . . .]]
 b.' [_{RefP} two students_i . . . [_{AgrSP} t_i . . . [_{AgrOP} less than five articles . . .]]]
 c. [_{AgrSP} (less than five students) [_{DistP} every article . . .
 [_{VP} less than five students . . .]]]
 d. [_{AgrSP} (more than three men) [_{AgrOP} more than six books . . .
 [_{VP} more than three men . . .]]]

In short, the model stipulates syntactic positions and allows only certain classes of quantifiers (defined in terms of stipulated shared formal features) to move to those syntactic positions. Some quantifiers may only move to a single projection (like distributive universals), others may possess one of several formal features (like bare numeral indefinites, which may move to RefP or to ShareP or only as far as their AgrP). In order to account for some of the interactions, it is also stipulated that bare numeral indefinites cannot reconstruct (to their VP-internal base position), while modified numeral indefinites can. It is also assumed that inhabitants of RefP are exceptional in that they cannot receive a distributive reading.

This theory derives directly why modified numeral indefinites cannot take wider scope than their overt c-command domain: they do not move to a quantifier projection above their A-position. This very assumption answers the question we raised at the end of the preceding subsection, namely the question of why modified numeral indefinites do not undergo QR (here decomposed basically into movement to RefP and to DistP), once they are GQ-NPs. It is simply because they do not get

associated with a [dist] or [ref] feature that would be checked in DistP or RefP. Of course, the answers are not extremely deep, but they do resolve the issues, at least technically speaking.

Let me now turn to some problems that such a checking account faces (some of these are also discussed in Surányi (to appear d)). One drawback is that we lose all hope of accounting for the clause-boundedness of QR of quantifiers like *every*-QPs (in terms of economy) (for B&S, movement to DistP), given that the relevant movement in B&S's system is basically a feature-checking driven A-bar movement, virtually indistinguishable from *wh*-movement: nothing rules out long movement of an *every*-QP to DistP of a superordinate finite clause.

Also, it appears that island-external scope of bare numeral indefinites requires a mechanism different from movement to RefP anyway (unless this instance of covert movement is stipulated to be island-free, a stipulation we cited arguments against above based both on theoretical and on empirical grounds). If *some* cases of wide scope of bare numeral indefinites is not movement, but say, unselective binding, then the role of movement to RefP becomes extremely dubious: it appears wholly redundant. RefP is also defective in B&S's system in not allowing distributive readings, in contrast to the other projections (in their terms, not allowing silent EACH in Ref). In fact, to account for the fact that subject bare numeral indefinites can distribute, B&S need to assume that a bare numeral indefinite in RefP can distribute with the help of a silent EACH appearing not in the Ref head, but in the AgrS head; further, this option is only available to subject bare numerals, not to other bare numeral indefinites. Now, if existential closure (i.e. unselective binding) is to account for the non-overt scope of these indefinites, then the problematic properties simply fall out: their non-overt scope is not distributive, and subject bare numeral indefinites can distribute just in case they take scope from their overt position (c-commanding other quantifiers overtly). Of course, the unbounded nature of non-overt scope is straightforward—this is a central fact which the unselective binding approach is built on in the first place.

A third complication is related to a general typology of specifier positions. It is fairly standard to divide specifier positions in the clause into A- vs. A-bar classes. Feature checking A-positions tend to appear above the domain of base positions, and feature checking A-bar positions tend to appear above the domain of A-positions. Now DistP appears to be exceptional in this respect. This in itself would not undermine the analysis, however, there is a problematic sort of exceptionality involved here. Namely, it appears that we need to allow movement of a subject universal quantifier first to DistP and then to AgrSP, the Case/phi-checking position. Inasmuch as DistP is an A-bar, quantifier position, however, such dependencies are standardly characterized as improper movement and ruled out as such.

A fourth, very general problem is related to the functional projections themselves. If specialised functional projections are identified in the clause to account for some pattern of behaviour of some elements, we would expect to find independent, converging motivation for those posited projections. For instance, we would expect to find elements identifiable as the heads of the relevant projections. I am not aware of Ref or Share elements in languages, however. B&S refer to Gil

(1982) who points out the existence of distributive affixes in a number of languages. However, there is no strong evidence that such distributive affixes are heads in the clausal domain. Further, inasmuch as not only universals can be distributive (but also indefinites and definites as well), we need to assume distributive morphemes independently of distributive universals, which considerably weakens the motivation of a certain fixed functional head in the clausal hierarchy associated with distributive universals. I will examine this particular issue further in the context of Hungarian below.

Further, it is not clear what derives a crucial component of the account of the scope options for bare numeral indefinites, namely that they cannot reconstruct to their base position. For, Diesing's (1992) mapping hypothesis only excludes specific/referential NPs from the VP; however, bare numerals can also be non-specific/non-referential—one wonders why on this reading they still cannot reconstruct. This needs some elaboration.²⁴

In fact, the model appears to be empirically incorrect in at least two regards as well. First, it can generate only non-distributive wide scope of object bare numeral indefinites over non-reconstructing subject, such as another bare numeral indefinite. However, it appears—as we have already pointed out—that distributive wide scope reading is available to bare numeral indefinites clause-internally. Examples include sentences such as (24a,b) below (=17a,b).

- (24) a. A guard is standing in front of two buildings
 b. Two students passed four classes

The distributive reading is easier to get in (24a) (in fact, that is the pragmatically preferred reading). It is also possible in (24b) (cf. e.g. Liu 1990, 1997, Beghelli 1993, Reinhart 1997, Footnote 24, Erteschik-Shir 1997), though clearly the direct scope reading is preferred, given that there is no pragmatic infelicitousness of the kind arising with (24a). That direct scope is preferred over inverse scope is well-known (cf. e.g. Gil 1982). Why there should be differences regarding the degree of dispreference among cases of inverse scope is an ill-understood question.

Second, it both undergenerates and overgenerates in terms of readings in sentences with modified numeral indefinites in subject and indirect object positions, and with an *every*-QP as direct object. (25) illustrates the case.

- (25) Few teachers showed less than five students every experiment

B&S's system predicts that the QPs involved in such a sentence type can occur at LF as schematized below (multiple occurrence indicates optional reconstruction; the

²⁴ It also deserves noting that the interpretation of the quantifier *every* itself is not entirely clear either. In fact, if the Dist head is responsible for distribution and is interpreted quasi as the universal quantifier distributing over a set (a witness set for Szabolcsi (1997)), then *every* itself appears to be uninterpreted in this model. This seems a rather counterintuitive—though technically possible—proposal.

base position of the indirect object is lower in the (layered) VP than that of the subject):

(26) [_{AgrSP} few [_{DistP} every [_{AgrIOP} exactly five [_{AgrOP} [_{VP} few [...exactly five...]]]

Now this generates the following three scope relations. However, (27b) seems to be a wrong prediction.

(27) a. Subj > every > I.Obj
 b. every > I.Obj > Subj wrong prediction
 c. every > Subj > I.Obj

On the other hand, a further existing reading fails to be generated, that with narrowest scope of the *every*-QP.

(28) Subj > I.Obj > every

In general, the attested reading of narrow scope of a distributive universal object with respect to a modified numeral indirect object is never generated, since the universal moves up to DistP, and the highest position for a modified numeral indirect object is AgrIOP, which is lower than DistP.

We have seen then that Beghelli and Stowell's model suffers from both theoretical and empirical shortcomings. In the next subsection, I will make a claim for the plausibility of a QR-based account being ad (i), able to capture the differential behaviour of quantifier classes, if the focus structure as well as quantificational intervener elements in the relevant sentences are also taken into account, ad (ii), stays clear of the theoretical problems B&S's account faces, and ad (iii), unlike B&S's model, yields empirically correct results.

2 The outline of a QR-based account of the differential behaviour of QPs

In fact, Beghelli and Stowell's theory incorporates some assumptions that are perfectly compatible with a QR view²⁵, and as a matter of fact are also assumed independently of their account.

One such assumption is A-reconstruction. If modified numeral indefinites cannot generally take inverse wide scope, cf. (18a,b) (except over another modified numeral indefinite, cf. (23d)), then on the QR-based approach, this follows if these indefinites cannot undergo QR, but can A-reconstruct. On an approach

²⁵ Note that the QR-view has a straightforward account for the problematic reading (28) of sentences like (25): either QR takes the direct object *every*-QP to a VP-adjoined position below AgrIOP, or as on Reinhart's (1995) view, QR is not applied to the *every*-QP, instead it takes scope in situ as a GQ-NP. These options are not available to B&S, since in their system distributive universals must invariably raise to check their formal feature [dist] to DistP.

incorporating QR, there is evidence that bare numeral indefinites can QR if (i) they can take inverse distributive scope over a subject quantifier, and (ii) this cannot be due to the reconstruction of the subject quantifier to a VP-internal position. However, cases where an object bare numeral can take distributive scope over a subject do not meet condition (ii): they can be analysed as involving A-reconstruction of the subject.

The issue whether it is QR of bare numeral indefinites or A-reconstruction of the QPs taking wide surface scope over them is involved is an empirical one, of course. For one thing, it appears (and this is the view held by Beghelli (1993), Beghelli and Stowell (1994/1995) and Szabolcsi (1997) as well) that a bare numeral indefinite cannot have distributive inverse scope over a universal quantifier subject (cf. 22a). This is not predicted by QR-ing bare numeral indefinites, but is predicted on the A-reconstruction account—provided that universal quantifiers cannot reconstruct to VP. In fact, we need a general filter on A-reconstruction to VP-internal positions, namely some version of Diesing's (1992) mapping hypothesis, which bans reconstruction of specific NPs to the VP-domain. Then, given that distributive universals are interpreted as specific (or strong), they should not reconstruct to VP (this also explains why inverse distributive scope is unavailable in patterns like (20) and (22a)).²⁶ Bare numeral indefinites on their referential/specific interpretation are also unable to reconstruct to VP, as in B&S's model.

But this cannot be the whole story, given that bare numeral indefinites appear not to be able to reconstruct to VP even if they are non-referential/non-specific in examples like (29) below.

(29) Two students read less than five articles

Inverse scope here would be available only if the bare numeral subject could reconstruct to its VP-internal base position, below the Case-/phi-checking position of the object. However, such a reading is not present, hence we might jump to the conclusion that bare numeral indefinites cannot reconstruct to VP even on their non-referential reading. This would seem mysterious at first sight; I return to the issue below, arguing that it is in fact not the case.

Coming back to the scope of bare plural indefinites, what we have said so far is that inverse distributive scope is ruled out in (22a) type sentences because, (i) bare numeral indefinites do not QR, and (ii) universal quantifiers, given that they are interpreted as specific, do not A-reconstruct to VP for scope. However, it seems that inverse distributive scope *is* possible with object bare numeral indefinites: recall (24a,b), reproduced here, and consider also (30), where *ten books* can distribute over *fewer than five students*.

(24) a. A guard is standing in front of two buildings
b. Two students passed four classes

²⁶ Note that A-reconstruction for scope is distinct from A-bar reconstruction of the *restriction* of a quantified expression for binding (under a copy theory of movement).

- (30) Fewer than five students read ten books

(30) does not bear on the issue at question, given that it is accounted for by A-reconstruction of the modified numeral indefinite already. (24a,b) are more significant. If bare numeral indefinites do not undergo QR, then the only way (24b) can get an inverse distributive scope reading is by A-reconstruction of the subject. Then, (24b), again, cannot decide the issue in itself.²⁷ At first sight, the same does not apply to (24a): the bare numeral indefinite is embedded in a prepositional expression and does not have c-command over the VP, strictly speaking. However, such configurations are well known. For instance, even though they are embedded in a PP, experiencers in *It seems to NP*-type constructions happily c-command/scope out of the PP. It seems that in (24a) the string *in front of* is analysed as a complex preposition, inasmuch as it allows the NP *two buildings* to scope out. Of course, inverse distributive scope results only if the indefinite *a guard* reconstructs to VP—an analysis we are entertaining presently. In fact, there is independent evidence that subject indefinites do reconstruct to their VP-internal position. Consider the interaction of indefinite subjects with modal auxiliaries:

- (31) a. A guard must have seen them
b. Two syntax articles may be included in this volume

(31a,b) are scopally ambiguous, and this is standardly analysed as a result of A-reconstruction of the indefinite subjects. Now, if *a guard* A-reconstruct to a VP-internal position and *two buildings* scopes over the VP, then the inverse distributive scope follows. That QR of the bare numeral *two buildings* is not at play in such examples is confirmed by the contrast we find between (24a) and (32) below.

- (32) a. A guard is sleeping in two beds
b. A celebrity lives in two towns

Inverse distributive scope appears next to impossible in (32a,b). The difference between (24a) and (32a,b) is that in the former case the lower indefinite is (in) an adjunct and hence scopes over the VP, while in the latter cases it is (in) a more complement-like phrase (cf. *This bed has been slept in* / *This house has been lived in*), which has no c-command over the base position of the subject. If the low bare numeral indefinites are QR-ed, no such asymmetry is expected.

²⁷ A potentially discriminating example would be (i):

- (i) Two students gave three teachers four books

The prediction of the A-reconstruction account is that DO > IO > SU distributive scope cannot be generated. This is because for the subject to take narrowest scope, it must have reconstructed to VP, and given that IO scopes over SU, IO must be outside VP (in AgrIOP, or a corresponding position). But then there is no position for DO above the Case position of IO, so as to be able to take scope and distribute over IO. Unfortunately, this test occurred to me too late to be able to check it with a native speaker.

In fact, there are further reasons to believe that bare numeral indefinites do not QR. One consideration is that if they did QR, we would predict that Weak Crossover effects should be obtained on the inverse distributive reading of sentences like the one below.

(33) Three of their_i students met two teachers_i

However, no such deterioration occurs. This is in support of the ‘A-reconstruction of the subject’ view. Another interesting prediction is that if A-reconstruction of the subject takes place in such inverse readings, then that should have an effect on A-binding as well. Namely, if a reflexive embedded in a subject has to reconstruct to obtain inverse distributive scope, then the reflexive will at the same time get out of the local domain of its antecedent—hence, such inverse scope reading is expected to be unavailable in this case. In light of (34), this is indeed what happens.

(34) a. Bill believes two pictures of himself to have outraged three critics
b. Bill believes that two pictures of himself have outraged three critics

As predicted, the distributive inverse scope reading of the object in the embedded clause is blocked. Now, this effect is not expected if the object can gain distributive inverse by QR, with the subject not undergoing A-reconstruction at all.

A last piece of evidence I put forward against a QR treatment of bare numeral indefinites is of a cross-linguistic nature: in Hungarian, which is claimed to realize movement to DistP (or QR, as we will see) overtly, bare numeral indefinites are not included in the class of QPs undergoing this overt scope-shifting operation. If the set of QPs undergoing QR is cross-linguistically stable, and provided that QR is overt in Hungarian and the class of overtly QR-ed QPs in this language excludes bare numeral indefinites, then it should follow that they do not undergo QR in English either.

Let us return now to what blocks A-reconstruction of the bare numeral indefinite subject to a VP-internal position below the (LF) position of the object *less than five articles* in (29), reproduced below.

(29) Two students read less than five articles

It should be noted that (29) contrasts with (35), where inverse distributive scope appears possible (with stressed numeral) (though dispreferred).

(35) a. Two students read at least five articles
b. Fifty guests attended more than three parties

This is surprising. Let me add to this a curious asymmetry in the scope options for two modified numeral indefinite subclasses. This asymmetry is traceable on the one hand if the data discussed in Beghelli (1993) and in Szabolcsi (1997) are unified, and on the other hand, if we look at data that are not discussed in any of the cited

works. There appears to be a perceivable contrast between sentences like (36a) (=Beghelli (1993) (13)) and (36b) (=Szabolcsi (1997) (17)).

- (36) a. More than five students passed fewer than six classes
 b. More than three men read more than six books

Beghelli (1993) reports that distributive inverse scope is unavailable in (36a), and Szabolcsi reports that such inverse scope is available (although dispreferred) in (36b).

Why should this be? Recall from Chapter 2, Section 4 that I argued that for the class of quantifiers referred to by Szabolcsi (1997) as predicate operators (including *few* N, *fewer/less than* n N, among others) that they are cases of focus, with focus on the numerals. In Hungarian, these expressions serve as default syntactic focus: they are moved to the preverbal focus position by default in the absence of a regular focus, and their de-focusing is licensed only if they become part of the presupposition, given an immediately preceding context where they already appear focused. Now, by extension, we can claim that these quantifiers are focused in English as well—their prosody and their interpretation are fully compatible with such a claim. *More than* n N—as well as *at least* n N—do not belong to this class of quantifiers in Hungarian; indeed their prosody is distinct from that of focused numeral indefinites in English too: their numeral part does not necessarily receive emphatic stress and their noun is not necessarily de-stressed. Besides focusing, another, more obvious difference between *fewer than* n N and *more than* n N / *at least* n N type indefinites is monotonicity: one is decreasing, the other is increasing.

Now, from (35a) and (36a) it appears that decreasing focused quantifiers do not allow reconstruction across them. This explains the asymmetry in (35) and (36). But this is not wholly surprising. Beck (1996) demonstrates that covert movement cannot cross a class of quantificational interveners, which class includes decreasing indefinites like *few(er) than* n N. It is not surprising therefore that covert scope reconstruction is also sensitive to the same intervener here. Note that scope reconstruction of a subject quantificational expression across negation (another member of the class of quantificational interveners) is also blocked generally—an effect of the same constraint; cf. (37) (NB: contrastive topic intonation excluded).

- (37) a. More than five students didn't show up
 b. Every student didn't show up

Before moving on, let me point out that the account we are entertaining here predicts exactly the set of available readings with sentences of type (25) above, which proved problematic for B&S's model. The illustration is reproduced below.

- (25) Few teachers showed exactly five students every experiment

The indirect object modified numeral indefinite raises to AgrIOP from its VP-internal position, but can A-reconstruct into VP. The subject *few teachers* cannot

reconstruct across the focused *exactly five students* (which comes with a stressed numeral and a de-stressed noun). The direct object universal can QR either above VP or above IP. If QR takes the universal above VP and the indirect object A-reconstructs (or if QR can adjoin not only to VP, but to AgrIOP as well), then we get $\text{Subj} > \text{every} > \text{I.Obj}$ (=27a). If there is no A-reconstruction of the indirect object (or alternatively, if QR is an optional operation, as in Reinhart's (1995) theory, and hence the *every*-QP can stay in situ), then the result is $\text{Subj} > \text{I.Obj} > \text{every}$ (=28). In case QR raises the universal above the subject, the interpretation is $\text{every} > \text{Subj} > \text{I.Obj}$ (=27c). The system generates exactly the occurring scope relations, and no others.

Then, we are entertaining a picture in which bare numeral indefinites are ambiguous, resulting from the ambiguity of their numeral—a conception essentially similar to that of Reinhart (1997). The bare numeral is either interpreted as a cardinality predicate, leaving room for unselective binding by existential closure (the referential/specific reading), or it is interpreted as a generalized quantifier. In difference to Reinhart (1997), however, I have argued that distributive inverse scope of such GQ-indefinites is the effect of A-reconstruction of scope-bearing NPs that are situated above them at Spell-Out (in slightly conservative terminology). Distributive inverse scope is blocked exactly when the higher scope-bearing NP cannot A-reconstruct for some independent reason. The independent blocking elements we have discussed are focused modified numeral indefinites.

In an approach to the differential scopal options for quantifier classes incorporating (QR and) unselective binding via existential closure, RefP—as I indicated in the discussion above—is redundant, insofar as it does not yield distributive scope for its inhabitants. Unselective binding is needed independently given that island-external wide scope of referential indefinites (not derivable by movement in a sufficiently constrained theory of scope) is attested anyway. Wide 'scope' of the other main class of referential expressions, i.e. definites (inasmuch as definites are scope-sensitive at all), is to be treated without movement as well, as is widely assumed.

Let us consider now modified numeral indefinites further. The question now is whether they can undergo QR. Since they can undergo A-reconstruction quite freely, given that they are not referential/definite, potential test cases are substantially reduced. One test case involves an object modified numeral indefinite and a subject universal quantifier: only QR can take the object modified numeral indefinite above the subject universal, cf. (38a). Another involves a non-reconstructable indefinite in subject position, where an analogous situation obtains, cf. (38b).

- (38) a. Every man made an agreement with more than two women
 b. Two libraries showed fewer than twenty students at least three films

In both (38a) and (38b) wide scope of the modified numerals is marginally available. This means then that QR is required for the treatment of modified numeral indefinites—at least for the ones appearing in (38a,b), i.e. ones with increasing

modified numerals. Let us check whether the same extends to decreasing and non-monotonic ones.

- (39) a. Every man made an agreement with fewer than four women
 b. Every man made an agreement with exactly four women
 c. Two libraries showed fewer than twenty students less than three films
 d. Two libraries showed fewer than twenty students exactly three films

Wide scope of the relevant indefinites in (39) appears degenerate—though judgements are of course difficult with (39c) and (39d), involving three quantifiers.

The remaining major issue for such a QR-based account is to delimit the class of GQ-NPs that undergo QR in such a way that the semantics of the operation of QR is related to some property of set of quantifiers that can take part in such a process. We have seen that this set includes distributive universals, increasing modified numerals like *more than n N* / *at least n N* (on their wide scope specific distributive reading).²⁸ To isolate this class, we may attempt a definition based on their discourse semantic properties.

Based on procedural notions instead of denotational semantic terms, Szabolcsi (1997) argues that movement to DistP (in Hungarian) involves NPs that offer up a (plain) witness set to distributive predication. (In the case of bare numeral indefinites in RefP, the witness offered up for predication is a minimal witness.) We can assume, transposing Szabolcsi's idea to a QR-based model, that QR is defined as distributing over witness sets. Then, it follows that only QPs with an increasing determiner can undergo QR, as Szabolcsi points out (though in different terms). This is due to the fact that only increasing determiners (but not decreasing or non-monotonic determiners) are such that (40) holds of them:

- (40) $\text{Det}(N) P = \exists A, A \text{ a witness of } \text{Det}(N), \forall x \in A, Px$

This in itself is not a sufficient condition on availability of QR, since bare numeral indefinites are also increasing (on their non-focused reading), yet, they seem not to undergo QR. However, as Szabolcsi argues, reinterpreting Partee's (1995) notion of 'essentially quantificational', it seems a valid generalization that it is 'essentially quantificational' DPs that can be interpreted distributively—which in turn is a condition on QR (QR produces a distributive interpretation). 'Essentially quantificational' DPs are defined as DPs whose determiner is not purely intersective and which do not denote (atomic or plural) individuals, either (hence, bare numeral indefinites are excluded). Distributive universals and proportionals are essentially

²⁸ It is not clear whether singular indefinites like *a(n) N*, or *some N* also undergo QR. This is because distributivity would be the key property separating scope gained by QR and scope achieved by existential closure—however, singular indefinites are unable to distribute. As far as I can see, for this very reason, Reinhart's interface economy view predicts that these indefinites never QR. On the other hand, if singular indefinites fall into the same class as bare numeral indefinites examined above, then by uniformity, we could conjecture that they do not undergo QR either (similarly to bare numeral indefinites). I will remain agnostic here regarding this issue.

quantificational; non-individual denoting DPs whose restrictor²⁹ is presupposed not to be empty (e.g. *more than six N*) are essentially quantificational too.

If QR is formulated—following Szabolcsi’s (1997) insight—as introducing a witness set as logical subject distributing over the predicate denoted by the sister of the QR-ed quantifier, then this grabs precisely those GQ-NPs that appear to undergo QR (universals and increasing modified numeral indefinites³⁰), to the exclusion of others (like non-monotonic or decreasing modified numerals, e.g. *exactly three n N*, or *fewer than n N*, respectively, and bare numeral indefinites (which on their focused (non-specific) interpretation are not increasing)).³¹

Given that non-increasing modified numerals do not undergo QR on this definition, they are not necessarily interpreted as distributive. As for bare numeral indefinites, they once again can be either interpreted collectively or distributively.

In this subsection I have argued that a QR-based account yields better results than B&S’s checking-based account augmented with an elaborate clausal hierarchy of quantifier-specialised functional projections—provided that the focus and quantificational intervener status of some numerals (in turn affecting scope shifting operations across them) is taken into account. The QR approach defended here stays clear of the theoretical complications associated with Beghelli and Stowell’s feature checking theory, and furthermore, it is significantly more constrained.

In the next section, I turn to Hungarian as a case study and argue, further weakening the support for a feature checking approach to scope, that contrary to Szabolcsi’s (1997) claim, Hungarian does not produce conclusive overt evidence in favour of such a theory.

3 Hungarian: against a checking approach to scope

3.1 Quantifier-specialised functional projections in Hungarian

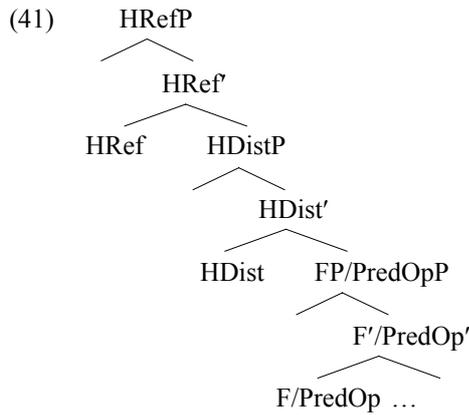
Szabolcsi (1997) argues that Hungarian, with its preverbal overt movements, provides strong evidence for Beghelli and Stowell’s (1994/1995; 1997) theory of

²⁹ Or rather, witness, as Szabolcsi shows (p. 142–143).

³⁰ As well as increasing proportionals, like *many N*. Here we have not examined *many N* QPs: in fact they behave on a par with *more than n N* expressions.

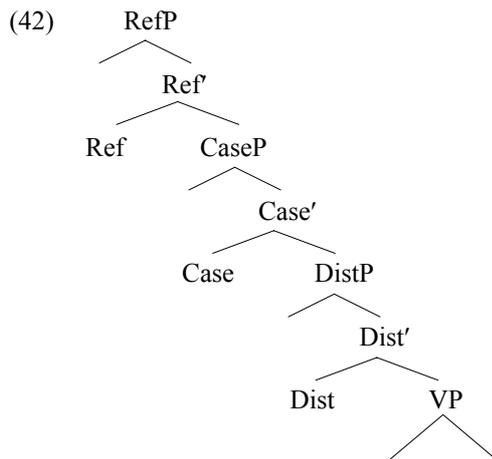
³¹ Given the assumption we have been making regarding the focused status of non-increasing modified numeral indefinites, and provided that we extend this analysis to bare numeral indefinites on their non-specific/non-referential interpretation, it becomes possible to give an alternative specification of the class of QPs that can undergo QR. If these bare numeral indefinite occurrences are also focused (because their numeral is focused), then, taking focusing into account, it appears that it is the non-focused class of indefinites that can QR, of course, including (non-focused) strong quantifiers. Then the picture would be extremely simple: all GQ-NPs can QR, except the ones that are focused. The remaining question then is why focusing bleeds QR. Various explanations come to mind (for instance, an improper movement account, given a sufficiently elaborated typology of movements in which QR is lower in a hierarchy than focusing, incorporating at least the (partial) hierarchy A-movement > QR > discourse-related A-bar movement; see also Chapter 4); but I leave this issue open here.

scope. She transposes B&S's analysis to Hungarian by positing the following hierarchy of functional projections in the preverbal domain of this language:



HRefP is targeted again by referential expressions (definites and wide scope indefinites), HDistP by increasing distributive quantifiers, FP by focus operators (cf. Brody 1990), and PredOpP by what are referred to as counting quantifiers (such as *kevés* N 'few N', *hat* N 'six N', *pontosan hat* N 'exactly six N')—all in overt syntax. By stipulation, out of the latter two projections (FP and PredOpP), only one can appear in one clause (see the discussion in Chapter 2, Section 4.1). In the field marked by three dots we find the verb and AgrP projections.

Now, this picture in itself unfortunately does not account for the full set of even the most basic data. Therefore Szabolcsi proposes that the following hierarchy is present in the postverbal field of Hungarian:



In distinction to HRefP and HDistP, movement to these second instances of RefP and DistP is covert. Inhabitants of CaseP³² (and AgrP) can optionally A-reconstruct.

Here too quantifiers bearing the relevant features raise to the corresponding projections. Let us see some Hungarian examples, along with their analysis in the style of Szabolcsi (left arrows indicate LF raising, right arrows signal LF-reconstruction, where the latter one is an optional operation).

- (43) a. [HRefP Péter_i [HDistP mindenkit_k [FP a névnapján köszönt fel
 P.-nom everyone-acc the namesday-his-on greets Pref
 [CaseP t_i [CaseP t_k [VP ...
 ‘Peter congratulates everyone on his nameday’
- b. [PredOpP Kevés lány_{t_i} köszöntött fel [RefP [CaseP t_i [VP az osztályfőnök
 few girl-acc greeted Pref the headmaster-nom
 ‘The headmaster congratulated few girls’
- c. [HDistP Több mint hat fiú_i [PredOpP két jelest_k szerzett [CaseP t_i [CaseP t_k
 more than six boy-nom two five-acc got
 [DistP [VP ... minden félévben ...
 every term-in
 ‘More than six boys got two fives in every semester’
- d. [FP Egy keddi napon harapott meg
 a Tuesday day-on bit Pref
 [CaseP hatnál több kutya [DistP [VP ... minden fiút ... (ambiguous)
 more than six dog-nom every boy-acc
 ‘More than six dogs bit every boy on a Tuesday’

In (43a) the various quantifiers move to the respective quantifier projections overtly: the proper name to HRefP, the universal to HDistP, and the focus operator to FP. In (43b), PredOpP replaces FP, and that is where the counting quantifier raises to, while the postverbal definite NP moves to RefP of the postverbal domain covertly. (43c) contains a postverbal universal quantifier, which moves to DistP covertly. Finally, the ambiguity of (43d) is derived by assuming that on the one hand, the universal quantifier moves to DistP covertly, and on the other, the expression *hatnál több kutya* ‘more than six dogs’ optionally reconstructs from CaseP to its VP-internal position—this being responsible for the ambiguity.

Let me make two specific comments now related to CaseP, turning to more general issues directly below. First, it is not clear, if CasePs exist in Universal Grammar at all, as distinct from AgrP projections. Chomsky (1995) suggests eliminating AgrP projections—hosting Case-checking in earlier models—altogether from syntax on conceptual grounds. In Chomsky (2000), it is suggested that Case checking never happens independently, but always as parasitic on some other checking (Agree) relation. Second, optional reconstruction for scope from CaseP only takes care of scope of arguments. Nevertheless, (43d) type ambiguity is

³² CaseP is a recursive Case-checking projection.

available with (non-reconstructable) adjuncts as well.³³ In reality, the postulation of CasePs is crucially instrumental for Szabolcsi to treat postverbal scopal optionalities.

Although Szabolcsi underscores the similarity of the Hungarian and the English clause and suggests that this similarity appears to support Beghelli and Stowell's theory, in actual fact this similarity is much more limited than what would make a convincing argument. Let us see why this is so. First, as acknowledged by Szabolcsi herself (p. 122), FP does not parallel ShareP of the English clause, neither does PredOpP correspond to AgrP in English. FP is matched with focus interpretation, and it can host definite expressions as well—neither is true of ShareP (as Szabolcsi acknowledges). While AgrP is the locus of phi-feature checking and an A-position, FP/PredOpP is not. (Recall that in Chapter 2, Section 4.1 I argued that the projection of PredOpP does not exist as such.) Further, below I examine the issue of the presumed parallel between Hungarian HRefP and English RefP, concluding that these two projections are essentially different. It is important to note that the more different the set of functional projections of English and Hungarian clause structure, as well as the hierarchical order of these projections are, the more the potential justification derivable from such an alleged symmetry diminishes, and at the same time, the more the ideal of reducing cross-linguistic variation to a minimum in the theory is contravened. I will also argue that HRefP is distinct not only from English RefP but also from Hungarian (postverbal) RefP. I will also demonstrate that the empirical evidence for having DistP as a projection is rather flimsy, moreover, its postulation is problematic, and therefore unwarranted.

3.2 Against RefP in Hungarian

I will start the discussion with the RefP family of projections. This is a family of projections in two senses: on the one hand RefP occurs at two points in the syntactic tree of Hungarian (HRefP and RefP), and in fact RefP can be filled multiply (in contrast to FP/PredOpP), which is construed as (multiple) adjunction to specifier and absorption in Beghelli and Stowell (1994/1995), and as recursivity (multiplication) of the functional projection itself in Szabolcsi (1997). On either view, there appears to be a crucial syntactic difference between HRefP and postverbal RefP. Phrasing the difference now in terms of the recursive projections (i.e. Szabolcsi's) view, it seems that recursive HRefPs cannot be disrupted by any other projection, whereas the same seems not to hold for RefPs. I will examine this

³³ Consider, for instance, (i):

- (i) Pötyi egy keddi napon harapott meg kettőnél többször mindenkit
 Spotty a Tuesday day-on bit-3sg Pref more than twice everybody-acc
 'Spotty bit everybody more than twice on a Tuesday'
 more than twice > everybody / everybody > more than twice

If we do not assume that distributive universals move to a fixed projection, the ambiguity reduces to optionality of landing sites of QR of the postverbal universal.

asymmetry directly below. The other, admitted difference is that movement to HRefP is overt, while movement to RefP is covert. This latter distinction is technically possible to make, however, inasmuch as we are dealing with the same projection essentially, we would expect feature checking movement that it triggers to either be uniformly overt, or be uniformly covert.

Let us see what reason there is to believe that multiple RefPs in the postverbal domain can be disrupted. As we saw in Chapter 2, Hungarian has true multiple foci constructions. As I demonstrated there, postverbal focus operators may optionally scope inversely over other postverbal quantifiers, as illustrated below.

- (44) PÉTER mondott el egy diáknak mindent CSAK KÉTSZER
 P.-nom told-3sg Pref a student-dat everything-acc only twice
 ‘It’s Peter who told a student everything only twice’
 everything > only twice
 only twice > everything

This, we argued, warrants FP focus projections in the postverbal field, besides the one in the preverbal field. Given the ambiguity of (44), we need an FP both below and above postverbal DistP.

- (45) Revised postverbal field I.
 ... [RefP [FP [CaseP [DistP [FP [VP

Further, the postverbal field admits multiple distributive universals with the scopal intervention of indefinites:

- (46) PÉTER mutatott meg minden vizsga után minden dolgozatot
 P.-nom showed Pref every exam after every test-acc
 egy diáknak
 a student-dat
 ‘It’s Peter who showed every test to a student after every exam’
 every exam > a student > every test
 every exam > every test > a student
 a student > every exam > every test

The position hosting the indefinite *egy diáknak* ‘to a student’ must be located below the DistP of ‘every exam’ but above the DistP of ‘every test’. In this case, after every exam a (potentially) different student can see the tests all (say the teaching assistant, when correcting them). Following the logic of the model, we can identify this position only with CaseP. Of course the reading is still available in which the reference of the indefinite NP is independent both of the exams and of the tests, i.e. in which RefP is situated above both of the DistPs.

- (47) Revised postverbal field II.
 ... [RefP [FP [**DistP** [CaseP [DistP [FP [VP

Now, it is possible for an indefinite to have wide scope with respect to a postverbal distributive universal, but take scope below a postverbal focus:

- (48) PÉTER mutatott meg KÉT vizsga után egy diáknak minden dolgozatot
 P.-nom showed Pref TWO exam after a student-dat every test-acc
 ‘It’s Peter who showed every test to a student after TWO exams’
 possible: TWO exams > a student > every test

This requires a RefP in between postverbal FP and DistP:

- (49) Revised postverbal field III.
 ... [RefP [FP [**RefP** [DistP [CaseP [DistP [FP [VP

It also appears that an FP must be projected between the two postverbal DistPs, given (50).

- (50) PÉTER mutatott meg minden vizsga után KÉT diáknak
 P.-nom showed Pref every exam after TWO student-dat
 minden dolgozatot
 every test-acc
 ‘It’s Peter who showed every test to TWO students after every exam’
 possible: every exam > TWO students > every test

- (51) Revised postverbal field IV.
 ... [RefP [FP [RefP [DistP [**FP** [CaseP [DistP [FP [VP

We can vary the sequence of QPs in the postverbal field to show that there must be at least another RefP here:

- (52) A MÚLT FÉLÉVBEN magyarázott meg minden tanár
 the last semester-in explained-3sg Pref every teacher-nom
 egy diáknak mindkét vizsgája után két kérdést CSAK KÉTSZER
 a student-dat both exam-poss-3sg after two question-acc only twice
 ‘It was in the last semester that every teacher explained two questions
 to a student after both his exams only twice’

The sentence obviously takes some processing, but at least on the surface scope reading, it is clearly an available possibility. Given that the indefinite *két kérdést* ‘two questions’ on the direct scope reading takes wide scope immediately above the secondary focus *csak kétszer* ‘only twice’, we need a RefP above the lowest FP and below the lowest DistP. Further, it is not backbreaking to add another distributive universal like *minden előadóteremben* ‘in every lecture hall’ to (48) in a position below ‘two questions’ but above ‘only twice’—this entailing the postulation of a further DistP above the lowest FP and below the lowest RefP.

(53) Revised postverbal field V.

... [RefP [FP [RefP [DistP [FP [CaseP [DistP [**RefP** [**DistP** [FP [VP

In short, while FP and DistP projections can intervene between RefPs (underscored below), they cannot separate HRefPs.

(54) ... [RefP [FP [RefP [DistP] [FP] [CaseP [DistP] [RefP [DistP [FP [VP

In addition, RefPs have to be admitted to the preverbal field too. This is because indefinites can scope above preverbal distributive universals (and indeed above preverbal quantificational focus as well):

(55) Mindkét fiú minden lánynak kölcsönadott egy könyvet
 both boy-nom every girl-dat Pref-lent-3sg a book-acc
 'Both boys lent a book to every girl'
 both boys > every girl > a book
 both boys > a book > every girl
 a book > both boys > every girl

In reality, RefP needs to be projected between preverbal HDistP and preverbal FP as well, given that wide scope indefinites can scope between the two:

(56) Mindkét fiú KÉT lánynak adott kölcsön egy könyvet
 both boy-nom TWO girl-dat lent-3sg Pref a book-acc
 'Both boys lent a book to TWO girls'
 a book > both boys > two girls
 both boys > a book > two girls
 both boys > two girls > a book

Then the revised preverbal hierarchy is as follows:

(57) Revised preverbal field

[HRefP [RefP [HDistP [RefP [HDistP [RefP [FP ...

Crucially, what is not possible is to separate two HRefPs by a (H)DistP or an FP:

(58) *[HRefP [(H)DistP / FP [HRefP ...

The difference between RefP and HRefP, however, is not only syntactic in nature. From a discourse semantic perspective, it can be observed that inhabitants of HRefP need to be high accessibility entities in the sense of Ariel (1990, 1994), while inhabitants of RefP need not. For instance, this explains the acceptability contrast below, where judgments refer to a discourse-initial position (the pronoun in (59a) in RefP, while it is in HRefP in (59b)).

- (59) a. Mindig veszekszem vele,
 always quarrel-1sg with-him
 Péter mégsem haragszik meg
 P.-nom still_not become_angry Pref
 'I always quarrel with him, Peter nevertheless is not angry with me'
- b. ?* Vele mindig veszekszem,
 with-him always quarrel-1sg
 Péter mégsem haragszik meg
 P.-nom still_not become_angry Pref
 'id.'

It is a long-standing generalization that expressions that are in HRefP for Szabolcsi function as logical subjects of categorical judgements (cf. e.g. Kuroda 1972). Inhabitants of RefP, however, are not interpreted in the same way. The accusative definite NP is understood as subject of predication in (60a), but not in (60b).

- (60) a. Jánost elütötte a vonat
 J.-acc Pref-hit-past-3sg the train-nom
 'The train ran over John'
- b. Elütötte Jánost a vonat
 'id.'

The same applies to inhabitants of RefP in the revised preverbal field, cf. (57). The postverbal wide scope indefinite in (61), situated in preverbal RefP at LF, is not interpreted as logical subject again:

- (61) Mindenki látott egy lányt
 everybody-nom saw-3sg a girl-acc
 'Everybody saw a girl'

It appears then that we are dealing with two distinct projections as far as the semantic status of their inhabitants is concerned. In fact, prosodic properties are also different in the two positions: the prosodic pattern characterizing expressions in HRefP, for example the lack of obligatory stress-bearing (cf. e.g. É.Kiss 1994, 1998b) does not automatically extend to elements in presumed RefP projections. In (62), the preverbal definite in HRefP and the postverbal definite in RefP differ in that the inhabitant of HRefP bears stress as an option, while stress is obligatory on the definite associated with RefP.

