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**The acquisition of focus by adult English learners of
Hungarian:
Evidence of optionality in mature and developing
grammars**

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Dedication

To my mother

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Title

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Abbreviations

| | |
|-------|--|
| Agr | Agreement |
| AgrO | Object agreement |
| AgrS | Subject agreement |
| BV | Basic Variety Hypothesis |
| C | Complementizer head |
| Comp | Complementizer |
| COND | Conditional |
| CP | Complementizer Phrase |
| DEF | Definite conjugation |
| ERP | Event-related brain potential |
| FC | Functional category |
| FCs | Functional categories |
| F | Focus head |
| FFF | Failed Functional Features Hypothesis |
| FP | Focus phrase |
| FT/FA | Full Transfer and Full Access Hypothesis |
| I | Inflection head |
| IHS | Initial Hypothesis of Syntax |
| IL | Interlanguage |
| ILG | Interlanguage grammar |
| INDEF | Indefinite conjugation |
| INF | Infinitive |
| Infl | Inflection |
| IP | Inflection phrase |
| LI | Local Impairment Hypothesis |
| L1 | First language |
| L1A | First language acquisition |
| L2 | Second language |
| L2A | Second language acquisition |
| LF | Logical Form |
| ME | Magnitude estimation |
| MP | Minimalist Program |
| MT | Minimal Trees Hypothesis |
| N | Noun |

| | |
|------|----------------------------------|
| Neg | Negative head |
| NegP | Negative phrase |
| NEGP | Sentential negative phrase |
| NP | Noun phrase |
| OI | Optional infinitive phrase |
| OT | Optimality Theory |
| Past | Past tense |
| PF | Phonological Form |
| PLD | Positive language data |
| PP | Principles and Parameters Theory |
| Pref | Prefix |
| Prev | Preverb |
| Q | Question particle |
| SAI | Subject-auxiliary inversion |
| SLA | Second language acquisition |
| SOV | Subject Object Verb |
| Spec | Specifier |
| SUBJ | Subjunctive |
| SVO | Subject Verb Object |
| T | Topic head |
| TL | Target language |
| TLG | Target language grammar |
| Tns | Tense |
| TnsP | Tense phrase |
| TP | Topic phrase |
| UG | Universal Grammar |
| V | Verb |
| V2 | Verb second |
| VF | Valueless Features Hypothesis |
| VM | Verb modifier |
| VO | Verb Object |
| VOS | Verb Object Subject |
| VP | Verb phrase |
| VSO | Verb Subject Object |
| Wh | wh-question phrase |

Abstract

The process of second language acquisition is usually assumed to be affected by differences between the source language (L1) and the target language (L2). Within the Minimalist approach (Chomsky 1995) crosslinguistic variation is accounted for in terms of differences in the values of features of functional categories instantiated in specific languages. Mature English differs from Hungarian in that its Tense category does not carry the [+f] feature characteristic of Hungarian focused sentences. Also, English lacks an additional functional projection dominating IP, namely F(ocus)P(hrase), which hosts focused, *wh*-, and negative operators in Spec,FP and attracts the verb or adjectival predicate into its head in order to satisfy spec-head agreement. It follows that English learners of Hungarian will have to instantiate a new functional category FP and reset the values of the Tense category in their IL grammar.

In this thesis we account for the difficulties faced by adult English learners of Hungarian by adopting the hypothesis that the two main classes of features have distinct learnability properties. It has been suggested that interpretable features (among them *phi*-features of nouns as well as [+*wh*] and [+f] features) are acquired easier than non-interpretable features (such as features responsible for V2 word order, resumptive pronouns, verbal inflection and nominal case morphology, as well as verb-movement associated with the Focus Projection in Hungarian). We demonstrate that this effect is also found in our English-Hungarian interlanguage data. We show that even though L2 learners manage to prepose *wh*, focus and negative operators, they have continued difficulties with the accompanying verb-movement properties of Hungarian. This is reminiscent of the difficulties we find in child L1 language acquisition of Hungarian.

However, we argue that learnability factors have to be complemented by considerations about the nature of the target language input L2 learners receive. We propose that the nature of the TL input accounts for the differences between child and adult learners of Hungarian. It is well known that robust data (i.e. simple, salient and frequently occurring sentences) are required for the acquisition of correct feature-specifications of a target language. Infrequent data may cause a delay in the process of establishing L2 feature specifications and result in *incomplete* representations. Ambiguous data, on the other hand, are likely to ultimately result in *divergent* L2 representations at near native level.

Testing these predictions in a study of acceptability judgements of adult English-speaking learners of Hungarian, we show that adult English speaking learners of Hungarian have difficulties in acquiring double *wh*- and double focus constructions as well as focused infinitives, long and partial operator movement in Hungarian. It is demonstrated that in the case of double *wh*- and double focus constructions native speakers' intuitions are indeterminate/optional, therefore the data L2 learners receive are not robust, leading to optionality in learners' interlanguage grammars. Although enjoying categorical judgements in native grammars, the nature of the input is similarly non-robust in the case of focused infinitives as well as long and partially extracted operator sentences. This is argued to lead to the difficulties L2 learners exhibit with respect to these structures. In the face of non-robust target language data learners are found to fall back on L1 values and/or to resort to general learning strategies, such as overgeneralization and analogy.

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1 Introduction

This thesis sets out to investigate two issues: a) the status of optional representations for the same grammatical construction in mature and developing grammars and b) the nature of competence at ultimate attainment in adult second language (L2) learning. We have used the Minimalist Program (MP) (Chomsky 1995) as our theoretical background. The motivations for our choice of linguistic theory are set out in Chapter 2.

The first issue, optional representations within grammatical systems, is a highly elusive and controversial topic in current theoretical thinking. While optionality has been widely observed in the production and linguistic intuitions of native speakers, it has proved difficult or even impossible to account for in current linguistic theories. The very first question concerns whether optionality is only a performance phenomenon or whether it characterises underlying competence. We shall distinguish between variability characterising performance and optional representations, which we argue, are internal to the syntax and characterise competence.

Our starting point is that current models of native speaker competence are not compatible with the notion of optional rules or representations. In the Minimalist Program syntax-internal optionality is not allowed. The reason for the discrepancy between the observed data and minimalist account of native speaker competence is that the MP has been constructed on the assumption that language is 'a perfect system'. That is, the computational system underlying linguistic processing is assumed to be characterised by utmost simplicity and economy (Chomsky 1995:9, 317). Thus any output of the computational system is assumed to be always a unique optimal output. Chomsky (1995:171) states that:

The linguistic expressions are the optimal realizations of the interface conditions, where "optimality" is determined by the economy conditions of UG.

The cognitive system interacts with two external performance levels: the articulatory-perceptual system and the conceptual-intentional system. The interface levels are the Phonetic Form (PF) at the articulatory-perceptual interface and Logical Form (LF) at the conceptual-intentional interface. The conditions that hold at these interface levels need to be satisfied for a unique optimal output to surface.

Central to the minimalist claim is that output of syntactic processing is constructed by movement of syntactic elements. However, movement is only allowed if it is necessary to satisfy morphological requirements. Therefore, movement that is possible but not necessary (i.e. truly optional movement) is not allowed. The MP allows for variation at the PF level only. Chomsky (1995:27) argues the following:

At the PF level, properties of the language can be readily observed and variation is possible within a fixed repertoire of phonetic properties and the invariant principles of universal phonetics. S-Structures are not constrained by interface conditions and can vary within the range permitted by the variation of the interface levels [...]

Thus, optionality has been pushed to the domain of PF in the Minimalist Program. Alternatively, seemingly optional constructions have been argued to be only quasi-optional in the sense that the two alternatives are claimed to carry different interpretations due to semantic or discourse differences.

Similarly to the Minimalist Program, in standard Optimality Theory (OT) (Prince and Smolensky 1993) optional representations were not allowed, even though OT concerns itself with actual outputs and not underlying representations. Recently, however, there have been attempts to incorporate the phenomenon into the theory (Hayes 1997, Boersma 1997). These attempts have acknowledged the existence of optional outputs in mature grammars and even pointed out that optionality is a gradient phenomenon that can be measured in speakers' intuitions. These accounts attribute gradient optional representations to be the result of incomplete acquisition. This is corroborated by investigations in historical linguistics where it is also claimed that optional representations come into being as a result of L1 acquisition (see research done by Kroch 1989, 1998, Santorini 1992, 1995, and Pintzuk 1993, 1995, 1996, 1998). It has been argued that linguistic change is contingent upon the existence of optional representations for the same grammatical construction within the same speech community (Lightfoot 1991, 1995).

In Chapter 2 we shall argue that optional representations exist syntax-internally, i.e. they characterise the competence of individual speakers of a language. However, we agree with Chomsky, that they are not 'optimal realisations of interface conditions'. Having a sub-optimal status means that although speakers use both of the alternatives, both or only one of the options will receive less than total acceptability in intuitional data showing a marginal status in the speakers' grammar. This is why free optionality (where both alternatives are fully accepted) is such a rare phenomenon in natural languages. We show that this is

witnessed in both mature and developing grammars. Developing grammars are characterised by more optional representations, precisely because they have not managed to approximate the 'optimal realisation of interface conditions'. Our empirical evidence comes from intuitional data from native speakers of Hungarian as well as adult English-speaking learners of Hungarian. We used the unique designated focus position of Hungarian as a basis of investigation as English and Hungarian differ to a considerable degree in this respect.

The second related issue that our thesis set out to examine is the nature of ultimate attainment in second language learning. Chapter 3 is devoted to the introduction of relevant issues in second language acquisition research. It is well established that learner representations at ultimate attainment can be either target-like, incomplete or divergent (Sorace 1993). We were interested to see what kind of representations learners create in the face of categorical, optional and quasi-optional target language input.

Having our research goal thus defined, we had to find appropriate constructions in focus-related phenomena in Hungarian. In Chapter 4 we outline the characteristic features of Hungarian and contrast it with the structure of English. We use the Functional Parameterisation Hypothesis (Borer 1984, Chomsky 1991) according to which languages vary with respect to the functional categories and their feature specifications. English differs from Hungarian in that its Tense does not carry a [+f] feature in focused sentences and it does not instantiate a separate functional projection (Focus Phrase) to host operators and the verb.

After the contrastive analysis of the two languages under investigation, we tested both native speakers and English learners of Hungarian on their judgements of acceptability of the identified focus-related phenomena. The elicitation techniques we used were magnitude estimation and rating. The two pilot studies and the main study are described in Chapter 5 and the results of our investigations are outlined in Chapter 6. Finally, we give our conclusions in Chapter 7. This chapter also provides place for describing the limitations of our study and setting out the agenda for future research on the topic of optional representations in mature and developing grammars of Hungarian with special reference to ultimate attainment.

2 Linguistic Theory and Language Acquisition

2.1 Introduction

In this chapter we outline the main issues that will be ultimately relevant to our study. In order to do this, first we need to address the relationship between linguistic theory and language acquisition theory. Then we review some of the issues within these two fields that bear directly on our study. The question of *language universals* and *crosslinguistic variation* will be addressed as a background for the contrastive analysis of the two languages under investigation. Next, it will be shown that crosslinguistic variation, *diachronic change* and *language acquisition* are intrinsically interrelated. Among the factors mediating the relationship between them are the pervasive phenomena of *variability*, *optionality* of rules in mature and developing grammatical systems, and *markedness*.

Variability results from the dynamic nature of both mature and fledging grammars, as well as from the individual differences between and within speakers. Optionality, as we shall define the term, refers to the co-existence of interchangeable rules within a linguistic system. Optional representations have been argued to characterise the developing interlanguage grammars (ILGs) of L1 and L2 learners and, more controversially, the adult steady state grammars of native speakers. The issue of markedness will also be discussed since it plays a crucial role in crosslinguistic variation, language change and language acquisition.

The linguistic framework we adopt is the Minimalist Program (MP) (Chomsky and Lasnik 1993, Chomsky 1995) which is a radical rethinking of the Principles and Parameters Theory (PPT) (Chomsky 1981, 1986) but has adopted some of the basic assumptions of it. The reason for our choice of the minimalist framework is manifold. First, PPT with its most recent minimalist version is the most coherent theory of language structure with a principled account of crosslinguistic variation. Second, it is also the theory that has clear implications for the processes of language change and acquisition and provides a set of testable hypotheses. Third, English and Hungarian have received extensive descriptive analyses within this theoretical framework. And last, language acquisition studies involving Hungarian within the generative framework are rare, thus our study is an attempt to narrow this hiatus in the research literature.

Our preference for the generative minimalist approach does not necessarily exclude the possibility that some of the issues that arise in the context of second language acquisition are better accounted for in other current theoretical frameworks. Therefore, we will sometimes make reference to the treatment of the main issues in other current linguistic theories, namely Optimality Theory (Prince and Smolensky 1993) and connectionist approaches to language learning (e.g. Elman *et al* 1996). We find that these theories are complementary to the PPT/MP in accounting for some of the phenomena that have eluded explanation within the generative framework.

2.2 Language universals

In this section we shall review the views taken by various linguistic theories of language universals with a view to finding the common underlying properties between the two languages in our study: English and Hungarian.

According to some estimates, there are around 4,000 human languages around the world arranged in related language families (e.g. Vögelin and Vögelin 1977). Despite the superficial differences among all human languages and their dialectal versions, there is consensus among linguists that they must share a common set of properties. Those aspects thought to be common to all human languages are generally known as language universals. The search for universals has been in the heart of typological work on languages (Greenberg 1966, Comrie 1989, and Croft 1990). The typologists have advanced several reasons for the existence of language universals, among them a universal functional underpinning for all natural languages as well as a common cognitive architecture characteristic of all human beings. Chomsky (e.g. 1986) and other generative linguists have specifically argued that language universals directly characterise the structure and workings of the language faculty within the human mind. The basis for the generativist argument is that knowledge of language emerges in the mind in the form of linguistic representations that build upon and make use of the mechanisms of the language faculty.

Language universals have been envisaged differently in different theoretical frameworks. In what follows, we shall discuss the way the conception of language universals has varied among these frameworks, with special attention to the PPT/MP approach, the theoretical framework we have adopted for our study.

2.2.1 Principles of linguistic structure

In the framework of the standard PPT (Chomsky 1981, 1986), principles have been proposed to be invariant properties of grammatical *structure* shared by all natural languages. The principles are seen as guidelines that all languages follow. Examples for these potentially universal core properties or rules in the PPT are, for instance, the principles of X'-theory, the Structure Dependence Principle, the Projection Principle, the Extended Projection Principle, the Empty Category Principle, the Binding Principles, Case Filter, Theta Criterion, Subjacency, etc.¹

These proposed principles are seen to partly constitute Universal Grammar (UG)². UG was originally postulated to account for the exceptional feat displayed by children when learning their native language (henceforth L1). It is widely known that normally developed children's language learning is equipotential, uniform in its end state, relatively fast, efficient and apparently does not require negative data in order to ultimately formulate a grammar that is equivalent to that of the adult native speaker's grammar. The *logical problem* of language acquisition³ (Hornstein and Lightfoot 1981), which begs an answer to the question 'How can children know so much given so little evidence', required the stipulation of a rich and innate knowledge system, UG, that children bring to the learning task. Elements of UG need not be learnt as they are assumed to be inherently specified at the initial state of language acquisition. In other words, when faced with primary linguistic data (PLD), children's language acquisition proceeds automatically, but under the guidance of UG, which restricts the hypotheses they can entertain. This foreshadows our discussion in section 2.5.1.

In the Minimalist Program, a more recent parsimonious version of the PPT, the proposed principles have taken a somewhat more abstract shape. Apart from considerably simplified principles of syntactic *structure*, they include principles of syntactic *operations*. All the principles serve one function: they are economy principles, ensuring that the computational system (C_{HL}) underlying linguistic knowledge is the least burdened with a rule component and uses the fewest possible number of steps in derivations and representations. The proposed universal operational principles include among others the shortest movement principle (Minimality), the principle of Greed, the principle of Procrastinate, the principle of

¹ For a review of the proposed principles and their general properties the reader is referred to Roberts (1997).

² Apart from principles, UG contains parameters of cross-linguistic variation, see section 2.3.1

³ The logical problem is in fact a learnability problem, which has variously been termed 'Plato's problem', 'Chomsky's problem', 'Gold's problem', 'Baker's paradox' or the 'poverty of the stimulus' paradox.

Least Effort, the principle of Full Interpretation, the principle of Minimize Chain Links, etc. (Chomsky 1995). The structure-building principles in this theory are Merge (i.e. form constituent) and Move. They are viewed as derivational operations universal in all natural languages. Additionally, the principle of feature checking provides a motivation for structure building, which results in language variation (see section 2.3.3).

2.2.2 *Universal constraints*

Mention must be made of Optimality Theory (OT) which was created in the early 1990s (Prince and Smolensky 1993). OT was well poised to solve some of the problems the standard PPT approach was facing at the turn of the decade. As Archangeli (1997) points out, towards the end of 1980s, the standard generative theory failed to deliver some of the expectations presented for it. There was a lack of much awaited theoretical simplification in the way syntactic and phonological representations were assumed to be constrained. For instance, syntactic representations required ever-expanding syntactic structures with increasing numbers of empty categories. More and more parameters were proposed to account for cross-linguistic variation. Even more crucially, principles assumed inviolable frequently turned out in need of qualification and needed peculiar in-built restrictions. Speas (1997) strongly argues that *all* principles proposed by the PPT, and even the economy-based principles in the MP are in fact violable.

These trends have conspired to lead to a new conception of grammatical structure and language acquisition in Optimality Theory. OT has been widely used in the area of phonology, but studies on syntactic description and acquisition of syntax within this framework have also started to appear (Beckman *et al* 1995, Archangeli and Langendoen 1997, Barbosa *et al* 1998, Dekkers *et al* to appear).⁴

In Optimality Theory, instead of principles, constraints have been proposed as universals of human languages. Constraints however, unlike principles, are seen as inherently violable. OT works in the following way: for a syntactic phenomenon, say *wh*-movement or null-subjects, variation among languages is accounted for by identifying instances of the same phenomenon cross-linguistically and proposing a universal set of constraints (called CON).

This universal set of constraints is assumed to be present in all languages, but particular languages obey each constraint to various degrees. Children are born with the knowledge of the possible (universal) set of constraints. The child's task is seen as setting up the particular constraint hierarchy the target language instantiates. Thus the proposed constraints, although present at the initial state, acquire different status in various mature languages during the course of language acquisition. Being violable, constraints can be violated by any language. In this sense, constraints constitute both the universals as well as the properties along which languages can vary (when violated).

In OT the candidates made possible by the universal set of constraints are in competition with each other. The optimal candidate is the one that satisfies the highest ranked constraint in a given language. This is the winner candidate that gets spelt out. The number of the violations of the lower candidates is immaterial in OT. The most crucial information lies in the highest ranked constraint; other lower-ranked constraints are therefore lost to view. The number of violations of each constraint in a language is important only in setting up a particular language's "dominance hierarchy", the order of constraints determined by harmonic candidates (Tesar and Smolensky 1998). Tesar and Smolensky state: 'Optimality Theory recognises a relative distinction between more- or less-violation of a constraint, but an absolute quantitative measure of degree of constraint violation'. This results in a situation where gradience in grammaticality cannot be accounted for, only the sharp distinction between grammaticality vs. ungrammaticality (Pesetsky 1997). This shortcoming would make the OT framework less interesting had there not been recent attempts to incorporate gradient acceptability in the OT conception of grammar, too. We shall review these attempts in section 2.7.4 as they will bear direct relevance for our study.

2.3 Cross-linguistic variation

Having reviewed the ways different theories construe universal principles of human languages, we will outline how they in turn explain the apparent diversity of human languages. In this section we shall point to the parametric differences between our two languages under scrutiny: English and Hungarian. This will serve as a precursor to the detailed crosslinguistic analysis of the two languages in Chapter 4.

⁴ One of the many reasons, apart from the more immediate ones mentioned above in the text, that OT has achieved such widespread application is that it has a lively electronic publications archive. The URL of the archive is <http://rucss.rutgers.edu/roa.html>

If there were only language universals underlying the languages of the world, all humans would be expected to speak the same language, i.e. a language with the same underlying system, even though the vocabulary items might still be different. That this is not the case has to be explained by a theory of language variation.

2.3.1 *Parameters of variation*

Standard PPT, as its name suggests, is a theory of principles as well as parameters of the architecture of natural languages. Parameters are posited to account for the diversity of languages. In standard PPT, these parameters are understood as the dimensions along which the principles of UG are allowed to vary. Parameters are generally thought to have binary values (yes/no choices) (Chomsky 1986) although some parameters have been proposed with more than two values (e.g. see the five values of the governing category parameter proposed by Wexler and Manzini 1987, Manzini and Wexler 1987)⁵.

Standard PPT uses the comparative method to contrast various languages and find systematic differences between them. If a difference seems to be general and systematic enough cross-linguistically, languages are classified according to some proposed division. The established differences are then used to posit parametric differences. After this, investigations usually ensue to see whether there are subclasses within each type thus established. Thus, languages can be classified into nested categories along which they differ from one another⁶.

Some of the parameters that have been proposed in standard PPT to account for cross-linguistic variation are the following:

- the head-parameter
- the word order (head direction) parameter
- the *pro*-drop (null subject) parameter
- the *wh*-movement parameter
- the verb-raising parameter

⁵ However, it has been argued in the learnability literature that binary parameters significantly reduce the learning task for the child (Clark 1992, Berwick and Niyogi 1993, Gibson and Wexler 1994, Frank and Kapur 1996, *inter alia*).

⁶ For an excellent account of the comparative method within PPT see Roberts (1997).

- the presence vs. absence of morphological marking of nouns and determiners
- the possible verb second (V2) parameter⁷

Individual languages are assumed to instantiate one of the options of each of these parameters. There are nested categories within some of these parameters, and some of them are interrelated with each other.

One of the major attractions of this view of parametric variation lies in the way it is able to account for seemingly unrelated phenomena within a linguistic system. Setting a parameter to a particular value has far-reaching consequences for the whole grammar. This is manifest in the cluster effect observed in the process of language acquisition (see section 2.5.1).

It is important to note that this account of cross-linguistic variation yields itself naturally to explanations of diachronic change. As we shall see in section 2.4.1, synchronic parametric variation obtaining among languages can be employed to explain diachronic changes within a particular language.

2.3.2 *Functional parameterisation*

In this section we review the view of parametric variation adopted in the MP: the Functional Parameterisation Hypothesis whose conception in fact predates the MP (Borer 1984, Emonds 1985). The minimalist framework has retained the basic notion of parametric differences among languages; however, the conception of the location and contents of the parametric differences has radically changed. Instead of construction-specific parametric rules (such as *wh*-movement, V2, verb-movement, etc.), the MP sees the location of parametric variation solely in the properties of functional categories (Borer 1984, Pollock 1989, Ouhalla 1991, Chomsky 1991). Functional categories are the elements with grammatical properties in the sentence: they carry information about number, gender, person, case, tense, agreement, finiteness, etc. Lexical categories, on the other hand, have descriptive content and comprise nouns, verbs, adjectives, adverbs and prepositions. The functional/lexical dichotomy has been recognised for a long time in theoretical linguistics in the sense of a division between functors and content words (for a historical review see Joseph 1992, 1997). The Functional

⁷ The reader is referred to Roberts (1997) for a detailed account of these proposed parameters.

Parameterisation Hypothesis has exploited this dichotomy by according functional elements pride of place in accounting for cross-linguistic variation (Emonds 1985, Ouhalla 1991, etc.).

2.3.3 Grammatical features

In the Functional Parameterisation Hypothesis adopted in the MP, functional categories as well as lexical categories have grammatical features. Features play a crucial role in morphological and syntactic processes. Cross-linguistic parameterisation results from the difference in the types and strength of the features of functional categories for Spell-out, i.e. the point where the derivation gets 'spelt out'. Syntactic movement and morphological mechanisms are motivated by feature strength: [+strong] features require movement for the purpose of feature checking before Spell-out, whereas [-strong] or weak features do not require movement as they are not checked before Spell-Out only at LF. Thus strong features result in deviations from the unmarked underlying order in the sentence, which has been assumed to be the SVO order since Kayne's (1994) proposal.⁸

Apart from feature strength, further cross-linguistic differences are located in the phonological properties of features and feature-complexes for the PF output. In other words, there are further cross-linguistic differences in the actual shape of the morphological elements.

Grammatical features are subdivided into a further division (Chomsky 1995:277). Therefore, the distinction between features is assumed to hold along two properties: [+/- strong] as well as [+/- interpretable].

Interpretable features have semantic content and so contribute to determining meaning at LF. These are

- ϕ (*phi*)-features⁹ of nominals,
- categorial features (whether an element is a D, V or N, or whether a verb is in the perfective or progressive aspect),
- head features of the functional categories T, C and D (with the exception of Agr) and

⁸ About the role of feature strength in determining markedness, see section 2.8.2.

⁹ *Phi*- (ϕ) features are person, number and gender features that can be carried by nouns, verbs and adjectives.

- semantic features, such as [+wh], [+f], [+neg], etc.

These interpretable features cannot be deleted/erased in a derivation; i.e. they have to stay visible to the computation, as they need to be interpreted at LF. However, they need to be checked by another element before Spell-Out if they are strong. For example, the Q feature in interrogative sentences is strong in English, and since it is an interpretable feature, it must be eliminated by movement of an element with a [+wh] feature (another interpretable feature). The [+wh] feature of a *wh*-element will then check the strong Q feature in an interrogative sentence. In a language where Q is weak, on the other hand, the *wh*-element with the [+wh] feature can stay in situ since the weak feature of Q does not need to be checked before Spell-Out (Chomsky 1995:291). This will yield a language such as Chinese or Japanese, where sentences equivalent to the English *John gave which book to Mary?* are possible and necessary. The same applies to the [+f] feature carried by an element that is emphasised or focused. If a language has a strong F feature, a constituent with the [+f] feature will raise to check off the strong F feature in a focused sentence. This is what happens in Hungarian, Finnish, Greek, Turkish, Standard Arabic, etc. (É.Kiss 1995). However, if a language lacks a strong F feature, the focused elements will stay in situ and other devices, such as stress assignment or morphological marking of some kind, will be employed. English belongs to this latter type of language.

The other class of features is *uninterpretable*. The features belonging to this class have no semantic content and so they do not contribute to meaning at LF. The uninterpretable features include

- ϕ (*phi*)-features of verbs and adjectives¹⁰,
- the functional head features of Agr,
- phonological features,
- Case features of nominals and
- the Case assigning features of V and T.

These are the purely formal features. Uninterpretable features must be eliminated at LF following the principle of Full Interpretation, as they cannot be interpreted at LF. This is done by obligatory feature checking and consequent elimination. Once checked,

¹⁰ The *phi* features of V and A are carried essentially by the agreement inflections on the verb or predicative adjective.

uninterpretable features are erased/eliminated, as they have to be non-visible to the computation. As Chomsky (1995:280) puts it, 'a [-Interpretable] feature is "frozen in place" when it is checked, Case being the prototype'.

In summary, language variation is accounted for in the MP by the strength of grammatical features of functional categories. The computational system and the set of functional and substantive lexical categories are assumed to be universal, variation is assumed to arise from the feature specifications of these categories. Each item carries a head-feature, a specifier-feature, and a complement-feature. Specifier and complement features (as well as those head features which have no semantic content) are uninterpretable, thus have to be checked and erased (Radford 1997:170-215).

2.4 Language change

The process of language change will be considered in this section with the aim of pointing out the insights it can provide into the processes of (first and second) language acquisition. In particular, the notion of *competing grammars* will be emphasised as a major force of both language change and acquisition. We shall also argue that the role of the *input* in the diachronic development of languages is just as crucial as it is in language acquisition. Ultimately, our claim will be that adult second language acquisition in particular is fundamentally reliant on the nature of the evidence available to the learners.

In current linguistic theories the focus of research into language change is to find the *reasons* for the successive stages of a particular language under change. Within this research the issue of *gradual vs. abrupt change* has been addressed along with the nature of the *triggering experience*.

2.4.1 Parametric change

It is a rather uncontroversial fact that languages are dynamic systems in a state of constant flux (Larsen-Freeman 1997). In PPT language change within a single linguistic system is accounted for by parameter resetting (Lightfoot 1991). In the MP language change is conceptualised as change in the strength of grammatical features (interpretable or noninterpretable). For example, changes in verb movement are seen as the result of a shift in the strength of the verb's grammatical features. During the period of Middle English the

verb-movement properties of English changed. According to the minimalist analysis, in Early Modern English in the era of Shakespeare (around 1600), finite verbs carried strong agreement features, i.e. strong person/number specifier-features. In Standard Modern English the same finite verbs are seen to carry weak agreement features (Pollock 1989, Radford 1997:224-225, 308). Therefore some of the sentences taken from Shakespeare's plays would not be currently used in the following form:

- (1) Came you from the church? (Tranio, *Taming of the Shrew*, III.ii)
- (2) Wrong I mine enemies? (Brutus, *Julius Ceasar*, IV.ii)
- (3) I doubt not of your wisdom (Mark Anthony, *Julius Ceasar*, III.i)
- (4) Knows he not your voice? (First Lord, *All's Well that Ends Well*, IV.i)
- (5) What sayst thou? (Olivia, *Twelfth Night*, III.iv)
- (6) Who knows not that? (Curtis, *Taming of the Shrew*, IV.i)

2.4.2 Causes of language change

The reasons for language change can be manifold: either internally driven or brought about by external factors such as language contact ensuing from migration, invasion etc. In the case of an internally driven change some factor causes the language system to become unstable. This might happen when the *evidence* for a parameter becomes less robust (i.e. not frequent and salient enough) or the parameter setting for a particular construction is ambiguous (i.e. two conflicting parameter values can account for a single construction) (Clark and Roberts 1993).

As a result of non-robust or ambiguous data, *innovations* are created in the grammatical system. It is conceivable that even one individual can create an innovation (through language contact or as a result of a shift in their internal grammar due to the nature of the evidence they get) hence altering the triggering input for new acquirers. Children take on board innovations during the process of language acquisition. That is, the grammar children create will be crucially influenced by the weakest points in an unstable target language system. This way, members of the new generation will start to distinguish the innovation in the possible parameter settings in their grammar. As more and more speakers acquire the innovative form, the old value gradually loses its categorical, definitive status. When the old generation that favoured the old setting finally dies out and a subsequent generation wholly embraces the new setting, parameter resetting can be said to be complete.

2.4.3 *Gradual change vs. restructuring*

Lightfoot (1991) argues that language change in the form of parameter resetting is chaotic and catastrophic. It is catastrophic in the sense that gradual changes in lexical specifications, changes affecting the *frequency* of occurrence of triggering experiences, and changes in the makeup of the language community might all lead to abrupt changes of parameter resetting. On the other hand, language change is chaotic in a sense that small disturbances or perturbations in a linguistic system cause disturbances in other parts of the system. Thus language is an eternally dynamic system without a steady state or a state of equilibrium (see also the same argument Larsen-Freeman 1997 for second language systems).

Lightfoot (1991) further points out with respect to child language acquisition and language change that the chaotic dynamism of the linguistic system sometimes leads to a random and unpredictable restructuring which brings about the cluster effect characteristic of abrupt catastrophic changes. The size of the disturbances and their relative frequency will determine the criticality/instability of the system (see Klein 1986 for the instability and criticality of rules in second language grammars).

We would like to argue that the instability of a linguistic system is reflected in the proportion of speakers who favour one value over the other. The fewer native speakers use a construction type as compared to an alternative construction representing a new parametric value, the more vulnerable the language system at that point will become. A child learner faced with a totally unstable/critical system in this sense (i.e. 50 percent of the population preferring one and 50 percent of the population preferring the other alternative) will be forced to have recourse to self-organisation of their grammatical representations (Bak and Chen 1991) or pathological learning in Clark and Robert's (1993) sense. In other words, if the composition of the native speaker population changes so much that the frequency of the triggering experience they provide for children changes to a critical extent, the situation may give rise to an abrupt restructuring of the entire system in the children's grammatical representations. Again, language change, or rather adoption of a new parameter, is supposed to happen when the new value is categorically favoured over the old one by a generation of children acquiring the target language.

As an example of an innovation that entered the English language, Lightfoot (1991, 1995) mentions the emergence of the periphrastic *do* in the 15th century. It first occurred in the early 1400s and its occurrence steadily increased from this time. The sharpest increase happened between 1475-1550 (Lightfoot 1995:45) and this served to eliminate the previously widespread V-to-I movement in English (see section 2.4.1). This process ranged between 1440 and 1600. This innovation in the system of English along with the earlier, gradual loss of rich inflections which was complete by 1400 and the item-by-item reanalysis of modal verbs as elements base-generated in I, resulted in a loss of full V2 in English. What remained in English is a *residual V2* system, which is restricted to specific syntactic environments (i.e. only when [+wh] or [+neg] element appears in C^o) and with only specific verbal items (i.e. dummy *do*, *have*, *be* and the modal auxiliaries) appearing in C^o. As we shall see, this fact is directly relevant to our study on the acquisition of Hungarian by English speakers.

It is worthwhile to point out at this junction that morphological changes usually happen *gradually* as a result of an *item-by-item reanalysis*, sometimes ranging over several hundreds of years (such as, for instance, the loss of gender marking, subjunctive mood, or rich morphological marking in English). These gradual changes are then followed by abrupt, catastrophic across-the-board shifts resulting in parameter resetting. The process of parameter resetting usually takes the shape of an S-curve and entails clusters of changes in other parts of the system. In the next section we review different types of linguistic change.

2.4.4 *The shapes of change*

A very useful taxonomy of different change patterns has been offered in Elman *et al* (1996). In fact, the taxonomy is used in the explanations for any type of development (of both cognitive faculties and motor skills) within the connectionist framework, not only linguistic change. What is interesting in this approach is that the patterns of growth are shown to be described as a result of a mathematical function inherent *within* the system.

The shapes of change discussed by Elman *et al* (1996) are classified along three nested dimensions: *linearity* (linear vs. non-linear), *direction* (monotonic vs. non-monotonic, i.e. progressing in one direction only vs. changing in direction) and *continuity* (continuous vs. discontinuous). They discuss five possible shapes of change:

1. linear monotonic (steady increase/decrease of a property)
2. non-linear monotonic with linear dynamics (exponential rate of growth, the 'burst' pattern)
3. non-linear monotonic with non-linear dynamics (the S-curve)
4. non-monotonic (improvement + decline pattern followed by subsequent improvement again, showing the U-shaped curve)
5. truly discontinuous change (sudden restructuring).

Linear monotonic change has been observed in the process of the steady loss of gender marking in English (Lightfoot 1991). Of the five shapes of change, the S-curve is the most characteristic pattern found in language change. The S-curve describes a period of steady growth followed by a rapid arrest to the rate of change. In the latter part the growth slows down dramatically and even stops ultimately, creating a state of 'asymptote'. Syntactic change, similarly to sound change, follows an S-curve (Bailey 1973a, 1973b) as exemplified by the change in the syntactic category of present-day English modals (Lightfoot 1991) and the development of periphrastic *do* (Kroch 1989). A similar change pattern has been argued to happen in the regularisation process of irregular verbs in English and the loss of inflection on modals (Lightfoot 1991) (see section 2.4.3 above).

Truly discontinuous change, i.e. sudden restructuring, is assumed to happen as a result of parameter (re)setting. As we saw above, parametric change brings about a cascade effect in the whole language system, exhibiting changes in clusters of seemingly unrelated phenomena. This kind of abrupt change, i.e. restructuring of the entire system, is not only common during the process of language change (Kroch 1989) but also in L1 acquisition (e.g. Clahsen 1988) and L2 acquisition (e.g. McLaughlin 1990).

Diachronic language change and developmental language change exhibit similar types of shifting patterns, such as the S-curve and discontinuous change. In addition, L1 language development exhibits burst patterns, such as the vocabulary burst in children between the ages of 2 and 5 years. Also, children's language development is said to often exhibit the U-shaped curve. The U-shaped curve is assumed to be the result of learning by analogy. Learning by analogy results in overgeneralizations. This is followed by a subsequent recovery from the overgeneralization once the correct target rule has been hypothesised (see e.g. Pinker 1984 for the account of over-generalised past tense marking in English children,

such as 'goed'). In the next section we look at language acquisition in more detail. Now we return to the mechanisms of linguistic change.

2.4.5 *Competing grammars*

As we saw in sections 2.4.3 and 2.4.4, the process of parameter resetting does not happen from one generation to the next. It is usually preceded by an extended, gradual process. It has been observed that there is always a period (sometimes spanning hundreds of years) when two parameter settings coexist with each other and there is *grammatical competition* within two values (Kroch 1989)¹¹. Why does grammar competition come about and how does it determine the make-up of the linguistic system? These are questions which are pertinent to our study, so we shall explore them in more detail.

2.4.6 *Optionality in language change*

The studies on parameter resetting in footnote 11 propose that language change occurs as *optional forms* come to exist within the grammatical system of a language. The alternative form may enter as a result of externally or internally driven factors, as outlined in section 2.4.2. Crucially, these optional forms may enter into competition with each other even within an individual's grammar (Santorini 1992). Pintzuk (1998) argues that some specific text, such as Beowulf or other prose texts from Old English, can exhibit two variants of a word order at the same time, the older OV and the new VO order. Thus Pintzuk's data support the argument for the existence of two systems *within* an individual speaker. This precludes the possibility that variation is solely a social phenomenon within a speech community with sub-dialects represented by separate groups of individual speakers. Kroch (1989, 1998) also argues that two variants can exist within a speaker's competence thus creating a type of diglossia within the same individual. This is what he calls the *double base hypothesis* (for more details see below in section 2.4.7).

The point of controversy in this position is whether the two representations exist within the same grammar, or whether they belong to two separate grammars held by the same person.

¹¹ Grammar competition has been seen to be the driving force of parameter resetting in Old English (Pintzuk 1993, 1995, 1996, 1998), Middle English (Kroch 1989, 1998, Kroch and Taylor 1997), Old French (Kroch 1989), Middle French (see papers in Battye and Roberts 1995), Early Yiddish (Santorini 1992, 1995), and Indo-European (Kiparsky 1995). Grammatical competition during the course of language change has also been investigated for

The controversy originates in a sharp distinction made by Chomsky (1986) between E-language and I-language. Chomsky has categorically distinguished E-language phenomena from the internalised system of individual speakers, i.e. I-language. According to him, I-language is a perfect system; it cannot contain two parallel grammars as parameters are supposed to be mutually exclusive within the same grammar.

Kroch (1989) and Lightfoot (1991) on the other hand argue that the process of language change is not a fact of grammar but a fact of language use¹². The study of language use is the study of the choices that people make among alternative forms. However, the development of these alternative forms *is* a fact of grammar. Thus, E-language phenomena may effect the I-language of a speech community and vice versa (for a strong defence of this point see Battye and Roberts 1995).

Cook (1991, 1992, 1996) has argued for the latter position for syntactic representations (i.e. the possession of multiple grammatical representations) held by multilingual speakers whose languages constitute different settings of the same parameter. In what follows we shall present empirical evidence for the double base hypothesis.

2.4.7 *The double-base hypothesis*

Kroch (1989) argues for a double-base hypothesis during language change when one form is replacing another, such as in English loss of V2 properties, see section 2.4.3. The double base hypothesis has been exemplified by Santorini's work on Early Yiddish subordinate clauses (Santorini 1992, 1995). She shows that during a period of Early Yiddish, individual speakers had both an older Infl-final and a new Infl-medial grammar in subordinate clauses. This is exemplified here by two subordinate clauses taken, crucially, from the same text:

- (7) vas er zeyn tag fun zeynm r. **gilernt hat**
 *what he his day from his rabbi **learned has***
 'what he learned from his rabbi in his day'
 (from *Preface to Shir ha-shirim*, 1579) (Santorini 1995:60, example (11).c)

Middle Spanish (Fontana 1993 quoted in Pintzuk 1995), Ancient Greek (Taylor 1994 quoted in Pintzuk 1995) and Old Portuguese (Ribeiro 1995).

¹² Kroch draws attention to 'the underlying competence extended to the discourse level' (Prince 1988) in cases of variation in use where grammatical options are determined by features of extra-sentential context.

- (8) dz der mensh **git erst oyf** in di hikh
that the human goes first up in the height
 ‘that people first grow in height’
 (from *Preface to Shir ha-shirim*, 1579) (Santorini 1995:61, example (12).a)

This optionality ultimately resulted in a parametric change whereby Yiddish became a symmetric V2 language; that is, it started to exhibit obligatory verb second phenomena in both main and subordinate clauses¹³. The following examples of Modern Yiddish main and subordinate clauses are from Santorini (1995:54) showing a symmetric V2 structure:

- (9) Oyfn veg **vet** dos yingl zen a kats
on-the way will the boy see a cat
- (10) ... oyb oyfn veg **vet** dos yingl zen a kats
 ... *whether on-the way will the boy see a cat*

Pintzuk’s (1993, 1995, 1996, 1998) work illustrates a similar competition between Infl-medial (i.e. Infl-initial) and Infl-final constructions in Old English¹⁴. According to the evidence of her empirical investigations, both structures co-existed and entered into competition with each other during both the Old and Middle English periods, and the innovating VO structure finally won out by the end of the Middle English period. The following evidence of competing grammars are cited from Old English in Pintzuk (1998):

- (11) & woldon hig **utdragan**
and (they) would them out-drag
 ‘... and they would drag them out’ (Pintzuk 1998:2, example (7).a)
- (12) he wolde **adræfan ut** anne æpeling
he would drive out a prince
 ‘... he would drive out a prince...’ (Pintzuk 1998:2, example (7).b)

¹³ In this respect, Yiddish has undergone changes directly opposite to those characterising English and French. Both English and French have lost V2 in their main clauses and exhibit V2 only in residual form (Platzack 1995).

¹⁴ She incidentally argues against the standard view of word order change in English held by van Kemenade (1987) and Lightfoot (1991), i.e. the view that the change from OV to VO happened in an abrupt manner.

Both Santorini and Pintzuk's evidence bears witness to competing grammars within the same linguistic system during the period of language change. The double-base hypothesis is based on the assumption that children and adults are able to construct more than one grammatical systems from the primary data. Santorini (1992) agrees with Kroch (1989) in that this ability is independently and incontrovertibly evidenced in multilingualism, diglossia and intra-sentential code switching. Children's mental representations during syntactic change are similar to bilingual's mental representations, as well as those of adult learners of a second language (Santorini 1992:619). This idea is echoed in Cook's (1991, 1992, 1993, 1996) concept of *multicompetence*. Multicompetence is argued to be the state of mind of bilingual and multilingual adults. A more thorough account of multicompetence as it relates to second language acquisition is given in Chapter 3.

2.5 Language acquisition

2.5.1 *Parameter setting*

As was proposed originally by Chomsky (1981, 1986), the fields of generative linguistic theory and language acquisition are intimately related through their shared research questions. The double objective of the generative research agenda consists of (1) the attempt to describe the properties of native speakers' tacit knowledge of their language and (2) the parallel endeavour to answer the question of how this knowledge comes to be acquired by children. The PPT/MP tries to satisfy both these requirements in that parameters are seen not only as properties along which languages vary cross-linguistically, but they are also supposed to account for developmental language change, i.e. the interim grammars children (and adult learners) create during the process of language acquisition. Acquisition is therefore seen as a task of *parameter setting* by the child who is exposed to the target language and *parameter resetting or activation* by the adult learner whose first language is already in place (see Chapter 3).

As we have already outlined, the child is supposed to be born with an innate knowledge of UG principles as well as prespecified parametric options. This inborn knowledge constitutes the initial state of language acquisition, S_0 . The child's acquisition task is therefore reduced to identifying the specific parametric values the ambient language instantiates, i.e. the FCs and their feature specifications in the TL.

Traditionally, there have been at least three arguments for the parameter setting view of language acquisition. All of them are connected to the nature of the *input* children receive, i.e. the *triggering evidence*. One of the arguments is the learnability argument that we have outlined in section 2.2.1. This poverty of the stimulus argument concerns the fact that children acquiring their language do not receive, or if they do, misinterpret, negative evidence. Thus information about the grammaticality of evidence children receive is not forthcoming or not used appropriately (Brown and Hanlon 1970, Marcus 1993). The next argument relates to the noisiness of the input. This argument points out that children not only do not receive information about grammaticality but they are exposed to noisy data. Noisy data can be ungrammatical, ambiguous or incomplete. First, children receive *ungrammatical data* in the sense of grammatical mistakes, false starts, slips of the tongue, etc. (see Chomsky 1965, but cf. Newport, Gleitman and Gleitman 1977 who argue that the input children receive consists of short but grammatical sentences). Also, children are frequently exposed to *ambiguous* and therefore *misleading data* as to the correct parameter value of their target language (Truscott and Wexler 1989, Weissenborn 1992). A third argument concerns the fact that children are never exposed to the totality of the language system they are to internalise. In other words, the input to language acquisition is *incomplete* and the child has to glean the underlying system from an incomplete amount of data (Hornstein and Lightfoot 1981, Chomsky 1986). We shall see in Chapter 3 that the same learnability problem characterises L2 acquisition where the effects of insufficient input are even more detrimental for successful acquisition of the TL.

As Roberts (1997) points out, the above arguments point to a correlation between the richness of the final state (S_S) and the amount of information we are led to attribute to the initial state (S_O). That is, the more complex and noisy the mature grammar and the smaller the amount of evidence available to the child, the more knowledge we are compelled to impute to the child. The argument is that without imputing prespecified knowledge of UG to the child before they are exposed to any language data, the process of language acquisition by children is simply not explainable, given the conditions under which it takes place.

Since parameters are seen as interrelated (Marantz 1995, Roberts 1997) and each parameter is supposed to be responsible for a number of superficially unrelated properties in the language, setting a parameter value has consequences for the entire grammatical system. This is what has been known as the ‘cluster-effect’ or ‘cascade effect’ of setting a single parameter (see sections 2.3.1 and 2.4.3 above). This view of language acquisition certainly

has considerable explanatory force. However, on a cautionary note, Meisel (1995:12) argues that the explanatory power of parameters is lost if clusters cannot be unanimously identified¹⁵, and if parameters refer to individual properties of grammars only. To keep its explanatory appeal, parameter theory clearly needs to be constrained and the precise nature and number of parameters need to be clarified.

One of the unresolved questions in this view of language acquisition concerns the nature of the initial state, and the other the nature of the triggering experience that forces parameter setting. In the next sections we highlight these two questions briefly.

2.5.2 *The L1 initial state*

The first question which relates to the initial state of the grammar is, in fact, a question concerning what exactly the prespecified UG should be seen to contain. It is unanimously accepted among generativists that the initial state, i.e. UG, constitutes the core principles of language design. It is more controversial, however, whether, and if so, in what way, parametric options are also part of the initial state that constrains the L1 grammar building.

What parametric options are provided initially for the child is still an open issue. Do parameters initially appear with both/all their values accessible simultaneously? This is the *continuity* approach according to which all parameters are present with both/all their values. They are each to be eliminated in the face of positive evidence, except for the TL parameter and its value. In fact, it is important to note that this view of parameter setting works by assuming the availability and use of indirect negative evidence (Lebeaux 1988:179ff, 1990, Meisel 1995)¹⁶? As an alternative to the 'all-present' view, it has been proposed that parameters have a pre-set (default) value which needs to be changed when evidence to the contrary is forthcoming and noticed (Hyams 1986)? This latter scenario would entail a markedness relationship between each of the parameter values which does not exist in the case of non-nested but disjoint parameter values. The nature of the initial state in L1 acquisition is still a question of debate. In second language acquisition a parallel debate has recently emerged, which we shall review in Chapter 3.

¹⁵ As, for example, in the case of the pro-drop parameter, where it has been called into question whether free inversion of subject and verb and the *that*-trace effect is part of the cluster of properties (Jaeggli and Safir 1989).

¹⁶ To support this position on the initial state, it has been argued (Valian 1990) that all the parameter values need to be available to children in order for them to be able to parse the incoming input.

2.5.3 Hypothesis testing vs. triggering

The other question that still awaits an answer is the nature of the *input* based on which language acquisition is supposed to proceed. The parameter setting account of language acquisition has employed two models to explain acquisition by the child: hypothesis testing and triggering (Atkinson 1992). Hypothesis testing assumes a creative process undertaken by the child's language acquisition device (LAD) (Brown 1973). In this view, the language learner is seen to take an active part in the grammar creating process by a trial and error process. The second model, triggering, places the onus of the task of acquisition on the *evidence* the child is exposed to and not the innate powers of the learning device. Both of the models assume that the principles and mechanisms of UG guide learning. However, triggering is thought to be more superior to traditional hypothesis-testing models, since it is simple, mechanical, predicts a more uniform developmental path across learners and is more reliable in leading the learner to the correct grammar (Carroll 1989, Fodor 1998, cf. Bley-Vroman 1986 for hypothesis-testing in second language acquisition). However, there are some unresolved issues around the idea of triggering, too. Let us look at these with an eye to explicate the role of the nature of the input on the basis of which the learner has to proceed during acquisition.

2.5.4 The nature of the input

As we saw in section 2.4.2, Lightfoot (1991) has argued that the triggering data need to be *simple* and *robust* for parameter setting to take place. By *simplicity* he assumes that the triggering evidence needs to contain simple main clauses. He calls this requirement 'degree 0 learnability'. In his investigations of the acquisition of the V2 parameter, he concedes that the degree 0 triggering input needs to be complemented by the initial part of subordinate clauses as well (Lightfoot 1991). This is called 'degree 1 learnability'. Under the requirement of *robustness*, Lightfoot subsumes the double requirements of *salient* and *frequent* data readily available to the child, a requirement noted by Clark and Roberts (1993) as well. These are the definitions we shall also adopt for simple and robust data.

Although there is a general consensus about the necessity of readily available robust data for parameter setting to take place, there is no precise theory of triggers to date in the literature.

Researchers have not been able to identify the exact nature and quantity of the required triggering evidence on the basis of which L1 parameter setting is to take place. It is most likely that different parts of the linguistic system require different and varying amounts of triggering data.

Roberts (1997) has proposed that if we had a fully developed theory of parameters, all the child would be required to do is find out the target language's parametric bar-code in terms of the values for the yes/no binary choices for parameters. Since parameters are interrelated by implicational relationships among and within them, this would render the task of language acquisition much simpler and more efficient. However, Turkel (1994b) has argued that the number of interrelated parameters should be restricted to two, otherwise the acquisition process is paralysed by lack of relevant evidence available for the learner.

The impasse between these two positions on the required number of interrelated parameters can be avoided if we assume that children are conservative learners. This idea has been addressed in various disguises in the literature. We shall review some of the proposals with a view to contemplating whether the same conservatism can be assumed for adult second language learners.

In the learnability literature, acquisition is seen as a failure-driven process, involving small, greedy steps, when a datum of the input cannot be accounted for by the current grammar. The Single Value Constraint of Clark (1992) constrains successive hypotheses made by the learner to differ only in the setting of *one* parameter, thus conservatism on the part of the child is guaranteed. The greediness of steps is manifest in the Greediness Constraint of Gibson and Wexler (1994), which requires that every step a learner takes must lead to an improvement in the system. Although this constraint does not guarantee the non-existence of the phenomenon of backsliding (or U-shaped curves, see section 2.4.4), it minimises its occurrence. Turkel (1994b) points out, however, that even if acquisition is viewed as taking a series of *successive small, greedy steps*, as assumed by Clark and Gibson and Wexler, the process can lead the learner to hypothesising grammars from which there is no way out (no positive evidence that can disconfirm the wrong hypothesis). This is usually the result of mis-triggering parameters by several types of data in the learner's input. These data are usually insufficiently simple or robust (frequent and salient). It has been argued that such mis-triggering can happen as a result of:

- *ungrammatical* input (Grodzinsky 1989, Kapur 1994), such as *Want your lunch now? Raining hard*, etc. in the parental input.
- well-formed but *exceptional* constructions (Truscott and Wexler 1989, Weissenborn 1992, Fodor 1994) Exceptional constructions are such as *I'm gonna make me a sandwich, Sit you down, Let's go to the zoo* and similar constructions which constitute exceptions to the binding principles. Also exceptional constructions are the discourse-conditioned null subjects in otherwise [-pro-drop] languages, such as English and German: *Got up at 6 and went to the market*.
- *ambiguous* input (Clark 1992, Gibson and Wexler 1994). Ambiguous input contains sentences such as *You saw WHAT?, I don't know how, You know what?, Tell you what*, which lead the child to hypothesise the wrong parameter setting.
- input with *borderline* grammaticality, such as *??Are??Is John or his parents here?* or *I, who the FBI thinks *am/*is an anarchist, will doubtless be there*.

Misleading input such as the above ones can lead the learner to end up in situations called *traps* (Turler 1994b) from which there is no positive evidence to escape. In other words, when the learner is led to fall into one of these traps, positive evidence that might persuade them to entertain an alternative hypothesis might simply not be available. These traps have been variously termed local maxima (Gibson and Wexler 1994, Bertolo 1995, Clark 1992), oscillators or pendulum (Randall 1990, 1992, Turler 1994b).

So how do we account for the fact that children manage to avoid traps and finally converge on mature representations? There have been several proposals for the avoidance of traps. Traps can be avoided by assuming an initial default setting of parameters, such as taking [-V2] (Gibson and Wexler 1994) or *pro-drop* (Hyams 1986) as the unmarked, default value. Alternatively, traps can be avoided by assuming parameter ordering as a result of maturation (such as word order parameters followed by the V2 parameter) (see Borer and Wexler 1987). As a third option, it has been argued that more relevant triggering data in the input might cause the learner to avoid local maxima. This can comprise degree 1 data, such as embedded clauses, imperatives, separable prefixes, intonation, or contextual/situational cues for the correct setting of V2 (Gibson and Wexler 1994:439). In another proposal, the learner is assumed to ignore ambiguous data and learn from unambiguous input only, thus guaranteeing that the child does not enter these traps (Fodor 1998). Also, certain formal relationships, such as the subset-superset relationship between parameters or between parameter values can lead to traps. To avoid these, the Subset Condition has been

hypothesised to hold between parameters and parameter values (Berwick 1985), which ensures that the child hypothesises the most restricted and smallest possible grammar compatible with the data. These proposals all assume that the child is a conservative learner and thus convergence on the TL is guaranteed. We shall see that the same cannot be held for the adult second language learner. The adult learner has been found to be trapped in situations where positive evidence does not seem to be sufficient or sufficiently salient to disconfirm wrong hypotheses. This leads us to argue that the adult learner is different from the child learner in that the mechanisms which guarantee conservative learning are missing in L2A.

2.5.5 *Feature strength setting*

As we saw above in section 2.3.3, parametric differences are seen in the MP as differences in the feature specification of functional categories. Indeed, in this theory, language acquisition is seen not as parameter setting but as *feature-strength setting*. The questions still unsolved include the exact number of functional categories and their universality across languages as well as the problem of the triggering experience and the markedness problem characteristic of the PPT approach (see section 2.8 below).

Acquisition in the MP is seen as the result of *lexical learning*, i.e. discovering the feature properties of lexical items. Ouhalla (1992b) has pointed out that there are three types of lexicon: the UG lexicon, the mental lexicon and the grammatical lexicon. The UG lexicon is seen as the set of (abstract) functional categories, which is “part of the genetic blueprint which constrains human languages” (Ouhalla 1992b:9). The mental lexicon in this division consists of abstract predetermined concepts. It characterises the human cognitive system independently of UG or the linguistic module. The grammatical lexicon consists of the actual lexical representations for both abstract functional elements and abstract concepts. Thus acquisition involves specifying the values of the UG-lexicon (the functional categories and their feature values) and building up the grammatical lexicon through lexical learning from the PLD.