- (62) Az ⁽⁰⁾igazgató bemutatta minden lánynak egyenként
 the director-nom Pref-introduced-3sg every girl-acc one-by-one
 a 'fiúkat
 the boys-acc
 'The director introduced the boys to every girl one by one'

Observe further that the English RefP originally proposed by Beghelli and Stowell also systematically differs with respect to the criteria above from Hungarian HRefP. The properties of the inhabitants of HRefP (high accessibility, logical subject interpretation, overt movement) make them similar more to English topicalized constituents. (English topicalization falls outside the domain described by Beghelli and Stowell: it is a syntactically higher, CP-related phenomenon.)

Thus, it cannot be maintained that Hungarian HRefP is parallel to English RefP, and that therefore Hungarian provides overt support for a Beghelli and Stowell style analysis.

On the other hand, the relative scopal freedom of inhabitants of presumed RefP-s do not make a treatment in terms of RefP projections very appealing, inasmuch as RefP does not appear to be associated to a fixed position in the clausal hierarchy, but has to be posited all over the place to get the empirical facts right. Furthermore, scopal freedom of wide scope indefinites is not confined to a clause, but—as is well known—specific indefinites have unbounded scope, which essentially goes against a movement treatment. In fact, according to a wide-spread alternative view, the scope of specific indefinites is not the result of movement at all, but of unselective binding (cf. e.g. Reinhart 1995 and references therein), and definites do not move for scope either (they are scope-independent).

All in all, although movement to a position corresponding to HRefP seems justified (and is parallel to English topicalization), this position is not analogous to English RefP; nor is it analogous to Hungarian RefP, whose postulation appears unmotivated.

3.3 Against DistP in Hungarian

We have seen that HRefP is fundamentally distinct from RefPs, and that given the scopal freedom of their inhabitants, their postulation seems both unnecessary and undesirable. Let us turn now to the other crucial quantifier-specialized projection type, HDistP and DistP.

Syntactic differences similar to those between HRefP and RefP appear to exist between HDistP and DistP, at least at first approximation. On the one hand, movement to HDistP is overt, while movement to DistP is covert—an asymmetry that is conceptually unappealing in the same way as the asymmetry of HRefP and RefP pointed out in the preceding subsection. On the other hand, HDistPs do not admit intervening projections, while DistPs do. In fact, the positional restrictedness of DistPs (which could potentially provide evidence for their existence) is once again much weaker than Szabolcsi presumes. If RefPs exist, they can freely intervene between DistPs, cf. (46) above (and indeed between HDistPs as well, cf. (55)). In fact, FPs can also intervene between DistPs: postverbal universals can scope both below and above a postverbal focus, cf. (48), (50) and (52).

Returning now to the overt/covert distinction, in fact, at least descriptively, a wide scope universal (i.e. one that is associated with HDistP) can surface postverbally. This is acknowledged by Szabolcsi in a footnote (p. 118, Fn.9), where

she proposes to generate these quantifiers as undergoing a stylistic (PF) postposing rule, advocated in É.Kiss (1987). While the restrictiveness of such a PF-displacement treatment is unclear, a syntactic account is at least just as feasible. The syntactic account would be to admit that the movement of universal quantifiers to HDistP can be covert as well overt. On the other hand, we have seen that movement to DistP can be covert. Importantly, however, in fact there is no evidence that such movement cannot be also overt (direct scope of postverbal distributive universals is actually the preferred parse). If it turns out that it can also be overt, then the difference between HDistP and DistP with respect to the overt/covert status of movements triggered dissolves. Let us assume this to be the case. Then we can no longer differentiate DistP from HDistP: DistP-s are HDistP-s too, with optionally overt/covert movement to their specifier.

But then, in terms of the intervention generalization, preverbal and postverbal focus will be on the same footing with respect to HDistPs: FP can intervene between an two HDistP projections. If RefPs exist, as I already pointed out, they can also freely intervene, both in the preverbal and the postverbal domain. In any case, it appears that the projection housing distributive universals can be projected at any point in the clausal hierarchy (except above HRefP, to which we will return). However, as I pointed out for RefPs too, one strong type of evidence for positing a functional projection can and should come from the fact that the class of elements associated with that projection appear in a fixed syntactic position, namely that provided by the functional projection itself (assuming that the nature of the fixed position cannot be derived elsewhere in the grammar, but must be encoded in syntax). The fact that we find that we need to project HDistPs virtually at any point above VP and (below HRefP) means that we simply have no motivation provided by positional restrictions for a HDistP projection.

In fact, the relative freedom of the scope of universals within the clause would follow from a QR-based approach, where QR is taken to be syntactic adjunction.

Another motivation for (H)DistP could be the isolation of a Dist morpheme as a head in the clausal hierarchy. Such a morpheme does not overtly exist, however, in Hungarian—even though distributive morphemes can be found in some languages, as B&S point out (cf. Gil 1982). Of course, the presence of an affixal morpheme on a verb does not entail that there must be an independent functional projection in the clausal domain corresponding to that morpheme, whether it is interpretable or uninterpretable (like Case, according to Chomsky's view), hence this in itself cannot justify positing (H)DistP. The basic motivation is that the property of distributing and the witness set distributed over can be dissociated. This is what the example below is meant to illustrate.

- (63) Mary thought that every student_i kept [a stolen book that he_i actually returned]

The bracketed NP receives a *de re* interpretation and thus raises to a matrix RefP. But then the universal quantifier fails to bind the pronoun internal to the NP, hence we are forced to believe that the universal quantifier raises covertly to the matrix

clause to be able to bind the pronoun, above matrix RefP. It is a fact that the universal does not distribute in the matrix clause: it does not distribute over the matrix verb (one thinking event), and if we replace the matrix subject with an indefinite like *more than three librarians*, librarians cannot vary with students. We can conclude that the set introduced by the universal and the operation of distribution are dissociated (in DRT terms: the set is introduced in a higher box than the distributive operator).

However, the argument is far from conclusive. The unselective binding approach to the scope of indefinites (here: *a stolen book that he actually returned*) eliminates the motivation for the raising of the universal to the matrix to begin with, hence such evidence is not very strong.³⁴

Nevertheless, Hungarian features similar constructions overtly (% indicates variation among speakers in terms of accepting such long movements).

- (64) a. %Minden diáknak, aki részt vett benne úgy döntött
 every student-dat who part-acc took-3sg in-it so decided
 az igazgató hogy el kell hagynia az iskolát
 the principal-nom that Pref must leave-inf-3sg the school-acc
 ‘The principal decided that every student who took part in it must leave the school’
- b. %Minden meghívottnak Imre azt hitte, hogy
 every invited_one-dat I.-nom that-acc believed that
 meghívókártyát kell küldenie
 invitation-card-acc must send-inf-3sg
 ‘Imre thought that he had to send an invitation card to every invited person’
- c. Mindhárom jelöltünk valószerű volt hogy
 all-three candidates-poss-1pl-acc probable was that
 nyerni fog
 win-inf will-3sg
 ‘Every one of our three candidates were likely to win’

The universals stand in the matrix clause, but they distribute only in the embedded clause.³⁵ However, this phenomenon has at least one alternative explanation which

³⁴ Yet, it remains true that universal quantifiers can have *de re* readings over intensional predicates. Accordingly, (i) below is ambiguous:

- (i) Mary believes that every unicorn is white

³⁵ The matrix clause involves a single event in (a) and (b). If we insert an indefinite in the matrix VP, it will not be able to be interpreted to co-vary with the raised universal quantifier. When raised to the matrix clause, the universal has a *de re* interpretation: uttering (i) commits the speaker to assuming the existence of unicorns:

- (i) Minden unikornis azt hitte, hogy fehér
 every unicorn-nom that-acc believed-3sg that white
 ‘He believed that every unicorn is white’

does not assume a distributive functional head in the clausal hierarchy; hence, the strength of such constructions as evidence for the existence of a Dist head is rather dubious. Before we turn to this account, let us examine the nature of the long movement of the universal in some detail.

First, consider (64b) again. There the universally quantified expression undergoes movement to a position above the matrix topic *Imre*. It appears, however, that long movement of the universal quantifier is severely degraded (even for those speakers who accept (60b)) if it takes to a position below the matrix topic phrase:

- (65) *?Imre minden meghívottnak azt hitte, hogy
 I.-nom every invited_one-dat that-acc believed that
 meghívókártyát kell küldenie
 invitation-card-acc must send-inf-3sg
 ‘Imre thought that he had to send an invitation card to every invited person’

We can find an interesting contrast in this respect between matrix topics that originate from within the matrix clause and matrix topics that originate in the embedded clause. It appears that topics that have undergone long movement from the embedded to the matrix clause are significantly more tolerant with respect to the placing of long-moved universal quantifiers (although parsing may be more difficult given the two long movements to the higher clause):

- (66) a. %Minden jelentkezővel a főnökök azt hittem,
 every applicant-with the bosses-nom that-acc believed-1sg
 hogy már elbeszélgettek
 that already Pref-talked-3pl
 ‘I believed that the bosses had already talked to every applicant’
 b. %A főnökök minden jelentkezővel azt hittem,
 the bosses-nom every applicant-with that-acc believed-1sg
 hogy már elbeszélgettek
 that already Pref-talked-3pl
 ‘id.’

So, there seems to be a contrast between topics that originate in the matrix clause and ones coming from the subordinate clause: the latter allow long movement of a universal to a position below them, the former do not. Interestingly, a similar contrast can be found with two topic expressions involving short and long topicalisation contexts:

- (67) a. %A jelentezőkkel Imre azt hitte hogy
 the applicants-with I.-nom that-acc believed-3sg that
 a főnökök már elbeszélgettek
 the bosses-nom already Pref-talked-3pl
 ‘Imre believed that the bosses had already talked to the applicants’

- b. *?Imre a jelentkezőkkel azt hitte, hogy
 I.-nom the applicants-with that-acc believed-3sg that
 a főnökök már elbeszélgettek
 the bosses-nom already Pref-talked-3pl
- c. %A jelentkezővel a főnökök azt hittem, hogy
 the applicant-with the bosses-nom that-acc believed-1sg that
 már elbeszélgettek
 already Pref-talked-3pl
- d. %A főnökök a jelentkezővel azt hittem, hogy
 the bosses-nom the applicant-with that-acc believed-1sg that
 már elbeszélgettek
 already Pref-talked-3pl

It appears then that long movement of the universal to the matrix is long topicalisation.³⁶ However, there are two potential problems with this view. The first is that it also appears that long topicalisation cannot take to a position that is lower than that of short-topicalised elements originating from the matrix clause. This problem in itself is not conclusive, given that it may very well reduce to economy of movement (Shortest Move / Attract Closest, i.e. the Minimal Link Condition). For that to work we need to assume that there is a [topic] feature attracting topics, and in case of multiple topics it is the closer topic that is attracted (first)—topics originating from the same clause counting as closer than ones coming from an embedded clause. Then, to ensure that the topic originating lower ends up higher we either assume that Richards's (1997) 'tucking-in' analysis is either incorrect in general or it does not extend to topics, or we assume that there are recursive TopP/HRefP projections one above the other. However, there is a more serious problem with a long topicalisation analysis. Namely, it is not clear why short topicalisation cannot target distributive universals in general (as opposed to long topicalisation). If it could, we would expect that universal quantifiers can generally appear as topics within a clause, above other topics in the same clause. This is not generally possible, however.³⁷

³⁶ It cannot be long 'QR'/movement to matrix DistP: first, universal quantifier movement cannot take to a position above topic, second, QR is clause-bounded generally, and third, movement to a universal cannot take to a position below a matrix universal quantifier, cf. (i). However, if both universals originate from the embedded clause, then the same configuration is possible, given that neither long movement takes to a position of universals in the clause, cf. (i).

- (i) *Minden főnök minden jelentkezővel azt hitte, hogy már elbeszélgetett
 every boss-nom every applicant-with that-acc believed-3sg that already Pref-talked-3sg
 'Every boss believed that he had already talked to every applicant'
- (ii) %Minden főnök minden jelentkezővel azt hittem, hogy már elbeszélgetett
 every boss-nom every applicant-with that-acc believed-1sg that already Pref-talked-3sg

³⁷ It must be noted that although this remains generally impossible, in case the universal is descriptively sufficiently rich (e.g. it is modified by a relative clause), short topicalisation seems to be available to it:

Therefore I will assume here that long movement of universal quantifier and referential/specific expressions to a topic-like position above the topic field is in fact a kind of long A-bar scrambling occurring after the completion of the superordinate clause. Indication that we are dealing with a landing site which is not simply that of topics, but some even higher field is provided by the fact that certain high adverbials also do not tolerate a long-moved topic to a position below them, even though the same adverbials allow this for short-moved topics.

- (68) *?Tegnap a jelentkezőkkel azt hittem, hogy már
 yesterday the applicants-with that-acc believed-1sg that already
 korábban elbeszélgettetek
 earlier Pref-talked-2pl
 ‘I believed yesterday that you had already talked to the applicants earlier’

Having examined the nature of the long movement in question³⁸, let us return to the main discussion: namely, why is it possible for a universal to stand in the matrix clause but distribute only in the embedded clause.

Beghelli and Stowell, and Szabolcsi offer the explanation that there is a Dist head in the clausal domain which hosts the universal in its specifier, from where it can move on to matrix (H)RefP, stranding the Dist morpheme (which is responsible for distributing). However, as I said, the same fact can be explained in a different way as well. One alternative analysis is as follows. Suppose we accept Szabolcsi’s proposal according to which syntax reflects the dissociation of distribution on the one hand, and the introduction of the referent set on the other. However, this can be implemented in such a way that the silent distributive operator itself is part of the

-
- (i) ?Minden meghívott, aki eljött Pétert nagyon jól ismeri
 every invited_one-nom who Pref-came-3sg P.-acc very well know-3sg
 ‘Every invited person who has come along knows Peter very well’

³⁸ That long-scrambling is not semantically insignificant can be seen from the fact that it results in a *de re* interpretation (see also Footnote 31), as well as from Condition C effects:

- (i) *Velük_i azt hitték a jelentkezők_i, hogy majd elbeszélgetnek
 with-them that-acc believed-3pl the applicants-nom that Fut Pref-talk-2pl
 ‘The applicants believed that you would talk to them’

Note here that non-referential adverbials/adjuncts cannot undergo long-scrambling (the same is impossible for Japanese long-scrambling, cf. Miyara 1982, Saito 1985). That we are dealing not with A-movement is evidenced by the ‘long’ nature of the movement itself, as well as inability to result in new A-binding relations:

- (ii) *A jelentkezőket azt hitték egymás tanárai,
 the applicants-acc that-acc believed-3sg each other’s teachers-nom
 hogy felveszitek
 that Pref-admit-2pl
 ‘*Each other’s teachers believed that you would admit the applicants’

This set of facts are of course compatible with a long-topicalisation view as well.

distributive quantifier expressions themselves as a high functional head (cf. Shlonsky 1991), schematized in (69a). Then, sentences in (64) are analogous to floating quantifier constructions (cf. e.g. Koopman and Sportiche 1991), i.e. sentences like (69b,c) below.

- (69) a. [QP/DistP Dist [DP . . .]]
 b. The boys are thought by some to be likely to all pass the test
 c. A diákok valószínű hogy mind hozzájárultak
 the boys-nom probable that each Pref-contributed-3pl
 ‘The boys are likely to have each contributed to it’

In sentences in (64), the Dist element is contained in a high functional head of the distributive expression, and it is then stranded by the rest of the nominal phrase, i.e. the DP part if the structure of the phrase is [QP/DistP Dist [DP . . .]] (in other words, Dist is part of the nominal, not the clausal domain). The obvious question at this point is: why cannot the whole QP (DistP) undergo movement to the higher clause (i.e. what is the reason for stranding)? The answer to this question may be found with the requirements of the long-scrambling movement itself, inasmuch as this movement displaces referential expressions only. This then does not let QP (DistP) to undergo movement, but allows DP to strand QP (DistP), undergoing long-scrambling. The result, as desired, is introducing the relevant set (corresponding to the DP part) in the matrix, but distributing over it only in the position of stranding, i.e. in the embedded clause. Therefore, there is not conclusive argument to be based on the dissociability of introducing referent set and distribution itself.

In fact, Szabolcsi’s system as it stands overgenerates in this context. This is because it predicts that such a dissociation is possible also within the same clause: if an element moves first to specifier of (H)DistP and then on to specifier of (H)RefP, then the prediction is that it will only distribute in the (H)DistP position. We can test this prediction with a scope-sensitive element placed between the (H)DistP and the (H)RefP positions in question. Recall that Szabolcsi admits of a (H)DistP position in the postverbal domain (though we argued above that many more, in fact an indefinite number of such projections would be necessary). In (70) the scope-sensitive element is a universal quantifier.

- (70) a. Legalább három fiú minden lánnyal táncol majd
 at least three boy-nom every girl-with dance-3sg Fut
 ‘At least three boys will dance with every girl’
 b. [HRefP at least three boys_i [HDistP every girl . . .]_{(H)DistP} t_i . . .]

It is predicted that there should be a reading for (66a) on which ‘at least three boys’ distribute lower than ‘every girl’, and not above ‘every girl’. Such a reading, however, does not exist. The movement combination to DistP and on to RefP is not ruled out on the Beghelli and Stowell—Szabolcsi theory, because this is precisely what derives the dissociations in the first place.

In actual reality, this treatment of the dissociation gives rise to a serious overt distributional problem as well: if the element in the specifier of a (H)DistP

projection can be moved on the (H)RefP, then this ought to be possible with the preverbal (H)DistP and HRefP projections in Hungarian as well. This predicts very simply that distributive universals can end up in the preverbal HRef position in Hungarian overtly. HRef can be recursively filled by topic elements. This means that a distributive universal moved from (H)DistP to HRefP should be able to end up to the left of other topics (other inhabitants of (recursive) HRefP). As we have seen before, this is plainly impossible in Hungarian: topics strictly precede fronted distributive universals.

It further weakens the basis for the postulation of an independent Dist head that Beghelli and Stowell are forced to associate the covert Dist morpheme (silent EACH) with the Share, AgrS and AgrO heads as well, to obtain distributing definites and bare numeral indefinites. These heads correspond to Szabolcsi's F, PredOp and Case for Hungarian. Szabolcsi notes in relation to expressions like *a legtöbb fiú* '(the) most boys' that these are distributive, nevertheless they are located in HRefP. If the distributive morpheme can and needs to be associated with heads other than the head of (H)DistP, then the syntactic independence of a (H)DistP projection is once again rather questionable.

There is also a technical complication: it is unclear if the same Dist morpheme can be potentially located in Agr / Case heads, why cannot a distributive universal argument expression check its distributive features in the specifier of these projections, and why it has to do so in DistP. This complication is resolved in the model by simply stipulating that the distributive morpheme in heads other than Dist—although it is otherwise identical to the Dist morpheme—is different from Dist: it is silent EACH.

In general, identifying the movement of universals to their scope position as driven by feature checking in functional projections appears to go against the robust generalisation that these movements are clause bound, as I pointed out in section 1.4. For, nothing precludes that a universal quantifier can move directly to the specifier of a DistP in a higher clause; hence, the model for instance incorrectly allows quantifying and distributing over a higher predicate or other scope-sensitive elements of the higher clause. Note that Relativized Minimality (or any equivalent) cannot be referred to in order to exclude the unwanted movement (i.e. that the DistP of the lower clause interferes, being closer). This is because this would not be extendable either in general (*wh*-movement being a prototypical case allowing long movement), or Hungarian-internally to movement to FP within Hungarian, and hence would remain a stipulation (cf. long focus movement exists in this language overtly, without inversion of the verb in the lower clause, suggesting that the focused expression does not move *through* the specifier of an embedded clause FP, cf. e.g. É.Kiss 1994, 1998b, Puskás 2000).

In this subsection, I have argued that there is neither a positional restriction of putative DistPs, nor is there evidence for the isolation of a Dist head in the clausal domain—two potential arguments for the postulation of a functional projection in the clausal hierarchy. On the other hand, the DistP analysis faces serious empirical complications.

More broadly, in this section we have presented detailed arguments that (i) the hierarchy of functional projections posited by Szabolcsi to treat Hungarian in the

vein of Beghelli and Stowell is different in significant respects from what B&S posit for English, (ii) HRefP is distinct both from Hungarian RefP and from English RefP: movement to the position associated with it shows traits of topicalisation, unlike movement to RefPs, (iii) when a wider range of data is examined, both RefP and DistP show a radical syntactic freedom with respect to positions in the clausal hierarchy where they can be projected, (iv) no morpheme is found to correspond either morphologically or semantically to the heads Ref and Dist (Dist may well be a high element in the nominal extended projections), and (v) just as in English, movement to DistP is more limited than the account predicts: it is essentially (finite) clause-bounded, while movement to RefP is more liberal than the account predicts: it is island-free. Hungarian fails to furnish the alleged support of a checking-driven account of the differential scope possibilities of quantifier classes; in fact, as (i), (ii) and (iii) witness, Hungarian poses significant complications for that theory.

4 QR in Hungarian

The view that is advocated in this chapter, then, is a defense of a QR-based treatment of the differential behaviour of Q-classes, along with the elimination of Q-specialised functional projections like DistP and RefP both from the grammar of English³⁹ and from that of Hungarian. As for HRefP, movement to the position associated with this projection undeniably exists in Hungarian; but we have argued that it is different from putative movement to both English and Hungarian RefPs—it is topicalisation (which is the standard view).

As for HDistP and DistPs in Hungarian (recall that DistP needs to be posited quite freely), we are arguing that it is the operation of QR that targets scope positions associated with these projections. I pointed out in section 3.3 that given that postverbal scope of a postverbal universal can be both direct and inverse (cf. section 3.2, as well as Chapter 2), and given that preverbal scope is possible not only for fronted universals but also for postverbal ones, it can be suggested that the movement of distributive universals to (wider than surface) scope position is optionally overt or covert. Now, the same applies in fact to increasing modified numeral indefinites, as well as the increasing proportional *many* N. Distributive universals, increasing modified numeral indefinites and increasing proportionals are exactly the class of quantifiers we identified in section 2 as the class undergoing QR, and this is the class that Szabolcsi (1997) identifies as moving to (H)DistP in Hungarian.⁴⁰ Hence our generalization is that QR as such is optionally either overt or covert in Hungarian.

³⁹ The RefP argued against is not identical to the higher subject position in English proposed in É.Kiss (1996), but is a general scope position for definites and specific indefinites.

⁴⁰ Szabolcsi also includes *also*-expressions in the (H)DistP-associated class. *Is*-phrases are increasing and essentially quantificational in the sense elaborated at the end of section 2, hence, they do qualify as targets of QR, and therefore do not pose a problem in the present context.

4.1 Stylistic postposing?

As for the treatment of preverbal scope for postverbal occurrences of the QR-ing class of quantifiers (i.e. the increasing essentially quantificational QPs), É.Kiss (1987, 1992, 1994) makes use of a stylistic (PF) postposing rule (adopted in Szabolcsi (1997) as well) that places the wide scope quantifier to the postverbal field. As I indicated in section 3.3, the restrictiveness of such a device is questionable to begin with. Further, there are two potential empirical qualms it raises. One is that typically, surface postposing rules (like extraposition, or heavy NP shift) target the edge of the given domain they move an expression out of. The same is not true of the stylistic postposing rule for the QR-ed quantifiers: it places the given quantifier back inside of the IP/VP (depending on the analysis), where they can be followed by other IP-/VP-internal material. Second, we need to rule out incorrect prediction in cases like (71a) (compare (71b)):

- (71) a. *KÉT fiú mondta el, hogy János megérkezett
 two boy-nom said-3sg Pref that J.-nom Pref-arrived-3sg
 mindenkinek
 everybody-dat
 ‘TWO boys said that everybody had come along’
- b. KÉT könyvet olvasott el mindenki
 two book-acc read-3sg Pref everybody-nom
 ‘Everybody read two books’
 two > everybody / everybody > two

In (71b) an allegedly postposed universal takes scope over a preverbal focused numeral indefinite. In (71a), however, postposing is not allowed—in all probability, because of the clause boundary. More specifically, it is a finite clause boundary that appears to block postposing:

- (72) KÉTSZER akartam, hogy eljöjjön mindenki
 twice wanted-1sg that Pref-come-subj-3sg everybody-nom
 ‘I wanted everybody to come along twice’
 OK everybody > twice

But, the same is true for overt QR: as we saw in section 3.3 (cf. Footnote 36), overt QR cannot take to a matrix clause across a finite clause boundary. However, it can cross a non-finite clause boundary:

- (73) Mindenki KÉTSZER akartam, hogy eljöjjön
 everybody-nom twice wanted-1sg that Pref-come-subj-3sg
 ‘I wanted everybody to come along twice’

This is an expected property of QR. However, the conceptual problem here is that we need to state exactly the same locality condition once for QR—this locality

restriction seems to be universal—and once for a language- and construction-particular stylistic rule.

It appears to be preferable to analyse non-overt wide scope of otherwise overtly QR-ing quantifiers to involve covert QR: in other words, to conclude that QR can be optionally overt or covert in Hungarian.

4.2 Optionality

Optionality in general is problematic in a Last Resort-based minimalist framework. However, we need to distinguish between optionality of an operation itself (e.g. between movement and non-movement) and optionality of overtness or covertness of that operation. This latter optionality is problematic for Last Resort in a particular way: it may need to be assumed that the formal feature triggering the movement has dual properties, i.e. there is a lexical doubling of the formal feature itself (a weak and a strong occurrence of the relevant feature are both necessary in the given language, in Chomsky's (1993, 1995) terms). Such lexical doubling appears stipulative and unrestricted, therefore is to be avoided if possible. Note that here, in the case of optionally overt/covert QR in Hungarian, such a technical solution cannot even be considered, given that QR is by definition not feature-driven.

Recall that exactly this is the reason why QR is considered an economy violation in Reinhart (1995), which is only ever tolerated if an otherwise unattainable interpretation is realized. In this latter context, however, Hungarian QR poses a complication. This is because it appears that there does not need to be a scope-sensitive element in the clause for QR to occur to a preverbal position overtly:

- (74) Mindenkit elküldtek
 everybody-acc Pref-sent-3pl
 'They sent everybody away'

Note that the same fact is not problematic under Fox's (1995, 2000) view of QR, where the restriction is only that *wider than shortest QR* is only ever tolerated by economy of movement if it realizes an otherwise unattainable interpretation. QR of the type in (74) is short, therefore it raises no problem for such an approach.

Yet, it is appealing to entertain the possibility that overt fronting of these quantifiers is not QR, but may be reduced to an independently existing other movement operation, and hence QR is uniformly covert in Hungarian as well. The two independently existing movement operations we have admitted here are topicalisation and focusing. As for topicalisation, we pointed out in section 3.3 that universals (just as other members of the QR-ing class) cannot be fronted above another topic, hence they do not seem to be topicalisable (but cf. Footnote 37). Let us consider treating overt fronting of the QR-class of QPs as focusing.

4.3 Focusing instead of overt QR?

In fact, Brody (1990) claims that universals of the *every*-QP type are focused in the fronted position in Hungarian. Of course claiming that such universals are focused *syntactically* in the same way as regular foci does not go through, since fronted universals do not trigger, and in fact do not tolerate V-inversion at all (in plain contrast to regular foci):

- (75) a. *Mindenki jött el
 everbody-nom came-3sg Pref
 ‘Everybody came along’
 b. Mindenki el jött
 c. JÁNOS jött el
 J.-nom came-3sg Pref
 ‘It’s John who came along’
 d. *JÁNOS el jött

Brody assumes that in the case when the universal is focused, then it bears [foc] feature inherently. Brody (1990) works in a model with dynamic [foc]-feature assignment by the verb, rather than in a checking theory. For him, V-inversion does not take place with a universal carrying inherent [foc], because the V would raise to F only to assign [foc] to [Spec,FP]. This is not storable in a checking theory, where F has uninterpretable [foc] to begin with, which needs to be checked no matter what. Still, let us follow Brody’s presentation further on. Focus needs to front generally, hence the inherently focused universal needs to front too. However, this fronting is unexplained in a checking-based theory of movement: inasmuch as the fronted inherently [+foc] universal does not enter any interaction with F, its fronting is not accounted for—another property of the construction not formulable in a checking theory. Brody needs to assume that universals have occurrences which are not inherently [+foc] in order to account for postverbal instances of universals. This lexical ambiguity is unappealing. Further, the immediate problem for the analysis becomes its prediction that a non-inherently [+foc] universal should also be focusable just like any regular focused expression, i.e. dynamically, by raising to [Spec,FP] and being assigned a [foc] feature by the raised verb. That is, the account as it stands predicts that V-inversion should be possible with universals that are not inherently focus. But V-inversion is generally ruled out with a fronted universal, as we have seen (cf. 75a). The assumption Brody makes to rescue the analysis is that economy of movement (a Least Effort principle) favours selecting an inherently [+foc] universal precisely because that does not incur V-raising, i.e. it results in a more economical derivation. However, this assumption is not legitimate in the current input-based minimalist framework: the lexically (inherently) [+foc] universal and a non-[+foc] universal make different Numerations (Lexical Arrays), generating two distinct (sets of) derivations, with no economy-comparison between

(members of) the two (sets).⁴¹ That is, if a non-[+foc] universal is selected in NUM (or LA), then the convergent derivation will be one with V-inversion, and if an inherently [+foc] universal is selected in NUM, then the grammatical derivation will have no V-inversion. Hence, the prediction is optionality of V-inversion with a fronted universal quantifier—contrary to fact.

A further problem for a claim that fronted universals are focused in a checking account of syntactic focusing is that a fronted universal can cooccur both with a fronted regular focus (which it has to precede), and with any number of other fronted universals. If the uniqueness of fronted regular focus is a consequence of checking *off* [foc] of the F head, then it follows that fronted universals do not check [foc] of F in the same way (otherwise uniqueness would be obligatory). But if they do not check [foc] of F, then it ultimately remains unexplained why they are fronted in the first place.

In short, a syntactic focusing account of universal quantifier fronting remains beyond reach. I believe, however, that some notion of focus must be involved here, nevertheless. Consider the dialogue below:

- (76) A: Mindenki eljött?
 everybody-nom Pref-came-3sg
 ‘Did everybody come along?’
 B: Mindenki.
 everybody-nom
 ‘Yes’

If there is a correspondance in terms of focus structure between questions and answers (as is the common assumption, see Chapter 6), then the universal of B’s answer must be some sort of focus. This focus can be above a regular identificational focus as well (the universal is not de-stressed):

- (77) A: Mindenki TEGNAP jött el?
 everybody-nom yesterday came-3sg Pref
 ‘Did EVERYBODY come along YESTERDAY?’
 B: Mindenki
 everybody-nom
 ‘Yes (it is true for everybody)’

However, it appears—at least in light of this experimental test—that a preverbal universal is not necessarily focus: (78) is also a possible (the universal does not bear emphatic stress).

⁴¹ If the derivation can select lexical items directly from the Lexicon (i.e. there is no intermediate interface between the computational system and the Lexicon in the form of a Numeration/Lexical Array), then this aspect of the account can be maintained in the current theory as well.

- (78) A: Mindenki TEGNAP jött el?
 everybody-nom yesterday came-3sg Pref
 ‘Did everybody come along YESTERDAY?’
 B: Tegnap
 Yesterday
 ‘Yes (it was yesterday)’

In case of two or more fronted universals, questions with different ‘scopes’ can be formed. A of (79) can be answered in four different ways—in fact it can be interpreted in four different ways, as indicated in (80) (the interpretation in (80a) yields (79) B as an answer, (80b) yields B’, (80c) is matched with B’’, and (80d) with B’’’). The different question ‘scopes’ correspond to different intonational patterns: in case the scope of the question is not the whole sentence, then there is a short intonational break before the ‘scope’ of the question, and the first, rather long, intonational unit of a yes/no question has its onset on the following phrase (e.g. on the interpretation (80c), answered by (79) B’’, there is an intonational break after *minden fiú* ‘every boy’, and the onset of the first intonational unit of the yes/no question is *minden lányt* ‘every girl’).

- (79) A: Minden fiú minden lányt minden este táncba vitt?
 every boy-nom every girl-acc every night dance-to took-3sg
 B: Táncba
 dance-to
 ‘Yes (they did so)’
 B’: Minden este
 every night
 ‘Yes (they did so every night)’
 B’’: Minden lányt
 every girl-acc
 ‘Yes (they took every girl)’
 B’’’: Minden fiú
 every boy-nom
 ‘Yes (every boy did so)’
- (80) a. ‘Did every boy take every girl to dance every night?’
 b. ‘Did every boy take every girl to dance EVERY NIGHT?’
 c. ‘Did every boy take EVERY GIRL to dance every night?’
 d. ‘Did EVERY BOY take every girl to dance every night?’

The different interpretations are truth-conditionally distinct. This in itself is not proof that it is not identificational focus that is involved (cf. É.Kiss 1998c, see Chapter 2, section 1), for in the case of a universal quantifier identificational focusing happens not to alter truth conditions (recall that the same is true for example for *few* N quantifiers, see Chapter 2, section 4). Thus, it may still be that universal quantifiers here are information focus.

However, it appears that not all QR-ed quantifiers behave the same way as distributive universals in yes/no questions. A limitation of this test is that it cannot be applied to *több mint* n N ‘more than n N’ and *sok* N ‘many N’ type quantifiers, because these are possible foci as well (and focused QPs quite trivially can be the focus of a yes/no question). The three remaining QPs are *also*-phrases and *at least* n N QPs. In fact, the former type behave as universals, while the latter do not. I only give an illustration for the latter case:

- (81) A: Legalább hat fiú eljött?
 at least six boy-nom Pref-came-3sg
 ‘Did at least six boys come along?’
 B: *Legalább hat fiú
 at least six boy-nom

In fact, ‘at least n N’ QPs have a stress pattern distinct from that of universals (both of the *minden* N ‘every N’ and of the *valamennyi* N ‘each N’ type), insofar as the N of the former class not de-stressed. So, they do not function as focus from a prosodic point of view either. Given that ‘at least n N’ QPs are supposed to make perfect information focus, it appears that it is not information focus, but identificational focus that plays a role here—provided that the choice is only between these two. However, as we saw, identificational focusing has syntactic properties that do not match those of a fronted universal.

Inasmuch as we adopted Szabolcsi’s view for QR, claiming that QR creates a logical subject–predicate configuration, the very fact that universals can be focused might appear problematic. However, note that this may well be a separate issue: even if we find that certain occurrences of fronted universals are focused, it does *not* follow that all fronted universals are focused, and neither does it follow that universals fronted by focusing undergo (or have undergone) QR. At any rate, it must be clear that (79A) on the (neutral) interpretation (80a) involves only non-focused fronted universals (and it involves two non-focused fronted universals on the interpretation (80b)). Then, focusing, in view of these data, as well as in view of (81), cannot be the sole motive of fronting of increasing essentially quantified QPs (i.e. the QR-class of QPs). In other words, whether or not a *syntactic* operation of focusing is sometimes involved in fronting them, another, independent fronting operation is remains necessary. The latter operation we continue to identify as overt QR; on the other hand, the former question we have to leave open here.

4.4 A QR-type property of the fronting operation

There is an interesting pattern exhibited by the type of overt QP-fronting we are considering. Let me first point out again that QR cannot take a QP to a position above a fronted referential expression like a name or a definite DP:

- (82) a. *Minden fiú Marit táncba vitte⁴²
 every boy-nom M.-acc dance-to took-3sg
 intended: ‘Every boy took Mary to dance’
- b. *Minden fiú a szépségkirálynőt táncba vitte
 every boy-nom the beauty queen-acc dance-to took-3sg
 intended: ‘Every boy took the beauty queen to dance’

However, witness now that a fronted DP can be situated below the QR-ed QP in examples like (83) (they are slightly marked, yet, judged to be fully grammatical by informants).

- (83) a. ?Minden fiú egy lányt táncba vitt
 every boy-nom a girl-acc dance-to took-3sg
 ‘Every boy took a girl to dance’
- b. ?Minden fiú valakit táncba vitt
 every boy-nom somebody-acc dance-to took-3sg
 ‘Every boy took somebody to dance’
- c. ?Minden fiú az *pro* anyját MOZIBA küldte
 every boy-nom his mother-acc cinema-to sent-3sg
 ‘Every boy sent his mother to cinema’
- d. ?Minden fiú két cikket átnéz
 every boy-nom two articles-acc Pref-browse-3sg
 ‘Every boy will browse through two articles’

The scope relations are direct throughout (83). Now, it appears that the *every*-QP can move above fronted (non-focus) DPs just in case it can have scope over them incurring some scope dependency that would not exist otherwise. But this is exactly the way QR is characterized by Fox (1995, 2000) and Reinhart (1995, 1997). Inasmuch as the fronting of *every*-QPs (and indeed the same extends to other QPs in the ‘QR-class’) shows this central trait of Quantifier Raising described independently, this is a potentially strong argument that this fronting is indeed QR.

5 A brief synopsis

In this chapter I have (i) examined the interaction of multiple occurrences of quantifiers both in Hungarian, as well as more generally, (ii) provided a critical appraisal of the pure checking approach to quantifier scope, i.e. Beghelli and Stowell’s theory, and showed that Szabolcsi’s attempt to adopt this theory for Hungarian results in serious conceptual as well as empirical complications, and (iii) defended an approach to quantifier scope which involves A-reconstruction, unselective binding via existential closure and, crucially, QR as well.

⁴² We are not considering a contrastive topic or left dislocation reading of the *every*-QP here. These do not acquire a clause-initial position via QR.

My account, which is based on both English and Hungarian data, involves the claims that (a) the class of quantifiers undergoing QR is the increasing essentially quantificational QPs, in terms of Szabolcsi (1997), (b) GQ-NPs other than the ‘QR-class’ of GQ-NPs (i.e. non-increasing modified numeral indefinites) can only A-move and undergo A-reconstruction, (c) A-reconstruction is restricted by quantificational interveners, including intervention of decreasing focused numeral indefinites. I have adopted the view here that bare numeral of indefinites can be interpreted as cardinality predicates, hence unselective binding via existential closure can apply to them.

I argued that QR in Hungarian is optionally overt or covert, demonstrating that fronting cannot be reduced either to topicalisation or to focusing.

Chapter 4

Negative operators

In the preceding two chapters I have shown that a number of quantifier class specialized functional projections are eliminable from the grammar of Hungarian, and inasmuch as Hungarian data were assumed to be instrumental in providing essential support for the availability of such projections universally, from Universal Grammar as well. I have retained focussing as a feature checking operator movement, and defended the view that Hungarian makes use of Quantifier Raising for a well-defined semantic class of quantifiers. With these results in mind, I will turn now to negation and negative operators. I examine the interaction of the movements of multiple negative operators, as well as their interaction with focus.

The structure of the chapter is as follows. I first lay out some recent analyses of the syntax of negation in Hungarian in terms of negative functional projections (Section 1.1), and then critically reconsider the syntactic status of the negation particle, and the functional structure negation appears in, especially in interaction with preverbal focus. I will argue that the Hungarian negation particle, contrary to the current view, is a specifier element, and that it appears in a multiple specifier configuration whenever it co-occurs with preverbal focus (Section 1.2).

Next, I turn to negative operators like *senki* ‘nobody’—also referred to as *n*-words—in Hungarian, a Negative Concord (NC) language.¹ I review the most basic pertaining empirical generalizations, and two prominent current approaches to their syntax and semantic interpretation (Section 2.1), each of which classifies Hungarian as belonging to what can be referred to as a *pure* type of Negative Concord. According to Puskás (1998, 2000), *n*-words in this language invariably carry logical negation, while according to É.Kiss (1998, 2002) and Olsvay (2000), they are non-negative. I argue that the correct approach is one that factors Hungarian *n*-words into two morpho-syntactic classes, one semantically negative (the paradigm modified by

¹ The term *n-word* (due to Laka 1990) is used in this paper as a descriptive label of a class of (possibly modified) pronouns which take part in Negative Concord.

the *sem* particle) and the other non-negative (Section 2.2). In exploring interaction of n-words with focussing, it is found that n-words themselves are focusable (contrary to Olsvay 2000). I claim that similarly to other downward entailing quantifiers (cf. Chapter 2), n-words are in fact focussed by default. This explains a salient divergence in the pattern of the interaction of preverbal focus with n-words from the pattern of interaction displayed by the preverbal focus and the negation particle.

In the third section, the quantificationality of Hungarian n-words is investigated. The focusability of n-words creates a paradox in their semantic analysis as quantifiers: it will be shown that neither a uniform universal quantifier, nor a uniform existential quantifier treatment is tenable. Carrying out careful empirical testing based on the relevant literature I establish that in fact both an existential and a universal reading are available to Hungarian n-words, though the distribution of each reading is restricted, in distinct ways. I argue that the patterns reflect an ambiguity between a universally quantified vs. a non-quantified (Heimian) n-word. In particular, existential closure applies to the bare indefinite n-word in the scope of logical negation, and in case an indefinite occurrence of an n-word gets focussed, the sentence receives a scalar interpretation—a proposal tying in with some recent work on negative polarity.

With regard to the movement pattern of negative operators then, these items can be moved either *qua* universal quantifiers by Quantifier Raising (QR), or by focussing, or by the need of checking [neg] on a functional head, where the latter two are checking movements occurring invariably in overt syntax. The apparent optionality of overt movement thus reduces on the one hand to checking [neg] via direct merger of the negation particle or by movement of an interpretively negative n-word, and on the other hand, in the presence of the negative particle, to the optionality of overt QR in Hungarian (cf. Chapter 3), as well as to the option of focussing, operations selectively available due to an ambiguity in the lexical semantics of the n-words themselves.

The chapter concludes with a summary, which includes spelling out some significant repercussions of the present picture for a general typology of Negative Concord.

1 Negation in Hungarian

1.1 Negation and word order

Clausal negation in Hungarian is characterized by the inversion of the finite verb and the so-called verbal modifier (VM). VM, as we have seen in the introduction to Chapter 2, is a descriptive cover term for a class of elements occupying an immediately preverbal position in neutral order sentences. A subclass of VM elements are particles commonly termed verbal prefixes (Pref) due to their neutral position; these are often associated with an aspectual function (e.g. perfectivizing). As we have seen before, the linear order of the finite verb and VM is inverted not only in sentences with a contrastive focus or a Wh expression, but also in negated clauses. I exemplify the relevant contrasts in (1):

- (1) a. Péter el jött (neutral order)
 P. Pref came
 ‘Peter came along’
 b. Péter nem jött el
 P. not came Pref
 ‘Peter didn’t come along’
 c. PÉTER jött el
 P. came Pref
 ‘It’s Peter who came along’
 d. Ki jött el
 Who came Pref
 ‘Who came along?’

A fronted focally stressed expression may also serve as the focus for a negated clause, as in (2a). The negation element can also appear to the left of the focus site, illustrated in (2b). In addition, *nem* can appear both to the left and to the right of the focus, yielding a Double Negation (DN) reading, as can be witnessed in (2c).

- (2) a. MARI nem jött el
 M.-nom not came Pref
 ‘It’s Mary who didn’t come along’
 b. Nem MARI jött el
 not M.-nom came Pref
 ‘It’s not the case that it’s Mary who came along’
 c. Nem MARI nem jött el²
 not M.-nom not came Pref
 ‘It’s not the case that it’s Mary who didn’t come along’

The pattern in (2b) (on the associated reading) has been described in the literature as the negation of a clausal projection containing a fronted focus (Szabolcsi 1981b), along the lines of (3a) below. It is crucially not a case of constituent negation per se with the negated constituent focussed, as in (3b) (which, however, may be an available option in case of other constructions, e.g. *nem mindenki jött el*, lit. ‘not everybody came along’). One argument for the view that it is not constituent negation can be derived from facts related to the licensing of n-words. Constituent negation is known not to license n-words in general; however, negation in (2b) type constructions warrants the appearance of an n-word, cf. (3c).

- (3) a. [nem [_{focus} MARI] V_i [. . . t_i]
 b. #[[_{focus} nem MARI] V_i [. . . t_i]
 c. senki nem MARIT hívta meg
 nobody-nom not M.-acc invited Pref
 ‘Nobody invited MARY’

² There is a difference between (2b) and (2c) in the discourse conditions of their appropriate use, to which we will return in Section 1.2.

Having surveyed the most fundamental of the descriptive generalisations pertaining to clausal negation in Hungarian, let us now turn to some recent proposals treating this domain.

1.2 Recent accounts of clausal negation

Current accounts of Hungarian negation adopt a functional projection in the clausal hierarchy as the locus of the negation operator, following work by Pollock (1989), Belletti (1990), Ouhalla (1990), Zanuttini (1991), Haegeman & Zanuttini (1991), and Haegeman (1995), among others. As the (by now) general consensus holds, two major sources of linguistic variation are related on the one hand to the hierarchical position of what is most often termed NegP (cf. also Cinque 1999), and on the other, to the specifier or head ('heavy' vs. 'light') status of the negation element. As for the first issue, I take it that in Hungarian, NegP is in a high position, above the nuclear clause (IP); nothing hinges on this however. As far as the second question is concerned, current approaches share the view that Hungarian negation is of the 'light' type, i.e. is a syntactic head element. However, I demonstrate below that a number of complications result from this assumption, both on the empirical and on the theoretical side.³

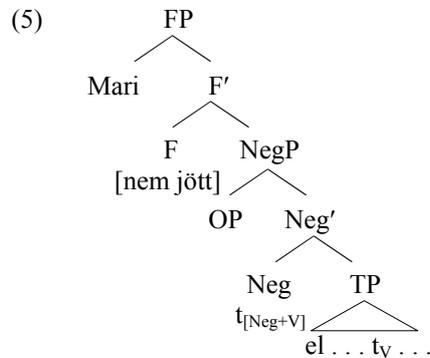
The two most elaborated theories are Puskás (1998, 2000)⁴ and Olsvay (2000). In fact, in the regard that is relevant to the discussion here, the two analyses are largely identical. To derive the most elementary facts above, they both assume the following.

- (4) a. The negation element *nem* is a head, i.e. it fills Neg⁰;
- b. Neg⁰ attracts negation by head-movement, [Spec, NegP] is filled by a phonetically empty OP;
- c. if the clause contains a focus, the *nem*+V complex in Neg⁰ raises to F⁰.

The structure in (5) represents (2a), a negated sentence containing a focus.

³ The first criticism of the received view appears in Surányi (1997). Some of the arguments in this section, as well as an alternative analysis, were first offered in Surányi (1999a,b).

⁴ The account in Puskás (1998) largely draws on Puskás (1996), but contains some improvements. Chapter 5 of Puskás (2000) is a revised version of Puskás (1998). The two relevant revisions (i.e. the trigger for V-to-Neg, and the (non-)existence of Neg-to-F), however, do not affect the criticisms adduced here. I will take as a basis of my discussion the analysis of the 2000 work.



Such a head movement analysis derives the adjacency of the negation particle and the verb (the two form a complex syntactic head), and the intervention of the negation particle between the otherwise adjacent focus and the verb (V moves to F through Neg, picking up *nem*).

1.3 Problems with recent accounts and the alternative

The crucial argument for the head status of *nem* within a V-to-Neg construction that is made by Puskás comes from coordinations like (6). Puskás assumes that the coordination in (6) is degraded because the verb head-moves to the negation particle and hence these two elements constitute a complex head, which cannot be disrupted.

- (6) **nem felejtettem el a lovat és vesztettem el a levelet*
 not forgot-1sg Pref the horse-acc and lost-1sg Pref the letter-acc
 ‘I didn’t forget the horse and lose the letter’
 [Puskás 2000: 323, (44)]

The force of such arguments, however, is extremely dubious. This is not only because similar coordinations are often degraded even with focus (cf. 7a), which is undoubtedly phrasal, but also because many coordinations below a (phrasal) specifier are ungrammatical.⁵ In addition, coordination below negation is often acceptable (cf. 7d).⁶

⁵ Verbal prefixes exhibit phrasal properties (e.g. movement across a series of restructuring infinitives, or over some finite matrix modal verbs; cf. Koopman & Szabolcsi 2000), and are analysed as phrases occupying some specifier position (e.g. Spec,VP in É.Kiss 1994, Spec,AspP in É.Kiss 1998b, Puskás 2000).

⁶ It appears that the interpretation of the constituent below negation must be that of a complex event, i.e. the coordinated constituents together represent one event. (7d) is interpreted as ‘There’s going to be no event of me travelling to Balaton and getting burnt to death’, with the two event variables bound by the same negated existential operator.

- (7) a. ??ÉN felejtettem el a lovat és
 I forgot-1sg Pref the horse-acc and
 vesztettem el a levelet
 lost-1sg Pref the letter-acc
 ‘It is ME who forgot the horse and I lost the letter’
- b. *Who do you like and do you dislike?
- c. *El felejtettem a lovat és vesztettem a levelet
 Pref forgot-1sg the horse-acc and lost-1sg he letter-acc
 ‘I forgot the horse and lost the letter’
- d. Nem utazom le a Balatonra és égetem
 not travel-1sg down the Balaton-to and burn-1sg
 szénné magam
 coal-to myself-acc
 ‘I won’t travel to Balaton and burn myself to death’

It appears then that coordination below negation *is* syntactically possible, although under restricted semantic/pragmatic conditions (cf. Note 6). This fact in effect argues against the conjunction of assumptions (4a) and (4b): if V is raised to Neg, which hosts *nem*, then the resulting complex head would be disrupted by the coordination in (7d).

Let us turn now to further complications raised by an analysis incorporating (4a) and (4b). The most immediate problem that is created, as pointed out in Surányi (1999a,b), is that such a treatment requires right-adjunction of V in the complex head *nem+V*. First, such a structure is not admissible in restrictive theories of phrase structure stemming from Kayne (1994), such as Chomsky (1995). Second, even if it was, it would run into difficulties in view of data suggesting that on such an approach the negation particle is occasionally excorporated. Examples of this include the following:

- (8) a. nem is látogatta meg Pétert,
 not also visited-3sg Pref P.-acc
 és nem is vitt levest
 and not also took-3sg soup-acc
 ‘She neither visited Peter, nor did she bring some soup (for him)’
- b. [He promised not to come along, and . . .]
 nem is jött el
 not EMPH came Pref
 ‘He indeed didn’t come along’
- c. nem igazán értette meg senki
 not really understood-3sg Pref nobody-nom
 ‘Nobody really understood it’

In (8a) *nem* is apparently raised above *is* ‘also’ and in (8b) above the homophonous emphatic particle *is*, which can both be taken as functional heads heading their own projection (whether *is* ‘also’ in fact heads an independent projection in the domain

of *clausal* extended projections, see Brody 1990 and Puskás 2000⁷). This immediately pre-*is* position can be targeted by phrasal elements: the verbal prefix or other VM constituents (see Note 5), as well as focussed expressions:

- (9) [I had been told that it would be the boy who would come along, and . . .]
 A FIÚ is jött el
 the boy-nom EMPH came Pref
 ‘Indeed it’s the boy who came along’

On the complex head analysis, if *nem* moves away from the inverted verb, then it effectively excorporates; moreover, it seems to move to a specifier position. In (8c), *nem* is separated from the inverted verb by an adverb, which would again necessitate excorporation.⁸

Further doubt is cast on the complex head treatment of *nem*+V by the fact that the verb can form part of an elided constituent, leaving behind the negation. Witness (10):

- (10) Péter el jött a buliba, de János nem
 P.-nom Pref came the party-to but J.-nom not
 ‘Peter came along to the party, but John did not’

Yet another test, sometimes referred to as the ‘answer fragment’ test further brings the complex head analysis into question. Commonly, strings that can stand as answers to a question are taken to be independent constituents. Striking in this connection is the fact that in contrast to negation particles of Romance, which are taken to be head elements, the Hungarian negation element can indeed form an answer fragment on its own:

- (11) A: El jössz?
 Pref come-2sg
 ‘Will you come along?’

⁷ It is perfectly feasible to assume that *is* ‘also’ heads a QP type projection in the phrasal extended projections domain, with movement to its specifier in a phrase structure constrained by the LCA. This phrasal *is*P would inevitably possess features of its specifier (e.g. the negation particle, or focus), and would move about accordingly; e.g. the *is*P in (i) bears [neg] and will trigger verb inversion in the clause it appears in, just like the negation particle on its own.

- (i) [_{isP} nem [_{is} is] [_{t_{nem}}]]
 [neg] [neg]

⁸ Note that it is objectionable to analyse (8c) as negation of an FP, with the adverb in focus, because (8c) does not exhibit any degree of unacceptability even with only a neutral stress on the postverbal n-word *senki* ‘nobody’. This contrasts with the attested unacceptability of such constructions:

- (i) *Nem ITT találok semmit
 not HERE find-1sg nothing-acc
 intended: ‘I can’t find anything HERE’

B: Nem.
'No'

Turning now to the prosody of the *nem*+V sequence, we can observe that in the regular sentential negation case they form one prosodic unit, with the stress falling on *nem* and the verb remaining stressless. Note that this fact is by no means a source of evidence to decide the head status issue, since both phrases and heads may form such a prosodic unit with an immediately adjacent head. Hungarian-internal examples for an XP+head prosodic unit include the focus+verb sequence, the Prefix+verb sequence, but a fairly trivial analogue from a language like English is the subject+auxiliary prosodic unit, or initial XP+V in the CP domain of verb second languages. What *can* however potentially bear on the issue is finding positive evidence that what appears in the regular case to be a prosodic unit in some contexts *may* in fact break into two such units, each with its own independent main stress. This would attest that *nem* and the verb in those particular contexts at least do not form a complex syntactic head, nor a morphological word. Indeed such contexts exist. A marked prosodic variant is illustrated below, where ' indicates main stress and # stands for a very short pause.

- (12) ezt egyszerűen 'nem #'tudom # 'meg érteni
this-acc simply not can-1sg Pref understand-inf
'I simply cannot understand this' (emph.)

The availability of such a (stylistically marked) prosodic pattern suggests once again that the negation element and the inverted verb do not form one complex head.

Up to this point, we have seen evidence of solidly empirical nature disfavoring the head-incorporation approach. However, there is a significant conceptual argument as well. This comes from the inadequacies of both Olsvay's and Puskás' treatment of a higher occurrence of the negation particle. Olsvay (2000) attempts to capture the pattern in (2) above by assuming an asymmetry between the occurrences of negation above the preverbal focus (=NEG⁰, projecting NEGP) and below it (=Neg⁰, projecting NegP). NEG⁰ is differentiated from Neg⁰ in terms of the strength of the relevant V-attracting feature in order to capture the fact that the occurrence of *nem* above focus does not attract the verb. This dissection of what in Olsvay's conception otherwise seems for all intents and purposes a single lexical class into two lexical classes appears to be a rather high cost (cf. Surányi 1997).

Puskás (1998, 2000), unlike Olsvay (2000), does not assume a separate negation category at all. Instead, she treats constructions involving a pre-focus n-word followed by a *sem* or a *nem* particle as containing no clausal negation, but only constituent negation of the n-word.⁹ Indeed, she makes no mention of *nem FOC V*

⁹ This construction, appearing also in (3c) above, is illustrated in (i).

- (i) Soha nem MARI jön el
 never not M.-nom comes Pref
 'It's never Mary who comes along'

constructions like (2b) above, which have been argued to be analysed (at least for proper names in focus) to have the structure [*nem* [*FOC V* in Szabolcsi (1981b), principally for reasons of focus semantics (cf. (3) and the related discussion).¹⁰ This appears as a gap in the analysis, constituting a hindrance to the evaluation of the overall proposal.

What we have seen is that the assumption of the head status of the negation particle coupled with a V-to-Neg⁰ raising analysis of verb inversion to derive the adjacency faces both empirical and conceptual complications. Let me explore an alternative view here according to which Hungarian negation is in fact ‘heavy’, i.e. it is a specifier element in a projection whose head is lexicalised by the inverted verb¹¹ (instead of NegP, I use the neutral ZP to label the projection for now).

(13) [ZP *nem* [Z V] [. . . t_v . . .

This assumption avoids most of the complications arising with the analysis discussed above, which serves as strong evidence in its favour. There is no question arising with respect to right-adjunction, no excorporation needs to be assumed. Appearance of the negation particle in what can be assumed to be specifier positions of functional particles is unproblematic with regard to phrase structural (‘bar-level’) status. Coordination or deletion affecting only the verb and material to its right affects a constituent, unproblematically. The availability of separate stresses on the negation element and on the inverted verb, once again, is fully compatible with the analysis.

However, this cannot be the whole story. In particular, it remains open how to derive then the asymmetry mentioned above with respect to movement of the verb. Recall that negation above focus seems not to attract the verb, while negation below focus, as well as in lack of focus, does attract it.

This apparent asymmetry is explained straightforwardly however, if we assume that Hungarian focus and negation occupy specifiers of the same single projection (I continue to label it ZP to remain neutral). In another terminology, I propose that [foc] and [neg] in this language co-project, housing multiple specifiers (on multiple specifiers and co-projection, see Koizumi 1994, Chomsky 1995, Ura 1996 and Bobaljik and Thrainsson 1998).¹² Then, we have the optimal situation, since the verb-attracting asymmetry needs no explanation: no such asymmetry exists. An elegant picture is obtained, since in fact we find syntactic symmetry of checking [neg] and checking [foc]: either a focussed expression or the negation particle may fill the inner specifier, while the other operator will occupy the outer one, as sketched abstractly below.

A constituent negation analysis seems inappropriate for such cases involving the negation element, since *nem* normally precedes the constituent it negates, whereas here it follows the n-word it is supposed to negate, requiring some further stipulation.

¹⁰ See also Olsvay (1996) for a different argument.

¹¹ This alternative is in fact first suggested in Surányi (1999a, 1999b), and is elaborated in some detail in Surányi (to appear a).

¹² For instance, Bobaljik and Thrainsson (1998) differentiate languages where agreement and tense co-project from ones where they project separately. In fact, multi-purpose projections have been proposed elsewhere as well, e.g. in Laka (1990) (SigmaP).

- (14) a. [ZP focus] [ZP *nem*] [Z V] . . . (cf. 2a)
 b. [ZP *nem*] [ZP focus] [Z V] . . . (cf. 2b)

This analysis also derives the fact that normally nothing may separate preverbal focus and negation, in either scope order.

While this account preserves the correct empirical predictions of the standard account, and neatly improves on the incorrect ones, one apparently problematic piece of data remains. This involves Double Negation patterns like (2c), repeated here as (15a), where one instance of the negative particle precedes, one follows the preverbal focus. In particular, if such a construction is readily available, why is the exact analogue of this not available with two occurrences of preverbal foci (cf. 15b)?

- (15) a. Nem MARI nem jött el [= (2c)]
 not M.-nom not came Pref
 'It's not the case that it's Mary who didn't come along'
 b. *MARI nem JÁNOSSAL jött el
 M.-nom not J.-with came-3sg Pref
 'It's MARY that didn't come along with JOHN'

Such a difference between multiple negation and multiple foci is not predicted by our account.

However, it is in fact desirable that this asymmetry not be predicted: it is the effect of an independent interfering factor. Namely, what distorts the symmetry is that negation has both a descriptive and a metalinguistic use (Horn 1985, 1989), with differing pragmatic and as well as syntactic consequences. I argue that it is the metalinguistic use of negation which produces patterns like (2c=15a).

Metalinguistic negation is different from descriptive negation in that it presupposes a context where a previous proposition of the corresponding affirmative is present, whose assertability it contradicts. In Cartson's (1996) view, it differs from 'descriptive' negation in that it takes an echoic proposition in its scope.¹³ It can deny the conventional content of the proposition, its focus structure, a triggered conversational implicatum, or even the appropriateness of some aspect (e.g. the phonetic realisation) of the utterance itself. It is different in a number of respects from descriptive negation. Prosodically, it involves a 'contradiction contour' (cf. Lieberman & Sag 1974), which corresponds to a fall-rise both in English (cf. Horn 1989: 374) as well as in Hungarian (cf. Varga 1980: 89–93), illustrated for the latter in (16).

¹³Metalinguistic negation is sometimes also called 'external negation', while descriptive negation is referred to as 'internal negation'. Horn (1985, 1989) argues extensively that this is not a case of semantic ambiguity, rather, the two are pragmatically different—with systematic, though in part language-specific syntactic and prosodic consequences.

- (16) `Nem a könyvet olvasta ki, hanem az újságot¹⁴
 not the book-acc read-past Pref but the paper-acc
 ‘He read not the book, but the paper’

Metalinguistic negation has a strong tendency to co-occur with contrastive *but* conjunctions: in fact, as Horn (1989: 402) points out, the *not X but Y* construction is the archetypal frame for metalinguistic negation. Further, it has a distinct interaction with both negative and positive polarity items (NPI and PPI). While descriptive negation licenses the former, and prohibits the latter, metalinguistic use of negation behaves the opposite way:

- (17) He didn’t manage to solve some/*any of the problems—he solved all of them

In Hungarian, I argue, metalinguistic negation is also syntactically distinct from descriptive negation. Recall that negation in Hungarian normally triggers verb inversion. However, when used metalinguistically, it does not do so, as (18) illustrates:

- (18) Nem be ment hozzájuk, hanem levelet küldött nekik
 not in(Pref) went-3sg to-them but letter-acc sent-3sg to-them
 ‘He did not drop by them, but sent a letter to them instead’

Of course, this property of metalinguistic negation remains concealed in syntactic environments where metalinguistic negation is higher than focus: focus triggers verb inversion independently, cf.(16).

Now, I claim that in patterns like (2c=15a), the higher instance of negation is invariably metalinguistic. What renders it difficult to realize this fact is the presence of the lower, descriptive instance of negation. For, this lower negative particle will license NPI and will ban PPI from its scope, cancelling the opposite effect of the metalinguistic negation situated above focus. Also, since metalinguistic negation in these contexts is above focus, its inability to trigger verb inversion once again remains undetectable, as I have pointed out. However, in the remaining respects, it behaves fully as metalinguistic negation does: it obligatorily induces a fall-rise contour, and it can only ever occur in an ‘echoic’, contradiction context (hence cannot stand discourse-initially), virtually always necessitating a *but*-clause to follow.

- (19) `Nem `MARI nem jött el, hanem . . .
 not M.-nom not came-3sg Pref but . . .
 ‘It’s not the case that it’s Mary who didn’t come along, but . . .’

Since it fails to trigger verb inversion, I analyse metalinguistic negation syntactically simply as adjoined to the appropriate clausal functional projection, in any case appearing in a non-checking position (vs. descriptive negation, which is in

¹⁴ Note that such a fall-rise contour is not the only one available with negation above focus in Hungarian—it occurs only in the ‘echoic’/contradiction contexts.

a feature-checking specifier position)—much in the same way as constituent negation is traditionally analysed. Then, instances of metalinguistic negation (such as (16), (18), as well as (2c=15a)) do not belong to the domain of our description, and hence will be ignored as truly irrelevant.

Thus, the fact that pattern (2c) is not excluded by the multiple specifier analysis presented above is not only unproblematic, but in fact desirable: it is brought about by a domain-external interfering factor—metalinguistic use of negation.¹⁵

2 N-words

2.1 The negativity of n-words in Negative Concord

Hungarian is a Negative Concord language. Negative Concord (NC) is a term of traditional grammar¹⁶, which is commonly used to refer to scenarios where multiple occurrences of elements which are negative in the sense that they incur negation when appearing alone in a sentence only contribute to a single semantic negation.¹⁷

Let us first review the basic syntactic patterns in Hungarian Negative Concord clauses. N-words in this language may remain postverbal if there is an overt negation element in the clause, however, they may be moved before the negation particle too (20)¹⁸.

- (20) (Senki) nem jött el (senki)
 nobody-NOM not come-PAST-3SG PREF nobody-NOM
 ‘Nobody came along’

N-words come in two flavours: they may or may not be modified by the particle *sem*, which historically derives from the merger of *is* ‘also’ and *nem* ‘not’. Since the paradigm of n-words share the initial morphological element *s(e)-*, I will be using the term *s*-words to refer specifically to unmodified, bare n-words. The variety modified by *sem* will be referred to as *sem*-expressions.

¹⁵ Another instance of metalinguistic negation occurs in negating a negated clause:

- (i) Nem nem jött el, hanem meghalt
 not not came-3sg Pref but Pref-died-3sg
 ‘It’s not that he didn’t come along, but in fact he died’

¹⁶ The first detailed discussion of Negative Concord in generative grammar is Labov (1972).

¹⁷ Items participating in Negative Concord bearing special morphology are commonly called n-words (following Laka 1990). I will occasionally also refer to these elements as NC items, although this is in fact too general a term, since elements other than n-words may also participate in Negative Concord in some languages, including Hungarian (cf. minimizers).

¹⁸ As we saw above (cf. 1), the negation particle, just like focus, triggers verb inversion: in the neutral word order, the verbal prefix PREF immediately precedes the verb, in the inverted order, it follows it.

- (21) *s*-words
- senki
'nobody'
 - semmi
'nothing'
 - sehol
'nowhere'
 - semelyik
'neither/none'

- (22) *sem*-expressions
- senki sem
'nobody'
 - semmi sem
'nothing'
 - sehol sem
'nowhere'
 - semelyik fiú sem
neither/none boy SEM
'neither boy/none of the boys'

Now, *sem*-expressions (but not *s*-words) are preverbally (and only preverbally) in complementary distribution with the negation particle, cf. (23a). *Sem*-expressions are preverbally (and again, only preverbally) in complementary distribution with each other, cf. (23b). An *n*-word is licensed postverbally not only by the presence of an overt negation element, but also by a preverbal *sem*-expression, cf. (23c). These generalizations also hold if the inverted verb is preceded by a focus, e.g. (23d,e). The verb in negative clauses is generally inverted to the left of the verbal prefix by V-movement, whether or not the clause contains an overt negation particle.

- (23) a. (Senki (*sem)) nem jött el (senki (sem))
nobody-NOM SEM not come-PAST-3SG PREF nobody-NOM SEM
'Nobody came along'
- b. Senki (*sem) sehova sem jött el
nobody-NOM SEM nowhere-to SEM come-PAST-3SG PREF
'Nobody came along nowhere'
- c. Senki sem jött el sehova (sem)
nobody-NOM SEM come-PAST-3SG PREF nowhere-to SEM
'Nobody came along anywhere'
- d. (Senki (*sem)) nem MA jött el (senki (sem))
nobody-nom SEM not today come-PAST-3SG PREF nobody-nom SEM
'Nobody came along TODAY'
- e. Senki sem MA jött el
'id.'

First, *n*-words can be fronted to a position above focus, and to above another fronted *n*-word; the obvious question concerns the identification of the exact fine structure of these positions. Second, apparently, *n*-words can be fronted *optionally* in

Hungarian, although some co-occurrence restrictions apply. Such optionality in movement appears to be unexpected in a Last Resort based minimalist model—as pointed out in Chapter 1, and in relation to the raising of universal quantifiers in Chapter 3—provided that the movement in question is driven by feature checking. Whether it actually is will be an issue I raise in what follows.

This issue is intimately tied to the first of the two central questions in the broader literature on Negative Concord items in Romance, Germanic and Slavic concerning the interpretation of n-words in general, which can be formulated briefly as below.

- (24) a. Do Hungarian n-words carry logical negation?
 b. Are they quantificational, and if so, what is their quantificational force?

Now, if Hungarian n-words turn out to be semantically negative, carrying logical negation, then on general grounds it is not unexpected to find a morpho-syntactic reflex like a [neg] feature in their lexical specification corresponding to that interpretive property. This morpho-syntactic [neg] feature then should be subject to the general mechanism of feature checking in narrow syntax. If this is what we find, the question regarding movement optionality arises sharply.

In fact, (24a) has received both a positive (Puskás 1998, 2000) and a negative answer (Szabolcsi 1981a, É.Kiss 1994, 1998, Olsvay 1998, 2000) in the pertinent literature, while the second issue has invariably been resolved by attributing to Hungarian n-words a universal quantifier status. As far as (24a) is concerned, however, both answers seem inadequate, although for different reasons. Below, I critically review the two families of theories stemming from, on the one hand, the positive, and on the other, the negative answer given to (24a), demonstrating that neither one is tenable.¹⁹ Then, I present my alternative, according to which Hungarian n-words are to be properly subcategorized into two classes, only one of which is negative: i.e. the correct answer to (24a) in this particular sense is ‘yes and no’. I return to the complex issue of (24b) subsequently.

2.1.1 Hungarian n-words are negative: Puskás (1998, 2000)

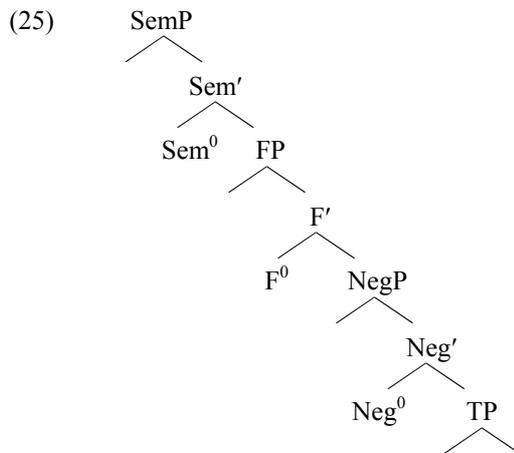
On Puskás’ account, Hungarian n-words are essentially universal quantifiers prefixed by logical negation ($\neg\forall x$), following Zanuttini (1991), Haegeman & Zanuttini (1991), Haegeman (1995), and a substantial body of work stemming from these. On this view, Negative Concord arises as a result of the absorption of several negative operators, on the analogue of Wh-absorption (Higginbotham & May 1981, May 1985). The absorption rule in May (1989) involves the formation of a polyadic quantifier complex. In Zanuttini (1991), Haegeman & Zanuttini (1991) and ensuing work, negative absorption is characterized as Neg-factorization, a rule of the syntax–

¹⁹ This point, and most of the arguments presented immediately below, also appear in Surányi (2002).

semantics mapping which, in creating a complex quantifier, simply gets rid of the unwanted instances of logical negation under specified conditions.

Below I present a brief synopsis of Puskás's particular proposal. The relevant hypotheses she makes are summarized, along with the pertaining portion of clause structure that is assumed, as well as illustrative examples.

As for clause structure, it is maintained that the relevant hierarchy comes as depicted in (25).



The nuclear clause is dominated by a NegP with the negation element as its head, which attracts the finite verb (the verb attaches to its right) (see Section 1 above). NegP in turn is dominated by a focus phrase (FP). The independent assumption is adopted that the head of FP is filled by head movement of the verb. When NegP is projected below FP, F is filled via Neg-to-F head movement. The phonetically empty negation operator (OP) is located in [Spec,NegP] (this assumption is based on A-bar Relativized Minimality effects it incurs). Finally, FP is dominated by SemP, which is a functional phrase with a phonetically empty head hosting *sem*-expressions in its specifier position.

Let me turn now to assumptions relevant to *n*-words. The central thesis is that Hungarian *n*-words inherently carry logical negation, as well as a syntactic [neg] property, and by the Neg-Criterion they must move to [Spec,NegP], where they form a complex specifier and undergo absorption (with each other and with the negation operator OP). This movement is covert in the default case. If bare *s*-words appear to be fronted overtly, this involves movement to [Spec,FP], i.e. focussing, affecting the complex specifier of NegP (cf. 26a). If *sem*-expressions appear to be fronted overtly, this involves a second step of movement from [Spec,FP] on to [Spec,SemP], pied-piping all other *n*-words (cf. 26b). The negation particle *nem* is deleted by a phonological rule if right-adjacent to *sem*, i.e. when a *sem*-expression is fronted. This phonological deletion rule²⁰ is responsible for the complementary distribution effects obtained with negation and preverbal *sem*-expressions

²⁰ This deletion rule is proposed by É.Kiss (1992, 1994).

- (26) a. [FP [senki soha]_i [F nem jött]_j [NegP t_i OP [Neg t_j]
 nobody-NOM never not come-PAST-3SG
 [TP el t_j . . .]]]
 PREF
 ‘Nobody ever came along’
- b. [SemP [[senki] soha sem]_i [Sem] [FP t_i [F ~~nem~~ jött]_j [NegP t_i OP [Neg t_j]
 [TP el t_j . . .]]]]

It is assumed that multiple instances of *sem*-expressions are unable to undergo absorption if moved through [Spec,NegP] in overt syntax; this derives the fact that multiple occurrences of *overtly* moved *sem*-expressions cannot be absorbed (cf. 23b). When a *sem*-expression or the sequence of *s*-word plus negation precedes a regular preverbal focus (cf. 27a), *sem* and *nem* are construed as alternative constituent negation particles negating the *s*-word they immediately follow (cf. 27b). It is stipulated that in this case the *n*-word is interpreted existentially, not universally, as in all other cases.

- (27) a. senki soha sem / nem IDE jött el
 nobody-NOM never SEM not HERE come-PAST-3SG PREF
 ‘Nobody ever came HERE’
- b. [SemP [[senki] soha sem/nem]_i [Sem] [FP IDE [F jött]_j [NegP t_i OP [Neg t_j]
 [TP el t_j . . .]]]]

This account suffers from a number of shortcomings.

First, it involves stipulations that are required to eliminate complications arising as a consequence of the hypothesis that Hungarian *n*-words carry negation. Let me point out two. Since bare *s*-words and *sem*-expressions are both taken to carry negation, a semantic as well as a syntactic asymmetry needs to be stipulated between them to derive the fact that maximally one *sem*-expression may occur preverbally, whereas no such restriction applies to *s*-words. The semantic stipulation is that multiple *sem*-expressions cannot undergo absorption in case they move to/through Spec,NegP in *overt* syntax—while absorption of one *overtly* and one or more covertly moved *sem*-expressions is possible (cf. 23c). However, all this is not sufficient, since this in itself does not rule out multiple preverbal *sem*-expressions with a Double Negation (DN) reading—the empirical fact is that such a DN reading is not obtained: multiple preverbal *sem*-expressions are simply ungrammatical. Therefore, a syntactic stipulation is needed. The stipulation is that there is a *unique* SemP projection with a [sem]-feature in Sem⁰, which feature is distinct from [neg] in Neg⁰. So, if two *sem*-expressions were moved to [Spec,NegP] to form a complex specifier with a DN reading, and this complex constituent was attracted to [Spec,SemP], then there would be two instances of *sem*-expressions checking against one [sem] feature in Sem⁰, which would then be ruled out presumably by the mechanism of unique checking. However, the *uniqueness* of SemP is a completely ad hoc assumption. Granting for the sake of the argument that this type of projection exists, the uniqueness of SemP contrasts with the *recursivity* of the corresponding positive polarity IsP (cf. Brody 1990), of which SemP is the negative polarity-

sensitive analogue. In essence, the exclusion of multiple preverbal *sem*-expressions is derived by more or less transparent stipulation.

Second, the account overgenerates. Consider a negated sentence containing a focussed constituent in [Spec,FP] above negation, and a *sem*-expression moved to [Spec,SemP] above focus, like in (28a). This sentence would have (28b) as a possible representation.

- (28) a. Senki sem MA nem jött el
 nobody-NOM SEM today not come-PAST-3SG PREF
 ‘Nobody is such that it’s TODAY that he did not come along’
 b. [_{SemP} [senki sem]_i] [_{Sem}] [_{FP} MA [_F nem jött]_j] [_{NegP} t_i OP [_{Neg} t_j] . . .

In [Spec,NegP], *senki sem* ‘nobody’ and the negation operator OP undergo absorption, hence a Negative Concord (single negation) reading is predicted. However, this is plainly contrary to fact, as the translation shows. Thus, absorption in [Spec,NegP] generates a NC reading even where in reality only a DN reading obtains.

Third, treating multiple preverbal n-words as occurring in a complex specifier is untenable. However, this syntactic assumption is crucially instrumental in achieving that out of a sequence of preverbal n-words only the linearly last one can be a *sem*-expression (cf. 23b). This is because in moving to [Spec,SemP], the *sem*-expression pied-pipes all other n-words, precisely due to the assumption that they together form a complex specifier (cf. 26b). If they did not form one complex constituent, the account would generate (non-existing) sequences of preverbal n-words where a *sem*-expression is linearly non-last—for instance (29), (29) a minimal pair of (26b).

- (29) *[[_{SemP} [soha sem]_i] [_{Sem}] [_{FP} [senki]_k [_F nem jött]_j] [_{NegP} t_k t_i OP [_{Neg} t_j] [_{TP} el t_j . . .]]]]

If n-words moved to [Spec,NegP] did not make up one branching specifier, then identifying the overt fronting of n-words as focussing would also be unworkable: preverbal focus can be filled by a unique phrase in Hungarian, while any number of s-words can be fronted.

The complex specifier analysis of sequences of preverbal n-words is insupportable for a number of reasons. I present prosodic, syntactic and semantic counter-evidence. From a phonological angle, a complex specifier analysis faces the most immediate question in the domain of stress assignment. In a standard description (É.Kiss 1989; É.Kiss 1992, 1994), the Nuclear Stress Rule assigns stress to the typically right-branching preverbal structure in the following manner:²¹

- (30) a. [""QP₁ [""QP₂ [""QP₃ [. . .]]]]]

²¹ See É.Kiss (1994) for relevant details. Here I do not enter a specification of the mechanism of the Nuclear Stress Rule, and the exact absolute degrees (number of ' symbols) assigned here are of no significance, only their relative differences are.

- b. Mindig mindenki mindenkinek küld képeslapot
 always everyone-NOM everyone-DAT send-3SG postcard-ACC
 ‘Everyone always sends a postcard to everyone’

In (30a), QP stands for preverbal universal quantifier, and the degrees of stress are marked with a number of ` diacritics, (30b) illustrating the case. The fact is that the stress pattern of (31b) below is identical to that of (30b), however, the adjunction-to-specifier analysis predicts a stress pattern similar to (31a).

- (31) a. [[QP₃ [QP₂ [""QP₁] 'QP₂] 'QP₃] [. . .]]
 b. Soha senki senkinek nem küld képeslapot
 never nobody-NOM nobody-DAT not send-3SG postcard-ACC
 ‘Noone ever sends a postcard to anyone’

In (31a) the prediction we get is that non-initial occurrences in the preverbal n-word sequence receive a degree of stress comparable to that of postverbal constituents, while the initial occurrence should receive a distinctly larger degree of stress. This, plainly, does not correspond to reality.

A second fact of prosody that potentially bears on the present matter is that the intonational contour in matrix yes/no interrogatives may begin before any one of the preverbal n-words (although markedness differences exist). (32) illustrates:

- (32) a. Ez semelyikőjüknek soha sem jutott eszébe?
 this-NOM noone-PART-3PL-DAT never SEM come-PAST-3SG mind-to
 ‘It never occurred to any of them?’
 b. Ez semelyikőjüknek soha sem jutott eszébe?

However, this fact would be difficult to reconcile with the complex specifier analysis: on that account, the onset of the contour could correspond to a *non-initial* constituent *contained within* a specifier of a functional projection in the clausal hierarchy.

Let us now turn to syntactic evidence. Ordinary coordination appears possible below a fronted n-word.

- (33) Soha [senkinek nem küld képeslapot] és
 never [nobody-DAT not send-3SG postcard-ACC] and
 [semmiről nem készít fotót]
 [nothing-of not make-3SG photo-ACC]
 ‘He never sends a postcard to anyone and he never makes a photo of anything’

A highly relevant—and I believe novel—observation in this context is that the sequence of preverbal n-words can in fact be disrupted by certain high adverbs. This is illustrated below.

- (34) a. Semelyik fiú valószínűleg semelyik lánnyal nem találkozott
 none boy-NOM probably none girl-with not meet-PAST-3SG
 ‘Probably, none of the boys met any of the girls’
- b. Senkit még semmi baj nem ért
 nobody-ACC yet nothing problem-NOM not affect-PAST-3SG
 ‘Nobody had any problems yet’
- c. Semmiért ami történt érdekes módon senki sem
 nothing-for what happen-PAST-3SG interestingly nobody-NOM SEM
 felelős
 responsible
 ‘Interestingly, nobody is responsible for anything that happened’²²

The point of significance is that these patterns either necessitate a complication of the picture if the absorption approach is to be maintained, since absorption will have to be declared possible across intervening adverbs, or else the complex specifier view must be abandoned.²³

Finally, the complex specifier and absorption approach entails a syntactic representation in which n-words mutually command each other (or, on Kayne’s (1994) definition of c-command, have identical c-command domains). One consequence is that there can be no issue of relative scope as far as the participating quantifiers are concerned. This prediction, however, seems to be disconfirmed. Although truth-conditionally the two sentences below are equivalent, (35a) can be interpreted as a predication about the contextually salient set of boys, while (35b) can be interpreted as predicating about the set of girls, but the reverse scenario is not possible. In both cases, the set quantified over by the second n-word can (although does not need to) co-vary with member of the set quantified over by the first n-word (but the reverse, again, is impossible). On such an interpretation of (35a), for instance, there is a potentially different set of girls associated with each boy and it holds for each boy that he danced with none of the girls in that associated set (however, he might have danced with a girl from a set associated with another boy).

²² The degree of acceptability may vary from speaker to speaker, from fully acceptable to mildly degraded. The acceptability of these sentences corresponds to that of their minimal pairs containing positive universals instead of n-words. Note that on the complex specifier view such constructions cannot be derived even by some further displacement: no movement is possible out of an adjoined position within a (complex) specifier.

²³ For many speakers, there exists a stylistically marked transformation that I will label here ‘predicate fronting’, which, under restricted conditions that are of no immediate concern to the present issue, moves part of a predicate phrase (in the sense of É.Kiss 1992, 1994) to the front of the sentence. Such a transformation is illustrated below:

- (i) % ['Sehova 'elmenni]_i 'nem akar 'senkivel t_i
 nowhere PREF-go-INF not want-3SG noone-with
 ‘He doesn’t want to go anywhere with anyone’

The availability of this construction demonstrates that Negative Concord does not correlate with a complex specifier formed by n-words, since the sequence of n-words here is disrupted by movement.