2.5.6 Acquisition of [+/-interpretable] features

Radford (1997:183) hypothesises that interpretable features which have semantic content are acquired more easily than uninterpretable features which do not. He reminds us that child English and children with specific language impairment (SLI) have been shown to exhibit similar problems most of which can be traced to lack of specification for functional categories, resulting in “telegraphic speech” (Radford 1990). In the case of speakers with SLI, it has been shown that impaired access to functional categories is a more permanent phenomenon than in normally developing children (Guilfoyle and Noonan 1992, Ouhalla 1992b).¹⁷

Radford (1997) suggests that in creole studies the simplified morphology is a result of the survival of only interpretable features. Thus the fact that in Jamaican creole personal pronouns do not inflect for case and verbs do not have agreement-based inflections would receive a principled account. He cites some examples from Jamaican creole after Bailey (1966):

(13) *Mi/Im/Dem a rait*
me/him/them are write
 ‘I am/(S)he is/They are writing’ (Radford 1997:183)

(14) *Dem en si we*
them been see we
 ‘They saw us’ (Radford 1997:204)

Radford’s hypothesis predicts that the tense feature (which is an interpretable feature) will be acquired before agreement features and plural marking on nominals will be acquired earlier than case marking on nominals (cf. Radford 1997:183). Both of these predictions seem to be partially born out in studies on child and adult SLI speakers (Gopnik 1990, Gopnik and Crago 1991, Bishop 1994, Rice, Wexler and Cleave 1995, Leonard 1995, Ullman and Gopnik 1994). The problem with these studies is that they do not systematically compare error rates between the 3rd person singular and past tense marking, or the plural marker and the case-morphology of nominal elements. Also, both in creoles and SLI data the problems

¹⁷ See section 3.2.2.2 in Chapter 3 for a detailed discussion of SLI cases.

with tense marking seem to co-exist with variable agreement marking. Gopnik (1994) suggests that the explanation might lie somewhere else in the case of speakers with SLI. He argues that the invariable plural marker *-s* and past tense marker *-ed* are used by SLI speakers by application of a conscious rule. On the contrary, the more variable agreement inflections show a higher error rate as they are stored in associative memory as unanalysed lexical units and are randomly inserted in the sentences (see also Ouhalla 1992b). However, a study on a Greek child with SLI by Tsimpli and Stavrakaki (to appear) shows that interpretable features are indeed less impaired than non-interpretable features in the determiner system.

It is probably more revealing to look for evidence for the difference in the ease of acquisition of interpretable and non-interpretable features in a language with a variable word order due to some functional category, such as the V2 structures in Germanic languages. In Swedish SLI children it has been observed by Hansson and Nettelbladt (1995) that those children who had problems with the V2 word order (producing incorrect *V3 orders) were the ones who had more problems with verb-inflection and the provision of obligatory subject pronoun. Hyams (1992) has also pointed out that there is a correlation between pro-drop, word order, and verbal morphology in normally developing children. These studies raise more questions about the differential learnability hypothesis than they answer: although correlated, is acquisition of V2 word order easier than acquisition of verbal inflections?

2.6 Variability

In this section we need to distinguish between variability which is a *performance* phenomenon and optionality which characterises underlying *competence*. Variation in performance has been extensively described in Labov's sociolinguistic studies of native speaker performance (Labov 1972). Two parallel models have been proposed in non-primary language acquisition, the *capability continuum* of Tarone (1988) and the *variable competence* model of Ellis (1985, 1989). These models state the existence of variable rules based on varying linguistic and situational contexts, and, crucially, the amount of attention directed to the form rather than the content of the utterance. However, variation at the level of *competence* can be argued to obtain regardless of the amount of attention paid to form by the speaker. In the next sections we argue that this kind of variation is a characteristic of the underlying grammar, not a feature of the performance system. Thus we reserve the term optionality for the syntax internal phenomenon. Optionality in representations involve

alternative representations for the same structure or alternative surface forms for a string with the same LF interpretation. In this thesis we categorically distinguish optionality from variability which term we wish to reserve for performance.

2.7 Optionality

As we saw in sections 2.3 and 2.4, languages vary cross-linguistically and individual languages evolve all the time. This type of variation occurs at the competence level. In addition, as we saw in section 2.6 above, there is variability at the performance level.

It was argued that variation at the competence level is brought about by competition between two parameters or constraints. The phenomenon of optionality at the competence level merits a more detailed discussion, as it is arguably present in both mature languages (steady state stable optionality, see section 2.7.1.1) and the interlanguage of children and second language learners (developmental optionality, see section 2.7.2) (see Wexler 1994 for cases of optional infinitives in L1 acquisition; for cases of optional representations in the second language grammar see e.g. Eubank 1993/1994, Eubank 1996, Eubank et al 1997, Eubank and Grace 1996, 1998, Vainikka and Young-Scholten 1994, 1996, 1998a, 1998b, Beck 1998, Müller 1998, Hulk 1991, 1996, etc.).

2.7.1 *Genuine optionality*

As briefly outlined in Chapter 1, current theoretical advances in the Minimalist Program do not allow for syntactic optionality. Among the arguments prohibiting optional representations from syntax the basic one made by Chomsky (1995) is the assumption that language is a ‘perfect system’. This assumption is necessary in order to relieve the computational system (C_{HL}) of any unnecessary burden in the form of computational cost and enable it to deal with the interpretation of LF information only. Interpretation at LF is assumed to be universal therefore it does not present extra computational cost.

Chomsky has hypothesised that language is a perfect system but only as far as the computational component is concerned. Outputs at the PF level, however, can be less than perfect. Displacement of an element from where it receives its LF interpretation is seen as a deviation from the underlying ‘deep structure’ obtaining at LF. Deviations from the norm are

brought about by the operation Move. Move displaces elements from their base position as the result of fulfilment of morphological requirements of strong features. In Chomsky's (1995:317) words these deviations from the LF order of elements constitute the "imperfections" in the design of natural languages:

The most casual inspection of output conditions reveals that items commonly appear "displaced" from the position in which the interpretation they receive is otherwise represented at the LF interface. [...]

Among the reasons for displacement, Chomsky (1995:317) singles out the following:

Speculations about [the reason why natural languages have displacement] invoked considerations of language use: facilitation of parsing on certain assumptions, the separation of theme-rheme structures from base-determined semantic (θ) relations, and so on. Such speculations involve "extraneous" conditions of the kind discussed earlier, conditions imposed on C_{HL} by the ways it interacts with external systems. That is where we would hope the source of "imperfections" would lie, on minimalist assumptions.

On another occasion when he contemplates the sources of "imperfections" in language, Chomsky (1995:9) includes PF variation within the imperfections:

How "perfect" is language? One expects "imperfections" in morphological-formal features of the lexicon and aspects of language induced by conditions at the A-P interface, at least.

In order to ensure that the computational system is least burdened with extra cost, principles of linguistic structure are supposed to be invariant in the Minimalist Program. In addition, parameters are assumed to be exclusive in that they are seen as having binary values, i.e. [+/-strong], [+/-interpretable]. A particular language is assumed to instantiate only one of the values of a parameter. This is an assumption inherited from earlier conceptions of a homogenous language community without any parametric variation within it.

The third argument involves the exclusive nature of the Move operation in the MP. Elements do not move unless forced by morphological requirements. Principles of economy must be adhered to, so that all the computation should be seen to deal with is the imperfections caused by strong feature values, which constitute deviation from the norm. Movement is possible and necessary only if morphologically motivated, thus movement that is possible

but not necessary (truly optional movement) is theoretically excluded from the operations of the computational system.¹⁸

2.7.1.1 Steady state optionality

Despite the above theoretical arguments against stable optionality in native grammars (i.e. alternative structures with the same LF interpretation), in this section we shall list the cases where optional forms have been argued to exist in a language. It is a well known fact that optionality exists in French *wh*-placement (Haegeman 1994, Roberts 1997):

(15) Qui as-tu vu? / Tu as vu qui?

who have you seen / you have seen who

'Who have you seen?'

(16) Quelle fille a-t-il embrassée? / Il a embrassée quelle fille?

which girl has he kissed? / he has kissed which girl?

'Which girl has he kissed?'

Sorace (1993) argues that auxiliary selection under the syntactic mechanism of restructuring is optional, allowing both *Non ha potuto venire* and *Non è potuta venire* to be correct. Stable optionality has also been argued to exist in the presence or absence of English complementizers in relative clauses and complements (Pesetsky 1997):

(17) a. the person whom Mary invited to the party

b. the person that Mary invited to the party

c. the person Mary invited to the party

(18) a. Mary thinks Peter is hungry

b. Mary thinks that Peter is hungry.

Optionality exists in constructions with singular/plural concord, alternating word order in imperatives, negative concord and demonstratives in Belfast English (Henry 1995):

¹⁸ However, recently some attempts have been made within the Minimalist Program to integrate optionality. Petteward (1997) accounts for optionality within syntax by the differential timing of movement.

- (19) The eggs are / is cracked.
- (20) You sit down. / Sit you down.
- (21) I have(n't) seen nobody. / I haven't seen anybody.
- (22) I like those / them shoes. Those / Them look good.

Scrambling and passive in Japanese and extraposition and heavy NP shift in English are also argued to be optional movements by Fukui (1993). He argues that a movement is optional if it does not violate the language-specific value of a parameter, i.e. the head-direction parameter. Thus in Japanese since scrambling and passive use leftward movement of an object and hence follow the head-final property of Japanese, they constitute optional movement types:

Scrambling

- (23) a. John-ga sono-hon-o katta (koto).
John-NOM that-book-ACC bought (the-fact-that)
'John bought that book.'
- b. Sono-hon-o John-ga katta (koto).
'John bought that book.'

Passive

- (24) a. (Mary-ni) John(-ga) nagur-rare-ta (koto).
Mary-by John-NOM hit-PASSIVE-PAST
'John was hit (by Mary).'
- b. John-ga (Mary-ni) nagur-rare-ta (koto).
'John was hit (by Mary).'

Similarly, in English rightward movement is argued to be optional, hence extraposition and heavy NP shift can optionally apply:

Extraposition

- (25) a. I read a review of John's book last week.
- b. I read a review last week of John's book.

Heavy NP shift

- (26) a. They brought the beautiful pink dress into my room.
- b. They brought into my room the beautiful pink dress.

In Muxí (1995) it is argued that with 3rd person direct object clitics, participial agreement is optional in Catalan:

(27) Les he vist / vistes
them-Fem-pl have-1sg seen / seen-Fem-pl
 'I have seen them.'

(28) Ja l'he escrit / esrita
already it-Fem-sg have-1sg written / written-Fem-sg
 'I have already written it.'

As we have established in section 2.4.6, genuine optionality in mature grammars exists during language change when one form is replacing another (Kroch 1989, 1998, Santorini 1992, 1995, Pintzuk 1993, 1995, 1996, 1998, Muxí 1995, etc.). In this case it is assumed that both alternatives enjoy the same preference by native speakers. However, it was also argued that genuine optionality is only a temporary phenomenon since natural languages strive for economy and elimination of redundancy (Chomsky 1993). Over time, optionality is usually reduced either by categorisation or reanalysis. *Categorisation* is the process when one of the alternatives loses its grammatical status in the language. Such categorisation happened in the almost complete loss of V2 in English (Lightfoot 1991). *Reanalysis* happened in the case of Agr when it acquired a weak feature instead of the old strong feature leading to loss of main verb raising (Radford 1997). Note that both of these changes involved elimination of strong morphological requirements in English.

The strife for elimination of redundancy leads to the adaptation of the most economical grammar, as Clark and Roberts (1993) have shown. When the positive evidence upon which parameter setting is to proceed is ambiguous, in a sense that it is compatible with a number of different and conflicting parameter settings (grammars), the learner's *fitness metric*, regardless of frequency of input, will not be able to decide on the correct parameter value. Clark and Roberts argue that in due course the learner's grammar building process will be forced to turn on 'itself'. Relying on its own structure it will opt for the most economical grammar in the present system, thus resolving optionality in a 'pathological' manner, i.e. without external pressure. The process of categorisation usually takes a considerable amount of time. We witnessed the large time-scale in section 2.4.3 with respect to the loss of V2 in

English. Arguably, this process has still not run its course, thus there is no total loss of V2 in English, as there is still what is called a residual V2 in this language. Also, the loss of strong Agr features is still in process in possessive *have*. This is evident in the existence of alternative constructions *Have you any sheep?* and *Do you have any sheep?* in some dialects of English (see Radford 1997).

Apart from categorisation and reanalysis, genuine optionality can be reduced by *semantic differentiation*. Constructions that still look optional on the surface may acquire different pragmatic/semantic values. Thus scrambling in German can be regarded as merely quasi-optional as it produces different LF representations (Langer 1995). Adverb-placement in French infinitives (Pearce 1995) as well as pro-drop and subject placement in Romance (Grimshaw and Samek-Lodovici 1995, 1998 and Adger 1996) are only apparently optional in the same sense. We shall review quasi-optional constructions in section 2.7.2 below.

2.7.2 Pseudo-optionality

Let us see a selection of studies that claim that genuine syntactic optionality does not exist, but is a result of different semantic/discourse interpretations. This is what Adger (1996) claims for the varying placement of Italian subjects. He argues that Italian speakers use a subsystem of their linguistic competence to assign distinct interpretations by constructing different discourse contexts to apparently optional syntactic variants. Thus the postverbal subject acquires a different reading shown in the English translation:

(29) Tre leoni sono scappati.
three lions be-3p escape-pp-3p
 'Three of the lions have escaped.'

(30) Sono scappati tre leoni.
be-3p escape-pp-3p three lions
 'Three lions have escaped.'

Grimshaw and Samek-Lodovici (1995, 1998) show that the referential pro-drop in Italian *ha cantato* is not optional, but it is obligatorily required wherever the subject is referring to the

discourse topic and impossible whenever it is not. Subject inversion affects foci and is also obligatory. Thus neither construction is optional in the next examples:

- (31) Ha cantato.
(She/He) has sung.
- (32) Ha cantato Gianni.
JOHN has sung.

Similar ideas are explored in Langer (1995) who shows that scrambling in the German Mittelfeld is actually not optional, but results in different interpretations. Scrambling is in fact an obligatory movement in the case of weak pronouns, rendering them defocused. However, definite DPs can be both interpreted as defocused or focused due to their position in the Mittelfeld:

- (33) a. Ich habe dem Hund DEN KNOCHEN gegeben.
I have the-DAT dog the-ACC bone given
'I gave the dog THE BONE.'
- b. Ich habe den Knochen DEM HUND gegeben.
'I gave the bone to THE DOG.'
- (34) a. Der Mann trocknete dem Kind DIE TRÄNEN.
the man dried t he-DAT child the-ACC tears
'The man dried the child's TEARS.'
- b. Der Mann trocknete die Tränen DEM KIND.
'The man dried the tears of THE CHILD.'
- (35) a. Der Mann setzte das Kind DER GEFAHR aus.
the man exposed the-ACC child the-DAT danger particle
'The man exposed the child to DANGER.'
- b. Der Mann setzte der Gefahr DAS KIND aus.
'The man exposed THE CHILD to danger.'

Langer (1995) cites optional constructions in English, however, he asserts that they are used with different interpretations:

- (36) a. He looked up the number.
 b. He looked the number up.
- (37) a. He gave the book to the man.
 b. He gave the man the book.
- (38) a. This is Chomsky's latest article.
 b. This is the latest article by Chomsky.

Similarly, Pearce (1995) argues that verb-movement in French infinitives is not optional. Contrary to Pollock's (1989) analysis, Pearce shows that speakers do not arbitrarily choose between the French equivalents of '*to appear often sad is...*' and '*to often appear sad is...*', but their choice is determined by the semantics of the adverb. When it precedes the infinitive, it is more strongly focused and thus makes the construction more marked (Pearce 1995:33). Thus adverbs receive differing interpretations in different (apparently optional) positions by speakers in the examples below, with the adverb in (39)b. being more strongly focused:

- (39) a. Paraître souvent triste n'est pas bon pour la santé.
to appear often sad is not good for the health
- b. Souvent paraître triste n'est pas bon pour la santé.
often to appear sad is not good for the health
 'To appear often sad is not good for your health.'

All of these studies argue that there is in fact no competition between two alternatives as they have different discourse interpretations.

2.7.3 Developmental optionality

Optionality in interlanguage grammars is a well-attested phenomenon both in L1 and L2 acquisition (see e.g. Wexler 1994, Henry 1998, Henry *et al* 1998, White 1990/1991, 1991, 1992a, Eubank 1993/1994, 1994, Robertson 1996, Robertson and Sorace in press etc.). In

this section we shall deal with developmental optionality as present in L1 acquisition. The discussion of optionality in L2 will be delayed until Chapter 3.

Developmental optionality is a common phenomenon in child language. It is expected, since developing languages are by definition unstable, permeable, and in a constant flux of change (Adjemian 1976). Optionality is the result of hypothesis testing in the sense that old hypotheses turn out to be inadequate when new language data are encountered that cannot be parsed. Creation of a new hypothesis, however, does not automatically eliminate the old rule; thus two competing grammars are expected to operate during the time of developmental change. Therefore, optionality allowed by UG in native mature grammars during the time of language change (section 2.4.5) also characterises developing grammars. In fact, developmental optionality may be the major characteristic feature of grammars under construction. Similar grammar-competition exists in language acquisition as in diachronic language change.

Optionality has been extensively investigated in the literature on child language. Wexler (1994) has drawn attention to the so-called optional infinitive phase (OI) in child language. He hypothesised that the OI phase during which tensed and infinitive main verbs are in free variation is the result of the optional presence of the Tense category in the child's grammar¹⁹. Children in the OI phase produce forms such as the following taken from Brown (1973):

- (40) a. Cromer come on Wednesday.
b. Fraser comes on Saturday.

The OI stage has been observed in French children (Pierce 1992) and German children (Poeppel and Wexler 1993). These data confirm Wexler's hypothesis. In French verbs that appear before the negative marker *pas* are inflected and verbs that appear after *pas* are in the infinitive and carry the infinitive marker *-er*. In German the same phenomenon happens, finite verbs appear in V2 position, non-finite verbs stay in sentence final position. These languages with richer morphology than English present clearer evidence for the OI stage, since in English the bare stem of the verb and the infinitive form are indistinguishable.

¹⁹ Wexler (1994) entertains the possibility of an underspecified Tense category in which the [+/-] features are absent. However, since child language in the OI phase completely lacks elements which would be indicators of the [+] feature, such as English *to*, German *zu*, French *à*, *de*, etc., he opts for the missing Tense hypothesis instead.

Hyams (1996) and Wexler (to appear) argue that the children's deficit in the OI phase is not only morphological but is rooted in a more comprehensive deficit in the interpretative/pragmatic abilities. Hyams (1996) argues that both the categories I and D are underspecified which results in optional specificity in these categories. This would account for the optional use of pronominal subjects, root infinitives as well as determiners and free object scrambling.

As a third explanation for the OI phase, Rizzi (1993/1994, 1994) proposes a truncation hypothesis to account for the appearance of root infinitives in child language. Children between the ages of 2;0 and 2;6 optionally project functional categories. This is due to the lack of a principle "CP = root" in child grammars. Vainikka (1993/1994) has argued that clauses with nominative subjects are IPs (such as *I seed you* produced by Nina, 2;1.15), whereas clauses with oblique objects are VPs (e.g. *me ate outside* produced by the same child at the same recording session). Radford (1995a, 1996b) also argues that children start out with a VP (the pre-functional telegraphic stage) and when they first acquire an extended projection above VP, they only optionally project it. He argues for a structure-building account of child acquisition along which the superstructure of functional categories is acquired as a response to positive data from the target language. These are just some of the hypotheses that attempt to explain the optional infinitive stage in child first language development.

In the next section we shall look at a very unique property of optional representations, namely gradience. It refers to the fact that not both of the alternatives in an optional construction are usually accepted to the same extent: one is preferred more to the other.

2.7.4 Gradient optionality

So far we have seen that free variation in the computational system is theoretically prohibited within the MP. On the other hand, in OT optionality at the competence level is possible and has received several analyses. In addition, the phenomenon of gradient optionality has received a considerable amount of attention within the OT framework. In what follows we briefly review these.

In the standard OT framework (Tesar and Smolensky 1998), *equally* ranked constraints can lead to optionality as two candidates emerge as optimal in free variation. Equally ranked constraints result from a tie between two competing constraints.²⁰ This scenario is very rare, since as Hayes (1997) points out, ‘in realistically large grammars it is likely that some constraint deep down within the hierarchy will discriminate between the free variants, wiping out free variation’ (Hayes 1997:15, fn.10). Ties are usually resolved by a lower ranked constraint (Archangeli & Langendoen 1997:15). If there is no lower ranked constraint that can decide between the two outputs, or in case the lower ranked constraints have mutually cancelled each other out, no single optimal output can emerge.

Instead of *equal* ranking of constraints as envisaged in the standard framework, Hayes (1997) proposes that optional outputs are the result of *free* ranking of constraints, where ‘each variant outcome is obtained by fixing the free ranking in a particular way’ (Hayes 1997:15). In other proposals free variation has been explained *variable* ranking of constraints which is very similar to free constraint ranking (Pesetsky 1997, Boersma 1997). Additionally, Hayes (1997) suggests that apart from a free ranking of constraints, constraints have strictness bands and fringes. Let us see all three proposals in more detail.

Pesetsky (1997) accounts for the optional presence or absence of the complementizer *that* in English relative clauses by the tied ranking of two constraints: TELEGRAPH (a constraint which prohibits pronunciation of function words) and LEFTEDGE(CP) (a constraint which requires that the first leftmost pronounced word in CP must be the complementizer). These two constraints are variable in their rankings. The particular ranking will determine whether the complementizer *that* gets spelt out or not.

Boersma (1997) accounts for the alternation between [anpa] and [ampa] in the pronunciation of Dutch speakers by also assuming variable ranking of two constraints. His model, however, contributes to the understanding of optionality by casting light on the issue of *gradient optionality* (see also Sorace 1996b, 1998). It is well known that optionality is very rarely ‘free’, the ideal 50%-50% distribution between the alternating options is extremely rare, except perhaps, as we argued in section 2.4.5, in the case of language change, when one form is replacing another. Boersma (1997:2) suggests that we should interpret the standard OT idea of equal ranking in a probabilistic manner if we are to account for the gradient

²⁰ Equally ranked constraints come about as one constraint acquires the same value as another as a result of either violation or satisfaction of a higher ranked constraint.

nature of optionality. It is conceivable that one form of the optional pair may occur in 80% and the other only in 20% of the cases. This would account for the *strength of preference* between the two alternatives.

The strength of the preference for one form over the other is likely to differ between different neighbouring dialects (a point hinted at in Turkel 1994a and Pesetsky 1997 as well). In addition, the strength of preference will also vary between speakers of the same dialect and even within the same speaker over the course of time.

Complementing Boersma's (1997, 1998) proposal, Hayes (1997) presents another modification of the standard OT framework. Analysing the variable distribution of light and dark allophones of /l/ in American English, he proposes that constraints can not only be mutually ranked in the traditional OT sense, but actually possess a value for strictness on a continuous scale. Some individual constraints vary in strictness, thus their variable ranking on the continuous strictness scale yields a *strictness band*. Hence some constraints not only vary in strictness among each other, but can vary around their own strictness value as well. Where the strictness bands of two constraints fail to overlap, the bandwidth is vacuous: one of the constraints clearly outranks the other resulting in categorical judgements. However, if the strictness bands for two conflicting constraints overlap, optionality ensues. The relative frequency of output forms will depend on how many times one of the conflicting constraints wins out by receiving a slightly higher selection point for the strictness value within the strictness band.

Hayes (1997) accounts for gradient optionality by proposing that the upper and lower limits of strictness bands are not firmly delimited in some cases, resulting in variable limits. These unfixed limits constitute the *fringes* of strictness bands²¹. Hayes denotes the fringes with the traditional well-formedness diacritics such as the commonly-used markers for less than grammatical sentences, that is *?, ?, ??. If a selection point for the strictness value of a constraint is made within the fringe, the output will emerge with a degree of ill-formedness, i.e. marginality or ungrammaticality. This is what we called borderline cases in grammaticality in section 2.5.4.

Hayes conjectures that the fringes of strictness bands 'arise as part of the acquisition process, in cases where *the input data do not suffice* to establish firmly what the upper or lower

bounds of a constraint's strictness bands are' (Hayes 1997:18, my italics). Firm categorical judgements result when UG principles dictate an outcome or where the ambient data is sufficiently robust²². Gradient judgements emerge if no principle of UG forces the outcome and the data are not sufficient. This can happen either when

- relevant data occur in massive *free variation* with further varying realisations for each alternant (like the light and dark /l/ investigated in Hayes' paper)
- relevant data occur with extreme *sparseness* (such as deverbal *-able* adjectives created from verbs, like *obfuscate* → ?*obfusvable*)
- or speakers are exposed to highly *unusual* sentences that are unlikely to occur naturally, typically created by syntacticians to test a proposed constraint or rule (such as subjacency or long extraction).

Thus Hayes (1997) convincingly argues that gradient well-formedness is the residue of the influence of *sparse or uninformative data*. If we assume that children are incremental learners (taking conservatively modest steps, see section 2.5.4), the rise of gradient well-formedness can only be accounted for by the suggestion that the learner does not get sufficient data to eliminate the fringes that it set up as tentative hypotheses. This is usually the consequence of the availability of only sparse, uninformative, or downright misleading data.

The issue of gradient optionality leads to considerations of markedness. Preference for one alternative over the other indicates that one is the unmarked and the other the marked option of the two. In the next section we shall discuss the issue of markedness.

2.8 Markedness

Markedness is a term that has been widely used to define any asymmetry within a system of oppositions (Battistella 1995, 1996).

Despite the differences in the notions and definitions of markedness, there are some common trends in the conception of the marked/unmarked dichotomy. The *marked* item, construction,

²¹ Note that fringes are also a band with a range that defines bandwidth.

²² See the connection regarding the emphasis on robust data with Lightfoot (1991) and Clark and Roberts (1993), although what Hayes defines as a robust rule means a rule without any exceptions (Hayes 1997:27).

or rule is seen as the more constrained one, having a focusing characteristic, a marked property that delimits or specifies it. It is the special, the exceptional, or unusual part of the marked/unmarked pair. The *unmarked* element, on the other hand, is taken as the norm, the natural, universal element, usually the simple and common alternative which is the less informative, less conceptually complex, more basic, familiar, prototypical and the more frequent of the two.

2.8.1 *Typological markedness*

In research on language typology (Greenberg 1966, Comrie 1989, Croft 1990), markedness plays a major part in the discovery of implicational universals. In this conception, the presence of a marked option implies the presence of its unmarked counterpart. With the help of implicational universals it is possible to make predictions about language development and language change. Marked structures in the adult language tend to be later acquired by children. On the other hand, unmarked structures are retained in neutralisation and language attrition, are lost later in aphasia, tend to be more stable historically and are acquired earlier by children, as observed by Jakobson (1941/1968). Jakobson made the claim that crosslinguistic distribution and developmental priority are both related to the same markedness values. The more widely distributed features would be acquired earlier than the less widely distributed features across languages.

2.8.2 *Markedness and learnability in UG*

As opposed to the conception of markedness in the typological work, markedness in the PPT is not connected with the cross-linguistic frequency, regularity or productivity of an element, construction or rule, but with the learnability of language. Therefore markedness has a theory-internal definition espoused by Chomsky (1981) in that the elements of the *core* grammar are taken to be unmarked in a sense that they do not need special external evidence from the target language. Marked elements are part of the *periphery* and need to be learnt. The learning of marked elements necessarily requires positive evidence from the input.

Later, the question arose in the literature on markedness and learnability as to whether the core can contain marked and unmarked parameters, or whether the core consists of purely unmarked parameters and all the marked parameters with other idiosyncrasies of a particular

language are confined to the periphery, as was thought earlier. Chomsky (1986) seems to be of the former opinion, namely that the core contains both unmarked and marked categories. He makes the following three-way distinction: distinction between core and periphery, markedness within the core, and markedness within the periphery. Markedness within the core means that certain parameter values are assumed by learners as default, thus they represent the unmarked value (Hyams 1986). Other core options may be considered marked to a lesser or greater degree²³. However, Chomsky (1986) also pointed out that unmarked default parameter settings might not be acquired earliest, as certain other factors, such as maturation and frequency in the input may intervene. Thus it is possible that marked parameter settings show up earlier if they have more robust (frequent and salient) manifestation in the input the learner is exposed to.

The question of markedness has received a more unified account in the Minimalist Program. As we have already suggested above in section 2.7.1, in the MP structures that adhere to the economy principles are unmarked, as they require the least computational cost. There is a preference for LF (covert) operations over pre-Spellout (overt) syntactic movements. This preference is the outcome of the principles of Procrastinate and Greed. Also, there is a requirement for rules not to apply unless deemed necessary as a result of the principle of Last Resort. If a structure goes against these general principles, it is seen as more costly for the derivation and representations and is therefore more marked. In this version of the theory, Chomsky (1991, 1993, 1995) questions the possibility of the markedness of parameters since parameters are seen as residing in the numbers and feature specifications of functional categories. As a result, hierarchies of accessibility within UG are not relevant in the MP framework (Battistella 1996:91).

On the other hand, OT is in many respects a formal theory of markedness (Smolensky 1996). In OT, markedness implies the robustness of a given property in a given language. OT addresses the question of crosslinguistic as opposed to language-particular markedness by assuming that the same constraints are at play in all languages, but to a greater or lesser degree. The more common a given property cross-linguistically, the more unmarked and consequently the more universal it is. The less common a property among languages, the

²³ The idea that other core options can be marked to a lesser or greater degree raises the possibility of hierarchies of markedness, as manifested in hierarchies of accessibility. This idea is inherent in Jakobson's (1941/68, 1971) *Child Language*, Greenberg's (1966) *Language Universals*, and Keenan and Comrie's (1977) accessibility hierarchies of NPs, etc. These hierarchies of preference, ranging from default to least preferred, have been widely investigated in the empirical research on language acquisition and make the rationale for grammaticality judgements. See Chapter 5 for discussion.

more marked it is cross-linguistically. Extremely marked properties are found quite rarely, and they have minimal (or no) claims to universality.

Again, in the OT view universals are present in each language. However, universals are present in languages to different degrees. Thus if an unmarked (i.e. universal) property is less highly valued in a particular language than in the majority of languages, it will be seen as marked within that language. Battistella (1996:91) raises the possibility that language-particular markedness values could be encoded in deviations from the unmarked constraint.

This view of markedness, however, reduces it to a matter of distribution and ultimately to frequency and this way it becomes similar to the conception of markedness within the typological work. OT and the typological work both require the examination of successively more and more languages to determine the markedness value of each constraint or property across languages. However, the technique used to discover language universals, i.e. unmarked properties, constraints or rules, seems to be less efficient in OT than in the typological work. Implicational universals (e.g. Keenan and Comrie 1977) have a more efficient predictive power for acquisition (see studies on testing predictions in second language acquisition by Eckman 1977, Hawkins 1987, Eckman et al 1988, Gass 1979).

2.9 Conclusion

In this chapter we have briefly outlined how the issues of principles of linguistic organisation, cross-linguistic variation, change and acquisition are treated in the PPT/MP and some other complementary theories. This was in order to introduce the topic of concern in our own investigations, i.e. optionality, as well as to give a rationale for selecting the theoretical framework in which we wish to present and interpret our own study.

In this thesis the PPT/MP model is used, but other theories are introduced to account for some of the issues the PPT/MP theory leaves unexplained. Among these are the nature of the trigger experience (input) as the cause for transitions between developmental stages and the prevalent child-adult differences we find in ultimate attainment, as well as inter- and intra-learner variability. These issues have been partly addressed in Chapter 2 and will be further discussed in Chapter 3.

In the next chapter we outline the main issues in second language acquisition (SLA) theory. In chapter 4 we contrast English and Hungarian and introduce the problem of acquisition of Hungarian focus structures by adult English speakers in the PPT/MP framework. The discussion of our study will be conducted in Chapters 5 and 6 and our conclusions will be drawn in Chapter 7.

3 UG and Second Language Acquisition

3.1 Introduction

Principles and parameters theory has been adopted as a potential component in a theory of second language acquisition (L2A). Although the generativist framework itself says nothing directly about L2A (White 1996a), it provides a firm theoretical framework against which hypotheses regarding L2A can be formulated and tested (Gregg 1996).

The main concern dominating the research agenda between the mid-1980s and mid 1990s was whether adult learners of a second language still have continued access to UG, something that has been, by necessity, assumed for L1 learners (see Chapter 2). This has constituted the '*access debate*' among SLA researchers. A related question concerned the age at which access to UG was assumed to stop being available or the period when it gradually ceased to constrain the emerging interlanguage grammar (ILG). This area of research has crystallised in the '*age debate*'. The third area of inquiry has been conducted into the similarities and differences between L1 and L2 acquisition. Apart from the potentially different learning mechanisms as well as the differing age of first exposure to the target language (TL), we can expect there to be differences between L1 and L2 learning due to the likely influence of the L2 learner's L1. This issue has been addressed within the '*transfer debate*'. In the following sections we shall provide a brief summary of these areas of discussion as they have evolved in the last 15 years in order to identify and circumscribe the issues our study will address.

In section 3.5 of this chapter we shall deal with L2 development with particular reference to optionality, the main issue identified in our study. Specifically, we shall address the topic of the nature of representations at ultimate attainment.

3.2 The access debate

As we indicated above, the access debate dominated the research agenda between 1985 and 1995. The debate crystallised into two extreme positions. Initially there was a sharp contrast between the no-access and a full-access view held by different camps. This situation could not be maintained for long, so several intermediate proposals were created.

Researchers who claimed that adult L2 learners have *no access to UG* in general (Clahsen and Muysken 1986, Clahsen 1988, Bley-Vroman 1989, Schachter 1990) argued that adult L2 learners use different cognitive skills and learning strategies, such as general problem solving, distributional analysis, analogy, linear ordering²⁴, etc. Recent proponents of this view are Meisel (1997) and Müller (1998) who argue that adult L2 learners of German do not use the hierarchical organisation of the TL but rather employ a strategy of linear ordering in creating their IL grammar. Another study comparing L1 and adult L2 acquisition of word order in Dutch by Neeleman and Weerman (1997) has concluded that adults acquire individual construction-specific rules one by one, i.e. in a piecemeal fashion. This is argued to be a process guided by general learning strategies. Their interpretation is supported by the finding that L2 grammars of Dutch show a lack of clustering effect which is present in L1 grammars.

On the other hand, researchers who argue that adults still have *access to UG* do so on the basis of the observation that similarly to L1 acquisition, the ILG of adult L2 learners is also underdetermined by the input (White 1989). In other words, the extent of the success of L2 learning goes beyond the input even though it might not reach the same level of ultimate attainment as in L1 acquisition and L2 learners may not attain a final state identical to the monolinguals' grammatical system. Another argument for the UG-access view is that IL grammars can be described within UG constraints provided a more detailed theory-internal analysis is rendered to the linguistic system of both the target and the interlanguage grammars (see e.g. du Plessis *et al* 1987, Schwartz and Gubala-Ryzak 1992). In what follows we review some studies in which the operation of principles as well as parameters of UG has been investigated in L2 acquisition. We shall conclude that while principles must be operative in L2 acquisition, there is more and more evidence that parameterised aspects are not available in L2 acquisition.

3.2.1 *Access to principles*

The original assumption was that if non-native speaker learners (NNSs) behave in a different way from native speakers (NSs) in production and grammaticality judgements, their grammar

²⁴For instance, Clahsen and Muysken (1986) claim that L2 learners of German move non-finite elements rightward, an operation non-existent in natural languages as it is disallowed by UG.

could not be identical to that of NSs, therefore it could not be constrained by UG. Fairly recent papers have still espoused this view (Schachter 1996, Flynn 1996 and Epstein *et al* 1996, 1998). However, other researchers argue that even if the two systems prove to be different, the ILG can still be constrained by UG principles. According to this argument, the learner might choose a possible option within UG even though the chosen option is not instantiated in either the L1 or the TL (du Plessis *et al* 1987, Hulk 1991, White 1992a, Martohardjono and Gair 1993, Schwartz and Sprouse 1994, 1996, *inter alia*). The argument is then that IL grammars are natural grammars since they are constrained by UG. However, it is possible that their acquisition follows a different path from that of L1, in other words, IL grammars can go through different developmental stages. Also, in the majority of cases they have a different end state from that of L1 acquisition. These differences we shall argue are due to the different initial states characterising L1 and L2 acquisition as well as differences in the nature and amount of input L1 and L2 learners receive. In what follows we give details about both positions regarding the access of UG.

As indicated above, the observable differences between the development of child L1 and adult L2 grammars of the same language has engendered a lot of speculation that UG might not guide adult language learning. Clahsen and Muysken (1986) have pointed out the differences in the development of word order in child L1 and adult L2 learners of German. They argue that child L1 learners start out from an OV structure and progress through developmental stages which, although not target-like at points, conform to the constraints of UG at all times. On the contrary, adults start out from a VO structure, regardless of their first language²⁵. Consequently, in order to best approximate the target grammar, adults have to resort to a series of general cognitive strategies (Slobin 1985) to 'patch up' the deficiencies in the ILG caused by the initial default setting. L2 learners of German are said to go through the following stages (adapted from Clahsen and Muysken 1989:57):

Phase I: SVO + adverb preposing, resulting in incorrect *V3 structures:

acht uhr ich komme zu hause

Phase II: extraposition of subject + all non-finite elements placed clause-finally, thus unsuccessfully attempting V2 structures:

²⁵ Note that Clahsen and Muysken (1986) thus argue against the transfer of L1 properties. They claim that adults initially hypothesise an SVO word order, led by the canonical word order strategy. This is similar to the default grammar proposed by Platzack (1996) and Klein and Perdue (1997), see section 3.5.1.2.



jetzt liest ein buch Susanne

Phase III: AdvV + subject-verb inversion:

gestern abend war die polizei gekomm

Phase IV: verb end in subordinate clauses:

...wenn jetzt die papieren kommen

Clahsen and Muysken (1986, 1989) argue that these stages are not constrained by UG but rather are created by the employment of general cognitive strategies, such as use of canonical word order, extraposition, linear ordering, and so on. Proponents of the full access view on the other hand have pointed out that the same learners' grammars can indeed be analysed as UG-constrained under the assumption of a different, more elaborate syntactic analysis involving an extra IP projection in German (du Plessis *et al* 1987). In response, Clahsen and Muysken (1989) have maintained their position that although L2 learners may have access to UG principles such as structure dependency, the parameterised aspects of UG are not available for them. Apart from the earlier word order data from child L1 and adult L2 learners of German (Clahsen and Muysken 1986), they base their revised argument on data from acquisition of the inflectional paradigm and negation (see Clahsen 1988). When comparing the data from these three studies, substantial differences are observed between L1 and L2 learners. These striking differences show up in the spontaneous production of learners. Clahsen and Muysken (1989) argue that in L1 development parameter setting is indicated by the appearance of a cluster effect (see Chapter 2 section 2.5.1). Acquisition of the full inflectional paradigm is coterminous with subject-verb inversion, correct V2 order as well as target-like placement of the NEG marker *nicht* also seems to be part of the cluster. The authors argue that this relatively sudden restructuring which takes place within a period of one month is triggered by a simple element from the PLD. The acquisition of second person singular present declarative *-st* ending causes the child to identify the full inflectional paradigm, which leads to correct representation of finiteness, which in turn motivates correct verb placement in main clauses. Similarly, as soon as complemetizers are available in the child's lexicon, it is argued that verb placement in subordinate clauses becomes target-like. Clahsen and Muysken (1989) demonstrate that this developmental shift is not present in adult L2 acquisition. Although the notion of subject-verb agreement is present from the beginning of L2 development, establishing a morphological paradigm in an L2 is more problematic, as witnessed by random and sometimes incorrect use of inflections. Attainment of the full paradigm unfolds more gradually and shows a lot of intra- and inter-learner variation. Most crucially, acquisition of

subject-verb agreement develops independently of the development of verb placement in main, subordinate and negative clauses. It is claimed that rather than appearing as part of a cluster, the rules are learnt piecemeal by L2 learners. Clahsen and Muysken (1989) are led to conclude from their observations that adults no longer have open parameters, instead they have only the principles of UG and the knowledge of their L1 with its fixed parameters and its lexicon. Therefore the IL is assumed to conform to UG until the L2 input forces adjustments to be made to the L1-based system. However, it is argued that the adjustments are made not by the domain-specific linguistic module but by the general learning module, creating UG-violations. Thus, adult L2 learning is not parameter fixing as is L1 acquisition, nor is it parameter resetting as is child L2 acquisition. The authors conclude that in adult L2 development parameter resetting is no longer possible. The entertainment of new hypotheses does not lead to restructuring of the IL grammar, rather only to the addition of new rules and patterns in a piecemeal fashion. Thus Clahsen and Muysken (1989) argue that even when the outcome appears to be similar in L1 and L2 acquisition, L2 attainment is only the result of successful ‘mimicry’ of native speaker performance, but certainly not the result of similar learning mechanisms. As we shall see, Tsimpli and Roussou (1991) and a number of other researchers recently have defended the position that ILGs are possible languages but devoid of the possibility of parameter resetting.

As was demonstrated in the work by Clahsen and Muysken (1989), the strictly no-access view has been softened by conceding that adults still have access to the invariant principles of UG (see also Bley-Vroman *et al* 1988, Schachter 1990, 1996). Although the access debate still has not been resolved for want of unequivocal evidence for either position²⁶, it has been extremely useful in one respect. As mentioned in the introduction to this section, the no-access view can easily be invalidated if the TL and the learners’ ILG receive a satisfactorily detailed syntactic analysis. The welcome result of the access debate is that recent L2A studies have been conducted based on an extremely fine and current syntactic analysis. For instance, Eubank (1992) argues for stages of L2 German in terms of AgrP and TP projections. White (1992a) also shows that French learners of English project both a TP and an AgrP. These studies use the split IP analysis of Pollock (1989).

²⁶ We believe it is never going to be possible to solve the UG access dilemma, since the two camps use different theoretical premises and assumptions. The lack of a common theoretical framework makes it impossible to decide which proposal is right (see proponents of each view in the text).

Other studies within the PPT have also analysed ILGs as natural languages, at least as far as adherence to the *principles* of UG is concerned. For instance, White (1988), Flynn (1987) and Martohardjono and Gair (1993) have demonstrated that L2 learners do not deviate from the constraints of the *principles* of UG²⁷. Recently, access to the invariant principles of UG during L2 acquisition has been increasingly presumed (Eubank 1995, Towell and Hawkins 1994, White 1996a, 1996b, *inter alia*). However, even though UG *principles* are assumed to be operative in any language learning process, the differences between L1 and L2 acquisition still remain to be explained.

After the abandonment of the strict no-access-to-UG, the question arose whether rather than a wholesale loss of UG options in L2 acquisition, different components of UG might have different status in L2 acquisition. This engendered a wealth of positions with respect to the extent of UG access. Is it the case that both principles and parameters that are not instantiated in the L1 are inaccessible to the L2 learner thus leading to UG violations when the L2 requires them (Schachter 1989, 1996)? Or is it the case that ILGs are fully constrained by UG, but parameters that have not been instantiated in the L1 are unavailable to the L2 learner, hence where the L1 and L2 differ, parameter resetting and activation becomes impossible in L2A (Bley-Vroman *et al* 1988)? Alternatively, do L2 learners have access to both parameters realised by the L1 as well as parameters not instantiated in the L1, thus being able to reset parameter values and activate new parameters (Zobl 1989, 1990, Flynn 1987, Martohardjono and Gair 1993)? If UG principles remain available but parameters responsible for cross-linguistic variation are not operative, what are the reasons for and the nature of the attenuation of access to functional categories? Are they initially missing only to be gradually instantiated during L2A (Vainikka and Young-Scholten 1994, 1996, 1998a, 1998b)? Or, are they subject to maturation during childhood and hence atrophy before the onset of adult L2 acquisition (Clahsen and Muysken 1986, 1989, Tsimpli and Roussou 1991, Tsimpli and Smith 1991, Smith and Tsimpli 1991, 1995, Smith, Tsimpli and Ouhalla 1993, Beck 1996, 1997, 1998)? Do all the aspects of parameterisation become the subject of critical period effects or are there *differences within the functional module* (Tsimpli 1996b, 1997, Tsimpli and Stavrakaki to appear)?

²⁷ Studies that have attempted to show that L2 grammars do exhibit 'wild' rules which are not constrained by UG in the sense of Goodluck (1991) have failed to provide convincing evidence. The allegedly non-UG-constrained preposition-stranding data of Klein (1995) have been shown to indeed belong to UG, as this construction is attested in natural languages.

As we can see, the revised focus of investigation has allowed researchers to ask more detailed questions about the development and end-state of the IL grammar. There has been a concerted attempt at providing theory-internal *explanations* to facts of L2 acquisition, rather than merely point out the differences between L1 and L2 acquisition, a dominant practice in the original access-to-UG debate (Schwartz and Eubank 1996).

As a summary, *principles* are assumed to be still available to the adult learner for the building of the L2 grammar. There seems to be a consensus arising among researchers working within the generative framework that differences between L1 and L2 acquisition may be accounted for by an attenuated access to *parameters*. The question occupying the research agenda at present is whether parameters are still available for L2 learners to activate and reset, and if they are, whether L2 learners are able to reset them. In the next section we review the positions taken on these issues.

3.2.2 Access to parameters

3.2.2.1 L2 acquisition

Recently, SLA theory has embraced the Functional Parameterisation Hypothesis (section 2.3.2.) according to which functional categories (FCs) are seen as the locus of parametric variation. As indicated in the last section, the current controversy in UG-based L2A research centres on the possibility of parameter activation and resetting. More precisely, research has been directed towards the emergence of new FCs not realised in the L1 grammar and changes in feature values of FCs differently instantiated in the L1 (see Towell and Hawkins 1994).

As Ratwatté (1995) has pointed out, both activation of a new FC and resetting the values of existing FCs entails a change in the underlying representation of the TL grammar. On the one hand, learners have to notice properties *not* present in their L1 and work out the related consequences in the L2. The change in mental representations will result from the computation of the consequences of the newly activated FC in the IL grammar. We call this process *activation* of a new FC. On the other hand, *resetting* the values of existing FCs requires modification to existing hypotheses. Learners need to notice the discrepancies between their L1 and L2 and adjust their underlying representations of the TL accordingly. In both cases,

learners need to discover the implications that the differences between L1 and the L2 have on the rest of the grammar. Note that *noticing* new or different properties of the L2 is a crucial element in the process of parameter activation and resetting (see Truscott 1998 and fn. 40 below).

Zobl (1989, 1990) argued that although learners initially misanalyse the L2 input, they are eventually able to reset a parameter and activate a new functional category. He demonstrated that Japanese learners of English are able to activate a new FC, more precisely Agr, in their ILG. These learners are shown to initially misanalyse subject NPs in English as if they were topic/theme, based on their L1, a topic-prominent language. The misanalysis is indicated by the learners' attempt to keep low referential and/or rhematic NPs out of the subject position by the overuse of expletives. However, it is shown that they eventually manage to activate the target parameter for subject-prominence.

In contradiction to Zobl's findings, other researchers have argued that FCs are not accessible or are only partially accessible to the L2 learner through the L1 settings. This position is generally termed the Failed Functional Features Hypothesis (Hawkins and Chan 1997). Bley-Vroman *et al* (1988) first proposed the *attenuated-access-to-parameters* view. Beck (in Beck, Eubank and Schwartz 1995, and Beck 1996, 1997, 1998) and Hawkins and Chan (1997) have adopted the *impaired-access-to-FCs* view. Tsimpli and Roussou (1991), Tsimpli and Smith (1991) and Smith and Tsimpli (1991 and 1995) have taken the 'attenuation' idea to its logical extreme, by expounding the *no-access-to-FCs* hypothesis.

Tsimpli and Roussou (1991) postulated that the UG-lexicon, i.e. the universal set of functional categories, is itself subject to critical period effects. Initially, the child has all the options of UG; i.e. all FCs are available to choose from. Those FCs that are not instantiated in the L1 grammar gradually disappear, leaving only the features encoded in the entries of L1 lexical items behind. Therefore, access to FCs becomes impossible after the end of the critical period. Consequently, all FCs and their feature values not instantiated in the L1 lexical entries become unavailable in adult L2 acquisition. This position predicts that when the L1 does not employ a functional category, instantiation of it will be impossible in the IL grammar, and when the L1 and L2 functional category features differ, no feature-values can be re-established. Thus parameter activation and resetting is not possible in L2 acquisition. What learners are found to do instead is reanalyse the TL input in the light of the L1 parameter

values. This was observed in the case of Greek learners of English who were found to reanalyse the English subject pronouns as agreement elements, i.e. pronominal clitics left adjoined to the verbs, just as non-subject-clitics are in Greek. This is confirmed by the fact that Greek learners of English leave out non-referential subjects, i.e. expletives, even at quite advanced levels. Thus, contrary to Zobl (1989, 1990)'s Japanese learners who were found to be able to reset the parameter of Agr, Greek learners of English appear unable to reset the Agr parameter.

In Tsimpli and Smith (1991) and Smith and Tsimpli (1991 and 1995), the authors investigated the linguistic makeup of Christopher, a linguistic savant. Christopher, in his mid-30s, is fluent in some 18 languages, but is severely impaired in other cognitive areas. Tsimpli and Smith argue that Christopher's L2 grammars are a testimony to the no-parameter-resetting hypothesis, since his representations contain the English values for parameters. What he has managed to do, they argue, is acquire the vocabulary of these foreign languages and use them in a grammatical system which still retains the English parameter settings.

In a different L2 study, Tsimpli (1996b, 1997) has subjected the Failed Functional Features Hypothesis to empirical testing. While she maintains that the functional module (the UG lexicon) is severely impaired in L2 learners, she refines the absolute no-access-to-FCs hypothesis. As we saw in section 2.3.3. in Chapter 2, within the minimalist framework, features are divided between interpretable and non-interpretable ones. In accord with Radford's (1997) observation in section 2.5.5, Tsimpli's (1996b) prediction was that non-interpretable features are more difficult to acquire than interpretable features and will show more optionality during development. Universally strong features (such as the Q feature in interrogatives) are easier to identify from the PF output as they have overt manifestations, e.g. through a distinct word order, a change in prosody and/or a distinct morphological realisation. Interpretable features, such as the [+wh] in English or the [+f] feature in syntactic focusing in languages like Hungarian and Greek, are easier and earlier acquired by children (Tsimpli 1996a) since they can identify them from the PF output. This is shown by the early preposing strategy of children to place focused and *wh*-phrases sentence-initially for reasons of scope. However, preposing of operators is not accompanied by verb raising or SAI. Tsimpli (1996a) calls this *partial grammaticalisation*.

Our study on child acquisition of Hungarian (reported in Appendix A) supports this observation. We carried out a search for all operator clauses in the files of the five Hungarian children in the CHILDES database and compared the results with spontaneous production of adult L2 learners of Hungarian. In our investigations we also found that while children and adult second language learners prepose elements for scope reasons, they have continued difficulties with the concomitant verb movement. For a detailed report of our exploratory study into L1 and L2 acquisition of Hungarian verb movement in focused, negative and interrogative clauses we refer the reader to Appendix A.

To explore the issue of the differential learnability problems interpretable and non-interpretable features present in L2 acquisition, let us consider a study on L2 acquisition by Tsimpli (1996b see also 1997). She tested Greek learners of English on a resumptive strategy which is present in English *wh*-sentences, but not in Greek. Although her study is based on only percentage data, the results support her hypothesis that non-interpretable features are difficult or even impossible to acquire. She has found that transfer effects were present from the early ILG up to the very advanced stages, although learners' PF outputs managed to approximate the L2 to a considerable degree. Learners were found to be quicker in identifying the phi-features on pronouns (which are [+interpretable] features) and they managed to reanalyse English pronouns from a clitic status to a fully non-affixal pronoun. However, the phi-features on T and C (both [-interpretable] features) are not reset leading even advanced learners to accept ungrammatical sentences such as

- (41) *Who do you believe that came yesterday?
- (42) *Maria knows what is the name of the doctor.

Importantly, Tsimpli (1996b, 1997) evokes the role of the input in the distinction between the acquisition of interpretable and non-interpretable features. Since non-interpretable features are less salient than interpretable ones, they do not always bring about parameter resetting. In some cases they affect output representations which *look* like the L2 overt realisations, but do not have corresponding feature-specifications. Thus, morpho(phono)logical reanalysis of English pronouns is easier than changing the resumptive strategy in C from the Greek value (no *that-t* effect) to the English value (presence of *that-t* effect).

Beck (in Beck, Schwartz and Eubank 1995, Beck 1996, 1997 and 1998) argues that the capacity of adult learners to represent the strength values of V-features under functional heads changes with maturation. She suggests that this change is a direct result of a modified cognitive makeup – itself an effect of a critical period (Beck 1997:96, see also Eubank and Gregg 1996, 1998). Beck thus hypothesises that the adult ILG is characterised by local impairment, hence the Local Impairment (LI) hypothesis. Investigating English learners of German, she predicts that the ILG of these learners will show gaps in the underlying knowledge of word order throughout development and even at advanced levels. More specifically, verb raising in German will be optional both in the early and in the later English-speaking learners. Note the similarity between this position and that of Tsimpli and Roussou (1991), particularly in the role accorded to a critical period in the loss of target-like representations of FC values. The difference between Tsimpli's (1996b, 1997) and Beck's studies (1996, 1997, 1998), however, is that while Tsimpli hypothesises that non-interpretable features will be more difficult to acquire, Beck's hypothesis concerns the difference between N-features and V-features of functional categories. Beck's hypothesis is confirmed by the grammaticality judgements of her subjects: even at advanced levels, English learners of German have non-target-like representations of verb placement in German. Their representations of the V-features under I^0 are unspecified, leading to optionality in their judgements. Again, the reason of this under-specification is accounted for by a linguistic impairment to this part of the language faculty due to maturation.

Hawkins and Chan (1997) examined Chinese learners of English while testing the Failed Functional Features Hypothesis. The first language of their subjects were Mandarin and Cantonese which differently instantiate FCs in the CP from English. While English relative clauses exhibit operator movement, Chinese uses resumptive pronouns within relative clauses. The authors have found that their learners behave in a target-like manner in most cases, but the findings reveal the effect of an early misanalysis present even at an advanced level: learners misanalyse English relative clauses (*wh*-operator + variable sequences) as *wh*-topic + pronominal sequences. The results constitute additional evidence for the claim that L2 learners' mental representations do not always match that of native speakers even though their ILG closely resembles natives' grammar in other areas. Again, an impaired access to the functional module in adult learners is taken as responsible for the mismatch between the L2 learners and NSs.

3.2.2.2 Linguistic impairment

In addition to the studies conducted on adult L2 acquisition reviewed in the previous section, the Failed Functional Features Hypothesis has been supported by research carried out on people with damaged or deprived linguistic systems. Speakers within this heterogeneous group belong to one of many categories. One subgroup consists of aphasic or agrammatic speakers, individuals with dysphasia (in other word specific linguistic impairment (SLI)), as well as clinical cases of people with left hemispherectomy. Another subgroup consists of speakers with late exposure to linguistic input, i.e. people deprived of relevant linguistic input, such as Genie and Chelsea, as well as congenitally deaf people who were not introduced to sign language in childhood (Curtiss 1988, Berent 1996).

We shall see that the study of these damaged or deprived linguistic systems has repeatedly made it possible to dissect the language faculty into its dissociable components. These speakers' linguistic systems reveal highly specific deficits, clearly describable by the divide between lexical and functional categories.

Functional categories have indeed been shown to be missing in most of these cases. Grodzinsky (1990) and Ouhalla (1992b) have observed that agrammatic patients' speech lacks the functional architecture which is crucially characteristic of normal native speakers. As we mentioned in section 2.5.5. in the previous chapter, speakers with dysphasia or SLI have also been shown to have difficulty in representing functional categories and their concomitant syntactic structure (Gopnik 1990, Gopnik and Crago 1991, Gopnik 1994, Clahsen 1991, Fletcher and Ingham 1995, Rice, Wexler and Cleave 1995, Hansson and Nettelbladt 1995, Leonard 1995). Interestingly, English children and adults with SLI have been observed to have a morpho-phonological problem that is not exhibited to the same degree in Italian and Hebrew speakers with SLI (Leonard 1995, Fletcher and Ingham 1995). It is still to be determined whether SLI speakers have a representational deficit related to functional categories or whether their linguistic problems can be accounted for by processing difficulties involving the non-saliency of morphological and functional categories. Studies on Swedish SLI children by Hansson and Nettelbladt (1995) however support the functional deficit hypothesis since their subjects' grammar not only lacks the grammatical elements associated with functional categories but displays word order deviations as well (see section 2.5.5).

Functional categories have also been argued to be missing in the case of Genie who missed out the critical period for this aspect of grammar (Eubank and Gregg 1996, 1998) and congenitally deaf learners deprived of suitable linguistic input in their childhood (Curtiss 1988, Berent 1996). As mentioned above, the same dissociation has been found in the special case of linguistic impairment found in Christopher, a polyglot savant studied by Tsimpli and Smith (1991) and Smith and Tsimpli (1991 and 1995). They argue that Christopher's deficit is also in the inability to acquire functional categories in any of the numerous subsequent languages he has learnt.

In the above cases of linguistic impairment, the causes of missing morphology and accompanying deviations in the syntactic domain can be found either in late exposure to crucial linguistic data or in a (potentially fatal) damage to the linguistic system. It has been argued that these learners have no access to functional categories whatsoever, i.e. the parameterised aspects of universal grammar have not been utilised in their grammatical systems. Remember that in the L2 studies maturation was assumed to be responsible for the impaired access to FCs. The question of availability of crucial linguistic input for the timely activation of the innate constraints of UG takes central position in the 'age debate', to which we turn in the next section.

3.3 The age debate

The age debate in SLA research has been the most enduring one in the field. It has centred around two questions: (1) whether there is an optimal age for L2 acquisition and (2) whether it is ever possible to achieve native-like proficiency in an L2.

3.3.1 The critical period

Penfield and Roberts (1959) first entertained the Critical Period Hypothesis. Penfield earlier hypothesised that after the age of 10-12/14 the established connections of the cortex of the brain become fixed and cannot be further modified. Consequently, there is a loss of plasticity in brain structure, therefore an age-related decline in learning ability is expected. Lenneberg (1967) has extended Penfield's hypothesis on the basis of clinical evidence. He claimed that

there is a lateralization process between the two hemispheres of the brain during the first dozen years of life. After that there is a decreased potential for language learning due to the increasing prohibition in the reorganisation of the established brain structures. Thus, Penfield and Lenneberg identified puberty as the cut-off point in the ability to achieve native-like fluency in any language, first or subsequent.

The idea of the Critical Period Hypothesis has resurfaced within UG research on L2 acquisition as well. Although the critical period hypothesis in L1 acquisition is related to the critical period hypothesis in L2 acquisition, the two are not one and the same phenomenon, as stressed by Schachter (1996), Eubank and Gregg (1996, 1998) and Bialystok (1997). The question has been formulated whether there is a sudden decrease in access to UG at puberty, a gradual decline, or no decline at all.

In addressing the possibility of a critical period in L2 learning, first there was a need to refine the term and render it an operational definition. It was pointed out that it is probably more appropriate to talk about a 'sensitive' rather than a 'critical' period, as whatever biological or cognitive determinants there are of capacities, they are unlikely to become totally unavailable after a certain age (Lamendella 1977, Bornstein 1989, Eubank and Gregg 1996, 1998). Also, Seliger (1978) pointed out that there is a *series* of sensitive periods for different linguistic components. He therefore established the notion of a 'multiple critical period hypothesis' instead of the single critical period assumed earlier for language learning in general.

In essence, the age debate centres on the observable differences between L1 and L2 acquisition. According to Ellis (1985a:99), researchers participating in the age debate have had to address three properties that seem to differentiate L1 from L2 learning. These are (1) the rate of learning (relative learning speed), (2) the route of learning (the distinct stages of development), and (3) the outcome of learning (success at ultimate attainment). We argue that while rate of learning is irrelevant to the age debate, the different routes of learning and differential success levels achieved by the majority of adult L2 learners are indeed in need of an explanation.

Rate of learning is a measure of relative learning speed and has no direct relation to general cognitive maturity. Therefore any of those studies that attempt to compare child and adult acquisition on the basis of their ability to memorise various linguistic categories (usually in a

laboratory setting) have no bearing on the child-adult differences that obtain in language development.²⁸ Route of learning, although initially claimed to be similar for L1 and L2 learners by the creative constructivists in the 1970s (i.e. Bailey, Madden and Krashen 1974, Fathman, 1975, Cazden, Cancino, Rosansky and Schumann 1975), has been shown to be more different than what was first assumed. Studies which directly compare L1 and L2 acquisition (Cook 1973, Flynn 1983, Clahsen and Muysken 1986, 1989, Clahsen 1988, 1990, Meisel 1991, 1997, Neeleman and Weerman 1997, etc.) have repeatedly shown that L2A exhibits different stages of development from that of the ones found in L1 development. This is expected, especially if the L1 of the adult learners is seen to have an influence on the ILG. Unfortunately, we still do not have a clear indication of what the exact stages of development are for adult learners of second languages, except for the acquisition of German (Clahsen and Muysken 1986, 1989, Pienemann and Johnston 1987).

More specifically, Zobl (1995) and Zobl and Licerias (1994) have shown that L1 and L2 learners markedly differ in their acquisition of FCs. It has been argued that in L1 acquisition the emergence of FCs proceeds in a category-specific fashion, i.e. the category DET appears before INFL, which in turn precedes COMP (see Vainikka 1993/1994, but cf. Radford 1990, 1995a,b, 1996a,b, who argues for a simultaneous appearance of all FCs in English children). It is also argued that in L1 acquisition bound morphology triggers acquisition of FCs and their feature specifications (Clahsen 1988, Wexler 1994, etc.) However, in L2 acquisition learners exhibit cross-categorical development of FCs, since INFL and COMP morphology appears from the beginning in an unsystematic fashion (Clahsen 1988). The suggestion that the acquisition of bound morphological paradigms triggers syntactic development in L2A (Eubank 1992, 1993/1994, 1994a, 1994b, 1996) has not been supported by empirical research. In fact, Schwartz and Gubala-Ryzak (1992), Schwartz and Sprouse (1994, 1996), Sprouse (1998), Tsimpli (1996b, 1997) and Lardiere (1997) have all argued for a dissociation between morphological acquisition and syntactic development in L2A²⁹. It has been suggested that instead of bound morphemes, it is free morphemes which trigger development in L2A

²⁸ See studies of this type reviewed in Ratnasabapathy (1994).

²⁹ Even for L1 acquisition, Verris and Weissenborn (1992) and Poeppel and Wexler (1993) have argued that morphological acquisition is not related to acquisition of verb-raising (cf. this view, however, with that of Clahsen 1990/1991).

(Vainikka and Young-Scholten 1994, 1996, 1998a,b)³⁰. In addition, learners do not set all of the necessary parameters in the same way and at the same time as L1 learners. This leads to stages of acquisition not evidenced in L1 learning. Also, the computation of the consequences of a newly (re)set parameter may present the L2 learner more difficulties than L1 learners. Switching to the target value may not be accompanied by clustering of related phenomena (White 1985, 1986, 1991, Phinney 1987, Liceras 1988, Neeleman and Weerman 1997, etc.).

The third difference distinguishing L1 and L2 acquisition is level of ultimate attainment. This issue has recently received a lot of attention and generated a healthy discussion within the field. As pointed out earlier, two questions have had to be addressed within the age debate with respect to L2 acquisition: (1) whether younger is better for L2 acquisition and (2) whether it is ever possible to achieve native-like competence in an L2 (Kim *et al* 1997). The first question focuses on maturational effects, which take place during the sensitive period(s) so that an earlier age of onset of learning has an advantage over a later age of onset (Long 1990). The second question relating to ultimate attainment does not take maturational effects into consideration. Instead, it asks whether there is a cut-off point beyond which native-like acquisition of an L2 becomes impossible.

Both questions have been addressed by a series of studies carried out by Johnson and Newport (1989, 1991) and Johnson (1992). Johnson and Newport (1989) found that the end of the critical period is around the age of 7. Subjects who were exposed to English before age 7 performed similarly to native speakers. The researchers also found that there is a gradual maturational decline in ability from 7 to about 15 years of age. After age 15 however, Johnson and Newport found a dramatic drop in ability to learn a second language. They based this conclusion on the finding that in the older group (above age 15) there ceased to be a correlation between age of exposure and performance. In short, Johnson and Newport argue for a dramatic maturational change, i.e. an irreversible loss of plasticity or readiness for language learning, after the age of 15. As a result, it is claimed that learners above age 15 find themselves in a steady state of limited success in the L2. Johnson and Newport's findings therefore seem to support the Critical Period Hypothesis.

³⁰ The difference between free and bound morphemes is explained in Ouhalla (1991). Bound morphemes correspond to inflections and free morphemes are elements such as progressive *be*, perfective *have*, the negative marker *not*, the complementizer *that* etc. in English.

Not unexpectedly, the Johnson and Newport studies and their replications have had a tremendous influence on the way the Critical Period Hypothesis has been evaluated. However, these studies are not devoid of mistakes as some of their detractors have shown (Ellis 1994, Percival *et al* 1996, Singleton 1995, Kellerman 1995a, Bialystok and Hakuta 1994, Elman *et al* 1996, Bialystok 1997, etc.) It has repeatedly been suggested that the evidence based on which Johnson and Newport formulated their conclusions has not been unequivocal. Remember that Johnson and Newport argued that after age 15 the possibility to learn an L2 dramatically diminishes. However, Bialystok and Hakuta (1994) re-plotted the original data and found that the end of the decline of an abating learning ability is in fact at age 20 instead of 15. In a similar attempt to refute the drastic age-related cut-off point argued for by Johnson and Newport, Elman and his collaborators (Elman *et al* 1996) also reanalysed the original data. Intriguingly, they found *no* cut-off point, but a continuous fading of abilities characteristic from birth throughout the entire lifetime of learners³¹. Both these studies have shown that the tendency for proficiency to decline with age projects well into adulthood and does not exhibit a fatal drop at around age 15.³² We can conclude that the results of the reanalyses carried out by Bialystok and Hakuta (1994) and Elman *et al* (1996) have presented unassailable evidence that there is no defined cut-off point in learning potential around puberty. Rather, there is a gradual decline in abilities that characterises the entire lifespan of language learners.

Having said that, both reanalyses point out that what is indeed different between the two groups identified by Johnson and Newport is *variability*³³. Whereas young learners behave in a strikingly similar way to each other, there is considerable individual variation in the case of adult learners³⁴. Some of the adult learners perform better than young learners and some of them are substantially worse. Bialystok (1997) attributes the differential success rate of adults to varying learning experiences outside the U.S. previous to testing. She also suggests that learners before the age of 7 might have had English as their dominant, i.e. first language (rather than Korean or Chinese being their L1). Thus they *are* in effect native speakers of

³¹ Or, more precisely, until the age of around 40, the age-range that the original Johnson and Newport studies investigated.

³² Elman *et al* (1996) point out that their single non-linear function by which they explain the steady decline in abilities throughout the whole lifespan accounts for 63.1% of the variance in the original data, while Johnson and Newport's drastic decline hypothesis accounts for only 39.25% of their own data.

³³ The two groups were young learners who were exposed to English before the age of 15 and older learners who started learning it after age 16.

English and this would account for their indistinguishable native-like performance. In fact, Bialystok goes further to argue that the only factor contributing to the decline in proficiency between 7 and 20 years of age is in fact the amount of time spent learning and speaking the target language in the TL environment. It is interesting to note in this regard that Kellerman (1995a) suggests that the sole contributing factor that might interact with performance is length of exposure to the target language *regardless* of where that exposure took place – whether in the target language environment or in a foreign language context.³⁵ Kellerman (1995a) bases his argument on data from Dutch learners of English as a major subject at college, who from the level of 2nd year at college proved to be similar to natives on structures that are both similar and different in the two languages.

Kellerman (1995a), however, does not rule out the possibility that Chinese and Korean learners have more difficulty acquiring English than Dutch learners *precisely* because of the typological differences between the source and target languages, a point that Bialystok (1997) also returns to. Bialystok strongly argues that structural differences between L1 and TL account for the differential success rate between younger and older learners. She agrees with Kellerman's (1995a) proposal that only those structures of the target language will show an age-related decline, which are different in the L1 and the TL. In the case of Chinese and English, she argues that plurals, determiners and the subcategorization of some verbs are different, thus they are expected by Bialystok to show an age-related decline. On the other hand, Bialystok predicts that structurally similar constructions will show no age-related decline in performance. Bialystok finds her predictions born out by her data. She points out that Johnson's (1992) data collected on the original test materials but in the written mode show that Chinese and Korean learners perform uniformly on the present progressive, auxiliaries, pronominalisation and word order, regardless of when they started learning English. The author argues that this is expected under the assumption that these structures are similar in the two languages.

³⁴ Variability is shown by a greater variance around the mean regression line in the plot graph of the data for people above the age of 15.

³⁵ He also, very tentatively, suggests that length of exposure to the L2 in a foreign language context might be linked to learners' aptitude or talent. He argues that people with a stronger aptitude or talent usually pursue a university degree and a professional career and ultimately become experts in their profession and consequently represent exceptionally advanced speakers of the L2.

However, Bialystok (1997) stops short of offering a linguistic explanation of the alleged effect of structural differences between the L1 and the target language. It is insufficient to make *ad hoc* predictions on the basis of surface (construction-specific) properties of the L1 and TL. Bialystok's (1997) idea as it stands is, in effect, a revamping of the contrastive analysis hypothesis in its original form, such that was advocated by Lado (1957). Kellerman's (1995a) proposal for a research agenda seems slightly more refined. Crucially, the structural differences need to be examined within a unified theoretical framework, such as the one that sees functional categories as a source of cross-linguistic variation. Now we turn to those studies which see access to FCs as contingent upon the critical period.

3.3.2 *Functional categories and the critical period*

As we have indicated in the section above, Bialystok's (1997) and Kellerman's (1995a) studies have given rise to the suggestion that child-adult differences in language acquisition might be explainable by a differential status of FCs in the two sets of learners. If age-related differences can be accounted for by the impaired access to the functional module in adults, this would support the Failed Functional Features Hypothesis, which states that the attenuated access to FCs is a result of the critical period in L2 acquisition. Eubank and Gregg (1996:6, see also 1998) indeed speculate that 'there may be multiple CPs [critical periods] for linguistic competence, perhaps with different timings, or that some components (modules) of linguistic competence may be subject to CPs while others not'. This insight has been investigated in neurolinguistic research carried out on congenitally deaf speakers as well as adult L2 learners by Neville and her associates (Neville 1995, Neville *et al* 1992, 1996, Weber-Fox and Neville 1996).

This group of studies measures event-related brain potentials (ERPs)³⁶ as a reaction to grammatical and semantic anomalies in written (Neville *et al* 1992) or signed English (Neville *et al* 1996). In the first study conducted by Neville *et al* (1992), congenitally deaf learners were investigated who started their English development late and consequently learnt it imperfectly. These deaf signers were shown to display ERPs similar to those displayed by normal hearing speakers when presented with semantically anomalous sentences or open class

³⁶ ERPs are a means to measure electrical activity in different brain regions with electrodes attached to the scalp of subjects, see references in the text.

words, showing that late exposure did not hinder the acquisition of this part of the grammar. However, their ERPs elicited in response to closed class words were markedly different from normally developing native speakers³⁷. Thus the results suggest that specialisation for grammatical processing involving closed class words (i.e. functional categories) may be more sensitive to the timing of exposure to the TL than is semantic processing or vocabulary acquisition. In the second study by Neville *et al* (1996) the ultimate attainment of adult L2 learners of American Sign Language was shown to be different from native speakers of ASL, i.e. both hearing and congenitally deaf signers who learnt ASL in early childhood³⁸. The difference between the late L2 learners of ASL and native speakers of ASL was, again, in syntactic processing of closed class words, rather than in knowledge of a semantic or lexical nature. These two studies have been interpreted as support for the Critical Period Hypothesis. However, the reason we are mentioning them at this juncture is that they provide further evidence for the diminished ability of adult learners to access knowledge of *functional categories*. This is a more important and novel finding, which is in line with the Failed Functional Features Hypothesis. It combines the critical period with the issue of the access to FCs in L2 acquisition.

In a third study employing ERPs, Weber-Fox and Neville (1996) investigated normally developing learners of an L2 who were exposed to English at different times. Their main aim again was to test the Critical Period Hypothesis with regard to L2 acquisition. Perhaps by now not very surprisingly, they found that grammatical processing involving functional categories is subject to an age-related decline within L2 learners, whereas semantic processing is not. Learners who were exposed to the L2 between the ages of 11-13 showed little deviation from native speakers on syntactic tasks, such as phrase structure rules, specificity, and subadjacency. However, learners who were older than 16 at the beginning of acquisition showed a strikingly different pattern in their ERP reactions to these syntactic structures. The ERPs elicited to semantic anomalies did not show an age-related decline.

³⁷ Open class words are defined as 'words which primarily convey referential meaning' and closed class words as 'words that primarily provide structural information in a sentence' (Weber-Fox and Neville 1996:252).

This division clearly represents the substantive-functional category divide, which has been hypothesised in theoretical work in the Functional Parameterisation Hypothesis, see section 2.3.2 in Chapter 2.

³⁸ The subjects in this study were adult hearing individuals who learnt American Sign Language in adulthood as an L2 to become interpreters between English and ASL.

This view of the critical period hypothesis allows more refined distinctions to be made within the linguistic achievements of those individuals who were deprived of linguistic input in childhood. Eubank and Gregg (1996, 1998) have suggested that Genie, the child who was deprived of linguistic stimuli between the ages of 1;6 and 13, 'only' missed the critical period within which functional categories have to be acquired. In comparison, Chelsea, who was misdiagnosed initially to be mentally retarded and was only found to be congenitally deaf at the age of 31, missed the entire critical period for language acquisition. The result is that Genie, after extensive language instruction, showed a less impaired linguistic system, as she was able to acquire extensive vocabulary and construct sentences according to X-bar structure as witnessed by utterances such as

- (43) 'Another house have dog'
 'Want go ride Miss F. car'
 'Genie bad cold live father house'
 'Very angry Mrs L.V. house'
 'Father hit Genie long time ago'
 'Mama have baby grow up' (taken from Curtiss (1988))

In comparison, Chelsea's linguistic repertoire is widely deficient. Her utterances lack any of the basic structure-dependent rules, as can be seen in examples such as

- (44) 'Breakfast eating girl'
 'The small a the hat'
 'Orange Tim car in'
 'The woman is bus the going'
 'They are is car in the Tim' (taken from Curtiss (1988))

As a summary, the studies reviewed above unequivocally point to the evidence that FCs are 'the flesh and blood of grammar' (Ouhalla 1991) and their timely acquisition is crucial in a successful attainment of the TL. Lack or imperfect acquisition of FCs will result in impaired representations, which in turn will show up in production, comprehension and grammaticality judgements as well.

3.3.3 Other factors differentiating L1 and L2 acquisition

3.3.3.1 Different learning mechanisms

In the last section we have reviewed evidence that onset of learning (age) is a crucial factor in the successful mastery of an L2 system, especially that of the functional module. However, there are other factors contributing to the differences between L1 and L2 acquisition. Bialystok (1997) attributes the age-related differences to the different *learning styles* adults and children use. Children learn by creating new categories, thus they use what Piaget called the strategy of *accommodation*. Since adults already have a linguistic system in place, their strategy is usually to extend the existing categories in their L1 (in other words, they use the strategy of *assimilation* in Piaget's term). Apart from differences in learning styles, there are differences in other cognitive capacities as well. Wolfe-Quintero (1996:357) points out the differential access to various *types of cognitive capacity* children and adults have.

Slobin (1985) has proposed the best-known set of language-specific learning mechanisms for L1 acquisition. Children are claimed to employ language learning mechanisms similar to the ones below³⁹:

- Pay attention to stressed syllables in extracted speech units.
- Keep track of the frequency of occurrence of every unit and pattern that you store.
- Store together ordered sequences of word classes and functor classes that co-occur in the expression of a particular proposition type, along with a designation of the proposition type.
- Keep the order of morphemes in a word constant across the various environments in which that word can occur. (Slobin 1985:1251-1254)

Andersen (1989) has applied Slobin's language learning principles to SLA. However, as Gregg (1997) has pointed out, the problem with these language-specific learning mechanisms is that they do not comprise a natural class in any of the cognitive or mental operations even though they have been proposed for the language faculty alone.

³⁹ Slobin's (1985) language learning mechanisms have been extended to include some 40 such principles.

Among the modular mechanisms, the Subset Principle (Berwick 1985, Wexler and Manzini 1987) and the Uniqueness Principle (Pinker 1984) have been proposed as language specific learning mechanisms in L1 acquisition. However, neither has been supported by empirical findings in the SLA literature (White 1989, MacLaughlin 1995).

Gregg (1997) lists the learning mechanisms that have been proposed specifically for L2 acquirers. The general learning mechanisms described by O'Malley and Chamot (1990) include the following:

- inferencing ('using information in text to guess meanings of new linguistic items'),
- rehearsal ('repeating the names of items ... to be remembered'),
- deducing ('applying rules to the understanding of language'), and
- imagery ('using visual images ... to understand and remember new verbal information').

Other proposals have been made by O'Grady (1987) who claims that 'descriptively adequate grammars can be constructed from concepts and relations that are not specific to the language faculty' (O'Grady 1987:1). However, as Gregg (1997) points out, the general learning principles again represent various cognitive mechanisms and are not specifically applied to the acquisition of linguistic properties, i.e. properties of UG. Both Slobin's (1985) language-specific learning principles and O'Malley and Chamot's (1990) and O'Grady's (1987) general learning mechanisms are merely enough for the description of the process of acquisition but they lack explanatory power. The same criticism can be levied against the mechanisms of automatization and control (Bialystok 1978, Bialystok and Sharwood Smith 1985, MacLaughlin, Rossman, MacLeod 1983).

Apart from the disparate learning mechanisms children and adults seem to use, differences in *processing capacities* (such as memory limitations) as well as differences in metalinguistic abilities (such as ability to notice discrepancy between the L1 and the TL⁴⁰) make the two acquisition processes essentially different. In addition, failure to keep acquisition abilities

⁴⁰ The influence of metalinguistic knowledge has been investigated in numerous studies, see e.g. Sorace (1985), Trahey and White (1993), etc. Noticing the differences between the source language and the target language is crucial, as observed by Truscott (1998). The role of attention in noticing crucial linguistic properties of the PLD and bringing them to the domain of conscious explicit linguistic knowledge has been strongly emphasised by Ellis (1995) and Schmidt (1994).

active might also contribute to child-adult differences, especially in the case of lexical acquisition (e.g. Aitchison 1988).

3.3.3.2 Differences in input

Hatch (1977) first pointed out that differences in the type of input child as opposed to adult learners receive might potentially explain the age-related differences in language acquisition. Young children receive better tuned and linguistically less complex input providing them with more and clearer samples from which they can glean properties of the TL (Newport, Gleitman and Gleitman 1977). The PLD adult L2 learners are usually exposed to is qualitatively and quantitatively different (Schwartz and Sprouse 1994). First, adult learners receive less input data from the L2 on the whole (Klein 1986). Also the PLD they receive tend to be more complex, more formal, and in a classroom foreign-language setting the nature of the input data might contain more ungrammatical sequences. Thus the L2 data are usually insufficient when compared to the input child acquirers receive.

Meisel (1997) argues that in L1 acquisition the crucial property of the input is its robustness (saliency and simplicity) not so much its *frequency*. However, Lightfoot (1991, 1995), Clark and Roberts (1993) and Gibson and Wexler (1994) have all singled out frequency along with robustness as a factor paramount for parameter setting. In line with Meisel's observation, Beck (1997) also points out that in L1 acquisition frequency of occurrence might not be as crucial for the acquisition of the morphological paradigm as in L2 acquisition. This is based on the observation made by Brown (1973) that there is no correlation between caretaker frequency of morpheme use and L1 acquisition sequences. However, in L2 acquisition input frequency (as well as saliency and simplicity) clearly have a determinant role in the process of acquisition (Larsen-Freeman and Long 1991).

We wish to argue that *insufficiency of the input* might be one of the major factors contributing to the inability to attain native-like competence in L2 acquisition. DeGraff (1996) indeed argues that the absence of adequate PLD from the target language (i.e. the non-robustness, instability or structural complexity of the input, as well as the restricted range of uses and length of exposure to the TL) usually lead to the creation of pidgins. He explicitly draws parallels between pidgins and L2 grammars in that if the PLD remains below the necessary

threshold level, the adult learner will resort to relexification-like strategies that make crucial use of L1 settings (see more about relexification in section 3.5.2).

3.3.4 Summary

As a summary, it is possible that the differential success rate attained by child and adult learners is not only the result of differences in age of onset of learning. We have established that age of first exposure does indeed have a crucial effect on the extent to which FCs can be successfully acquired. This may be accounted for by the different neurocognitive flexibility children and adults have. However, we have also established that other factors also contribute to differences in learning outcomes between children and adults, among which the following have been identified:

- diverse length of exposure
- dissimilar learning situations (naturalistic vs. formal)
- other age-related affective and cognitive factors (various degrees of motivation, distinct learning styles and mechanisms as well as dissimilar memory capacities)
- differing metalinguistic abilities (leading to variance in ability to notice TL properties)
- crucial discrepancies in the nature and quantity of input learners are exposed to.

3.3.5 Talent in L2 learning

The findings about individual talented learners do not refute but in fact corroborate these suggestions. Studies by Schneiderman and Desmarais (1988), Novoa, Fein and Obler (1988) and Ioup *et al* (1994) have shown that it is indeed possible to attain native-like competence of an L2 by some very few individuals. However, such level of success is awarded only to the elected few and it is a result of the favourable combination of (some or most of) the above factors listed in the last section. These studies show that provided that adult learners have long-term exposure to the TL (irrespective of whether in the target language environment or in a formal setting) as well strong motivation and additionally they manage to retain earlier neurocognitive flexibility leading them to arrive at accurate L2 representations, they are in a position to achieve native-like competence in the L2.

3.3.6 *Native-like performance*

Apart from the above studies of exceptionally talented learners, the general observation that younger learners consistently outperform older ones has been refuted by a small number of studies in which older learners are shown to have attained native-like performance. These studies form counter-evidence to claims about the critical period, which as we have established in section 3.3.1, seems to characterise the entire lifespan of humans. White and Genesee (1996), Birdsong (1992), Bongaerts *et al* (1995), Patkowski (1994), Ioup *et al* (1994) and Juffs and Harrington (1995) have all shown that some near-native speakers' mental representations are similar to that of native speakers'.

3.4 The transfer debate

The extent and nature of the influence of the native language on the representations of the TL has also been a central topic of investigation in SLA research. Our assumption will be that adult learners come to the learning task with a fully specified grammar that consists of the instantiation of all the principles of UG and some of the parameters relevant to the first language.

The expansion of the L2 learner's linguistic system was first conceived of by Corder (1973) as a process which starts out from the mother tongue and proceeds through intermediate stages towards the target language. However, the initial role attributed to the L1 was denied during the period of the creative construction hypothesis (e.g. Dulay and Burt 1974, Dulay, Burt and Krashen 1982). Since the end of the 1970s, there has been a revived interest in the role of the mother tongue in the construction of IL systems. This interest has been shown not only in the general SLA literature (Kellerman 1983, Gass and Selinker 1983, 1992, Kellerman and Sharwood Smith 1986, Odlin 1989) but also in the standard PPT framework (White 1985, Flynn 1987, etc.). The issue has flared up recently in the current theoretical and empirical debate over the nature of the L2 initial state (Hoekstra and Schwartz 1994, Eubank and Schwartz 1996).

In the early 1980s it was emphasised that both the L1 and the L2 play a role in cross-linguistic influence. Andersen's (1983) principle of 'transfer to somewhere' emphasises that

resemblance between L1 and L2 is a crucial prerequisite for language transfer to occur. He pointed out that any L1 candidate for transfer must be compatible with 'natural acquisitional principles' (1983:182) and that the PLD must provide some grounds for the learner to be able to generalise the L1 hypotheses to the L2 input. Zobl (1982) showed that transfer interacts with developmental sequences in that typologically common (unmarked) patterns may surface either as an L1 effect or as a developmental factor. Kellerman (1983) also argued that perceived language distance might have a role in crosslinguistic influence. According to this *psychotypology*, the more distant two languages are in a particular linguistic domain, the less chance there is for transfer to occur. Chinese speakers don't use their L1 hypotheses while Dutch speakers are more likely to do so in learning English as an L2. In addition, Kellerman (1995b) points out that if the TL is indeterminate in some aspect, L1 influence is more likely to occur as learners tend to fall back on their L1 hypotheses for guidance. With the advent of the Functional Parameterisation Hypothesis a more elaborate linguistic analysis has been employed in the study of transfer in L2 acquisition. In the next section we shall review the recent studies carried out on the nature of the L2 initial state.

3.4.1 *Transfer of L1 FCs*

Similarly to L1 acquisition studies, there is a split in opinion as to whether a UG grammar is fully articulated in early L2A (the strong continuity approach) or whether it develops over time (the weak continuity approach).

According to the strong continuity approach advocated in the SLA literature by Schwartz and Sprouse (1994, 1996) L2 learners (similarly to L1 learners) have functional categories already instantiated in their earliest grammars. The full functional architecture (including IP and CP trees) are available from the very early stages. Moreover, the initial state of L2 acquisition is fully determined by the parameter settings of the L1. Hence the entirety of the L1 grammar (excluding the phonetic matrices of lexical/morphological items) is transferred into the early stages of L2A and the L1 constrains the initial hypotheses the learner can make. The proposal therefore is that the L1 has complete influence over the initial L2 representations, including the nature of both lexical and functional categories and their projections. This position has been called the Full Access/Full Transfer (FA/FT) view.

The proponents of the other, weak continuity approach in SLA research (Vainikka & Young-Scholten 1994, 1996, 1998a, 1998b) advocate the view that functional projections are completely free from L1 influence in the L2. L1 influence therefore is restricted to the nature of lexical projections. Adult learners have the same task as children, that is, they have to set 'open' parameters by building up functional projections from a core VP structure. Hence, this position has been termed the Minimal Trees (MT) hypothesis.

In contrast to both of the above extreme views, Eubank (1994a and 1996) permits only partial L1 influence over functional projections. He takes a middle position between the two extreme views and proposes that even though there is full L1 influence on the initial nature of lexical projections, only very few or even none of the functional projections in the L2 representation are influenced by the L1 initially. Eubank (1994a, 1996) argues that the initial FCs have <inert> values which need to be specified for the TL in the course of L2 acquisition. This position has been called the Valueless Features (VF) view.

As we saw in section 3.2.2.1, Tsimpli and Roussou (1991) represent a radically different position from all of the above proposals. They argue that since functional projections mature during the critical period of language learning, parameters of UG are no longer available for resetting in adult L2 acquisition. Thus deprived of the possibility of being able to reset parameters, learners are claimed to only 'match' their interlanguage to the target language so that the two look alike. Thus their position is similar to that of Schwartz and Sprouse (1994, 1996) in assuming initial full transfer, however, while Schwartz and Sprouse predict parameter resetting, Tsimpli and Roussou (1991) argue against the possibility of resetting. Therefore, their position is termed the *no-access-to-FCs* hypothesis.

In the next section, we shall see what these positions predict with regard to optional representations throughout the developmental process and at ultimate attainment.

3.5 The development of L2 competence and optionality

The development of the L2 grammar proceeds in stages. Above we have outlined the theoretical positions on the initial state of L2 acquisition in relation to transfer. In the next

sections we shall deal with the stages of second language development, with special reference to the issue of optionality of representations in the ILG.

3.5.1 *Initial state and optionality*

3.5.1.1 Structure building, underspecification, or L1: (MT, VF, or FT/FA)?

On the assumption that the IL is a natural language, i.e., it is UG-constrained; the initial state of the ILG can be characterised in two ways (Epstein *et al* 1996). It may either be constrained by the inborn system of UG, such as in L1 acquisition. That is, the L2 learner can be thought of having access to *all* the options provided by UG. According to this view, initially optional representations make up the linguistic faculty (a proposal set forth in the MT hypothesis by Vainikka and Young Scholten 1994, 1996 1998a,b, and the no-access-to-FCs view of Tsimpli and Roussou 1991). In the VF hypothesis of Eubank (1994a and 1996), as long as specification of FCs has not occurred, optionality (i.e. variability) of rules in the IL of learners is expected. Initially, learners are predicted to have absolutely indeterminate, random judgements on aspects of the target grammar associated with FCs and their feature specifications. In this proposal, initial optionality is due to lack of underlying representations as a result of unspecified <inert> features. Alternatively, the L2 initial state can be thought of as constrained by a language-specific version of UG, characterised by those options that are instantiated in the L1 of the learner (the view held in the FT/FA hypothesis of Schwartz and Sprouse 1994, 1996, Schwartz 1998). In this case, optional representations are not predicted to characterise the initial L2 grammar.

Apart from these by now classical views on the initial nature of the ILG, two more positions have been put forward with regard to the L2 initial state: the Initial Hypothesis of Syntax of Platzack (1996) and the Basic Variety proposed by Klein and Perdue (1997). They both assume that the initial ILG, rather than being underspecified or entirely determined by the L1, starts out from a default system. Since these views both complement the initial state debate, they need to be reviewed in detail here.

3.5.1.2 Default initial grammar (IHS and BV)?

Corder (1981) speculated that L2 learners might return back to a simplified system at the beginning of the development of the L2. He incidentally called this simplified system 'universal grammar'. Mazurkewich (1988) has proposed a similar back-to-UG position, based on considerations of markedness. Two recent theoretical positions have subscribed to this view: one, the Initial Hypothesis of Syntax (IHS) expounded by Platzack (1996) and the other, the Basic Variety (BV) proposed by Klein and Perdue (1997) as the system characterising the L2 initial grammar.

Working within the Minimalist framework, both of these hypotheses claim that all features are initially weak in the ILG of L2 learners. The IHS states that initially 'all instances of feature checking take place after Spell-out' (Platzack 1996:375) and Klein and Perdue hypothesise that 'in the BV, all features are weak' (Klein and Perdue 1997:336). This entails the markedness relationship assumed in the Minimalist Program according to which the lack of movement is the unmarked mechanism and movement motivated by strong feature values is the marked mechanism, see section 2.8.2 in the previous chapter. It is suggested that both L1 and L2 learners initially entertain a general hypothesis according to which the TL contains only weak features. Therefore, all initial utterances are predicted to conform to an unmarked, default structure: they are expected to contain no movement and a general SVO structure. As a consequence, the IHS and the BV are different from the earlier conceptions of the initial state. Neither the ILH nor the BV predicts L1 transfer, but just as equally, they do not predict initial optional representations either.

Platzack (1996) argues that in L1 acquisition the child will gradually adjust the TL values from weak to strong where the primary data license this. This process continues until the age of 7, the age Platzack assumes to be the end of the critical period⁴¹, after which established strong features cannot be reset. However, Platzack does not argue that assignment of strong values to default weak ones becomes impossible after the age of 7, so he leaves open the possibility of parameter setting after the critical period.

Platzack presents several pieces of evidence for the position that the early ILG will be characterised by non-raising. He points out that initial orders in L2 acquisition are

⁴¹ Remember that Johnson and Newport (1989, 1991) also argued that learners who start learning the L2 before age 7 are indistinguishable from native speakers, but learners who start after 7 show an age-related decline in attainable proficiency.

predominantly SVO irrespective of the L1 or TL word order. This claim is born out in data from Schwartz and Sprouse's (1994, 1996) Turkish learner and Vainikka and Young-Scholten's (1994, 1996, 1998a) Turkish and Korean learners whose L1s are SOV but they exhibit an early SVO order. Second, in early IL grammars there is an absence of subjects even where the learners' L1 requires them (White 1985, Liceras 1989, Hilles 1986, 1991). Also, learners of an L2 with V2 characteristics exhibit problems with raising even if their L1 requires the same verb raising to C in V2 constructions. This has been observed in the case of Swedish and Danish learners of German (Håkansson 1994). These learners produce incorrect *V3 structures in which the verb does not move to second position, in spite of the fact that V3 structures are not allowed in their L1 either. According to Platzack, the findings all constitute evidence for the non-raising properties of early ILG. On the other hand, Platzack predicts that once acquired, strong features cannot be lost as a result of language attrition. He provides evidence that expatriate Swedes make no errors in V2 in their L1.

As far as the L1 and L2 differences are concerned, Platzack (1996) brings a connectionist argument⁴². Platzack argues that in L1 acquisition the marked properties become engraved in the brain of the learner before the age of 7. These marked properties (strong features) cannot be subsequently forgotten. On the contrary, in L2 acquisition the marked properties (the strong features of the TL) will not be engraved in the L2 learners' brain (as a result of the end of the critical period) and will be vulnerable in situations of stress, tiredness, intoxication and other cases where the speaker is not in total control. This is argued to happen even if the learner is exposed to naturalistic PLD.

The Basic Variety (Klein and Perdue 1997) is reminiscent to Platzack's IHS in that it also assumes no movement for the initial L2 grammar. Klein and Perdue hold the position that L2 learners' initial grammar exhibits universal organisational principles regardless of the learners' L1 and regardless of the TL to which the learners are exposed. Klein and Perdue claim that the Basic Variety constitutes an interplay between pragmatic, semantic and phrase structure constraints. Among the special pragmatic constraints characterising the BV are 'topic first' and 'focus last' and the semantic constraints include the 'controller/agent first' rule. Klein and Perdue (1997) argue that the BV is a core manifestation of the human language faculty, resembling simple varieties of fully-fledged languages, such as telegraphic

⁴² See also Schachter (1996) and section 2.5.6.

speech, headlines and captions. Also, the BV is likened to systems operating in the 'pragmatic mode' in Givón's (1979, 1984) sense, such as child language or pidgins. Similarly, it is pointed out that Bickerton's (1990) protolanguage brings together the similarities between child language, pidgins and language produced by speakers deprived of linguistic input (see section 3.2.2.2).

The BV is assumed to be the 'perfect' I-language (Chomsky 1995:9, 317-318) in the sense that all features are supposed to be weak in it. The learner has to strengthen some of the features based on the PLD thus turning the initial perfect system 'imperfect'. The reason for the imperfections in the system is the interaction between the computational system and other external sources, such as the pragmatic system or the conceptual-intentional system, see section 2.7.1.

Klein and Perdue (1997) base their argument on their observation of L2 learners in a cross-linguistic investigation where the L1 and TLs of the learners were systematically varied (Klein and Perdue 1992). They note that in the spontaneous production of their L2 learners there is a lack of inflectional (free and bound) morphology, utterances contain no movement, and complementizers and subordination are entirely missing. From these observations they conclude that the BV might possibly lack formal features of FCs, although the functional categories themselves (D and the elements of the exploded IP: Tense and Agr) might be present with an unmarked value. The exception is CP, which is argued to be missing altogether (this is what L1 researchers, such as de Villiers 1995 and Whitman 1994 claim). Elements that typically require a CP in mature grammars, such as negative markers, quantifiers and focus particles equivalent to *only* and *also* tend to precede the part of utterance over which they have scope. Klein and Perdue (1997) suggest that closed-class elements are adjoined rather than integrated into the structure in the BV. The Basic Variety allows L1 influence only in the very early stages of acquisition as evidenced by Italian learners of German who transfer SVO into their initial L2 German. Subsequently, the L1 is assumed to have an effect only when the TL has alternative ways of expressing the same content⁴³. Similarity in development among learners with different L1s is accounted for by the fact that the driving force of acquisition is the PLD from the TL. Klein and Perdue (1997) claim that this variety of ILG is potentially fossilizable, as it is a relatively stable system.

⁴³ See reference to Kellerman (1995b) above in section 3.4.

However, the hypothesis of the Basic Variety has engendered a lot of criticism. Bierwisch (1997) argues that several properties of the BV are more likely the result of general learning strategies than of language-specific principles. In this he agrees with Meisel (1997a, 1997b) and Neeleman and Weerman (1997) who claim that L2 learners resort to strategies using sequential ordering of surface strings, see section 3.2. Thus the BV is a mix of both UG-constrained and non-grammatical cognitive processes. Schwartz (1997) contests that the BV is a 'perfect' I-language. Klein and Perdue (1997) allow for some influence at the very initial stages, but they state that L1 influence is 'rare overall' (1997:314, fn.16). Schwartz argues from the viewpoint of FT/FA that some of the features must be strong in what Klein and Perdue call the BV of their learners. Preposed *wh*-phrases and subjects in Spec,IP are both the result of strong features and they do characterise learners' grammar in the Klein and Perdue study. We certainly agree with Schwartz (1997) that the absence of morphology is not a straightforward reflex of [-strong] features in functional heads. Word order is a much more reliable diagnostic for determining functional feature values in ILGs. Also, it has been shown that strong SOV features do transfer from Turkish to English (Hazdenar 1997).

3.5.1.3 Summary

As a summary, two positions have been identified with respect to optionality at the initial state of language acquisition:

- there is optionality due to either lack of functional architecture (MT) or underspecification of existing functional categories (VF)
- there is no optionality either because of transfer of L1 values (FT/FA) or as a result of a default initial system with [weak] values (IHS/BV)

However, indeterminate judgements do arise as a result of ignorance of L2 learners in case where the L1 does not instantiate a property. Learners in this case do not have any representation and their knowledge of the L2 property is non-existent. Henry and Tangney (1996) argue that *knowledge strength* is correlated with the occurrence or absence of a particular form in the data. Knowledge strength of a form thus depends on a 'simple' process of strengthening a form in memory each time it is used (both in the input and in the learner's

output, i.e. each time it is heard or used)'. Initially, as long as the learner has not received sufficient PLD, the knowledge strength is weak, leading to indeterminate/optional representations.

3.5.2 *Intermediate stages*

Since L2 learners have a fully developed computational system (i.e. their language faculty contains the principle of feature checking), they only have to discover the consequences of parametric variation between the L1 and the TL. The L2 learner's task is to reset any parameter setting instantiated in the L1 and activate new parameter settings if the L2 data so require. That is, failure to assign representation to any input data will force amendment of the current system. Additionally, language acquisition includes lexical learning of the grammatical lexicon (learning the phonological matrices of free and bound morphology) as well as the mental lexicon (pure vocabulary learning of substantives) (Tsimplici 1996a, Schwartz and Sprouse 1996).

It is well established that ILGs are unstable systems, which is the effect of the permeability of grammars in progress (Adjemian 1976). During the process of gradual accommodation of L2 properties, some of the rules in ILGs become unstable and acquire a critical nature (Klein 1986) leading to a reanalysis of their status within the system. Thus, learner judgements are usually rather variable and inconsistent at intermediate stages (Corder 1973, Sorace 1993) due to the process of reanalysis. Restructuring (McLaughlin 1990) involves a sudden reanalysis of the entire system resulting in across-the-board repercussions for the whole grammar. Restructuring may occur quite fast (as in the case of basic word order acquisition) or it may take some while (such as in lexical/morphological acquisition) (Schwartz and Sprouse 1996). However, the clustering effect of parameter setting characteristic of L1 acquisition has not been observed in L2 acquisition. Herschensohn (1997) argues that in the L2 acquisition of verb placement core properties (negative placement) is acquired first but properties on the periphery (adverb and quantifier placement) are acquired later, due to the nature of the input. Adverbs and quantifiers can be base generated in various positions and this leads to their delayed acquisition (Lardiere 1997, Schwartz and Sprouse 1996). This supports our observation that L2 acquisition is crucially dependent on the nature of the input, see section 3.3.3.2.

The gradual accumulation of L2 entities implies that development is a continuous process, whereas restructuring involves a sudden discontinuous change (see Sorace 1992). Selinker (1992) described the intermediate stages of language learning as a continuous succession of gradual progression interspersed by sudden changes:

'IL learning is best viewed as a "cline progression" from stable plateau to stable plateau, [...] the learner is operating with a system at each point'. (Selinker 1992:226)

The gradual accumulation of entities itself can proceed in two ways. It can involve either *relexification*, i.e. use of L2 words in L1 syntactic structures (see McLaughlin 1987, 1990, Tsimpli and Roussou 1991, Tsimpli and Smith 1991, Smith and Tsimpli 1991, 1995, Hawkins and Chen 1997, DeGraff 1996). Alternatively, it can involve *incremental incorporation* of the L2 elements into the existing system (Schwartz and Sprouse 1994, 1996). According to the second view, both elements and rules are incorporated into the existing system, which is taken to be influenced by the L1. The changes that are made in L2 development are the following (Schwartz and Sprouse 1994:349):

- (1) part of the machinery of the L1 is *relinquished*
- (2) a new property or mechanism of grammar is *appended* to the current system
- (3) part of the machinery of the L1 grammar is *replaced* by a new property or mechanism

Thus we have established that development in L2 is an attempt by the learner to accommodate more and more of the target language in the current linguistic system in a series of incremental stages (Schwartz and Sprouse 1994). The gradual nature of language acquisition thus involves overlapping stages where two or more hypotheses can compete within the same system (Ellis 1985, 1989). Grammar competition leads to optional representations as widely observed in L2A (White 1990/1991, 1991, 1992a, Eubank 1993/1994, 1996, Vainikka and Young-Scholten 1994, 1996, 1998a, 1998b, Gavruseva and Lardiere 1996, Bruhn-Garavito and Montrul 1997, Montrul 1996, Hulk 1991, 1996, Beck 1996, 1998, etc). Categorical representations emerge only when the knowledge system becomes strong due to adequate amount of sufficiently robust PLD.

Optionality at the intermediate stages of acquisition was first observed in a series of studies by White (1990/1991, 1991, 1992a, 1992b) where Francophone learners of English accepted both SVAO and SAV structures, exhibiting two co-existing parameter-settings within the ILG. White (op.cit.) takes this as a period of uncertainty/fuzziness, where the parameter is wavering between two values.

In the FA/FT proposal initial transfer is supposed to be followed by parameter resetting. However, it is argued that learners make use of any of the UG options and mechanisms, not only the option instantiated in the TL. Thus, the FT/FA predicts intermediate optionality where the L1 option competes with the newly hypothesised rule. Schwartz and Sprouse (1994, 1996) argue that in the case of Francophone learners of English, lack of clear, sufficient evidence is the main reason for optional adverb-placement.

In the MT (Vainikka and Young-Scholten 1994, 1996, 1998a, 1998b) learners are assumed to rely on triggers in the input to be able to proceed from a bare VP through incremental stages towards the target grammar. The different stages of acquisition are assumed to be overlapping successive stages, first a bare VP, then an under-specified FP, followed by a fully specified AgrP, and lastly a CP. Thus optionality is predicted to emerge in overlapping stages, but it is predicted to fade out as one stage wins out over the other.

Eubank (1993/1994, 1996) in the VF hypothesis argues that since the actual morphological items do not get transferred to the ILG, the initial values of FCs are inert, leading to optional representations. Eubank (1992) postulates that similarly to L1 acquisition, L2 development is intimately tied with morphological acquisition (based on proposals by Rochrbacher 1994 and Vikner 1995). It is claimed that just like in L1, once L2 learners identify a crucial proportion of the morphological paradigm of the TL, syntactic changes (i.e. target-like verb raising) will automatically follow. However, correlation between morphological richness and strength of features responsible for word order has been argued to be more apparent than real (e.g. Chomsky 1995:277, Lightfoot and Hornstein 1994:9, Marantz 1995, Schwartz and Sprouse 1996, Sprouse 1998). Also, contrary to fact, the VF predicts that optional representations will dominate the intermediate stages, but will suddenly disappear once learners establish the nature of the TL inflectional system.

The Local Impairment hypothesis of Beck (1996, 1997 and 1998)⁴⁴, although it does not have a prediction for the initial state of L2 acquisition, predicts optional representations about the status of V-features at intermediate stages. This is the result of the non-accessibility of this part of the grammatical system to L2 learners. Thus if there is a strong feature to be activated in the ILG (such as in the case of English learners of German V2), learners will not arrive at determinate representations but the intermediate grammar will exhibit optionality in verb-movement.

3.5.2.1 Summary

Thus, we have established that all theoretical positions predict an intermediate stage where optional representations dominate the ILG due to grammar competition and reanalysis. This is a direct consequence of the gradual development of the ILG towards the L2 system, regardless of the nature of the initial representations assumed. As knowledge of the L2 properties is strengthened by continued exposure to PLD, optional representations become gradually pruned. The exact motivation and mechanism for this differs in the various proposals.

3.5.3 *Ultimate attainment*

According to the FA/FT position, parameter resetting will happen provided there is sufficient evidence in the L2 input. However, convergence on the TL is not guaranteed, as the L2 initial state is by definition different from that of the L1 initial state. More particularly, the special combination of the L1 and the TL may lead to a situation where the learner does not have access to relevant positive evidence. One such case is represented by a Turkish learner of German who retains the incorrect *V3 order for want of relevant crucial data. This fossilized aspect of the IL is the result of an early misanalysis of the L2 data, i.e. adjunction of additional CP elements, as well as the absence of crucial data⁴⁵. Schwartz and Spouse (1996) predict fossilization to happen as a consequence of at least three factors:

- the learner's L1 has preset values, thus the L2 learner does not start from a default setting
- crucial data (i.e. negative data) needed to force restructuring do not exist

⁴⁴ See section 3.2.2.1 for an introduction.

⁴⁵ In this case, the Turkish learner would need to notice that XSV_[+finite] structures are absent in the PLD.

- the relevant positive data are highly complex or extremely rare

Both the VF and MT hypotheses predict convergence of the ILG with the TL system as soon as the learner incorporates a critical portion of the morphological paradigm of the target system. Thus they expect that learners at an advanced level will have acquired the inflectional properties and thus their underlying representations will be target-like in the syntactic domain as well. Remember that the crucial assumption here is that similarly to L1 acquisition, there is a correlation between the morphological component and the abstract syntactic feature-specification in L2 acquisition as well. Several researchers have questioned this assumption, see section 3.3.1 (p. 63) and section 3.5.3 (p.84) above for references.

The Local Impairment hypothesis of Beck (1996, 1997 and 1998), however, predicts optional representations even at the advanced level. This is similar to the no-access-to-FCs view of Tsimpli and Rousseau (1991) and Smith and Tsimpli (1991, 1995). Both of them account for optional representations by a lack of knowledge of the target-like feature values throughout the L2A process.

3.5.3.1 Summary

In summary, the LI hypothesis and the no-access-to-FCs view will both predict the presence of optional representations at advanced and near-native levels. The FT/FA proposal suggests that optionality might persevere where the input is insufficient to 'disabuse' the learner of an L1-induced hypothesis. Since the VF and MT hypotheses are based on a misconceived assumption, their prediction for ultimate attainment will not be considered.

3.5.3.2 Types of representation at ultimate attainment

In SLA research the ultimate attainment of L2 learners was originally investigated in order to bear upon the issue of access to UG (Coppetiers 1987, Bley-Vroman et al 1988, Schachter 1989, 1996, Birdsong 1992, White and Genesee 1996). The studies on very advanced and near-native learners to date have not been conclusive, as the grammatical representations of these learners have been found to show great variability (Johnson *et al* 1996, Eubank and Grace 1996, Eubank *et al* 1997, Lardiere 1997, 1998, *inter alia*).

The new focus of inquiry is concerned with the precise character of L2 learners' competence at near-native level (Sorace 1993, Ratwatté 1995, Lardiere 1997, and also Tsimpli 1996b, 1997, Beck 1996, 1997, 1998, etc.). In what follows we outline the characteristics of L2 competence at near-native level as identified by Sorace (1992, 1993), then we shall discuss the refinements we propose to the distinctions made in this regard.

Sorace (1993) distinguishes between three different types of representation that can comprise the near-native grammar:

- **complete**, i.e. native-like representations
- **incomplete**, i.e. 'lack of given L2 properties', and
- **divergent**, i.e. 'interlanguage representations of L2 properties that are consistently different from native properties' (Sorace 1993:22)

Sorace (1993) investigated categorical and optional rules in Italian auxiliary selection as represented by French and English near-native speakers of Italian. The elicitation technique used in her study was magnitude estimation (see section 5.3.1.4.). The final results are reported using the geometric mean⁴⁶. The geometric means calculated from the results of magnitude estimation are comparable to the values gained from acceptability judgements elicited on a scale of 1-10 (see section 5.4.3.1.). Using repeated measures ANOVA and the *post hoc* Sheffé test, Sorace (1993) examined the significant differences between the judgements of her three experimental groups: Italian natives, and French and English near-native speakers of Italian.

Her results show that in the case of a **categorical** rule in Italian (e.g. the categorical distinction in the grammaticality of *Maria non ci è potuta andare* vs. **Maria non ci ha potuto andare*) French learners (24 people) make similar judgements to natives. That is, the French subjects distinguish between the correct and the incorrect sentence type to a significant degree as can be seen in Figure 3-1 below:

Native categorical rule

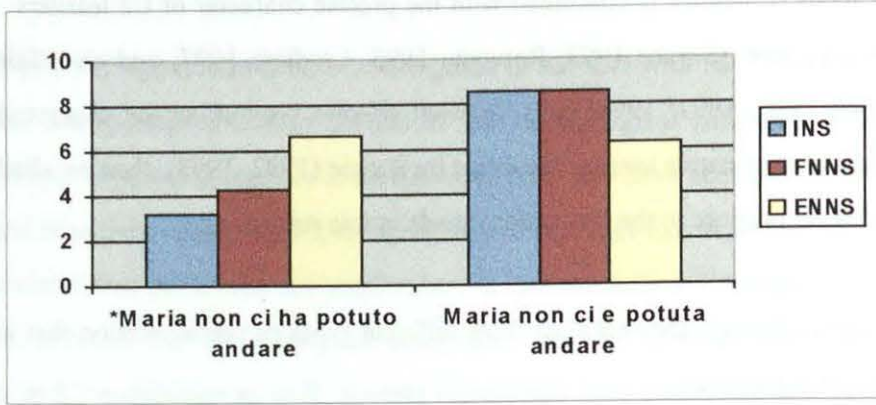
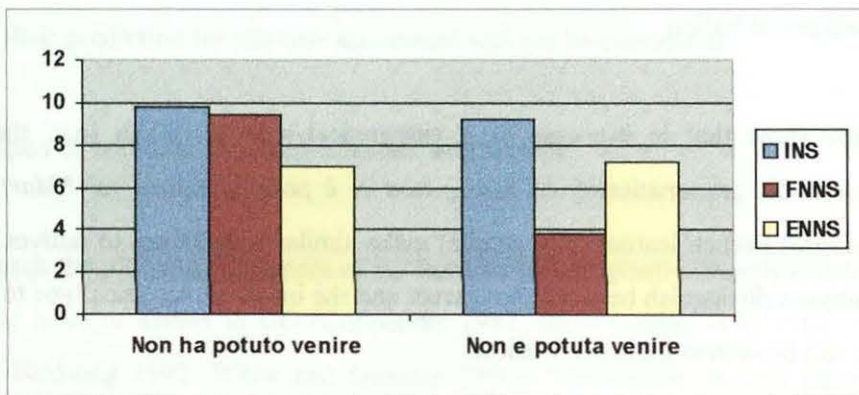


Figure 3-1 Chart from Sorace (1993:40) (INS = Italian native speakers, FNNS = French non-native speakers, ENNS = English non-native speakers)

However, her English subjects (20 people) gave an average judgement of 6.286 and 6.623 respectively to the two alternatives (see the third bars in Figure 3-1 above). Sorace thus concludes that her English subjects ‘are unable to distinguish between the two types of sentences: their judgements are indeterminate’ (Sorace 1993:40).

Further, when examining an **optional** native alternation (e.g. the mutually acceptable *Non ha potuto venire* and *Non è potuta venire* constructions), Sorace found that the English subjects behaved in a similar fashion. That is, they gave an average of 7.231 and 6.977 to the two optional sentence types, as shown in Figure 3-2 below:

Native optional rule



⁴⁶ Geometric mean is the arithmetic mean of the scores that have been transformed into logs. This is necessary in magnitude estimation in order to bring the scores together onto a common scale. For a description of magnitude estimation see the methodology section in 5.3.1.4.

Figure 3-2 Chart from Sorace (1993:41) (INS = Italian native speakers, FNNS = French non-native speakers, ENNS = English non-native speakers)

Sorace notes with respect to these optional native constructions that ‘the English subjects cannot decide between the two auxiliaries and produce indeterminate judgements on both sentence types’ (1993:41). Noting the similar behaviour of her English subjects regarding both the categorical and optional target language rules, she concludes that these learners’ representation of auxiliary selection in Italian is *incomplete*. The French subjects, on the other hand, made significantly different judgements to the native optional sentence types, accepting one and rejecting the other (see the middle bars in Figure 3-2 above). In other words, they transform an optional rule into a categorical one, ending up with a *divergent* representation. Sorace (1993) attributes the differential findings for the two near-native groups to the influence of the L1: French instantiates an auxiliary distinction, although different from Italian, English on the other hand does not exhibit the property at all. Thus the fact that French near-native speakers of Italian have divergent representations and English near-natives of Italian have incomplete representations of Italian auxiliary selection is sufficiently accounted for by the influence of the L1. English learners are seemingly unable to notice and incorporate the relevant PLD crucial for parameter-setting to take place, while French learners apparently notice the relevant PLD but are constrained by their L1 representations even at ultimate attainment.