- (35) a. Semelyik fiú semelyik lányt nem vitte táncba
 none boy-NOM none girl-ACC not take-PAST-3SG dance-in
 ‘None of the boys took any girl to dance’
- b. Semelyik lányt semelyik fiú nem vitte táncba
 ≈‘None of the girls was taken by any boy to dance’

This would seem curious under the absorption approach, which predicts no such asymmetry. This interpretational difference is most probably a reflection of the relative scope of the preverbal n-words, which appear to correspond to their linear order—a scenario identical to the case of positive universal quantifiers (cf. e.g. É.Kiss 1992, 1994; Szabolcsi 1997).

Recall again that for Puskás’ account to go through, the complex specifier analysis is crucial because preverbal sequences of n-words need to move (to [Spec,FP] and [Spec,SemP]) as one constituent. However, such an analysis, in the face of ample evidence, is untenable. Note that this does not refute the semantic absorption view; it only makes Puskás’s (1998, 2000) analysis of the overt movement of n-words extremely difficult to maintain.

Finally, a simple problem is buried in the treatment of pre-focus n-words (cf. (23d,e), (27)). First, it is not clear why the negation particle *nem* should *follow* the *s*-word it constituent-negates, given that normally when *nem* functions as constituent negation, it *follows* the negated constituent. Even more perplexing is the inconsistency that such a constituent-negation analysis of pre-focus *sem* incurs. For, if in (23e), *sem* constituent-negates *senki* ‘noone’, then it follows that the *s*-word itself does not carry negation. This cannot be because it has undergone absorption, since the *s*-word is *inside* the *s*-word plus *sem* unit. But if this *s*-word simply lexically lacks logical negation, then why are other occurrences different in that they do carry negation?

In sum, then, the assumption that all n-words are semantically negative, the complex specifier treatment of fronted n-words, and the [Spec,NegP] to [Spec,SemP] movement of preverbal *sem*-expressions are untenable. Let us now turn to an elaboration of the opposite basic view: that of analyzing Hungarian n-words as semantically non-negative.²⁴

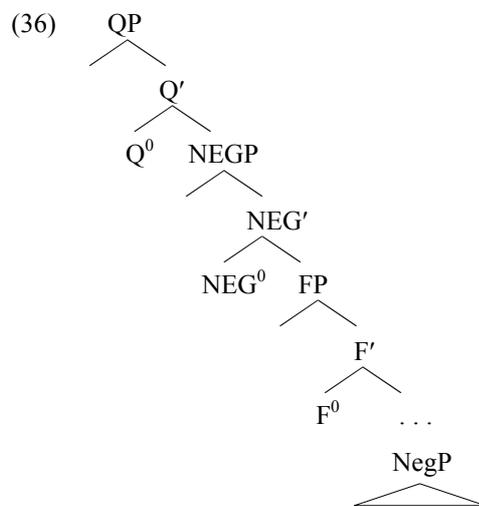
2.1.2 Hungarian n-words are non-negative:

É.Kiss (1994, 1998b) and Olsvay (1998, 2000)

É.Kiss (1994, 1998b) and Olsvay (1998, 2000) build on the assumption that n-words in Hungarian do not carry logical negation. Following Szabolcsi (1981a), they assume that they are interpreted as regular universal quantifiers of the *every*-QP type.

²⁴ After completing this chapter Puskás (1999) came to my attention. In this article, Puskás maintains that Hungarian n-words are semantically non-negative, i.e. sides with the views discussed in the following subsection. Here no account of the preverbal complementary distribution effects is presented, as it is not the main concern of the study.

The syntactic machinery adopted in these works is somewhat varied²⁵, but it is similar to that embraced by Puskás (1998, 2000) in that it is maintained that there is a NegP projection, whose head is the negation particle, dominated by a FP projection, targeted by focus. Now, it is assumed that n-words can be fronted only *qua* universal quantifiers to a QP (corresponding to Szabolcsi's (1997) DistP) (passing through NegP for Olsvay (1998, 2000)). In crucial difference to Puskás (1998, 2000), the syntax of pre-focus n-words is analysed as involving a second NegP projection above FP. The relevant portion of the structure is given below.



Assimilating the syntax of n-words below and above focus makes it possible to reduce the complementary distribution of *sem*-expressions and *nem* above the focus site to the analogous complementary distribution below the focus site, both reflections of a phonological deletion rule affecting the negation particle (*nem*-deletion). However, given that a unique SemP is not posited, the complementary distribution of preverbal *sem*-expressions is to be derived differently. É.Kiss (1994) and Olsvay (1998, 2000) assume a second phonological deletion process to this end: if a *sem*-expression is fronted to the immediate left of another *sem*-expression, the *sem* particle modifying the first is deleted in the phonological component (*sem*-deletion).²⁶

I argue now that such deletion rules do not exist in the grammar of Hungarian. For one thing, if they did exist, they would clearly be language-specific²⁷ and construction-specific rules, clearly undesirable on general methodological grounds. In fact, Olsvay (2000) presents an attempt to derive these deletion rules from the purported universal of the Obligatory Contour Principle (OCP) (in essence,

²⁵ I ignore differences not directly relevant to the present concerns (like the positioning of the verb). Here I will consider É.Kiss's more recent 1998 syntactic account.

²⁶ É.Kiss (1998b) derives the complementary distribution by direct stipulation.

²⁷ Greek, which on this view under scrutiny would be a close counterpart to Hungarian, allows fronted n-words to co-occur with overt negation (cf. Giannakidou 2000).

a haplology rule), which deletes one of two adjacent identical phonological elements. However, the success of this attempt is questionable. Olsvay's claim is in effect the following. Since historically *sem* is morpho-phonologically composed of *is* 'also/even' + *nem* 'not', Olsvay maintains that at the level of syntactic structure, this is how *sem* is still represented in present-day Hungarian (though such an assumption would require independent synchronic justification). Then, the morpho-phonological string *is nem nem* serves as input to OCP, which requires the elimination of one instance of *nem*. This is sketched in (37a), with the two options in (37b,c):

- (37) a. *s*-word *is* *nem*₁ *nem*₂ V
 b. *s*-word *is* ~~*nem*~~₁ *nem*₂ V (=s-word *nem* V)
 c. *s*-word *is* *nem*₁ ~~*nem*~~₂ V (=s-word *sem* V)

However, the account faces complications. For, it needs to be stipulated that when the first instance of *nem* is deleted, as in (37b), that also entails the elimination of the *is* particle, yielding *nem* (= *nem*₂), but it is not clear why this should be so.²⁸ Further, it is also unclear how the effect of deleting *sem* comes about in this picture. Recall that *sem* is syntactically represented as *is nem*, and Olsvay analyzes the initial *se*-morpheme of *n*-words as *sem*, i.e. as *is nem*. But then, it remains obscure how to account for the putative deletion of *sem* off non-last members of a preverbal sequence of *sem*-expressions, as in (38a). The syntactic form of (38a) would be (38b), and as we witness, the *nem* component of *sem*₁ is not adjacent to another occurrence of the same morpheme, failing to feed the OCP.

- (38) a. *s*-word ~~*sem*~~₁ *s*-word *sem*₂ ~~*nem*~~ V
 b. *is* *nem* XP *is* *nem* *is* *nem* XP *is* *nem* *nem* V

²⁸ To resolve this problem, we could contemplate that *is* has to be eliminated because it cannot possibly be contracted with *nem*₂ across a deleted element (the idea would be similar to contraction being blocked by traces), and for some reason, it cannot be spelled out as *is*. However, relevant evidence can be derived from the behavior of the negative existential verb, suggesting that such an account cannot be maintained. The indicative present tense 3rd person form of this verb merges morpho-phonologically with negation, and we also witness what on Olsvay's account would be merger with *is+nem*:

- (i) a. \emptyset nincs otthon
 he-NOM NEG-be-IND-3SG at-home
 b. \emptyset sincs otthon
 he-NOM also-NEG-be-IND-3SG at-home

Accepting, for the sake of the argument, Olsvay's treatment, the underlying representation of (i) would be (ii), and the two options for deletion deriving (ia,b) would be (iib,c), respectively:

- (ii) a. *is* *nem*₁ *nem*₂ be-IND-3SG
 b. *is* ~~*nem*~~₁ *nem*₂ be-IND-3SG
 c. *is* *nem*₁ ~~*nem*~~₂ be-IND-3SG

However, the explanation why *is* has to be eliminated we attempted above cannot then hold, since it appears from (iic) that contraction is indeed possible across a deleted *nem*.

Note that even if we granted a resolution of this problem, the question would arise why it cannot be the *se-* morpheme of the second *sem*-expression that gets deleted (cf. (37b,c)).

These data very strongly suggest that an OCP-based deletion operating on abstract *is nem* sequences is essentially misguided, thus, instead of a single generalization, we fall back on two stipulative rules. However, even if we abstract away from the failure of the attempt to reduce *nem-* and *sem*-deletion to more principled grounds, and consider the two rules as mere descriptive devices, the account still leaves a crucial question related to prosody unanswered, an in addition, it simultaneously both under- and overgenerates.

The central question of prosody *nem*-deletion gives rise to concerns stress pattern. Since on any account *nem* forms one phonological word with the inverted verb (and on É.Kiss' and Olsvay's view, it forms part of a complex head with it), the deletion of *nem* at the segmental level should not in fact also remove the main stress from the whole phonological word (or complex head) as such. However, it is attested that if a *sem*-expression immediately precedes the inverted verb, the verb is always unstressed.

Further, the phonological deletion analysis undergenerates. An even more apparent problem is posed by the fact that *sem* gets omitted even when the subsequent *sem*-expression does not begin with the *se-* morpheme at all, and so there is no phonologically adjacent instance of an underlying *nem* in the context (the starred version is ungrammatical for all informants, the unstarred version is grammatical for many, but not all):

- (39) % Semelyik barátja (*sem) meg sem ismerte
 none friend-of-his SEM PREF SEM recognize-PAST-3SG
 'None of his friends even recognized him'

Another instance of undergeneration is manifested in cases like (34); (40) below corresponds to (34b).

- (40) Senkit (*sem) még semmi baj nem ért
 nobody-ACC yet nothing problem-NOM not affect-PAST-3SG
 'Nobody had any problems yet'

The phonological deletion account grossly overgenerates as well, i.e. there exist a number of contexts where the relevant adjacency holds, yet no deletion occurs. Witness (41):

- (41) sem nem jött el, sem nem maradt otthon
 SEM not come-PAST-3SG PREF SEM not stay-PAST-3SG at-home
 'He neither came along, nor stayed at home'

In this construction, the sequence of *sem nem* must be exempt from *nem*-deletion. Note that here the *is* 'also/even' component of the meaning of *sem* is clearly semantically interpreted, so it could be argued that that is why *sem* cannot be

deleted. However, even then, it is still not clear why in this context *nem* should also be impossible to delete. A further example of overgeneration is (42):

- (42) ?*nem* akartam semelyiket sem nem fejezni be
 not want-PAST-1SG none-ACC SEM not finish-INF PREF
 ‘I didn’t want to not finish ANY of them’

Finally, *sem*-deletion strikingly overgenerates in the postverbal domain. It predicts that *sem* will have to be deleted there as well—but that is plainly false: any number of *sem*-expressions may form a sequence postverbally.

What I have shown is that the preverbal complementary distribution patterns are not *phonological* phenomena dependent on adjacency. But if n-words are uniformly non-negative, as assumed under the approach under scrutiny, then these patterns are left without an account.

These results clearly call for an alternative analysis.

2.2 The negativity of n-words revisited: the two classes of n-words

We have seen that both the approach that assumes Hungarian n-words to be uniformly semantically negative and the one taking them to be uniformly non-negative fail, although for very different reasons. Let me suggest an alternative view.²⁹

I propose that modification by the *sem* particle is both syntactically and semantically crucial. I assume that *sem* carries logical negation. As I pointed out at the beginning of Section 2, *sem* historically derives from the merger of *is* ‘also’ and *nem* ‘not’; this lends immediate plausibility to such a claim. In effect, we factor n-words syntactically and semantically into the class of bare *se*-words, which are non-negative, and *sem*-expressions, which are negative. Let us see what this buys.

Such a move offers a neat explanation of the preverbal complementary distribution effects. Recall that we analysed the negation particle as occupying a specifier position of a functional projection (call it ZP, as above), checking [neg]. If *sem*-expressions also carry logical negation, they can effectively have the same function (checking [neg]) as well as the same position (Spec,ZP) as negation itself. This immediately derives the preverbal complementarity of negation and *sem*-phrases. In reality, it *potentially* derives the prohibition against multiple preverbal *sem*-phrases too: there is only one [neg] feature to check on Z^0 , which then is either checked by negation, or by exactly one occurrence of a *sem*-expression. (In fact, the same consideration rules out multiple preverbal foci.) It will *actually* derive that prohibition, if it can be shown that there is no way a *sem*-expression can be fronted other than when it checks [neg]. This is what I am going to argue. But before that, let us see the state of the overall analysis at this point.

²⁹ This alternative view also appears in Surányi (to appear a).

Granting the proviso just made, the mutual exclusion effects are derived directly. There is no need for the problematic phonological deletion rules criticised above. Also, patterns like (the grammatical) (23a), reproduced below as (43a), as well as patterns like (23b)=(43b), are analysed without relying on Neg-factorization, since bare *se*-words are non-negative.

- (43) a. (Senki) nem jött el (senki)
 nobody-nom not came-3sg Pref nobody-nom
 ‘Nobody came along’
- b. (Senki) sehova nem jött el (senki)
 nobody-nom nowhere-to not came-3sg Pref nobody-nom
 ‘Nobody came along to nowhere’

Let us here adopt the view that Hungarian n-words can be uniformly taken to be universal quantifiers of the *every*-QP type, assuming that they are fronted qua *every*-QPs: members of this quantifier class have been generally taken to be able to occupy their scope position overtly in Hungarian ever since the earliest analyses (cf. É.Kiss 1987, 1991 and references therein) (a view contested in Chapter 3). However, they may also surface postverbally, taking wide scope—we will assume the same for n-words, which may also optionally remain postverbal (as the parentheses show). In Chapter 3, we analysed this optionality as optionally overt/covert QR. As we have seen, bare *s*-words (just like positive universal quantifiers) may raise above focus as well, provided that it is licensed by negation:

- (44) (Senki) nem MA jött el (senki)
 nobody-nom not today came-3sg Pref nobody-nom
 ‘Nobody came along TODAY’

To be able to understand why in contrast it is impossible in light of the data in (23) above for a *sem*-expression to raise above negation (or above another *sem*-phrase) qua universal quantifier, we must first explore the status of postverbal *sem*-expressions. Given that they cannot appear inside clause-internal islands, cannot be separated from preverbal expression of logical negation (i.e. the negation particle or a preverbal *sem*-expression) by a quantificational intervener, it is plausible to assume that these also form a covert dependency with the Z^0 head (whose specifier may be occupied overtly by either the negation particle or a *sem*-expression), Agree in Chomsky’s recent work. Brody (1997) argues that multiple Wh interrogatives are interpreted as a single question not because the relevant interpretable [wh] feature is present only on one of the Wh elements, but essentially because they all form a chain with C^0 , thus creating a single (complex) object that is interpreted at the semantic interface as expressing a single question, scoping from the position of the highest of the Wh elements. I adopt this view for Hungarian Negative Concord: multiple occurrences of *sem*-expressions, all linked up to [neg] in Z^0 , and hence forming a single (complex) object at the semantic interface, are interpreted as expressing a single logical negation at the position of the uppermost instantiation of negation, be it the negation element *nem* or the negative particle *sem*. Acquaviva (1997, 1999) takes a very similar stance. The mechanism whereby Italian Negative

Concord items receive a single negation interpretation is described in analogous terms: in Acquaviva (1997) a representational chain, in Acquaviva (1999) a dependency connects individual *n*-words and clausal negation to be read as a single LF object. In effect, this is a form of absorption, in a very broad sense. However, as the reader can easily verify, it stays clear of all the complications associated with the complex specifier absorption analysis discussed above.³⁰

We are now in a position to address the issue of the ‘freezing’ affecting postverbal *sem*-phrases: why they are not eligible to undergo universal quantifier raising (QR) above negation, unlike bare *se*-words. I argue that this ‘freezing’ effect is a subcase of what is known as the improper movement generalisation. Broadly speaking, according to this generalisation, given a sufficiently elaborated typology of movements which maps onto a certain hierarchy, a movement operation cannot be followed by another movement operation (applying to the same element) if that is lower on the hierarchy. The typology in the 80s was rough: it divided the relevant movements into A type and A-bar type, with the corresponding hierarchy A-bar > A. In the 90s, the need for a more elaborate movement typology has become clear. The point of significance here is that presumably on a hierarchy of movements, syntactic operator movements serving operator feature checking appear to be placed higher than QR. For one thing, QR targets the nuclear clause (a propositional unit), while syntactic operator movements target higher positions. If that is true, syntactic operator movements cannot feed QR, creating improper movement—a generalisation that generally appears to be correct. But then, in this light it is clear why QR cannot move *sem*-expressions which have already entered a checking (Agree) relation with Z^0 : such improper movements are not possible in general. Note that bare *se*-words do not carry any relevant feature, hence do not enter checking with Z^0 —as a consequence, they are freely fronted by QR.

It appears that the assumption that *sem*-expressions are negative and check [neg] of Z^0 in Spec,ZP, while *se*-words are non-negative yields correct results.

However, as the careful reader will have realized, we have avoided a full discussion of the preverbal distribution of *sem*-phrases. In particular, there appears to be a gap in our predictions as they stand: the account overgenerates for one case. This is because we claim that *sem*-expressions are on a par with the negation particle: they both appear in Spec,ZP, in a multiple specifier configuration together with focus. As we saw above (cf. 2a,b & 14a,b), the negation particle can both occur in the inner and in the outer specifier when ZP houses a focus as well. However, the same is not true of *sem*-expressions: although they can appear in the outer specifier of ZP (cf. 23e represented as 45a), they appear to be banned from the inner specifier, scoping below focus (cf. 45b,c):

- (45) a. [_{ZP} senki sem [_{ZP} MA [_Z jött] . . . (cf. 23e & 14b)
 b. *MA senki sem jött el
 today nobody-nom SEM came-3sg Pref
 intended: ‘It is TODAY that nobody came along’

³⁰ In Chapter 5, section 2.3 I present an alternative account of why only one logical negation is expressed (i.e. why a Negative Concord interpretation is achieved) by multiple *sem*-expressions in terms of Chomsky’s (2000, 2001) feature valuation.

- c. [Z_P MA [Z_P senki sem [Z jött] . . .

As I demonstrate directly, this gap in the coverage is exactly in the right place: (45b,c) is ruled out by an independent factor.

Recall from Chapter 2 that we argued that certain classes of elements undergo default focussing in Hungarian. Some examples of this are reproduced below.

- (46) a. Miért / Hova jött el?
 why / where-to came-3sg Pref
 ‘Why / Where did he come along?’
 b. *Hova MA jött el?
 where-to today came-3sg Pref
 ‘Where did he come along TODAY?’
 c. Miért MA jött el?
 ‘Why did he come along TODAY?’
- (47) a. Rosszul csinálta meg a leckét
 badly did-3sg Pref the homework-acc
 ‘He did the homework badly’
 b. *Meg csinálta a leckét rosszul
 c. *Rosszul A LECKÉT csinálta meg
 d. *A LECKÉT rosszul csinálta meg
 e. A LECKÉT csinálta meg rosszul
 ‘It’s the homework that he did badly’
- (48) a. Kevés fiú jött el
 few boy-nom came-3sg Pref
 ‘Few boys came along’
 b. *Jött el kevés fiú
 c. *Kevés fiú MA jött el
 d. *MA kevés fiú jött el
 e. MA jött el kevés fiú
 ‘It’s today that few boys came along’

For instance, *miért* ‘why’ appears to be exceptional among *wh*-items in Hungarian in that it may precede preverbal focus (cf. 46b vs. c). Since it is a robust generalisation that only one preverbal focus is available in Hungarian, we are forced to assume that *miért* ‘why’ is not focussed in this case. Counting quantifiers (cf. Szabolcsi 1997 for the characterization of this class) including as a proper subset of the class of downward entailing numeral expressions (e.g. *few*-NPs) also behave in a similar way. As argued in Chapter 2, these quantifiers are focussed when preverbal (contra Szabolcsi 1997). In fact, when there is no other focus, they *must* be focalized (cf. 48a,b), and only when there is a regular focus can they be postverbal (and in such contexts they *must* remain postverbal) (cf. 48c–e). In the postverbal field, they behave as distinct from postverbal, secondary focus occurring in multiple foci constructions, as I demonstrated in Chapter 2: they are not focussed by default there.

But *sem*-expressions are clearly downward entailing, hence we expect them to group with other downward entailing quantifiers, serving as default focus. Let us now examine this question.

First, let us turn to the issue whether n-words in Hungarian are focussed—or focussable at all. As we have seen, Puskás (1998, 2000) analyses preverbal n-words as being focussed; however, no convincing argument is offered. Puskás (2000) cites ungrammatical examples like (41a,b) below as purported evidence: *wh*-elements (which are generally considered to occupy a focus position, see Chapter 6 for discussion) and fronted n-words are in complementary distribution. I add (49c,d): minimal pairs of (49a,b), but with *sem*-expressions.

- (49) a. *Ki semmit nem látott?
 Who-nom nothing-acc not saw-3sg
 intended: ‘Who saw nothing?’
 b. *Semmit ki nem látott?
 c. *Ki semmit sem látott?
 d. *Semmit sem ki látott?

However, these examples are not decisive. (49b,d) are ruled out independently. (49b) is disallowed at least because the *s*-word, as a strong NPI, needs to be licensed by negation—but here negation fails to license it, being lower in the structure. Also, it is disallowed for the same reason as (49d): universal quantifiers can never raise above *wh*-elements independently, and it is safe to assume that the n-words in (49b,d) are interpreted as universals. However, (49a,c) indeed show that an n-word cannot be fronted to a preverbal position below focus. This is expected if these fronted n-words are focal as a rule—this is the case either if fronted n-words are invariably focussed, as suggested by Puskás, or if they are focussed by default, as we are arguing here.

On the other hand, Olsvay (2000) argues that n-words are *never* focussed in Hungarian. He cites two examples which exhibit occurrences of n-words which are certainly not in focus. These are reproduced in (50):

- (50) a. Senki akit vártam nem jött el
 nobody-nom who-acc expected-1sg not came-3sg Pref
 ‘Nobody I had expected came along’
 b. 'Senki 'fel nem állt volna
 nobody-nom up(Pref) not stood-3sg COND
 ‘Nobody would have stood up’

(50a) illustrates the fact that a preverbal *s*-word can be modified by a relative clause, while (50b) shows a stylistically marked pattern where the *s*-word is separated from the *nem V* sequence by Pref (note that Pref in such stylistic variants also bears stress). The crucial fact is that neither possibility is grammatical with minimal pairs containing focus instead of n-words. Notice however that, crucially, what this contrast shows is *not* that it is *never* possible to focus an n-word, but only that the instances of *s*-words in the examples in (50) are not focussed. Then, this

demonstrates only that *there are* preverbal occurrences of non-focussed n-words, in particular, of the bare *s*-word variety.

Preverbal focus in Hungarian is marked by emphatic accent which is followed by deaccenting of the immediately right-adjacent inverted verb, or the *nem V* sequence. The fact that such a stress pattern is not only readily available with preverbal *sem*-expressions, but is actually the only available stress pattern is suggestive prosodic evidence indicating that an immediately preverbal *sem*-expression is in fact focussed (51a–c). Such a stress pattern is also available with bare *s*-words, but only as an option (51d,e).

- (51) a. SENKI sem ⁰jött el
 nobody-nom SEM came-3sg Pref
 ‘NOBODY came along’
 b. *SENKI sem ⁰jött el
 c. *Senki sem ⁰jött el
 d. SENKI ⁰nem ⁰jött el
 e. Senki ‘nem ⁰jött el

Indeed, returning to (50), (50a,b) become unacceptable with analogous prosody, suggesting that the *s*-words there are not in focus. Further, it is revealing to observe that (50a,b) also become ungrammatical if instead of bare *s*-words, *sem*-expressions are used. It appears that immediately preverbal *sem*-expressions are focussed.

The same conclusion is suggested by the distribution of postverbal focus. A focussed expression is normally only licensed postverbally by a preverbal occurrence of focus. However, preverbal *sem*-expressions are also able to license a postverbal focus (52a). Again, the same is possible with a bare *s*-word, but only if it bears emphatic stress (52b).

- (52) a. Senki sem szavazott végül A FIATALABB JELÖLTRE
 nobody-nom SEM voted-3sg finally for the younger candidate
 ‘Finally nobody voted for the original candidate’
 b. SENKI ⁰nem ⁰szavazott végül A FIATALABB JELÖLTRE

Note that these arguments only apply to *immediately* preverbal *sem*-expressions and *immediately* pre-negation *s*-words. Occurrences of n-words above focus in the preverbal field cannot be focussed in the face of the robust generalisation that in this language only one preverbal focus is allowed (and given that a complex specifier analysis has been dismissed).

The general conjecture is that Hungarian n-words are in fact focussable with the regular syntactic and prosodic consequences. We can conclude in particular that (i) n-words are not always focussed, in fact never focussed when above regular preverbal focus, and (ii) immediately preverbal *sem*-expressions are invariably focussed,³¹ but immediately pre-negation *s*-words are only focussed as an option.

Our main concern here is *sem*-expressions. Based on the facts we have just seen, I assume that they function as default focus, along with other downward

³¹ As we will see in Section 3, they also receive a focal interpretation.

3 The quantificational status of Hungarian n-words

3.1 N-words as universal quantifiers?

We established at the end of the preceding section that n-words can be focussed in Hungarian. However, if n-words are focussable, then the uniform treatment of n-words as universal quantifiers of the *every*-NP type becomes problematic. This is because universal quantifiers are non-focussable in this language:

- (54) *MINDENKI jött el
 everybody-NOM come-PAST-3SG pref
 ‘EVERYBODY came along’

This is contrary to expectations, if n-words in focus are of the *every*-NP type. In this section, I examine the quantificational status of Hungarian n-words in detail, also trying to account for this perceived asymmetry.³³

The issue of the quantificational property of n-words in general has been hotly debated in the broader literature on Negative Concord, and it has been resolved variously for different language types. The assumption that Hungarian n-words are interpreted as universals has been taken for granted since earliest times in the study of Hungarian syntax (cf. e.g. Szabolcsi 1981b, 1997; É.Kiss 1987, 1994; Olsvay 1998, 2000; Puskás 1998). The view has an obvious descriptive appeal: the numerous symmetries found between the distribution and prosody of n-words and universals like *every*-NPs fall out directly (although the parallel is more complete for *s*-words, whose fronting I described in precisely these terms above). Because of the apparent symmetries, the question essentially had not been seriously raised as an empirical one until recently.

The issue was raised first in Surányi (2000) and Puskás (2000) independently of each other. Some of the empirical results of Surányi (2000)—suggesting that in some contexts at least, n-words are interpreted not universally, but existentially—are built into the present analysis. Puskás (2000) addresses the issue and concludes that the traditional conception of n-words as universal quantifiers is essentially correct. Both authors rely on various tests from the literature, some proposed in Giannakidou (2000). I argue here that (i) some of the potential tests that have been thought to be inapplicable or inconclusive in the case of Hungarian due to special circumstances in fact produce suggestive results; (ii) some other probes indicate that n-words in this language can be interpreted as universal quantifiers; (iii) and a number of tests reveal that they can be interpreted as existentially quantified.

One test often applied is *almost*-modification (see Dahl 1970, Horn 1972; Zanuttini 1991). *Almost* (and *absolutely*) are taken to be able to modify universal quantifiers, but not existential indefinites (see Horn & Lee 1995 for a refinement). In fact, as Puskás (2000: 341) also points out, n-words can be modified by *almost* in

³³ Various aspects of this issue are examined in Surányi (to appear b, to appear c).

Hungarian. However, further qualification is in order. In reality, not all n-word occurrences allow *almost*-modification. Witness (55):

- (55) a. ??Majdnem senkivel sem beszélt Zeta
 almost nobody-with SEM talk-PAST-3SG Z.-NOM
 ‘Yesterday Zeta talked to almost nobody’
 b. ?*Nem találtam majdnem semmit a hűtőben
 not find-PAST-1SG almost nothing-ACC the fridge-in
 ‘I found almost nothing in the fridge’

We will return to the conditions of *almost*-modification below. The lesson at this point is that the correct generalisation is that Hungarian n-words sometimes may, sometimes may not be modified by *almost*. This should mean that some, but not all occurrences of Hungarian n-words are interpreted as universal quantifiers.

A second test involves donkey anaphora. It is well known from dynamic semantics that universal quantifiers do not support anaphora appearing outside the sentence that they appear in, whereas existentials do. Giannakidou (2000) argues that Greek emphatic n-words must be universals because they do not support donkey anaphora, whereas non-emphatic n-words do, so she analyses the latter class as existentials. Puskás provides an example from Hungarian, showing that the n-word cannot support donkey anaphora. However, her example is a simple indicative, and therefore it is wholly expected that donkey anaphora will fail: if the n-word is a universal, then it is expected for that reason, if it is an existential, then it is expected because existentials in the scope of negation typically do not support such anaphors (cf. Richter and Sailer 1998 for the same point). However, Giannakidou (2000: 476) goes on to argue that in directive sentences like the one below an anaphoric link *can* be established between the pronoun and the *any*-phrase; in other words, negated directives allow donkey anaphora in the case of existentials in the scope of negation (cf. 56). Then, the appropriate test case is (57).

- (56) Don’t check any book out from that (Satanic) library;
 reading it might warp your mind.
 [=Giannakidou’s (40a)]

- (57) Ne nyisd ki semelyik könyvet;
 not open-IMP-2SG PREF none book-POSS-3SG-ACC
 már elolvasni is veszélyes lehet
 already PREF-read-INF even dangerous be-COND-3SG
 ‘Don’t open any of the books; even reading it could be dangerous’

The grammaticality of such examples suggests that n-words in Hungarian *can* be interpreted existentially.

Giannakidou & Quer (1995) note that just like universal quantifiers of the *every*-NP type, n-words in languages like Greek cannot function as predicate nominals. In contrast, existential indefinites can. Thus Greek n-words side with *every*-NPs in this respect. Puskás (2000) notes that Hungarian allows n-words to be

used as predicate nominals, and also treats universals in the same way. The illustrations she provides are cited below.

- (58) a. Emőke minden öröömöm [=p. 342, (72b)]
 E.-NOM every joy-POSS-1SG
 'Emőke is all my joy'
- b. Zeta semmiféle katona [=p.342, (72c)]
 Z.-NOM no-sort soldier
 'Zeta is no soldier'

Puskás comments that given the grammaticality of (58a), the judgement of (58b) allows us to make no inferences with respect to the quantificational force of Hungarian n-words. However, the examples above are not conclusive. The universal quantifier *minden* in (58a) is arguably a counterpart of English *all* (combining with a mass term), rather than *every*, as indicated in the translation (although the same lexical item is used). *All* is licit in predicate nominal position in English too (cf. *That is all we know*). NPs quantified by *minden* 'every' are, in contrast, unacceptable as predicate nominals:

- (59) *Péter és János minden magas fiú
 P-NOM and J-NOM every tall boy
 '*Peter and John are every tall boy'

Then, this can serve as an appropriate test case in Hungarian as well to distinguish quantification with the force of *every* on the one hand, and existential indefinites on the other. In this light, Puskás' example (58b) appears to suggest that Hungarian n-words can be existential. However, (58b) is insufficient to make the point. This is because universal quantification over kinds is a standard exception in Definiteness Effect contexts like existential sentences: here too *every*-expressions cannot appear, except if kinds are involved (cf. *There was every kind of wine on the table*). However, there are other examples that work:

- (60) a. A: Mi ez?
 What this-NOM
 'What's this?'
- B: Semmi / Ez? Á, ez semmi különös
 nothing / This? Oh, this-NOM nothing particular
 'Nothing' / 'This? Oh, this is nothing particular'
- b. Ez a zaj semmi a tegnapihoz képest
 this the noise-NOM nothing the to-yesterday's in_ comparison
 'This noise is nothing compared to yesterday's'

These facts point to the fact that Hungarian n-words may be interpreted as existentials.³⁴

³⁴ Unfortunately, this test cannot be productively applied. This is due to a lexical quirk of Hungarian, namely, that it lacks a determiner analogous to English *no*, Dutch *geen*, German *kein*, etc.

However, further facts indicate that n-words in Hungarian may be existential. Giannakidou (2000) points out that in Greek, *ke* ‘and’ is a modifier of existential quantifiers, and n-words and universal quantifiers are incompatible with it, thus forming a natural class in this respect. A similar consideration may turn out to be relevant in Hungarian as well. As noted in Tóth (1999), Hungarian has a paradigm of weak negative polarity items (NPI) with the internal structure *vala* + *Wh* + *is*, where *vala* is similar to ‘some’, *Wh* stands for bare Wh pronouns and *is* is (homophonous with) *is* ‘also/even’.³⁵ It is commonly accepted that weak NPI-s are interpreted existentially. Importantly, *is* cannot modify positive universal quantifiers:

- (61) *mindenki is
everybody also/even

On the other hand, historically *sem* is a combination of *is* ‘also/even’ + *nem* ‘not’. This means that the n-word paradigm and the existential weak NPI paradigm at an abstract level share the property of being modified by *is*. That n-words pattern morphologically with a existential weak NPI is suggestive evidence that n-words and weak existentials may be a natural class in another regard too: in terms of the availability of an existential interpretation.

A further relevant fact concerns incorporation. It is an empirical generalisation that bare plurals in Hungarian, being bare NP projections (vs. full DPs) undergo ‘incorporation’ to the verb, cf. (62).³⁶ In this incorporated position, however, bare plurals only have the existential reading, but lack the generic one. Incorporated complements in simple cases too can be existentials, but not universals, cf. (63).

- (62) a. János lakásokat újít fel
J.-NOM apartment-PL-ACC renovate-3SG PREF
‘John renovates apartments’
b. *János fel újít lakásokat
- (63) a. János valami híres embert alakít
J.-NOM some(thing) famous person-ACC act-3SG
‘John acts the part of a famous person’
b. *János alakít valami híres embert
c. *Egy színész minden híres embert alakít
an actor-NOM every famous person act-3SG
‘An actor acts the part of every famous person’

³⁵ Hunyadi (1981) notes that the morpheme *is* ‘also/even’ in turn historically derives from the conjunction *es* ‘and’ (corresponding to Greek *ke*). This latter form in fact survives today in some dialects.

³⁶ ‘Incorporation’ here is meant as a cover term for the syntactic position of elements that occupy and immediately preverbal position in neutral clauses, often termed the VM position (cf. e.g. Komlósy 1994).

Now consider the data below:

- (64) a. nem szeretnék Pálnak semmi hülyeséget mondani holnap
not like-COND-1SG P-DAT nothing stupid-ACC tell-INF tomorrow
b. ?*nem szeretnék Pálnak mondani semmi hülyeséget holnap
- (65) a. nem szeretnék semmi különösnek látszani
not like-COND-1SG nothing particular-DAT seem-INF
'I wouldn't like to seem anything particular'
b. *nem szeretnék látszani semmi különösnek

It appears that the n-words in (64) and (65) undergo obligatory incorporation. In that case, however, they must be interpreted existentially, and not universally. That an existential interpretation is obtainable for Hungarian n-words is suggested by discourse semantic facts as well. It is well known that universal quantification has a pragmatic implicature of existence. If n-words are interpreted as universal quantifiers scoping above negation ($\forall > \neg$), then this entails that n-words are interpreted *de re*. As Giannakidou (2000) demonstrates, this is invariably the case for Greek n-words. Hungarian n-words, however, appear to be different: they are not always presuppositional. Witness (66):

- (66) a. Nem fedeztem fel semmi nyomát
not discover-PAST-1SG PREF nothing trace-POSS-ACC
'I didn't discover any trace'
b. Nem látom semmi értelmét
not see-1SG nothing sense-POSS-ACC
'I don't see any point (in it)'

Comparable sentences in Greek are pragmatically odd (cf. Giannakidou 2000: 505), because there only the *de re* reading is generated. (66a,b), in contrast, are perfectly felicitous, with *de dicto* readings. N-words in such examples cannot be universals, but may be existentials instead.

The availability of so-called 'split' readings with modal verbs (cf. e.g. de Swart 1996) points to the same conclusion. A sentence like (67) has three distinct readings.

- (67) They are allowed to fire no nurse

These readings are the *de re* ('for each nurse, one is not allowed to fire her'), the *de dicto* ('what one is allowed to do is not fire any nurse') and the 'split' ('one is not allowed to fire any nurses'). As Giannakidou (2000) shows, the 'split' reading is unavailable with the Greek counterpart. However, the Hungarian equivalent admits this reading easily:

- (68) Nem szabad egy ápolónőt sem / senkit elbocsájtani
not allowed a nurse-ACC SEM / nobody-ACC PREF-fire-INF
'One is not allowed to fire any nurses / anybody'

If such a reading must be decomposed as $\neg > \text{modal} > \exists$, and cannot be represented as $\forall > \text{modal} > \neg$, then we have evidence that Hungarian n-words may correspond to existential quantifiers.

Up to this point, we have seen substantial evidence that both the universally and the existentially quantified interpretations are available to Hungarian n-words. However, not both interpretational options are present in all syntactic positions, it appears. *Almost*-modification is not felicitous in all positions, cf. (69).

- (69) a. nem segített majdnem senki
 not help-PAST-3SG almost nobody-NOM
 ‘Almost nobody helped’
 b. ??majdnem senki sem ⁰segített (cf. also 55a)
 c. ?*MAJDNEM SENKI ⁰nem segített
 d. majdnem senki semmiben nem segített
 almost nobody-NOM nothing-in not help-PAST-3SG
 ‘Almost nobody helped with anything’

Almost cannot modify an immediately preverbal *sem*-expression, and an *s*-word that precedes another preverbal n-word. Of the sentences below, an existential presupposition is obligatory (i.e. a universally quantified interpretation must be generated for the n-word) in (70d,e), but not in (70a,b,c).

- (70) a. Nem fedezték fel semmi nyomát
 not discover-PAST-3PL PREF nothing trace-POSS-ACC
 ‘They didn’t discover any trace’
 b. SEMMI NYOMÁT ⁰nem fedezték fel
 c. Semmi nyomát sem fedezték fel
 d. 'semmi nyomát 'nem fedezték fel
 e. semmi nyomát senki nem fedezte fel
 nothing trace-POSS-ACC nobody-NOM not discover-PAST-3SG PREF
 ‘Nobody discovered any trace’

It appears from (69) that a universally quantified interpretation is *not* available for a preverbal *sem*-expression, and an emphatic *s*-word to the immediate left of unstressed negation (let us call these non-universally quantified occurrences, or non-uQ for short). On the other hand, (70) suggests that a universal interpretation is the only one available in a position to the left of a stressed negation element, as well as to the left of another fronted n-word (call these instances uQ).

If n-word occurrences are either universally or existentially quantified, then this entails that postverbal n-words, as well as non-uQ occurrences may in principle be existentially quantified. However, in the latter position type the n-word is situated to the left of negation itself. Hence, if an existential interpretation were assigned to these n-words, then that would yield a semantic representation where the existential quantifier outscopes negation—a reading contrary to fact. That is, we have a paradox: non-uQ occurrences can neither be interpreted universally nor can they be interpreted existentially.

In fact, this is the same paradox we encountered above with regard to focussing of n-words. Recall that we pointed out at the beginning of this section that there exists an asymmetry between n-words and positive universal quantifiers: the former are focussable, while the latter are not (cf. 54). This would imply that focussed n-words are semantically not universal quantifiers. However, they cannot be interpreted in focus existentially either, given that, once again, the existential quantifier would then outscope negation, which is not the reading that actually obtains.

I suggest that to resolve this paradox we need to reject the premise that the universal and the existential are the only two interpretations that n-words can have. Following this reasoning, we are led to conclude that non-uQ occurrences receive a third interpretation, neither existential, nor universal—to be discussed shortly.

Summing up the discussion thus far, we have three position types. (i) uQ, where only a universally quantified interpretation is available, (ii) the postverbal field, where both a universal and an existential reading are obtained, and (iii) non-uQ, where some third interpretation is generated. Significantly, non-uQ occurrences are the focussed occurrences.

Let us turn our attention to cases (i) and (ii): uQ and postverbal occurrences, i.e. (i) and (ii) above. The uQ occurrences or n-words are fronted above negation, above a focused n-word (i.e. above the focus position), or above another uQ n-word occurrence. This case, then, appears to be straightforward, inasmuch as normally universal quantifier raising places (wide scope) universal quantifiers above the syntactic position of focus and of negation in Hungarian (cf. e.g. É.Kiss 1991, 1994). The uQ occurrences of n-words are interpreted universally, because they are universal quantifiers displaced by overt QR.³⁷ In short, the standard account treating Hungarian n-words as universal quantifiers applies to these occurrences.