Note that Sorace (1993) does not provide an operational definition of incompleteness or divergence. It is simply assumed that if learners’ judgements are significantly different from native judgements, their IL contains a divergent representation. On the other hand, it is implicit in the treatment of the English judgements that if learners fail to distinguish between two sentence types and their judgements are indeterminate (i.e. they centre around the high intermediate values of 6-7), their grammar is incomplete.

We would like to argue that it is necessary to make refinements to the distinction in the different types of mental representations. Ultimately, we need to have operational definitions for each of the different representations characterising near-native competence with precise ways of measuring them. These operational definitions and the criteria of measuring them will hopefully allow further research and comparison of results of studies into the nature of the ultimate L2 competence. As a first step towards the operationalisation of possible types of

near-native representations, we need to consider the theoretically possible characteristics of learner representations in general.

3.5.3.2.1 Complete/convergent representations

A complete/convergent representation is by definition identical to native speakers' representations as reflected in their grammaticality judgements. Native grammars contain *categorical*, *optional* and *quasi-optional* rules as well as *borderline* cases. A categorical rule is characterised by a significant difference between the correct and the incorrect version as expressed by native speakers' judgements. Most of the rules of language fall into this category. For optional rules, there is no significance between the alternatives, both of them are equally *accepted* by natives. For examples of optional constructions, see section: 2.7.1.1 in Chapter 2. Quasi-optional constructions seem optional only on the surface but have different acceptability values and carry different interpretations depending on the context of the utterance. In other words, quasi-optional constructions show significant differences only in differing logico-semantic contexts. For examples, the reader is referred to section 2.7.2 in Chapter 2 above.

A sentence with acceptability hovering on the borderline usually receives an indeterminate judgement between correct and incorrect. That is, some natives would reluctantly accept it (probably with some reservations) while others would rule it out. These borderline sentences form part of what Lakoff (1973) and Mohan (1977) call 'fuzzy grammars'. Below we cite two representative examples of sentences with borderline grammaticality. In fact, many speakers would find neither variant of them grammatical:

(45) ??Are / ??Is John or his parents here?

(46) I, who the FBI thinks *am / *is an anarchist, will doubtless be here.

So far we have looked at native representations as expressed in grammaticality judgements by native speakers. In what follows we review possible non-native representations: divergent and incomplete representations.

3.5.3.2.2 Divergent representations

A divergent representation implies a difference in *quality* from native representations. There must be a statistically significant difference between native judgements and learner judgements if they are to be termed divergent. In the following we invite the reader to speculate on the possible scenarios that might obtain at the asymptotic near-native level of acquisition.

First we consider hypothetical *categorical* rules in the target language. Please refer to Figure 3-3 below in the following discussion. Faced by a categorical rule in the target language, learners might ultimately accept variants, or they might reject both alternatives (the third and fifth pairs of bars in Figure 3-3). This would suggest that they have formed a divergent ILG. However, learners might wind up with a divergent representation if their judgements are diametrically opposed to that of natives', i.e. if they accept the incorrect and reject the correct sentence type (the second pair of bars in Figure 3-3):

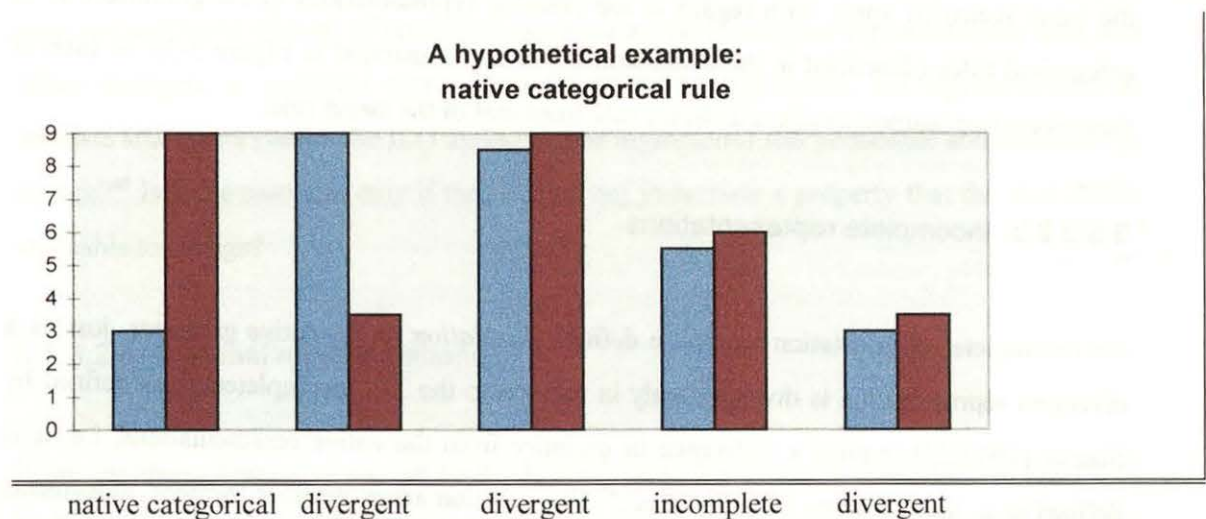


Figure 3-3 Native categorical rule

Now we turn to hypothetical *optional* constructions in the target language. The following discussion is illustrated in Figure 3-4 below. Faced by optional constructions in the TL, learners might turn the native optional rule into a categorical one by distinguishing significantly between the two alternatives (see the second and third pairs of bars in Figure 3-4 below). Thus they would exhibit divergent representations. In case learners equally *reject* both alternatives, their representation can still be optional but divergent (see the last pair of bars in Figure 3-4):

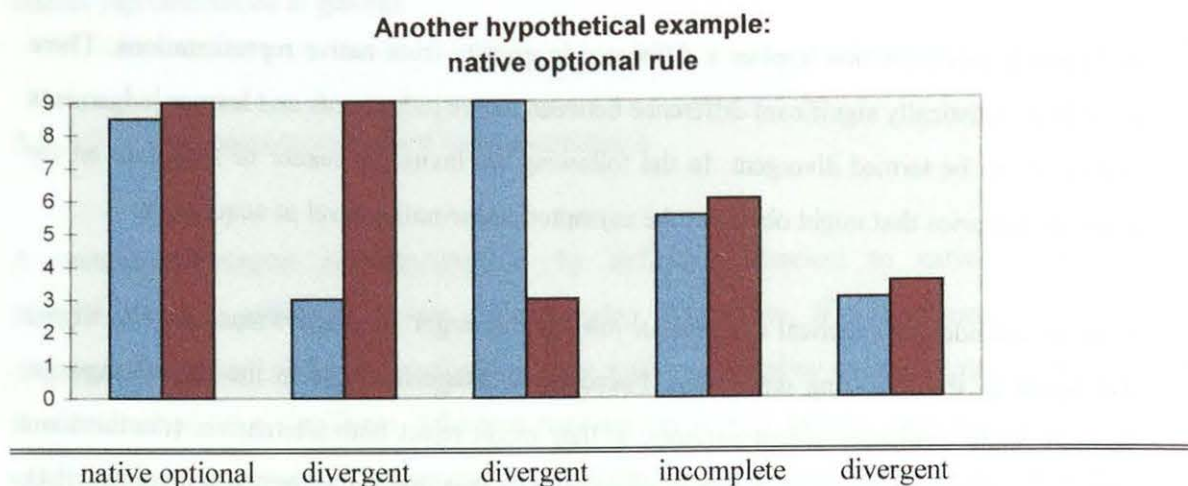


Figure 3-4 Native optional rule

Quasi-optional constructions resemble categorical ones in that although similar on the surface, they are given significantly different judgements in differing semantic contexts. Thus the same scenarios apply with regard to the possible representations in L2 grammars as to categorical rules (described in the discussion above and illustrated in Figure 3-3). In each of these scenarios learners create a different rule from that of the target rule.

3.5.3.2.3 Incomplete representations

An incomplete representation has to be defined *in relation to* the native grammar, just as a divergent representation is divergent only in relation to the TL. Incompleteness as defined by Sorace (1993:22) implies a difference in *quantity* from the native representations, i.e. it is defined as a 'lack of given L2 properties'.⁴⁷ The question arises whether learners' judgements have to be significantly different from native judgements to be qualified as incomplete. In Sorace's (1993) study English learners' judgements are significantly different from natives' in case of the native optional constructions, whereas in the case of the native categorical rule a significant difference from native judgements is not reported. However, the mean group judgements centre around a high intermediate value of 6-7 in both cases without a significant

⁴⁷ Under the assumption that L2 grammars are natural grammars constrained by UG principles, lack of a given property would have far-reaching consequences in the ILG, thus making the incomplete ILG not only a quantitatively but also qualitatively different grammar. On the other hand if the no-parameter-setting view is correct, lack of a property simply means just that: lack of a given property, with no relevance to the status of other parts of the system.

difference between the two alternatives (see Figure 3-1 and Figure 3-2 again). Therefore it is assumed that the main characteristic of incomplete representations is that they are *indeterminate*. Learners do not seem to have any formed representation as to the acceptability of these constructions; therefore they choose to select intermediate values on the grammaticality scale.

Note that optionality characterised by indeterminacy (judgements which centre around the intermediate value on the scale⁴⁸) is only one type of optionality (the fourth sets of bars in Figure 3-3 and Figure 3-4). Indeterminacy of this kind indicates lack of knowledge and carries less theoretical interest than optionality in divergent representations. What is striking about this kind of indeterminacy as found by Sorace (1993) is that it exists in the grammar of highly advanced learners *despite* positive evidence.

This conception of incompleteness raises the question whether there is a possibility for a grammar containing an incomplete representation for further progress. In other words, given time and sufficient amount of continued exposure would incomplete representations turn into either divergent or complete representations? Slightly paraphrased, are representations at ultimate attainment (where the ILG appears to be asymptotic) still permeable and amenable to change?⁴⁹ Is it the case that only if the L1 does not instantiate a property that the ILG is still amenable to change?

3.5.3.2.4 Optional representations

From the above discussion we can conclude that optionality can be a characteristic feature of both divergent and incomplete grammars, as well as complete grammars. Of these, optionality in stable native grammars is of utmost interest from the point of view of linguistic theory (Chomsky 1995, Pettiward 1997, Hayes 1997, Boersma 1997, 1998). With regard to L2A, optionality in divergent end-state grammars is interesting, as it could ultimately explain fossilisation (Selinker 1972, 1992, see also White 1990/1991, 1992a). However, the third

⁴⁸ See Tarone *et al* (1976) and Sorace (1988, 1990) for instability/indeterminacy of this kind in the ILG.

⁴⁹ It can be argued that representations at ultimate attainment are, by definition, steady states that are not amenable to change. However, if we accept the diachronic view of mature languages as dynamic systems capable of change, there is no reason why we should not view non-native grammars at ultimate attainment *non-stable*.

type, incomplete optionality is also worthy of concern. It provides the potential for L2 representations even at ultimate attainment to progress.

Of course, within the lifetime of a human individual this theoretical potential cannot be fulfilled, i.e. an incomplete representation does not have enough time to 'turn' complete or divergent. However, allowing this theoretical possibility would explain why (albeit very few) individuals do manage to attain native-like performance in a second language.

3.6 Summary

In this chapter we looked at the main theoretical debates within SLA research. In a sense they all bear relevance to our study on the second language acquisition of Hungarian by adult English-speakers. Subsequent to our discussion of the debates we have established the following: although adult L2 learners have access to UG principles, access to FCs and their feature specifications is impaired. Age of onset of learning a L2 is crucial in successful acquisition of L2 FCs and their features values. The L1 of adult learners has an influence on the ILG, prevalent *especially* when there is insufficient evidence from the L2. The ILG at ultimate attainment will thus depend on two factors: the nature of the L2 rule to be learnt (whether it is categorical, pseudo-optional or optional) and the nature of the TL evidence L2 learners receive (whether it is robust, rare or ambiguous).

In the next chapter we shall compare English and Hungarian in order to see the parametric differences with particular reference to focusing. This will be done with a view to identify those areas of Hungarian grammar that need resetting/activating by learners whose L1 is English.

4 The Characteristics of Hungarian

4.1 Introduction

In order to gain insight into the nature of the learning task (adult) English learners of Hungarian face, we need to give a brief outline of the grammatical structure of Hungarian in general. Naturally, the description cannot be exhaustive, it merely serves as a guideline to the structure of Hungarian, its morphology, syntactic structure and the main features of phonology.⁵⁰

4.2 Family relations and dialectal variation

Hungarian belongs to the Finno-Ugric group within the Uralic language family. It constitutes the largest group within the Finno-Ugric language group, with some 15 million native speakers mostly in and around Hungary. There are only two minor languages in the Ugric branch, Ostyak and Vogul, which are closely related to Hungarian, but geographically well separated from Hungary. Although related to Finnish and Estonian (the two major languages of the Fennic, i.e. Non-Ugric branch), present-day Hungarian is not mutually intelligible with any of its relatives, close or distant. Finnish and Estonian are said to be more intimately related than, for instance, Finnish and Hungarian (Comrie 1987, Abondolo 1987, Campbell 1995). Nevertheless, Hungarian displays a number of properties characteristic of the Uralic, and more specifically Finno-Ugric, languages. Among these features are a rich inflectional and case-marking system, vowel harmony, objective conjugation (i.e. subject-object agreement), the existence of the definite article, a set of spatial cases, word stress on first syllable, and front rounded vowels, both short (ö, ü) and long (o, u). These properties, of course, can be found in other languages as well. Their special combination is, however, characteristic of the Finno-Ugric family. In addition to these features, Finno-Ugric languages share a basic lexicon.

Within its speech community, Hungarian shows surprising uniformity, in the sense that it does not have mutually unintelligible dialects. However, there do exist dialectal differences

⁵⁰ A comprehensive descriptive grammar of Hungarian can be found in Kenesei *et al* (1998), as well as Kiefer (1992), Kiefer and É.Kiss (1994 and 1998).

in vocabulary, phonology, pronunciation, morphology and even syntax in the various regional dialects both within and beyond the borders of Hungary.

4.3 Morphology

4.3.1 Nominal morphology

Noun morphology is rich with some 17-27 nominal cases.⁵¹ The full list of nominal cases identified by various linguists is given in Appendix B. Hungarian also has an extensive set of postpositions, the majority of which assign nominative case to their complements:

(47) az egri vár alatt
the Eger castle beneath
'below Eger castle'

(48) a törökök miatt
the Turks because-of
'because of the Turks'

The range of postpositions complements the set of nominal cases in Hungarian. Sometimes there is more than one marker for the same grammatical function. For instance, apart from the dative suffix *-nak/-nek*, two alternative postpositions, namely *számára* and *részére*, can be used to express the same thematic role benefactive:

(49) Gergely küldött egy levelet Dobó-nak / Dobó számára / Dobó részére.
Gergely sent a letter-ACC Dobó-DAT / Dobó DAT / Dobó DAT
'Gergely sent a letter to Dobó.'

⁵¹ The variation in the number of cases identified is due to some uncertainty as to the derivational versus inflectional origin of some of the nominal suffixes.

4.3.2 Verbal morphology

Hungarian verbal morphology is agglutinating, mainly suffixing. Verbal morphology is extensive, presenting the language learner with a considerable lexical learning task. A Hungarian verb is marked for five grammatical features: mood, tense, person and number of the subject, in some cases the person of the object, and the definiteness or indefiniteness of the direct object. More precisely, a verb consists of three parts: the stem, the tense/mood suffix, and the person/number suffix. These parts have a fairly fixed sequence in the formation of a verb form.

Present tense is marked by a zero morpheme, past tense is marked uniformly by a *-t-* suffix, and future tense is constructed periphrastically by the auxiliary *fog* and the infinitive. Mood, i.e. conditional and subjunctive mood, is also expressed morphologically, either through inflections or periphrastically. The indicative mood is marked by a zero morpheme. Aspectual and voice distinctions are mainly expressed derivationally, i.e. through the use of derivational suffixes on the verb.

4.3.2.1 Subject agreement

Hungarian has an extensive subject-verb agreement paradigm, with a discrete morphological inflection for each person and number in both tenses:

(50) harcol-ok / -sz / -Ø / -unk / -tok / -nak
fight-1sg/-2sg/-3sg/-1pl / -2pl / -3pl
 'I / you.sg / he-she-it / we / you.pl / they fight.'

(51) harcol-t- -am / -ál / -Ø / -unk / -atok / -ak
fight-PAST-1sg/-2sg/-3sg/-1pl / -2pl / -3pl
 'I / you.sg / he-she-it / we / you.pl / they fought.'

4.3.2.2 Object agreement

Hungarian is a nominative-accusative language. Verb-morphology displays an overwhelming transitive-intransitive distinction. Hungarian transitive verbs have two sets of conjugation paradigm, indefinite and definite conjugation, selected according to the definiteness of the object complement of the verb.⁵² Compare examples in (52) and (53) below:

- (52) szeret-ek / -sz / -Ø / -ünk / -tek / -nek egy lányt
love-1sg/-2sg/-3sg/-1pl / -2pl / -3pl.INDEF a girl-ACC
 ‘I / you.sg / he-she-it / we / you.pl / they love a girl.’

- (53) szeret-em / -ed / -i / -jük / -itek / -ik Vicát
love-1sg/-2sg/-3sg/-1pl / -2pl / -3pl.DEF Vica-ACC
 ‘I / you.sg / he-she-it / we / you.pl / they love Vica.’

4.4 Pro-drop

Hungarian is an extensively subject-drop as well as an object-drop language. Since the verbal inflection expresses the person and number of the subject, and in some cases the person of the object, it both licences and identifies the phi-features of the dropped subject and object complements of the verb:

- (54) Ha elárul(-Ø), megöl-öm.
if betray-SU:3sg.OB:1sg, kill-DEF.SU:1sg.OB:3sg
 ‘If he/she betrays me, I’ll kill him/her.’
- (55) Ha becsap-sz, megver-lek.
if cheat-SU:2sg.OB:1sg, beat-INDEF.SU:1sg.OB:2sg
 ‘If you cheat me, I’ll beat you.’

⁵² Throughout this thesis *INDEF* indicates indefinite verbal inflection, *DEF* indicates definite inflection in the glosses.

The following Table 4-1 shows the 1st person singular definite conjugation of the stem *olvas* 'read':

| | prefix | root | mood/tense | person/number def/indef object | periphrastic mood | |
|---------------------|--------|--------|------------|-----------------------------------|----------------------|------------------------|
| present indicative | el- | olvas- | ∅ / ∅ | om | | 'I (will) read it' |
| past indicative | el- | olvas- | ∅ / t- | am | | 'I read it (past)' |
| present conditional | el- | olvas- | ná- / - | m | | 'I would read it' |
| past conditional | el- | olvas- | - / t- | am | volna | 'I would have read it' |
| subjunctive | | olvas | s- / - | am el! | | 'I should read it' |

Table 4-1 Definite 1sg inflectional paradigm

4.5 Word order

4.5.1 'Basic' word order

With respect to canonical word order, Hungarian is said to exhibit both SOV and SVO orders. As to its basic word order, Hungarian, like Finnish, is supposed to be in a transitional state, moving from an earlier SOV order to a SVO order.⁵³ Whether SVO or SOV is the neutral, canonical order for present-day Hungarian is still a question of unresolvable debate. In fact, Siewierska (1995) classifies Hungarian in an altogether different category, the 'split word order' category, to distinguish it from the rest of the languages that display a single basic word order. She calls it a 'split word order' language along with possibly Basque and argues that this type represents a very minor percentage of the languages of the world (3%).

É.Kiss (1987, 1992) argues that it is not very illuminating to claim either of the two orders as the neutral, i.e. context-independent, order in Hungarian. The word order of a neutral ('out of the blue') sentence depends very much on a number of grammatical factors. Among these grammatical factors are the specificity, definiteness, theta role and other semantic features (such as the [+/-human] feature) of the subject or object arguments of the verb, as well as the aspect of the sentence⁵⁴. Note, of course, that if we assume with Kayne (1994) that SVO is the

⁵³ Finnish is said to have proceeded further on this development towards an SVO structure (Vilkuna 1989).

⁵⁴ In order to see the inter-relatedness of, for instance, definiteness and aspect in the determination of basic word order, note the variation in the following sentences. Transitive verbs with an **indefinite** or determinerless NP argument are conjugated according to the *indefinite conjugation* in an SOV order as the following example shows:

universal order, the very notion of basic word order becomes trivial, since all the other word orders (i.e. the SOV and verb-initial VSO/VOS structures) can be seen as derived from this base order.

4.5.2 Discourse configurationality

As seen above, Hungarian has a rich nominal and verbal morphological paradigm, which provides a highly elaborate system for showing thematic relations in propositions. This rich system renders the use of word order to indicate syntactic-thematic roles unnecessary. What it actually means, in effect, is that word order in Hungarian is not necessarily employed for indicating thematic relations, such as agent, patient, recipient (*Who did what to whom?*), as these relationships are clearly marked by the inflections on the arguments of the verb.

In English, on the other hand, it is almost exclusively the sequence of elements that is instrumental in marking syntactic and thematic roles. English has been called a **configurational**, fixed word order language. In configurational languages the syntactic position of elements is a crucial indicator of their grammatical and thematic role in the sentence. Contrary to English, Hungarian word order is 'freed' to fulfil other functions in communication. These are discourse functions, which satisfy requirements of information packaging in the on-

- (1) Mari (egy) almát eszik.
Mary-NOM (an) apple-ACC eat-3sg.INDEF
 'Mary is eating an apple.' ('Mary is apple-eating').

whereas transitive verbs with a **definite** NP, i.e. a specific object argument, display the *definite conjugation* and appear in an SVO sequence:

- (2) Mari eszi az almát.
Mary-NOM eat-3sg.DEF the apple-ACC
 'Mary is eating the apple.'

A similar phenomenon can be observed with **verbal prefixes**, which express aspect in Hungarian. Indefinite NPs with a verb **without a prefix** appear in an SOV order and have an imperfective aspect interpretation:

- (3) A férfi sört ivott a kertben.
the man-NOM beer-ACC drank-3sg.INDEF the garden-in
 'The man drank beer in the garden.' ('The man was beer-drinking in the garden.')

while definite NPs with a **prefixed** verb appear in an SVO order with a perfective aspect interpretation:

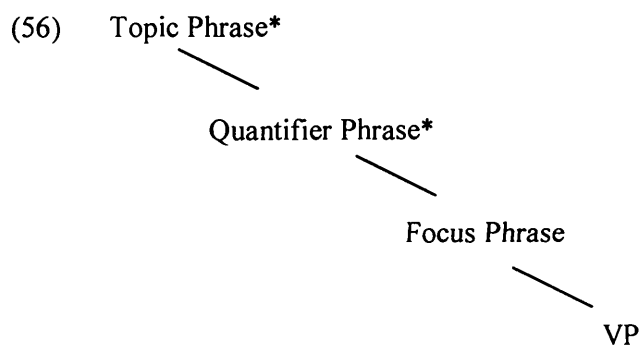
- (4) A férfi meg-itta a sört a kertben.
the man-NOM PREF-drunk-3sg.DEF the beer-ACC the garden-in
 'The man drank up the beer.'

These word order patterns are further complicated by discourse phenomena, such as focusing and topicalization. It is thus clearly difficult to determine the basic word order pattern of Hungarian.

going discourse. Word order is thus varied to distribute textually and contextually determined factors such as *given*, *new*, *topic*, *focus*, *contrast*, *emphasis* and a range of other proposed informational primitives to elements of the sentence⁵⁵. However, as we indicated above, word order in Hungarian is also determined by semantic factors, such as the specificity and definiteness of a constituent, or whether it is a quantifier, an operator or the predicate of the sentence, etc. Languages that have designated positions for discourse functions rather than syntactic/thematic functions are called **discourse configurational** languages (É.Kiss 1995). This group includes Hungarian, Basque, Greek, Bulgarian, Turkish, Catalan, and Finnish.

In Hungarian, it has been argued that there are three syntactically designated positions with a specific discourse function: the Topic position, the Quantifier position and the Focus position. Quantifiers, focused as well as *wh*-expressions are generally termed operators in an A'-position. Operators are moved from their Case-marked position in the sentence to a scope position. From their scope position operators bind a variable left in their trace. In this study we investigate the acquisition of focus, therefore here we shall introduce the other two discourse functions only briefly.

The partial tree in (56) shows the preverbal part of the Hungarian sentence which provides a hierarchical structure for various A'-moved elements. The designated Topic position occupies a sentence initial position and can host any number of elements. The next operator position is the Quantifier position to which Quantifier Raising moves any number of quantified elements. This position is separate from the designated Focus position and it does not share the characteristic features of the latter. The Focus position is the host for focused, *wh*- and negative operators.



⁵⁵ For a survey of these informational primitives see Vallduvi (1992, 1993).

É.Kiss (1994) posits two different parameters of UG with which languages of the world can be said to differ from each other, namely that

1. a language may or may not express **grammatical relations** by S-structure configurations. Hungarian has a [-] value for the expression of grammatical relations at S-structure, while English has a [+] value for this parameter. This means in effect, that English expresses grammatical and thematic roles in the sentence configurationally, while Hungarian does not.
2. a language may or may not express **logical relations** by S-structure configurations. Hungarian has a [+] value for logical relations at S-structure. This means that scope relations of operators play a crucial role in the word order of Hungarian. English might be said to have a [-] value for expressing logical relations at S-structure.⁵⁶

É.Kiss's generalisations under point 1 are correct with respect to showing grammatical relations at S-structure. However, her second proposed parameter under point 2 needs refinement. Although English does not show logical relations at S-structure in the case of quantifiers and focused expressions, it does have A'-movement in the case of *wh*-phrases, relative pronouns, topicalized constituents, and negative operators. We shall return to these shortly in the contrastive analysis of English and Hungarian. First we review the Hungarian operator positions.

4.5.3 *Topic prominence*

Hungarian is a **topic-prominent** language, as opposed to English, which is a subject-prominent language. Semantically, the topic of the sentence is understood as the notional subject. It serves for the foregrounding of an entity, or a group of entities, the existence of which is presupposed by the participants of the discourse. Usually it represents the given information in the proposition, i.e. an element of a pre-established, given set. Note that there can be any number of topics in a Hungarian sentence.

⁵⁶ É.Kiss (1994) points out that Greek, Basque, Japanese, Somali, and Quechua have been described as having a [+] value for both of these parameters.

4.5.4 Neutral, emphatic and focused sentences

In Hungarian, three basic types of sentences have been identified with respect to their discourse functions: neutral sentences, emphatic sentences, and sentences with a focused constituent (Kálmán 1985). Let us exemplify each in turn.

In **neutral sentences** each constituent bears equal stress. Therefore neutral sentences display level prosody. As we pointed out earlier, the order of constituents in neutral sentences depends on the lexical properties of the main verb as well as on specific semantic features of its complements. In the following neutral sentence each stress is indicated with a diacritic ‘ to show level prosody:

- (57) ‘Gergely ‘vissza-tért a ‘török ‘fogságból.
Gergely PREF-came the Turkish capture-from
 ‘Gergely returned from Turkish imprisonment.’

According to the classification given in Kálmán (1985), **emphatic sentences** are clauses in which the verb bears the main stress. Emphatic sentences correspond to *do*-support sentences in English (see also Komlósy 1994:97). Emphasis and focus is indicated by small caps:

- (58) A törökök végül MEG-VERTÉK a magyarokat.
the Turks-NOM in-the-end PEF-beat-they the Hungarians-ACC
 ‘In the end the Turks DID beat the Hungarians.’

The feature of Hungarian, which will be the focus of our L2 study, is the fact that in **focused sentences** the XP which bears the focus interpretation immediately precedes the inflected verbal element or the predicate of the sentence:

- (59) Gergely DOBÓT akarta szolgálni.
Gergely-NOM Dobó-ACC wanted serve-INF
 ‘Gergely wanted to serve DOBÓ.’
- (60) Dobó A VÁR KAPITÁNYA volt.
Dobó-NOM the castle(-POSS) captain-POSS was
 ‘Dobó was THE CAPTAIN OF THE CASTLE.’

The main difference between typical neutral and focused sentences can be seen in their basic word order. While **neutral sentences** predominantly have an **SVO (logical subject, V, object/argument)** structure, the **sentences with focus** have the characteristic features of **SOV (Topic, Focus, V)** structure (Kiefer 1992:11). This is exemplified by the following contrast:

- (61) **SVO:** Imre ismeri Erzsit.
Imre-NOM knows Erzsi-ACC
 'Imre knows Erzsi.'
- (62) **SOV:** Imre 'ERZSIT ismeri.
Imre-NOM Erzsi-ACC knows
 'It is ERZSI that Imre knows.'

That the SOV structure is probably the earlier word order that characterized Hungarian was shown by Dezső (1980:250) who argues that the determinerless NP appearing before the verb is an earlier, more unmarked construction⁵⁷. Dezső further suggests that the preverbal focus position was inherited from this early SOV word order.

4.5.5 The semantic properties of focus operators

The focus operator (i.e. the preverbal focused element introduced above) can carry different semantic interpretations, according to textual and contextual features of the domain of discourse in which it appears. The focus operator always operates on a set of contextually relevant entities present in the domain of discourse and identifies all and only the elements of this set of which the predicate holds. It can express identification or identification with exclusion, which is in effect contrast (Kenesei 1989). In Hungarian identificational focus is always exhaustive [+exhaustive]. It can, but does not necessarily have to be contrastive [+/-contrastive]. In the following paragraphs we shall exemplify the different types of focus operators in more detail.

⁵⁷ Vilkuna (1989) has attributed a similar earlier SOV construction to Finnish. However, both Dezső's and Vilkuna's proposals lose theoretical power if we assume Kayne's (1994) proposal about an invariant underlying order, see section 4.5.1 above.

Among the semantic roles of the focus operator the most characteristic one is the expression of **identification with exclusion**, i.e. **contrast**. This means that there is a set of possible candidates for which the proposition may be true and the focus operator identifies and selects the one from this set of which the proposition holds true *excluding* the rest of the set. In this case identification of one element with the exclusion of the rest of the possible candidates of the set corresponds to *contrast*. Note that when focusing operates on a closed set of individuals, identification always goes together with the exclusion of the rest of the set, resulting in contrast. Contrastively focused elements can only be DPs and PPs. Identification with exclusion is exemplified in the following example, where the contrastively focused element is marked by small caps:

(63) Mit loptak el? A lovat vagy a szamarat?
what-ACC stole-they PEF? the horse-ACC or the donkey-ACC?
 ‘What did they steal? The horse or the donkey?’

(64) A SZAMARAT, (nem a lovat).
the donkey-ACC, (not the horse-ACC)
 ‘THE DONKEY, (not the horse).’

If the focused expression involves only **identification without exclusion**, it does not carry a contrastive interpretation. The examples below in (65) and (66) involve identification without exclusion, which is the only possible interpretation if there is an open set presupposed in the discourse domain:

(65) a. Ki írta az Eger Csillagokat?
who wrote the Eger Stars-ACC?
 ‘Who wrote Eclipse of the Crescent Moon?’

b. GÁRDONYI GÉZA.
 ‘GÉZA GÁRDONYI.’

(66) a. Mit tudsz Gárdonyiról?
what-ACC know-you Gárdonyi-about?
 ‘What do you know about Gárdonyi?’

- b. Azt, hogy EGERBEN temették el.
that-ACC that Eger-in buried-they PREF
 ‘That he was buried in EGER.’

Contrary to an unrestricted number of topics, there can only be *one* focused phrase in the designated focus position in Hungarian. This considerably restricts the possibilities of focusing more than one phrase in the same clause. The language thus resorts to other means of expressing multiple quantification, which will be reviewed in later sections.

According to É.Kiss's (1998a) distinctions, *wide focus* is presentational focus that carries new information in the sentence. It is commonly described in information packaging accounts of focus (Vallduvi 1992, 1993, Vallduvi and Engdahl 1996). On the other hand, *narrow focus* is the so-called identificational focus operator, which expresses identification or contrast. It is the focus operator which occupies a designated syntactic position in several discourse configurational languages, such as Hungarian described in Horváth (1986), É.Kiss (1987) and Bródy (1990), Greek described in Tsimpli (1995), Finnish outlined in Vilkuna (1995), etc. Let us summarize, after É.Kiss (1998a), the difference between wide focus and narrow focus. É.Kiss (1998a) equates

- wide focus with information focus (i.e. presentational focus expressing new information)
- narrow focus with the identificational focus (i.e. focus operator expressing identification or contrast)

É.Kiss (1998a) goes on to contrast the two types of focus she has identified:

(67)

Identificational Focus

exhaustively identifies the subset of a set
identification, +/- contrast
 takes scope over the VP
 operator moved to [Spec,FP] in syntax
 moved to a left-peripheral operator position
 triggers V movement to F
 cleft-construction

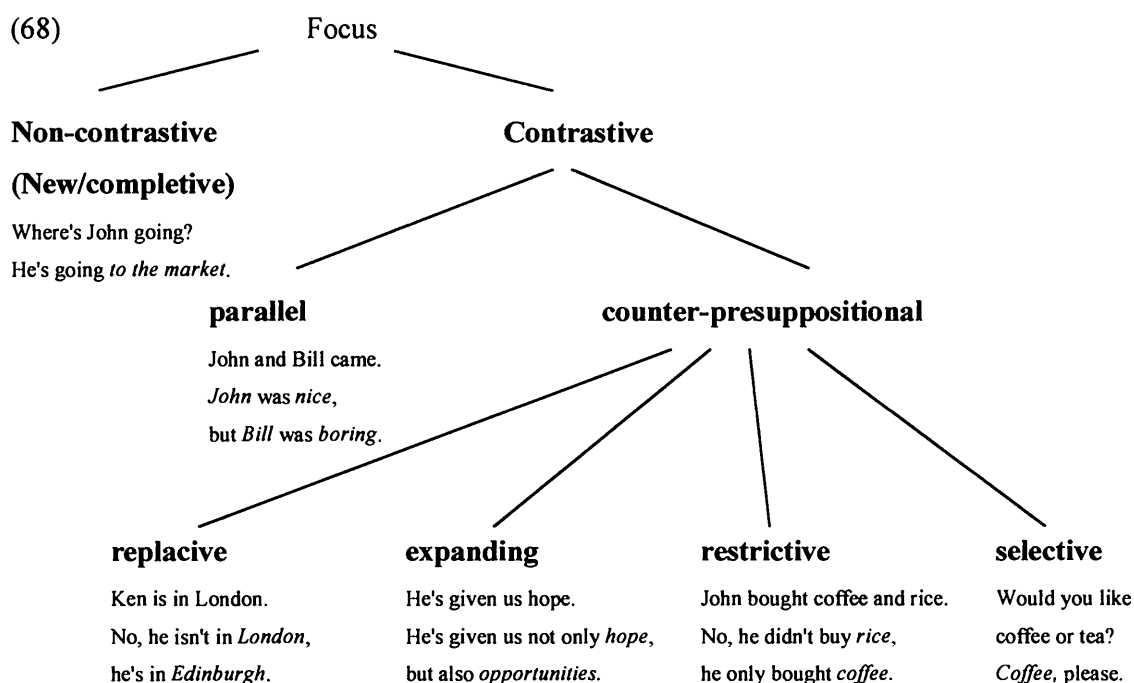
Information Focus

non-exhaustive
 conveys *new information*
 does not have scope
 operator moved to [Spec,CP] in LF
 left in situ
 does not involve any movement
 non-presupposed, new, emphatic element

However, it can be argued that what É.Kiss (1998a) and Roberts (1996) call information (or presentational) focus is actually part of the neutral sentence. This is supported by the observation that the sentence-final element appears with level prosody and it does not have any of the features characteristic of focus operators.

As a summary of the semantic interpretation of the focus operator we reiterate what was said above. In Hungarian, the preverbal Focus operator performs identification. It exhaustively identifies the subset of a set of entities with or without excluding the rest of the set. If it excludes the rest of the set, it expresses contrast (identification with exclusion); if it does not, it expresses only identification.

The functional literature (e.g. Dik 1989:282, Siewierska 1991:176) recognises more than two types of focus. The division of focus into different subtypes was carried out before É.Kiss (1998a) gave the above account of the two focus types. Below, we reproduce the subcategorization of different types of focus from Siewierska (1991:176)⁵⁸:



⁵⁸ In the tree in (68) drawn up by Siewierska (1991) we can recognise the various types of focus that we have identified above. It can be argued that the *non-contrastive (new/completive)* focus of Siewierska corresponds to É.Kiss's (1998a) *information/presentational* focus; *replacive* corresponds to the *corrective* of Kálmán *et al* (1986); *expanding* can be taken as the equivalent of *emphatic*; *restrictive* parallels *contrastive*; and *selective* can be a term for *identificational* focus. This exercise serves for highlighting the problem of the considerable terminological confusion in both the functional and generative literature.

These distinctions between the different types of focus may be accompanied by various formal expressions in a language, such as cleft constructions, special prosody, word order changes, morphological focus markers, and so on. However, a particular language does not necessarily have all of the above distinctions expressed through different formal means. Hungarian is unique in the sense that it has a designated syntactic position for all the above types of focus, contrastive and non-contrastive.

4.6 Designated Focus projection

In languages where there is a designated syntactic position for focused material, such as Hungarian, the Focus operator usually occupies the specifier position of a functional projection. The exact nature of this projection is, however, given different treatment in various authors' works. In what follows we shall review some of the major proposals that have been advanced for the analysis of Hungarian focus constructions. Our ultimate aim is to try to reconcile the notion of focus projection (FP) with the other functional projections, such as IP containing Tense and Agr as well as NegP and *is* 'only'-phrases, in one tree representation. This is necessary for the comparison of Hungarian functional categories and their lexical properties with those obtaining in English.

4.6.1 *The theory-neutral description*

Our main question concerns the *verb-movement* possibilities in Hungarian. Any theoretical analysis of Hungarian has to account for the verb-movement property in sentences containing an operator, i.e. a focused, *wh*-, or negative phrase. A diagnostic for verb movement is the surface position of the preverbal verbal element⁵⁹, which appears preverbally in neutral sentences (see example (69)), but postverbally in sentences with operators (examples (70)-(73)):

- (69) 'Gergely 'meg-szerette 'Vicát.
Gergely-NOM PEF-loved-DEF Vica-ACC
 'Gergely fell in love with Vica.'

- (70) Gergely VICÁT szerette meg.
Gergely-NOM Vica-ACC loved-DEF PREF
 ‘Gergely fell in love with VICA.’
- (71) Gergely KIT szeretett meg?
Gergely-NOM who-ACC loved-INDEF PREF?
 ‘Who did Gergely fell in love with?’
- (72) Gergely NEM szerette meg Vicát.
Gergely-NOM not loved-DEF PREF Vica-ACC
 ‘Gergely did not fall in love with Vica.’
- (73) Gergely nem VICÁT szerette meg.
Gergely-NOM not Vica-ACC loved-DEF PREF
 ‘It is not VICA Gergely fell in love with.’

In what follows we shall outline the main proposals for the verb-movement properties of Hungarian shown in (69)-(73). We shall review, in particular, what syntactic positions various authors have advanced as landing sites for the moved operators and the main verb (or predicate) itself. During the history of focus analyses, VP, CP, IP and a new functional projection FP have all been proposed as hosts for the operator and the verb.

4.6.2 VP-focus: the semi-configurational approach with a flat V' (É.Kiss 1994)

É.Kiss (1981a,b,c, 1987, 1992, and 1994) analyses Hungarian as a semi-configurational language with a bipartite clause structure. She argues that the Hungarian clause consists of a flat non-configurational V' dominated by a highly configurational hierarchical left periphery, which provides several A'-positions as landing sites for various movement transformations. Movement rules, such as Topicalization, Quantifier-raising, *Wh*-movement and Focus-movement move constituents from their base-generated position in the flat postverbal part to the left periphery.

⁵⁹ Preverbal elements are prefixes and other verbal modifiers. We shall review them in detail in section 4.8.

É.Kiss (1992, 1994) argues that the Hungarian sentence is the projection of the abstract functional category tense. Tense is in complementary distribution with mood. Spec,TP is assumed to be the landing site for the topic phrase; Spec,VP is analysed as the landing site for the focus or the *wh*-phrase; quantifiers are assumed to be left adjoined to the VP. Figure 4-1 shows the clause structure proposed in É.Kiss (1992):

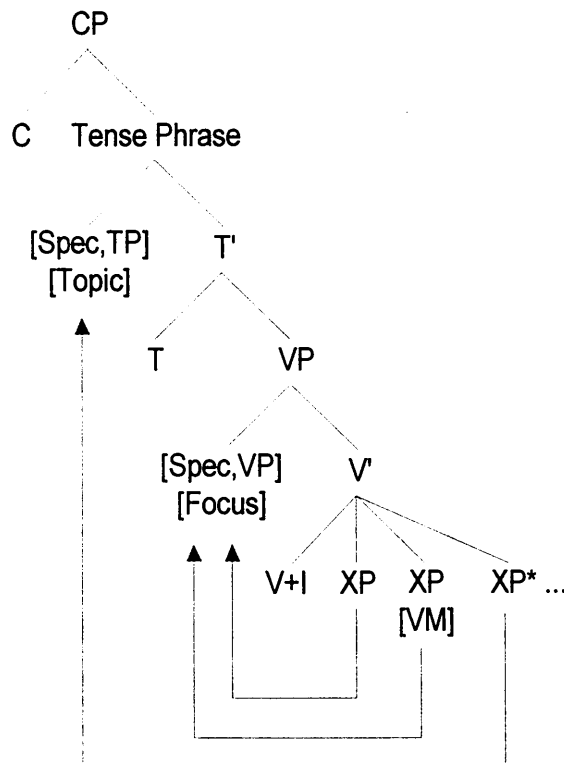


Figure 4-1: É.Kiss's (1992) clause structure

The flat V' contains the propositional part of the sentence. The verb is phrase-initial and its arguments, including the prefix and other preverbal elements, are base-generated postverbally. It is from this postverbal position that elements are moved either to Spec,VP or Spec,TP, depending on their specific discourse functions. Note that in this analysis the verb is assumed to stay in its base-generated position under V+I within the V'. In other words, É.Kiss does not assume verb-movement.

One of the drawbacks of this analysis is that it does not account for the fact that the unmarked surface position for the elements is the preverbal position. The standard analysis for the preverbal elements assumes a VM+V node⁶⁰, as outlined in Ackerman and Komlósy (1983) and

⁶⁰ Where the VM stands for preverbal elements, such as the prefix or other verbal modifiers, see section 4.8 for more detail.

utilised in later proposals by Horváth (1986), Farkas (1986), Kenesei (1989), Marác (1990), Bródy (1990), Piñón (1992), *inter alia*.

Note that in her more recent work, É.Kiss (1998b) has revised her position on the Hungarian clause structure. In contrast to her earlier position, she now assumes that the focused material appears not in Spec,VP, but rather in Spec,FP, a functional projection that dominates the VP. This way her later analysis conforms to the analysis of other authors who will be discussed below.

4.6.3 CP-focus: the V2 analysis (Marác 1990)

According to Marác (1989/1991, 1990) the all-pervasive noun-incorporation of internal arguments with generic, indefinite and sometimes idiomatic interpretation points to a configurational VP-node in Hungarian. The internal arguments of the verb follow a hierarchy of nominative-accusative-dative-instrumental-lexical case. Marác (*op.cit.*) argues that the VP is head-final, i.e. left branching, in accordance with other lexical phrases in Hungarian. Thus the Hungarian sentence is assumed to display an underlying SOV structure.

Marác (1990) argues that the Hungarian neutral sentence is an IP. V-to-I movement and the movement of the subject from Spec,VP to Spec,IP results in the neutral order (SVO). Marác (1990) thus assumes the following structure for neutral sentences in Figure 4-2:

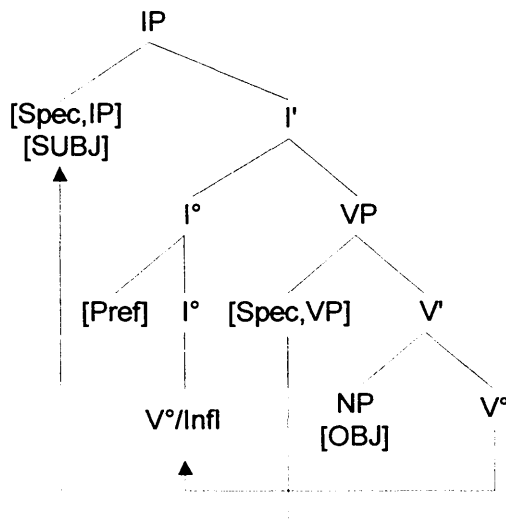


Figure 4-2: Marác's (1990) analysis of neutral sentences

On the other hand, non-neutral sentences are argued to activate a CP level. The CP contains wide-scope quantifiers: *wh*-phrases, focused XPs, *csak* ‘only’-phrases and negated constituents. In his analysis Marác (1989/1991, 1990) adapts the analysis of Germanic V2 structures to Hungarian sentences containing wide-scope quantifiers. Therefore a strong C^0 is assumed to attract the verb and hence there is V-to-C movement in these sentences. The focused, negated, or *wh*-element is argued to appear in Spec,CP, just like any non-subject-like topic in German V2 structures. The clause structure in Figure 4-3 is based on the analysis given by Marác (1989/1991, 1990):

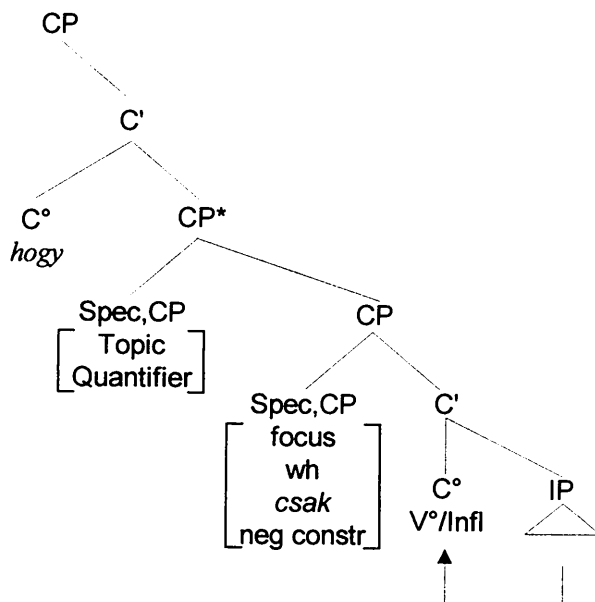


Figure 4-3: Marác's (1989/1991, 1990) V2 analysis of wide-scope sentences

Note that CP is assumed to be recursive in Marác (1989/1991, 1990). Quantifiers and topics appear in a higher Spec,CP dominating the CP containing the wide scope operator. The complementizer of an embedded sentence is assumed to be in the head C^0 .

Since our study assumes a feature-checking approach to syntactic movement, the attractive feature of Marác's analysis is the assumption that verb-movement is motivated by feature-strength. However, rendering the same analysis to the Hungarian focus structure as to Germanic V2 structures involving non-subject topicalization conceals the considerable differences between the structure of the two languages and the particular constructions involved.

4.6.4 IP-focus: the configurational SVO approach (Horváth 1995)

Contrary to É.Kiss's verb-initial flat structure and Marác's SOV structure, Horváth (1986, 1995) has claimed that Hungarian is an SVO language. Initially she assumed that the focus feature is associated with the verb, but in her later analyses she has postulated that focused sentences are IPs with the operator appearing in Spec,IP.

Originally, Horváth (1986) hypothesised a FOCUS-parameter for UG with the following two options:

FOCUS-Parameter:

- a) [+FOCUS]: a feature associated freely with any category - deriving the English-type languages, i.e. Focus *in situ*
- b) the "grammaticalized" version of the [+FOCUS] feature: an intrinsic part of the feature-matrix of a single category, namely, V - meant to derive the Hungarian-type, structurally limited, instantiations of Focus

It can be seen from clause b) of the proposed Focus-parameter, that Horváth (1986) associated the assignment of the [+F(ocus)] feature with the verb. To summarise her earlier position, she assumed that in the Hungarian-type languages the feature [+F] is part of the feature matrix of the verb and can be assigned by the verb to any constituent that it governs and is adjacent to.

Horváth (1995), on the other hand, has postulated that focus in Hungarian appears in Spec,IP of the sentence, and it is the functional head I^0 (more specifically, the [+tense] feature in it) that assigns the feature [+f] to the element that appears in Spec,IP. The feature [+f] originates in I^0 , and is assigned to a constituent in Spec,IP under spec-head agreement, rather like structural case-assignment. The verb or predicative adjective moves to I^0 in order to lexicalize the head node, that is, to provide it with lexical content. Figure 4-4 is Horváth's (1995) proposed clause structure for operator sentences:

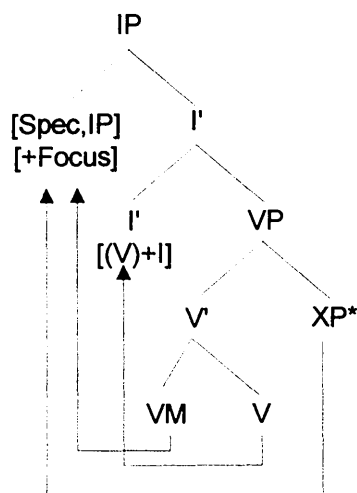


Figure 4-4: Horváth's (1995) clause structure

Horváth (1995) attempts to account for cross-linguistic variation among designated Focus languages by revising her original FOCUS-Parameter (Horváth 1986). Languages can 'choose' from the options of two factors: a) the actual functional category that assigns the [+f] feature, whether it is I^0 or C^0 , and b) the mode of feature assignment, whether it happens under government or spec-head relations. Hungarian is said to belong to the IP-focus group with spec-head agreement between the operator and the moved verb or adjectival predicate (see Horváth 1995).

The appeal of this proposal is that it uses spec-head agreement in the analysis of operator structures. Also, it proposes the head I^0 as the landing site for the moved verb, which provides a natural account for the inflectional properties of the verb as well as its adjacency to the operator position.

Kenesei (1989, 1992) has also identified Tense as the carrier and assigner of the [+f] feature. The IP analysis has also been adopted by Piñón (1992) with the modification that he postulates that the Hungarian sentence is a projection of a Sigma-Phrase (ΣP) in which it is the Tense head which is associated with the [+f] feature in operator sentences. Piñón (op.cit.) assumes that a number of functional heads can contribute to the articulation of a single projection with a unique specifier position, Spec, ΣP . The following Figure 4-5 shows the clause structure proposed by Piñón (1992). Note the distinction he makes between two kinds of *is* 'only'-phrases: one, the quantificational *is*, which is not part of the extended ΣP , and the other, emphatic *is*, which is one of the heads contributing to the ΣP :

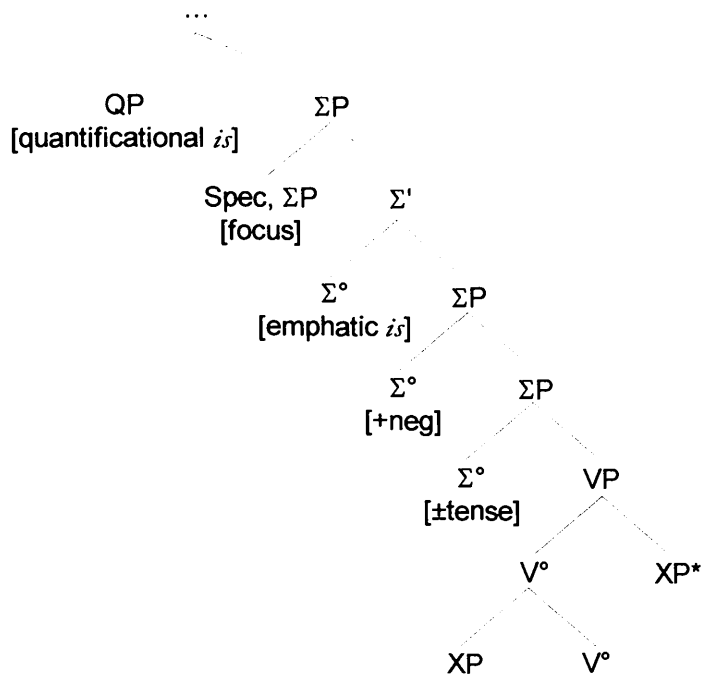


Figure 4-5 Piñón's (1992) clause structure

4.6.5 FP-focus: an extra functional projection proposal (Bródy 1990)

Bródy (1990) modified Horváth's (1986) early formulation of the FOCUS-Parameter by associating the focus operator with a functional projection of its own. He still assumes that the verb is the element that assigns the [+F] feature to a complement that it governs and is adjacent to. However, he proposes that the verb is moved to F, the head position of a new functional projection, the Focus Phrase (FP).

Bródy (1990) accounts for cross-linguistic variation by arguing that the feature [+F] can be assigned to the element in the Spec,FP position either at S-structure, or as late as at LF. In Hungarian assignment of the [+F] feature happens at S-structure, while English instantiates an LF-based [+F] assignment without any overt movement.

Bródy (1990) originally proposed that Hungarian does not have a separate INFL node. In line with later theoretical developments in the Minimalist Program, he later argues in Bródy (1995) that all inflectional morphemes are generated directly on the verb. Therefore there is no need to posit any syntactic movement mechanism for the verb in order to pick up or have its inflectional morphemes checked, as earlier assumed. Earlier, in Bródy (199), he supported his argument for the absence of an IP projection by the claim that Hungarian does not have modal

auxiliaries⁶¹. Instead of verb-movement to INFL, Bródy (1990) assumed verb-movement to the F head of the FP, which is projected only in focused sentences. In Figure 4-6 we reproduce the clause structure assumed by Bródy (1990):

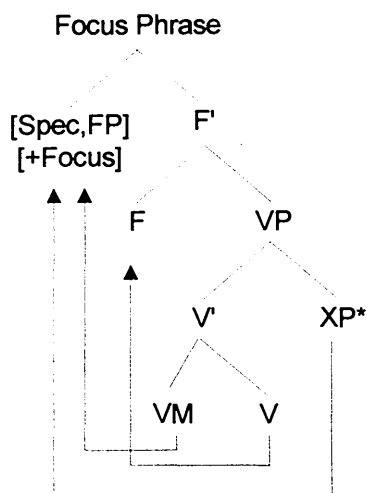


Figure 4-6: Bródy's (1990) focus projection

Bródy's (1990) analysis conforms to the analyses that have been proposed for other designated Focus languages (see e.g. Ouhalla 1992a, 1993 for Arabic, Tsimpli 1995 for Greek, etc.). From Bródy's (1990) analysis we shall adopt the notion of a separate functional projection in focused sentences.

Bródy (1995) extends the FP-focus analysis in the Minimalist checking approach. Contrary to his earlier proposal, he assumes an elaborated split IP structure. The inclusion of a Tense node was necessitated by the realisation that Tense plays a crucial role in distinguishing between tensed and infinitival structures on the one hand, and other (participial/gerundive) structures vs. [+/-tense] clauses on the other. Also, separate AgrS and AgrO projections are needed to account for the subject-object (a)symmetries found in Hungarian. Below is the structure of the sentence assumed in Bródy (1995):

⁶¹ However, the future auxiliary *fog* 'will', as well as the auxiliary *szokott* denoting present habitual action, are clearly auxiliaries that require an INFL node. The analysis of Hungarian auxiliaries can be found in Kálmán *et al* (1989), Kenesei (1998) and Bartos (1998). Note that in his later work Bródy (1995) has noted the necessity for the clause to contain at least a Tense node, as is shown in the text.

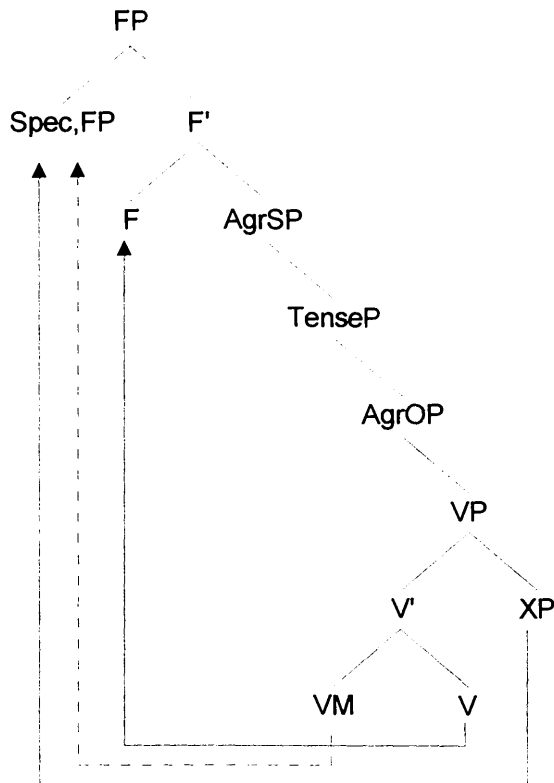


Figure 4-7 Bródy's (1995) clause structure

4.6.6 FP + IP approach (Puskás 1996)

Puskás (1992, 1994, and 1996) combining the proposals by Bródy (1990, 1995) and Horváth (1995) with the split CP approach of Rizzi (1990, 1995) has proposed the following constituent structure for the Hungarian sentence, see Figure 4-8:

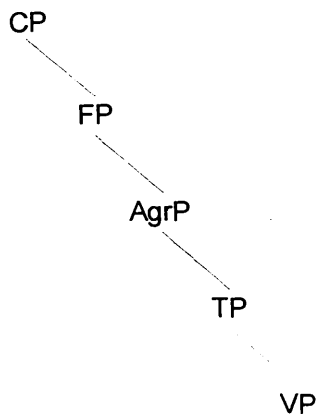


Figure 4-8 Puskás's (1992, 1994) clause structure

Puskás argues that FP is a CP-type projection and not an IP-type projection, such as TP and AgrP. In line with Rizzi (1990, 1995), she assumes that sentences containing an operator are

type-changing sentences, such as *wh*-questions, negatives, imperatives and focused sentences which modify the type of an indicative declarative sentence. Thus the FP is part of the CP-structure of the sentence rather than an element of the elaborate IP structure. IP is the projection of the verb. It contains functional categories that serve to fulfil morphological requirements, such as tense and agreement features. Verb movement from I-to-F, however is not motivated by overt morphological requirements of the verb, thus projections involving any of the operators are not extended V-projections in Grimshaw's (1991) sense.

4.6.7 Feature-checking approach: [+/-interpretable] features

Within the Minimalist Program, feature checking is assumed to be motivated by morphological requirements, i.e. the strength of features under functional nodes. However, features have been divided into two categories: interpretable and non-interpretable (see section 2.3.3 in Chapter 2). In our analysis of Hungarian we would like to utilise this distinction between the two types of features.

Our analysis in this thesis will be mainly based on Bródy's (1995) clause structure. Verb-movement to Agr is motivated by the necessity to fulfil morphological requirements of *non-interpretable* features on the verb, i.e. the phi-features. These features will be checked and then erased. On the other hand, Tense is an *interpretable* feature, i.e. it needs to be checked but stays visible to the computation. Verb-raising to it will be obligatory to check the [+tense] feature. Verb-raising will be not required when the clause has a [-tense] feature. T-to-F movement also involves *interpretable* features, that of [+*wh*], [+neg] and [+f] in Hungarian. The verb moves up to F⁰ in order to satisfy the spec-head agreement between its strong feature and the feature of the operator in Spec,FP. Although Bródy (1995) assumes that an [+f] feature was present under T⁰ in addition to a strong [+f] feature in F⁰ in Hungarian, it is not clear whether in the Minimalist framework this feature is required under T⁰. The assumption of an optional [+f] feature under F⁰ assigned to a focussed phrase in the numeration or the course of the derivation would be sufficient to force verb (or adjectival predicate) movement to F⁰.⁶² This is the analysis we shall adopt in the present thesis.

⁶² I owe many thanks for this observation to Roger Hawkins, my external supervisor.

4.7 Focus operators

It is time to review the specific operators that can appear in the designated specifier position in Hungarian. Any element with a [+wh], [+neg] and [+f] feature is called an operator.

Elements that involve negation overtly carry a [+neg] feature. These include negated constituents, predicate negation, negative universal quantifiers *senki* ‘nobody’, *semmi* ‘nothing’, other negative polarity items *soha* ‘never’, *semelyik ház* ‘neither/none of the houses’, etc. Others involve covert negation. These include negative non-universal quantifiers (*kevés* ‘few’) and adverbials expressing negative frequency, degree, or manner (such as *ritkán* ‘seldom’, *alig, kevéssé* ‘hardly’, *hiába* ‘in vain’, *rosszul* ‘badly’, *csúnyán* ‘in an ugly way’, *hibásan* ‘with faults’, *hiányosan* ‘with deficiencies’, *elégtelenül* ‘unsatisfactorily’ etc.)⁶³. Although not overtly negative, these elements also carry a [+neg] feature. This [+neg] feature turns them into operators and ensures that they appear in the focus position.

Wh-phrases, as well as *csak* ‘only’-phrases and emphatic *is* ‘also’-phrases are inherently focused and carry the [+f] feature in Hungarian. They appear in the specifier of FP. Apart from *wh*-operators, *csak* ‘only’ and emphatic *is*- ‘also’ phrases, any constituent of the clause can acquire the [+f] feature in the numeration or the course of the derivation, by which it acquires an operator status and moves into the focus position of the sentence.

In the next section we shall review the types of preverbal elements. They occupy a preverbal position in neutral sentences, but appear postverbally if any focus operator appears in the sentence.

4.8 Preverbal elements

A fundamental property of Hungarian is that preverbal elements (i.e. verbal prefixes and other verbal modifiers) are in complementary distribution with the operators of the sentence in the preverbal position. This means that only one can fill the preverbal slot to the exclusion of the other. In neutral sentences these elements appear preverbally. However, when there is

⁶³ Kiefer (1967) and É.Kiss (1994) offer an extensive discussion of negative and positive adverbials.

an operator in the sentence, these elements occupy a postverbal position. In other words, there is a single position available preverbally, which can be occupied by either the preverbal element or the operator, but not both. Compare the following ungrammatical sentences in (74)-(77) with the ones given in examples (69)-(73). In the following sentences the verbal prefix appears preverbally although there is an operator in the sentence, creating sharply ungrammatical sentences:

- (74) *Gergely VICÁT meg-szerette.
Gergely-NOM Vica-ACC PREF-loved-DEF
 ‘Gergely fell in love with VICA.’
- (75) *Gergely KIT meg-szeretett?
Gergely-NOM who-ACC PREF-loved-INDEF?
 ‘Who did Gergely fell in love with?’
- (76) *Gergely nem meg-szerette Vicát.
Gergely-NOM not PREF-loved-DEF Vica-ACC
 ‘Gergely did not fall in love with VICA.’
- (77) *Gergely nem VICÁT meg-szerette.
Gergely-NOM not Vica-ACC PREF-loved-DEF
 ‘It is not VICA Gergely fell in love with.’

In order to present a more detailed analysis of the Hungarian VP, we need to examine the preverbal elements and describe their syntactic and semantic properties as well as the possible categories they fall into. The following in-depth overview of verbal prefixes and other verbal modifiers is presented with a view to outlining the specific learning problems they present for L2 learners of Hungarian.

4.8.1 Verbal prefixes

Of the two subcategories within the group of preverbal elements we shall first examine the Hungarian verbal prefixes. Verbal prefixes in Hungarian are crucial since they play a major role in morphological as well as syntactic processes. Prefixes are derivational morphemes.

They determine the subcategorizational and selectional properties of the verb they attach to as seen in the following examples with the stem *néz* ‘look’:

(78) *át-néz* *valami-n*
through-look something-through
 ‘look through something’

(79) *le-néz* *valaki-t*
down-look somebody-ACC
 ‘look down on somebody’

The next question we address is the types of verbal prefixes present in Hungarian. Historically, verbal prefixes are preverbal modifiers of various sorts, including different kinds of complements and heads of complements. The group comprising the core representatives of prefixes are directional complements of the verb: *be-* ‘in’, *ki-* ‘out’, *le-* ‘down’, *fel-* ‘up’, *át-* ‘across’, *rá-* ‘onto’, *ide-* ‘hither’, *oda-* ‘thither’, *szét-* ‘around’, *össze-* ‘together’, *vissza-* ‘back’. In addition to the directional prefixes, Hungarian has two prefixes with a perfectivizing function: *el-* and *meg-*.

Apart from the above core representatives of prefixes, various heads of complements, predicative complements and direct objects are also now analysed as prefixes. The following is a non-exhaustive list of non-directional complements with a verb that they can occur with:

(80)
benn-ég ‘lit: inside burns = get burnt inside’
helyre-hoz ‘lit: place-onto brings = put something right’
jóvá-tesz ‘lit: good-into makes = remedy’
helyt-ad ‘lit: place-ACC gives = allow’
egyét-ért ‘lit: one-ACC agrees = be of the same opinion’
ellent-mond ‘lit: counter-ACC say = contradict’
észre-vesz ‘lit: mind-to takes = notice’
agyon-üt ‘death-to hits = strike dead’

The members of this less basic and more heterogeneous type lack the productivity of directional prefixes. Some of them can appear with some other verb(s), others are not

productive at all. Since they are more idiomatic expressions, learning of them requires lexical memorisation.

Komlósy (1994:102) estimates the number of verbal prefixes at one hundred, although there is some controversy as to the exact number within this closed category. The reason for this is that incorporation is still in process today, i.e. verbal modifiers are currently acquiring functions that are typical of derivational morphemes.

The individual properties of prefixes range over a wide spectrum of syntactic functions. Apart from the perfectivizing function mentioned above (*el-*, *meg-*), some are used to express different Aktionsart⁶⁴, and some serve to form complex predicates with unanalysable meanings. Thus the meaning is non-compositional in some of the more idiomatic cases, such as:

- (81) *tol valami-t* 'push something-ACC' versus
ki-tol valaki-vel 'lit: out-push somebody- with = deceive somebody'

The next question concerns the syntactic and semantic status of verbal prefixes. Are they lexical entries of their own or are they listed in the lexicon attached to the verb? Data from first language acquisition could certainly inform this question. Let us see the two sides of the argument surrounding the status of prefixes in Hungarian.

Some authors assume that prefixes have lexical entries of their own, since they belong to a definite categorial class, e.g. that of adverbials, and they have particular subcategorization properties. Similarly to inflectional and derivational affixes, a prefix can be analysed as the head of its own projection that subcategorises for a verb and selects its own complements. This is in line with the assumption that prefixes and verbs are generated under separate heads in the lexicon (see e.g. Puskás 1996)⁶⁵. It is argued that there is strong evidence from acquisition data that this is the case (see Pléh 1992, Gergely 1991). Children sometimes make mistakes in the lexical restrictions of prefixed verbs by using prefixes productively and creatively, as the two non-target-like utterances show:

⁶⁴ Such as certain prefixes do in Russian and German.

⁶⁵ Verb-particle combinations in English are analysed as "complex" verbs with two heads, a verb and a particle. Of the two heads the verb is the head which projects VP but it adjoins to the head that contains the particle:
Mary [looked down] on John. / He [wrote down] the answer.

- (82) Csukd ki az ajtót!
close out the door-ACC
 ‘Close the door.’
- (83) Öltöztessél le!
dress-me down
 ‘Undress me.’ (Pléh 1992)

The verb *csuk* ‘close’ takes the semantically similar *be* ‘in’ prefix in the adult language, but the child in example (82) used a prefix with the opposite meaning *ki* ‘out’, thus creating a semantically anomalous utterance. The same productive and independent use of the prefix *le* ‘down’ is evidenced in the utterance in (83). In the adult language the prefix *le* ‘down’ occurs with the verb *vetkőztet* ‘undress’, while the verb *öltöztet* ‘dress’ can occur with only the prefix *fel* ‘up’. The child combines ‘dress’ with ‘down’, hence again producing a semantically anomalous sentence. Anecdotal evidence shows that this kind of productive and creative use of prefixes abounds in children’s production.

However, there is some argument that (at least) a subset of the prefixes might be generated attached to the verb⁶⁶. The evidence is argued to come from syntax. É.Kiss (1994) argues that the VM+V unit is sometimes the basis of word formation: *le-néz* (v.t.) ‘look down on somebody’ is basis of *le-nézés* (n) ‘the act of looking down on somebody’. However, the lexical unit does not always serve as the input to word formation processes directly. For instance, the indefinite object VM loses its case marking when incorporated during word formation: *levelet ír* ‘letter-ACC writes’ becomes *levél-írás* ‘letter-writing’, *kezet fog* ‘hand-ACC takes’ becomes *kéz-fogás* ‘handshake’, *részt vesz* ‘part-ACC takes’ becomes *rész-vétel* ‘participation’, etc. Also, if it is argued that verbal modifiers are incorporated and are generated attached to the verb in the lexicon, it would be difficult to see how they can move by themselves in the syntax. Therefore, we shall assume that verbal prefixes are generated separately in the lexicon and need to be learnt separately.

⁶⁶ This position is in line with Chomsky’s (1970) Lexicalist Hypothesis, which states that certain morphological rules apply to lexical items and derive complex categories in the lexicon. These categories are represented in the syntax as single complex units.

To summarise this section, verbal prefixes are very salient in Hungarian grammar due to the aspectual and other semantic functions they fulfil as well as their characteristic syntactic behaviour. They are in complementary distribution with operators. Therefore, their position varies in the sentence depending on whether the sentence is a neutral one or it contains an operator.

4.8.2 *Verbal modifiers (VMs)*

The second group of constituents which behave in a rather similar fashion to verbal prefixes are called verbal modifiers (VMs). Just like prefixes, these elements are closely related to the verb they modify semantically and lexically but are free syntactically. They serve to restrict the meaning of the verb. They are semantically incorporated to the verb and form the semantic predicate of the sentence. The meaning of a VM+V complex predicate can be compositional but is mostly non-compositional, carrying an idiomatic expression.

In a discussion of the base-generated status of verbal modifiers in the lexicon, Komlósy (1994:98) argues that when a VM and a V form a unit and acquire an idiomatic interpretation they should be listed in the lexicon as a single complex lexical unit. Unlike prefixes, some of the verbal modifiers are not orthographically incorporated with the verb, but appear separated from the verb.

Similarly to prefixes, verbal modifiers can be of different syntactic categories and have different grammatical functions⁶⁷ (see Komlósy 1994:98-100 for a comprehensive list). It is inevitable that the heterogeneous character of the group and the different orthographic rules have led to some confusion in the traditional literature as to their syntactic and semantic role in the VP.

Komlósy (1992) muses over the fact that some of the preverbal elements have been termed verbal prefixes while others have not still reached the status of 'prefixhood' in traditional descriptions. Some of the less core members of the prefix category, i.e. elements other than the directional and perfectivizing prefixes, are treated as prefixes by traditional grammars,

⁶⁷ See Baker (1988) where incorporation involves heads of various categories moving into heads of a variety of categories. For example, N, P, as well as V and A may incorporate into V.

see examples in (80). This is so despite the fact that they are less productive and their meaning is less compositional than the elements of the basic set of prefixes. Komlósy (op.cit.) wonders why some obligatory complements are treated as verbal modifiers and not prefixes although some non-core members are considered prefixes. The following is a list of verbal modifiers:

(84)

részt vesz 'lit: part-ACC takes = participate'

szénné ég 'lit: coal-into burns = get charred'

beteg volt 'sick was'

rosszul esik 'badly feels = hurt somebody's feelings'

újságot olvas 'newspaper-ACC reads'

úszni akar 'swim-INFL wants'

moziba jár 'cinema-to goes'

kezet mos 'hand-ACC washes'

kezet fog 'lit: hand-ACC takes'

nyelvéssz lesz 'linguist becomes'

gazdag lesz 'rich becomes'

nyelvéssznek vél 'linguist-as takes = think somebody is a linguist'

szőkére fest 'blond-into dyes'

The question naturally arises whether the only criteria distinguishing between prefixes and other verbal modifiers are conventions of orthography. So we must look for other differences in the traditional distinction between prefixes and other verbal modifiers.

Except for predicate nominals and adjectives of finite copular clauses (*nyelvéssz lesz* 'becomes a linguist', *beteg volt* 'was sick') each of the preverbal elements is marked morphologically. Note that the members of the prefix category which fall outside the core locative/perfectivizing category also bear morphological marking. So the difference must lie in the extent of derivational incorporation these preverbal elements have gone through, i.e. the extent of grammaticalization they have been subjected to in the language and their decreased productivity as a consequence.

It is generally known that incorporation takes place at the lexical level (see Baker 1988 and footnote 67). The lexicon is the location where it is determined which verb allows

incorporation and what category can be incorporated into it. Since lexical selection of the preverbal element is more or less idiosyncratic for each verb, complex VM+V semantic units have to be learnt individually (Horváth 1986). This is predicted to present some difficulties in interlanguage development, since the lexical entry of each verb has to be identified on the basis of input alone. There is no rule-type generalisation that can be used in order to find out which verbs will take which preverbal elements.

Apart from the semantic differences pointed out above, there is a striking similarity between adverbial/perfectivizing prefixes and other verbal modifiers with respect to syntactic behaviour. Elements in both groups are syntactically independent and can be moved freely in the sentence. When they occupy the preverbal position, they serve the role of modification of the verb. Neither prefixes nor verbal modifiers can act as focus operators, as they cannot express identification or identification by exclusion since they are non-referential. However, they can bear emphasis in the case of predicate focus (in emphatic sentences). There the VM+V complex bears the primary stress, and the sentence corresponds to emphatic *do*-sentences in English (Puskás 1998).

In the next section we shall outline the syntactic criteria that have been proposed for well-formed focused, interrogative and negative sentences cross-linguistically. Satisfaction of these criteria is crucial for the correct ordering of elements in a language. Thus, we shall see what syntactic restrictions will determine the ordering of the verb, its prefix or VM, and any operator in the Hungarian sentence. We shall compare these restrictions with those that obtain in English.

4.9 Contrastive analysis of English and Hungarian

The aim of this section is to show how the *Wh*-Criterion (Rizzi 1990, 1996), the Neg-Criterion (Haegeman and Zanuttini 1991) and the Focus Criterion (Bródy 1990, 1995) apply in English and Hungarian. These syntactic criteria constitute well-formedness conditions on movement of *wh*-phrases, negative operators, and focus operators, respectively. The three criteria share some structural similarities in their application, among them the most striking similarity being that they all involve a specifier position as the site to which operators must

move. In other words, there is specifier-head agreement between the element in the specifier position and that of the head of the maximal projection.⁶⁸

4.9.1 Affect-Criterion

The structural similarities among *wh*-questions, negative and focused sentences and the constraints that apply to them were summarised in the Affect Criterion by Haegeman (1993). The Affect-Criterion encompasses all three well-formedness criteria:

Affect-Criterion (Haegeman 1993):

- a) An AFFECTIVE operator must be in a spec-head configuration with an [AFFECTIVE] X⁰.
- b) An [AFFECTIVE] X⁰ must be in a spec-head configuration with an AFFECTIVE operator.

The Affect-Criterion was proposed by Haegeman (1993) based on Klima's (1964) analysis of interrogative and negative sentences. Klima had suggested that negative elements, *wh*-phrases and *only* form a natural class that he called 'affective elements'. In what follows we outline each of the criteria as they apply to English and Hungarian, respectively.

4.9.2 Wh-Criterion

4.9.2.1 English main *wh*-questions

Wh-movement, as May (1985) and Chomsky (1986) described it, is a case of substitution, i.e. movement of a maximal constituent into a specifier position. It is a structure preserving movement, since it involves movement of a category into an empty position.

The first to argue for the extension of the concept of Case-marking and agreement checking to *wh*-movement was Rizzi (1990, 1996), based on the assumption that *wh*-movement lands

⁶⁸ The trend in recent GB theory to analyse the specifier position in more detail (Weibelhuth 1995:82, Haegeman 1993:183) has led to the in-depth investigation of spec-head agreement, coindexation, feature sharing, feature-checking, operator movement and scope-relations, instead of the government relations dominating earlier analyses. These are mechanisms that are central to recent work in the theory, particularly the Minimalist Program. Apart from being the position for moved *wh*-, negative and focus operators, the specifier position of functional heads is specialised for the checking of all Case marking and agreement features.

in the specifier of Comp (Chomsky 1986). Rizzi postulated the *Wh*-Criterion as a licensing mechanism for *wh*-operators.⁶⁹ He bases the licensing mechanism for *wh*-operators on a close analogy with the licensing mechanism for arguments.

The ***Wh*-Criterion** as postulated by Rizzi (1990, 1996) is the following:

- a) A *wh*-operator must be in a Spec-head configuration with an X⁰ marked [+*wh*].
- b) A X⁰ marked [+*wh*] must be in a Spec-head configuration with a *wh*-operator.

Rizzi gave the following qualifying definitions:

- a) *wh*-operator: a *wh*-phrase in a scope position⁷⁰
- b) scope position: left-peripheral A'-position, i.e. an adjoined position [YP,XP] or a specifier position [Spec,XP].

The *Wh*-Criterion expresses the requirement that any *wh*-phrase must be in the required relation with a head carrying the feature [+*wh*], and that a head which carries this feature requires a *wh*-operator in the given configuration. The licensing of the *wh*-feature in English follows two separate mechanisms:

- a) in main clauses INFL (which already contains other independently licensed specifications such as Agr and Tense) also contains the feature [+*wh*]. In a split-INFL approach (Pollock 1989) the [+*wh*] feature would be associated with T or Mood. See example (85) and (86):

(85) *_{CP} who [_C [_{IP} Mary saw t_i]]]
[+*wh*]

(86) [_{CP} Who_i [_C did_j [_{IP} Mary t_j [_{VP} see t_i]]]]]?
[+*wh*]

The sentence in (85) is ungrammatical because the [+*wh*] I⁰ is not in the required configuration with the *wh*-operator, violating clause b) of the *Wh*-Criterion. The sentence in (86) is correct since *did* carries the feature [+*wh*] and is in the required configuration with the *wh*-element.

⁶⁹ Rizzi (1996) also postulates a structurally similar Neg-Criterion. Haegeman and Zanuttini (1991) work out the details of Neg-Criterion, see section 4.9.3.

⁷⁰ Rizzi (1996) gives the definition of a *wh*-operator as a *wh*-phrase in a scope position to exclude *wh*-phrases appearing in a base-generated left position, as in some French *wh*-questions.

b) in subordinate clauses the licensing is a question of the classical device of selection (the standard subcategorization of verbs): some main verbs like ‘wonder’ select a [+wh] C⁰ subordinate clause, triggering the movement of the *wh*-phrase to Spec,CP:

(87) I wonder [CP who_i [C [IP John saw t_i]]]
 [+wh]

(88) *I wonder [CP [C [IP John saw who]]]
 [+wh]

Other main verbs, such as ‘think’ or ‘believe’ select a [-wh] C⁰, thus rendering the following constructions ungrammatical, since the *Wh*-Criterion is not fulfilled:

(89) *I think who_i C John saw.

(90) *I believe who_i C John saw.

Rizzi (1990, 1996) argues that the *Wh*-Criterion must universally be satisfied at the level of LF. However, the application of overt *wh*-movement is subject to parametric variation. In English, *wh*-movement applies at S-structure and hence the ungrammaticality of **I wonder John saw who*. In Chinese it applies at LF. Thus in English *wh*-in-situ is ruled out, whereas in Chinese *wh*-phrases move at LF, i.e. they remain in situ in the overt syntax. Thus languages differ not with respect to whether they have *wh*-movement or not, but in terms of the level at which the move-*wh* rule applies.

For *yes/no* questions in English as well as V2 Germanic languages Haegeman (1995:98) following Bródy (1995) postulates an empty [+wh] operator to satisfy spec-head agreement:

(91) [CP OP [C Have [you seen him?]]]
 [+wh]

(92) [CP OP [C Kommt [er morgen?]]]
 [+wh]

Subject *wh*-questions such as *Who phoned?* or *Who loves Sylvia?* in English follow a different pattern from non-subject *wh*-questions. They will be reviewed in section 4.9.2.3.

4.9.2.2 Hungarian main *wh*-questions

Puskás (1992) first applied the *Wh*-Criterion of Rizzi (1990, 1996) to Hungarian. As in English, in Hungarian the movement of *wh*-phrases applies at S-structure. The general assumption made by Chomsky (1986) that *wh*-phrases move to Spec,CP however, has to be qualified in the case of Hungarian. *Wh*-phrases seem not to appear in Spec,CP, because there is a *hogy* complementizer occupying C⁰:

- (93) Kíváncsi vagyok, [_{CP} [_C *hogy* [_{FP} *mikor* [_F *támadnak* a *törökök*.]]]]
curious am-I that when attack-they the Turks
 ‘I wonder when the Turks attack.’

Instead of moving to Spec,CP the *wh*-phrase appears in the spec of a lower projection. This position has been identified as the specifier of the independent focus projection (FP) (Bródy 1990, see section 4.6.5 above).

This observation is corroborated by the fact that in Hungarian, unlike in English, the *wh*-phrase does not have to move to the very beginning of the sentence, as either the subject or the topic of the sentence can precede it in the Topic position (see the tree of operator positions in (56) above):

- (94) Dobó MIT mondott?
Dobó what-ACC said-3sg
 ‘What did Dobó say?’
- (95) A szultánt KI látta?
the sultan-ACC who-NOM saw-3sg
 ‘As for the sultan, who saw him?’

Therefore we can establish that full main clauses consist of a CP, TopicP, QuantifierP, FocusP, and a VP in Hungarian.

Anticipating our discussion in section 4.9.5.2 of the structure of Hungarian focused sentences, we point out that according to Bródy’s Focus-Criterion the head of the lower position to which Hungarian *wh*-phrases move is F⁰ whose projection is F(ocus)P(hrase). F⁰

carries the features [+focus] as well as [+wh] and [+neg]. The verb (or the predicate) moves to the head in order to check its [+f], [+wh] or [+neg] feature, as well as to satisfy the spec-head relationship with the element appearing in Spec,FP, in this case the *wh*-word. As a result of verb movement to F^0 , the verbal prefix or preverbal modifier stays left behind in a postverbal position. As a consequence of the focus position they appear in (i.e. Spec,FP), Hungarian *wh*-phrases obligatorily carry stress.

In Hungarian the feature [+f] is not realised morphologically.⁷¹ Instead, it is always realised as a primary stress at PF on the XP that moves to Spec,FP. In case there is no element in Spec,FP in a focused sentence, the verb (or the adjectival predicate) retains its [+f] feature and realises it as stress at PF, creating an emphatic sentence that corresponds to emphatic *do*-clauses in English, see example (58) (Puskás 1998).

It has been suggested that in some languages I^0 is a “rich” functional head, which contains enough material to trigger movement to it. However, according to the Split INFL hypothesis of Pollock (1989) and Chomsky (1991), INFL is made up of Agr and Tense categories minimally, so there is no sense in which we can talk about a unified INFL category. The Agr category within INFL in French is argued to have strong features capable of attracting both main and auxiliary verbs into it, but in English it is weak so only auxiliaries can raise to it. Tense is the head that carries the strong [+wh] feature in English (Rizzi 1990, 1996). Auxiliaries and periphrastic *do* appear in Tense to check their own tense feature. Also, they pick up T^0 's strong [+wh] feature and raise to C^0 in order to be in a spec-head relationship with Spec,CP in questions, see section 4.9.2.

In Hungarian, on the other hand, a language with structural focus, the F^0 functional head is an additional category, and “rich” enough to trigger movement of the verb to it. It contains among others, the feature [+focus], [+wh] and [+neg]. So while in Hungarian the feature [+wh] is carried F^0 (and arguably by T^0), in English it is carried by T^0 and C^0 . This is in line with the proposal that languages instantiate different functional heads with distinct features. Features do not have to be the same for similar functional categories in other languages. Moreover, a given feature can be either part of a functional head or it can have an independent projection. This hypothesis is taken to account for cross-linguistic variation

⁷¹ In some languages there is a focus marker, such as in Aghem (Horváth 1986), Arabic (Ouhalla 1992a, 1993), and Gun, a West African dialect spoken in Benin (Aboh 1993 cited in Haegeman 1995:109).

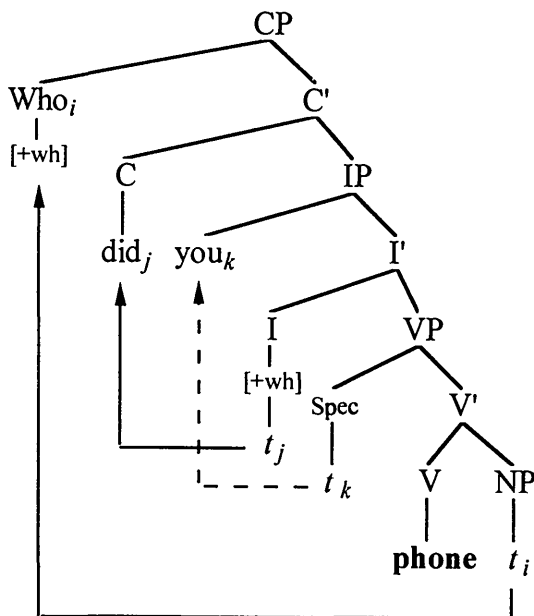
among natural languages in the Functional Parameterisation Hypothesis, see section 2.3.2 in Chapter 2.

4.9.2.3 Comparison of English and Hungarian main *wh*-questions

Let us exemplify the difference between the projection in English as opposed to Hungarian in main *wh*-clauses. The major difference between main *wh*-question formation in Hungarian and English lies in the target site of the main verb in head-to-head movement. In English main *wh*-questions (excluding subject *wh*-questions) there is I-to-C movement, or in other words, subject-auxiliary inversion (SAI). The English head-to-head movement is graphically shown in the tree representation below. The sentence in (96) has the structure in (97). Here and below boldface indicates phonological stress.

(96) [_{CP} Who_i [_C did_j] [_{IP} you_k [_I t_j] [_{VP} t_k [_V **phone** t_i ?]]]]]

(97)



In this main clause the element in I⁰ carrying the [+*wh*] feature is moved to C⁰, the object *wh*-operator is moved to Spec,CP, and thus the *Wh*-Criterion is fulfilled. As we have mentioned in the last section, English has the unusual property that it has a weak Agr, with the result that main verbs cannot move out of the VP. Therefore, when there is no auxiliary,

the dummy modal "do" must be inserted and moved to C^0 in *wh*- and *yes/no* questions⁷². If there is a modal or aspectual auxiliary, there is no need for *do*-support, since these elements move to C^0 .

Subject *wh*-questions are different from other *wh*-questions, creating a subject-object asymmetry that is present throughout the grammatical system of English. In a subject *wh*-question, such as the ones below there is no I-to-C movement:

(98) Who phoned you?

(99) Who loves Sylvia?

Here, the *Wh*-criterion seems to be violated since there is no *do*-support. Rizzi (1996) suggests that I-to-C movement creates a configuration in English which does not licence a subject trace. Rizzi (1990) argued that I-to-C movement in subject interrogatives (in sentences such as **Who does love Mary?*) would violate the proper head government requirement of the ECP. The question concerns whether the subject *wh*-phrase in these constructions stays in Spec,IP or moves to Spec,CP. Rizzi (1996) rules out the possibility that the subject *wh*-phrase does not move but stays in Spec,IP. He argues that it moves up to C^0 as there is coindexation between I^0 and C^0 and this makes it possible to satisfy the *Wh*-criterion. Haegeman (1994), on the other hand, while she agrees with Rizzi (op.cit.) that the subject *wh*-phrase appears in CP, argues that an empty category in C^0 matches the [+*wh*] feature of the subject *wh*-phrase *who* which appears in Spec,CP. These accounts are different from Grimshaw's (1993, 1997) treatment, who argues that subject *wh*-phrases do not move but stay in Spec,IP when the clause contains auxiliary verb, and Spec,VP when no auxiliary is present.

In Hungarian spec-head agreement holds between the *wh*-phrase and the verb in the same way, except that there is V-to-I-to-F movement. Further, unlike in English, there is no restriction on movement of the main verb, which can therefore move head-to-head to F^0 carrying the [+*wh*], [+f] or [+neg] features. Therefore, Hungarian does not need an element of the *do*-support kind. It follows that in English the presence of *do*-support is a reliable cue that I-to-C movement has applied. On the contrary, there is nothing in the Hungarian

⁷² as well as negatives, see section 4.9.3.1.

sentence to indicate I-to-F movement, unless there is a verbal prefix or other preverbal modifier that appears postverbally after verb movement has applied:

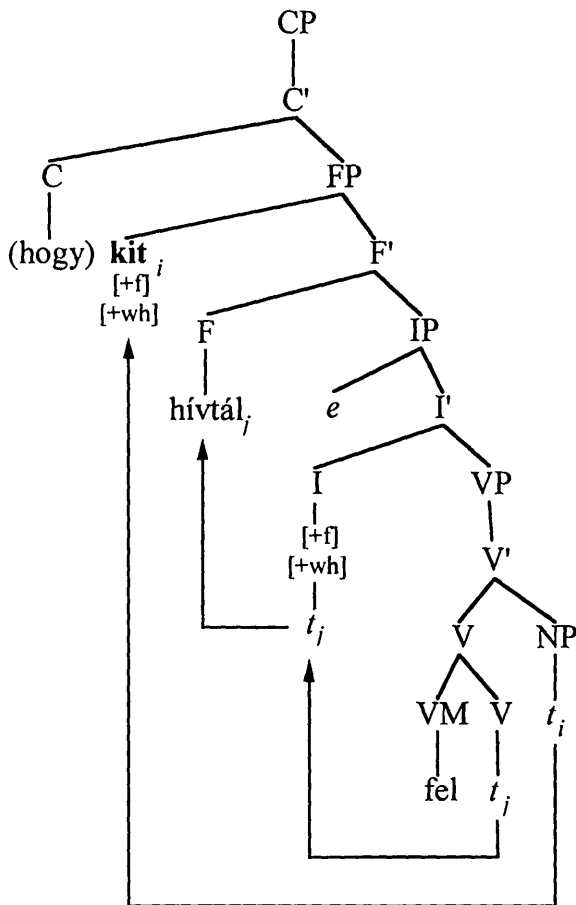
- (100) [_{FP} **Kit**_i [_F látott_j [_{IP} [_I t_j [_{VP} t_j Mari t_i]]]]]?
who-ACC saw-3sg Mary-NOM
 'Who did Mary see?'

- (101) [_{FP} **Kit**_i [_F látott_j [_{IP} [_I t_j [_{VP} t_j meg Mari t_i]]]]]]?
PREF
 'Who did Mary get a glimpse of?'

The Hungarian main *wh*-question corresponding to (96) is illustrated in (102) and the course of verb movement is shown in the corresponding structure in (103). In the tree structure in (103) the complementizer *hogy* 'that' is identified in the head of CP for explanatory reasons. It indicates that Hungarian main and subordinate clauses have the same structure, unlike the difference between English main and subordinate clauses, see sections 4.9.2.4 and 4.9.2.5 shortly.

- (102) [_{FP} **Kit**_i [_F hívtál_j [_{IP} [_I t_j [_{VP} [_{VM} fel] [_V t_j] t_i ?]]]]]]?
who-ACC called-you up
 'Who did you phone?'

(103)



One of the questions that arises when we compare English and Hungarian *wh*-questions is whether *wh*-phrases are universally/inherently focused, as Horváth (1986) and É.Kiss (1987) suggested. In the phonology of English *wh*-questions, the *wh*-word/phrase is not stressed (Ladd 1996). In an English *wh*-question the stressed constituent is the sentence final verb rather than the *wh*-phrase appearing sentence initially, see examples (96) and (104)-(105) below:

- (104) Which book did you **buy**?
 (105) Who **came**?

Contrary to English, in Hungarian *wh*-phrases carry the [+f] feature and bear tonal accent (stress) as a result of their position in Spec,FP. In English where there is no FP projection and *wh*-phrases appear in Spec,CP, the focal stress is consequently not assigned. We expect this difference to bear importance in the acquisition of Hungarian by English speakers, as we shall outline in Chapter 5.

4.9.2.4 English embedded *wh*-questions

Subject-auxiliary inversion (SAI) in English is a root phenomenon, therefore there is no inversion in embedded *wh*-questions in English. In embedded sentences the [+*wh*] C⁰ is selected by the main verb.

(106) I wonder who John saw t

(107) *I wonder who did John see t

In English the embedded *wh*-phrase appears in Spec,CP. Other complementizers, such as the subordinator *that* and its interrogative counterparts *if/whether* appear in C⁰. There is further subdivision within C⁰ according to Nakajima (1996)⁷³.

Relative pronouns, exclamative *wh*-phrases and the expression *how come* in main clauses form exceptions to *wh*-phrases in that they appear in C⁰ and they do not trigger I-to-C movement of the verb:

(108) How nice he is!

(109) How come you are here?

The status of the complementizer in embedded sentences is subject to cross-linguistic variation. We shall compare English and Hungarian in this regard.

Bhatt and Yoon (1992) argue that complementizers have two distinct functions:

- to serve as subordinators, and
- to indicate clause-type

Consequently, Bhatt and Yoon (1992) distinguish between two kinds of complementizers according to their distinct functions:

⁷³ The analysis of Nakajima (1996) distinguishes two types of projections within CP: CP-type C and TopP-type C. Nakajima's claim rests on the distribution and similar behaviour of English *whether* and *that*, and *if* and *zero-that*, respectively. The head of CP contains the interrogative complementizer *whether* and its declarative counterpart *that*; while the head of TopP-type C is the position of interrogative *if* and its declarative correlate *zero-that*. Nakajima argues that Top-type C is where the verb raises in V2 phenomena, as Top is a verbal projection, whereas C is not.

- those that carry only information relating to the subordinate status of the clause they introduce, i.e. **pure subordinators** which can optionally be omitted, and
- those that indicate the type of the clause they introduce, i.e. **clause-typing complementizers** whose presence is obligatory

The complementizer *that* in English serves both of these functions in the same lexical item, whereas Bhatt and Yoon (1992) observe that in languages with a richer morphological system the two functions tend to be expressed by separate lexical items. In Hungarian, for example, the pure subordinator is *hogy*, and in this function can be freely omitted, whereas the clause-type indicators, such as the *-e* question marker in yes/no embedded questions are obligatory.

4.9.2.5 Hungarian embedded *wh*-questions

As we have mentioned above, unlike English, Hungarian embedded clauses have the same structure as main clauses. In Hungarian embedded questions the F^0 inherits the $[+wh]$ feature from the C^0 , as Puskás (1992:159) argues on an analogy with West Flemish. In West-Flemish there is a case of “head-to-head” agreement (co-indexing) between C^0 and I^0 , that is, the features of I^0 are passed on to C^0 . Puskás argues that the motivation for the “head-to-head” agreement, i.e. the transmission of the $[+wh]$ feature from C^0 to F^0 in Hungarian is precisely the satisfaction of the *Wh*-Criterion. In Hungarian the C^0 is filled by the complementizer *hogy* ‘that’ in embedded sentences, although it can be phonologically null (it can be optionally omitted, as mentioned in the previous section). The *wh*-phrase itself appears in Spec,FP:

(110) ... [_{CP} [_C *hogy* [_{FP} *mit* [_F *látott* [_{IP} [_I *t* [_{VP} *t* *János* *t*]]]]]]]
that what-ACC saw-3sg John-NOM
 ‘... what John saw.’

(111) ... [_{CP} [_C *hogy* [_{TopicP} *János* [_{FP} *mit* [_F *látott* [_{IP} [_I *t* [_{VP} *t* *t*]]]]]]]]]

Similarly to English, embedded *wh*-phrases need to be distinguished from other elements, such as relative pronouns, exclamative *wh*-phrases and the element *hogyhogy* ‘how come’. Compare sentences in (108) and (109) with (112) and (113):

- (112) Hányszor meg-mondtam!
how-many-times PREF-said-1sg
 ‘How many times have I told you!’
- (113) Hogyhogy el-jöttél?
how-come PREF-came-2sg
 ‘How come you’ve come?’

These latter elements are not moved to Spec,FP but appear in C⁰, and do not trigger I-to-F movement of the verb (just like in English they do not trigger SAI, see examples (108) and (109)). Note that these constructions are the exceptions to verb-movement in *wh*-, negative and focused clauses.

Kenesei (1984, 1992, 1994) describes the processes of subordination in Hungarian. The most common subordinating conjunctions (simple complementizers) are the following: *hogy* ‘that’, *ha*, *hogyha* ‘if’, *bár*, *habár* ‘though’, *bárha* ‘if only’, *mint* ‘as’, *mintha* ‘as if’, *minthogy* ‘since’, *mintsem hogy* ‘so as not to/rather than’, *mivel*, *mivelhogy* ‘since’, *azonban* ‘however’, *mert*, *merthogy* ‘because’, *ahogy* ‘as’, *amikor* ‘when’, and any combination of *a*-/+*wh*-phrase.

As can be seen in the list, Hungarian has some complex complementizers which are made up of a case-marked NP and the simple complementizer *hogy*, or two complementizers: *mivel+hogy* ‘lit: what-with + that = since’, *mert+hogy* ‘lit: because + that = because’, *amint+hogy* ‘lit: relative-as + that = as soon as’, etc.

Proposals for the position of the complementizer and the relative *wh*-phrase have assumed that the *hogy* ‘that’ complementizer appears in C⁰, whereas relative *wh*-phrases occupy Spec,CP (e.g. Horváth 1986). In the case of complex complementizers the first complementizer is base-generated in Spec,CP and *hogy* occupies the head C⁰. Kenesei (1994) analyses the complementizer + relative pronoun sequence (such as *mint ahogy* ‘as’) in a similar way to Puskás’s (1996) analysis of the complementizer + *wh*-phrase sequence in subordinate questions:

(114)

[CP [C hogy]

[CP aki [C] (Horváth 1986)

[CP mivel [C hogy]

[CP mert [C hogy]

[CP amint [C hogy]

[CP [C mint [IP/FP ahogy] (Kenesei 1994)⁷⁴

[CP [C hogy [FP ki] (Puskás 1996)

In Hungarian a *hogy* ‘that’ clause can be an argument of an adjectival predicate or a verb, just as in English (Nakajima 1996). In Hungarian there is an additional expletive which is related to the clausal complement and it bears the case of it (examples from Kenesei 1994):

NOM case, complement of A

- (115) Félő volt (az), hogy a gép el-romlik.
worrying was (that) that the plane down-breaks
 ‘It was feared that the plane might break down.’

ACC case, complement of V

- (116) Kati azt képzeli, hogy a gép el-romlott.
Kati that-ACC imagines that the plane down-broke
 ‘Kati imagines that the plane has broken down.’

Oblique case, complement of A

- (117) Büszke volt arra, hogy első lett.
proud was that-SUB that first became
 ‘He was proud that he came first.’

Oblique case, complement of V

- (118) Csodáloztam azon, hogy meg-értette.
wondered-1sg that-SUP that PREF-understood-3sg
 ‘I was amazed that s/he understood.’

Kenesei (1994:312) proposes that the arguments with structural case, i.e. the pronominals *az*, *azt*, be analysed as expletives. They are empty, non-referential expressions, and form a chain in Chomsky's (1986) sense with the complement *that*-clause. In Hungarian the expletive is obligatory in oblique cases, but optional in subject-complement and object-complement matrix clauses. This is a consequence of the subject- and object-*pro*-drop character of Hungarian:

(119) (Az) gyakran megesik, hogy a vonat késik.
(that-NOM) often happens that the train comes-late
 'The train is often late.'

(120) Félő volt (az), hogy a vonat késni fog.
fearful was (that-NOM) that the train be-late will
 'It was possible that the train would be late.'

(121) (Azt) nem tudom, hogy mikor érkezik a vonat.
(that-ACC) not know-1sg that when arrives the train
 'I don't know when the train arrives.'

(122) Kati gyakran gondolja (azt), hogy a vonat kisiklik.
Kati often thinks (that-ACC) that the train derails
 'Kati often imagines that there is a derailment.'

Expletives are not present in English subordinate clauses.

After a comparison of *wh*-questions in English and Hungarian according to the *Wh*-Criterion, we now turn to the Neg-Criterion.

⁷⁴ Kenesei (1994) bases his argument on historical data. In 16th century Hungarian *hogy*-relatives were in use. These are the by now obsolete *hogy ki/mely* 'that who/what' relatives (examples from Simonyi 1882 and Galambos 1902 cited in Kenesei 1994:303).

4.9.3 *Neg-Criterion*

Haegeman and Zanuttini (1991) postulated the Neg-Criterion based on data such as the following English sentence⁷⁵:

- (123) In no case would I do that.
 [+neg]

Sentences with negative operators such as ‘in no case’ display a similar structure to *wh*-questions. Rizzi (1996) formulated the Neg-Criterion on an analogy with the *Wh*-Criterion.

Neg-Criterion:

- a) Each NegX⁰ must be in a Spec-head relation with a Negative operator.
- b) Each Negative operator must be in a Spec-head relation with a NegX⁰.

The Neg-Criterion applies to negative sentences with a negative operator, such as ‘never’, ‘hardly anywhere’, ‘under no circumstances’, ‘in no way’, etc. The conditions of sentential and constituent negation are also brought under the Neg-Criterion by the assumption of empty operators in the sentence.

Haegeman (1993, 1995) set out the parallelisms between interrogative and negative constructions in English. Among the five properties identified by Haegeman (op.cit.) we mention three. First, both negative and interrogative constituents license polarity items such as *anyone*, *ever* or *anything*. Second, both preposed negative and interrogative constituents give rise to SAI, i.e. I-to-C movement, in root sentences. Therefore both negative and interrogative clauses require *do*-support in English. The third similarity between the two constructions is what Haegeman calls *Wh*-absorption. *Wh*-absorption characterises an interrogative sentence with two question words but a single question interpretation. A typical answer to this type of question is a paired list. English, French and German allow *Wh*-absorption (*Who said what?*, *Wer hat was gesagt?*), whereas Hungarian and Italian do not allow this type of construction:

⁷⁵ as well as extensive data from West Flemish

- (124) *Ki mondott mit?⁷⁶
who-NOM said what-ACC
'Who said what?'

However, multiple questions with absorption are fully possible in Hungarian if the two *wh*-words refer to the same set of entities (see É.Kiss 1992, 1994), see also later in section 4.9.8.1.2.2:

- (125) Ki szeretett bele kibe?
who liked into who-into
'Who fell in love with whom?'

A structural parallel to *Wh*-absorption is Negative concord, i.e. Neg absorption. Negative concord obtains when two negative operators jointly express a single negation. This is allowed in French, Italian, and Hungarian, but not in Standard English:

- (126) Personne ne disait rien
noone ne said nothing
- (127) Senki nem mondott semmit (sem).
noone not said nothing-ACC (not)
'Noone said anything.'
- (128) *Noone said nothing.

We shall deal with negation separately in detail in the following sections.

⁷⁶ The correct Hungarian multiple question is the following:

- (5) Ki mit mondott?

Sentences of the type 'Ki mondott mit?' deemed ungrammatical by Haegeman (1995) and Puskás (1994) are possible if the interpretation is of an echoic clarifying question, similarly to Polish (Wachowicz 1974 cited in Pesetsky 1987:117):

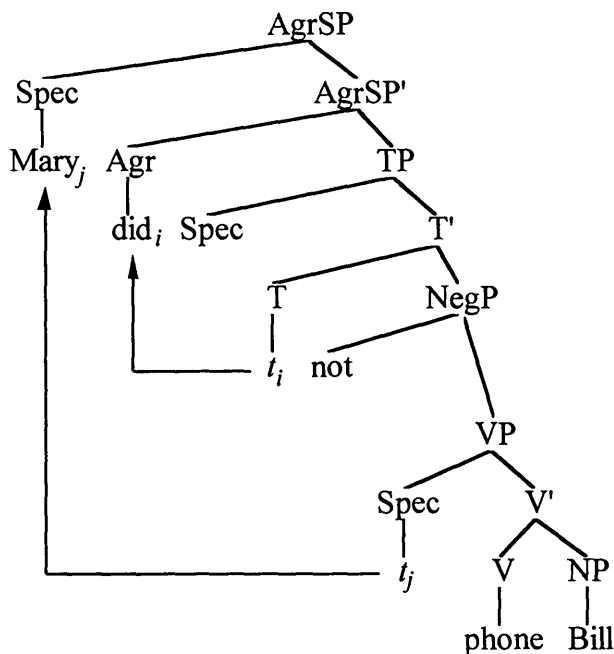
- (6) W końcu, kto robi co?
finally who does what

4.9.3.1 Negation in English

The placement of the NegP in the clause structure varies cross-linguistically (Ouhalla 1990, 1991). In English it is IP-internal, placed below Tense. Thereby the unmoved negative marker *not* intervenes between VP and Tense, hence the ungrammaticality of both **Mary not phoned Bill* and **Mary phoned not Bill*. If there is an auxiliary, it moves to tense and agreement, otherwise *do*-support is employed to carry tense and agreement features in negative sentences with a main verb: see (129) and the corresponding (130).

(129) [_{AgrSP} Mary_j [_{AgrS} did_i [_{TP} [_T t_i [_{NegP} not [_{VP} t_j phone Bill]]]]]]]

(130)



4.9.3.2 Negation in Hungarian

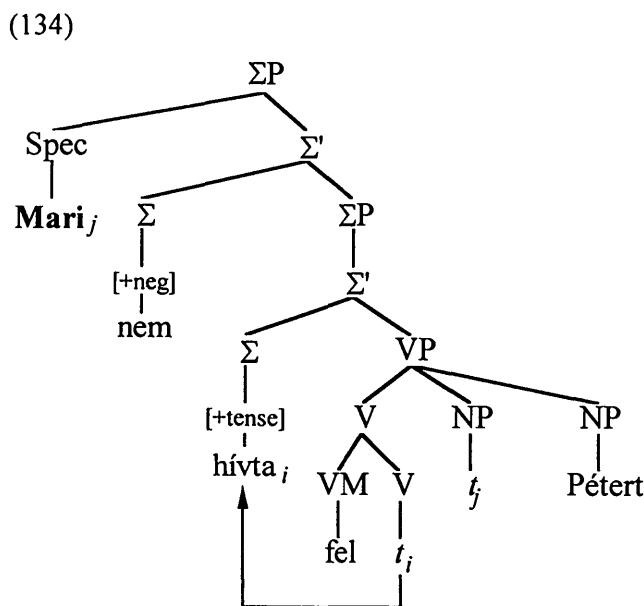
While in English NegP occurs below TP, there is consensus in the literature that in Hungarian the sentential NegP is above TP. In Hungarian ordinary sentential negation is expressed by the negative marker *nem*. In such negated sentences the verb moves out of the VP. The exact position of sentential NegP has been identified in between the Agr and T heads in Puskás's (1994) analysis, and inside the Sigma-Phrase (Σ P) in Piñón's (1992) work. The target of verb-movement is F⁰ in the analysis of Puskás (1994) as illustrated in (131), and the head Σ^0 of the Sigma-Phrase in Piñón's (1992) work, as shown in (132):

- (131) [FP [F nem_i láttam_j [AgrP [Agr t_j [NegP [Neg t_i [TP [T t_j [VP [V t_j Jánost]]]]]]]]]]]]]]
not saw-1sg John-ACC
 'I didn't see John.'

- (132) [ΣP [Σ nem [ΣP utazom_j [VP [vM el] [v t_j]]]]]]
not travel-1sg away
 'I'm not leaving.'

According to Puskás, in bare sentential negation there is Spec-head agreement between a null operator in Spec,NegP and the negative marker *nem* in the head of Neg⁰, thus the Neg-Criterion is satisfied. *Nem* cliticises to the verb and together they move to F⁰. In Piñón's (1992:109) analysis, the sentential negator *nem* is part of his ΣP. It is one of the functional heads along with 'emphatic *is*', both contributing to the feature-specification of his extended Sigma-Projection. In (133) and the corresponding structure in (134) we exemplify a sentence with a *nem* negative marker and an additional focused phrase in Spec,ΣP after Piñón (1992):

- (133) [ΣP **Mari**_{*j*} [Σ nem] [ΣP [Σ hívta_{*i*}] [VP fel t_{*i*} t_{*j*} Pétert]]]]
Mary-NOM not called-3sg up Peter-ACC
 'It was Mary who did not phone Peter.'



However, neither of these two analyses (that of Puskás 1994 and Piñón 1992) can account for the fact that Hungarian contains both sentential negation and constituent negation. As we have seen, in **sentential negation** *nem* cliticises to the verb that moves to the head F^0 :

- (135) [_{TP} János [_{FP} OP [_F *nem* hívta [_{IP} *t* fel *t* Juliskát].
John not called up July-ACC
 'John did not call up July.'

In **constituent negation** the *nem* + XP expresses a (negative) identification, thus appears in the focus slot (É.Kiss 1994:35):

- (136) [_{FP} NEM János [_F hívta [_{IP} *t* fel *t* Juliskát].
not John called up July-ACC
 'It was not John who called up July.'

In case there is a **focus in a negated sentence**, the focus has wide scope over the whole clause, see (137) which is similar to (133):

- (137) [_{FP} JÁNOS [_F *nem* hívta [_{IP} *t* fel *t* Juliskát].
John not called up July-ACC
 'It was John who did not call up July.'

There can be **constituent negation in a negated sentence**:

- (138) [_{FP} NEM János [_F *nem* hívta [_{IP} *t* fel *t* Juliskát].
not John not called up July-ACC
 'It was not John who did not call up July.'

In fact, Olsvay (1998) posits two NegPs in Hungarian: one for sentential negation (NEGP) and the other for constituent negation (NegP). In (140) we shall reproduce the tree proposed in Olsvay (1998) corresponding to the structure in (139):

- (139) Nem Jánost *nem* hívta meg senki sem.
not John-ACC not invited PREF nobody not
 'It wasn't John that nobody invited.'

(140)

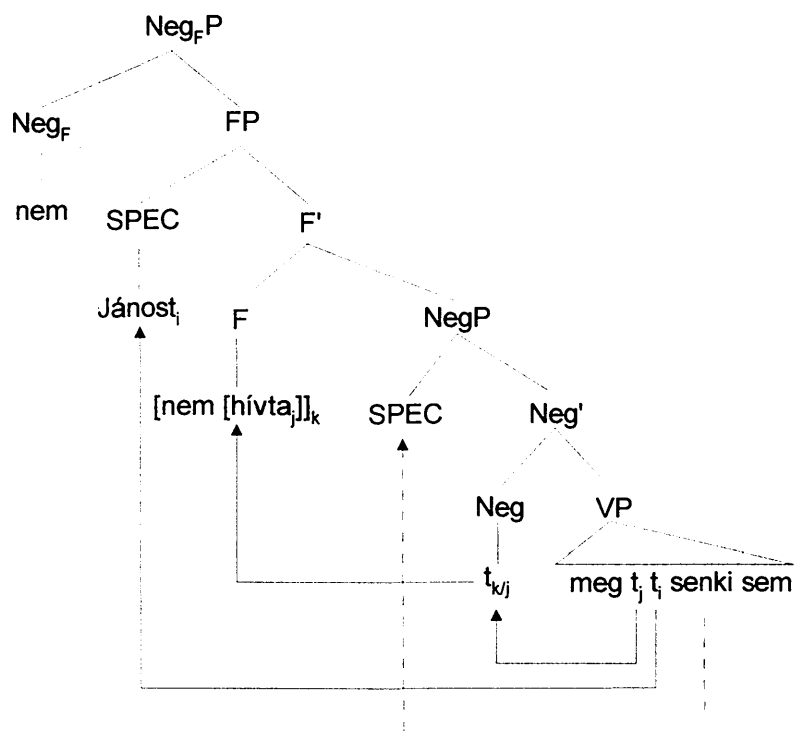


Figure 4-9 Olsvay's (1998) proposed tree for negative clauses

Having identified the structure of a Hungarian clause that contains both sentential and constituent negation, we look at a phenomenon which is called **metalinguistic negation**.