As for the postverbal instances, these come in two varieties: those interpreted universally, and those interpreted existentially. The first variety is, once again, simply the case of universal quantifiers. Universal quantifiers may take their scope overtly in Hungarian by overt QR, but they do not have to: they may take wide scope even when postverbal (for the exact mechanism of inverse scope taking of postverbal universals, cf. e.g. Brody 1990, É.Kiss 1994, as well as Chapter 3). This leaves us with the postverbal existential reading. That postverbal n-words can be existentially quantified appears well established (recall the predicate nominal test, incorporation facts, and the availability of ‘split’ readings). It could be claimed that Hungarian n-words are lexically quantificationally ambiguous between a universal and an existential reading. However, this would not explain why the existential reading is unavailable when the n-word is fronted by focus movement. In the next subsection I examine how the postverbal existential reading arises, as well as what the mysterious third reading of n-words is when they are syntactically focused, showing that the two questions are intimately related.

³⁷ I take the *s(e)*- morpheme appearing in the whole paradigm of n-words to have the force of ‘every’. This morpheme historically derives ultimately from the conjunction ‘and’, which similarly to *is* ‘also’ and the *sem* particle.

3.2 An indefinite / universal quantifier ambiguity account

Let us start out from the complication we have encountered. There is ample empirical evidence that postverbal n-word occurrences can have an existential interpretation. We have also seen that n-words can be fronted by focus movement above negation—to what we referred to above as non-uQ position: in these fronted positions, the n-word is *not* interpreted as universally quantified. However, for some reason, a postverbal existentially quantified n-word cannot retain its existential interpretation in the face of the facts: otherwise the sentence would be interpreted as involving the scope relations $\exists > \neg$, which is clearly not the case.

I propose to explain this complication in the following way. As argued by Cheng (1991) and Nishigauchi (1990), among others, *wh*-pronouns in languages like Japanese or Bulgarian are bare Heimian indefinites without quantificational force of their own. Their quantificational force comes externally: either by combining with a quantifier like *some*, or *every* or a *wh*-quantifier, or through unselective binding. A bare *wh*-pronoun like *ki* ‘who’ only contributes a descriptive restriction ‘person’ or [+human]. This view of *wh*-pronouns is upheld and discussed extensively in Lipták (2001) for Hungarian. I propose that the non-universal occurrence of an n-word like *senki* ‘nobody’ is also a polarity sensitive kind of Heimian indefinite, the descriptive restriction it contributes is—similarly—‘person’ or [+human].³⁸ Then, postverbal existential force derives from existential closure triggered either by an existential operator associated with the negation operator (Heim 1982) or at VP level (Diesing 1992). This view explains why the n-word fronted by focus movement loses existential force: it leaves the domain of existential closure, and, as we have seen above, comes to be interpreted neither existentially nor universally. The remaining question concerns the nature of this other type of interpretation.

I suggest that the interpretation of focused n-words is similar to that of minimizers, expressions like the ones below.

- (71) a. Egy cseppet sem érdekli Pétert
 a drop-ACC SEM interest-3SG P-ACC
 ‘It doesn’t interest Peter a bit’
- b. Egy fillért sem költött el
 a penny-ACC SEM spend-PAST-3SG PREF
 ‘She didn’t spend a penny’

Minimizers (the term due to Bolinger 1972) are idiomatic strong polarity elements denoting a minimal quantity or extent. According to Horn (1989: 400), when these elements ‘occur in negative contexts, the negation denotes the absence of a minimal quantity, and hence the presence of no quantity at all.’ Hence, in negative contexts, they act as a means of negative reinforcement (cf. Vallduví 1994). Minimizers co-

³⁸ This is in line with Ladusaw’s (1994) seminal proposal. In contrast to Ladusaw, however, I maintain that the ambiguity is one between a universally quantified and a bare indefinite reading, and is essentially lexical in nature (the bare indefinite variety leaves the bound *s(e)*- morpheme of n-words uninterpreted). (See also Note 35.) The transition in negativity and in quantificationality may well be related (cf. Section 4).

- b. Mit sem változtat a tényeken
 what-ACC SEM change-3SG the facts-on
 ‘It does not change the facts at all’

This construction is equivalent to corresponding variants with an n-word in place of the bare *wh*-pronoun precisely because n-words, just like bare *wh*-pronouns, are interpreted as pure indefinites.³⁹

Summing up, the complex picture of the distribution of readings is now reduced to a simple ambiguity: that between a universally quantified and a bare indefinite. I have proposed to treat this ambiguity of Hungarian n-words as one between the presence and absence of lexically specified universal quantification, where the latter results in a bare nominal.⁴⁰ This nominal, in turn, is either existentially closed (in the postverbal domain), or it is syntactically focused. In the latter case, the sentence identifies an extremely general property expressed by the n-word—for which the predicate of the clause is the most likely to yield truth—as one for which the predicate fails to hold. By scalar implicature, the predicate will be false for all weaker (i.e. all other) properties on the scale. This treatment resolves a paradox pertaining to the interpretation of n-words in contrastive focus, and also sheds light on the role the modifying particle *sem* plays.

³⁹ Such *wh*-pronouns modified by *sem* must be focused. A non-focused, postverbal occurrence is unacceptable:

- (i) *Nem használt mit sem (cf. 73a)

⁴⁰ Ladusaw’s (1994) model, which is further developed by Giannakidou & Quer (1997) and Giannakidou (1997) could also be applied to treat the data. Ladusaw (1994) proposes that the quantificational property of n-words is radically context-dependent in the sense that in the nuclear scope of the negation operator, it is existentially closed, and in the restriction of the negation operator, they are interpreted as universally quantified. Critical evidence for this type of account should ideally come from data indicating that, indeed, as can be expected, under the right conditions, n-words in some contexts are universally interpreted, and in others existentially, within one and the same language. If our results are correct, Hungarian provides this type of data.

Nevertheless, I have not adopted Ladusaw’s model because of three prominent reasons. (i) The model introduces universal quantification non-compositionally. (ii) I have argued above in Section 2 that bare *s*-words are not fronted for reasons of [neg]-checking. Then, the trigger of their fronting under Ladusaw’s assumptions would be unclear: indefinites are not quantificational and hence do not undergo QR, and only a single n-word can be fronted by syntactic focusing. Even if the trigger was [neg]-checking, then we would face optionally overt/covert checking of [neg], given that n-words move optionally overtly/covertly. Also, by collapsing bare *s*-words and *sem*-expressions under [neg]-checking, we would lose the explanation of preverbal complementarity effects argued for in this chapter. (iii) There appears to be no correlation between universally quantified interpretation and overt movement of an n-word to the preverbal field, above negation, contrary to what would be expected if the universal force is acquired in a position above negation, as in Ladusaw’s model.

4 Concluding remarks

In this chapter I argued that within a typology of Negative Concord, Hungarian is a truly hybrid language on two counts. First, Hungarian n-words are to be factored into two morpho-syntactic sets (*sem*-expressions and bare *s*-words), one bearing logical negation and carrying out [neg]-checking on a functional head and the other being non-negative. Second, Hungarian n-words can both be interpreted as universally and as existentially quantified, the actual interpretational options depending on syntactic context. Significantly, this confirms the prediction of Giannakidou (2000: 518) that there must be languages that realize both universal and existential negation with their n-words. I presented a model in which this ambiguity reduces to an ambiguity between the presence and absence of universal quantification internal to the n-word. When universal quantification is absent, a bare Heimian indefinite is obtained, which is existentially closed postverbally. When in focus, this bare indefinite is interpreted much like a minimizer as the extreme element of a scale, triggering the appropriate scalar implicature for all elements higher on the scale.

Importantly, the quantified / non-quantified ambiguity we have discovered is in fact not unexpected to find in a language that is in a transitional stage in the Jespersen cycle (cf. Jespersen 1917). Jespersen's description of the historical development of various languages reveals that in many cases—in current terms—n-words enter the language as NPIs, and over time, potentially going through several stages, they shift to semantically negative expressions (i.e. expressions carrying logical negation) (see also Ladusaw 1993). The transitionality that we have found in Hungarian n-words in terms of quantificationality (simultaneous presence of non-quantified and universally quantified occurrences) may well be related to the division within the class of n-words with respect to semantic negativity. Essentially, it can be argued that Hungarian n-words as a whole class have a transitional status with respect to negativity (cf. Herburger 2001 for a similar claim for Spanish). Empirical work is needed to establish whether there is evidence from preceding stages of Hungarian confirming such a view.

In short, both with respect to negativity and quantificationality, Hungarian Negative Concord simultaneously realizes what in each case may ultimately prove to be *the* two options for the interpretation of n-words cross-linguistically, bringing strong evidence for such a cross-linguistic parametrization. This parametrization is very much in line with the minimalist approach to variation: it reduces syntactic differences to lexical parameters.

Chapter 5

Verb movement, structure building and the overt/covert distinction

I concentrate now on some aspects of the findings of the foregoing chapters. I have argued, among others, that (i) focus movement of secondary focus in true multiple foci constructions is covert, in contrast to movement of primary focus, which is overt; (ii) RefP and DistP type functional projections are to be eliminated from the grammar, defending a QR-based approach to the differential scope-taking options of various quantifier classes, and suggested that QR in Hungarian is optionally overt or covert; and (iii) negative operators (including the unary negation operator) share a functional projection with identificational focus in a multiple specifier configuration.

In this chapter I will focus on some prominent questions posed in Chapter 1, based on these results. In particular, I will implement the achievement of the Criteria tradition in successfully capturing mutually dependent head and operator movement to the same projection by assuming that the relevant operator features are carried by the moving head itself. This—given the view of head movement *qua* substitution (instead of adjunction) and projectability of categories with unsaturated features that I defend here—enables me (a) to eliminate FocP and NegP as pre-determined functional projections from the clausal architecture of Hungarian, and (b) to account for the puzzle in (i) above.

Finally, I will consider a possible account of the optionality of overt or covertness of QR in Hungarian. Extending that account, I scrutinize a previously not studied construction of Hungarian featuring optionally overt/covert focus movement, and examine the possibility of assimilating the optionality of overt or covertness of the movement involved to the optionality of overt or covertness of QR in this language.

1 The status of head movement

1.1 Head movement in checking theory

A fundamental conception of minimalist grammar is that syntactic operations are forced (Last Resort). To be more precise, operations are still in principle optional, as in the Government and Binding model (i.e. there is overgeneration), however, the degree of overgeneration is reduced to a minimum: in principle, the computational system is free to carry out some operation *O* at stage *S*, but if *O* is not *necessary* at *S*, then *O* will be ruled out by the economy principle of Last Resort.

In the realm of movement, Last Resort manifests itself in the form of checking theory (or its later incarnation, feature valuing; cf. Chomsky 2000, 2001). Movement is necessary to ‘check’ functional features that are uninterpretable at the (PF or LF) interface. As I pointed out in Chapter 1, section 2.2, the syntactic domain for checking is defined negatively, and is a non-homogeneous set. This is extremely unappealing on methodological grounds: primitive notions of a theory are expected to be characterized by symmetry and logical simplicity. The fundamental disjunction in a checking domain of feature *F* of head *H* in Chomsky (1995) is that between syntactic specifier of *H*, or a head adjoined to *H* by head movement. If possible, this disjunction/non-homogeneity in checking can be seen as an imperfection, in a minimalist sense.

A particular shortcoming of checking theory is that it appears inadequate in capturing mutually dependent movements targeting the same functional projection, characteristic in the domain of operator movement: often an operator and a (verbal) head move ‘simultaneously’ to a projection. In the *Criteria* tradition, where it was required of an operator bearing feature [*op*] that it should occur in the specifier of a verbal head bearing [*op*], and of a verbal head bearing [*op*] that it should host in its specifier an operator with feature [*op*], the verbal head and the operator both moved up to enter the required specifier–head configuration (a characteristic example is Rizzi’s (1996) treatment of English root *wh*-movement; cf. Chapter 1, section 2.2).¹ No such (mutual) dependency can be formulated under Chomsky’s (version of) checking theory: there movement to the specifier and the head position of a single functional projection are by definition dissociated. This is because movement to the specifier of a head *H* of a functional projection is triggered by a feature *F*₁ of *H*, and the raising of a verbal head element to *H* is required by a completely independent feature *F*₂ of *H*; i.e. such an interdependency is effectively unexpressible in this system. If such mutual dependency of movements to the same projection exists, then this aspect of checking theory needs reconsideration.

If head movement was treated not as attraction to a functional head to which the attracted head adjoins, then both of these complications would be prevented

¹ In fact, a notable case of mutually interdependent movements in the domain of A-movements is that of AgrP projections: AgrP projections appear to exist for no other reason than to host a head and a phrase in a specifier–head configuration, and are in themselves otherwise void (cf. the relevant discussion in Chomsky (1995), who claims that for this latter reason, AgrP projections are to be eliminated from syntax).

from arising. In fact, head movement in checking theory is highly problematic in other respects as well, as has been observed repeatedly.

There are several major complications for the treatment of head movement in checking theory (cf. e.g. Brody 2000, Fanselow in progress). First, it apparently violates the Extension Condition (cf. Chomsky 1993), i.e. it is counter-cyclic.² It necessitates a complication of the definition of c-command for (any counterpart of) the Proper Binding Condition on 'traces' to apply. Also, the locality of head movement is unmatched in the domain of established syntactic movements (of phrases): the effect once described in terms of the Head Movement Constraint (HMC) (Travis 1984) is widely attested.³ Remarkably, the nature of the locality of head movement is significantly stricter than that of phrasal movement: head movement cannot skip any c-commanding head position, i.e. it is strictly local.⁴ The idea that head movement cannot 'excorporate' plays a crucial role in accounting for HMC effects (if 'excorporation' was allowed, then it would effectively obliterate the effect of HMC). Nevertheless, the 'no excorporation' restriction is not properly derived from an independent source, and remains stipulative. Head movement *qua* adjunction also incurs complications with respect to the Uniformity Condition on chains of Chomsky (1995), a distant descendant of the principle of Structure Preservation (Emonds 1970). For, a head chain is not uniform *stricto sensu*: the lower link projects, whereas the higher one is non-projecting: the lower link is the head of a projection, while the higher one is only *adjoined* to the head of a projection.

Adjoining head movement then appears to be significantly problematic in several important regards. One recent reaction to this state of affairs is to suggest that syntactic head movement does not exist. Chomsky (2000) makes a suggestion to relocate such head movement to the PF component (hence outside syntax), driven by phonological triggers. However, it is unlikely that this picture can be maintained generally. On the one hand, head movement does not seem to be uniformly semantically inert (cf. e.g. Zwart 2001), and on the other, syntactic correlations involving for example verb movement would be inexpressible (cf. Koenenman 2000: 45). A number of researchers take a different line: they reanalyse apparent head movement phenomena as resulting from remnant phrasal movement (e.g. Sportiche 1999, Koopman and Szabolcsi 2000, Mahajan 2001). This, however, requires complicating derivations and resulting structural representations to a significant extent, with many movement operations lacking an identifiable trigger.

Nevertheless, a more conservative response is also possible, which would retain the positive, descriptively beneficial aspects of head movement (which head

² Although it does not violate Chomsky's (2000) less restrictive Least Tampering condition, which is partly designed precisely to circumvent the above problem.

³ Claims of HMC violations have been occasionally made (cf. e.g. Rivero 1991), and have been strongly rejected in the literature as merely apparent. One popular reaction to such ostensible violation effects is to reanalyze them as cases of remnant movement, in the spirit of Kayne (1994) (cf. e.g. Mahajan 2001).

⁴ Pesetsky and Torrego (2001) reduce the locality of head movement to the locality of head-complement relation. In doing so, they stipulate that if a head attracts its complement phrase, only the head of the complement phrase raises.

movement has been motivated by), but which would do away with the unwanted complications.

1.2 Head movement as substitution

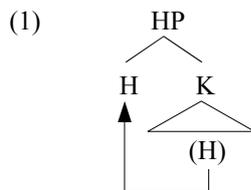
In the Government and Binding (GB) model, head movement was allowed to be either of the substituting or of the adjoining type within a bi-partitioned typology of movement. In minimalism, the restrictive view is taken according to which all head movement is head adjunction. This derives from the syntactic treatment of inflectional morphology developed in the 1980s, based on Baker's Mirror Principle (Baker 1985). A consequence of (i) generating inflectional morphemes in functional heads, and (ii) the strict locality of head movement, is that the syntactic sequence of functional heads in the clause mirrors the order of morphological affixes on the verb (of course the same would hold in non-clausal domains as well) (call this the Mirror Generalisation). Then, this generalization is actually *derived* in models where inflectional affixation is a product of syntactic head movement. However, a major difficulty for this type of account was that it became clear that the overt position of the verb does not correlate with what affixes it hosts morphologically. Affix Lowering cannot be applied as a syntactic rule, given the robust generalization that syntactic movement does not lower elements. However, if an association operation akin to Affix Lowering is invoked in the component of morphology (or, morphological interpretation, within the model of Distributed Morphology of Morris and Halle (1993)), then the 'lowering' property is no longer problematic, in principle. Such a line is taken in Bobaljik (1995) and Bobaljik and Thrainsson (1998). In their conception, head movement is present in syntax, but whenever possible, a kind of morphological/PF-merger of affixes and stems is triggered under PF-adjacency. This approach, while leaving the problematic nature of head movement unattended, gives up the uniform checking account of head movement phenomena advocated by Chomsky.

Chomsky (1993, 1995), on the other hand, maintains an essentially lexicalist theory of inflection under which inflectional morphemes are generated on the verb prior to syntactic computation. Then, to be able to maintain that head movement of the verb is driven by checking, Chomsky generates syntactic, purely formal features on the inflected verb that match features of heads in the clausal hierarchy in a one-to-one fashion. Now, as Brody (1997) points out, this model fails to derive the Mirror Generalisation. This is because the Mirror Generalisation is encoded in the system by *stipulating* that the sequence of the formal features on the inflected verb must be exactly the inverse of the sequence of inflectional morphemes attached to the verbal stem.

To be sure, this inadequacy, in essence, is not a necessary property of adjoining-type head movement (since the original GB account of the Mirror Generalisation stays clear of it): it is a property of adjoining-type head movement combined with a checking theory-based treatment of head movement.

Let me point out that a checking account of head-movement is desirable on the conceptual grounds on which checking theory is based: namely, checking theory provides a restrictive syntactic theory of triggers for movement (i.e. all movement is triggered by checking needs). For this reason, we will adopt such an account for head movement here. But then, it follows from the foregoing discussion that at the same time we need to reject the adjunction-type treatment of head movement, to have some hope of capturing the Mirror Generalisation. This consideration, then, is a further motivation to abandon the view of head movement *qua* adjunction.

The alternative, equally restrictive view of head movement would be to assume that all head movement is of the substituting type. In minimalist terms of generalised transformations, head movement of the substitution type means that under the right conditions a head H can be moved out of the current phrase marker K, merging H with K and projecting H, as below:



A somewhat anachronistic, yet suggestive formulation of the leading idea of the response to the problems caused by head movement *qua* adjunction that I will adopt essentially characterizes head movement as substitution, instead of adjunction.

This move, while demanding a reconsideration of some of the assumptions made in Chomsky (1993, 1995), eliminates the critical complications that adjoining head movement has given rise to, and at the same time retains head movement in syntax, and potentially retains it within the application domain of checking theory (we return to this below). Similar ideas have been pursued elsewhere, although not always within a checking-based model, and partly for different reasons—for instance in Holmberg (1991), Ackema, Neeleman and Weerman (1993), Koenenman (2000), Bury (2001) and at the time of writing this thesis, in Fanselow (in progress).

1.3 Head movement and structure building

Let me now sketch an account of head movement as substitution. I will demonstrate in the domain of verb movement how head movement plays a crucial role in structure building itself, in a radically derivational model of syntax. In fact, the exact details of the picture I will be giving are not crucial for my analysis of the Hungarian data in this study—I merely wish to demonstrate the plausibility of such a theory.

The crucial idea for the purposes of the account of Hungarian will be that since head movement is of a substituting kind, and given the assumption that there is

no morphologically free (non-bound) focus or negation morpheme in Hungarian,⁵ it is the verb that carries the relevant [foc] and [neg] uninterpretable operator features. Two immediate consequences follow. First, the interdependence of focus movement and V-inversion on the one hand, and of negative quantifier movement / negation particle merger and V-inversion on the other hand is derived. Second, no prefabricated focus or negation projections (FocP, NegP) exist in Hungarian. Inasmuch as the [foc] and [neg] features are not ordered in this language, it also follows that either [neg] or [foc] can be checked first in a situation where both are present on the verb (as we saw in Chapter 4).

I will elaborate these points further, but let me first outline the mechanism. Note that a number of mechanisms could in principle equally well derive the above results, my choice here is arbitrary. Let me briefly draw up the frame of ideas I construct the model in; I am not dwelling on any one of them, since the details of the exact mechanism do not matter for my analysis of the data in this thesis.

First, there is a functional sequence—realized in syntax as a hierarchy of functional projections—much of which is universal (cf. Cinque 1999, Starke 2001). Second, I will adopt the view, following Zwart (1992, 2002) that checking occurs under sisterhood. As for determination of label (i.e. the category label of the node created by merger of two nodes), I will assume the principle in (2).

- (2) If A and B are merged, the label will contain categories that have features yet to check, as well as the category that is being checked as a result of the merger

In line with ideas in Pesetsky and Torrego (2001) and Svenonius (2000), I will assume that c-selection is checking too. Further, I will be adopting Chomsky's (2000, 2001) phase-based derivational account, with some modification. According to the phase-based theory, syntax is derivational and proceeds in cycles that are referred to as 'phases': at the end of each phase, the created structure is fed into the interface components of semantics and phonology (PF) (Spell-Out). A modification will be that while Chomsky takes only some designated maximal projections to qualify as phases, I will take each maximal projection to be a phase.⁶ Another modification concerns movement due to the Phase Impenetrability Condition (PIC). PIC states (roughly) that the material in a previous phase will not be available for further syntactic computation. This means that elements within a phase that still have features to check ought to be 'rescued' out of the phase. For Chomsky, this is done by arbitrarily introducing P-features at the edge of phases where such 'rescuing' movements are necessary. These P-features will 'pull up' the required

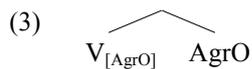
⁵ Recall that it was argued in Chapter 4 that the negation particle *nem* is a phrasal (i.e. specifier) category.

⁶ If phases are propositional, then this is justified on these grounds as well in the case of FocP and NegP, since they create novel propositions, compared to the one they are projected on top of. However, I do not consider propositionality as a prerequisite of phase status. The same view is taken in Müller (2001). The idea goes back to Takahashi (1994) (whose model requires movement to proceed by adjoining to every dominating XP), and ultimately to Chomsky's (1986) Barriers framework.

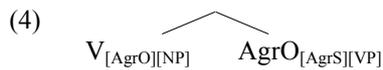
elements out of the (part of the) phase to be handed over to the interface systems, and will do so in the form of checking. In distinction to Chomsky, I will simply assume that no such arbitrary P-features are present to implement this idea: these ‘rescuing’ movements are in conformity to Last Resort, inasmuch as without them the derivation would crash at the immediately next Spell-Out.

Let us inspect the mechanism of checking and structure building now. Following Chomsky, the verb gets inserted in its base position with inflectional elements associated with it. However, in difference to Chomsky, I assume that the inflectional morphemes are syntactically visible nodes: heads have to satisfy their morphological needs first. This will mean that the verb must first merge with the affix it requires (as a lexical specification), say, AgrO. Let us conceptualise this ‘requirement’ of the V of AgrO as checking under sisterhood too. Then, we have three types of checking: checking of affixal features, checking of c-selectional features, and checking of regular ‘specifier checking’ features (normally checked in a specifier position). Let us suppose that the computational system is such that the checking of these classes of features is in this order for any element: affixal features > c-selectional features > ‘specifier’ features. This is in fact necessary for convergence: if affixal features are not yet checked when the verb is already inserted and has taken a complement (checked its c-selectional feature), then it affixal features will not be able to be checked at any later point; the same extends to c-selectional features: if the c-selectional feature is not checked when the ‘specifier’ feature has been checked, then it will not be able to be checked anymore (assuming a cyclic syntactic computation, as is standard in minimalism). Given that affixes are special in being morphologically dependent, first all affix features need to be checked, and only then can other features be saturated.

Let us see a partial sample derivation, to obtain an idea of what derivation might be defined in a model based on the premises I am entertaining. A verb with an affixal feature [AgrO] is merged with an AgrO category.

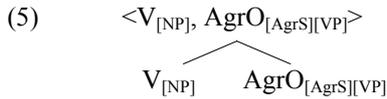


Let us take V to be transitive. Then, V has selectional features to be checked against an object. AgrO selects for a VP as a category, hence it has a selectional feature marking this property; and AgrO has an affixal feature requiring AgrS as a bound affix—see (4). We will ignore ‘specifier’ features for the moment; they are taken to be checked in the same manner, however. (Note that in this thesis I am adopting the view advanced in Chomsky (1995), among other places, with multiple specifiers.)

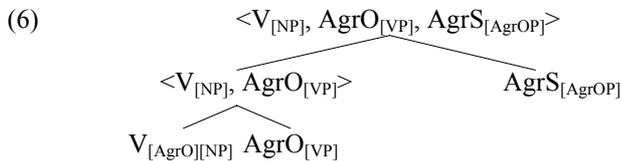


By (2), categories having features to be checked appear in the label. That is, in (4), both of the merged categories are copied up (with the exception of the already checked feature/s, which is/are assumed to be deleted, or marked for deletion). The

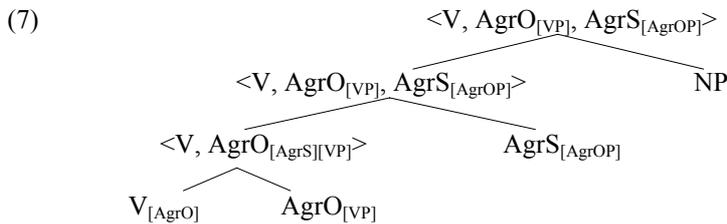
label is an ordered set, where the element that has checked its feature (checkee) is ordered before the element that it was checked against (checker).



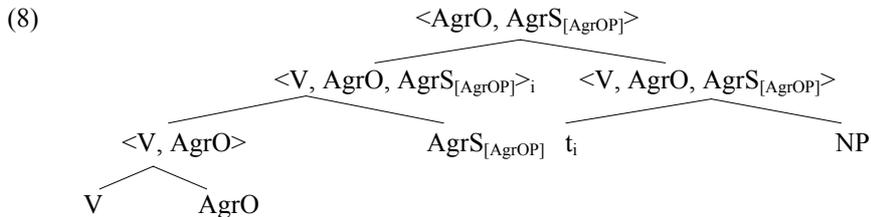
AgrO requires (by lexical specification) AgrS as a morpheme bound to it, i.e. to check an AgrS. (Of course, we are using AgrO and AgrS as symbolizing any two functional morphemes attaching to the V in a fixed order, like *v* and T.) Then, AgrS is merged, and checking takes place.



Now the verb is merged with an object NP. According to (2), we get the phrase in (7):



Let us imagine now that the verb has checked all its features (also against other arguments and specifier(s)), i.e. a stage where no further checking may take place by more direct merger. At this point the only solution is to move the head of the current phrase. However, this is an operation that is forced by PIC, given that the current phrase will be handed over to the interface systems, but its head (the verb) still has features to check. Hence, the head is copied and is merged with the current phrase. Continuing (7) directly (ignoring other arguments etc.), we get (8), after checking has taken place.



Given that there is no further checking to do by merger, the head in (8) now raises out of this phrase—it is copied and merged with the phrase in (8). At this stage, AgrS will check its c-selectional feature against AgrOP (=8)). This illustrates the structure building mechanism.

Head movement can be covert as well. This means that Spell-Out can strip the phonological features away from the verb at any point. We can conceptualise this as a property of the (complex) verbal head itself, in terms of PF-uninterpretable features: as soon as it has checked all its PF-uninterpretable features (which may be a property of the stem of any affix morpheme), it can—and therefore will—be spelled out phonologically. However, the syntactic verb (now without phonological features) keeps moving on due to its semantically (or LF-) uninterpretable features. This is merely a reformulation of the standard minimalist treatment of the (arbitrariness of the) overt/covert dichotomy.

There are in all probability other—perhaps better—ways to implement the underlying ideas, but I will not enter into more technicalities here, since the exact mechanism is not the concern of this chapter. I merely wished to provide an—impressionistic—view of how a derivation with head movement *qua* substitution may proceed, putting a host of questions to one side here.

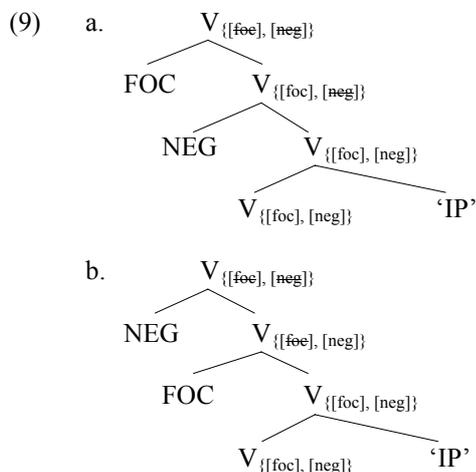
2 Operator feature checking in Hungarian

I turn now to applying the substitution view of head movement to verb raising and operator movement in Hungarian, based on the results of the previous chapters, as well as on the assumption that it is the verb that carries the operator features in this language. The stage we consider is one where the nuclear clause (‘IP’) has been constructed; the V now only has operator features to check, if any.

2.1 Co-projection of [foc] and [neg]

We have discussed two such operator features, [foc] and [neg]. In Chapter 4, we argued that when both are present, [foc] and [neg] co-project. In the present terms, this means that when the V has checked one of the two features, it will not close the phrase and move on, but will check the other one as well in the same position—in either order. Schematically, this is represented in (9a,b) (V stands for the complex verbal head, {[foc], [neg]} for the outermost unordered set of checking features⁷, and FOC and NEG are operators carrying [foc] and [neg], respectively).

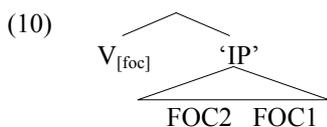
⁷ In single specifier projections, this set has a single member.



This is then the nature of ZP of Chapter 4 (cf. e.g. Chapter 4, (14), (45a)).

2.2 The structure of true multiple foci

Let us consider the structure of true multiple foci now. Recall from Chapter 1 that the movement pattern exhibited by these constructions involves an overtly moved primary operator and covertly moved secondary operators (with narrower scope). Let us examine the predictions of the assumption that it is the raising verb that carries the operator features in Hungarian. Our assumption will be that the verb in Hungarian can carry maximally one [foc] (and [neg]) feature. Consider a stage of the derivation with the outermost feature on the verb to be checked is [foc], and the complement of the raised verb contains two focus operators.



Given that [foc] on V is strong in Hungarian, we expect overt movement to be triggered. However, to see what is happening, we need to consider the nature of operations in Last Resort based minimalism. As I pointed out at the beginning of section 1.1, in minimalism, as in the Government and Binding approach, syntactic operations are in principle optional, i.e. there is overgeneration. However, in minimalism, overgeneration is massively restricted by economy, applying locally (cf. Collins 1997, Epstein *et al.* 1998, Chomsky 2000, 2001). In the case of movement, whether it is overt or covert is fundamentally still an option; however, economy will immediately rule out overt movement if it proves unnecessary as non-economical, while the interface condition of Legibility (Chomsky 1993) rules out

covert movement if it fails to check some non-legible (strong) feature. With this in mind, let us return to (10) now. Assume that V (or [foc] of V) attracts FOC2, forcing movement (establishes an Agree relation with it, in Chomsky's (2000, 2001) terminology). This movement can be either overt or covert.⁸

Take the option first when movement of FOC2 is covert. Then, the strong [foc] feature will not be checked, given that strong features can be checked only by overt displacement of a category. In that case, in principle there are two scenarios. If there is no other focus operator in the clause, then this [foc] feature of the V has no hope of being checked, and will ultimately cause the derivation to crash. If there is another focus operator in the clause, as in the case we are considering, then V can move on, as before, projecting another phrase.⁹ This is repeated until there is only one focus operator left, at which stage overt focus movement must be selected.

Consider the option now when movement of FOC2 in (10) is overt, and there is still (at least) another focus operator waiting to be checked. We know that focus operators themselves also carry some feature that needs to be checked covertly, given that in complex focus constructions, the secondary focus operator raises to the same functional head position in covert syntax as the primary focus. This is in line with Chomsky's (2000) assumptions: both the 'attractor' and the 'attractee' have a feature to check both in A-movement and in *wh*-movement (in the latter case, the [wh] and the [Q] feature). If at stage (10), movement of FOC2 is overt, then that checks strong [foc] of V. In that case, V will be unable to check another focus operator (FOC1 in (10)) in a higher projection, creating the structure characterizing true multiple foci constructions.¹⁰

Then, the assumption that it is the verb in Hungarian that carries [foc] accounts for the movement pattern of true multiple foci constructions in this language: movement of a focus operator to some lower position is covert, while the focus operator that targets the highest position moves overtly.

2.3 Feature valuation or feature deletion?

The model as it stands has no way of capturing the asymmetry between focus and negative operators: true multiple focus is possible, whereas true multiple negative operator constructions are not. It is to be noted, though, that the difference between languages that allow multiple (double) negatives are differentiated from ones that do not in terms of some stipulative syntactic property of the [neg] feature or Neg head: e.g. the Neg head projects once in the latter language type, but projects multiply in the former, Neg projects as a clausal projection in the latter languages, but projects

⁸ For Chomsky (2000, 2001), covert movement does not involve any more operations than Agree, i.e. the optionality lies in whether or not actual displacement occurs.

⁹ In line with Chapter 3, before V would move on, QR can adjoin a quantifier to the current phrase, or an existential closure can apply too.

¹⁰ If checking itself is also taken to be an optional operation in the presence of overt movement as well, then simply, if no checking happens, then overt movement will be deemed uneconomical, since it was not necessary in the sense of Last Resort.

as a high projection in the negative indefinites themselves in the former. Let me offer an alternative syntactic treatment of why Hungarian has no double negation, extending the present system.

My analysis will be essentially a reformulation of Ladusaw's (1992) insight, who defines the [neg] feature of morphologically negative indefinites as being interpreted as semantically negative (i.e. as logical negation) only *in a certain syntactic context*. My general assumption will be that feature valuation, as introduced by Chomsky (2000, 2001), co-exists in the grammar with feature deletion, both occurring in a 'checking' configuration, although the former in a more restricted environment. Feature valuation provides an either phonologically¹¹ or semantically interpretable value to some underspecified feature, and hence rescues it from causing the derivation to crash (for a recent account of the apparent optionality of *wh*-fronting in French in terms of separating checking of C and valuation of an underspecified Q feature, see Cheng and Rooryck 2000). My specific assumption will be that the *sem* particle of *sem*-expressions carries underspecified [neg]. (In this sense, what follows is an alternative approach to Negative Concord to the one presented in Chapter 4.)

Let me state the two assumptions I make about feature valuation. First, it is licensed in checking configurations, just like feature deletion. Second, in contrast to feature deletion, feature valuation requires strict locality, quasi adjacency (perhaps it is part of the cyclic Spell-Out/Transfer operation itself). This means that an underspecified feature can in principle be rescued either by deleting it, or by valuing it, both under checking. However, there is preference of valuation to deletion: deletion of the feature along with its value specified as a variable is operationally more costly than just specifying a value for the variable.¹²

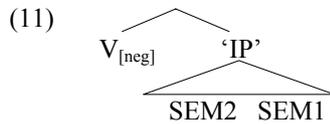
Consider now what this buys if the *sem* particle of *sem*-expressions has underspecified [neg]. Take a derivational stage akin to (10), but this time with two *sem*-expressions, where V carrying uninterpretable [+neg] attracts a *sem*-expression from down below (establishing Agree), say SEM2:

¹¹ Like for Case in Chomsky (2000).

¹² I assuming something along the lines of (i):

(i) [neg: α]

with α a variable over + or – (or possibly only over +, the point being that a variable will not be interpretable). Values of α could be conceptualized as Interpretable or Non-interpretable. If the value of α is set as Non-interpretable, then it will be checked and deleted as usual, if it is set as Interpretable, then it will no longer be offending for semantic interpretation.



If the movement of the *sem*-expression SEM2 remains covert (a case we considered for FOC2 above), then only feature deletion of [neg] of SEM2 can occur, given that feature valuation requires strict locality (adjacency) ([neg] of V is strong, and hence, is not deleted). Then either SEM1 also moves to V, or it does not. If it does, then given that there are no more *sem*-expressions to check [neg] of V, it has to do so overtly. If it does not, then, just as above, the verb can escape the current phrase by moving up and projecting. In this higher projection, the verb attracts SEM1, and this time movement has to occur overtly, given that this is the last chance to check [neg] of V.

Just as with FOC2 above, if movement of SEM2 at stage (11) is overt, then that checks strong [neg] of V, and hence nothing will be able to check (delete or value) [neg] of SEM1—such derivations crash.

Then, as with focus, only one *sem*-expression can move overtly as a result of [neg]-checking. However, when a *sem*-expression is overtly moved to a position adjacent to V, the form of checking will be feature valuation, and not feature deletion, given that feature valuation is operationally more economical. This means that the overtly raised *sem*-expression, and only that *sem*-expression, will be interpreted as negative. All other *sem*-expressions, which are moved covertly at some point, will be interpreted as non-negative: their underspecified [neg] feature gets deleted. Thus, we have obtained a way to derive Negative Concord (NC) in Hungarian, a language with expressions participating in NC which *can* be interpreted as semantically negative.

Note that the negation particle *nem* is distinct from *sem*-expressions in that first, it has a fully specified [neg] feature, and second it enters the derivation by directly being merged in [Spec, V_[neg]]. Given that it is merged directly in [Spec, V_[neg]], it checks strong [neg] of V immediately, therefore another [neg]-checking expression above *nem* is impossible.

In fact, we might be able to extend the present feature valuation analysis to default focusing of immediately preverbal *sem*-expressions. Their underspecified [foc] feature should be made [+foc] when immediately preverbal (which then in turn checks [foc] of V, hence no regular focus is possible in an outer specifier, cf. Chapter 4, section 2.2, especially the discussion following (45)), but their underspecified [foc] can only be deleted if an inner specifier of V is already occupied by a regular focus, checking [foc] of V. I leave the details of such an analysis for later exploration.

3 Optionality of overt/covert movement

3.1 Optionally overt/covert movement in Hungarian QR

I turn now to examine the overt/covert distinction in another movement type: Quantifier Raising (QR). It emerged in Chapter 3 that QR in Hungarian is optionally overt or covert. This behaviour is not explained by any current analysis, and appears problematic in a standard minimalist setting. Let me offer a tentative account of why this pattern should obtain.

In minimalism, optionally overt/covert movements are a potential problem inasmuch as economy favours one kind of movement over the other.¹³ Just whether it should be overt movement to be favoured over covert movement, or vice versa was not all along an uncontroversial matter. Pesetsky (1989) advances the economy principle of Earliness, which prefers overt movement to covert movement, and the same view is adopted in Brody's (1995b) 'radically minimalist' Lexico-Logical Form framework. Chomsky (1993, 1995, 2000, 2001) maintains the opposite view, although the basic conception takes on different forms as his model changes moving from one version to the next. Chomsky (1993) proposes the economy principle of Procrastinate, just the opposite of Pesetsky's Earliness, favouring covert (post-Spell-Out) movement. In Chomsky (1995) the effect of Procrastinate is derived by introducing pure feature movement, granting the proviso that pure feature movement is the ideal (the optimal, the perfect) case, and moving the whole category as well is a case of pied-piping, and as such, is less economical.

As mentioned in Chapter 1, section 2.3, in Chomsky (2000, 2001), a significant redundancy of Chomsky (1995) is recognized. For, the system we have arrived at is one where overt and covert movements are distinguished doubly: first, all overt movements occur before Spell-Out, and all covert movements occur after Spell-Out, and second, all overt movements are full category movements, while all covert movements are pure feature movements.¹⁴ Chomsky (2000, 2001), building on much ongoing work, suggests a radically derivational model in which all 'movement' is pre-Spell-Out. What is standardly referred to as covert movement is seen as pure Agree, and overt movement is Agree coupled with category displacement (due to an entirely independent property: (generalized) EPP). Here too, however, the basic attitude is maintained according to which covert movement is operationally simpler, therefore more economical.