Since the negative particle is flexible in Hungarian, there is a range of possibilities for it to show up in the sentence. The negative particle is exploited for the purposes of metalinguistic negation. Horn (1985) argues that metalinguistic negation 'signals the speaker's unwillingness to assert a given proposition in a given way - or, more generally, the speaker's objection to the content or form (phonetic, morphological, syntactic, semantic, or pragmatic) associated with a given utterance' (Horn 1985:122). In other words, in metalinguistic negation the speaker objects to the content or form of a previous utterance. The interpretation is of a contrastive, corrective and contradictory statement. In the case of metalinguistic negation, the negative particle is not stressed in Hungarian, as can be seen in the following examples from (141) through (147):

- (141) *Nem [JÁNOS hívta fel MARI], hanem [MARI hívta fel JÁNOST].*
not John called up Mary-ACC but Mary called up John-ACC
 'It was not the case that John called up Mary, but Mary called up John.'

- (142) Nem [JÁNOST csókolta meg Mari], hanem [JÁNOST és ZOLIT].
not John-ACC kissed PREF Mary but John-ACC and Zoli-ACC
 ‘It wasn’t just John that Mary kissed but John and Zoli.’
- (143) Nem [HOLNAP megyünk haza] hanem [MÉG MA].
not tomorrow go-we home but already today
 ‘We are going home not tomorrow but today.’
- (144) Mari nem [a KONYHÁT mosta fel], hanem [a SZEMETET vitte le].
Mary not the kitchen-ACC washed PREF but the rubbish-ACC took down
 ‘What Mary did was not wash the kitchen floor but take down the rubbish.’
- (145) János nem [FEL-HÍVTA Marit], hanem [MEG-LÁTOGATTA].
John not up-called Mary-ACC but PREF-visited
 ‘John did not phone Mary but visited her.’
- (146) Mari nem [FEL-ment], hanem [LE-ment] a lifttel.
Mary not up-went but down-went the lift-with
 ‘Mary did not go up but down with the lift.’
- (147) Mari nem [haza-MENT], hanem [haza-SZALADT].
Mary not home-went but home-ran
 ‘What Mary did was not go home but run home.’

Miért ‘why’ is similar to the negative marker in that normally it can adjoin both to an XP, see (148) and a predicate, see (149):

- (148) (a) [_{FP} MIÉRT Marit [_F küldted el a boltba]?)
why Mary-ACC sent-2sg PREF the shop-to
 ‘Why is it Mary you sent to the shop?’
- (b) Mert csak Ő volt itthon.
because only she was at-home
 ‘Because she was the only one at home.’

- (149) (a) [FP MIÉRT [F küldted el Marit a boltba]?
why/what for
 ‘Why did you send Mary to the shop?’
 ‘What did you send Mary to the shop for?’
- (b) Mert idegesített.
because annoyed-3sg
 ‘Because she annoyed me.’
- (c) Kenyérért.
bread-for
 ‘To get some bread.’

Similarly to metalinguistic negation, *miért* can be used metalinguistically as well, as the answers in example (150) show:

- (150) (a) Miért [FP MARIT [F küldted el a boltba]]?
why Mary-ACC sent-2sg PREF the shop-to
 ‘Why is it the case that you sent Mary to the shop?’
- (b) Mert nekem nem volt időm el-menni.
because for-me not was time-mine PREF-go-INF
 ‘Because I didn’t have time to go.’
- (c) Mert a bolt nem szállít házhoz.
because the shop not delivers home-to
 ‘Because they don’t do home delivery.’

Other examples of metalinguistic uses of *miért* ‘why’ parallel that of metalinguistic negation. In this sense, metalinguistic *miért* corresponds to *hogyhogy* ‘how come’ questions, see examples (151) through (153):

- (151) János miért/hogyhogy [FEL-HÍVTA Marit], ahelyett hogy
John why/how come up-called-3sg Mary-ACC instead that
 [MEG-LÁTOGATTA volna]?

PREF-visited *COND*

‘Why did John call Mary instead of going to see her?’

‘How come John called Mary instead of going to see her?’

(152) Mari miért/hogyhogy [FEL-ment], miért nem [LE-ment] a lifttel?

Mary why/how come up-went why not down-went the lift-with

‘Why did Mary go up instead of down with the lift?’

‘How come Mary went up rather than down with the lift?’

(153) Mari miért/hogyhogy [haza-MENT], ahelyett hogy [haza-ROHANT volna]?

Mary why/how come home-went instead that home-ran COND

‘Why did Mary walk home rather than run?’

‘How come Mary walked home rather than run home?’

In the case of metalinguistic negation (examples (141)-(147)) and metalinguistic *why* questions (examples (150)-(153)) neither the negative marker *nem*, nor the question-markers *miért* ‘why’ and *hogyhogy* ‘how come’ function as an operator, since they are not stressed and do not occupy the focus slot. Consequently, they do not entail verb-movement either. This will be crucial in the argument we shall adopt in our study on the acquisition of Hungarian.

4.9.4 Comparison of *wh*-questions and negation

In English sentential negation and questions pattern together with respect to *do*-support. In Hungarian they pattern together with respect to verb-movement. Focused elements are also operators, thus focused sentences display similar verb-movement in Hungarian (see section 4.6.1).

The difference between *wh*-movement and negation is that negation can be sentential or local both in Hungarian and English (Quirk *et al* 1985: 790). On the contrary, *wh*-constituents always cause SAI in main clauses in English and verb-movement in Hungarian and do not have a local analogue. The only exceptions are *why* and *how come*. This difference is present both in English and Hungarian as shown above.

4.9.5 Focus-Criterion

Horváth (1995:28) observed that the S-structure position for focus operators shows a ‘fundamentally similar’ cross-linguistic variation to that of *wh*-elements. She also shares the assumption with Rizzi (1996) that there is a ‘fundamental parallelism between the nature and origin of structural Focus positions and that of structural Case-assignment positions’.

Bródy (1990) introducing his Focus projection (by positing a new functional category F^0 projecting a Focus Phrase) pointed out the following well-formedness conditions:

Focus-Criterion: (Bródy 1990:10)

- a) At S-structure and LF the Spec of an FP must contain a +f-phrase.
- b) At LF all +f-phrases must be in an FP.

Although not immediately obvious, the clauses of the Focus-Criterion are on a par with the *Wh*-Criterion. In a later paper, Bródy (1995) strengthened the second condition so that it corresponds to the *Wh*-Criterion. The earlier version had only FP specified in condition b) instead of Spec,FP. This was in order to allow a focused verb in the head of FP to satisfy the focus criterion. However, with the recent introduction of “checking domains” (Chomsky 1993), the focused verb is now assumed to adjoin to the +F head and thus it is in the checking domain of that head. The revised Focus-Criterion is the following:

The **revised Focus-Criterion:** (Bródy 1995:31)

- a) At S-structure and LF the spec of an +F XP must contain a +f-phrase.
- b) At LF all +f-phrases must be in the spec of a +F XP.

The Focus-Criterion suggests that constituents are marked [+f] very much like *wh*-phrases are marked [+*wh*]. The same focus analysis has been extended to Modern Greek (Tsimpli 1995) and classical Arabic (Ouhalla 1992a, 1993).

4.9.5.1 Focus in English

In English neutral sentences bear sentence-final stress on the last element. Focus is expressed by free assignment of stress to any element of the sentence (Culicover and Rochemont 1983,

Rochemont and Culicover 1990). Alternatively, English uses syntactic means to express focus. One of these syntactic means is clefting (Delin 1989, 1991, Collins 1991). Cleft sentences have several subtypes in English. Genuine clefts single out an entity to be focused and introduce it in the head *it* + *copula* clause: *It's John who helped in the end*. Pseudo-clefts represent a summary of the discourse by way of a *what* + *copula* clausal head: *What we want is freedom*.

There is a phenomenon of left dislocation in English that can easily be mistaken for focus movement of the Hungarian type:

(154) **This book** I've read, that one I haven't.

Indeed, it has been termed the so-called 'focus movement' of English. However, the sentence *John I fell in love with* is different from

(155) **Jánosba** szerettem bele

John-into liked-I PREF

'It was John I fell in love with'.

What is called 'English focus movement' is to be categorically distinguished from the focus operator movement in Hungarian. The information value of the two elements in the ongoing discourse is different, John being a topic in the English example, János being the exclusively identified focus in the Hungarian example. Also, the syntax of these two constructions is different: while in English there is no word order change, in Hungarian verb movement is obligatory. Therefore it is more appropriate to call the so-called English 'focus movement' topicalization or left dislocation.

4.9.5.2 Focus in Hungarian

The assumptions of the Minimalist Program correspond to the licensing mechanisms of the *Wh*-Criterion, Neg-Criterion and the Focus-Criterion. In these criteria it is the satisfaction of spec-head agreement that accounts for the movement of elements. Indeed, in the Minimalist

Program spec-head agreement is the only remaining relation that is allowed between elements⁷⁷.

Working within the Minimalist framework, Kenesei (1993) and Bródy (1995) both assume that Hungarian has an AgrS and an AgrO head as well as a separate Tense projection which is associated with the [+f] feature in focused, interrogative and negative sentences. Both analyses give account of the Focus projection as a function of feature strength. It has been conceded that in the analysis of Hungarian there is a need for both an IP where the verb checks its inflections, and an FP, a clause-typing category which is part of the split CP structure (Puskás 1992, 1996).

According to Bródy's (1995) analysis in the Minimalist framework, the 'N' feature in Spec,FP is strong in Hungarian, as it needs to be filled at S-structure (before Spellout) by an element that will thus acquire the focus interpretation and obligatory stress. The 'V' feature of the head F is also strong in Hungarian. This accounts for the fact that verb movement occurs obligatorily in focused constructions in this language.

The following examples in (156) through (163) show the variation of neutral and focused tensed and infinitival sentences in Hungarian. Kenesei (1986, 1989) and Bródy (1995) have argued that in focused infinitival sentences verb movement is optional, both alternatives are correct, as shown in (162) and (163):

neutral tensed

(156) Mari fel-hívta Pétert.

Mary up-called Peter-ACC

'Mary called up Peter.'

(157) *Mari hívta fel Pétert.

Mary called up Peter-ACC

⁷⁷ The checking domain of a head is any position related to that head except for its complements, i.e. adjuncts, or its own specifier (Cook and Newson 1995:333, based on Chomsky 1993).

focused tensed

- (158) MARI hívta fel Pétert.
Mary called up Peter-ACC
 ‘It was Mary who called up Peter.’

- (159) *MARI felhívta Pétert.
Mary up-called Peter

neutral infinitival

- (160) Szeretném fel-hívni Pétert.
would-like-I up-call-INF Peter-ACC
 ‘I would like to call Peter.’

- (161) *Szeretném hívni fel Pétert
would-like-I call-INF up Peter-ACC

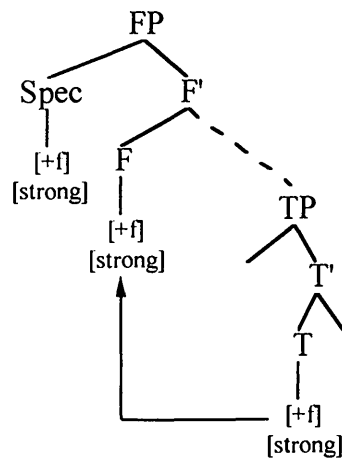
focused infinitival

- (162) Jobb lenne PÉTERT hívni fel
better would-be Peter-ACC call-INF up
 ‘We’d better call PETER up’

- (163) Jobb lenne PÉTERT fel-hívni
better would-be Peter-ACC up-call-INF

Note that in this analysis the [+focus] feature is carried by Tense. In addition, there is an FP projection (Bródy 1995). The ‘N’ feature in Spec,FP is strong, as it needs to be filled at S-structure by a DP or PP that will thus acquire focus interpretation and obligatory stress. The ‘V’ feature of the head is also strong, accounting for obligatory verb movement in tensed focused sentences. Optional verb movement in focused infinitival clauses is accounted for by assuming that the +F feature on the –Tns head can be either strong or weak (Bródy 1995). In other words, Bródy (op.cit.) argues that in tensed clauses the verb moves to support T^0 then moves to the head F^0 if there is a focused element in the specifier position of FP. In infinitive clauses the verb only optionally moves to the head F^0 . The syntactic tree underlying the Focus-Criterion is shown in (164).

(164)



The 'N' feature in Spec,FP is the interpretable [+wh] or [+f] feature. The 'V' feature of the head is a non-interpretable feature, similar to the feature [+finite] responsible for V2 order in Germanic and the phi-features responsible for morphological processes in most of the languages. Since in English the [+wh] and the [+neg] features in Spec,CP are strong, there is overt operator movement to this position. This accounts for the 'residual' V2 property in English (Rizzi 1990, 1996, Grimshaw 1993, 1996). However, the [+f] feature is weak in English, thus overt movement of focused elements is not carried out, or more precisely, it happens only after Spellout in English.

4.9.6 Long vs. partial operator movement

Long extraction of *wh*-phrases is a very common phenomenon in English, as exemplified in sentences such as *Who do you think came?* *Who did you say (that) you saw?* This property of English has generated a great deal of interest among linguists who have tried to unravel the restrictions on long movement. Since Ross (1967), various island, subjacency and empty category principles have been proposed in English. The original analyses have been extended to other languages as well.

In Hungarian, long movement of operators, although possible, is less common. The reason is that there is an alternative device for the expression of such complex sentences in the

language. Hungarian makes extensive use of expletives, i.e. demonstrative pronouns that freely take case endings⁷⁸. The expletives can occur in Focus or Quantifier positions:

- (165) Éva [_{FP} **azt** [_F találta] ki, [hogy el-megy moziba]].
Eve that-ACC found out that PREF-goes cinema-to
 ‘Eve decided that she would go to the cinema.’

- (166) Éva [_{QP} azt is] ki-találta, [hogy mikor érkezik a vonat].
Eve that-ACC too out-found that when arrives the train
 ‘Eve also found out when the train would arrive.’

Sentences introducing an expletive allow **partial movement** of the focus operator as in (167). The operator (Pétert) remains in the lower clause while the expletive (azt) in the main clause marks its scope. Long focus movement is possible if the expletive is replaced by the moved focus-phrase as in (168):

- (167) Kati [_{FP} **azt** [_F akarja], hogy [_{FP} **PÉTERT** [_F látogassam] meg]].
Kati that-ACC wants that Peter-ACC visit-SUBJ-I PREF
 ‘It is PETER Kati wants me to visit.’

- (168) Kati [_{FP} **PÉTERT** [_F akarja], hogy [_{IP} meg-látogassam]].
PREF-visit-SUBJ-I

Parallel to partial and long focus movement, partial and long movement of *wh*-phrases is also possible as exemplified in (169) and (170) below:

- (169) Kati [_{FP} **mit** [_F akar], hogy [_{FP} **KIT** [_F látogassak] meg]]]?
Kati what-ACC wants that who-ACC visit-SUBJ-I-INDEF PREF
 ‘Who does Kati want me to visit?’

- (170) Kati [_{FP} **KIT** [_F akar], hogy [_{IP} meg-látogassak]]]?
PREF-visit-SUBJ-I-INDEF

⁷⁸ The use of expletives was demonstrated first in the discussion about subordinate sentences in section 4.9.2.5.

Note that the lower clause does not have an operator position as indicated by the absence of verb-movement in the embedded clause in both (168) and (170).

Apart from Hungarian, German and Romani have been argued to employ partial *wh*-movement (McDaniel 1989). Long-extraction of elements has been investigated under the label of ‘mondatátzövődés’ (‘sentence intertwining’) by Zolnai (1926) and Szalamin (1978) in Hungarian.

Long and partial operator movement are both possible in (spoken) Hungarian (de Mey and Marác 1986, Horváth 1995, 1997, Müller 1997, etc.). The two are claimed to represent optional constructions with the same semantic meaning. Their use is restricted by subcategorizational properties of the main verb. However, in spite of the optionality in some cases, partial operator movement is the unmarked and long-movement is the marked construction in Hungarian in the sense that partial movement has a wider range of application than long movement.

Long extraction of elements has been a characteristic feature of *spoken* Hungarian ever since the second half of the 15th century when the first surviving written documents date from. Long extraction does appear in the written language but considerably less than in the spoken language. The most common long extraction involves extraction of a (contrastive) topic element or a *wh*-word. Long extraction of focus is less frequent. Szalamin (1978:301) cites only one example:

- (171) Ezt a kutat szeretném, ha be-nőné a borostyán.
this-ACC the well-ACC would-like-I if PREF-grow-COND the ivy
‘It is this well I’d like the ivy to grow over’

Zolnai (1926) cites other attested examples of long extraction of focused elements. He postulates that the motivation for long-extraction of focused elements is the particularly great emphasis rendered to some element in the embedded clause.

Long extraction in Hungarian resembles long movement in English in that when the subject of the lower clause is moved into a matrix clause whose main verb requires an object argument, there is case-reassignment, similarly to English (see É.Kiss 1987):

(172) Zoli [_{FP} **azt** [_F akarja, hogy [_{FP} **MÁRTA** [_F jöjjön el]]]].
Zoli that-ACC wants that Martha come-SUBJ-she PREF
 ‘Zoli wants MARTA to come.’

(173) Zoli [_{FP} **MÁRTÁT** [_F akarja, hogy [_{IP} el-jöjjön]]].
Zoli Martha-ACC wants that PREF-come-SUBJ-she

Kenesei (1994) noted that long focus-movement is possible with (i) object complement clauses of bridge verbs, see (174) and (175) (ii) case-reassigned clauses of matrix predicate adjectives, see (176) and (177), (iii) oblique NP, see (178), or (iv) adjunct, see (179):

(174) **A TEGNAPI MÉSÉT** akarom, hogy el-meséld.
the yesterday story-ACC want-I-DEF that PREF-tell-SUBJ-you-DEF
 ‘I want you to tell me yesterday’s story.’

(175) **KÉT DOLGOT** akarok, hogy el-mondjál.
two things-ACC want-I-INDEF that PREF-tell-SUBJ-you-INDEF
 ‘I want you to tell me two things.’

(176) **EMMÁT** fontos, hogy meg-látogasd.
Emma-ACC important that PREF-visit-SUBJ-you-DEF
 ‘It is Emma that you need to visit.’

(177) **KÉT EMBERT** érdemes, hogy fel-keress.
two people-ACC worthwhile that PREF-see-SUBJ-you-INDEF
 ‘There are two people who are worth seeing.’

(178) **KÉT EMBERREL** szeretném, hogy találkozz.
two people-with would-like-I-DEF that meet-SUBJ-you
 ‘I would like you to meet two people.’

(179) **HOLNAP** szeretném, hogy találkozz vele.
tomorrow would-like-I-DEF that meet-SUBJ-you him-with
 ‘I would like you to meet him tomorrow.’

In both partial and long movement constructions there are two clauses - a main and an embedded clause. If we classify them according to the *main clause*, the main verb can subcategorise for a subject, an object or an oblique argument. As pointed out, in Hungarian the main clause contains a demonstrative expletive. Long extraction of focused elements into a main clause whose verb subcategorises for a subject is least acceptable, but it is possible to extract elements from the lower clause into main clauses with object and other subcategorised arguments. The following examples in (180) to (182) show long extraction of a focused phrase into subject, object and oblique position in the matrix clause. In each *Éva* is extracted from the subordinate clause with *el-jön* 'PREF-come' as the verb:

subject

- | | | |
|-------|--------------------------------------|------------------------------|
| (180) | <i>Az zavar, that bothers me</i> | ?*ÉVA zavar, hogy eljött. |
| | <i>Az bosszant, that annoys me</i> | ?*ÉVA bosszant, hogy eljött. |
| | <i>Az érdekel, that interests me</i> | ?*ÉVA érdekel, hogy eljön-e. |
| | <i>Az számít, that matters</i> | ?*ÉVA számít, hogy eljöjjön. |

object

- | | | |
|-------|---|--------------------------------|
| (181) | <i>Azt gondolom, that-ACC think-I</i> | ?ÉVÁT gondolom, hogy eljön. |
| | <i>Azt hiszem, that-ACC believe-I</i> | ?ÉVÁT hiszem, hogy eljön. |
| | <i>Azt mondtam, that-ACC said-I</i> | ÉVÁT mondtam, hogy eljön. |
| | <i>Azt kérdeztem, that-ACC asked-I</i> | ÉVÁT kérdeztem, hogy eljön-e. |
| | <i>Azt akarom, that-ACC want-I</i> | ÉVÁT akarom, hogy eljöjjön. |
| | <i>Azt szeretném, that-ACC would-like-I</i> | ÉVÁT szeretném, hogy eljöjjön. |

oblique

- | | | |
|-------|--|-------------------------------|
| (182) | <i>Arra számítok, that-onto expect-I</i> | ÉVÁRA számítok, hogy eljön. |
| | <i>Attól félek, that-from fear-I</i> | ÉVÁTÓL félek, hogy eljön. |
| | <i>Azon tanakodom, that-about ponder-I</i> | ÉVÁN tanakodom, hogy eljön-e. |

Long extraction of *wh*-phrases works on the same principle. However, its range of application is wider than long extraction of focus, as it is freely allowed in subject and object extraction in the main clause. In the following examples we exemplify long *wh*-movement and the corresponding partial *wh*-movement.

- (183) Mire számítasz, hogy ki jön el?
what-on expect-you that who comes PREF
- (184) Kire számítasz, hogy el-jön?
who-on expect-you that PREF-comes
 ‘Who do you expect to come?’
- (185) Mitől félsz, hogy ki jön el?
what-from fear-you that who comes PREF
- (186) Kitől félsz, hogy el-jön?
who-from fear-you that PREF-comes
 ‘Who do you fear will come?’
- (187) Azon tanakodom, hogy melyik pizsamát vegyük fel.
that-on ponder-1sg that which pyjamas-ACC put-1pl-SUBJ-DEF PREF
- (188) Melyik pizsamán tanakodsz, hogy fel-vegyük-e?
which pyjamas-on ponder-2nd that PREF-take-2nd-pl-SUBJ-DEF-Q
 ‘Which pyjamas do you think we put on?’

Classifying long extracted clauses according to the *subordinate clause*, again, the embedded verb can subcategorise for subject, object, or any other arguments. It appears easiest to extract an embedded subject, as the embedded subject can easily take the case of the argument of the main verb (see Zolnai 1926:29, Szalamin 1978:296 for similar attested examples).

subject extraction:

(a) declarative main clause

- (189) Mit gondolsz, hogy ki jön el?
what-ACC think-you that who comes PREF
- (190) Kit gondolsz, hogy el-jön?
who-ACC think-you that PREF-comes
 ‘Who do you think will come?’

(b) subjunctive main clause

- (191) Mit szeretnél, hogy ki jöjjön el?
what-ACC would-like-you that who come-IMP PREF

- (192) Kit szeretnél, hogy el-jöjjön?
who-ACC would-like-you that PREF-come-IMP
 ‘Who would you like to come?’

object extraction:

(a) declarative main clause

- (193) Mit hiszel, hogy mit tett az asztalra?
what-ACC think-2nd that what-ACC put-3sg the table-onto
- (194) Mit hiszel, hogy az asztalra tett?
what-ACC think-2nd that the table-onto put-3rd
 ‘What do you believe s/he put on the table?’

(b) subjunctive main clause

- (195) Mit akarsz, hogy kit vegyek feleségül?
what-ACC want-you that who-ACC take-I-SUBJ wife-for
- (196) Kit akarsz, hogy feleségül vegyek?
who-ACC want-you that wife-for take-I-SUBJ
 ‘Who do you want me to marry?’

oblique object extraction:

(a) declarative main clause

- (197) Mit mondtál, hogy kinek vettél jegyet?
what-ACC said-you that who-DAT bought-you ticket-ACC
- (198) Kinek mondtad, hogy vettél jegyet?
who-DAT said-you that bought-you ticket-ACC
 ‘Who did you say you bought tickets for?’

(b) subjunctive main clause

- (199) Mit szeretnél, hogy kivel beszéljek?
what-ACC would-like-you-INDEF that who-with talk-1sg-SUBJ
- (200) Kivel szeretnék, hogy beszéljek?
who-with would-like-you-DEF that talk-1sg-SUBJ
 ‘Who would you like me to talk to?’

Extraction of arguments with oblique cases into main clauses whose verb subcategorises for an argument with subject or oblique case proves to be more difficult, due to a case-clash in the matrix clause:

- (201) Mi zavarja Marit, hogy kinek telefonáltál?
what bothers Mary-ACC that who-DAT phoned-you
- (202) *Kinek zavarja Marit, hogy telefonáltál?
who-DAT bothers Mary-ACC that phoned-you
- (203) *Ki zavarja Marit, hogy telefonáltál (neki)?
who bothers Mary-ACC that phoned-you (for-him)
 ‘Who did you talk to on the phone, that annoys Mary?’
- (204) Mi bosszantja Marit, hogy kinek nem vettél ajándékot?
what annoys Mary-ACC that who-DAT not bought-you gift-ACC
- (205) *Kinek bosszantja Marit, hogy nem vettél ajándékot?
who-DAT annoys Mary-ACC that not bought-you gift-ACC
- (206) *Ki bosszantja Marit, hogy nem vettél ajándékot (neki)?
who annoys Mary-ACC that not bought-you gift-ACC (for-him)
 ‘Who didn’t you buy a present for, that annoys Mary?’
- (207) Mire számítasz, hogy Mari kivel fog táncolni?
what-onto expect-you that Mary who-with will dance-INF
- (208) *Kivel számítasz, hogy Mari fog táncolni?
who-with expect-you that Mary will dance-INF
- (209) *Kire számítasz, hogy Mari fog táncolni (vele)?
who-onto expect-you that Mary will dance-INF (with-him)
 ‘Who do you expect Mary to dance with?’

Extraction of adjunct *wh*-words is unproblematic hence they represent the most common type of long extraction (examples from Szalamin 1978):

- (210) Mit gondolsz, hogy mikor jön haza?
what-ACC think-you-INDEF that when comes home?
- (211) Mikor gondolod, hogy haza-jön?
when think-you-DEF that home-comes

‘When do you think he will come home?’

(212) Mit akarsz, hogy hol jöjjünk össze?
what-ACC want-you-INDEF that where come-we-SUBJ together

(213) Hol akarod, hogy összejöjjünk?
where want-you-DEF that together-come-we-SUBJ

‘Where do you want us to meet?’

4.9.7 *Wh-in-situ and focus-in-situ*

Hungarian, similarly to English, does not allow *wh*-in-situ in simple sentences, which implies that the *Wh*-criterion must apply at S-structure in both languages:

(214) *John saw what?

(215) *János látott mit?

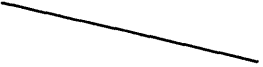
However, unlike Hungarian, in English *wh*-in-situ is allowed but it carries an echo question interpretation. Thus *John saw WHAT?* is allowed with an echo interpretation. Echo-questions usually express surprise at information just made available to the speaker or a request for repetition, thus they are not interpreted as real *wh*-questions. In English it is possible to query the subject or even part of a word in an echo question:

(216) You were wondering whether WHO was coming?

(217) Her name is McWHAT?

Hungarian echo-questions differ from genuine *wh*-questions not in their structure, but in intonation. Normal Hungarian *wh*-questions have a falling intonation as in (218), whereas echo-questions have a rise-fall intonation similar to *yes/no* questions as in (219) and (220) (cf. Varga 1981, 1983, 1985):

(218) genuine *wh*: KINEK mondtad el? falling intonation
who-DAT told-you PREF



- (219) echo question: KINEK mondtad el? rise-fall intonation

- (220) yes/no question: MELINDÁNAK mondtad el? rise-fall intonation
Melinda-DAT


Focus-in-situ is not allowed in Hungarian, although É.Kiss (1998a) identifies focus-in-situ with the element that introduces new information in a sentence-final position, i.e., the one with presentational interpretation. Following É.Kiss, Roberts (1996) also argues for focus-in-situ in Hungarian as well. However, in section 4.5.5 we argued that these in fact form part of a neutral sentence with level prosody. In English focused phrases stay in situ and are marked by stress, see section 4.9.5.1.

4.9.8 Multiple operator sentences

In this section we present a comparative account of multiple operator sentences in English and Hungarian. Here we give a very concise summary of what obtains in the two languages.

In Hungarian preposed multiple *wh*-phrases are possible, while in English they are not, cf. *Ki mit mondott?* vs. *Who what said? English employs one preposed *wh*-word and one in-situ: *Who said what?* As briefly indicated above, the latter construction is also possible in Hungarian: *Ki ölt meg kit?* but only if it refers to the same set of entities.

In Hungarian preposed multiple focus is not possible (**Csak két filmet csak hárman láttak*, see (245)), but one preposed focused element and a second postverbal focused element is possible (*Csak hárman láttak csak két filmet.*), a strategy similar to English multiple *wh*-questions. In English there is no syntactic focus movement at all, either single or multiple. The fact that Hungarian has focus-movement, while English does not, is reminiscent of a similar relation that holds between English and Chinese/Japanese, where English has *wh*-movement but Chinese and Japanese do not. Let us elaborate on these characteristics of the two languages.

4.9.8.1 Multiple questions

4.9.8.1.1 English multiple *wh*

In English there is subject-object asymmetry (the so-called ‘superiority effect’) with respect to multiple questions.

(221) Who read what?

(222) *What did who read?

In multiple *wh*-questions this superiority effect disappears if you replace the simple *wh*-words with *wh*-phrases containing *which* (Pesetsky 1987):

(223) *What did who read?

(224) Which book did which people read?

In these cases the *wh*-phrases are bound by an OP:

(225) [_{CP} Q_{ij} Which people_i [_{IP} e_i read which books_j]

Those variables that are bound by the Q operator are argued to be D-linked. D-linked elements receive their reference from the discourse context. Their referent is specific. Therefore the interpretation is more of an echoic rather than a real *wh*-question.

4.9.8.1.2 Hungarian multiple *wh*

4.9.8.1.2.1 *preposed multiple wh*

In Hungarian multiple questions with preposed multiple *wh*-phrases are possible but with some qualification:

(226) Ki mit látott?

who what-ACC saw

‘Who saw what?’

- (227) Ki kit vett el?
who whom married PREF
 ‘Who married whom?’

However, these multiple *wh*-questions are not analysed as real double questions by É.Kiss (1992, 1993 and 1994). The first *wh*-element is argued to be in the quantifier position and have the semantic function of a universal quantifier. The second *wh*-element occupies the focus position. Thus these constructions ask questions about the immediately preverbal element as indicated by the English translations of the following examples:

- (228) Mari kinek mit adott el?
Mary who-DAT what-ACC sold PREF
 ‘What did Mary sell to whom/to each person?’

- (229) Mari mit kinek adott el?
Mary what-ACC who-DAT sold PREF
 ‘To whom did Mary sell what/each thing?’

Note that not all multiple questions are grammatical in Hungarian. É.Kiss (1993) postulates a specificity condition on multiple operator constructions: namely that the first preposed *wh*-element, which appears in the quantifier position and has wider scope, has to be specific (i.e. given), otherwise the sentence is ruled out:

- (230) Ki milyen könyvet olvasott el?
who what book-ACC read PREF
 ‘*What book did who read?’

- (231) *Milyen könyvet ki olvasott el?
what book-ACC who read PREF
 ‘Who read what book?’

- (232) Kinek miért segítettél?
who-DAT why helped-you?
 ‘*Why did you help who?’

- (233) *Miért kinek segítettél?
why who-DAT helped-you
'Who did you help why?'
- (234) Mit hogyan magyaráztatok meg?
what-ACC how explained-you PREF
'How did you explain what?'
- (235) *Hogyan mit magyaráztatok meg?
how what-ACC explained-you PREF
'What did you explain how?'

In case both operators are specific, they are interchangeable:

- (236) Ki melyik könyvet olvasta el?
who which book-ACC
'Which book did which people read?'
- (237) Melyik könyvet ki olvasta el?
which book-ACC who
'Who read which book?'

As the above examples show, Hungarian allows multiple *wh*-questions, but they do not constitute real multiple questions in the logical sense. They are sentences with a *wh*-operation and a quantification-like operation in Hungarian (É.Kiss 1992:146, 1994).

4.9.8.1.2.2 genuine multiple questions

As well as preposed multiple *wh*-phrases, Hungarian allows for constructions like the following, as already mentioned in section 4.9.3:

- (238) Ki szeretett bele kibe?
who fell-in-love PREF who-into
'Who fell in love with whom?'

(239) Ki látott meg kit először?
who saw PREF whom first
 ‘Who saw whom first?’

(240) A regényben végül ki ölt meg kit?
the novel-in in-the-end who killed PREF whom
 ‘In the novel who killed whom in the end?’

As shown by these examples, real double questions with two genuine interrogative operators are possible⁷⁹. However, there are certain restrictions on real multiple questions in Hungarian. The construction is grammatical only if the two interrogative phrases quantify upon the same set of entities as in (241) a) below. It is ungrammatical if they apply to two markedly different sets as in (241) b) and c):

- (241) a) Ki vett el kit?
who married PREF whom
 ‘Who married someone and whom did he marry?’ (one person married another)
- b) *Ki mondott mit?
who said what-ACC
- c) *Mit mondott ki?
what-ACC said who

In real double questions the postverbal *wh*-word has all the features of a focus operator, but it fails to satisfy the requirement that all operators precede their scope. This failure is said to account for the slightly marked status of the construction (É.Kiss 1992:147). The second *wh*-element occupies a position that has been identified as a lower FP. The assumption is that FP

⁷⁹ Puskás (1996) argues that these constructions are felicitous only as echo-questions. To the extent that the English multiple question ‘Who said what?’ can be taken as an echo-question, *what* being D-linked, her argument stands. However, *what* can be interpreted as either specific or as non-specific, thus both interpretations (that of an echo-question and a real multiple question) are possible. The same holds for the Hungarian sentences above.

is a recursive projection thus the Focus Operator can be iterated (É.Kiss 1998b). Therefore the second *wh*-phrase is argued to be in the lower Spec,FP.

4.9.8.1.2.3 *preposed multiple vs. genuine multiple questions*

There is an alleged semantic difference between multiple questions with quantification (Ki kit vett el? *who whom married PREF*) in example (227) and real multiple questions in Hungarian (Ki vett el kit? *who married PREF whom*) in example (241). According to this argument (e.g. É.Kiss 1994), to a quantification the felicitous answer would pair up several pairs of people:

(242) Ki kit vett el?
who whom married PREF
 ‘Who married whom?’ (more than one couple)

(243) Janó Bogit, Széki Beát, és Csabi Jucit.
John Bogi-ACC, Szeki Bea-ACC and Csabi Juci-ACC
 ‘John married Bogi, Szeki - Bea, and Csabi - Juci.’

In case of a real multiple question however, the listing interpretation is ruled out by a reference to only two individuals:

(244) Végül ki hívott fel kit? Tony Blair Jelcint, vagy Jelcin Tony Blairt?
in the end who called PREF whom? Tony Blair Yeltsin-ACC or Y-NOM TB-ACC?
 ‘Who called the other, Tony Blair or Mr Yeltsin?’

Thus, there is supposed to be a semantic distinction between multiple questions depending on the position of the *wh*-phrases in the sentence. If there are two preposed *wh*-phrases, the interpretation is of more than two couples, and if the two *wh*-phrases appear pre- and postverbally, respectively, the interpretation is that of one couple only. In English these semantically based distinctions are missing since there is no alternative for the multiple question *Who called whom?*

4.9.8.2 Multiple focus

4.9.8.2.1 English multiple focus

Since English does not instantiate focus movement, multiple focus in English is also not possible.

4.9.8.2.2 Hungarian multiple focus

4.9.8.2.2.1 *preposed multiple focus*

As pointed out in section 4.9.8, in Hungarian preposed multiple focus is not possible as there can be only *one* constituent in Spec, FP:

- (245) *Csak KÉT FILMET csak HÁRMAN láttak.
only two films-ACC only three people saw
 ‘There are only two films that only three people saw.’

- (246) *KIT JÁNOS vett el?
whom John married PREF
 ‘Who did John marry?’

However, as Tsimpli (1995) has observed for Greek and Bródy (1990) for Hungarian, a stressed element may precede the *wh*-word occupying the focus slot, thus resulting in a correct focused embedded *wh*-question:

- (247) De én azt kérdeztem, hogy JÁNOS kit vett el?
but I that-ACC asked-1sg that John whom married PREF
 ‘But I was asking who did JOHN marry?’

Let us see a similar Greek example from Tsimpli (1995). Tsimpli claims that a focus phrase and a *wh*-phrase cannot co-occur in Greek, not even in two separate clauses, because of scope reasons. However, in embedded clauses Greek does allow a focus and a *wh*-phrase to co-occur:

- (248) Dhen ksero sti MARIA pjos milise.
not know-I to-the Maria who talked
 ‘I don’t know who talked to MARIA.’ (Tsimpli 1995:194, ex. 38.b)
- (249) Mu-ipan o YANIS ti agorase.
me-told-3p the Yanis what bought
 ‘They told me what YANIS bought.’ (Tsimpli 1995:195, ex. 39.c)

Tsimpli proposes that the focus phrase occupies the Spec,CP and the *wh*-phrase the Spec,FP in the above sentences. Thus F^0 can be specified for both the [+f] and [+wh] feature, and C^0 can be specified for both [+wh] and [+f] feature in embedded clauses (Tsimpli 1995:197). The argument is that the focus phrase occupies Spec,CP in Greek as there is no complementizer.

However, JÁNOS in the Hungarian sentence (247) above cannot end up in Spec,CP as there is a complementizer *hogy* in C^0 , which precedes it. At the same time, intuitively JÁNOS is contrastively focused and the *wh*-word after it becomes de-accented.

The analysis of JÁNOS as the contrastive focus element of the sentence is supported by the expletive pronominal *azt* ‘that-ACC’ in the matrix clause. If we remove the expletive *azt* from the matrix clause and exchange it with *kíváncsi vagyok* ‘I wonder’ or *szeretném tudni* ‘I would like to know’, János loses its stress and becomes either the subject or the topic of the sentence:

- (250) Kíváncsi vagyok, hogy János kit vett el?
curious am-I that John-NOM who-ACC married PREF
 ‘I wonder who did John marry?’
- (251) Szeretném tudni, hogy Jánost ki vette fel?
would-like-I know-INF that John-ACC who-NOM take PREF
 ‘I would like to know who gave John a lift?’

We would like to argue that the type of focusing present in sentences like (247) and repeated in (252) here for reference is **metalinguistic focus** on a par with metalinguistic negation⁸⁰.

- (252) De én azt kérdeztem, hogy JÁNOS kit vett el?
but I that-ACC asked-1sg that John whom married PREF
 ‘[I’m not interested in who PETER married] I was asking who did JOHN marry?’

In the above sentence the strongly emphasised JÁNOS is juxtaposed to some other person who is presupposed and has probably been mentioned in the previous discourse. This might account for the strong corrective or contrastive flavour of this kind of sentence. To summarize, we propose that metalinguistic focus is a type of corrective focus. It refers back and eliminates the presupposition of an alternative focused phrase.

4.9.8.2.2 *genuine multiple focus*

Multiple Focus is only possible in Hungarian with one constituent moved to Spec,FP and the other moved into a lower Spec,FP position, as we saw above with regard to genuine multiple *wh*-questions in section 4.9.8.1.2.3. The Hungarian multiple focus construction is superficially similar to English multiple *wh*-questions. However the difference is that while in English multiple questions the second *wh*-phrase stays in situ, in Hungarian the second focus-phrase does not stay in situ but indeed moves up to the lower Spec,FP (É.Kiss 1998b):

- (253) Who saw what?
 (254) ‘Csak KÉT filmet láttak ‘csak HÁRMAN.
only two film-ACC saw-3pl only three people
 ‘It was only two films that only three people saw.’

É.Kiss (1998b) proposes that the second focus-phrase (+F XP) appears after the verb in a lower FP. The problem this introduces is the question of the exact position of the preverbal element which is 'stranded' after the verb. This is what we discuss in the next two sections.

⁸⁰ See Horn (1985 and page 146 in section 4.9.3.2) for a definition of metalinguistic negation. For metalinguistic negation in Hungarian see also Roberts (1996). Interestingly, Horn argues that echo-questions could be renamed metalinguistic questions, as they also require a previous utterance by another speaker within the discourse.

4.9.8.3 Preverbal elements in multiple operator constructions

In what follows we examine the question of the preverbal element in Hungarian multiple operator constructions. Because of the first focused XP in the sentence, the verb moves to the head F to satisfy spec-head agreement. The second focused XP appears in the postverbal FP projection. The source of the problem is that verb movement leaves two possible positions for the preverbal element to appear: either immediately after the verb or after the second focused element.

(255) MARI hívta fel CSAK PÉTERT.
Mary called up only Peter-ACC
 'It was Mary who called up only Peter.'

(256) MARI hívta CSAK PÉTERT fel.
Mary called only Peter-ACC up
 ('op.cit.')

The prefix has been claimed to freely left-incorporate to the verb or remain after the second focused element (É.Kiss 1992, 1994, 1995c). This account allows for free optionality in the postverbal position of the incorporated element. Alberti and Medve (1998) argue that optionality of this kind is due to stylistic variation in the language and is present because of reasons of processing.

What we would like to propose is that there is a slight semantic difference between the two options. If the prefix left-incorporates to the verb, the second focused element is simply a presentational focus in É.Kiss's (1998a) sense⁸¹. On the contrary, in case the incorporated element stays clause-finally after the focused element, the sentence has a contrastive focus reading. Please compare (257) with (258) and (259) with (260) below:

⁸¹ See section 4.5.5 above for a definition of presentational/information and contrastive/identificational focus as proposed by É.Kiss (1998a).

presentational (new information)

- (257) Dobó meg-erősítette a déli bástyát.
Dobó PREF-strengthened the southern bastion-ACC
 ‘Dobó strengthened the southern bastion.’

És MELYIK BÁSTYÁT erősítette meg Bornemissza?
and which bastion-ACC strengthened PREF Bornemissza
 ‘And which bastion did Bornemissza strengthen?’

contrastive (more emphatic)

- (258) DOBó győzte le a törököket.
Dobó beat PREF the Turks-ACC
 ‘It’s Dobó who beat the Turks.’

De akkor KIKET győzött HUNYADI le?
but then who-pl-ACC beat Hunyadi PREF
 ‘But then who did HUNYADI beat?’

presentational

- (259) Az iskolások meg-nézték a Ben Hurt, a Robin Hoodot és a Rob Royt.
the students PREF-saw the B.H.-ACC, the R.H.-ACC and the R.R.-ACC
 ‘The students saw Ben Hur, Robin Hood and Rob Roy.’

És a Gandhit MIÉRT nem nézte meg senki?
and the Gandhi-ACC why not saw PREF nobody?
 ‘Why didn’t anybody see Gandhi?’

contrastive

- (260) Az ELSŐSÖK nézték meg a Ben Hurt, a MÁSODIKOSOK a Robin Hood-ot, a HARMADIKOSOK pedig a Rob Roy-t.
the first-year saw PREF the Ben Hur-ACC, the second year the Robin Hood-ACC, the third then the Rob Roy-ACC
 ‘The first year saw Ben Hur, the second Robin Hood, and the third Rob Roy.’

A Gandhit MIÉRT nem nézte SENKI meg?
the Gandhi-ACC why not saw nobody PREF?
 ‘Why did NOBODY see Gandhi?’

The difference in both cases can be clearly felt.⁸² The contrastively focused sentence is regarded more marked by native speakers. This decreased preference correlates with speakers’ decreased acceptance of the *wh-V-wh-PREF* order (*Ki hívott kit fel?* ‘Who called whom up?’) as opposed to the more natural *wh-V-PREF-wh* order (*Ki hívott fel kit?* ‘Who called up whom?’) in multiple *wh*-questions.

As a summary, the Hungarian multiple focus construction is similar to English multiple *wh*-sentence, namely that one operator is preposed to the specifier of a head category, whereas the other is postverbal. The difference is in the in-situ argument vs. operator position of the two phrases in the two languages.

4.9.9 *Wh-movement vs. focus movement*

Wh-movement and Focus-movement represent two distinct instances of operator movement. These two types of movement independently exist in languages to the extent that one of them may be missing but the other may be present. English is such a language. Hungarian instantiates both⁸³. See Table 4-2 below for languages with or without S-structure *wh*-movement and languages with or without S-structure focus movement (after Kenesei 1993):

⁸² This is also supported by Puskás’s (1996:186) observation that *nem+V+senki+PREF* is a more marked construction, see her examples (64)a and (64)b reproduced here:

- (7) Nem beszélt meg semmit a barátaival
not talked PREF nothing-ACC the friends-with
 ‘He didn’t agree about anything with his friends.’
- (8) Nem beszélt SEMMIT meg a barátaival.
not talked nothing-ACC PREF the friends-with
 ‘He talked about nothing with his friends.’

⁸³ Although both are operator movements with similar quantificational and syntactic properties, the two movement types are clearly not identical. See Puskás (1996), Kenesei (1993) and Tsimpli (1995) for various arguments for differences between *wh*-movement and focus movement.

| | <i>wh</i> -movement | focus movement |
|------------------------|---------------------|----------------|
| Chinese, Japanese etc. | - | - |
| French etc. | +/- | - |
| English etc. | + | - |
| Hungarian, Basque etc. | + | + |

Table 4-2 Wh-movement and focus movement cross-linguistically

As shown in Table 4-2 above, English differs from Chinese/Japanese with respect to *wh*-movement: English has *wh*-movement, Chinese/Japanese do not. In a parallel fashion, with respect to focus-movement Hungarian differs from English, in that Hungarian has focus-movement, while English does not, although both have *wh*-movement.

There is no language attested which has focus movement but shows no *wh*-movement. This can be expressed as an implicational universal (Greenberg 1966). From the implicational universal it follows that focus movement is a more marked phenomenon than *wh*-movement, as focus-movement entails *wh*-movement, but not vice versa. According to scholars who have investigated the role of implicational universals in L2A (Eckmann 1977, 1996, Hawkins 1987) the more marked construction is acquired subsequently or simultaneously with the less marked construction, but never before. It follows that focus movement is predicted to be acquired after or simultaneously with *wh*-movement but not before. Since both languages in our study exhibit *wh*-movement, this prediction could not be tested. It would be interesting, however, to see whether, for instance, Japanese, Chinese or Korean learners of Hungarian would follow the predicted sequence of acquisition.

4.10 Acquisitional predictions

In acquisition terms, the Minimalist Program has the following predictions for English L2 learners of Hungarian:

1) The 'V' feature of F in Hungarian is strong, whereas it is weak in English. UG specifies a weak +F feature, unless there is overt evidence of T-to-F movement in the language. Learners have to realise that in Hungarian the 'V' (head) feature of FP is strong, resulting in verb movement to F at S-structure. It was argued that since the strong 'V' feature is a non-interpretable feature, its acquisition will be more difficult.

2) The 'N' feature of a higher projection is strong both in Hungarian and in English. In Hungarian it means that Spec,FP has to be filled by an operator at S-structure and the element that fills Spec,FP acquires focus interpretation and carries stress. In English the 'N' feature of C is strong in case of *wh*-questions, negative preposing and relative clauses. Thus, the prediction is that learners will use the strong 'N' feature of C, and will fill it with a lexical element before actually realising that Hungarian has a separate functional projection for operators. Learners have to realise that the 'V' feature on the head F of this new FP is also strong (see point 1) above), resulting in verb-movement in order to satisfy the spec-head relation between the head and the operator in the spec of FP.

4.11 Summary

In this chapter we compared English and Hungarian with respect to focusing and related phenomena, such as negation and *wh*-questions. In the last section we provided some preliminary acquisitional predictions for adult English-speaking learners of Hungarian. We are now set to turn to the experimental studies we carried out to test these predictions. In chapter 5 we outline the pilot and main studies and in chapter 6 we provide the results of the main study.

5 The Empirical Study

5.1 Introduction

In Chapter 4 we reviewed the theoretical background to the cross-linguistic description of focus movement. In particular, we looked at the parametric variation between English and Hungarian with regard to the syntactic constructions involving the presence or absence of focus movement (operators in situ, moved operators, multiple movement, long movement, and partial movement of operators). In the last section of Chapter 4 we outlined the basic implications of these parametric differences for the L2A of Hungarian by English speakers.

In this chapter we first give a summary of the theoretical assumptions we have made (section 5.2.1). In section 5.2.2 we spell out the questions our study sought to answer. Next, we outline the predictions we have formulated with regard to the acquisition of focus movement in an L2 (section 5.2.3). The experimental hypotheses that our study set out to test can be found in section 5.2.4.

The actual experiments we carried out to investigate the acquisition of focus movement are described in section 5.3. In Appendix A we reported the results of an exploratory study into the similarities and differences between L1 and L2 acquisition of Hungarian focus movement. The outcome of this preliminary inquiry indicated the place of our study in the field of current language acquisition research in general. More specifically, the comparative L1/L2 study was carried out in order to highlight the empirical issues to be considered in our main experiment.

In section 5.3.1 we briefly outline the results of a first pilot study that was carried out with adult L1 Hungarian speakers. The first pilot was conducted in order to test a measurement technique, i.e. magnitude estimation, and to refine the experimental hypotheses. Next, in section 5.3.2, we shortly describe the second pilot study. It was carried out with adult L1 English learners of Hungarian and was the immediate predecessor to our main study.

The full description of the main L2 study can be found in section 5.4. Reporting both L2 studies (i.e. the second pilot and the main experiment) offers an opportunity to compare two different types of measurement: magnitude estimation and rating of linguistic acceptability. In section 5.4.7 we describe the data elicited in the main study. This is followed by a

description of the steps taken in the analysis of the data. Finally, we illustrate the layout we will follow in the presentation of the results in Chapter 6.

5.2 The experimental hypotheses

5.2.1 Summary of the theoretical assumptions

In this section we summarise the assumptions we have made with respect to the acquisition of focus movement in a second language. The assumptions can be grouped in two categories: assumptions from general linguistic theory and assumptions from language acquisition theory.

5.2.1.1 Assumptions from general linguistic theory

1. The principles of UG are invariant and constrain any language acquisition process.
2. Native languages are dynamic systems in a constant flux.
3. Language change and acquisition is contingent upon the presence of optional representations held by individual speakers at the competence level.
4. Optionality is a function of the nature of the input, resulting from *non-robust* (i.e. rare, complex, obscure) or *ambiguous* evidence (i.e. when more than two grammars can account for a construction in the PLD).
5. Genuine optionality is not favoured by native grammars as it violates the principles of economy.
6. Optionality is reduced either by semantic differentiation or by categorisation.

5.2.1.2 Assumptions from language acquisition theory

1. L2A is guided and constrained by the same principles of UG that guide L1A.
2. The parameterised aspects (i.e. the FCs and their feature specification) may be unavailable in L2A and in impaired L1A.
3. Adult L2A commences from an initial state fully specified by the L1. Therefore, in order to approximate the L2 system learners have to either reset the L1 value of a FC to the L2 value or activate a new L2 FC and assign relevant feature values to it.

4. Adult learners have different cognitive processes available in acquiring an L2. Crucially, their metalinguistic awareness can be heightened by negative evidence.
5. Markedness plays a role in L2A: it is more difficult to ‘unlearn’ a marked value than to learn it.
6. The evidence, i.e. PLD, in L2A is quantitatively and qualitatively different from the PLD in L1A.
7. The nature of the PLD plays a crucial role in L2A:
 - a) It has to be robust (i.e. frequent, simple and salient⁸⁴) and unambiguous (as to the grammatical representation learners are led to formulate) to enable parameter resetting.
 - b) It may be rare, complex, or obscure, which may ultimately lead to optional (i.e. incomplete or divergent) representations in the ILG.
 - c) It may be ambiguous, which may ultimately result in optional (i.e. incomplete or divergent) representations in the ILG.
 - d) Even if robust and unambiguous, PLD can go unnoticed.
8. IL development can be gradual/cumulative or discrete/discontinuous. Lexical learning is gradual, while parameter setting is a discontinuous process resulting from restructuring of the ILG.
9. Lexical learning involves working out the feature specifications and subcategorizational and selectional properties of the lexical entry. Lexical learning also involves memorisation and storage in long-term memory.
10. Restructuring follows when a sufficient amount of lexical learning and concurrent syntactic analysis has taken place.
11. Optionality may be persistent in ILGs because of
 - a) the pervasive influence of the L1
 - b) the possible unavailability/underspecification/impairment of the UG lexicon, i.e. FCs and their feature specification
 - c) the unavailability of learning strategies used by L1 learners in situations of language acquisition, i.e. lack of the ‘fitness metric’ and/or the Subset Principle causing the L2 learner to be less conservative than L1 learners
 - d) greater tolerance for gradient acceptability as a result of qualitatively and quantitatively different input.

⁸⁴ *Frequency* refers to the number of occurrence of a construction-type in the PLD, *simplicity* implies the structural make-up of the crucial evidence (whether it is a main clause, a subordinate clause etc.) and *salience* of a rule or mechanism means it is prevalent in more than one construction or module of the grammar (such as *do*-support in English negative interrogative and emphatic clauses).

12. Representations at ultimate attainment can be convergent, divergent or incomplete, depending on the nature of the TL rule and the nature of the evidence that L2 learners receive.

5.2.2 Questions to be addressed

1. How does the nature of the input exactly influence L2A? In other words, how does the acquisition process deal with optional, pseudo-optional, infrequent and ambiguous data in the input?
2. Can developmental optionality ever be eradicated from the ILG at near-native level?

5.2.3 Predictions for ultimate attainment

We predict that IL representations will have the following possible characteristics at ultimate attainment:

| Resulting IL rule | Target input | | |
|--|---|---|---|
| | genuinely optional | quasi-optional | categorical |
| incomplete , i.e. an L2 rule missing from the ILG (indeterminate, inconsistent judgements) | learners do not have any representations | learners do not have any representations | learners do not have any representations |
| divergent 1 , rule based on L1 (determinate, consistent judgements) | learners prefer only one over the other, i.e. turn optionality into categorical distinction | learners consider only one acceptable and the other unacceptable, i.e. make it categorical | learners have a categorical rule but other than the L2, they misanalyse the L2 data |
| divergent 2 , i.e. a different rule from that of the L1 and L2 (determinate, consistent judgements) | learners introduce different interpretations for each option | learners come up with semantic differences other than the L2, i.e. reassign, reinterpret, reanalyse the L2 rule | learners come up with an optional rule and perhaps assign different interpretations to them |
| complete , i.e. an IL rule identical to the L2 rule (determinate, consistent, target-like judgements) | learners come up with genuine optionality | learners come up with target-like semantic differences | learners have a target-like categorical rule |

Table 5-1 Hypothetical representations of optional, pseudo-optional and categorical rules at ultimate attainment

5.2.4 Hypotheses

In the following we outline the hypotheses we wished to test in our main study. Experimental hypotheses are informed guesses about the outcome of some proposed research. In order to test the hypotheses, specific constructions from the TL were needed and specific predictions formulated for each of them in the ILG.

We wanted to submit to testing the Failed Functional Features hypothesis, more particularly we wished to test the Local Impairment hypotheses of Beck (1996, 1997, 1998). Within this, there are five sub-hypotheses that we wanted to submit to empirical testing (1-5). They are stated below accompanied by the null hypothesis, the one we wished to disprove and reject. In addition, we wished to test the hypothesis that the nature of the L2 rule and the input will determine ILG representations. There are three sub-hypotheses to this effect (6-8).

We hypothesise that

1. Initially, both interpretable and non-interpretable feature values will be transferred from the L1. (H_0 : There will be no transfer of any kind in the initial IL grammar.)
2. Interpretable features will be easier to instantiate in the ILG than non-interpretable features. (H_0 : There will be no difference between instantiation of interpretable and non-interpretable features.)
3. Interpretable features will be reset to the target value. (H_0 : Interpretable features cannot be reset in an L2.)
4. Wherever the L1 and L2 differ in the non-interpretable features they instantiate, the influence of the L1 will be manifest throughout development. (H_0 : The L1 has no effect on the nature of representations created throughout development and at ultimate attainment with regard to non-interpretable features.)
5. An attempt to change the value of non-interpretable features will result in optional verb-movement at the intermediate stages. (H_0 : There will be no optional verb-movement at intermediate stages.)
6. The nature of the *target language rule* will affect the representations created in the ILG. (H_0 : The nature of the target language rule does not affect the ILG representations. Representations will be formed regardless of whether the TL rule is categorical, optional, or pseudo-optional.)

7. The nature of the *evidence* will determine the type of representation attained at near-native level. Wherever the nature of the input delays or hinders parameter setting (i.e. when input is rare, complex, obscure or ambiguous), the resulting grammar will be either incomplete or divergent. (H₀: The nature of the evidence does not influence ultimate attainment in L2A. Acquisition progresses independently of infrequent, complex, obscure or ambiguous evidence.)
8. Sufficient amount of lexical learning is needed for syntactic restructuring to occur.