¹³ This matter is distinct from optionality of movement as such. Optionality of whether or not to move is optionality of an operation, and optionality of overtness vs. covertness is not necessarily the same (though in Chomsky (2000, 2001) it is). Minimalist treatments of allegedly semantically vacuous optional movements (such as e.g. Japanese scrambling, Icelandic stylistic fronting) are offered e.g. in Fukui (1993), Poole (1996), Fukui and Saito (1998), Agbayani (1999), Sauerland (1999).

¹⁴ Both of these assumptions have been questioned, on empirical grounds. Some treatments of clitic doubling, for instance, treat the clitic that doubles a lexical DP to be the morphological realization of FF(DP). On the other hand, some researchers suggest that there are reasons to maintain covert full category movement, for instance in the case of QR.

This is a psychologically curious stance, however. Once movement exists, phonologically invisible movement is taken to be the default case, and phonologically visible movement the marked option. This is not necessarily a problem, if the computational system itself is taken to be a competence model only, but not directly a model of performance as well. Significantly, this is a view that is explicitly contradicted in Chomsky (2000, 2001): a central claim is in fact that operational complexity should matter precisely because the computational system is also a realistic model directly relevant to (and optimal for use by) performance systems as well.

In fact, it is not very clear whether the choice of overt vs. covert movement operation is a matter that is subject to economy at all. Economy principles should be violable. As Shortest Move (Chomsky 1993) did not appear to be such, it ceased to exist as an economy principle in Chomsky (1995), where it is incorporated into the definition of Attract (as an inviolable principle). Similarly, if we state that 'strong' features trigger overt movement, and 'weak' features trigger covert movement, then neither of the two generalizations are ever violated. Then, whether something has the status of an *economy* principle is principally a matter of its formulation in the theory.¹⁵

Clearly, Chomsky's (2000, 2001) model is also formulable in terms of pure feature movement instead of Agree, and then, the conceptual basis for maintaining that pure feature movement is more economical than full category movement would be the same as in Chomsky (1995). The reasoning, roughly, is that moving the set of formal features is more economical than moving a set containing the formal features and other features of the category as well. The conceptual argument that this should be so is not compelling, however. This is because there is no explanation offered as to why the contents of the set should matter to an operation: the operation applies to the set itself, so in principle it is a special property of the operation that it is sensitive to the *contents* (number of members) of that set. It is equally plausible that the movement operation is insensitive to the cardinality of the members of the set that it applies to. The same considerations apply if covert movement is movement of a category (its syntactic/semantic features) without phonological features.

Let us assume that this is the right way to look at the overt/covert distinction, i.e. there should be no economy preference of either overt or covert movement,¹⁶ and that covert movement is movement of a category without phonological features. Then, the choice of overt vs. covert movement is undetermined by the nature of the movement operation itself. Given that what languages exhibit is not massive optionality of overt vs. covert movement, another factor must determine whether a movement is overt or covert. This other factor is standardly taken to be the 'strong' / 'weak' nature of the checking features themselves. If an attracting feature is 'strong', it requires merging of a category together with

¹⁵ In Chomsky (2000, 2001), overt movement is an economy violation, inasmuch as it is a violation of the ultimate Least Effort character of syntax (it counts as an (extra) operational step). In Chomsky (2002), on the other hand, neither kind of movement is taken to be an economy violation, or imperfection.

¹⁶ A similar view is expressed in Adger (1994).

phonological features in its local domain, if it is ‘weak’, it requires merging of syntactic and semantic features only (but not phonological features).

I will assume that all phrases are merged in their base position to check some feature. This is the case for adjuncts in a Cinquean account (cf. Cinque 1999): they are merged in the specifier of adjunct (adverbial) projections to check some formal feature of a functional head. And this is the case for arguments in accounts where predicates (like verbs) possess theta-features (or some similar argument-related formal feature), as in Lasnik (1995c, 1996), Kim (1997), Boskovic and Takahashi (1998) and Fanselow (2001). Again, these features too can in principle be ‘weak’ or ‘strong’, however, even when they are ‘weak’ the required full category will be merged along with phonological features, given that there is no other way for them to enter the derivation.

Whether these features are weak or not is apparent only from certain movements out of these positions. Movements out of ‘weak’ and ‘strong’ base positions is exactly the same: if the attracting feature is ‘strong’, movement is overt, if the attracting feature is ‘weak’, then movement is covert, in line with the definition of ‘strong’ and ‘weak’ above. The interesting case is only when the movement is not feature-driven.

This appears to be the case in QR. If the movement dependency has to be created independently, as in QR, then there are two cases. Either the ‘base’ feature is strong, or it is weak. If it is strong, then by definition, it requires the presence of a category. Then, QR will be covert. If it is weak, then in principle it requires only the category itself without phonological features. QR itself is not feature-driven, hence no attracting feature imposes a restriction on what should move. Then, there is no featural conditioning of whether the movement should be overt or covert. We fall back on default optionality of overt/covert movement: QR in this case will be optionally overt/covert. If the present model of the overt/covert distinction is along the right lines, Hungarian realizes this option.

Weak ‘base’ features ultimately result in the optimality of overt/covert status of QR. The present theory of the overt/covert distinction in terms of ‘default optionality of overt/covert status’ is minimally different in empirical predictions from the standard ‘covert movement is preferred’ view, precisely because attracting and ‘base’ checking features exhaustively determine whether movements should be overt or covert. The only difference the present approach predicts is in the domain of QR, a non-feature-driven movement: the prediction is that a language with weak ‘base’ features should exhibit optionally overt/covert QR. This is the case of Hungarian.

An issue left open by the present account is whether ‘base’ features must be uniformly weak or strong in a given language, and if so, what explains that. Another question is whether other languages can be also shown to manifest the same option of weak ‘base’ features (even if optionally overt QR is obscured by the availability of scrambling), and whether weak ‘base’ features are a typologically marked option (perhaps because despite the weakness of ‘base’ features, the whole category (along with phonological features) must be inserted in the base position anyway). I leave these questions open here; they clearly require thorough investigation.

3.2 Optionally overt/covert focusing in embedded focused questions

The other case of apparently optionally overt movement in Hungarian that emerges is restricted to some embedded questions. These embedded questions are akin to so-called ‘partial *wh*-movement’ interrogatives, discussed extensively in the literature (cf. e.g. McDaniel 1989, Dayal 1994, Horvath 1995 and references therein). (12) illustrates from German and Hungarian.

- (12) a. Was glaubst du mit wem Hans spricht?
 what-acc think-2sg you-nom with who H.-nom talk-3sg
 ‘Who do you think that Hans is talking with?’
 b. Mit javasolsz, kivel beszéljen János?
 what-acc suggest-2sg who-with talk-subj-3sg J.-nom
 ‘Who do you suggest John should talk to?’

The difference is that instead of a *wh*-type expletive pronoun, we have a demonstrative pronoun in the matrix sentence. Such complex sentences are described in detail in Kenesei (1992, 1994). In the sentences that we are considering now, the demonstrative pronoun in fact is focused ((13b) is a possible continuation of (13a)):

- (13) a. AZT kérdeztem, hogy kivel beszéltél
 that-acc asked-1sg that who-with talked-2sg
 ‘What I asked was who you had talked to’
 b. Nem AZT, hogy mit csináltál
 not that-acc that what-acc did-2sg
 ‘Not what you did’

(13a) identifies what question was asked and excludes other questions. Now, a focus operator can be added to the embedded clause, taking scope over the embedded *wh*-phrase.

- (14) AZT kérdeztem, hogy JÁNOS kivel beszélt
 that-acc asked-1sg that J.-nom who-with talked-3sg
 ‘What I asked was who JOHN had talked to’

Note that the question that is being identified as the one that was asked is *not* ‘Who is such that *it’s John who* talked to her/him?’, but rather it is John who is such that I asked ‘Who talked to him?’ Evidence that John is not a focus operator scoping *below* the *wh*-phrase comes from the interpretation of superlative predicative adverbials. As discussed in É.Kiss and Farkas (1995), in superlative constructions the focus operator introduces the set that serves as the ordering domain for the

ordering property denoted by the adverb (or adjective) appearing in the superlative. Consider (15):

- (15) Kivel beszélt a legszebben JÁNOS?
 who-with talked-3sg the most beautifully J.-nom
 ‘Who did JOHN talk the most beautifully?’

Here the only interpretation is one where the adverbial orders speakers, and it is John for which the superlative adverbial holds. Now, contrast this with (16).

- (16) AZT kérdeztem, hogy JÁNOS kivel beszélt a legszebben
 that-acc asked-1sg that J.-nom who-with talked-3sg the most beautifully
 ‘What I asked was who JOHN had talked to the most beautifully’

Now the ordering is carried out on interlocutors of John, and the interlocutor is sought for whom John talked to this interlocutor the most beautifully out of all interlocutors. Further, we observe now that (17a) is an alternative to (14), (17b) is an alternative to (16).

- (17) a. AZT kérdeztem, hogy kivel beszélt JÁNOS
 that-acc asked-1sg that who-with talked-3sg J.-nom
 ‘What I asked was who JOHN had talked to’
 b. AZT kérdeztem, hogy kivel beszélt
 that-acc asked-1sg that who-with talked-3sg
 a legszebben JÁNOS
 the most beautifully J.-nom
 ‘What I asked was who JOHN had talked to the most beautifully’

(17a) has a reading equivalent to (14) and (17b) has a reading equivalent to (16). Note that if ‘John’ was a focus operator below the *wh*-expression in the embedded sentence, then we would expect the same facts as with (15), i.e. that the adverbial orders speakers. While this is also an available reading in (17b) (and hence ‘John’ can be construed as a focus *within* the embedded interrogative clause), it is not the interpretation we get (in contrast to (15)). The other interpretation that is obtained is the one that (16) received. I conjecture that overt fronting and overt non-fronting of focus operator both can be associated with the focus operator taking scope outside of the interrogative clause, which in the latter case is the result of covert movement of the focus. Hence, we witness optionality of overtness/covertness of focusing in this case.

Horvath (1995, 1997, 1998) argues convincingly that *wh*-scope-marking (i.e. ‘partial *wh*-movement’) constructions with a *wh*-expletive corresponding to English *what* must receive an analysis in which the *wh*-expletive is associated with the embedded clause (similarly to the English *it . . . [that . . .]* construction), whose CP is the argument of the question-embedding verb. Our sentences are essentially analogous to this construction, albeit not with a *wh*-expletive, but with a demonstrative one. In fact, they are a special subcase of this construction, namely, cases when the demonstrative expletive is in focus in the matrix clause (it is of

respect following common assumptions—attracting uninterpretable features (whether ‘strong’ or ‘weak’) to determine whether movement is overt or covert. In the case we are dealing with, however, there is no such feature. In fact, the scenario we are facing is analogous to that of QR: no attracting feature is present. Here too, just as with QR, unless another factor forces otherwise, we fall back on default optionality. I assumed in the previous subsection that Hungarian has weak ‘base’ features, hence, presence of the full category including phonological features is not forced at the base positions. Then, once again, an optionally overt/covert movement is generated—in accordance with the facts.¹⁷

The central tenet of the present account of the optionality of overtness of focus movement in this construction is that it reduces this optionality to the same basis as the optionality of overtness of QR in Hungarian, namely the lack of a coercing attracting feature.

4 Brief summary

In the foregoing pages I have argued for a substitution view of head movement in general and for the plausibility of structure building without prefabricated functional projections. Crucial for my purposes is that it is the raising verb that projects phrases where operator features like [foc] and [neg] are checked. Note that the proposal here is different from earlier suggestions about the elimination of projections like PredOpP, RefP and DistP. While these latter projections were argued not to exist as such, projections of focus and negation do exist, albeit not in a prefabricated clausal architecture, but as a result of the cyclic projection of the verb and its unsaturated features.

Relying on the default optionality still surviving—though immensely restricted—in minimalism, I demonstrated that two cases of optionally overt/covert movements in Hungarian (QR and wide scope focusing in focused embedded interrogatives) are due to lack of coercing features forcing the movement either to be overt or to be covert. Secondary focus movement in the true multiple foci construction was argued to be different, given that it is the verb that carries the single [foc] feature that needs to check against all occurrences of focus, therefore overt movement to the cyclically raising verb (deleting its [foc]) is only possible at the stage where the last remaining focus operator is attracted. Finally, I presented an alternative analysis of pertinent facts of Negative Concord in Hungarian, discussed in Chapter 4, arguing to distinguish between two ways of satisfying an underspecified feature: either by valuation or by deletion, limiting feature valuation to a local context and hence to overt movement. This ultimately derives a picture where only the immediately preverbal *sem*-expression is interpreted as semantically negative.

¹⁷ Although further details of the analysis of the construction do not have immediate significance, let me note that in an adequate description of such sentences, FOC moves on to replace the demonstrative expletive in the matrix clause. Nevertheless, in such sentences both FOC and the embedded question are focused: this is just another case of multiple focus.

Chapter 6

Multiple *wh*-operators

According to the picture that we arrived at in the preceding chapters of the distribution of operator movements along the overt vs. covert dimension in Hungarian, A-bar elements that are attracted to check an operator feature of a functional head (filled by V) invariably move overtly, while non-checking A-bar movements optionally have either overt or covert status by default. Chapter 5 explicates how this latter scenario is possible for instances of real multiple foci even if they arguably move to separate functional projections: it is the verb that carries the relevant operator features, and it is the verb that moves up stepwise to project the operator projections that are targeted by movement. This assumption, along with the findings of Chapters 2 and 3 according to which quantifier specialised A-bar type functional projections do not exist, produce a strongly restrictive clause structure of the Hungarian left periphery in which no pre-fabricated operator projections are made use of. Recall that no separate FocP and NegP are projected in this language, since on the one hand, both [foc] and [neg] are carried by the same raised verb, and on the other, given that nothing bars projecting the two features jointly in Hungarian, co-projection (i.e. a multiple specifier configuration) will be selected by derivational economy. All along we have kept to the minimalist ideal of proving ostensible optional or optionally overt *feature checking* movements to be merely apparent. On the other hand, real instances of optionally overt/covert movements have turned out not to be feature checking.

We now extend this picture to the domain of multiple *wh*-operators—an empirically productive expansion, as will be demonstrated. Let us briefly preview how we will proceed.

Hungarian is a language that features both what appears to be Slavic-type multiple *wh*-fronting and what appears to be English-type *wh*-in-situ. Both types apparently allow superiority violating patterns. It will be argued first that Boskovic's (1997b, 1998, 2000a,b) analysis of superiority violating multiple *wh*-fronting for Serbo-Croatian in terms of focus-movement (or its adaptation for Russian as

executed in Stepanov 1998) does not extend to Hungarian. Lipták's (2001) arguments to syntactically dissociate the locus of [wh]-checking from that of [foc]-checking are shown to be inconclusive (Section 2). The wide-spread view according to which all fronted *wh*-elements except for the immediately preverbal one are moved *qua* universal quantifiers (É.Kiss 1992, 1993, upheld in É.Kiss 1994, 1998b; Puskás 2000; Lipták 2001) is dismissed in view of a number of asymmetries that are shown to exist between the syntactic options for linearly non-last fronted *wh*-items on the one hand, and for regular universal quantifiers of the *every*-QP type on the other (Section 3).

Instead, I maintain the following picture (Section 4.1). (i) As far as the attracting properties are concerned, [wh]- and [foc]-checking, as well as multiple instances of [wh]-checking, take place in the same projection in Hungarian (no separate [wh]- and [foc]-checking projections exist, and multiple *wh*-fronting targets multiple specifiers), and similarly to uninterpretable [foc], uninterpretable [wh] is also a property of the raised verb in this language. (ii) As for the properties of moved elements, I propose that it is the *strong* [wh] feature of the *wh*-pronouns that drives Slavic type fronting. In this respect, *wh*-elements contrast with regular focus (whose [F] feature is not strong, see Chapter 5). I suggest further that even though (constituent) questions involve a [+wh,+foc] left peripheral head, *wh*-elements themselves are not always focused; in particular, secondary *wh*-items may remain non-focused.

The null syntactic hypothesis is that the attracting functional head is identical in the Slavic and in the English pattern within Hungarian. This hypothesis can be upheld only if the locus of intra-linguistic parameter between the two construction types is taken to be the *wh*-items themselves. Following this reasoning, it is proposed that the strong [wh] of the *wh*-elements can be satisfied not only via movement to the local (checking) domain of a [wh]-bearing functional head, but also via the application of choice functions (cf. Reinhart 1998) (Section 4.2). The distribution of choice function variables will be shown to be responsible for the syntactic arrangements of *wh*-items as well as the resulting interpretations of multiple *wh*-interrogatives. Covert movement of *wh*-elements (to check their [foc] feature) and binding of choice functions will interact to derive the rather complex pattern of available readings (Section 4.3). The novel syntactic analysis gains strong support from its power to derive and indeed discover a number of facts of the interpretation of multiple questions.

As far as the perceived optionality in fronting is concerned, in fact it turns out to be real, however, it is not optionality in terms of checking-driven movement but one in terms of the strategies of satisfying an unsaturated feature of the *wh*-pronoun.

1 Background

Multiple *wh*-fronting, mostly of the Slavic type, has received considerable attention in recent minimalist literature as an instance of what seems to be multiple movements to the same syntactic projection. The core discussion within the minimalist paradigm (cf. Ackema and Neeleman 1998 for an OT approach) revolves

around issues of implementing the checking mechanism (Chomsky 1993, 1995) in the analysis of this movement pattern, the role of focus-movement, and apparent superiority violations. On the other hand, *wh*-in-situ—both of the English type and of the Chinese type—has also induced a revival of interest in recent years, although for different reasons (e.g. Cole and Hermon 1994, 1995, 1998, Reinhart 1998, Hagstrom 1998, Barss 2000, Cheng and Rooryck 2000). The central question in this domain concerns the mechanism of the interpretation of the *wh*-element in situ, and more generally, the nature of the relation between *wh*-in-situ and Comp. These issues all figure prominently in the analysis of Hungarian multiple *wh*-operator constructions that I present.

In classical Government and Binding (GB) analyses of multiple *wh* constructions, no asymmetry obtains between fronted and so-called in-situ *wh*: both are moved to some left-peripheral A-bar position, whereby, as logical operators, they c-command their scope (cf. Chomsky 1977, 1981, Higginbotham & May 1981, Huang 1982, May 1985, Lasnik & Saito 1984, 1992, Watanabe 1992). For May (1985), and Rizzi (1990), the overt and covert movement of these operators satisfies some syntactic criterion (*Wh*-Criterion for Rizzi 1990). The exact A-bar position which *wh*-movement targets (esp. whether multiple instances of fronted *wh*-items are adjoined to CP, or to each other within [Spec,CP], or in fact are substituted into recursive specifier positions) has been the subject of disagreement, and in fact may well be subject to cross-linguistic variation (cf. Rudin 1988, Boskovic 1997b, 1998, Richards 1997). An influential hypothesis within a minimalist setting is that in constructions akin to multiple *wh* a one-to-many relation is involved, and multiple instances of fronted *wh* occupy multiple specifiers of the same projection (cf. Koizumi 1994, Ura 1996, Richards 1997).¹

Wh-in-situ appeared exceptional in relation to locality constraints, but parametrizing the overt vs. covert component of syntax with respect to the applicability of locality principles such as Subjacency (cf. Huang 1982) has not turned out to be either theoretically or empirically adequate (cf. Brody 1995b, Reinhart 1998; see also Cole & Hermon 1994, 1995, 1998 for a comparison of Chinese- vs. Malay-type *wh*-in-situ). Such parametrization has become virtually excluded by the advent of restrictive models of syntax such as Chomsky's (1993, 1995) minimalist theory, which dispenses with the syntax-internal representational level of S-structure, and especially in Brody's (1995b) radically representational model of Lexico-Logical Form, and Epstein et al.'s (1998), Uriagereka's (1999), and Chomsky's (2000, 2001) radically derivational family of models.

Here I will concentrate on the analysis of multiple *wh* within this latter, radically derivational framework, adopted in this thesis. As I have done throughout the book, I will assume some version of the checking theory of movement (cf.

¹ According to a recent revival of the 'adjunction within spec' position (cf. Ackema & Neeleman 1998, Grewendorf 2001, Sabel 2001), multiple *wh*-fronting is the result of adjunction of instances of [wh]-bearing constituents to one another before they move as a complex constituent to an A-bar specifier position. This is an interesting alternative that is essentially not incompatible with our proposal in terms of a split in the choice of mechanism of satisfying the [wh] feature of *wh*-elements. However, it clearly necessitates a different conception of strict cyclicity than assumed here (cf. Chomsky's 1995 Extension Condition, or its weaker incarnation, Chomsky's 1999, 2000 Least Tampering condition).

Chomsky 1993, 1995), whereby movement dependencies are triggered to satisfy some morphosyntactic inadequacy that would otherwise lead to uninterpretability at the interface. The controversy revolving around the locus of such inadequacies—i.e. whether they are in the elements to be moved (Move) or in the functional head hosting the moved elements (Attract) (cf. Chomsky 1993, 1994, 1995; Lasnik 1995a,b, 1999a,b, Ochi 1998; for *wh*-movement, see e.g. Simpson 1995)—is resolved in Chomsky (2000, 2001) by invoking a hybrid theory of symmetric/mutual checking.² Similarly to what is assumed in the preceding chapters, here too I adopt the view that offending features can reside *both* in the probe and in the goal, in the parlance of Chomsky (2000, 2001).

2 Focus movement and multiple *wh*-fronting

Let us start by examining the relation that may link *wh*-fronting to an independently existing syntactic operation: focus movement.

2.1 Boskovic's account

It is a long-standing assumption that interrogative *wh*-expressions are a subcase of focus (cf. Rochemont 1978, 1986, Culicover & Rochemont 1983, Horváth 1981, 1986, É.Kiss 1987). This is evidenced by certain prosodic and semantic parallels, as well as syntactic similarities. Significantly, as Lipták (2001: 70) points out, there appears to be an implication relation between focus-movement and *wh*-movement: languages that have overt focus movement also have overt *wh*-movement. A great number of languages reserve the same position for focus and interrogative *wh*-pronouns, in some languages they get associated with the same particles. There is also a clear semantic correspondence between the interrogative element in the question and the focus of the appropriate answer. It has been suggested for Hungarian that *wh*-movement and focus movement target the same left-peripheral position (Horvath 1986, Kenesei 1986, É.Kiss 1987, Marácz 1989, Brody 1990). In current clausal architecture this position is identified as the specifier of FocP (cf. Brody 1990, Rizzi 1997, Puskás 1996, 2000). However, Boskovic (1997a,b, 1998, 2000a,b) argues for (short) multiple movement of *wh*-elements in Serbo-Croatian that it is in fact identical to focus movement, and *wh*-movement per se happens at a later stage to a higher projection (CP). Stepanov (1998) applies this analysis to Russian. Lipták (2001) argues for a similar position, although on different grounds. I turn next to this type of analysis and show that it causes more problems than it solves. I will maintain that [wh]- and [foc]-checking happens in the same projection in Hungarian.

Superiority effects with multiple *wh*-constructions, illustrated in (1) from English, are derived in minimalism together with Relativized Minimality effects (cf.

² Or more properly, feature valuation. The difference between checking as deletion and as valuation need not concern us here; no empirical differences are involved for our purposes.

Rizzi 1990) through the property of feature-relativized minimality built into the definition of the movement transformation (Kitahara 1993, Chomsky 1995).

- (1) a. Who saw what?
 b. *What who saw?
 c. Who did you persuade to buy what?
 d. *What did you persuade who to buy?

In multiple *wh*-fronting languages Superiority effects are manifest in the fixed order of fronted *wh*-elements (cf. Rudin 1988, Richards 1997). In Serbo-Croatian, a multiple *wh*-fronting language, in matrix questions the order of fronted *wh*-expressions is free (2), unlike in embedded contexts and long-distance questions (3) (cf. Boskovic 1997a,b).

- (2) a. Ko sta kupuje?
 who what buys
 ‘Who buys what?’
 b. Sta ko kupuje?
- (3) a. ?*Zavisi od toga sta ko kupuje
 depends on it what who buys
 ‘It depends on who buys what’
 b. *Koga si ko tvrdio da je istukao
 whom are whom claimed that is beaten
 ‘Who did you claim beat whom?’

In the same contexts where Superiority is respected in Serbo-Croatian, French has obligatory overt *wh*-movement; in matrix clauses, where Serbo-Croatian fails to conform to Superiority, French has optional overt *wh*-movement (Boskovic 1997, 2000b). Boskovic describes these two observations by assuming that the functional head *C* carrying a strong [wh] feature is merged (optionally in French) in the covert component of syntax in matrix clauses in these two languages. That is, if *C* is not merged at the root overtly, neither Serbo-Croatian, nor French has overt *wh*-movement in matrix clauses. Following Stjepanovic (1995), Boskovic (1997b, 2000b) argues Serbo-Croatian multiple *wh*-fronting to be focus movement, dissociated from *wh*-movement. Focus features are assumed to reside in the *wh*-elements themselves in Serbo-Croatian. Boskovic suggests that the many-to-one relation is established simultaneously in the derivation between [foc]-bearing *wh*-expressions and the corresponding functional head, therefore the order of the respective movement operations is free—this derives the lifting of Superiority effects in this environment. Stepanov (1998) shows that Russian *wh*-fronting respects Superiority in no context at all, concluding that all *wh*-fronting in this language must be identified as focus movement, and all *wh*-movement is covert.

While Boskovic’s analysis in terms of identifying matrix short-distance *wh*-fronting as focus movement may be valid for Serbo-Croatian, a language that has multiple instances of preverbal contrastive focus, it cannot straightforwardly extend to Hungarian. Hungarian is a language with *ex situ* contrastive focus in immediately

preverbal position, with the robust restriction that maximally one preverbal focus is allowed. On the other hand, it appears to be a general fact that Hungarian, similarly to Russian, shows Superiority effects with multiple *wh* neither in matrix (4), nor in embedded (5), nor in long-movement contexts (6).

- (4) a. Ki mit tanított?
 who what taught
 ‘Who taught what?’
 b. Mit ki tanított?
- (5) a. Nem tudom, ki mit tanított
 not know-1sg who what taught
 ‘I don’t know who taught what’
 b. Nem tudom, mit ki tanított
- (6) a. Ki mit szeretnéd, hogy tanítson?
 who what like-cond-2sg that teach-subj-3sg
 ‘Who would you like to teach what?’
 b. Mit ki szeretnéd, hogy tanítson?

Although Boskovic makes his account of the lack of Superiority effects to appear to depend on the nature of the feature that drives the movement (i.e. [foc]), in fact it crucially relies only on the simultaneity of the creation of the multiple dependencies between occurrences of *wh*-items on the one hand, and a functional head on the other. Such an essentially Greed-based treatment can be also formulated based on another feature that *wh*-expressions may be safely claimed to bear: [wh]. If it is strong [wh] features that *wh*-elements bear in Hungarian, lack of Superiority effects follows once again. An approach to multiple *wh*-fronting relying on strong [wh] features on *wh*-items is not uncommon: it has been proposed by a number of researchers (cf. e.g. Simpson 1995, 2000, Sabel 1998 and references therein). Whether Boskovic’s account of the obviation of Superiority is the correct one for Hungarian multiple *wh* is a question I leave open.³ In Section 3 we will return to a potential amendment of Boskovic’s account relying on lack of overt *wh*-movement.

³ Boskovic’s conceptual argument is that given that by the merger of the attracting functional head, the movement dependencies (Agree in Chomsky’s (2000, 2001) terms) are created simultaneously in the derivation, therefore overt movement can happen in any order. However, we can make a conceptual argument in the opposite direction as well: if we assume that the computational system chooses the shortest movement dependency at each point of the derivation, then after the introduction of the relevant functional head, it will first select the shortest dependency for movement, then in the next step the next shortest, and so on. That is, ultimately, the account of the obviation of Superiority will be an empirical question.

Reinhart (1995) proposes to account for some Superiority violations by her view of reference set economy. Under this view, only derivations aiming at the same interpretation enter the same reference set to compete. If the Superiority-violating derivation aims at an interpretation that is the most economical derivation of that interpretation, then it will be tolerated (though it will still be marked). As we will see below, different orders of fronted *wh*-phrases correspond to different readings, hence Reinhart’s account can potentially apply. (However, both Serbo-Croatian and Bulgarian have multiple fronting as well as a subject–object asymmetry in the context of

2.2 Covert *wh*-movement? Lipták (2001)

A treatment of Hungarian *wh*-fronting essentially similar to Boskovic's is offered in Lipták (2001) (albeit conceived on entirely different grounds), where it is argued that *wh*-expressions undergo focus movement to FocP in overt syntax, and raise to the (higher) CP projection to check [wh] only covertly, as in (7).

- (7) $[_{CP} \text{ C}^0 \quad \quad \quad [_{FocP} \text{ WH Foc}^0 \quad \dots]]$
 [wh] [foc] [foc]
 [wh]

The *wh*-expression WH is raised overtly to [Spec,FocP], where it checks [foc] of Foc, and then it undergoes covert movement to check [wh] of C. Lipták offers three considerations to support this view. I inspect them one by one below.

The first argument is based on the following observation. Universal quantifiers of the *every*-NP type can normally precede and take scope over preverbal focus in Hungarian, as in (8a). This, however, is impossible when instead of preverbal focus we have preverbal *wh* (cf. (8b)).

- (8) a. Mindenki JÁNOST hívta fel
 everbody J.-acc called up
 'Everybody phoned JOHN'
 b. *Mindenki kit hívott fel?
 everbody whom called up
 'Who did everybody phone' (distributive reading)

Lipták argues that this latter fact is to be attributed to the covert movement of the *wh*-expression from FocP to the higher CP projection: it is essentially an intervention effect induced by a quantificational element, as discussed extensively in Beck (1996). Note that if Lipták's analysis is correct, it provides sound evidence that *wh*-movement per se is covert in Hungarian. In what follows I will examine whether her claim withstands closer scrutiny. I will conclude that the account of the ungrammaticality of (8b) that is offered is inadequate for a number of reasons; hence, it makes no argument for a covert *wh*-to-CP movement.

First, if (8b) was indeed a Beck-effect, then we would expect that in the relevant regard its structure is the same as that of other Beck-effect constructions. Beck (1996) carefully demonstrates not only that *every*-quantifiers are intervenors for LF *wh*-type movement, but also that they do not in fact block such covert movement on their so-called distributive or pair-list reading.

It is well-known that *every*-QP-s lead to different interpretations in constituent questions, which can be identified through differences in congruent answers. A question like (9a) can have at least (9b) or (9c) as answers.

Superiority.) Another account of the lack of Superiority effects is to argue that this freedom derives from the freedom of A-positions. If arguments are generated in any order, or can be A-scrambled prior to *wh*-fronting, then the obviation of Superiority effects follows. I leave the choice of the right account for Hungarian for future research.

- (9) a. Which girl did every boy phone?
 b. (Every boy phoned) Jill.
 c. Bill (phoned) Jill; John, Sarah; and Joe, Mary.

(9b) is often referred to as a single, or narrow scope answer, and (9c) as a pair list, or distributive answer. Now, the pair-list reading is not available with all types of QP-s and with all types of *wh*-phrases, but this need not concern us at this point. All that matters is that while the sentence in (10a) from German (Beck 1996: 22) has both the narrow scope and the pair-list reading, the same is not true of (10b) (Beck 1996: 23).

- (10) a. Wen hat jeder gesehen?
 whom has everyone seen
 ‘Who did everyone see?’
 b. Wen hat jeder wo gesehen?
 whom has everyone where seen
 ‘Where did everyone see who?’

However, it is not the case that *jeder* ‘everyone’ blocks the covert movement of *wo* ‘where’, resulting in plain ungrammaticality, but the presence of *jeder* only eliminates one of the two readings above: (10b) can only be interpreted distributively. But then, to maintain that no quantificational element can appear along the path of the covert movement of a *wh*-element, Beck assumes that the universal QP can move to adjoin to CP, above the primary *wh*-operator:

- (11) [_{CP} jeder_i [_{CP} wen_j [_{IP} t_i . . . t_j . . .]]]

If *jeder* raises to adjoin to CP, it will not be in a position to obstruct the movement of the *wh*-in-situ; and this generates only the distributive reading for the universal quantifier.

The crucial question now with respect to (8b) is: why is the sentence ungrammatical, instead of having only the distributive reading? If we assume, to maintain Beck’s account, that distributive readings arise as a result of adjoining the universal quantifier to CP, above the site of checking [*wh*], then we expect that the same covert universal quantifier movement would free up the way for covert *wh*-movement to CP, and derive a pair-list reading. This, however, is contrary to fact: (8b) is simply out. Then, the claim that *mindenki* ‘everybody’ in (8b) is an intervener is insufficient.

Second, on the assumption that (8b) is a Beck-effect, it is not entirely clear whether the account would not incorrectly rule out a number of other sentence types with an identical structural configuration (i.e. with a quantificational element intervening between the surface and the putative covert position of a *wh*-element). Witness examples in (12).

- (12) a. Ki hívott fel minden nap kétszer kit?
 who called up every day twice who-acc
 ‘Who phoned whom twice every day?’

- b. Who persuaded everybody to talk to who?
- c. Azt kérdeztem, hogy PÁLT / KEVÉS FIÚT ki szeret(i)
 that-acc asked-1sg that P.-acc / few boy-acc who love-3sg
 ‘I asked who PAUL / few boys love(s)’
- d. ?Mondd el, / Tudom hogy minden fiú
 tell-imp-2sg Pref / know-1sg that every boy
 kit hívjon fel
 who-acc call-subj-3sg up
 ‘Tell (me/us) / I know who every boy should call’
 (pair list reading available)

In (12a), allegedly, covert *wh*-movement crosses over a universal quantifier (as well as the quantificational adverb *twice*). (12b) reproduces an analogous example from English. Neither of these sentences are ungrammatical. (12c) is a minimal pair of (8b) in the relevant sense: here the fronted *wh*-element is immediately c-commanded by a focussed constituent, or by a monotone decreasing quantifier in the second version. Focus is a quantificational operator (cf. e.g. Rizzi 1997), and decreasing quantifiers are explicitly shown by Beck to be among the class of interveners; yet they do not appear to block the putative covert movement of *wh* to CP. Further, when embedded under a verb like *tell* or *know* as in (12d), (8b) improves radically (though the reason is not clear to me⁴). (12a,b) can be explained away if the *wh*-in-situ does not move covertly—though I will argue against this position for (12a) in Section 4 of this chapter. The last two examples, however, appear unyielding: they stick out as quasi-minimal pairs of (8b).

Third, the extension of the covert *wh*-movement approach to *multiple wh*-interrogatives is also potentially problematic for the intervention argument. The question arises as to which of the fronted *wh*-elements is moved covertly to CP. The idea that *wh*-fronting is *not* driven by [wh]-checking is made possible only on the proviso that we assume that *wh*-fronting is induced by some other factor. In the previous section we saw that in this language this factor cannot be focussing. Lipták (2001) follows É.Kiss (1992, 1993) in her analysis of these multiple *wh*-fronting constructions and assumes that all instances of fronted *wh*-items except the immediately preverbal one (which is essentially taken to be syntactically focused) are raised as quantifiers, more specifically as universal quantifiers (more on this below; recall from Chapter 3 that universal quantifiers can overtly occupy a position above focus). These linearly non-last *wh*-items do not carry a [wh] feature but are treated syntactically and interpreted semantically like universal quantifiers. Granting that the reasons behind *wh*-fronting are thus identified to be distinct from [wh]-

⁴ Other embedded questions minimally different from (12d) are unacceptable:

- (i) *?Nem tudom, hogy minden fiú kit hívjon fel
 not know-1sg that every boy whom call-subj-3sg up
 intended: ‘I don’t know who every boy should phone’
- (ii) *Mégkérdeztem, hogy minden fiú kit hívott fel
 Pref-asked-1sg that every boy whom called up
 intended: ‘I asked who every boy phoned’

checking, it is in principle possible to assume that [wh]-checking happens at a later stage in the derivation, higher up in the clause structure.

If the intervention-based account is correct, two hitches are created. Recall that on this view it can only be the linearly last fronted *wh*-element which is covertly moved to CP: all other *wh*-items are syntactically and semantically universal quantifiers. However, this entails that the covertly moved *wh*-element crosses over all the non-last fronted *wh*-items. There are two serious complications here. One is that by analogy to Lipták's intervention-based explanation of (8b), we expect multiple *wh*-fronting to be ungrammatical: covert *wh*-movement to CP would now cross over intervening universal *wh*-quantifiers, and would be necessarily ruled out. Then, [wh] of CP is never reached, invariably resulting in a crash. This predicts that multiple *wh*-fronting should never be possible in Hungarian—plainly contrary to fact. In addition, given that covert *wh*-movement extends the scope of the moved *wh*-operator, we expect that the linearly last *wh*-element takes widest scope out of all the fronted *wh*-expressions. This prediction, once again, fails to be borne out.

It is commonly recognised that different linear orders of multiple fronted *wh*-elements correspond to different question interpretations, and hence answerhood conditions. (13a) can be answered as (13b), (14a) as (14b), but not conversely.

- (13) a. Ki melyik tárgyat tanítja?
 who which subject-acc teaches
 ‘Who teaches which subject?’
 b. Pál a szintaxist tanítja, János a fonológiát, Béla a fonológiát és
 a morfológiát
 ‘P. teaches syntax, J. teaches phonology, B. teaches phonology and
 morphology’
 c. #(14b)
- (14) a. Melyik tárgyat ki tanítja?
 which subject-acc who teaches
 b. A szintaxist Pál tanítja, a fonológiát János és Béla, és a morfológiát
 Béla
 ‘Syntax is taught by P., phonology by J. and B., and morphology
 by B.’
 c. #(13b)

In (13) the mapping is from persons to subjects, while in (14) it is from subjects to persons. Such contrasts are standardly related to the relative scope of the fronted *wh*-items: a fronted *wh*-item that precedes another fronted *wh*-item asymmetrically scopes over it. Now, the assumption of covert movement of the linearly last fronted *wh*-element across preceding *wh*-items to CP actually generates contrary to fact scope relations where the linearly last *wh*-operator has widest scope.

In light of these considerations, the intervention argument appears to be unconvincing.

At the same time, in fact there is a straightforward alternative explanation for the ungrammaticality of (8b), on the assumption that in fact [wh]-checking takes place overtly in Hungarian. Assume that in order for a question to be interpretable,

the question operator itself must take widest scope. Questions are interpreted as open formulas (lambda-expressions) both in a Karttunen- and Groenendijk & Stokhof-style approach (a function of propositions in the former, and a relation of worlds in the latter) (Karttunen 1977; Groenendijk and Stokhof 1984, 1989) as well as in the ‘structured meaning’ approach (e.g. von Stechow and Zimmermann 1984, von Stechow 1990, Ginzburg 1992). The relevant lambda-abstraction is contributed in constituent questions by the *wh*-operator itself. If there is a generalized quantifier taking scope above the *wh*-operator, as in (8b), the clause will fail to be interpreted as a question-denoting lambda-expression; more precisely, what happens is that the lambda-expression will be fed an entity which is not of the right type.^{5,6} From the reverse point of view, if the universal quantifier combines with a clause denoting a question, this results in a type clash: the sister of the universal quantifier expression is not of a propositional type *t*.

On the other hand, as we saw above, it is not impossible in general for a universal quantifier to distribute over the set contributed by a fronted *wh*-expression, as in (15) from English (15a=9a), and (16) from Spanish.

- (15) a. Which girl did every boy phone?
 b. Who do you think that everyone invited? [May (1985)]

- (16) A quien ama toda mujer en tu clase?
 to whom loves every woman in your class
 ‘Who does every woman in your class love?’

Notice however that here the *wh*-operators c-command the *every*-quantifiers in the syntactic structure (which does not hold of the Hungarian (8b)). Then, the semantic representation of (15) and (16) will be able to preserve these scope relations. This of course does not mean that the whole of the *wh*-expression will be interpreted as taking the widest scope, but at least the question operator itself (turning the sentence into a question) will. For instance, Agüero-Bautista (2000, 2001), adopting an

⁵ Groenendijk & Stokhof (1984, 1989) in fact propose that quantifiers in questions provide witness sets (cf. Barwise & Cooper 1981), and quantification over the elements of the witness set is question internal.

⁶ Within the Karttunen tradition, the leading account of *wh*-universal quantifier interactions is Engdahl’s (1985). Engdahl maintains an Karttunen-style semantic representation in which the universal quantifier actually has narrow scope, illustrated in (i). Engdahl’s functional question approach is developed by Chierchia (1993), who accounts for the subject–object asymmetry between (i) and (ii) below (first discussed in May 1985) in terms of Weak Crossover, roughly as in (iii), which is analogous to (iv).

- (i) Which dish did every guest make?
 $\lambda p \exists f [\text{range}(f)=\text{DISH} \ \& \ p=\lambda \forall y [\text{GUEST}(y) \rightarrow \text{MADE}(f(y))(y)]]$
 (ii) Which guest made every dish?
 *‘For every dish: which guest made it?’
 (iii) *‘For which *f* (a function to guests): for every dish *x*, *f*(*x*) made *x*’
 (iv) *His mother loves every boy
 *‘For every boy *x*, mother(*x*) loves *x*’

Engdahl–Chierchia approach, argues that the subject–object asymmetry with *every*-quantifiers in such pair-list questions (see Footnote 5) is due to the fact that the restriction of the *which*-phrase reconstructs at LF to an A-position (the respective Case-checking AgrP positions⁷) (cf. Chomsky 1993, 1995, Cresti 1996 for a copy theory implementation of A-bar reconstruction). Since the Case position of an object *wh*-expression is below the subject *every*-quantifier (as in (15)), a pair-list interpretation is available; on the other hand, because the Case position of a subject *wh*-phrase is above the (Case) position of the object, a pair-list reading is not generated. In any case, the question operator itself invariably takes widest scope. This is possible because it is located above all other quantifiers, in [Spec,CP].

In short, if we assume that the *wh*-phrase has undergone overt *wh*-movement in (8b), we have an immediate semantic explanation for why (8b) is ungrammatical: it involves a type clash, in that a question is combined with a generalized quantifier. I conjecture that no argument appears to be derivable from (8b) for covert *wh*-movement.

A second argument Lipták adduces in favour of a covert *wh*-movement analysis is related to selection. Question-embedding predicates like *wonder*, *ask* etc. select for an interrogative clausal complement. Selection is generally taken to be a relation syntactically licensed locally under sisterhood (i.e. Merge). If *wh*-movement checks [wh] of C, then the selection between the superordinate predicate and C is local. This contrasts with the scenario where [wh] is assumed to be located on Foc: the structural relation between the higher predicate and Foc is not local.

However, analogous scenarios are rather common in syntax. For instance, verbs like *collect* semantically requires a plural nominal expression (cf. *collects the country's beer mats*), although number is located syntactically in a projection (NumP) lower than the immediate complement of the verb, which is commonly taken to be DP. In an articulated split CP such as Rizzi's (1997), finiteness is represented in a lower functional projection than force (or clause type in Cheng's (1991) terms), yet predicates can select for the (non-)finiteness of their complement clause, and the same applies to (e.g. subjunctive) mood.

This is ordinarily taken to be 'agreement' of heads, expressed as head-movement. One way of handling phenomena of apparent selection 'at a distance' like in the case of embedded questions (granting the strict locality of selection) then is head-movement. This may technically involve the postulation of the relevant selected feature on the highest functional projection of the selected expression.

Another possible approach is to claim that (in some cases) we face featural (lexical) ambiguity, or featural underspecification of the highest functional head. For instance, Canadian French apparently allows in embedded interrogatives the analogue of *what that* in CP, i.e. the complementizer that introduces embedded

⁷ Agüero-Bautista (2000) adopts Hornstein's (1995) theory of a QR-less syntax. He argues that *which*-phrases—as a result of a Definiteness Restriction on the appearance of DPs within VP at LF in the sense of Diesing (1992)—cannot reconstruct into their VP-internal base position. *Wh*-elements like *who*, however, can do so, hence the possibility of a pair-list interpretation for (i):

(i) Who put everything on the platter?

[Chierchia (1993: 183)]

declaratives can also appear in embedded interrogatives. Such complementizers can be claimed to be either ambiguous between +/-interrogative, or to be lexically un(der)specified for that feature. Or English *that* may be taken to be both the indicative and the subjunctive complementizer. Finally, local selection may be satisfied by the independent property of percolation (of the [wh] feature), which also plays a role in pied-piping phenomena.

Whichever of these approaches proves to be adequate, the argument from strictly local selection is inconclusive.

The third and final argument put forward for a split [foc]- and [wh]-checking, in my view, better serves as a counterargument. Lipták discusses at length the observation that there exists an asymmetry with respect to clausal pied-piping between focus and *wh*-elements. The asymmetry lies in the fact that in certain environments focus does not obligatorily pied-pipe the clause it occurs in into a higher clause, while a *wh*-expression does. Witness the contrast between (17) and (18) (Lipták 2001: 86, 88):

- (17) a. Nem jöhet be [aki PÉTERT ismeri]
 not come-pot-3sg in who P.-acc knows
 ‘Those who know PÉTER cannot come in’
 b. ?(Csak) [aki PÉTERT ismeri] jöhet be
 only who P.-acc knows come-pot-3sg in
 ‘It’s (only) those who know Peter that can come in’
- (18) a. *Nem jöhet be [aki kit ismer]?
 not come-pot-3sg in who who-acc knows
 intended: ‘Who is it such that those who know him cannot come in?’
 b. ?(Csak) [aki kit ismer] jöhet be?
 only who who-acc knows come-pot-3sg in
 ‘Who is such that only those can come in who know him?’

It seems uncontroversial that both regular focus and the *wh*-phrase are in a left-peripheral position *within* the relative clause: in case the verb comes with a verbal modifier like a prefix, the verb will be seen to invert. Now, Lipták argues that this movement within the relative clause is focusing in both cases—a claim that we have no reason to disagree with. Further, the focused status of an element does not force movement of the whole headless relative clause into the matrix clause by pied piping (cf. 17), therefore it must be the [wh] property of the *wh*-phrase that has to do with overt clausal pied piping movement into the matrix in (18). Lipták acknowledges that “the motivation for [this] clausal movement step [...] remains mysterious.” She stipulates that it is driven by the need that “*wh*-items in Hungarian must be in A-bar positions overtly *in the clause where they get licensed*.” In spite of this hitch, runs the argument, [foc]-checking and [wh]-checking are demonstrated to take place in independent clauses, hence to be syntactically dissociated.

Although it seems relatively clear that a *wh*-element can perform [foc]-checking without carrying out [wh]-checking (within the relative clause; i.e. the

dissociation holds in one direction⁸), no further conclusion can be distilled from the presented data. In fact, the complication in the reasoning above related to the overt clausal pied-piping induced by the *wh*-expression appears to be considerable. The resolution of the complication that suggests itself is that this overt movement step is triggered by overt [wh]-checking. In fact, if we do not make this assumption, we have to resort to some ad hoc filter (such as the one proposed by Lipták) to do the job—a clearly unattractive picture. Then, in fact, the contrast of (17) and (18) effectively points to the conclusion that *wh*-movement is overt in Hungarian.

Also, we need not be convinced that [wh]-checking *wh*-movement can target a projection where it does not at the same time check [foc]. This is because in order to treat (17b), we need to assume that the interpretable [foc] of the focused expression is checked twice (as is also maintained by Lipták (2001: 89)): once internally to the headless relative, and once in the matrix after pied piping. Then (18b) can be analyzed analogously: the *wh*-phrase checks [foc] within the relative clause, and checks both its [wh] and [foc] in the matrix. In short, with regard to isolating preverbal [foc]- from preverbal [wh]-checking, the data in (17) and (18) are perfectly neutral.

We have seen in this section that a view according to which there is an independent covert *wh*-movement step after focus movement in Hungarian on the one hand lacks conclusive support, and on the other hand, finds itself facing a number of empirical complications. I argued that these complications are straightforwardly eliminated if *wh*-movement, i.e. [wh]-checking, is taken to be overt. This will be taken up in Section 4.

3 *Wh*-fronting and universal quantifier raising

As I pointed out at the beginning of the preceding section, in fact Lipták's analysis is a minimal pair of Boskovic's. I argued in Section 2.1 that Boskovic's account in terms of fronting as focus movement does not appear to be extendable to Hungarian, a language with a unique preverbal focus position. If we try to amend Boskovic's analysis by incorporating É.Kiss's (1992, 1993) analysis of Hungarian multiple *wh*-fronting in terms of overt universal quantifier raising, and assuming that the linearly last fronted *wh* is moved by focussing, we will be able to maintain Boskovic's position, namely that no overt *wh*-movement occurs. This was exactly Lipták's theory.

Such a theory, incorporating the assumption of *covert wh*-movement, was shown to be unsupported, as well as inadequate in a number of respects in the preceding subsection. Now I turn to the other crucial assumption this theory integrates, namely the idea that fronted *wh*-items, except for the immediately preverbal one, are raised *qua* universally quantified expressions, and demonstrate that this view is essentially incorrect to begin with.

⁸ Our analysis of multiple *wh*-operator constructions proposed in Section 4 also makes use of this one-way dissociation.

The proposal was originally put forward in É.Kiss (1992, 1993), building on Comorovski (1989), and has become commonly accepted in the relevant literature (cf. É.Kiss 1994, 1998b; Puskás 1996, 2000; Horváth 1998; Lipták 2001).

As already I pointed out in the preceding section, universal quantifiers of the *every*-NP type can normally precede and take scope over preverbal focus in Hungarian, cf. (8a). A representation of multiple *wh*-fronting constructions based on É.Kiss (1992, 1993) is as in (19d):

- (19) a. Mindenki JÁNOST hívta fel
 everybody J.-acc called up
 ‘Everybody phoned JOHN’
 b. [_{XP} mindenki [_{FocP} JÁNOST hívta . . .
 c. Ki mit tanított?
 who what taught
 ‘Who taught what?’
 d. [_{XP} ki [_{FocP} mit tanított . . .

The identity of XP in (19b) can be FocP if universal quantifiers raise to adjoin to FocP, or it can be DistP if we adopt Beghelli and Stowell’s (1995, 1997) and Szabolcsi’s (1997) account of universal quantifier movement.

This analysis of multiple *wh*-fronting has the appeal of accounting for five relevant facts. First, there is an apparent parallelism in the overt position of universals like *every*-QP-s and non-last fronted *wh*-expressions in that they both precede focus in the preverbal field (cf. 19), and both follow topics, cf. (20).

- (20) A fiúkat mindenkinek JÁNOS mutatta be
 the boys-acc everybody-dat J.-nom introduced Pref
 ‘It’s John who introduced the boys to every girl’

This apparent parallelism is trivially explained if fronted non-last *wh*-items occupy the canonical position of raised universal quantifiers.

Second, the linear ordering of fronted *wh*-elements has a transparent effect on what answers are licensed; recall the contrast between (13) and (14) above. This is derived given that the relative scope of raised universal quantifiers, and *a fortiori*, that of fronted non-last *wh*-elements, is isomorphic to their c-command relations (hence to their linear order).

Third, non-last *wh*-items are presuppositional (D-linked in terms of Pesetsky 1987); see (21) below.

- (21) a. *Miért ki hívta fel Jánost?
 why who called up J.-acc
 b. Melyik okból ki hívta fel Jánost?
 for which reason who called up J.-acc
 ‘Who phoned John for which reason?’

- c. **Ki a fene* *kit* *hívott* *fel?*
 who on earth whom called up
 intended: ‘Who on earth phoned whom?’⁹
 (cf. also Lipták (2001: 115))

Miért ‘why’ is a non-referential, or non-D-linked, *wh*-word; it cannot appear as a non-last fronted *wh* (cf. (21a); contrast this with (21b)). *Wh a fene* ‘*wh* on earth’ type *wh*-expressions are ‘aggressively non-D-linked,’ hence banned in (21c). That non-last *wh*-items are presuppositional (or specific, in the sense of Enc 1991) follows from their status as universal quantifiers: universal quantifiers in natural language induce an existential presupposition of their witness set (cf. De Jong and Verkuyl 1985, Lappin and Reinhart 1988).

Fourth, multiple fronted *wh*-expressions license a pair-list interpretation only. A multiple *wh*-interrogative involving two *wh*-operators can in principle license a single pair answer, and it can also license a pair-list answer—although particular languages and constructions differ with respect to whether they allow both, or only one of the two. The fact that Hungarian multiple fronted *wh*-expressions allow only for a pair-list answer follows now from identifying non-last *wh*-items as wide scope universally quantified expressions.

Fifth, it seems to be a fact that questions involving two fronted *wh*-phrases require an answer which exhausts the set quantified over by the higher *wh*-expression (cf. Comorovski 1989, 1996) (contra É.Kiss 1992b: 145). Thus, (22b) is an appropriate to (22a), while (22c) is not.

- (22) a. *Ki kit hívott fel?*
 who whom called up
 ‘Who phoned whom?’
 b. *János Marit hívta fel, Péter Katit, Béla Zitát, stb.*
 ‘J. phoned M., P. phoned K., B. phoned Z., etc.’
 c. *#János hívta fel fel Marit*
 ‘J. phoned M.’

This follows if a question like (22a) is essentially interpreted as ‘for everybody, who did he phone?’: the answer must identify for every person in the contextually relevant set who he phoned.

At this point, let me, for ease of reference, briefly list the five empirical facts the appears to account for.

- (23) (i) the parallelism of the overt position of universals and non-last *wh*-items,

⁹ That in a pair-list question involving two *wh*-elements one *wh*-expression must be D-linked is true more generally, cf. Comorovsky (1985, 1996), Pesetsky (1987). Witness the unacceptability of (i) in English:

- (i) *Who on earth broke what?

- (ii) the effect of the order of fronted *wh*-items on answerhood conditions,
- (iii) the D-linked/specific status of non-last *wh*-items (vs. the linearly last *wh*-item),
- (iv) the obligatoriness of the pair-list interpretation, and
- (v) the ‘exhaustivity’ in the interpretation of non-last *wh*-items

An analysis assimilating non-last fronted *wh*-items to universal quantifiers is compelling to the extent that first, (23) (i–v) are real, and second, they cannot be naturally explained otherwise. As far as the second condition is concerned, I believe that an explanation for (ii–iv) is readily available also in an account of multiple *wh* that does not treat non-final fronted *wh* as universal quantifiers—I turn to this immediately below. Deriving (v) is less clear; I have only tentative comments for now. Further, I believe there is evidence that the account breaks down when we consider multiple *wh*-questions with more than two *wh*-elements inasmuch as it makes incorrect predictions regarding the interpretation of such questions—this is what I will demonstrate next. Finally, I will turn to show that the apparent parallel in (23)(i) is not sufficiently general; in fact, the claim of syntactic parallelism is mistaken.

To derive (23) (ii), the effect of the linear order of fronted *wh*-elements on answerhood conditions it is sufficient to assume asymmetric c-command relations among fronted *wh*-items. It is easy to see that this is trivially achievable even if non-final fronted *wh*-elements (henceforth *nfWh*) are not universals.

(23) (iii), i.e. the D-linked nature on *nfWh*-s, is also predicted on more general grounds. É.Kiss’s (1993) Specificity Filter demands that an operator that binds a variable in the scope of another operator be specific, in the sense of Enc (1991). Semantic accounts of the selective nature of weak islands, among them *wh*-islands, are essentially in the same vein (cf. Szabolcsi & Zwarts 1993, den Dikken and Szabolcsi 1999). Accounts of multiple *wh*-constructions that follow Engdahl (1985) in treating it as a subcase of functional questions also predict that the wide scope *wh*-element should be referential/specific, given that it functions as the generator of a set that is the individual domain for the function to apply to (cf. Hornstein 1995). Garrett (1996) and Hornstein (1995) argue that this is the reason why non-referential *wh*-adjuncts are ungrammatical in [Spec,CP] in the English-type multiple *wh*-construction, as in (24).

- (24) a. *How did he say what?
 b. *Why did he introduce who to Mary?

That is, the specificity requirement on *nfWh*-s is expected independently—once again, if the linear order of fronted *wh*-elements translates into asymmetric c-command relations.¹⁰

As for (23) (iv), its explanation will become clear in Section 4 below.

(23) (v) appears less clear—I offer tentative suggestions, however. An important note in this connection however is that pair-list readings of multiple

¹⁰ Bolinger (1978) calls the D-linked *wh*-expression, which acts as a sorting key (cf. Kuno 1982), the ‘topic’ of the multiple question.

questions require an exhaustive answer more generally, also in English type multiple *wh*. Now, either we assume that the *wh*-element overtly in Spec,CP in English type multiple *wh*-questions are universal quantifiers too, or there is an independent reason behind the exhaustivity in English type multiple interrogatives. Given that the first option is clearly a problematic assumption (such *wh*-elements have the properties more of existential quantifiers, than of universals), we are left with the second alternative. However, if there exists a reason for the exhaustivity of English-type multiple *wh*, then, depending on the nature of this reason, it is quite conceivable that it also derives the exhaustivity more generally, also for the case of multiple overt *wh*-fronting, as found in Hungarian. Then, the perceived fact of exhaustivity does not qualify as an argument for the universal quantifier treatment of nfWh-s; it is merely compatible with it.^{11, 12}

Let me now consider why exhaustivity should hold in multiple *wh*-interrogatives in general. In fact, Krifka (2001a) provides an independent answer. According to his analysis—essentially combining Engdahl’s account of the interpretation of multiple *wh* in terms of functional questions with what is standardly referred to as a structured meaning account of questions—a multiple question asks for a mapping, a function (out of a set of functions) for which it holds that for each element in its domain (i.e. the set quantified over by the higher *wh*-expression) yields a true proposition in which one *wh*-expression is interpreted as an element of the domain *x*, and the other as the element of the range *f(x)* that the function pairs with *x*. On this account, exhaustiveness is carried by the universal quantification encoded in the interpretation of a multiple question.^{13, 14} However, in fact it can be argued that on any account of pair-list multiple questions which holds that such questions are properly answered by a function, the desired result of exhaustiveness with respect to the ‘domain set’ follows. This is because the answer gives a function only if it pairs a value to each element in the domain (otherwise we have not given

¹¹ The problem is all the more acute in so far as English type questions exist within Hungarian as well, and as we will see in Section 4, they admit of list answers (if certain discourse conditions are met). However, it is extremely difficult to maintain that the preverbal *wh*-element is interpreted as a universal quantifier if we assume (as we have done) that the immediately preverbal *wh*-element is in focus position. This is because this contrastive focus position, as we saw before in Chapter 4, does not normally tolerate universal quantifiers, cf. (i).

- (i) *Mindenki hívta fel Marit
 everybody called up M.-acc
 intended: ‘EVERYBODY phoned Mary’

¹² A further problem with attempting to explain the perceived exhaustivity of nfWh as exhaustivity of universal quantifiers is that then we expect that exhaustivity of nfWh is exceptionless. This, however, is not the case: see Footnote 15 for relevant discussion.

¹³ For instance, according to Krifka (2001a) the interpretation of a question like *Who read what?* is as in (i).

- (i) $\langle \lambda f \forall x [x \in \text{DOM}(f) \rightarrow \text{read}(f(x))(x)], \text{FUN}'(\text{PERSON} \times \text{THING}) \rangle$,
 where FUN' (PERSON × THING) is the set of functions from PERSON to THING

¹⁴ As Krifka himself notes, this picture derives (23)(iii), inasmuch as cognitive functions require a domain, hence the domain must be given, i.e. D-linked.

the *function* that was asked for). On this type of view, exhaustivity in (23)(v) is intimately linked to the D-linked status of the domain.

Let me now show how the account in terms of universal quantification of nfWh-s breaks down in multiple questions with more than two fronted *wh*-phrases. For a question like (25a), the account predicts an interpretation like (25b) (assume a context with a given set of boys and girls).

- (25) a. Ki kivel hányszor táncolt?
 who who-with how-many-times danced
 ‘Who danced with who how many times?’
 b. For everyone (i.e. every boy), (tell me) for everyone
 (i.e. for every girl), how many times did he dance with her?

(25) says that the answer should specify for each boy the following: for each girl, how many times did he dance with her? But crucially, this is contrary to fact. This is because we predict that the answer should include a sub-list for each boy we enumerate that informs the interlocutor for each girl how many times this boy danced with her. That is every boy is paired with every girl, and the question is asked: how many times did they dance? Each such question must be answered. Take now a situation where each boy danced with two girls a certain, possibly different, number of times. Assume a context of three boys, John among them and four girls: Mary, Jill, Sue and Suzy. Assume that John danced with Mary once and with Jill twice, and did not dance with the other girls. The answer then should include that John danced with Mary once, with Jill twice, and that John did not dance with Sue and Suzy (i.e. with Sue and with Suzy zero times). However, a felicitous answer in fact does not include details of non-dancing girls; only girls that danced are enlisted—this contrasts sharply with what is predicted by (25a). In short, (25a) does not require that we exhaust the set quantified over by the second *wh*-expression, contrary to what we expect if (25b) is the interpretation of (25a).^{15, 16}

¹⁵ Let me note here that the generalization (predicted by the universal quantifier treatment of nfWh-s) that the answer must exhaust the set quantified over by the nfWh elements is in fact not fully stable. This is because in reality there exist contexts where the nfWh does not quantify over a D-linked/specific set, and does not serve as a ‘topic’ of the question (cf. Footnote 10). Consider (i) below in the context of a party where 20 people appeared.

- (i) Ki kivel táncolt?
 who who-with danced
 ‘Who danced with who?’

Assume one 10 out of the 20 people danced. Now (i) does not force an answer where we say for each person who (s)he danced with, but only the actually dancing pairs need to be listed (hence an existential flavour in the question). This is related to the fact that *ki* ‘who’ does not necessarily quantify over a given (specific) set in the same way as *melyik fiú* ‘which boy’ does in (ii) (like the set of people at the party).

- (ii) Melyik fiú kivel táncolt?
 which boy who-with danced
 ‘Which boy danced with who?’

Finally, I will show that (25)(i), the generalization of the parallelism of the overt position of *every*-QP-s and wide scope *wh*-elements cannot be maintained. Significantly, there exist a number of unexplained asymmetries between the wide scope *wh*-elements (continued to be referred to as nfWh-s) under scrutiny and regular universal quantifiers like *every*-expressions (henceforth uQ). First, wide scope uQ-s may surface postverbally (cf. É.Kiss's (1992, 1994, 1998b) postposing PF-rule) (cf. (26)), whereas nfWh-s cannot.

- (26) a. KÉT LÁNYT hívott fel minden fiú
 two girls-acc called up every boy
 'Every boy phoned two girls' (every > two)
 b. *Kit hívott fel ki?
 whom called up who
 intended: 'Who phoned who?' (who > whom)

Regular uQ-s can be raised to a superordinate clause to a preverbal position, nfWh-s cannot; cf. (27).

- (27) a. Minden lányt PÉTER szeretné, hogy felhívjunk
 every girl-acc P. like-cond-3r that up-call-subj-1pl
 'For every girl, it's Peter that would like us to phone'
 b. *Melyik lányt PÉTER kérdezte, hogy mikor hívjunk fel?
 which girl-acc P. like-cond-3rd that when call-subj-1pl up
 intended: 'Which girl is such that it's Peter that asked when we
 should phone her?' / 'Every girl is such that it's Peter that asked when
 we should phone her'

A sequence of fronted uQ-s may be separated by a high adverbial like *szerintem* / *szerinted* 'in my / your opinion', a sequence of fronted nfWh-s cannot:

- (28) a. Minden fiú szerintem minden lányt felhívott
 every boy in my opinion every girl-acc up-called
 'In my opinion, every boy phoned every girl'

The reading described here is marginally possible with (22a) above as well; though it is pragmatically odd. (19c) does not admit of such an interpretation.

¹⁶ (25a) type sentences are in fact predicted to have an interpretation analogous to that obtained for English sentences like (i), with the *wh*-object having narrowest scope.

- (i) What did every boy give every girl?
 every boy > every girl > what

To such a question, a proper answer enumerates in the case of every boy what is was *for every girl* that he bought for her, even if he bought nothing for some of the girls. The difference between the felicity conditions of answers to (i) and (25a) above point to the same direction as we were arguing in the main text.

- b. *Ki szerinted kit mikor hívott fel
 who in your opinion whom when called up
 intended: 'In your opinion, who phoned whom when?'

A uQ can precede another fronted uQ, a nfWh cannot:

- (29) a. Mindenki mindenkit felhívott
 everybody everybody-acc up-called
 'Everybody phoned everybody'
 b. *Ki mindenkit mikor hívott fel
 who everybody-acc when called up
 intended: 'Who phoned everybody when?'

Thus, nfWh and uQ clearly have distinct syntactic options. Beyond these asymmetries, it is not clear, if nfWh-s (i.e. *wh*-elements putatively raised to the canonical position of uQ) are interpreted as a universal quantifier, what rules out such an interpretation for these elements if (i) nothing occupies the focus position, cf. (30), (ii) a non-*wh* focus resides in focus position, cf. (31), (iii) when nfWh-s take narrower scope than preverbal focus, cf. (32).

- (30) *Ki felhívta Jánost
 who up-called J.-acc
 intended: 'Everyone phoned John' (also unavailable: 'Who phoned John?')

- (31) *Ki JÁNOST hívta fel
 who J.-acc called up
 intended: 'Everybody phoned JOHN'
 (also unavailable reading: 'Who phoned JOHN?')

- (32) Ki hívott fel kit mikor?
 who called up whom when
 intended:
 *'Who called everybody when?' /
 *'Who called who when?' (with an exhaustive interpretation of 'who')

In short, wide scope *wh*-elements and regular universal quantifiers have distinct syntactic options.

Taken together, the universal quantifier treatment of nfWh on the one hand appears not to be compelling as far as facts in (23)(ii–v) are concerned, while on the other, it creates profound difficulties. One such difficulty we have discussed is that it does not seem to work for multiple questions with more than two *wh*-words (especially, for the non-initial nfWh; but see also Footnote 13). The other major complication is that the proposal that nfWh-s must be raised in syntax because they

are treated by syntax as universal quantifiers cannot be correct in view of the numerous syntactic asymmetries that exist between nfWh-s and regular universals.¹⁷

We are then in need of an analysis that treats nfWh neither as focus, nor as universal quantifiers. The analysis will need to account not only for facts that have appeared in the discussion thus far, but also a number of further syntactic and interpretive properties of multiple occurrences of *wh*-operators, to which we turn presently.

4 The novel account of multiple *wh* in Hungarian

4.1 Preliminaries

Before setting up the analysis, I will present the crucial empirical generalisations appearing in the relevant literature, which to some extent I will extend and refine here. It is a significant observation that Hungarian allows not only the (apparently) Slavic type multiple *wh*-fronting pattern, but also the (apparently) English type multiple *wh* pattern, where only one *wh*-element is fronted. I will refer to the former as S-type questions, and to the latter as E-type questions for short.

It is also commonly observed that the S-type pattern is associated only with a list answer, e.g. (13a) repeated below as (33a) can be answered as (13b)=(33b), but not as (33c).

- (33) a. Ki melyik tárgyat tanítja?
 who which subject-acc teaches
 ‘Who teaches which subject?’
 b. Pál a szintaxist tanítja, János a fonológiát, Béla a fonológiát és
 a morfológiát
 ‘P. teaches syntax, J. teaches phonology, B. teaches phonology and
 morphology’
 c. #Pál a szintaxist tanítja
 ‘P. teaches syntax’

It is ordinarily recognised that the E-type pattern, on the other hand, is typically matched with a single pair answer. An answer to (34a) is (34b).

¹⁷ Potentially, a minority of these asymmetries can be explained away by stipulating restrictions on nfWh, however, such stipulations carry the danger of making the whole account non-explanatory. For instance, to rule out options (i) and (ii), related to (30) and (31) above, É.Kiss (1998b: 48) stipulates that the focus position of a constituent question must be occupied by a *wh*-element. Although this restriction seems natural, it admits of a certain degree of circularity in the context of ruling out (i) and (ii): such clauses then are not constituent questions, yet it is not clear why nfWh cannot be interpreted as a universal outside the context of constituent questions. In order to avoid this complication, we need to assume that the presence of nfWh turns the clause into an interrogative—which begs the question: why would an element interpreted as a universal quantifier have such an effect?

- (34) a. Ki hívott fel kit?
 who called up whom
 ‘Who phoned whom?’
 b. Péter hívta fel Marit
 P. called up M.-acc
 ‘P. phoned M.’

However, what is not standardly recognized is the fact that (34a) can also receive a pair-list interpretation if the appropriate discourse conditions are met. The discourse conditions are that both sets quantified over by the respective *wh*-expressions be familiar. Given a discourse in which callers and those that the calls were addressed to are both given sets, (34a) can be responded to as in (35):

- (35) Péter hívta fel Marit, János Katit, Béla Zitát, stb.
 ‘P. phoned M., J. phoned K., B. phoned Z., etc.’

Note that an S-type question can be answered with a list of pairs where the first member of the pairs is an individual, and the second member is a set of individuals (potentially containing a single element); cf. (13b)=(33b) above. By contrast, when asking for a list of pairs, E-type questions require that both members of the pairs be single individuals; (36) is unacceptable as an answer to (34a). This question interpretation is often referred to as a ‘matching question’ (cf. e.g. Comorovski 1996).¹⁸

- (36) Péter hívta fel Marit, Katit és Évát, János Zitát, Béla Ritát és Dórárt, stb.
 ‘P. phoned M., K. and É., J. phoned Z., B. phoned R. and D., etc.’

Having discussed the two surface patterns and the available readings, let me now turn briefly to the syntax of the E-type pattern. For, it is not convincingly settled what its appropriate structural description should be. One possibility is to assimilate this construction to multiple *wh* in English (cf. Brody 1990), i.e. to assume that secondary *wh* (i.e. here the postverbal *wh*, cf. Brody 1995b for this term) is related to the same functional projection (FocP) that hosts the primary (preverbal) *wh*-operator. The nature of this relation is not clear. Lipták (2001: 120–122) discusses this issue and suggests that the relation is not movement; however, she leaves its identity open. I will argue below that secondary *wh*-elements can be related to FocP of the primary *wh* in either one of two ways: one is syntactic movement, the other is unselective binding.

¹⁸ É.Kiss (1992, 1993, 1998b), Lipták (2001) appear to be maintaining that E-type questions require a single pair answer. While this is clearly a prominent reading of E-type questions, my informants report that it is not the only one: a matching question reading is also available. Annamária Bene informs me that in Serbo-Croatian too, a language which, similarly to Hungarian, allows E-type questions as well, E-type questions can be interpreted either as a matching question or as a question asking for a single pair. Horváth (1998: 43) also maintains that E-type questions in Hungarian can receive a ‘matching’ pair-list answer.

Another possibility is to propose that the secondary *wh* is syntactically related to some second A-bar position. É.Kiss (1992, 1993) posits such a picture. In É.Kiss (1992) it is suggested that the secondary *wh*-element is in a second, right-specifier of the same FocP that hosts the primary, preverbal *wh*-phrase.¹⁹ This, however, entails an unrestricted theory of phrase structure, as well as raises descriptive problems for predicting word order: in order to derive the fact that the postverbal *wh*-element can be both preceded and followed by other constituents, massive right-dislocation movements need to be entertained. É.Kiss (1993) puts forward the alternative that the postverbal *wh*-element itself undergoes right-dislocation, once again necessitating further right-dislocation operations to generate the full set of postverbal constituent orders.²⁰

Significantly, as extensively discussed in Chapter 2, Hungarian allows sentences with multiple foci, cf. e.g. (37), (38) and (39):

- (37) JÁNOS evett CSAK A LEVESBŐL
 J. ate only from the soup
 ‘It’s John who ate only from the soup’
- (38) CSAK JÁNOST hívtam meg ÉN;
 only J.-acc invited Pref I-nom
 Pétert és Évát A TÖBBIEK hívták meg
 P.-acc and É.-acc the others invited Pref
 ‘It’s only J. who I (myself) invited;
 P. and É. were invited BY THE OTHERS’
 [=É.Kiss (1998: 14, (22b))]
- (39) Mikor énekelte el MARI a népdalt a legszebben?
 when sang Pref M. the folk song-acc the most beautifully
 ‘When did MARY sing the folk song the most beautifully?’²¹
 [=É.Kiss (1998: 10, (13a))]

Recall that É.Kiss (1998a) proposes that such sentences involve multiple FocP projections, and secondary (i.e. postverbal) foci occupy [Spec,FocP] of lower FocP-s in overt syntax. We argued in Chapter 2 however that movement to secondary FocP-s is not invariably overt: it is optionally overt or covert. (For the arguments relevant

¹⁹ The relevant structural configuration is schematized in (i) below.

(i) [FocP [Spec1 Wh] [Foc V] [. . .] [Spec2 Wh]]

²⁰ It is to be noted here that some speakers prefer E-type questions with the secondary *wh* at the very end of the clause. For such speakers, Alberti and Medve (2000) (cited in Lipták 2001) argue that a stylistic rule applies that places secondary *wh* at the right edge. Lipták (2001) also adopts the view that any such preference is merely of a PF-nature, potentially related to heavy stress, which is easier to assign to elements located at the right edge of the relevant prosodic domain.

²¹ As Farkas & É.Kiss (1995) demonstrate, it is a focus operator that contributes the set that serves as the ordering domain for the ordering property denoted by the adjective/adverb in the superlative.

to the overt/covert distinction, see the original works.²²) Now, if the multiple FocP analysis is essentially correct, then, given that *wh*-operators are a subtype of focus, it is expected that a secondary *wh*-expression in E-type interrogatives have the same syntactic options as secondary focus, i.e. it too is predicted to raise to a lower FocP. Horváth (1998) in fact entertains such an analysis.²³ Note that we write ‘FocP’ here, although pre-fabricated FocP per se is no longer assumed in this thesis to exist in Hungarian; cf. the discussion in Chapter 5.²⁴ Then, given the analysis of double foci

²² Briefly, recall that the observation we made earlier is that a postverbal focus can take inverse scope over a preceding postverbal quantifier—suggesting the availability of covert movement of secondary focus. A further observation supporting the same conclusion was the following. A secondary *wh*-expression can bind a pronoun to its left in the postverbal domain, cf. (i). The same is not possible for a referential group-denoting expression which otherwise has the potential to be interpreted distributively, cf. (ii) (*két fiút* ‘two boys’ bears neutral, non-focal stress).

- (i) Melyik miniszternek mutatta be a *pro* főnöke melyik fiút?
 which minister-dat introduced Pref the (his) boss-poss-3sg which boy-acc
 ‘To which minister did his_{i/j} future boss introduce which boy_i?’
- (ii) Melyik miniszternek mutatott be a *pro* főnöke két fiút
 which minister-dat introduced Pref the (his) boss two boys-acc
 ‘To which minister did his_{*i/j} future boss introduce two boys_i?’

(It is not clear why (i) does not have the status of a WCO violation—I left this as an open issue.)

²³ Horváth (1998: 44–45) refers to Hornstein (1995), where it is maintained for English that not inherently D-linked *wh*-phrases like *who* and *what* may receive a D-linked interpretation in multiple interrogatives only if they occur in an A-bar position. Granting this and extending it to E-type questions in Hungarian, given that secondary (postverbal) *wh*-items must be D-linked, it would follow that they too are in an A-bar position (at least by LF). However, I do not adopt Hornstein’s suggestion; hence such an argument loses force.

²⁴ A test potentially confirming such a structural description is the availability of parasitic gaps licensed by the secondary (postverbal) *wh*-element. In languages like English and Dutch, secondary *wh*-elements are known not to license parasitic gaps:

- (i) *Who took whom to dance without knowing?

In contrast, some Hungarian speakers tend to accept such structures; cf. (ii).

- (ii) a. (?)Milyen politikusok hangoztatnak milyen elveket anélkül,
 what politicians voice what principles-acc without
 hogy ismernének
 that know-subj-3pl
 ‘What politicians voice what principles without knowing them?’
- b. (?)Ki vitt táncba kit anélkül, hogy ismerne
 who took dance-to whom without that know-subj-3sg
 ‘Who took whom to dance without knowing her?’

Many informants I asked reported that such constructions are acceptable (either fully or with some degree of degradation); further, their level of acceptability is not significantly different from minimal pairs involving a preverbal parasitic gap licensing *wh*-phrase, as in (i):

constructions in terms of a second, lower ‘FocP’, coupled with the general parallelism of focus and *wh*, we have some evidence to suggest that in E-type interrogatives, secondary (postverbal) *wh*-expressions can move to an A-bar specifier of a ‘FocP’ lower than the primary (preverbal) *wh*.²⁵

-
- (i) Milyen elveket hangoztatnak milyen politikusok anélkül hogy ismernének?
 what principles-acc voice-3pl what politicians without that know-subj-3pl
 ‘What principles are voiced by what politicians without knowing them?’

Also, postverbal (secondary) and preverbal (primary) focus (cf. (iia) and (iib), respectively) are no different with respect to parasitic gap licensing either. This is expected inasmuch as *wh* is a case of focus.

- (ii) a. Ki visz csak LÁNYOKAT haza anélkül, hogy ismerne
 who takes only girls-acc home without that know-subj-3sg
 ‘Who takes only girls home without knowing them?’
 b. János csak LÁNYOKAT visz haza anélkül, hogy ismerne
 J. only girls-acc takes home without that know-subj-3sg
 ‘John takes only girls home without knowing them’

However, Lipták (2001: 118) judges multiple *wh* constructions like (39) above as unacceptable, as do some of my own informants. (Judgement of speakers who also reject sentences like (i) are clearly of no relevance.) I have no straightforward account of this variation. Note, however, that parasitic gap licensing is a property of *overtly* moved operators only—it is quite possible that this variability reduces to variation among speakers with respect to the availability of *overt* (vs. covert) movement of secondary (postverbal) focus/*wh* to a second ‘FocP’. Alternatively, this may be caused by availability of scrambling of postverbal operators to some speakers. I leave this issue open here.

²⁵ Let me add another piece of supporting evidence that postverbal *wh*-elements may raise covertly to a lower A-bar position. Recall the property of sorting key (cf. Kuno 1982), i.e. that in a question with two *wh*-words the list in the answer is ‘sorted’ starting (the mapping) from the set quantified over by the higher *wh*-expression. Now in an E-type question with three *wh*-elements, if a postverbal *wh*-element can move to some A-bar projection lower than the overt position of the verb, we expect that if the overtly lowest *wh*-item undergoes such covert movement, then this may reverse the sorting relation among the second and third *wh*-expressions. Although judgments are difficult here, I believe that this is indeed what we find. As can be seen from the felicitousness of the answer in (ib) to (ia), it is possible to map from the set quantified over by *mit* ‘what’ to the set quantified over by the *kit* ‘whom’, even though their linear and hierarchical order in the question is *what* > *whom*. (For such a reading of (ia), the *kit* ‘what’ is destressed, while the *kit* ‘whom’ bears strong accent.)

- (i) a. Ki mutatott be mit mondva kit?
 Who-nom introduced Prefix what-acc saying whom
 ‘Who introduced whom, saying what?’
 b. Gábor mutatta be Pétert dicséretet mondva,
 G.-nom introduced Prefix P-acc praise-acc saying
 és Jánost dicséretet és kritikát is mondva;
 and J.-acc praise-acc and criticism-acc too saying
 Béla mutatta be . . .
 B.-nom introduced Pref . . .
 ‘G. introduced P. pronouncing praise, and J. pronouncing praise and criticism;
 B. introduced...’

A novel observation that confirms this analysis concerns Antecedent Contained Deletion (ACD) contexts (cf. Sag 1976, Larson and May 1990, Kennedy 1997). Pesetsky (2000) argues that ACD with apparent *wh*-in-situ is a diagnostics of covert full category movement (cf. also Lasnik 1995, Tanaka 1993, 1995). An example like (40) involves a quantificational intervener (a universal quantifier) (cf. Beck 1996) overtly above the secondary *wh*-element. Provided that the secondary *wh* raises covertly to some A-bar position as a category, it will license ACD. If it must raise to the site of the primary *wh* (overtly in [Spec,FocP]), then we expect an intervention effect. If it can raise to an A-bar position lower than the site of the universal quantifier, then we expect such examples to be fine. Now, the grammaticality of sentences like (40) is in support of the view that secondary *wh*-phrases may move to a lower A-bar position.

- (40) Melyik tanár mutatta minden fiúnak be melyik olyan lányt,
 which teacher-nom introduced every boy-to Pref which such girl-acc
 amelyiket Péter nem [VP e]?
 which-acc P. didn't
 ≈'Which teacher introduced to every boy which girl that Peter didn't'

Note that this picture of the syntax of secondary *wh*-elements fits wholly with our analysis of recursive 'FocP-s' presented in Chapter 5. Recall that I have argued for a derivational model in which in Hungarian it is the verb that carries [foc] and [neg], and in the case of [foc], the verb projects this feature potentially multiply as it moves up in a stepwise fashion, creating multiple sites for focus movement. This picture was used to derive the distribution of overt and covert focus movements. This in itself is enough to derive the generalization we have just established, namely that secondary *wh* can also move to some lower A-bar position. This movement will be analysed as [F]-checking movement, akin to secondary focus movement. However, by simple extension, we can assume that in Hungarian it is the verb that carries uninterpretable [wh] too. Recall that it follows from the system set up in Chapter 5 that an uninterpretable [foc] on V does not *have to*, but only *may*, project at an intermediate stage in the derivation, still below its final landing site. This then now also applies to [wh]. If [wh] projects low at an intermediate stage in a multiple question (which is an option only), then we predict that the secondary *wh*-element will have to raise to this lower A-bar position—an assumption we are making already anyway. Then the generalization we have arrived at is that all uninterpretable operator features are carried by the raised verb in this language—this furnishes a fully uniform analysis of operator constructions.