The general hypotheses were extended into the following specific hypotheses:

1. Initially, there will be a period of non-movement of focused operators, based on the L1 value. Failure to move the focused element would be an indicator of the use of the English value, i.e. focus-in-situ. This would support our Hypothesis 1.
2. Movement of the focused element to preverbal position would constitute evidence for the instantiation of the strong 'N' feature of a higher projection. Operators have interpretable features. This would support our Hypothesis 3.
3. It is hypothesised that interpretable features will be instantiated before non-interpretable features. However, movement of the focused element would not necessarily indicate instantiation of a new projection. Preposing the focused element without verb-movement would support our Hypothesis 2.
4. In English *wh*-movement is achieved by spec-head agreement of the [+*wh*] feature between Spec,CP and C⁰. In Hungarian, in contrast, *wh*-movement is similar to focus-movement in that the *wh*-phrase does not move to Spec,CP but to an intermediary Spec,FP. Movement of the *wh*-phrase in itself is not an indicator of instantiation of FP. It is hypothesised that movement of the *wh*-phrase without the necessary verb-movement to F⁰ is an indicator of the continued use of CP as the landing site. Evidence for *wh*-movement without verb-movement would support Hypothesis 1.
5. Initially, learners will not exhibit verb-movement even after they have started preposing the focused and *wh*-elements. Movement of the verb out of the VP indicates instantiation of a strong 'V'-feature of the head F⁰ of the extra FP projection. Only the additional verb-movement along with preposition of the operator is an indicator of the projection of a new functional category, FP. The 'V' feature on F⁰ is non-interpretable and it is hypothesised that non-interpretable features are more difficult to instantiate. An indicator of verb-movement is the

appearance of the prefix in postverbal position. Since the non-interpretable features of verb movement are different in English and Hungarian, continued failure to move the verb in *wh*- and focused sentences would constitute evidence for Hypothesis 4.

6. In Hungarian sentential negation the negative marker *nem* cliticises to the verb and moves with it to the head F^0 . In English however, the auxiliary or the dummy *do* moves to check off T and Agr features while the main verb stays after the negative marker. A diagnostic of verb-movement in Hungarian again is the appearance of the prefix in postverbal position. Failure to move the verb in Hungarian results in ungrammatical sentences. It is hypothesised that movement of the verb would be a diagnostic for a Hungarian-type negation where FP is projected. Failure to do so would indicate use of the English-type negation, which would support our Hypothesis 1.
7. Exposure to PLD will provide ample opportunities for restructuring, therefore the ILG will gradually approximate the TL. As a result of independent information, i.e. phonological, semantic as well as syntactic evidence in the input, the initial non-movement stage will be followed by an extended stage of optionality during which the ILG goes through extensive restructuring. This will be manifest in optional verb-movement in the intermediate stages in focused, interrogative and negative sentences. This would confirm our Hypothesis 5.
8. Representations at ultimate attainment will be affected by the nature of the *target language rule* in the following way:
 - a) *categorical* TL rules will result in native-like IL representations unless the relevant PLD are rare, complex, obscure, or ambiguous
 - b) *optional* rules will result in native-like IL representations unless the L1 has a lasting influence
 - c) IL representations of *pseudo-optional* target rules will remain incomplete as evidence relating to semantic differentiation is rare
 - d) IL representations of *borderline* cases in the TL (constructions with indeterminate acceptability among natives) will remain incomplete unless the L1 has an initial impact on the ILG
9. The nature of the *evidence* will constrain the possible outcomes of L2A in the following way:
 - a) *Infrequent* data will result in incomplete representations and parameter setting will be delayed, as in the case of long operator extraction in Hungarian.

- b) *Ambiguous* data will result in incomplete representations, as in the case of negative and positive adverbials in the focus position. In Hungarian, positive adverbials can occupy either an IP-adjoined position or move to the Spec,FP and hence they can acquire different interpretations. On the contrary, negative adverbials, due to their status as operators with a [+neg] feature, can appear only in the Spec,FP position. Consequently, the verb has to move to F⁰. Since positive adverbials present misleading evidence, restructuring is hypothesised to take place later in this domain. However, since English has residual V2 in negative preposing, parameter resetting will eventually take place.
- c) *Complex* data will result in incomplete representation, parameter setting is delayed, as evidenced by acquisition of partial movement of operators in Hungarian.
- d) *Ambiguous* data will result in divergent representations if the L1 has an initial influence. The ILG will resort to the L1 value in absence of other compelling extraneous evidence ('pathological learning' in the sense of Clark and Roberts 1993) and learning will proceed on the bases of analogy. This can be tested in the double focus constructions in Hungarian. It was hypothesised that there is a difference in interpretation between the two possibilities in double focus constructions. This would be supporting evidence for the hypothesis that categorisation is taking place in this domain. Failure to prefer one alternative in a certain context was predicted to indicate genuine optionality. Genuinely optional rules are ambiguous thus learners will fall back on the L1 strategy.
- e) *Ambiguous* data is provided by the PLD in the case of double *wh*-movement as well. There is a parametric difference between English and Hungarian with regard to the double-*wh* strategy. Hungarian allows for the second *wh*-phrase to stay in situ and it allows for the preposition of both *wh*-phrases. English permits only the first strategy. Moreover, there is supposed to be a semantic difference between the two strategies in Hungarian. Failure to distinguish between the two in different contexts was hypothesised to indicate lack of semantic differentiation thus genuine optionality. For the L2 learners failure to accept both strategies was predicted to show continued influence of the L1 value.

- f) *Exceptional* data will result in incomplete representation as they might mislead rule-formulation. This hypothesis can be tested with negative or *wh*-clauses where the operators do not carry the strong [+neg] or [+wh] feature but instead express metalinguistic interpretation.
10. Verb movement can be diagnosed by the position of preverbs in Hungarian. Some of them are prefixes of an adverbial origin, others are verbal modifiers of various syntactic categories. Verb movement is more salient with prefixes as they are more frequent in the input and more semantically transparent. Therefore it is hypothesised that prefixes are learnt earlier than other verb modifiers. A difference in acceptability would indicate differences in a) development, and b) in underlying knowledge, and would support our Hypothesis 8 that lexical learning is crucial for any syntactic restructuring to take place.

5.3 Pilot studies

In this section we will describe the two pilot studies that we carried out prior to the main study. First, we elicited acceptability judgements from adult Hungarian native speakers using magnitude estimation (section 5.3.1). Next, we carried out a study on the acquisition of Hungarian focus movement by adult native speakers of English (section 5.3.2). These two pilot studies together with the exploratory study into the nature of L1 and L2 acquisition of Hungarian reported in Appendix A were paramount to the final questions that were addressed in the main study.

For the comparative L1/L2 study which also appeared in publication (Papp 1998) the reader is referred to Appendix A. It was based on Hungarian data in the CHILDES database (MacWhinney and Snow 1985) and production data from adult English learners of Hungarian collected through the Map Task (Anderson et al 1991).

Both pilot studies employed magnitude estimation as a grammaticality elicitation and measurement technique. In the study of adult L1 Hungarian we hoped to gain empirical evidence regarding the mature representations of Hungarian native speakers. The second pilot with adult English learners of Hungarian was carried out to finalise the experimental hypotheses, test the measurement technique, and try out the materials to be used in the main empirical study.

5.3.1 Pilot 1: Magnitude estimation of adult L1 Hungarian

A study of grammatical intuitions of adult Hungarian native speakers was conducted in order to find out about the acceptability of various focus-related constructions in Hungarian.

5.3.1.1 Subjects

The subjects were 19 speakers of Hungarian currently studying at the University of Edinburgh. Participation in the study was voluntary and there was no reward offered.

5.3.1.2 Materials

The constructions were mostly derived from the theoretical literature on Hungarian. Several of the constructions tested are either infrequent in the input or have intermediate acceptability. The construction types were the following (see Appendix C(i) for the whole list of sentences):

- items 1-5: long focus movement, [+/-] verb-movement
- item 6: topic movement, [+/-] verb-movement
- items 7-11: long *wh*-movement, [+/-] verb-movement
- items 12-16: short *wh*-movement (subject extraction), [+/-] verb-movement
- items 17-18: embedded *wh*-movement (subject extraction), [+/-] verb-movement
- items 19-22: short *wh*-movement (object extraction), [+/-] verb-movement
- items 23-24: embedded *wh*-movement (object extraction), [+/-] verb-movement
- items 25-27: long *wh*-movement, [+/-] verb-movement in the lower clause
- items 28-29: long *wh*-movement, [+/-] subjacency violation
- items 30-31: yes/no questions, [+/-] verb-movement
- items 32-36: long *wh*-movement in multiple *wh*, [+/-] lower *wh* phrase
- items 37-48: infinitive with negative adverbial, [+/-] verb movement
- items 49-55: infinitive with positive adverbial, [+/-] verb movement
- items 56-58: long extraction, [definite/indefinite, i.e. subject/object] conjugation
- items 59-61: infinitive with focus, [+/-] verb movement
- items 62-76: double focus, [*wh*+V+XP+Pref/*wh*+V+Pref+XP/XP+*wh*+V+Pref] order
- items 77-79: partial *wh*-movement, [partial/long extraction]
- item 80: double *wh*-movement, [preposed/in-situ *wh* phrase]

There were altogether 80 pairs of sentences to be judged ((40 x 2) x 2 = 160 sentences). Both the instructions and the follow-up questionnaire were in the subjects' L1, Hungarian, which can be seen in Appendix C(ii) and C(iii).

5.3.1.3 Method

In this section we describe the test instrument used, namely acceptability judgements and the rationale for their use in L2A research. Also, we introduce the types of measurement that are usually used to measure acceptability judgements: ranking, rating and magnitude estimation.

5.3.1.3.1 Test instrument: acceptability judgements

In this section first we justify the use of acceptability judgements in linguistic research. Then we compare the two main elicitation techniques: rating and magnitude estimation. Finally, we give the rationale for using magnitude estimation in the pilot studies.

Grammaticality judgements have traditionally been used to ascertain the nature of the underlying competence of a speaker of a language. Grammaticality judgements, however, do not have an uncontroversial status among linguists as a reliable and valid method of gaining information about the underlying linguistic system of an individual (see discussions in Schütze 1996, Cowart 1997). They nevertheless seem to be one of the very few measures by which we can glean aspects of grammatical competence (Sorace 1996a).

There is usually a distinction drawn between grammaticality and acceptability. While grammaticality is a matter of competence, acceptability is argued to be a result of performance (Chomsky 1981). Acceptability judgements are used to make explicit the linguistic intuitions speakers have of a language. Since intuitions are highly implicit and directly non-accessible, people are encouraged to make their intuitions explicit by reflecting on the status of certain sentences with regard to their acceptability. Thus underlying grammatical competence is *inferred* from judgements regarding possible/impossible structures in a given language.

As it transpires from the above, the very act of judging the acceptability of a sentence turns the speaker's implicit intuitions into an explicit process. Providing judgements requires 'continued and sustained concentration', thus it is susceptible to contamination by performance factors (misreading, distraction, fatigue, etc.). However, despite this, it has been shown that there is a relationship between linguistic acceptability judgements and grammatical competence (Quirk and Svartvik 1966, Greenbaum and Quirk 1970). It is nevertheless usually pointed out that linguistic judgements may be affected by several extra-grammatical factors undermining their validity as a pure measure of grammatical competence. Here is a list of some of the confounding factors (for a review, see Sorace 1996a):

- mode of elicitation (oral or written)
- the type of scale used in the elicitation (nominal, ordinal, interval, ratio)
- context of test sentences
- ordering effects
- frequency of usage
- semantic or pragmatic (im)plausibility
- parsing difficulties
- beliefs about style and content
- conformity to prescriptive norm or perceived prestige
- linguistic training of subjects
- mental state of subjects

The *reliability* of acceptability judgements has to do with inter-subject and intra-subject consistency. In other words, reliability is ensured by the consistency exhibited by different subjects as well as the consistency of the judgements of the same subject on different occasions. As Householder (1965) pointed out, the reliability of acceptability judgements is questionable:

I regard the 'linguistic intuition of the native speaker' as extremely valuable heuristically, but too shifty and variable (both from speaker to speaker and from moment to moment) to be of any criterial value. (Householder 1965:15, cited in Schütze 1996:3)

Thus, the fact that even native speakers are not capable of producing consistent judgements of acceptability has been used as an argument against use of linguistic judgements as a

whole. Some researchers have gone as far as proposing to employ only subjects who exhibit a strong ability to judge reliably as established through a pre-test (Snow 1975, Ringen 1975). This would surely exclude the majority of speakers from any investigation. The results would certainly not reflect the underlying competence of the excluded speakers who make up the majority of the population.

It must be obvious that the above argument stands only in relation to the quest for investigating clear-cut cases in the language system. Acceptability judgements are in fact the most suitable type of measurement for the investigation of inconsistency and variation in languages. They have been found one of the best methods of finding out about parameter resetting in L2A research. Also, they throw light on issues such as variability, optionality and multiple parameter settings in mature and developing grammars (e.g. White 1990/1991, 1992a, Sorace 1993, 1996a, Robertson 1996, Robertson and Sorace (in press), Henry 1995, Beck 1998, *inter alia*).

The advantages of acceptability judgements far outweigh the drawbacks of their use in linguistic research. Some of the advantages are listed below:

- we can get reactions to sentence types that are very rare in spontaneous speech or corpus data, or to structures that speakers would normally avoid
- we can obtain information about *un*grammaticality as well as grammaticality
- we can abstract away from performance factors such as slips of the tongue, unfinished sentences, etc.
- we can also minimise the effect of metalinguistic knowledge by requesting spontaneous reaction to sentences (intuitions, contrary to performance data, are not affected by the amount of attention and time allocated as they are based on *tacit* knowledge, i.e. reflections by 'feel')
- we can get more finely-grained information about intermediate acceptability and uncertainty of subjects
- we can get detailed information about more differentiated knowledge, i.e. hierarchies of acceptability, as informants can indicate the relative acceptability of structures in relation to one another.

5.3.1.3.2 Types of measurement: ranking, rating, and magnitude estimation

Thus, acceptability judgements were deemed the most suitable type of measurement for the questions addressed in this study. Judgements can be elicited using different types of scales: nominal, ordinal, and interval/ratio scales. Let us see the differences between the three. *Rating* is used when absolute judgements are required. Subjects are asked to put items into predefined categories, such as correct/incorrect or assign items into predefined categories on a scale. *Ranking* requires relative judgements, i.e. it implies judging items in relation to one another. It can involve either ordinal or interval scales (judging items in relation to each other on a scale where neighbouring categories have various or equal intervals between them, respectively). The use of ranking as an interval measurement rather than an ordinal measurement depends on the informants' ability to distinguish between categories and assign stimuli to categories with equal intervals. The use of an interval scale naturally yields more precise information about degrees of (un)acceptability, since intervals indicate the precise distance between individual points on the scale. This information is missing in scales based on nominal/categorical or ordinal values. Some researchers advocate comparative, i.e. relative judgements, that is, ones measured on interval/ratio scales where it is possible to measure the size of the intervals between categories (Sorace 1992, 1996a, Schütze 1996). This is what the third type of measurement, *magnitude estimation*, uses. The argument is that relative judgements yield more refined results and have higher reliability.

In the next section we describe magnitude estimation (ME), the type of measurement we used for the pilot studies. We evaluate the merits and disadvantages of the use of ME in linguistic research. Next, the research design of the first pilot and the procedures in the administration of the test are reported (section 5.3.1.5).

5.3.1.4 Magnitude estimation

The technique we used was magnitude estimation administered as a computer-based task at the Department of Applied Linguistics, Edinburgh University⁸⁵. In what follows we will describe the measurement technique as used first in psychophysics and psychosocial investigations and more recently in linguistic research.

⁸⁵ I am infinitely grateful to Dr Dan Robertson for helping me to use the software program for magnitude estimation and for his unfailing help in the analysis of the results of this pilot study and throughout the thesis.

Magnitude estimation is a type of measurement that has been used for psychometric experiments (to measure brightness of light, loudness of sound, seriousness of crime, etc.) and has more recently been applied to the measurement of linguistic acceptability (Sorace 1992, 1996, Bard et al 1996). It is a technique, which employs an interval/ratio scale⁸⁶. Rather than using a traditional predetermined category scale of limited values, it enables subjects to set up their own range and categories of judgement. It uses proportionate judgements by asking informants to compare all subsequent stimuli with the first stimulus and assign values to successive stimuli in proportionately to the first value. Any positive number (including decimals and fractions) can be used. This way, informants are not confined to some predefined category scale. Traditionally, informants are given a predetermined category scale where they are forced to squeeze in their judgements in the categories provided. The traditional technique can potentially lead to loss of information about the refinement of judgements. In contrast, a scale which does not use a predefined range of categories and which requires subjects to set up their own categories enables subjects to mark any shade of judgement they see appropriate.

As indicated above, this method was first used in psychophysics to measure brightness of light, strength of colour, length of lines, or any other physical phenomena appearing on a natural continuum (Carterette and Friedman 1974, Stevens 1975, Michell 1990). In this domain it is possible to plot human perception against an objective measurement which is possible to arrive at independently of perception (objective measurement in kW's, cm's, etc.). Thus, in psychophysics there is an independent baseline measure against which human sensitivities can be compared. However, in other areas, where magnitude estimation has been applied, such as the domain of psychosocial investigations, see e.g. Lodge (1981), or investigations of linguistic acceptability, see Bard et al (1996), the objective measurement against which perception could be plotted is missing. In other words, there is no objective, independent measurement for seriousness of crime, stressfulness of events, perceived prestige, amount of moral support, acceptability of sentences, and so on. This obviously constitutes one reason to object to the use of interval/ratio scales for the measurement of these types of stimuli. To put it more clearly, the criticism is that concepts which cannot be measured by objective physical means should not be assessed on an interval scale, but should be treated only as nominal, or at the most, ordinal values. The suggestion of the critics is that

⁸⁶ A ratio scale subsumes an interval scale; thus any arithmetic (subtraction, multiplication etc.) can be done on the values on it. It differs from an interval scale in that it has an absolute zero point.

use of parametric tests should thus be excluded with this type of data (for a review of the controversy surrounding the use of parametric statistics with ordinal data, see Michell 1986). The counter-argument to this objection, however, points out that the treatment of, say, linguistic acceptability on a nominal scale (acceptable / unacceptable) or even on an ordinal scale (acceptable / less acceptable / even less acceptable / unacceptable) is only the result of historical accident in linguistic research. This can be accounted for by the fact that shades of linguistic acceptability have not been the centre of investigations in the past, as the questions linguistic theorising was asking were not sufficiently refined (Bard et al 1996, Schütze 1996). Moreover, it has been shown that people can reliably give proportionate judgements to any of the stimuli in the psychosocial and linguistic domains. Therefore, as the counter-argument follows, the fact that there is no objective zero point which these stimuli can be measured against and that an objective measurement for these phenomena is lacking, does not preclude the use of magnitude estimation to a good effect in these domains⁸⁷.

However, Schütze (1996) and Cowart (1997) in their extensive studies of linguistic acceptability judgements have pointed out some practical disadvantages of this type of measurement. They argue that informants need extensive training in giving proportionate judgements as it proves to be an unusual requirement for most people, especially for the less numerate ones (this particularly applies to infirm, young, and illiterate informants, as Cowart 1997 points out). Second, but connected to the previous disadvantage, is the suggestion that subjects ideally need to be reminded throughout the experiment that they are supposed to give judgements proportionate to the *first* value they have chosen. My informants frequently reported that after a number of stimuli sentences they usually forgot the first value they had used and were giving proportionate judgements not compared to the first but the immediately previous value. However, this should not be a problem as long as subjects are consistent in giving proportionate judgements in this way.

Having taken all these considerations into account, the method of magnitude estimation as a technique of eliciting responses from informants appears suitable for the measurement of linguistic acceptability. As magnitude estimation is used on an interval scale, it is possible to calculate differences in acceptability of two forms, that is, it is possible to work out the *preference score* between two sentences. *Strength of preference* can thus be compared for

⁸⁷ Validation of results of magnitude estimation is usually done using a procedure called 'cross-modality matching'. Lodge (1981) presents the hypothesis that subjects' estimates are operating in the same way on the physical and the social stimuli and outlines ways of validating results of psychosocial experiments. For an example of validation applied to judgements of linguistic acceptability see Bard et al (1996).

different pairs of sentences. The mean and variance of multiple judgements on a particular type of stimulus can also be calculated. Due to the interval scale measurement, these properties allow magnitude estimation to readily shed light on variation, indeterminacy and optionality in acceptability judgements of linguistic forms.

5.3.1.5 Design and procedures

In the first pilot, subjects were tested in a computer lab in groups of three. They were assigned individual i.d. numbers and were asked to start the test. There is a practice session, which consists of two parts. First, the computer program elicits judgements about line length. Subjects are asked to use proportionate judgements to judge the lengths of various lines. The computer alerts them if they use negative numbers or zero. After the introductory session, subjects were instructed in Hungarian how to use proportionate judgements to judge the acceptability of sentences, see Appendix C(ii). At this point, subjects could ask questions from the experimenter. Next, there were six practice sentences. If subjects did not have further questions after completing the practice session, they were allowed to proceed to the main part of the experiment. The informants gave acceptability judgements to two sets of 80 individual sentences, see Appendix C(i). Every subject judged every sentence. The computer automatically recorded the responses together with the response times. In the interval between the two sessions subjects were asked to fill in a questionnaire about their opinion of the type of measurement and the method of administration, see Appendix C(iii).

5.3.1.6 Results

The responses were collected in individual files and later collated for all 19 subjects. The *mean preference scores* were calculated for each item by first converting the scores into logs and then subtracting the mean for the ungrammatical from the mean for the grammatical sentence for each item⁸⁸. A positive mean preference score indicates preference for the

⁸⁸ More precisely, we calculated the log of the differences between the log of the two scores. The use of logs is necessary in magnitude estimation in order to standardise the individual scales subjects create for reasons of comparisons and further calculations. Thus, the mean preference score between two values is calculated in the following steps:

- (i) $\log \text{ diff} = \log (a) - \log (b)$
- (ii) add the individual values for log diff for all subjects
- (iii) $\text{mean log diff} = \text{sum log diff} / \text{number of subjects}$
- (iv) call the mean log diff the *mean preference score*

grammatical sentence, a negative mean preference score indicates preference for the ungrammatical sentence. Next, the geometric means were calculated⁸⁹. Lastly, the 95% confidence limits were calculated in order to gain information about the variability in the scores. The 95% confidence limits also provide information on the *strength of the judgements* and the *determinacy* with which they were made. The arithmetic means and the 95% confidence limits were plotted on a graph, which can be seen in C(iv). If the 95% confidence limits, i.e. 95% of the variation in the scores, include zero on the graph, we cannot be sure that the preference score is significantly different from zero. In other words, we cannot be sure that there is a determinate preference for the item in question. If the 95% confidence limits do not include zero, the preference is strong enough to call it determinate. This means, in effect, that the more variation there is in the judgements for an item, the greater the possibility that the judgements are indeterminate.

The results of the pilot study will not be reported in full. The plot graphs obtained for the 80 items can be seen in Appendix C(iv). The general observations that emerged from this experiment on 19 native Hungarian speakers are the following:

- 1) long extraction of focus operators produces indeterminate judgements in declarative sentences but it is accepted in subjunctive sentences
- 2) long extraction of *wh*-phrases is accepted but it produces verb-movement in the matrix clause rather than the subordinate clause where the *wh*-phrase was extracted from
- 3) long extraction of *wh*-phrases in a sentence with a verb marked with indefinite conjugation is preferred to those where verb-object agreement is marked by definite conjugation
- 4) long extraction of *wh*-phrases produces subjacency effects
- 5) partial *wh*-movement is preferred to long extraction
- 6) focused elements do not produce focus effects in infinitives, i.e. there is no verb movement in the non-finite clause
- 7) moreover, negative adverbials in infinitives do not act as focus either, i.e. do not cause verb-movement
- 8) in double focus constructions the second focused element is preferred in a sentence-final position
- 9) double *wh*-movement is optional among natives

⁸⁹ The geometric mean is the arithmetic mean computed on variables that have been transformed into logs.

The questions that this pilot study generated are as follows:

- 1) Why is there a difference between native speakers' production and grammaticality judgements? Native speakers do produce long extraction in spoken language (see section 4.9.6 in Chapter 4) but they do not seem to prefer them when it comes to judging them.
- 2) Are there semantic differences in apparently optional constructions or are they genuinely optional?
- 3) What is the frequency with which either of the options occurs in optional constructions (i.e. double *wh*-movement)? Does this frequency change over time within and across individuals ultimately resulting in language change?
- 4) What is the nature of grammatical judgements expressed for optional constructions? Which alternative is preferred, to what degree and by which speakers?

The first observation regarding discrepancy between informant judgements and the informants' own linguistic behaviour was first reported on in Labov (1975). The question might be answered by the suggestion that native speakers are more conservative when judging the grammaticality of an item than when producing the same structure. Since the task of *giving* grammatical intuitions itself is a highly conscious, explicit exercise, as has been discussed in section 5.3.1.3.1, speakers might be inclined to approach the intuitional task with a more normative sense of grammaticality. Therefore, when judging the grammaticality of a borderline or rare construction, speakers tend to reject sentences that they would probably feel free to use in real communication. This phenomenon has been well attested in English multiple embedding constructions. Multiple centre embedding tends to be judged unacceptable by English speakers, although people appear to use them frequently. Moreover, people do not seem to have any difficulty comprehending multiple embeddings when others produce them⁹⁰.

⁹⁰ Sampson (1996) muses about the common misjudgement about the acceptability and use of multiple embeddings in English. He cites an anecdote that happened to him at a conference. After claiming that multiple centre embeddings do not exist in English somebody said to him: 'But don't you think that sentences that people you know produce are easier to understand?' Sampson admits that the question sounded so natural that for some time he did not notice that it was indeed a multiple embedding. In his article he brings ample evidence from various corpora for attested multiple embeddings. Based on the above episode and the number of attested evidence for multiple embeddings in English, Sampson (op.cit.) argues that 'intuition gets the facts of language quite wrong'. Schütze (1996) also argues that people cannot be consistent in their judgements by definition, as judgements are not direct reflections of competence, but offer a different access to competence through the confounding factors of performance. See the discussion in section 5.3.1.3.1 about intuitions and differences between grammaticality and acceptability.

With regard to answers to questions involving optionality (questions 2, 3 & 4 above), further investigations seemed to be necessary, which we subsequently undertook in the main study. However, before that we carried out a second pilot, this time with adult English learners of Hungarian.

5.3.2 *Pilot 2: Magnitude estimation of Hungarian as an L2*

We conducted a second pilot study with adult L2 learners of Hungarian whose native language is English. This study was the immediate forerunner to the main study with regard to both the types of test materials and the informants participating in the test.

5.3.2.1.1 Subjects, setting

27 adult English speakers took part in the second pilot study. They were recruited from Edinburgh, Oxford, Cambridge and London by letter, email, through language courses and by word of mouth. All the subjects were individually contacted twice before the experiment, first by an introductory letter asking for their co-operation, then by a letter containing a vocabulary list of the words that would be used in the test. See Appendix D(i) for the vocabulary list.

The average age of the subjects was 31 years, with the average age of first exposure 25.5 years (range 17-68). The average period spent in Hungary was 49 weeks (i.e. just under a year). Although the subjects lived in the UK at the time of testing, they reported that they used Hungarian an average 1.5 hours a day. There were 14 female and 13 male subjects. They were mostly from an academic background (students, teachers, or researchers) with an average of three additional languages apart from English and Hungarian. However, Hungarian was the most recently learnt language for most.

5.3.2.2 Method and design

Magnitude estimation (see section 5.3.1.4) was used to elicit responses to 62 sentence pairs from each person. This time magnitude estimation was administered as a paper-and-pencil

exercise. The experimental material was designed to investigate the acceptability of various constructions in context. The types of constructions used were the following:

- 1) neutral
- 2) focused
- 3) negative
- 4) negative adverbial
- 5) positive adverbial
- 6) questions
- 7) double focus
- 8) double *wh*
- 9) focused infinitive
- 10) long extraction
- 11) embedded

Subjects were divided into two groups, Group A and Group B. Every item had two lexicalisations. Group A and Group B were presented with either the good or the bad version of each lexicalisation. This method was used to ensure that subjects encountered a lexicalisation only once. We will be reporting the results of 56 items of the total 62⁹¹.

Before the magnitude estimation test was administered, subjects were given extensive instructions on the methodology. They learnt about proportionate judgement of line length and then were given linguistic examples to judge. The instructions and example sentences were in English, the L1 of the subjects. See Appendix D(iii) for the whole set of instructions.

As mentioned above, in this experiment magnitude estimation was carried out as a paper-and-pencil exercise⁹². Small booklets were compiled, similar to Yuan's (1993) method. The order of presentation of the sentences was randomised for both groups. See Appendix D(ii) for the test materials and Appendix D(iv) for the two randomised orders. Each subject had two booklets with 62 sentence pairs in each (thus they judged a total of 62+62=124 sentence pairs). They were asked to give their answers on a separate answer sheet, see Appendix D(v).

⁹¹ The partial *wh*-movement sentences were excluded from the analysis as they did not fit the design of the study in that they did not have an immediate incorrect alternative.

⁹² The computer program we previously used in the first pilot study on adult Hungarian could not be employed for lack of access to computers in all the institutions around Britain where we conducted the second pilot study.

Originally it was planned that there will be a time restriction of 10 seconds to turn the page, read the pair of sentences, judge the experimental sentence, and record the judgement on the separate answer sheet. However, the time restriction proved to be too strict and some of the less advanced subjects found it impossible to keep up with the pace. It was decided that they should do the test in their own time. Other studies using the same method (Ratwatte 1995, Yuan 1993, Dube 1998) used tape-recorded as well as a written version of the sentences. The tape-recorded material ensures that subjects spend the same amount of time on each item. It was decided that this measure was not going to be used in the present study, as it would have introduced a range of extraneous issues into the interpretations of the results (phonological acquisition, mode of elicitation, etc.).

The modality of presentation of the test items is a crucial issue in L2A research. Murphy (1997) found that subjects are less accurate and slower in judging sentences when they hear them (oral mode) than when they read them (written mode). In a replication study of Johnson and Newport (1989), Johnson (1992) found that using the written mode of presentation produced more accurate results from the same subjects than when using the oral mode of presentation for the test materials. We took this as a supporting argument for the sole use of the written elicitation mode in our study⁹³.

In the interval between the two sessions of acceptability judgements, subjects were asked to fill in a questionnaire about themselves and their language learning experiences. For the questionnaire see Appendix D(vi). After the test, subjects were required to attempt a 48-item cloze test, on the basis of which we subsequently placed them in different proficiency levels. See Appendix D(vii) for the cloze test.

Under the given circumstances some tests had to be administered in the absence of the researcher. This means that the materials had to be sent through the post to some of the informants. Although the results showed no obvious detrimental effect of the absence of the researcher, it was considered that magnitude estimation might not be the most suitable technique for a posted survey-type test. A more familiar multiple-point scale was deemed to be a more reliable method of elicitation as it would exclude the confounding factors that an unfamiliar measurement technique might introduce in the results.

⁹³ In a later experiment a computerised version of the ME technique with simultaneous oral and written presentation of the same test materials could however be used for the purpose of validation of the pilot and main studies.

5.3.2.3 Results

Based on the results of the 48-item cloze test, subjects were divided into four groups: beginners (scores 0-5), intermediate (scores 6-15), advanced (scores 16-35), and near-natives (scores 36-48).

The analysis of the results was the same as in the L1 Hungarian pilot study. The mean preference scores were calculated by subtracting the log of the ungrammatical from the log of the grammatical version of each pair and averaging over the subjects in each proficiency group. Hence the mean preference scores and the 95% confidence limits were calculated for each item in each group. Then plot graphs were drawn for each group. See the four graphs for the four proficiency groups identified in Appendix D(viii). On the graph if the confidence limit crosses the y-axis at the zero point it indicates that there is indeterminacy in the judgement expressed by the group.

The results of this experiment were the following:

- 1) There was an obvious difference in the groups in the mean preferences and variation in the preference scores, suggesting that they came from different populations. ANOVA tests were not calculated since we were only interested in the general trends in the mean preference scores.
- 2) Since the near-native group had only 3 subjects in it, the confidence limits are too wide⁹⁴. However, this is not a sign of indeterminacy in the judgements of these 3 near-natives.
- 3) There seems to be an orderly (non-random) relationship between determinacy of judgements and proficiency. The more proficient the learners are, the less indeterminate their judgements appear.

The questions this experiment gave rise to are the following:

⁹⁴ If the sample sizes are less than 30 in each cell, the confidence limits are calculated not as a function of the value of the z score, but as a function of the value of t in the calculation. The confidence limits in this case are calculated following the steps below:

- (i) $\bar{x} \pm (t * S.E.)$
- (ii) where S.E. (standard error of mean) is $S.E. = sd / (\sqrt{N})$ (where sd=standard deviation and N=size of sample)
- (iii) where the value of t depends on the size of the sample and the appropriate degree of freedom at a chosen alpha level $\alpha = 0.05$.

- 1) Are prefixes acquired differently from other VMs? In other words, what are the differences between syntactic learning and lexical learning, i.e. the learning of the lexical subcategorization of certain verbs?
- 2) Do beginners show indeterminacy of judgements across all categories or do they show evidence of L1 effects?
- 3) What is the nature of the mental representations of near-native speakers? Do they still exhibit indeterminate judgements?

5.4 Main study

5.4.1 Introduction

This section is concerned with the structure of the main study. First, we report the changes and decisions made after conducting the pilot studies (section 5.4.2). Next, we give the rationale for using a different elicitation technique from the one used in the two pilot studies (section 5.4.3). Then we will provide details of the subjects, method and task, design, test materials and procedure employed in the administration of the main study. Lastly, section 5.4.7 will describe the data and the steps taken in the analysis of the data.

5.4.2 Post-pilot developments

Based on the results and insight gained from the experience of conducting the first two pilot studies, several decisions were taken.

First, computerised magnitude estimation was not available for the second pilot study. It was established that administration of a paper-and-pencil version of magnitude estimation required the presence of the experimenter in order to clarify possible questions regarding the technique. As the potential subjects were located throughout Hungary and other English-speaking countries it became clear that the administration of the main study had to be carried out in the form of a postal questionnaire. Therefore, it was decided that judgements should be elicited on the more familiar and traditional rating scale of 1-10 in the main study. This decision made it possible to validate the results of the magnitude estimation in the pilot study. Also, it was hoped that since rating enjoys higher face validity among subjects, fewer people would be discouraged from taking part in the experiment.

Second, it was decided to focus exclusively on those aspects of Hungarian that are in parametric variation with English or those which would directly shed light on optional representations in native and non-native grammatical systems. Those constructions which were regarded as borderline or controversial (extra long extraction, long double extraction, etc.) were excluded from the design.

Third, care was taken that each sentence type should have two versions which differed minimally only on one feature. This feature was either the presence or absence of verb movement, or the presence or absence of the complementizer.

Fourth, a new set of distractors (altogether 12 items) was included in the test materials. This was necessary in order to minimise the possibility of subjects identifying the nature of the experimental questions. It was however believed that the diversity of the sentence types investigated would have acted as distractors for each other in any case.

Fifth, since the native Hungarian pilot study showed some unexpected results with regard to optional and quasi-optional constructions, it was decided that natives would not be treated as the control group but also as one of the groups under investigation.

5.4.3 *Method*

Both our pilot studies employed magnitude estimation, thus the advantages and the disadvantages of this elicitation technique became apparent to us. During these pilot studies, informants reported that they would have found the task easier if the measurement was on a predetermined scale. This confirms the weak face validity of magnitude estimation.

5.4.3.1 *Rating*

As indicated in the subjects' reports, the traditional rating task where instead of relative judgements absolute judgements are used enjoys higher face validity among informants. This is not surprising, as it is conceptually simpler to work within a given range and with prespecified categories when giving judgements. Rating scales are extensively used to this day in L2A research (see e.g. Bley-Vroman et al 1988).

In a study employing both types of measurement, i.e. magnitude estimation and rating on a 5-point scale, Ratwatté (1995) found that rating produced more uniform responses across proficiency levels and it appeared to be a more sensitive instrument when compared to magnitude estimation. She found that rating produced more significant results than ranking the same sentences using magnitude estimation. On the other hand, other studies (Bard et al 1996, Sorace 1992) have shown that magnitude estimation does provide valid and reliable results. The effectiveness of each elicitation technique might depend on the linguistic structures under investigation.

Taking this into consideration and the above arguments for the use of the alternative, more conventional measurement technique, it was decided that a rating task that elicits acceptability judgements on a 10-point scale would be used in the main study. A scale of 10 points was expected to provide informants with enough categories to capture their intermediate judgements. Informants were encouraged to use the whole range between 1 and 10, thus it was hoped that the four intermediate numbers (4,5,6,7) would be extensively used to mark intermediate acceptability.

The choice of a scale with no middle point was made in order to compel informants to express their intuition 'for' or 'against' a given sentence, and to avoid the alleged tendency of informants in experiments to overuse the middle-point. This method has a drawback, however. Informants were not able to express genuine indeterminacy of judgement. True indeterminacy arises when a sentence has no grammatical status at all in the subject's competence: it is judged as neither acceptable nor unacceptable. This information was lost as a result of the absence of an absolute middle point on the scale. However, interpretation of judgements on the middle point on the scale is notoriously difficult to make. Moreover, it was believed that by employing a 10-point scale, rather than the 7-point scale widely used in the literature, we would gain more information on the degree of variation among subjects.

5.4.3.2 Task

Acceptability judgements were elicited using a 10-point rating scale, where the number 1 represented a judgement of 'very bad' and the number 10 represented 'perfect'. This was administered as a paper and pencil exercise. The rating task involved the presentation of

isolated micro-texts clearly separated from each other by lines. A micro-text comprised of a context sentence followed by an experimental sentence to be rated by the subjects. The sentence to be rated was in bold typeface to ensure that subjects' attention was drawn to it rather than to the context sentence. For all of the test materials with English glosses see Appendix E(i).

After a cover letter which can be seen in Appendix E(ii), subjects were instructed in the use of rating, see Appendix E(iii). The two randomised orders of materials that the subject received can be seen in Appendix E(iv). Subjects were instructed to read both sentences, and to judge the acceptability of the second sentence in the context of the first. They were requested to record their responses on the individual answer sheet provided. The answer sheet had 136 boxes printed with the corresponding sentence numbers (1-136), see Appendix E(v). Subjects had to write their numerical response in the box, corresponding to the sentence pair they were judging.

There was no time limit imposed, but subjects were instructed to give their immediate response. Subjects were given an opportunity to practice on five items at the beginning of the test. These five items represented a representative range of the test sentences to follow. This way primacy effect was eliminated from the real test.

The test materials were all put in an envelope and sent to the informants' address with a self-addressed, stamped envelope enclosed for the return of the materials to the experimenter.

5.4.4 *Experimental design*

There were altogether sixty-two test constructions to be tested. These sixty-two basic sentence constructions ('items') each had two versions ('sentence types'): the control sentence (usually the acceptable) and the experimental sentence (the unacceptable). Additionally, there were six distractor items testing knowledge of verbal and nominal morphology. Each sentence type was represented by two lexicalisations. This resulted in altogether $((62+6) \times 2) \times 2 = 272$ sentences to be tested.

The subjects were divided into two groups: Group A and Group B. Within each of the experimental groups, subjects were randomly assigned to either Group A or Group B. This can be graphically seen in Table 5-2:

| | Group A | Group B |
|---------------------|----------------|----------------|
| Intermediate | | |
| Advanced | | |
| Near-native | | |
| Native | | |

Table 5-2 Research design in the main study: Allocation of subjects to experimental groups

The two lexicalisations of each sentence type were divided between the two groups. Group A judged the correct pair of Lexicalisation 1, while group B judged the incorrect pair. At the same time, the incorrect pair of Lexicalisation 2 was judged by group A and the correct pair was judged by group B. The design ensured that no subject encountered the two versions of a construction in the same lexicalisation. However, every subject gave judgements to both the correct and incorrect versions (in different lexicalisations). This way the two groups served as controls for each other.

Each subject therefore judged 136 sentences. The experimental design can be seen in Table 5-3 below:

| | Lexicalisation 1 | Lexicalisation 2 |
|----------------|-------------------------|-------------------------|
| Group A | grammatical | ungrammatical |
| Group B | ungrammatical | grammatical |

Table 5-3 Research design in the main study: Allocation of test materials in the experimental groups

5.4.5 Materials

The test materials employed in the main study included twelve distinct areas of Hungarian grammar. All twelve areas are associated with the focus projection under investigation. They are similar to the sentence categories that were used in the second pilot, but some modifications were made. The following are the sentence categories tested in the main study:

- 1) neutral
- 2) focused
- 3) negative
- 4) *wh*-questions
- 5) negative adverbials
- 6) positive adverbials
- 7) multiple focus
- 8) multiple *wh*
- 9) focused infinitive
- 10) long extraction
- 11) partial *wh*-movement
- 12) embedded focused clauses

Each category comprised several subsets of constructions, see section 5.4.5.1 below for a detailed account. Two sentence types represented each construction: one experimental sentence and another control sentence, as mentioned previously. These two sentences were identical in every respect except for the syntactic aspect under investigation, in our case, verb movement or the presence/absence of a complementizer. Thus, in the case of [+/- verb movement] the control sentence had correct verb movement, the experimental sentence was identical in every aspect except that it lacked verb movement. This was to ensure that any difference in judgements could be attributed to the status of the syntactic aspect, e.g. verb movement under scrutiny in the ILG. The results thus provide a measure of the extent to which the informants showed a preference for movement over non-movement or presence over absence of syntactic elements.

5.4.5.1 Test categories and items

The categories and the sentence types used in the test are listed in Table 5-4 below:

| Category | preverb | verb | extraction | sentence | semantic int | operator | mood |
|----------|---------|-------------|------------|----------|--------------|----------|------|
| Neutral | no | main aux | | | | | |
| | prefix | main aux | | | | | |
| | VM | main aux | | | | | |
| Focused | no | main aux | | | | | |
| | prefix | main | | | | | |

| | | | | | | | |
|-----------------------------|--|---|--|-------------------|-------------|--------------------------|------------------|
| | VM | aux main aux | | | | | |
| Negative | no prefix VM | main aux main aux main aux copula | | | | | |
| Negative adverbial | no prefix VM | copula | | | | | |
| Positive adverbial | no prefix VM | copula | | | | | |
| wh-question | no prefix VM | main aux main aux main aux main aux main aux main aux main aux | S S O O S S O O S S O O | | | | |
| Multiple focus | | | | wh+foc foc+foc | | | |
| Multiple wh-question | | | | wh+wh | one more | | |
| Focused infinitive | | | | | | neg foc | |
| long extraction | | | S O A S O A | | | | decl subj |
| Partial wh-movement | | | S O A S O A | | | | decl subj |
| Embedded clauses | | | S O S O | | | wh foc neg | |

Table 5-4 Test categories and sentence types used in the main study

5.4.5.2 Preparation of test sentences

In the construction of the test sentences, special attention was paid to the frequency of occurrence of lexical items. There was an attempt to hold lexical complexity at a fairly low level by consulting two textbooks on Hungarian readily available in the UK (Payne 1987, Pontifex 1993). Thus the lexical items chosen for inclusion in the test were of relatively high frequency and were ones learners were fairly likely to encounter in the beginning stages. Most of the sentences were similar in length, although some of the constructions testing complex sentences were inevitably longer. This was however not taken as an influencing factor on the judgements, as there was no time restriction imposed on the subjects.

Since the syntactic aspect under investigation (focus movement and the accompanying verb movement) is linked to the discourse functions of elements in context, each sentence was preceded by a context sentence. The context sentences were carefully chosen to provide a natural context for the sentence to be judged. Given the practical difficulty involved in presenting fully natural micro-texts, it was hoped that the micro-texts would elicit the intended reading in the subjects.

The order of the sentences was randomised so that two consecutive sentences did not pertain to test the same construction. Two such random orders were generated. For the two randomised lists of the micro-texts used in the experiment see Appendix E(iv).

5.4.6 Procedure

In this section we will describe the subjects who participated in the experiment as well as the steps taken in the administration of the test.

5.4.6.1 Subjects

In our main study we conducted a study of the grammatical intuitions of L1 English learners of Hungarian, using a cross-sectional quasi-longitudinal research design. The subjects were native speakers of English who have acquired Hungarian to some extent in different ways. The subjects of the study were recruited by various means. Some were contacted through

language schools, colleges, universities and at their workplace such as embassies, foreign companies in Hungary, the UK, the US and other English-speaking countries. Some informants were approached personally by the experimenter, while others were initially contacted through the post or e-mail. A few of the subjects helped to find other subjects thus some of the recruitment was done by word of mouth. It was felt that the extent to which the sampling frame (the targeted group) reflected the population was adequate.

Initial contact was set up in order to identify potential subjects of any level. The high proficiency level required for the completion of the test resulted, regrettably, in some of the language schools declining to co-operate. This in turn gave rise to a situation where only those who freely volunteered to complete the test participated in the study. Therefore the subset of the sampling frame who actually volunteered for the completion of the test was not selected randomly, creating an 'accidental sample' (Shaugnessy and Zechmeister 1994). Availability and willingness to respond were the overriding factors in forming the sample, creating a bias towards higher proficiency learners (selection bias). Learners at a beginning level are underrepresented in our study compared to their overwhelming majority in reality since they were excluded by the decision of language schools or they excluded themselves by not returning the questionnaire (response bias). However, since the major questions addressed in this study concern language learning and mental representations at a higher level of proficiency, no special effort was made to increase the number of lower level subjects.

Altogether 74 subjects participated in the main study. Of these 47 were L1 English speakers and 27 were Hungarian speakers. Of the 47 English speakers 4 had to be excluded from the analysis as they turned out to be bilingual or child learners of Hungarian. Thus data from the remaining 43 English speakers will be reported in this study.

A timed cloze test designed by the experimenter and previously piloted with 17 Hungarian native speakers was used as a global measure of proficiency. Cloze tests are generally considered to be the most efficient and reliable measure of overall proficiency (Oller 1973). The test consisted of three passages from a popular Hungarian journal and had 48 blanks altogether, see Appendix E(vii). In scoring the cloze test, an answer was considered correct if it was identical to one of the alternatives that the native speakers had supplied. Subjects were assigned to four groups on the basis of their score on the cloze test:

| | | |
|---|----------|--------------|
| Cloze scores less than or equal to 12 | Level 1: | Intermediate |
| Cloze scores less than or equal to 20 | Level 2: | Advanced |
| Cloze scores greater than 20 | Level 3: | Near-native |
| Native speakers (no cloze scores were obtained) | Level 4: | Natives |

The results of the cloze test show that mean cloze score increases steadily across the range with statistically significant differences between the proficiency levels.

Table 5-5 summarises the details of the subjects participating in the experiment. Of the non-native informants all had English as L1 and none learned Hungarian in childhood. All of them had spent some time in Hungary and almost all had had some amount of formal instruction. No one, except for one of the informants, had participated in the pilot study. The Hungarian natives were resident in Hungary at the time of testing. They represented an average age of 25.7 years, somewhat younger than the non-native informants whose average age was 35.1 years. However, this was not taken to be an influencing factor. All subjects came from a wide range of professional backgrounds.

| | Total number | Sex | | Average age | Mean age of 1st exposure | Length of exposure | Mean cloze score |
|---------------------|--------------|-----|----|-------------|--------------------------|--------------------|------------------|
| | | M | F | | | | |
| Intermediate | 14 | 7 | 7 | 37.3 | 32.9 | 2.9 years | 7.5 |
| Advanced | 13 | 2 | 11 | 33.2 | 26.9 | 3.2 years | 16.7 |
| Near-native | 16 | 8 | 8 | 34.8 | 26.7 | 4.6 years | 33.1 |
| Native | 27 | 13 | 14 | 25.7 | 0 | - | - |
| Total | 70 | 30 | 40 | 32.7 | | | |

Table 5-5 Details of subjects participating in the main study

5.4.6.2 Administration of the test

The administration of the test to all informants was done by post. All subjects completed the test in their own homes, at their own leisure. Each subject received an envelope containing:

- a cover letter and a general description of the experiment, see Appendix E(ii)
- specific instructions for the rating task, see Appendix E(iii)
- the test materials, see Appendix E(iv)
- an answer sheet, see Appendix (v)

- e) questionnaire on background information, see Appendix E(vi)
- f) a cloze test, see Appendix E(vii)

The cover letter, all instructions (including explanations and training), as well as the questionnaire were in the L1 of the subjects.

The two versions of the test were randomly sent out to subjects. Since the level of proficiency of the prospective informants was not known beforehand, a Latin square design was unfeasible. The breakdown in Table 5-6 shows the number of subjects in terms of level and version:

| | Version A | Version B | Total |
|---------------------|------------------|------------------|--------------|
| Intermediate | 7 | 7 | 14 |
| Advanced | 6 | 7 | 13 |
| Near-native | 8 | 8 | 16 |
| Native | 14 | 13 | 27 |
| Total | 35 | 35 | 70 |

Table 5-6 Distribution of subjects taking the two versions of the test

Subjects received the envelope with all the materials stapled together. This was to ensure that they did each task in the order that they were presented. The instructions directed them through the procedure. Based on the report of subjects, the completion of the whole test took an average of one and a half hours. The lack of time limit (except for the final cloze test) made it possible that subjects could work at their own pace, but it was requested that they do the test in one session. They had been asked not to return to a previous item in the test. They were specifically and repeatedly instructed not to consult a native speaker or a dictionary. Testing was anonymous, subjects were asked not to write their name. All the test materials to be completed were marked by a unique combination of letters and numbers identifying the subject's group and the subject themselves. Anonymity was important in order to make it clear for informants that the test was not a test of proficiency. It was hoped that anonymity would also ensure that subjects followed the instructions closely and would return the test as requested. After completion of the test, subjects were asked to post the test materials in the self-addressed stamped envelope provided.

As we indicated in the last section, given the nature of the selection procedure, it was inevitable that the experimental group consisted of a high number of highly motivated and enthusiastic adult learners of Hungarian. This self-selection procedure excluded all the less motivated, less inquisitive and less self-confident learners, who, despite the instructions to the contrary, might have seen the test as an individual assessment. This resulted in a high number of unreturned tests. The attrition rate was approximately 60%, a common phenomenon in social science research.

We recognise the caveat this raises for the generalisability of the results. In the discussion of the results and the conclusion to the study this aspect of the design will be taken into consideration. To anticipate the argument, it will be pointed out that although the generalisability of the results is restricted, they are still interpretable and allow valid conclusions to be drawn.

5.4.7 Data

The raw data comprised the numerical responses to the acceptability of the test sentences, the questionnaire data on the background of the subjects, and the lexical items supplied in the cloze test. The data were first collected in Excel spreadsheets, then all the relevant data was transformed into a UNIX text file which took the following structure:

| | |
|------------|--|
| Column 1: | subject i.d. (numerical) |
| Column 2: | 1 = native, 2 = non-native |
| Column 3: | group (1 = A, 2 = B) |
| Column 4: | subject i.d. (coded) |
| Column 5: | level |
| Column 6: | sentence i.d. |
| Column 7: | order of presentation |
| Column 8: | item number |
| Column 9: | sentence type (1 = grammatical, 2 = ungrammatical) |
| Column 10: | response |

5.4.7.1 Data analysis

The data obtained in the experiment were subjected to appropriate statistical tests. In the following we outline the steps taken in the analysis.

1. The questionnaire data with background information on the participants in code were analysed to obtain descriptive statistics on the numbers in versions, age, gender, etc. The results from this analysis were reported in Table 5-5 and Table 5-6 above.
2. A one-way ANOVA was run on the results of the cloze test in order to establish whether the subjects' proficiency in each level was significantly different to regard them as belonging to different learner populations. The results of this were reported in section 5.4.6.1
3. A statistical analysis of the raw data obtained from the acceptability judgement was carried out to obtain descriptive statistics such as the mean, mode, median, frequency, etc. The results are reported in the first part of Chapter 6.
4. The results of the acceptability judgement test were subjected to parametric statistical tests in order to obtain a measure of preference for one or the other of two sentence types that differed by the syntactic feature under investigation only. Subsets of the data were identified corresponding to the categories in the test. The analysis took the form of multivariate repeated measures analysis of variance (MANOVA) run in SPSS. The linguistic variables were used as the repeated measure within-subject factors and level as the independent grouping factor.

First, the dependent variable was the *mean acceptability* for each sentence type within each level. The data were subjected to ANOVA tests using different grouping factors:

- i) all of the subjects
- ii) comparison of near-native and native speakers

The third possible by-subjects test (among the non-native speaker groups only) was not carried out. Given the lack of a beginner group, the developmental profile would have been incomplete. The test between the near-native and native groups was carried out in order to

detect the subtle differences between near-native and native speakers that might have been obscured by the inclusion of the less proficient groups.

In addition to ANOVA tests on the *mean acceptability* for each sentence type, two-way mixed design ANOVA tests were carried out on the *mean preferences* for one sentence type over another with linguistic factor as the repeated measure and level as the grouping factor. This was done in order to gain information on the strength of preference that the subjects had between the two versions of a construction. The greater the difference between the acceptability, the stronger the preference for one sentence over the other. Consequently, the stronger the preference, the more determinate the subject's judgement for the two versions of a particular construction. Lack of significant preference indicates that the ungrammatical sentence was not rejected. Thus strength of preference can be used for determining the determinacy of judgements (Sorace 1992, 1993, 1996).

5. Whenever the ANOVA test proved significant, post hoc Tukey tests were carried out to determine the source of the significant 'omnibus' F test.

There were no missing data, although some of the responses were 0. However, since we used arithmetic means, it did not present a problem, as calculations with zero are possible.

5.4.8 *Presentation of results*

The results will be reported in two sections in Chapter 6:

1. The descriptive statistics will be reported first (the results from the statistical analysis described in point 3 above).
2. The inferential statistics will be reported next (the results from the statistical analysis in points 4 and 5 above).

In the final chapter (Chapter 7) we will discuss the results and draw our conclusions from them.

5.4.9 *Conclusion*

The objective of this chapter was to set out the steps in the experimental stage of our study. The first section comprised the experimental hypotheses. The results of the study on child L1 Hungarian vs. adult L2 Hungarian were reported in Appendix A. In this chapter we described two preliminary studies that were the precursors to the main study: one on mature Hungarian and one on English-Hungarian IL. In the last section of this chapter our main experimental study was outlined. We described the test instrument, the experimental design and the administration procedure including details of the participants and we indicated the steps taken in the data analysis and presentation of results, which we now return to in Chapter 6.

6 Results of Main Study

6.1 Introduction

In this chapter we summarise the results of both descriptive and inferential statistical tests carried out in the main study. We describe the observed trends and tendencies in the underlying grammatical systems of non-native and native speakers of Hungarian. The main focus is on the development and nature of linguistic intuitions about the structure of focused sentences in Hungarian.

6.2 Descriptive statistics

6.1.1 Introduction

We wish to provide an overview of the descriptive statistics for the raw data prior to the detailed analysis of the results in section 6.3 where subsections of the data are examined separately. The results of the descriptive statistical analysis will enable us to outline general tendencies and overall developmental patterns.

6.1.2 Basic descriptive statistics of the raw data

The basic descriptive statistics for the raw data in the acceptability judgement test are presented in Table 6-1 below:

| | Mean | Std dev | Median |
|---------------------|-------------|----------------|---------------|
| Intermediate | 6.47 | 3.03 | 7.00 |
| Advanced | 6.42 | 3.16 | 7.00 |
| Near-native | 6.34 | 3.46 | 7.00 |
| Native | 6.30 | 3.40 | 7.00 |

Table 6-1 Descriptive statistics

As Table 6-1 shows, mean acceptability rating slightly decreases with proficiency. This shows a tendency for beginners to give higher acceptability scores and for more proficient learners to give lower acceptability scores. Increase in the standard deviation with proficiency indicates that the more proficient the learners are, the more variation in the use of points on the scale their judgements display. However, the mean and median are very similar for all the groups. This suggests that learners use the 10-point scale in a similar way.

6.1.3 Score distribution

The frequency distribution of scores overall and level by level are reported in this section. The overall frequency distribution is shown in Figure 6-1 below. The x axis shows the acceptability rating on a 10-point scale, while the y axis shows the number of times the individual points on the scale were used by the subjects.