Let us return to secondary *wh*. We have seen two basic options thus far: first, relating secondary *wh* syntactically to the same FocP that hosts the primary *wh*-operator, and second, not relating it to the same FocP. We have discussed one case of the second scenario, that of relating secondary *wh* to a *lower* FocP projection. However, I will argue that there must be another case within the second scenario: not relating the secondary *wh* element to any A-bar position at all. I will introduce this option in the next section.

4.2 Choice functions and checking [wh] and [foc]

In this subsection I lay out a novel analysis of the syntax of multiple *wh* constructions in Hungarian; in the next subsection we come to matters of interpretation. I work from the assumption—defended in Section 2 above—that [foc]-checking and [wh]-checking take place in the same projection in Hungarian (FocP). Let me point out that this is fundamentally in line with the Cinquean view (cf. Cinque 1999) inasmuch as the functional sequence itself (i.e. the uniform order of functional features across languages, cf. Starke 2001) is respected. Note that there is no universal claim made here: as Bobaljik and Thrainsson (1998) demonstrate, languages differ with respect to realizing phi and tense features on one common or on two distinct heads, as do other researchers for other feature types. Realizing multiple features on the same functional head is a central tenet of the multiple specifiers approach adopted in this book, and is assumed quite generally (cf. Koizumi (1994) for Pol bearing both [top] and [neg]; Lasnik & Saito (1992), Fukui (1993), etc. for T having [tense] and [top]; Boskovic (1997a, 1998) for AgrS carrying phi- as well as [foc]-features in Serbo-Croatian, and for C as carrying both [wh] and [foc] in Bulgarian; and many others). As for the [foc] feature of Foc and the [foc] feature of focussed expressions, given that in multiple foci constructions exactly one focus operator is fronted to the preverbal field (cf. (37) above²⁶), the inference we drew in Chapter 2 is that [foc] of Foc is strong and [foc] of focussed constituents is weak in Hungarian.²⁷

As for the *wh*-expressions themselves, I suggest that their [wh]-feature is strong in this language.²⁸ Further, I propose that *wh*-pronouns may or may not combine with choice functions to form a *wh*-phrase (the choice already being made in the Numeration/Lexical Array). Choice functions apply to a set and output one member of that set, and are claimed to be associated with *wh*-in-situ in Reinhart (1995, 1998). When applying to the set denoted by a *wh*-pronoun (e.g. a set of humans in the case of *who*), a choice function in a broad sense saturates the *wh*-pronoun (e.g. no free variable will be needed to be bound). Let us transpose this to syntax as checking of the [wh]-feature of the *wh*-pronoun.²⁹ In turn, this entails that

²⁶ (37) can be contrasted with (i):

- | | | | | |
|-----|---|------------|--------|-----|
| (i) | *JÁNOS | CSAK MARIT | hívta | fel |
| | J. | only Mary | called | up |
| | intended: 'It's John that phoned only Mary' | | | |

²⁷ As nothing hinges on the choice of encoding the strong/weak distinction, I will keep to the terminology of Chomsky (1993, 1995)—the translation is straightforward into the phraseology of Chomsky (2000, 2001).

²⁸ This means in the context of the system laid out in Chapter 5 that if the verb projects its [wh] on the way to its final landing site, then secondary *wh* will have to move *overtly* to the projected lower A-bar position. However, our system also predicts that secondary *wh* can move *covertly* as well to this lower A-bar position, if the verb, which in a constituent question bears both [wh] and [foc], projects not [wh], but [foc] on the way. These predictions do not appear to be falsified; in fact they are fully compatible with the observation that the order of secondary *wh*-expressions is free.

²⁹ We can follow Reinhart's (1998) concrete syntactic analysis here. She suggests that the choice function variable essentially functions as a determiner of *wh*-phrases (this can be safely assumed

at least one *wh*-element must remain unassociated with a choice function, in order to be able to check [wh] of FocP.

Recall that we have maintained, adopting a standard view, that interrogative *wh*-items are a subcase of focus (cf. Section 2.1). However, this does not entail that all other uses of *wh*-items are a case of focus. One argument for this view was derived from the discussion around (17) and (18) in Section 2.2 (cf. also Footnote 8). Another robust fact that suggests the same is the observation that only a unique preverbal focus is allowed in Hungarian, but the S-type pattern has multiple *wh*-occurrences. We conjectured above that the not immediately preverbal *wh*-occurrences cannot have undergone focusing, precisely in light of this very distributional asymmetry. Therefore non-final fronted *wh*-expressions do not carry [foc].

Let me add a further consideration. It is well-known (cf. Cheng 1991, 1997, Nishigauchi 1990) that in a number of languages, including Hungarian, *wh*-pronouns are used in the composition of existential indefinites or indefinite interpretations, universal quantifiers, and other quantificational expressions. Cheng (*inter alia*, cf. Aoun & Li 1993, Ouhalla 1996) concludes that *wh*-pronouns in these languages do not have any inherent quantificational force of their own (this view is maintained for Hungarian in Lipták (2001) as well). But for instance existential indefinites are not necessarily focussed, i.e. they do not inherently carry [foc].

Finally, another argument for this view in fact comes from the contrast in (41), while another is derived from another asymmetry between regular focus and secondary *wh*: in an embedded clause, regular focus cannot remain in situ (but must be moved to focus position), while secondary *wh* can.

- (41) a. Ki állítja, hogy felhívott kit?
 who claims that up-called whom
 ‘Who claims that he phoned whom?’
- b. *CSAK ÉN állítom, hogy felhívta CSAK MARIT
 only I-nom claim that up-called only M.-acc
 ‘It’s only me who claims that he phoned only M.’
- c. CSAK ÉN állítom, hogy CSAK MARIT hívta fel
 ‘(40b)’

If the *wh*-element in the embedded clause in (41a) had [foc], then it would have to undergo focus-fronting, as happens in (41c).

Based on these considerations, I propose that, at least in Hungarian, *wh*-elements do not *inherently* possess [foc], even though they are marked [wh]. More specifically, I propose that the feature [foc] is assigned to *wh*-elements in the Numeration (NUM)/Lexical Array (LA), and as such, assignment of [foc] to *wh*-elements is an option.

even for adverbial *wh*-phrases like *where*, cf. the determiner *some* in *somewhere*). Assuming that the head of the nuclear *wh*-phrase (NP in the case of *wh*-pronouns like *who*, *what*) is [+wh], this [+wh] feature is then checked under head movement to the choice function variable functioning as a [+wh] determiner.

However, recall that we are assuming that [wh]- and [foc]-checking occur in the same projection, FocP, in Hungarian. This means then that an interrogative clause will contain a FocP—which by definition carries [foc]—that bears [wh]. (I leave it open here whether [wh] of Foc is weak or strong, as this will not figure in the present analysis.) Based on the syntactic and semantic parallelism of *interrogative* wh-elements and focus, it is safe to maintain that a question interpretation asking for identification in the answer requires a [foc]-bearing wh-element in the relevant A-bar position, i.e. [Spec, FocP] in Hungarian. Then NUM/LA must minimally contain one [foc]-bearing wh-element. Further wh-elements may also be assigned [foc] in NUM/LA, but this remains an option.

To summarize the preceding discussion, we hypothesize that choice functions can combine with wh-pronouns, as well as make the following two assumptions about questions:

- (42) (i) Foc of FocP in interrogative clauses is {[wh], [foc]} (the standard view, assuming that [wh] and [foc] co-project in Hungarian; cf. Section 2.1), and vice versa, questions involve a {[wh], [foc]} wh-element in [Spec, FocP],³⁰
 (ii) [foc] of Foc is strong (cf. Chapter 2);

and we assume the following to hold of wh-elements:

- (43) (i) Wh-elements carry strong [wh] (and weak [foc], as other focussed expressions),
 (ii) either [wh]-bearing Foc or a choice function can satisfy unchecked [wh] of wh-elements,
 (iii) Wh-elements are assigned [foc] in NUM/LA (as an option by default).

Note that (42) would probably be part of any minimalist analysis based on a multiple specifier treatment of FocP in Hungarian questions (where (42)(ii) is needed independently of interrogatives). (43)(i) is also a rather natural assumption, given the availability of S-type questions, and given that we have rejected the universal quantifier-treatment of multiple wh-fronting, as well as Lipták's (2001) split [foc]- and [wh]-checking analysis. I will propose next that the locus of variation is to be found in the application of an independently argued device: choice functions (cf. (42)(ii)). (42)(iii) says something about the nature of [foc] on wh-expressions, and out of the choices of lexical and (NUM/LA-)assigned it opts for the latter.

I pursue a line here that does not posit variation in the syntactic feature composition of wh-elements to account for the difference between S- and E-type questions in one and the same language. I also avoid assuming variation in Foc of FocP across the two question patterns. This is the null hypothesis, adding extra assumptions to vary the functional head 'Foc' would be non-optimal. Also, it would

³⁰ Wh-expressions that are [+wh] do not survive outside the context of constituent questions: in a sentence with one or more [+wh] wh-expressions, at least one has to be [+foc] and move to FocP to make the sentence a constituent question.

be empirically undesirable, undesirable in view of the availability of mixed S- and E-type patterns, cf. (44).

- (44) Melyik fiú melyik barátját mutatta be melyik lánynak?
 which boy which friend-poss-3sg-acc introduced Pref which girl-to
 ‘Which boy introduced which of his friends to which girl?’

In fact, to derive the variation between E- and S-type multiple questions, as the attentive reader may have worked it out, we do not need to make any extra assumptions. Given a sentence with two *wh*-expressions, if neither one is associated with a choice function, both will have to raise overtly to FocP to check their strong [wh]. Since Foc attracts a unique [foc]-marked element, exactly one out of the two will need to be assigned [foc] in NUM/LA. This results in an S-type question pattern, schematized below:

- (45) $[_{\text{FocP}} \text{ WH } [_{\text{FocP}} \text{ WH } \text{ Foc } [\dots]]]$
 [wh] [wh] [wh]
 [foc] [foc]

On the other hand, if one *wh*-element gets associated with a choice function, its strong [wh] will be checked locally, i.e. without movement to FocP. This pattern is represented diagrammatically below (f stands for a choice function variable):

- (46) $[_{\text{FocP}} \text{ WH } \text{ Foc } [\dots \text{ f-WH } \dots]]$
 [wh] [wh] [wh] [wh]
 [foc] [foc]

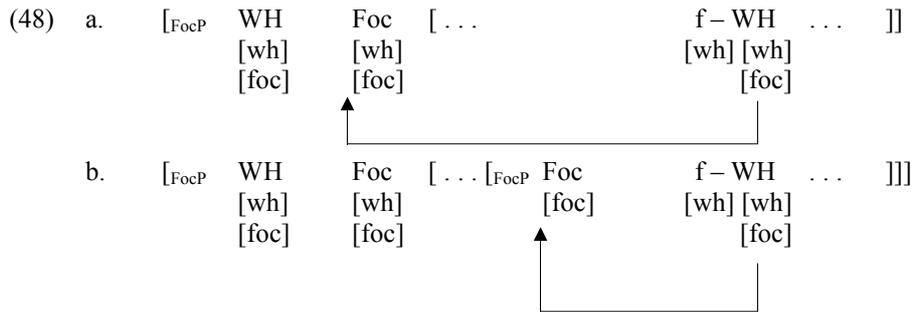
That *wh*-in-situ in E-type interrogatives does not need to move covertly to FocP is evidenced by the fact that such *wh*-in-situ is fine in strong islands (cf. e.g. (47a)), and it can be c-commanded by a quantificational intervener of the appropriate type (i.e. a lack of the ‘Beck effect’, cf. Beck 1996), as also pointed out in Lipták (2001: 121).

- (47) a. Melyik fiú lett ideges miután felhívta melyik lányt?
 which boy became angry after up-called which girl-acc
 ‘Which boy got angry after he phoned which girl?’
 b. Melyik fiú nem hívta fel melyik lányt?
 which boy not called up which girl-acc
 ‘Which girl didn’t call which boy?’

That both *wh*-expressions be associated with a choice function is a pattern that is ruled out in view of (42) (ii): at least one [wh] feature visible externally to a *wh*-phrase must be present in a constituent question.

Thus far, we have considered cases where the postverbal *wh*-item is not assigned [foc] in NUM/LA. Let us now see what happens if it is. Recall from the previous section that there are two conceivable possibilities: raising the [foc]-bearing constituent covertly to the same FocP that hosts the overtly fronted focus, or

raising it covertly to a lower FocP projection, depending on whether a second FocP is merged within the clause. The null hypothesis is that the same applies to postverbal *wh*. Then, we have either (48a) or (48b):



Having provided the syntactic picture, let us now turn to the matter of available readings for multiple *wh* in Hungarian. As we shall see, the distribution of distinct readings will provide strong empirical support for our analysis.

4.3 Deriving the distribution of answerhood conditions

We saw in Section 4.1 that S-type questions have to be answered with a pair-list, potentially containing sets of individuals as second members of the pairs, and E-type questions can be either answered either with a single pair, or a pair-list of the ‘matching’ kind. Let us see now how these facts are derived in the present model.

Barss (2000) builds on Higginbotham and May’s (1981) seminal article in maintaining that pair-list interpretations require Absorption to occur, i.e. Absorption is a necessary and sufficient condition for a pair-list reading to obtain—a view which we will also adopt here. Absorption is a rule in the syntax–semantics mapping that maps two (or more) structurally adjacent unary quantifiers into binary (*n*-ary) quantifiers with a complex conjoined restriction. Informally, two *wh*-operators are structurally adjacent if one immediately c-commands the other in the sense that no c-commanding element intervenes.³¹ For us this means that the *wh*-operators must be raised to the same FocP in order to undergo Absorption. In S-type questions, this is exactly what happens; hence the fact that they receive a pair-list interpretation is expected.

As we have seen, E-type multiple *wh*-constructions come in two main types: that of (46), where the postverbal *wh*-element does not bear [foc], and that of (48), where it does. In (46), and in (48b), where the postverbal *wh*-expression raises to a second, lower FocP, the structural conditions of Absorption are not met—hence

³¹ Absorption results in an ordered pair of quantifiers (Higginbotham & May 1981: 64–67), reflecting the syntactic c-command relations. Assuming that a fronted *wh*-expression that precedes another one also asymmetrically c-commands it, and that a fronted *wh*-expression c-commands a *wh*-element that is covertly raised to the same projection (cf. Richards’ (1997) ‘tucking in’ analysis), asymmetric scope effects (cf. (23)(ii)) are derived.

Absorption does not apply; only a single pair answer is allowed, which is the right prediction. That (48b) type structures require single pair answers is confirmed by the construction in (49) below. Here the second *wh*-expression is located within an embedded clause, which has its own FocP projection to which this second *wh*-element has been raised. Such questions can only be responded to with a single pair.

- (49) Kit akarsz, hogy mit vegyen?
 whom want-2sg that what-acc buy-subj-3sg
 ‘Who do you want to buy what?’

On the other hand, in (48a), where the postverbal *wh* raises covertly to the same FocP that hosts the preverbal *wh*-operator, Absorption will be activated, bringing about a pair-list reading. Importantly, there is a difference between (48a) and S-type questions: in the former, a choice function applies to the secondary *wh*. Choice functions, as functions, assign exactly one member of the range to each member of the domain. This means that any answer to (48a) is correctly predicted to strictly have single individuals as second members of the pairs listed, i.e. a ‘matching’ interpretation. No such restriction plays a role in S-type interrogatives. Hence, we have derived that E-type questions can be answered either with a single pair, or with a ‘matching’ pair-list.

The basic distribution of readings is thus accounted for. However, we can add further details to the picture. In E-type questions, secondary *wh* can occur in strong islands, as we saw in (47a) in Section 4.2. above. Significantly, it is interesting to observe that under these conditions the pair-list reading becomes unavailable: such questions require a single pair answer. This in fact is expected, if pair-list interpretations demand Absorption to apply, and Absorption requires secondary *wh* to raise to the same FocP that has the preverbal *wh* in its specifier. Such movement is disallowed by the island, hence Absorption is inapplicable. The same applies to constructions containing quantificational interveners, as in (47b) above. Such multiple *wh*-questions also limit answerhood conditions to single pairs. The reason is in all probability identical: the quantificational intervener blocks covert movement of the secondary *wh*-element (cf. Beck 1996, Cheng and Rooryck 2000), which in turn results in the loss of a pair-list reading.

Another relevant observation is concerns secondary *wh* within an embedded clause, with primary *wh* in the matrix clause. In such contexts, if the secondary *wh*-phrase remains postverbal in the subordinate clause, then, once again, only the single pair interpretation survives, cf. (50). Similar observations have been made for English; Kuno and Robinson (1972) observe the minimal pair in (51).³²

- (50) Ki gondolta, hogy János felhívott kit?
 who thought that J. up-called whom
 ‘Who thought that John phoned whom?’

³² Subjects of ECM clauses count as clausemates to matrix subjects in light of various phenomena, including anaphora, Case, quantifier scope and others.

- (51) a. I don't know who expects who to marry Mary
 b. *I don't know who expects that who will marry Mary

Interestingly, multiple foci are also impossible in the same pattern:

- (52) *JÁNOS gondolta, hogy felhívtam CSAK MARIT
 J. thought that up-called-1sg only M.-acc
 'It's John who thought that I phoned only Mary'

Since on the present account the 'matching' pair-list reading is associated with covert movement of the secondary *wh*-element to matrix FocP, whatever factor rules out (52) will be responsible for the loss of a 'matching' pair-list reading in (50). The independent descriptive condition for focus seems to be that if there is a [foc]-bearing element in a clause, FocP must be projected in that clause—and this is what obeyed in (52) and (50).

Even more interestingly, the same pattern again tolerates a 'matching' pair-list reading in (53a) (the example and the judgement on the reading from Horváth (1998)):

- (53) a. Melyik fiú kérdezte, hogy hol találkozhat melyik lánnyal?
 which boy asked that where meet-pot-3sg which girl-with
 'Which boy asked where he could meet which girl?'
 [Horváth (1998: 47, (13))]
 b. JÁNOS kérdezte, hogy hol találkozhat MARIVAL,
 J. asked that where meet-pot-3sg M.-with
 PÉTER kérdezte, hogy hol találkozhat KATIVAL, . . .
 P. asked that where meet-pot-3sg K.-with
 'It's John who asked where he could meet MARY,
 it's Peter who asked where he could meet CATHY, etc.'
 [Horváth (1998: 47, (14))]

In (53a) the descriptively stated condition of the preceding paragraph is met, therefore the postverbal *wh*-expression of the embedded clause is free to move covertly to matrix FocP. As a result, a 'matching' pair-list answer is appropriate.

We have seen in this subsection that the syntactic account argued for above is matched with an elegant explanation of the interesting variation in the availability of the types of readings for multiple questions. Inasmuch as this explanation is successful, it provides further confirmation for the syntactic account we have presented.

5 Conclusion

Let me recapitulate the main results of the chapter. In the first part, I summarized and argued extensively against two views of multiple *wh*-fronting. I demonstrated that Boskovic's account in terms of focussing cannot hold for Hungarian; then I

showed that the wide-spread view of Hungarian Slavic-type fronting in terms of treating non-final fronted *wh*-items essentially as universal quantifiers is untenable. I argued that the simple assumptions that (i) Hungarian *wh*-pronouns carry a strong [wh] feature, and (ii) they carry an optionally assigned [foc] feature (weak in Hungarian, cf. Chapter 2), when coupled with the proposal that [wh] of *wh*-pronouns can be satisfied either via movement to the local domain of a [wh]-bearing head, or by combination with a choice function variable provide a uniform account of the rather complex picture of syntactic options available for *wh*-operators in a multiple question (which incorporates the Slavic and the English pattern, as well as a third pattern where the secondary *wh*-element is in an A-bar position lower than the primary *wh*-operator).

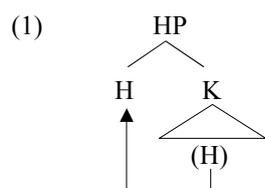
The account relies on no prefabricated functional projections for *wh*-operators, and incorporates results of Chapter 5.

A significant repercussion of the present proposal is that both covert movement and choice functions may co-exist within the grammar of one and the same language. This chapter in effect demonstrates that the apparent optionality of overt versus covert movement of secondary *wh*-elements reduces not to non-checking, but to different strategies of checking a [wh] feature. The principal appeal of the present proposal lies in the fact that it uncovers at times intricate connections relating the syntax and the interpretation of multiple interrogatives in terms of answerhood conditions.

Chapter 7

Conclusions

In this thesis I have argued for an approach to multiple operator constructions in Hungarian within a radically derivational model which heavily restricts the role of pre-fabricated functional A-bar projections and which holds that it is the verb in this language that carries and projects the relevant operator features in the course of structure building. In so doing, I adopted a ‘substitution’ view of head movement (cf. 1), which is able to circumvent the complications related to head movement *qua* adjunction as conceived in standard checking theory of head movement. NegP / FocP / WhP are seen as the product of cyclic verb raising and projection of unsaturated features to be checked, both when projected singly and when projected together. This view accounts straightforwardly for interdependent head and operator movement to the same projection.



I entertained an approach to movement operations such that there is no economy preference of either overt or covertness of movement. This is made possible by developments within the minimalist programme leading to a picture where the overt or covert status of movements is exhaustively determined by formal features involved in checking. This view predicts the availability of optionally overt or covert movement precisely in those marked cases where the overt/covert status of the operation fails to be dictated by formal checking properties. I showed that Hungarian realizes this option in two unrelated construction types: Quantifier Raising and wide scope focusing in focused embedded interrogatives.

In particular, I argued in Chapter 2 that in the domain of multiple foci constructions we need to differentiate two distinct syntactic patterns associated with two distinct interpretations. One interpretation, referred to as complex focus, following Krifka (1991), is yielded by patterns where the primary focus operator raises overtly to a preverbal position, and further (secondary) foci raise to the same position in covert syntax, creating a complex focus operator (cf. 2). The other interpretation is one where one focus is situated in the background of another focus. These true instances of multiple foci were analysed as involving recursion of focus projections. As for the overt/covert status of focus movements here, the primary focus raises overtly, while secondary foci raise only in covert syntax (cf. 3). This movement pattern was accounted for in terms of cyclic verb raising projecting positions for focus movement: the verb carries only one uninterpretable [foc] feature, which must not be checked (by overt movement of a focus operator) unless there are no further focus operators in the clause to be checked.

- (2) a. JÁNOS hívta meg egy sörré PÉTERT,
 J.-nom invited-3sg Pref a beer-to P.-acc
 és nem PÉTER (hívta meg egy sörré) SANYIT
 and not P.-nom invited-3sg Pref a beer-to S.-acc
 ‘JOHN treated PETER to a beer,
 and it’s not the case that PETER treated ALEX to a beer’
 b. [_{FP} JÁNOS V [. . . PÉTERT . . .]]
- (3) a. JÁNOS evett meg CSAK KÉT SÜTEMÉNYT
 J.-nom ate-3sg Pref only two cookies-acc
 ‘It was John who ate only two cookies’
 b. [_{FP} JÁNOS V [_{FP} t_v [. . . CSAK KÉT SÜTEMÉNYT . . .]]]
-

I also showed that Szabolcsi’s (1997) PredOp class of operators (e.g. *öttnél kevesebb fiú* ‘less than five boys’) form a proper subclass of focus, which led to the elimination of unwanted complications related to PredOpP. I argued that this class of operators are focused by default in Hungarian.

In Chapter 3, I examined movement of quantifiers with special emphasis on sentences involving movement of more than one quantifier, concentrating on their scopal interaction. Presenting a critique of Beghelli and Stowell’s (1994/1995) feature checking (i.e. functional projection) based treatment of quantifier scope, I defended an approach to the differential scopal behaviour of quantifier classes according to which (a) Quantifier Raising (QR) applies to a proper subclass of true quantifiers (increasing essentially quantificational quantifiers, in Szabolcsi’s (1997) sense), (b) while other quantifiers undergo A-movement and A-reconstruction for scope (the latter restricted by quantificational interveners), but do not QR, and (c) a third class of NPs (bare numeral indefinites) take scope via existential closure (involving unselective binding of a choice function variable, following Reinhart 1995). (4) illustrates the three classes of NPs.

- (4) a. every boy, more than five boys, at least five boys
 b. exactly five boys, less than five boys; a boy, five boys
 c. a boy, five boys

I demonstrated that contra Szabolcsi (1997), Hungarian does not furnish overt evidence for Beghelli and Stowell's treatment; in fact, it creates significant complications for that approach. I showed that fronting of quantifiers like distributive universals (cf. 5a) cannot be reduced either to topicalisation or to focusing, and that QR in Hungarian appears to be optionally overt or covert in the face of the facts (cf. 5b).

- (5) a. Minden könyvet KÉT fiú olvasott el
 every book-acc two boy-nom read-3sg Pref
 'TWO boys read every book'
 every > two
 b. KÉT fiú olvasott el minden könyvet
 two boy-nom read-3sg Pref every book-acc
 'TWO boys read every book'
 every > two / two > every

In the domain of negative quantifiers I argued in favour of the following claims in Chapter 4. First, the unary negative operator, i.e. the negation particle (*nem*) is to be analysed as a specifier element, rather than a head (that is, Hungarian negation is 'heavy' and not 'light'); furthermore, when co-occurring with preverbal focus, it occupies either an outer or an inner specifier position in a multiple specifier projection co-projected by [foc] and [neg], cf. (6) below.

- (6) a. [_{ZP} focus [_{ZP} *nem* [_Z V] ...]
 b. [_{ZP} *nem* [_{ZP} focus [_Z V] ...]

Second, negative quantifiers are to be properly factored into two morphosyntactic classes: those with a *sem* particle and those without one. It is this *sem* particle that carries a [neg] feature, and as it was argued in Chapter 5, this [neg] feature is to be seen as underspecified and hence either to be deleted or to be valued in a checking configuration, adopting Chomsky's (2000, 2001) mechanism. (This can be seen as a reformulation of Ladusaw's (1992) seminal idea that [neg] is interpreted as logical negation only in a certain syntactic context.) Third, I argued that negative quantifiers of Hungarian are focusable, but not invariably focused even when preverbal. It was suggested that the fact that negative quantifiers can occupy both a preverbal and a postverbal position is due to one of three movements applying. Either the negative quantifier moves to check [neg], or it is focused (or both), or it is raised *qua* universal quantifier.

I presented an extensive discussion of the quantificationality of negative quantifiers in Hungarian, and suggested that this is a typologically hybrid class: they can be interpreted either as existentially or as universally quantified (this is in line with a prediction of Giannakidou's (2000) work on Negative Concord). I argued

that this is due to the option of whether or not there is a universal quantifier (potentially identifiable with the *se-* morpheme of the paradigm) in their interpretation. In the former case, they behave as universally quantified NPs, moving up optionally (cf. 7). In the latter case, they are Heimian bare indefinites, i.e. predicate expressions. Then, they are either existentially closed in the scope of negation, or they are moved to focus (cf. 8). In this latter position, they are interpreted as extreme (most general, therefore most likely) elements on a scale for which the negated property does not hold, hence by virtue of scalar implicature the property fails to hold for all less general/less likely elements as well. This is a treatment akin to recent views expressed in Krifka (1995) and Lahiri (1995, 1998).

- (7) a. (Senki) nem jött el (senki)
 nobody-nom not came-3sg Pref nobody-nom
 ‘Nobody came along’
 everybody > not
- b. (Senki) sehova sem jött el (senki)
 nobody-nom nowere-to SEM came-3sg Pref (nobody-nom)
 ‘Nobody came along to any place’
 everybody > every place > not
- (8) a. Nem találtam semmit
 not found-1sg nothing-acc
 ‘I didn’t find anything’
 not > something
- b. SEMMIT nem találtam
 nothing-acc not found-1sg
 ‘I didn’t find anything’

In Chapter 6 I examined the empirical domain of multiple *wh*-movement. I argued first that Boskovic’s (1997b, 1998, 2000a,b) analysis of superiority violating multiple *wh*-fronting for Serbo-Croatian in terms of focus-movement does not extend to Hungarian. Lipták’s (2001) arguments to syntactically dissociate the locus of [wh]-checking from that of [foc]-checking were shown to be inconclusive. I demonstrated that the wide-spread view of Hungarian Slavic-type fronting in terms of treating non-last fronted *wh*-items as universal quantifiers (cf. É.Kiss 1994, 2002) is untenable.

I argued for the simple assumptions that Hungarian *wh*-pronouns carry a strong [wh] feature, and that they may or may not be focused in principle. A central tenet of my account is that [wh] of *wh*-pronouns can be satisfied either via movement to the local domain of a [wh]-bearing head, or by combination with a choice function variable. This has provided a uniform account of the rather complex picture of syntactic options available for *wh*-operators in a multiple question: the Slavic and the English pattern, as well as a third pattern where the secondary *wh*-element is in a lower A-bar position than the primary one.

- (9) a. [WH₁ [WH₂ V [...]]] Slavic pattern
 b. [WH₁ V [... WH₂ ...]] English pattern
 c. [WH₁ V [[↑] t_v [... WH₂ ...]]]
-

Optionalities in this domain were accounted for in terms of the two different mechanisms of checking a strong feature, as well as by the co-existence of choice function application and covert movement in the grammar. Finally, answerhood conditions of the different syntactic patterns were shown to fall out directly, in strong confirmation of the proposed analysis.

In general terms, in the present study the descriptive burden is shifted from stipulated lexical properties of formal features and functional heads, as well as from a proliferation of process/operation types as much as possible to the interaction of general principles governing structure building and movement in the computational system, within a restrictive minimalist framework.

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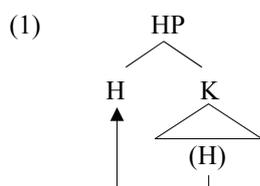
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Samenvatting

In dit proefschrift verdedig ik een benadering van meervoudige operatorconstructies in het Hongaars binnen een radicaal derivationeel model, waarin de rol van apart beschikbare functionele A-bar-projecties zeer beperkt is. In dit model is het werkwoord in het Hongaars het element dat de relevante operatorkenmerken draagt en projecteert tijdens het bouwen van de structuur. Daarbij ga ik uit van een ‘substitutie’-benadering van hoofdverplaatsing (zie 1). Deze benadering is in staat om de complicaties te vermijden die ontstaan als hoofdverplaatsing gezien wordt als adjunctie, zoals in de standaard checking-theorie van hoofdverplaatsing. Ik zie NegP / FocP / WhP als het resultaat van cyclische werkwoordsverplaatsing en van projectie van ongesatureerde features die gecheckt moeten worden, zowel als ze alleen geprojecteerd worden als wanneer ze samen geprojecteerd worden. Deze visie verklaart zonder verdere aannames het gedrag van onderling afhankelijke hoofd- en operatorverplaatsing naar dezelfde positie.



Ik onderzoek een benadering van verplaatsingsoperaties waarbij er geen op economie gebaseerde voorkeur is voor overte danwel coverte verplaatsing. Deze benadering wordt mogelijk gemaakt door ontwikkelingen in het minimalistisch programma waarin alleen formele features die een rol spelen bij checking, bepalen of een verplaatsing overte danwel coverte is. Deze visie voorspelt de beschikbaarheid van optioneel overte danwel coverte verplaatsing precies in die gemarkeerde gevallen waarin de overte/coverte status van de operatie niet gedictieerd wordt door formele checking-eigenschappen. Ik laat zien dat het Hongaars deze mogelijkheid realiseert in twee ongerelateerde constructies: ‘Quantifier Raising’ en ‘wide scope focusing’ in gefocuste ingebedde vraagzinnen.

Meer in het bijzonder betoog ik in hoofdstuk 2 dat we bij constructies met meervoudige foci een onderscheid moeten maken tussen twee verschillende syntactische patronen die verbonden zijn met twee verschillende interpretaties. De

ene interpretatie is complexe focus (zie Krifka 1991). Deze interpretatie is verbonden met patronen waarbij de primaire focusoperator overt verplaatst naar een preverbale positie, en waarbij andere (secundaire) foci covert naar dezelfde positie verplaatsen, waardoor een complexe focusoperator ontstaat (zie 2). De andere interpretatie is er een waarbij een focus gesitueerd is in de achtergrond van een andere focus. Deze echte voorkomens van meervoudige foci worden geanalyseerd met behulp van recursie van focusprojecties. In deze gevallen verplaatst de primaire focus overt, en de secundaire foci verplaatsen covert (zie 3). Deze verplaatsingspatronen ontstaan door cyclische werkwoordsverplaatsingen die posities projecteren voor focusverplaatsing. Het werkwoord draagt maar één oninterpreteerbaar [foc]-feature, dat alleen gecheckt mag worden door overte verplaatsing van een focusoperator als er geen focusoperators meer in de clause zijn die gecheckt moeten worden.

- (2) a. JÁNOS hívta meg egy sörré PÉTERT,
 J.-nom nodigde-uit-3sg Pref een bier-aan P.-acc
 és nem PÉTER (hívta meg egy sörré) SANYIT
 en niet P.-nom uitnodigde-3sg Pref een bier-aan S.-acc
 ‘JOHN tracteerde PETER op een biertje,
 en het is niet zo dat PETER ALEX op een biertje tracteerde’
 b. [_{FP} JÁNOS_↑ V [... PÉTERT ...]]
- (3) a. JÁNOS evett meg CSAK KÉT SÜTEMÉNYT
 J.-nom at-3sg Pref maar twee koekjes-acc
 ‘Het was Jan die maar twee koekjes at’
 b. [_{FP} JÁNOS V [_{FP} t_v [... CSAK KÉT SÜTEMÉNYT ...]]]

Ik laat ook zien dat de PredOp klasse van operatoren (bijv. *öttnél kevesebb fiú* ‘minder dan vijf jongens’) uit Szabolcsi (1997) een subklasse van focus vormen. Hierdoor kunnen ongewenste complicaties met betrekking tot PredOpP geëlimineerd worden. Ik betoog dat deze klasse van operatoren default focus draagt in het Hongaars.

In hoofdstuk 3 onderzoek ik kwantorverplaatsing, in het bijzonder in zinnen waarin meer dan één kwantor verplaatst wordt. Hierbij kijk ik vooral naar hun scopale interactie. Ik bekritiseer de benadering van kwantorbereik van Beghelli and Stowell (1994/1995), die gebruik maakt van feature checking en functionele projecties. Ik verdedig een andere benadering van het verschillend gedrag met betrekking tot bereik van onderscheiden klassen van kwantoren. Deze benadering ziet er als volgt uit: (a) Quantifier Raising (QR) is van toepassing op een subklasse van echte kwantoren (‘increasing essentially quantificational quantifiers’, in de zin van Szabolcsi (1997)); (b) andere kwantoren ondergaan A-verplaatsing en A-reconstructie voor hun bereik (hetgeen beperkt wordt door tussenliggende kwantificationale elementen), maar deze kwantoren ondergaan geen QR; en (c) een derde klasse NPs (kale numerieke indefiniten) nemen bereik via existential closure

(waarbij een keuzefunctievariabele aselectief gebonden wordt, zoals in Reinhart 1995). (4) illustreert de drie klassen NPs.

- (4) a. iedere jongen, meer dan vijf jongens, minstens vijf jongens
 b. precies vijf jongens, minder dan vijf jongens, een jongen, vijf jongens
 c. een jongen, vijf jongens

Ik laat zien dat het Hongaars (in tegenstelling tot de beweringen in Szabolcsi 1997) geen overte evidentie geeft voor de benadering van Beghelli and Stowell; het Hongaars levert zelfs ernstige problemen op voor die benadering. Ik toon aan dat de vooropplaatsing van kwantoren zoals distributieve universele kwantoren (zie 5a) niet teruggevoerd kan worden op topicalisatie of focusverplaatsing, en dat QR in het Hongaars optioneel overt of covert blijkt te zijn (zie 5b).

- (5) a. Minden könyvet KÉT fiú olvasott el
 ieder book-acc twee jongen-nom las-3sg Pref
 ‘TWEË jongens lazen ieder boek’
 ieder > twee
- b. KÉT fiú olvasott el minden könyvet
 twee jongen-nom las-3sg Pref ieder boek-acc
 ‘TWEË jongens lazen ieder boek’
 ieder > twee / twee > ieder

Wat betreft ontkennende kwantoren beweer ik in hoofdstuk 4 het volgende. Ten eerste, de eenplaatsige ontkennende operator, nl. het negatiepartikel (*nem*) moet geanalyseerd worden als een specificier, niet als een hoofd (dat wil zeggen, de negatie in het Hongaars is ‘zwaar’, niet ‘licht’); bovendien, als negatie samengaat met preverbaal focus, zit de negatie in een buitenste of een binnenste specificierpositie in een meervoudige specificierprojectie die geprojecteerd wordt door [foc] en [neg] samen, als in (6).

- (6) a. [_{ZP} focus [_{ZP} *nem* [_Z V] ...]
 b. [_{ZP} *nem* [_{ZP} focus [_Z V] ...]

Ten tweede beweer ik dat ontkennende kwantoren ingedeeld moeten worden in twee morfosyntactische klassen: die met een *sem*-partikel en die zonder. Het is dit *sem*-partikel dat een [neg]-feature draagt, en in hoofdstuk 5 betoog ik dat dit [neg]-feature ondergespecificeerd is en daarom gedeleerd moet worden of gevalueerd in een checkingconfiguratie, volgens het mechanisme in Chomsky’s (2000, 2001). (Dit kan gezien worden als een herformulering van Ladusaw’s (1992) idee dat [neg] alleen in een bepaalde syntactische context geïnterpreteerd wordt als een logische negatie.) Ten derde beweer ik dat ontkennende kwantoren in het Hongaars gefocust kunnen worden, maar niet altijd gefocust hoeven te worden, zelfs niet als ze preverbaal zijn. Het feit dat ontkennende kwantoren zowel een preverbaal als een postverbaal positie kunnen bezetten, is in mijn visie toe te schrijven aan een van de volgende drie verplaatsingen: de ontkennende kwantor verplaatst om [neg] te

checken, ofwel de kwantor wordt gefocust (of allebei), of de ontkennde kwantor wordt verplaatst als universele kwantor.

Ik bespreek uitgebreid de kwantificeerbaarheid van ontkennde kwantoren in het Hongaars, en beweer dat dit een typologisch hybride klasse is: ze kunnen geïnterpreteerd worden als ofwel existentieel ofwel universeel gekwantificeerd (dit is in overeenstemming met een voorspelling van het werk van Giannakidou (2000) over Negative Concord). Ik betoog dat dit komt door het al dan niet beschikbaar zijn van een universele kwantor (wellicht identificeerbaar met het *se*-morfeem van het paradigma) in hun interpretatie. In het eerste geval gedragen ze zich als universeel gekwantificeerde NPs, die optioneel naar boven verplaatsen (zie 7). In het tweede geval zijn ze Heimiaanse kale indefiniten, oftewel predicatieve elementen. In dat geval worden ze ofwel existentieel gesloten in het bereik van negatie, of ze worden verplaatst naar de focuspositie (zie 8). In deze laatste positie worden ze geïnterpreteerd als uiterste (de meest algemene, dus de meest waarschijnlijke) elementen op een schaal waarvoor de ontkennde eigenschap niet van kracht is, en derhalve geldt de eigenschap ook niet voor alle minder algemene/minder waarschijnlijke elementen, via scalaire implicaturen. Deze behandeling is vergelijkbaar met recente ideeën die terug te vinden zijn in het werk van Krifka (1995) en Lahiri (1995, 1998).

- (7) a. (Senki) nem jött el (senki)
 niemand-nom niet kwam-3sg Pref niemand-nom
 ‘Niemand kwam mee’
 iedereen > niet
- b. (Senki) sehova sem jött el (senki)
 niemand-nom nergens-naar SEM kwam-3sg Pref (niemand-nom)
 ‘Niemand kwam nergens mee naartoe’
 iedereen > overal > niet
- (8) a. Nem találtam semmit
 niet vond-1sg niets-acc
 ‘Ik heb niets gevonden’
 niet > iets
- b. SEMMIT nem találtam
 niets-acc niet vond-1sg
 ‘Ik heb niets gevonden’

Hoofdstuk 6 heeft meervoudige *wh*-verplaatsing als empirisch domein. Boskovic (1997b, 1998, 2000a,b) analyseert meervoudige *wh*-verplaatsing met superioriteitsschendingen in het Servo-Croatisch in termen van focusverplaatsing; ik laat zien dat deze analyse niet toegepast kan worden op het Hongaars. Ik laat ook zien dat de argumenten van Lipták (2001) om de positie van [wh]-checking syntactisch te onderscheiden van [foc]-checking niet afdoende zijn. Verder bespreek ik een wijdverbreide visie op de vooropplaatsing (die algemeen voorkomt in Slavische talen), waarbij de niet-laatste vooropgeplaatste *wh*-elementen als