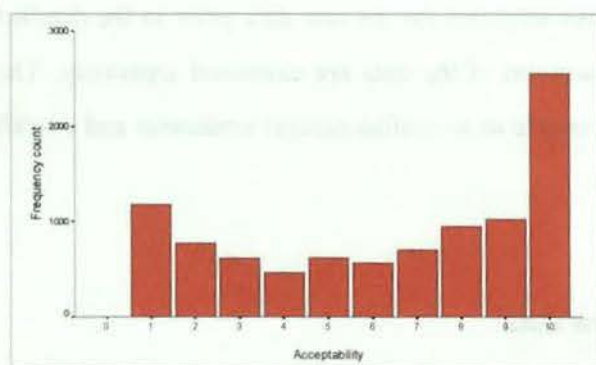


Figure 6-1 Frequency distribution of scores: All subjects

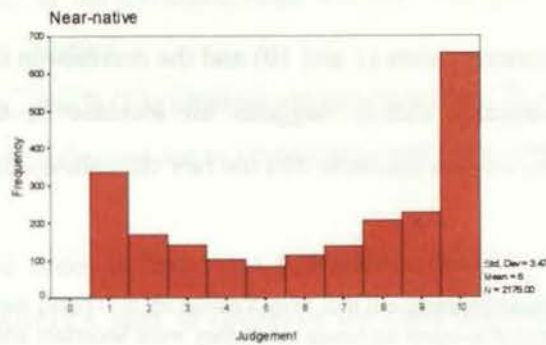
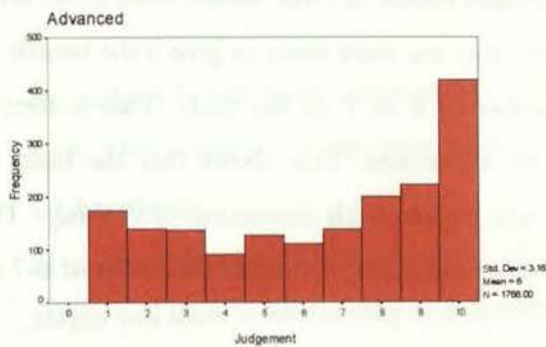
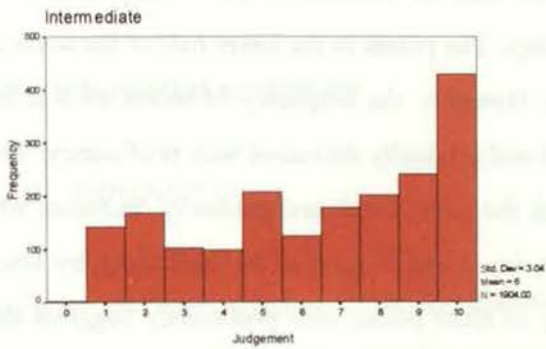
As seen in Figure 6-1, point 10 has the highest overall frequency. It represents nearly 27 % (26.91 %) of all the responses given by all subjects (see Table 6-2 below). This suggests that the informants regarded 27 % of the sentences as perfectly grammatical. The rest (73 %) is distributed among the rest of points on the scale.

We also looked at the frequency distribution of scores level by level in order to determine any differences in subjects' tendency to use individual points on the scale at each level of proficiency.

If the frequency with which the points are selected on the scale is systematically affected by the proficiency of learners, it would be an indicator of a developmental trend. The data are presented in Table 6-2 and Figure 6-2 below:

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|
| Int | 0.16 | 7.51 | 8.88 | 5.41 | 5.20 | 10.98 | 6.57 | 9.40 | 10.61 | 12.71 | 22.58 |
| Adv | 0.00 | 9.84 | 7.92 | 7.81 | 5.26 | 7.24 | 6.39 | 7.86 | 11.31 | 12.61 | 23.76 |
| NN | 0.09 | 15.44 | 7.81 | 6.48 | 4.78 | 3.91 | 5.19 | 6.34 | 9.47 | 10.39 | 30.10 |
| N | 0.03 | 14.46 | 8.12 | 6.45 | 4.77 | 5.45 | 6.02 | 7.11 | 9.40 | 9.42 | 28.79 |
| All | 0.06 | 12.44 | 8.16 | 6.50 | 4.95 | 6.53 | 6.01 | 7.53 | 10.01 | 10.89 | 26.91 |

Table 6-2 Score distribution broken down by proficiency level (in %)



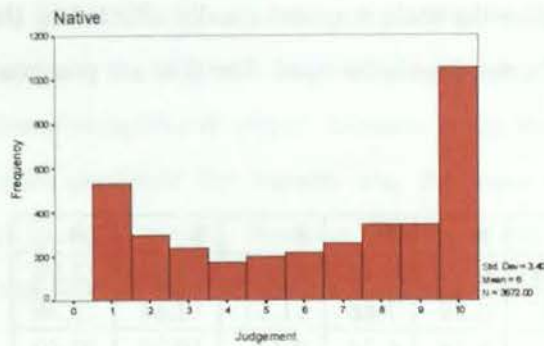


Figure 6-2 Frequency distribution of scores: Level-by-level

As Table 6-2 and Figure 6-2 above show, there is an increase in the frequency of the lowest point 1 with increasing proficiency level. This suggests that an increase in proficiency entails an increased ability to recognise absolute unacceptability. The points in the lower half of the scale do not show any discernible influence of proficiency. However, the frequency of scores of 5 in the middle of the scale is greatest with the lowest level and gradually decreases with proficiency. This strongly suggests that indeterminacy is highest with the lower levels and gradually decreases with proficiency. Points in the upper part of the scale, i.e. 6 and 7, tend to be used more by lower proficiency groups. The decrease in the frequency of these points with proficiency suggests that lower proficiency groups indicate indeterminacy by these points. In other words, when lower level learners are uncertain about the status of a sentence, they are more likely to give it the benefit of doubt and judge it as acceptable, giving it a number of 6 or 7 on the scale. This is further supported by the value of the mean at 6.367 for all groups. This shows that the band of acceptability is wider with lower level learners and shrinks with increasing proficiency. The reason for this is that instead of points 4-5-6, the lower proficiency students also selected 6-7 as the points to denote indeterminate judgement⁹⁵.

To summarise, the increase in the use of the two extreme points (1 and 10) and the decrease in the frequency of the intermediate points with proficiency clearly suggests an increase in the determinacy with which judgements are made. Thus we can conclude that the raw data shows that

⁹⁵ This is in line with Ratwate's (1995) findings who incidentally points out that Bley-Vroman *et. al.* (1988) found an inverse tendency with their subjects. Their subjects tended to reject sentences when they were uncertain about their status.

with increasing proficiency the ability to recognise ungrammaticality increases. On the other hand, with increasing proficiency indeterminacy decreases.

6.1.4 Discussion

In this section we have identified general trends in the data with the help of descriptive statistics. It was demonstrated that proficiency is negatively correlated with indeterminacy, while positively correlated with recognition of ungrammaticality. Recognition of ungrammaticality is possible only if the relevant parameter values are set in the ILG, thus increased recognition of violations of L2 parameter settings indicates the gradual setting of relevant L2 parameters.

6.2 Inferential statistics

6.2.1 Introduction

The main results obtained by inferential statistical tests are reported in this section. The purpose of the statistical analyses was to test the main hypotheses and predictions, stated here again:

1. the early ILG will be characterised by initial non-movement of focused constituents and the verb. This is due to L1 parameter settings. Learners at an early stage will show evidence of L1-based rules
2. at more intermediate stages optionality of ILG rules will prevail, thus learners at intermediate stages will show indeterminacy of judgements
3. at the advanced stage the ILG will approximate that of the TL due to gradual parameter setting
4. the ILG at ultimate attainment will be TL-like except for cases where there is an enduring L1 influence due to inadequate input (rare, ambiguous, or misleading input)

In order to test these hypotheses, sections of the data were subjected to repeated measures ANOVA tests to determine the main effect of the level and linguistic variables as well as any

interaction between them. In what follows we will report the results of each subset of the data. The structure of the report will be the following for each subset:

1. The syntactic structure is briefly explained and example test sentences are given with English glosses for ease of reference.
2. The relevant hypotheses are stated that the subset of the data purported to test.
3. The means of the acceptability judgement or preferences are reported in a table.
4. Graphical representation of the data is given in a chart.
5. The statistically confirmed F values with the degrees of freedom, an estimate of error variation and the probability level are given.
6. A prose explanation of the trends is given.
7. The results of *post hoc* analytical comparisons (Tukey test) are given to determine the source of the significant effects and interactions.
8. In the discussion the critical results are highlighted again and a conclusion is offered.

6.2.2 Activation of FP

To discover whether the functional projection FP is instantiated in the grammar of English learners of Hungarian, acceptability judgements were elicited on sentences with alternate word order. There were four categories of sentences in this sub-test: neutral, focused, negative sentences and *wh*-questions. Recall that it was predicted that

1. the FP will not be present in the early ILG, hence subjects at lower levels of proficiency will not express a significant preference for verb movement. They will prefer the non-moved variant, due to the L1 value.
2. the FP will be gradually instantiated in the ILG with increasing proficiency, but subjects at intermediate levels will not be able to distinguish between moved and non-moved versions. There will be indeterminacy in their judgements.
3. subjects at more advanced levels will distinguish between sentences with and without verb movement, i.e. their mean scores will start to differ, as their ILG approximates the TL.

4. since the L1 does not instantiate FP, it has to be activated in the L2 grammar. The parameter value of [+f] on F^0 has to be reset. The knowledge representation at ultimate attainment will be similar to that of native speakers', i.e. it will not show statistically significant differences from that of natives' in case of the operator movement (the strong 'N' feature of F^0), but it will show significant differences in verb-movement (the strong 'V' feature of F^0).

First, let us see neutral sentences, which have the basic word order and show no focus-effect.

6.2.2.1 Word order in neutral sentences

In this section we will look at the judgements given to sentences that require no movement of constituents, i.e. neutral sentences. Neutral sentences display both an SVO and an SOV word order in Hungarian (section 4.5.1). In English the basic word order is SVO. The reason for the OV pattern in Hungarian is that the neutral position for any indefinite or adverbial complement, prefix or any other VM is the preverbal slot (section 4.8). We hypothesised that

1. learners will carry over the basic word order from their L1 order into the early ILG. Hence, they will accept sentences that are grammatical in the L1 but ungrammatical in the L2. In our case, English learners of Hungarian will initially accept the ungrammatical VO order in those neutral sentences where OV should be used in the TL.
2. with increasing proficiency the L2 OV word order will be accepted.

The test sentences in this category have two linguistic variables: preverb type (no preverb, prefix, other verbal modifier (VM)) and verb type (main, auxiliary). For a full list of test sentences in the main study with English glosses see Appendix E(i). (In the example sentences henceforth we indicate the prefix/VM+verb unit with a hyphen for ease of reference. In the orthography of Hungarian they are either joined to the verb or separated from it, see section 4.8 in Chapter 4.)

| Prev | Verb | Sentence type | Example |
|--------|------|--------------------|--|
| no | main | PV [- V-movement] | Éva leckét ír, Jancsi moziba megy. <i>Eva homework-ACC writes, John cinema-to goes</i> 'Eve is writing her homework, John is going to the cinema' |
| | | VP [+ V-movement] | *Utazik külföldre és köt üzletet. <i>travels abroad and makes deal-ACC</i> 'He travels abroad and makes deals.' |
| | aux | PA [- A-movement] | Tanulni fogok. <i>study-INF will-I</i> 'I will study.' |
| | | AP [+ A-movement] | *Akarok utazni Európában. <i>want-I travel-INF Europe-in</i> 'I want to travel in Europe.' |
| prefix | main | PVC [- C-movement] | A fiú bele-szeret a lányba. <i>the boy into-loves the girl-into</i> 'The boy falls in love with the girl.' |
| | | CPV [+ C-movement] | *A levelet fel-adom. <i>the letter-ACC PEF-post-I</i> 'I'll post the letter.' |
| | aux | PAV [- A-movement] | El fogom olvasni az Eger Csillagokat <i>PEF will-I read-INF the Eger Stars-ACC</i> 'I'll read the Stars of Eger.' |
| | | APV [+ A-movement] | *Tud fel-öltözni. <i>can-he PEF-dress-INF</i> 'He can get dressed.' |
| VM | main | PVC [- C-movement] | Jól esik a napfény. <i>well feels the sunshine</i> 'The sunshine feels good.' |
| | | CPV [+ C-movement] | *A kocsiját kölcsön-adta. <i>the car-his-ACC PEF-gave</i> 'He lent his car to somebody.' |
| | aux | PAV [- A-movement] | Gyógyszert kell szedni. <i>medicine-ACC must take-INF</i> 'You must take some medicine.' |

APV [+ A-movement] ***Akar részt venni a fesztiválon.**

wants-he part take-INF the festival-on

'He wants to perform in the festival.'

(V=main verb, A=auxiliary, C=complement)

In order to test the hypotheses above, the following ANOVA tests were carried out:

- a) A four-way analysis of variance test with repeated measures for preverb type (no, prefix, VM), verb type (main, aux) and grammaticality (-,+ v-movement) was carried out on the *mean acceptability* scores with proficiency level as grouping factor (see Table 1a in Appendix F for the output of the ANOVA).

Two parallel tests were carried out with different groupings of proficiency level, one with *all subjects* and the second with *only the near-natives and the natives*. As default, we will always be reporting the results from the ANOVA tests carried out with all the subjects. The results of the comparisons between the near-natives and natives will be reported only when they differ from the main ANOVA test.

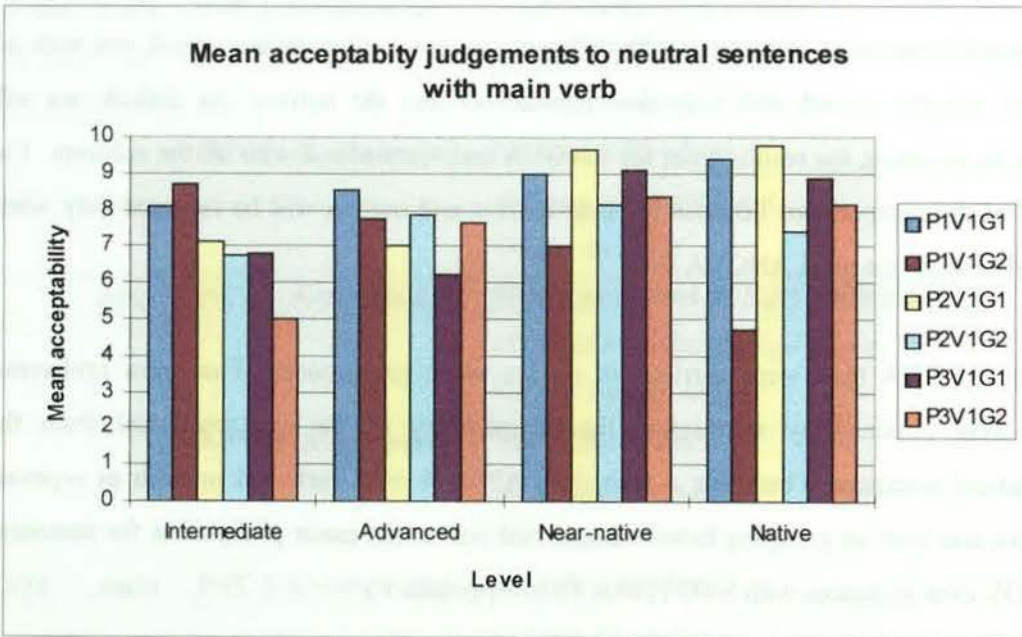
- b) Separate ANOVA tests were carried out on the *mean preferences*. The mean preference scores were obtained by subtracting the acceptability of the ungrammatical from the grammatical sentences. Therefore, a three-way ANOVA with verb and preverb as repeated measures and level as grouping factor was carried out on the mean preferences for sentences with SOV over sentences with SVO (Table 1b in Appendix F)
- c) *Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

6.2.2.1.1 Results: all variables, mean acceptability

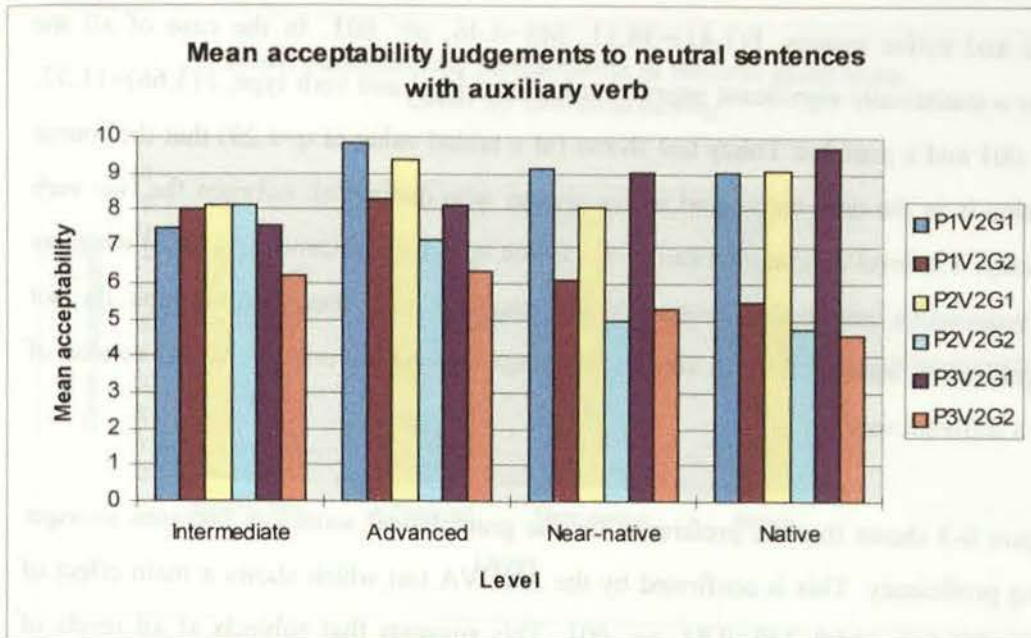
The results of the sentences in the neutral category are presented in Table 6-3 and the accompanying graphs in Figure 6-3.

| | Int | Adv | NN | N | All |
|---------------|--------|--------|--------|--------|---------------|
| P1V1G1 | 8.0714 | 8.5385 | 9 | 9.3704 | 8.8714 |
| P1V1G2 | 8.7143 | 7.7692 | 7 | 4.7407 | 6.6143 |
| P1V2G1 | 7.5 | 9.8462 | 9.125 | 9.037 | 8.9 |
| P1V2G2 | 8 | 8.3077 | 6.125 | 5.4815 | 6.6571 |
| P2V1G1 | 7.1429 | 7 | 9.6875 | 9.7778 | 8.7143 |
| P2V1G2 | 6.7143 | 7.8462 | 8.125 | 7.4074 | 7.5143 |
| P2V2G1 | 8.1429 | 9.3846 | 8.0625 | 9.1111 | 8.7286 |
| P2V2G2 | 8.1429 | 7.1538 | 5 | 4.7407 | 5.9286 |
| P3V1G1 | 6.7857 | 6.2308 | 9.125 | 8.8889 | 8.0286 |
| P3V1G2 | 5 | 7.6154 | 8.375 | 8.1481 | 7.4714 |
| P3V2G1 | 7.5714 | 8.1538 | 9.0625 | 9.7407 | 8.8571 |
| P3V2G2 | 6.2143 | 6.3077 | 5.3125 | 4.5926 | 5.4 |

Table 6-3 Mean acceptability rating in neutral sentences (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary, G1: grammatical, G2: ungrammatical)



Graph a Neutral sentences with main verb



Graph b Neutral sentences with auxiliary verb

Figure 6-3 Mean acceptability rating to neutral sentences with main and auxiliary verbs (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary, G1: grammatical, G2: ungrammatical)

Figure 6-3 shows three clear trends in the data. First, the judgements given to neutral sentences are not uniform across the proficiency groups. The non-native acceptability values are different from natives and there are further differences among the non-native learners at different proficiency levels. The second clear trend indicates an increasing ability to distinguish between the grammatical and ungrammatical sentences with increasing proficiency. The third obvious tendency we can observe is that despite the differences within the proficiency levels, non-native judgements show a similar pattern to that of natives in the auxiliary verbs (Graph b), but slightly different patterns in the main verbs (Graph a). Let us examine these trends in more detail.

Across the board, the ungrammatical version of neutral sentences with auxiliary verb is more strongly rejected than the equivalent ungrammatical counterpart of the main verb sentences. This tendency is especially pronounced with the near-native and native groups. This suggests a main effect for verb type within these two groups. This is confirmed by the ANOVA tests which show that the main effect of verb type slightly misses significance when we take all the groups into consideration, $F(1,66)=3.60$, $MS=4.52$, $p=.062$, but is highly significant when we examine only

the near-native and native groups, $F(1,41)=38.11$, $MS=4.46$, $p= .001$. In the case of all the groups, there is a statistically significant interaction between level and verb type, $F(3,66)=11.57$, $MS=4.52$, $p= .001$ and a *post hoc* Tukey test shows (at a tabled value of $q=4.29$) that the source of this interaction is in the near-native and native groups who distinguish between the two verb types significantly. The level by grammaticality interaction misses significance ($p= .068$) when we compare the near-native and native groups, which suggests that these two groups do not distinguish significantly between the two versions although treating the ungrammatical version of main verbs in a different way.

However, Figure 6-3 shows that the preference for the grammatical sentences becomes stronger with increasing proficiency. This is confirmed by the ANOVA test which shows a main effect of grammaticality, $F(1,66)=58.90$, $MS=9.84$, $p= .001$. This suggests that subjects at all levels of proficiency make a distinction between grammatical and ungrammatical sentences, preferring the grammatical version. The question arises whether this preference changes with proficiency, i.e. whether it has a developmental dimension. Table 6-4 and the accompanying Figure 6-4 represent the results of the acceptability judgements given to grammatical and ungrammatical versions of neutral sentences.

| | Intermediate | Advanced | Near-native | Native | Total |
|----------------------|--------------|----------|-------------|--------|---------------|
| Grammatical | 7.5357 | 8.1923 | 9.0104 | 9.321 | 8.6833 |
| Ungrammatical | 7.131 | 7.5 | 6.6562 | 5.8519 | 6.5976 |

Table 6-4 Mean acceptability rating for SOV in neutral sentences

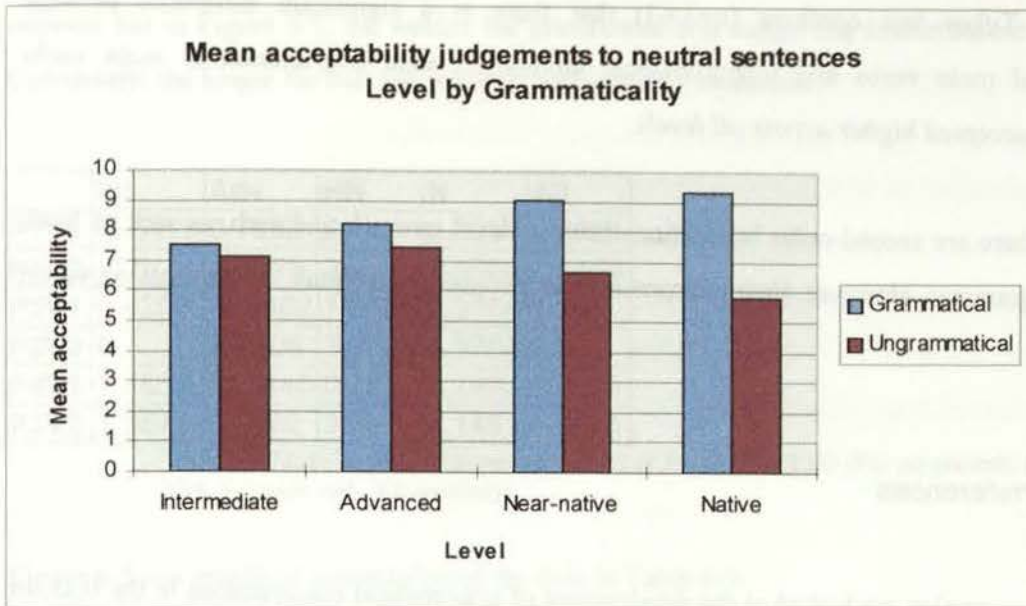


Figure 6-4 Mean acceptability rating for SOV in neutral sentences

The question we asked above concerned whether the preference for the grammatical sentence has a developmental dimension. Do subjects at various proficiency levels systematically differ in accepting grammatical sentences? If they do, there should be an interaction between proficiency level and grammaticality. Figure 6-4 shows that the preference for the grammatical sentences increases with proficiency. The ANOVA test indeed indicates a significant interaction between level and grammaticality, $F(3,66)=11.95$, $MS=9.84$, $p=.001$. The Tukey test shows (at a tabled value of $q=4.29$) that the preference for the grammatical sentence is significant only at near-native and native levels. This indicates that learners at lower levels do not decisively reject the sentences with SVO word order, i.e. their judgements are indeterminate.

Considering the main charts in Figure 6-3 again we find that there is also a main effect of preverb, $F(2,132)=5.96$, $MS=3.96$, $p=.003$, but no significant main effect of verb type or level. There is a significant first-order interaction between level and preverb, $F(6,132)=6.69$, $MS=3.96$, $p=.001$, as well as a significant interaction of level and verb, $F(3,66)=11.57$, $MS=4.52$, $p=.001$, and verb by grammaticality, $F(1,66)=18.19$, $MS=5.46$, $p=.001$. The interaction between level and preverb and the interaction between level and verb indicate that subjects distinguish between the different types of preverbs and verbs in different ways within groups. The interaction between verb and grammaticality shows that a distinction between grammaticality is a function of the type of verb.

A *post hoc* Tukey test confirms ($q=3.63$) that there is a significant difference between ungrammatical main verbs and ungrammatical auxiliaries, with *ungrammatical main verbs significantly accepted higher across all levels*.

In addition, there are second-order interactions between level, preverb and verb, as well as level, preverb and grammar. However, their interpretation is increasingly difficult, so we shall not report them.

6.2.2.1.2 Preferences

In the previous section we looked at the development of grammatical constructions in the ILG. In order to ascertain the status of ungrammatical sentences in the development of the ILG as well as to see the precise differences in representation between near-natives and natives, we investigated the mean preference scores for each sentence. The mean preference score is obtained by subtracting the score of the ungrammatical from the grammatical version and taking the mean across proficiency levels (see sections 5.3.1.4, 5.3.1.6 and 5.4.7.1).

The extension of Hypothesis 8, i.e. Hypothesis 10 on p.185, is that verbs with no preverb would be accepted first in the developmental process and would be accorded highest acceptability scores. Verbs with verbal modifiers would be the last to be accepted and would receive the lowest acceptability scores, while prefixed verbs would receive acceptability scores in between and come on-line in the middle.

In order to test these hypotheses, statistical analyses described in section 6.3.2.1.b were carried out on the mean preferences for the grammatical sentences. The results can be seen in Table 6-5 and the accompanying graph, Figure 6-5. Positive numbers indicate that the grammatical SOV order was found more acceptable than the ungrammatical SVO, negative numbers indicate that the ungrammatical version was preferred to the grammatical. Larger numbers, whether positive or negative, attest stronger preferences. The smaller the number in Table 6-5 and the shorter the

relevant bar in Figure 6-5, the weaker the preferences are, suggesting indeterminate judgements. Conversely, the longer the bar, the stronger preferences it represents.

| | Int | Adv | NN | N | All |
|-------------|---------|---------|--------|--------|---------------|
| P1V1 | -0.6429 | 0.7692 | 2 | 4.6296 | 2.2571 |
| P1V2 | -0.5 | 1.5385 | 3 | 3.5556 | 2.2429 |
| P2V1 | 0.4286 | -0.8462 | 1.5625 | 2.3704 | 1.2 |
| P2V2 | 0 | 2.2308 | 3.0625 | 4.3704 | 2.8 |
| P3V1 | 1.7857 | -1.3846 | 0.75 | 0.7407 | 0.5571 |
| P3V2 | 1.3571 | 1.8462 | 3.75 | 5.1481 | 3.4571 |

Table 6-5 Mean preference in neutral sentences for SOV or SVO (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary)

Figure 6-5 is a graphical presentation of the data in Table 6-5.

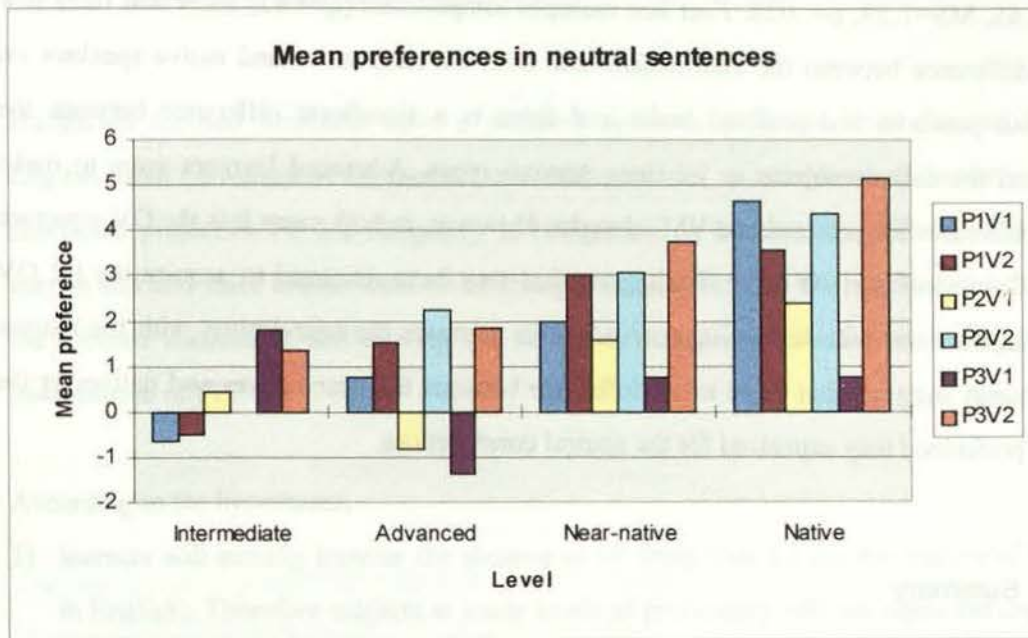


Figure 6-5 Mean preference in neutral sentences for SOV or SVO (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary)

The graph reproduces the results we have found in the previous analysis on mean acceptability. There is a clear-cut division between learners on the one hand and near-natives/natives on the other. The ANOVA test shows a significant main effect of level, $F(3,66)=11.95$, $MS=19.68$, $p=.001$ when we compare all the groups. The *post hoc* Tukey test ($q=3.63$) shows a significant

difference between the intermediate/advanced levels and the near-natives/natives. The difference is not significant ($p = .068$) when only the near-native and native groups are compared.

There is a main effect of verb type, $F(1,66) = 18.19$, $MS = 10.93$, $p = .001$ in the case of all subjects. The main effect of verb type stays significant when we compare the near-natives with the natives, $F(1,41) = 28.54$, $MS = 6.89$, $p = .001$. In both cases the auxiliary is preferred significantly more than the main verb (except for the first no preverb construction). The interaction between level and verb misses significance, $F(3,66) = 2.55$, $MS = 10.93$, $p = .063$. This suggests that near-natives' preferences are not as strong as natives' are, but their preferences are nevertheless in the right direction.

There is a significant interaction in the case of all subjects between level and preverb, $F(6,132) = 2.45$, $MS = 7.39$, $p = .028$. *Post hoc* multiple comparisons ($q = 4.62$) show that there is a significant difference between the intermediate and both the near-native and native speakers on verbs without preverbs and prefixed verbs and there is a significant difference between the advanced and the native subjects on all three preverb types. Advanced learners seem to make incorrect preferences for prefixed and VM-ed verbs. However, in both cases it is the OV structure they prefer instead of the VO order. It suggests that they have managed to acquire the L2 OV order. The interactions with level disappear when we compare the near-natives with the natives only. This again suggests that there is no difference between the near-natives and natives in the strength of preference they expressed for the neutral constructions.

6.2.2.1.3 Summary

The absence of a significant preference for either the grammatical or the ungrammatical sentence type at intermediate and advanced levels indicates that the judgements are indeterminate with regard to word order in neutral sentences. This can be attributed to the delay of adopting SOV in as a possible TL surface structure by the lower proficiency learners. The decisive rejection of the sentence with SVO at near-native level can be taken as an indication that these learners have acquired the SOV order in neutral sentences. The evidence confirms both predictions:

- a) that the judgements will be indeterminate at intermediate levels of proficiency
- b) word order in neutral sentences will be changed to SOV with increasing knowledge of the TL

The hypothesis that learners at the initial stages will carry over the L1 value for word order was partially supported in the intermediate and advanced learners' preference for SVO. However, these results do not bear on the question of the initial state, as these learners were clearly past the beginner stage. Therefore we cannot with authority support either of the hypotheses regarding the initial state of L2 acquisition (for a discussion of the initial state of L2 acquisition see section 3.4.1).

6.2.2.2 Movement in focused sentences

Hungarian focused sentences have a different syntactic structure from focused sentences in English. Both movement of the focused constituent as well as movement of the verb to a separate functional projection FP are obligatory in Hungarian. In contrast, English focused constituents stay in situ and there are no word order changes (section 4.9.5). We hypothesised that preposing the focused constituent and moving the verb over the preverb would be a diagnostic for the instantiation of FP.

According to the hypotheses,

- 1) learners will initially transfer the absence of FP from their L1 (as the feature of [+f] is weak in English). Therefore subjects at lower levels of proficiency will not reject the ungrammatical sentence and will prefer it to its grammatical counterpart.
- 2) learners at the intermediate stage will not be able to distinguish between the grammatical and ungrammatical sentence types as their ILG gradually integrates the TL rule. Their judgements will be indeterminate and they will accept optional movement.
- 3) when the FP is instantiated in the ILG, the grammatical sentence with verb movement will be preferred to the ungrammatical sentence without verb movement. Since learners have to activate a projection that is missing from their L1 but can be deduced from plenty of available

evidence in the TL, their representations at ultimate attainment will be target-like with respect to focus operator movement (the interpretable 'N' feature of F^0) However, they have to reset the non-interpretable 'V' feature value on F^0 , as since we hypothesised that this will prove more difficult, verb-movement will stay non-native-like.

The test sentences in this category have the same linguistic variables as the neutral sentences. They are exemplified below:

| Prev | Verb | Sentence type | Example |
|--------|------|---------------|--|
| no | main | [+ F-movt] | A skótokat szereti, nem az angolokat. <i>the Scots-ACC loves, not the English-pl-ACC</i> 'Who he likes is the Scots, not the English.' |
| | | [- F-movt] | *Megy a moziba, nem a koncertre. <i>goes the cinema-to, not the concert-to</i> 'It's the cinema he is going to, not the concert.' |
| | aux | [+ F-movt] | Úszni szokott, nem teniszezni. <i>swim-INF habitual, not play-tennis-INF</i> 'What he usually does is swim, not play tennis.' |
| | | [- F-movt] | *Akarok inni, nem enni. <i>want-I drink-INF, not eat-INF</i> 'What I want is drink, not eat.' |
| prefix | main | [+ F-movt] | A tányér esett le, nem a pohár. <i>the plate fell PREF, not the glass</i> 'It was the plate that fell, not the glass.' |
| | | [- F-movt] | *Ki-mostam a nadrágod, nem a kabátod. <i>PREF-washed the trousers-yours-ACC, not the coat-yours-ACC</i> 'It was your trousers, not your coat that I washed.' |
| | aux | [+ F-movt] | Délelőtt fogok be-vásárolni, nem délután. <i>morning will-I PREF-shop-INF, not afternoon</i> 'I'll do the shopping in the morning, not in the afternoon.' |
| | | [- F-movt] | *Kell át-szállni az Astoriánál, nem pedig az Oktogonnál. <i>must PREF-change-INF the Astoria-at, not though the Oktogon-at</i> 'You have to change at Astoria, not at Oktogon.' |
| VM | main | [+ F-movt] | Nagymama szed gyógyszert, nem nagypapa. |

| | | |
|-----|------------|--|
| | | <i>grandma takes medicine, not grandpa</i> |
| | | 'It's grandma who takes medicine, not grandpa.' |
| | [- F-movt] | *Rendbe hozta a kertet, nem a házat. |
| | | <i>order-into brought-he the garden-ACC, not the house-ACC</i> |
| | | 'It's the garden he cleaned, not the house.' |
| aux | [+ F-movt] | Később fogok munkába járni. |
| | | <i>later will-I work-into go-INF</i> |
| | | 'I'll be going to work later.' |
| | [- F-movt] | *Kellene tévét nézni kevesebbet. |
| | | <i>should TV-ACC watch-INF less-ACC</i> |
| | | 'You should watch less TV.' |

The analysis took the same form as with neutral sentences:

- A four-way ANOVA test with repeated measures for preverb type (no, prefix, VM), verb type (main, aux) and grammaticality (-,+ v-movement) was carried out on *mean acceptability* scores with proficiency level as grouping factor (see Table 2a in Appendix F).
- A three-way ANOVA test on the *mean preference* for the grammatical over the ungrammatical (i.e. +/- F-movement) sentences was carried out with preverb and verb type as repeated measures and level as grouping factor (see Table 2b in Appendix F).
- Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

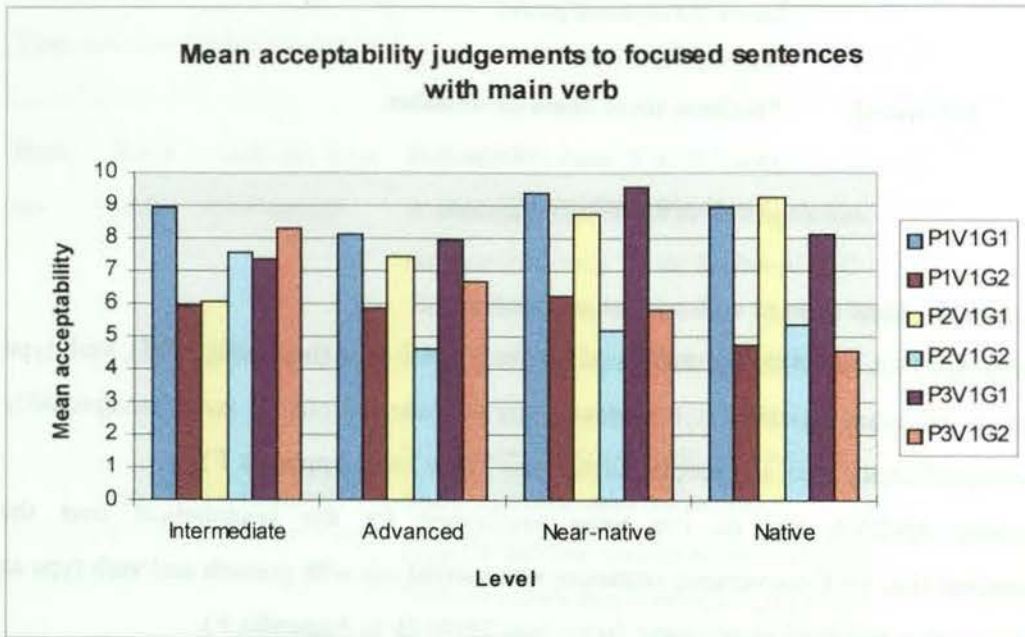
6.2.2.2.1 Results: all variables, mean acceptability

The results on the sentences in the focused category are presented in Table 6-6 and the accompanying graphs in Figure 6-6 below.

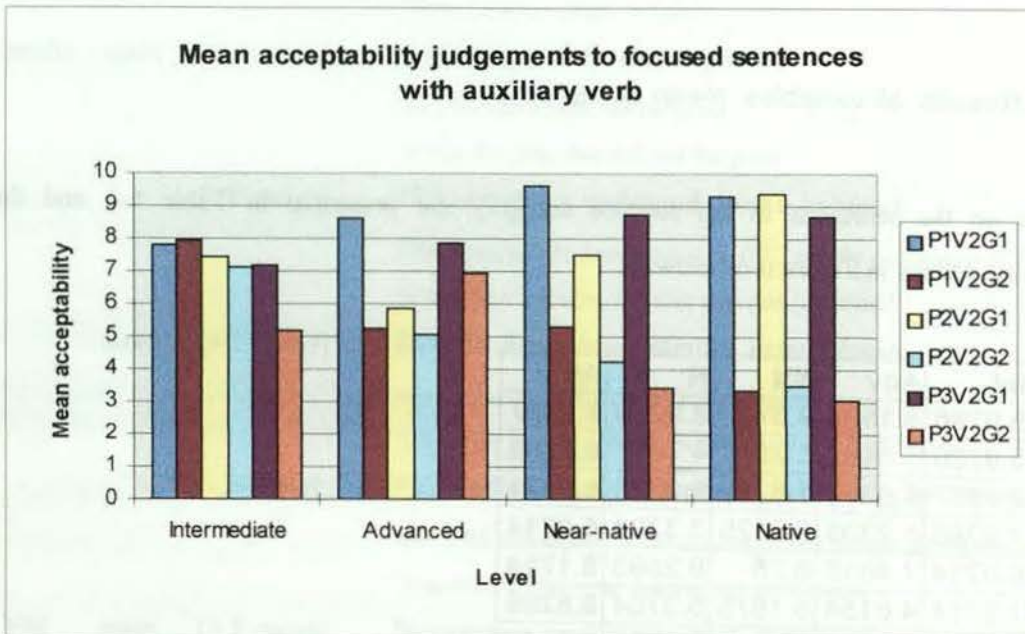
| | Int | Adv | NN | N | All |
|---------------|--------|--------|--------|--------|---------------|
| P1V1G1 | 8.9286 | 8.1538 | 9.375 | 8.9259 | 8.8857 |
| P1V1G2 | 5.9286 | 5.8462 | 6.25 | 4.7407 | 5.5286 |
| P1V2G1 | 7.7857 | 8.6154 | 9.625 | 9.3333 | 8.9571 |
| P1V2G2 | 7.9286 | 5.2308 | 5.3125 | 3.3704 | 5.0714 |
| P2V1G1 | 6.0714 | 7.4615 | 8.75 | 9.2593 | 8.1714 |
| P2V1G2 | 7.5714 | 4.6154 | 5.1875 | 5.3704 | 5.6286 |
| P2V2G1 | 7.4286 | 5.8462 | 7.5 | 9.3704 | 7.9 |

| | | | | | |
|---------------|--------|--------|--------|--------|---------------|
| P2V2G2 | 7.1429 | 5.0769 | 4.25 | 3.5185 | 4.7 |
| P3V1G1 | 7.3571 | 7.9231 | 9.5625 | 8.1481 | 8.2714 |
| P3V1G2 | 8.2857 | 6.6923 | 5.8125 | 4.5926 | 6 |
| P3V2G1 | 7.2143 | 7.8462 | 8.75 | 8.7037 | 8.2571 |
| P3V2G2 | 5.2143 | 6.9231 | 3.4375 | 3.037 | 4.2857 |

Table 6-6 Mean acceptability rating in focused sentences (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary, G1: grammatical, G2: ungrammatical)



Graph c Focused sentences with main verb



Graph d Focused sentences with auxiliary verb

Figure 6-6 Mean acceptability rating to focused sentences with main and auxiliary verbs (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary, G1: grammatical, G2: ungrammatical)

As we can see on the two graphs in Figure 6-6, the behaviour of the different proficiency levels is again not uniform. The ability to distinguish between grammatical and ungrammatical sentences increases with proficiency. Apart from the intermediate group judging the main verb sentences, subjects rated the grammatical sentences higher than the ungrammatical ones. This is confirmed by the ANOVA test which shows a main effect of grammaticality, $F(1,66)=121.54$, $MS=12.27$, $p=.001$. Next, similarly to the procedure in analysing the neutral sentences, we examine the developmental dimension by investigating whether there is an interaction between level and grammaticality. The results are shown in Table 6-7 and in the matching Figure 6-7.

| | Intermediate | Advanced | Near-native | Native | Total |
|----------------------|--------------|----------|-------------|--------|---------------|
| Grammatical | 7.4643 | 7.641 | 8.9271 | 8.9568 | 8.4071 |
| Ungrammatical | 7.0119 | 5.7308 | 5.0417 | 4.1049 | 5.2024 |

Table 6-7 Mean acceptability rating for movement in focused sentences

Figure 6-7 is a graphical representation of the data in Table 6-7.

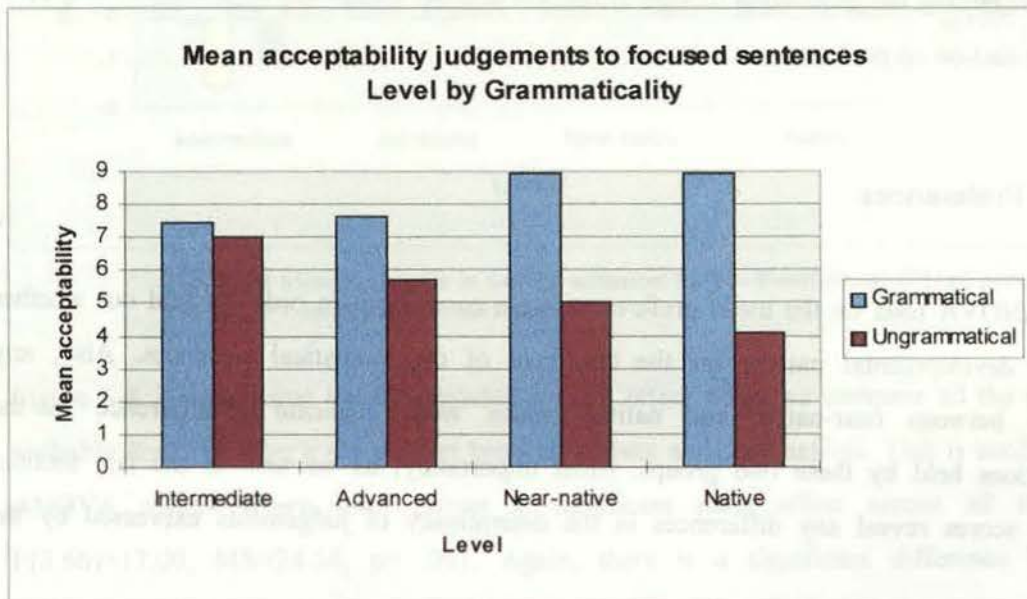


Figure 6-7 Mean acceptability rating for movement in focused sentences

Figure 6-7 shows that the judgements expressed by the intermediate group about the grammatical and ungrammatical sentences are very similar. The rejection of the ungrammatical sentences increases with proficiency. The ANOVA test shows a significant interaction between level and grammaticality, $F(3,66)=17.00$, $MS=12.27$, $p=.001$. The *post hoc* Tukey test shows (at a tabled value of $q=4.29$) that the preference for the grammatical sentence over the ungrammatical is significant from the advanced level onwards. This suggests that subjects at all levels other than the lowest one (i.e. the intermediate level) decisively reject focused sentences that do not contain focus-movement.

The ANOVA tests also show a main effect for verb type, $F(1,66)=9.50$, $MS=5.40$, $p=.003$ and preverb type, $F(2,132)=7.86$, $MS=3.84$, $p=.001$. However, when a *post hoc* Tukey test was carried out on the preverb types, no significant difference was detected between the three preverbs. This might be accounted for by the conservative nature of the Tukey test. There is a significant interaction between level and preverb, $F(6,132)=5.44$, $MS=3.84$, $p=.001$, similarly to neutral sentences. *Post hoc* multiple comparisons ($q=4.62$) show that intermediate subjects make a significant distinction between bare verbs and VM-ed verbs as well as between prefixed verbs and VM-ed verbs, judging the VM-ed verbs with the lowest marks. The advanced learners still retain the significant difference between the bare verb and VM-ed verbs. These findings support our hypothesis regarding the acquisition of verb types. For a fuller discussion on different verb types see the next section on preferences.

6.2.2.2.2 Preferences

Separate ANOVA tests on the mean preferences were carried out in order to find out whether there is a developmental pattern for the treatment of ungrammatical sentences. Also, any differences between near-native and native groups would indicate a difference in the representations held by these two groups. Most importantly, as we saw in the last section, preference scores reveal any differences in the determinacy of judgements expressed by the subjects.

The results are exhibited in Table 6-8 and are graphically presented in Figure 6-8 below. Again, negative values indicate that the ungrammatical version was preferred to the grammatical. Also, the longer the bars in the chart, the stronger the preferences expressed.

| | Int | Adv | NN | N | All |
|-------------|---------|--------|--------|--------|---------------|
| P1V1 | 3 | 2.3077 | 3.125 | 4.1852 | 3.3571 |
| P1V2 | -0.1429 | 3.3846 | 4.3125 | 5.963 | 3.8857 |
| P2V1 | -1.5 | 2.8462 | 3.5625 | 3.8889 | 2.5429 |
| P2V2 | 0.2857 | 0.7692 | 3.25 | 5.8519 | 3.2 |
| P3V1 | -0.9286 | 1.2308 | 3.75 | 3.5556 | 2.2714 |
| P3V2 | 2 | 0.9231 | 5.3125 | 5.6667 | 3.9714 |

Table 6-8 Mean preference in focused sentences for [+/- F-movement] (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary)

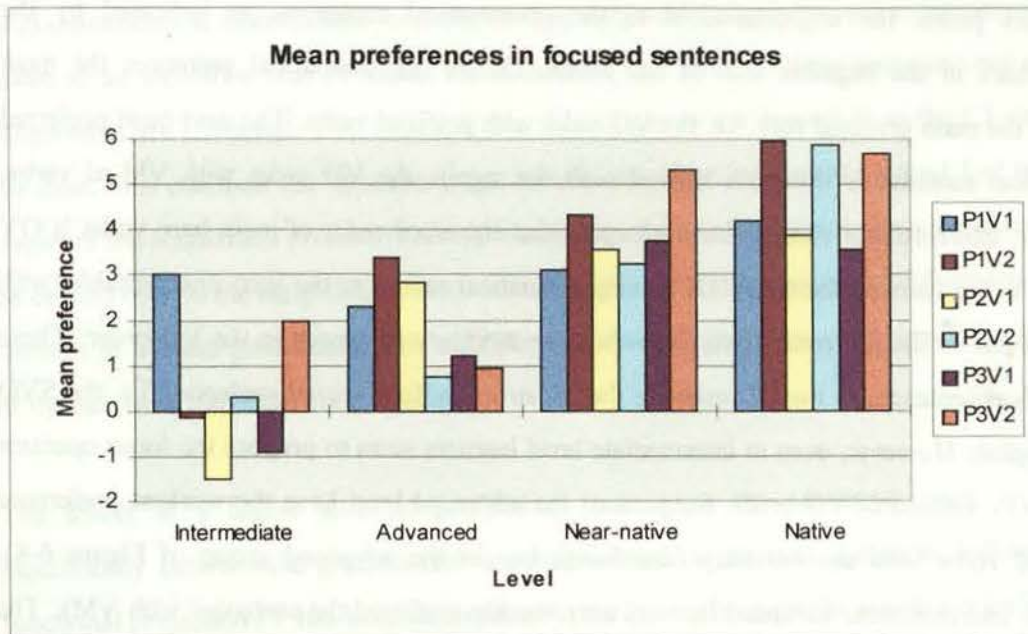


Figure 6-8 Mean preference in focused sentences for [+/- F-movement] (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary)

Figure 6-8 indicates that level constitutes a main effect when we compare all the subjects, but probably does not have a main effect between natives and near-natives. This is confirmed by the ANOVA results where level proves a significant main effect across all the subjects, $F(3,66)=17.00$, $MS=24.54$, $p=.001$. Again, there is a significant difference between the preferences of the intermediate and advanced groups on the one hand and the near-natives and natives on the other. This suggests that subjects on either side of this division have a markedly

different way of judging the focused sentences. This highly significant main effect of level disappears when we compare only the near-natives and the natives.

There is a main effect of verb type which slightly misses significance in the case of all subjects, $F(1,66)=3.96$, $MS=12.43$, $p=.051$, indicating that the subjects tend to show stronger preference for the auxiliary than the main verb. The main effect for verb becomes highly significant with the near-natives and natives, $F(1,41)=13.56$, $MS=8.49$, $p=.001$. This suggests that natives and near-natives have similar pattern of representations, a finding similar to that obtained in the case of the neutral sentences as well.

Figure 6-8 reflects the pattern of development outlined above. It shows that at the intermediate level learners prefer the ungrammatical to the grammatical sentences, as indicated by the preference bars in the negative side of the y -axis. Of the ungrammatical sentences the most preferred is the main prefixed verb, i.e. the VO order with prefixed verbs. The next most preferred ungrammatical sentence is the main VM-ed verb, i.e. again, the VO order with VM-ed verbs. Interestingly, intermediates seem to have accepted that the word order of main bare verbs is OV rather than VO in focused sentences. Of the ungrammatical sentences the least unacceptable (with the smallest bar in the preference ratio) are the bare auxiliary sentences in the VO order. These ungrammatical sentences in the L2 resemble the L1 structure for focused sentences, i.e. the SVO order of English. However, even at intermediate level learners seem to prepose the focus operator thus using OV instead of VO order. Subjects at the advanced level have the weakest preference for prefixed verbs with the auxiliary (the fourth bar in the advanced group of Figure 6-8). Similarly to intermediates, advanced learners only weakly preferred the sentences with VMs. The preferences expressed by intermediate and advanced learners confirm our hypothesis about the acquisition of verb-types: *VMs require lexical learning therefore take longer to acquire. Prefixed verbs involve syntactic learning, hence they are acquired earlier, after the syntax of bare verbs have been acquired.*

6.2.2.2.3 Summary

To summarise the above results, preference for the grammatical over the ungrammatical focused sentences increases with proficiency. This indicates an increasing determinacy of judgement. There is no significant difference between near-native and native preferences, indicating that there is no difference between these two groups in the determinacy with which they judge these sentences. However, similarly to advanced students, the near-native preferences are not so strong for the grammatical version of auxiliaries and prefixed verbs, although their judgements resemble those of natives.

The absence of a significant preference for either sentence type (either the grammatical or ungrammatical) at intermediate level shows that subjects' judgements are indeterminate. This is taken as an indication that FP is not instantiated at this level. In three sentences out of six their judgements are L1-based. This indicates that these learners are operating on the L1 value half of the time. This confirms our hypothesis that intuitions will be influenced by the L1 at intermediate stages of the acquisition process. The hypothesis that the L1 value for the functional category will be carried over to the early ILG is thus weakly supported. However, we would need to investigate learners at a lower proficiency level than our intermediate group in order to address the question of the nature of the initial state in L2A.

The ability at a higher level of proficiency, namely at the advanced level, to distinguish significantly between the grammatical and ungrammatical focused sentences indicates that the functional projection FP has been instantiated in the ILG. These results roughly coincide with that found for the neutral sentences. In neutral sentences advanced learners seem to have acquired the Hungarian SOV order and managed to overgeneralise it to other VO structures as well. This indicates that noticing and integrating the main word order patterns of the TL happens early in L2 acquisition. The overgeneralization of OV order might be a reflex of the instantiation of the new FP projection⁹⁶.

⁹⁶ Research on the L2 acquisition of Germanic languages shows that learners go through distinct phases in acquiring the double-tier word order system of German, too. See Clahsen and Muysken (1986, 1989), du Plessis *et al* (1987), Pienemann and Johnston (1989), Eubank (1992) and Cook (1993) for discussions.

The ability to decisively reject the ungrammatical focused sentences as shown by the preference scores appears only at the near-native level. This strongly shows that only at this level is the FP fully activated and are all its properties assigned to it. This confirms the prediction that learners go through a stage of optionality in the process of instantiating a new functional category in their ILG, but are able to activate it in a later stage. The FP is activated at the near-native level and the intuitions of this group do not show any significant difference from that of natives, although their preferences are not as strong as natives.

6.2.2.3 Movement in negative sentences

Hungarian negative sentences employ the FP as well. The verb moves across the preverb up to the head of FP and the negative marker *nem* cliticises to the right of it. In contrast, English negative sentences have an invariant NegP between TenseP and AgrP, which blocks main verb movement. Hence in English aspectual or modal auxiliaries move or in their absence *do*-support is employed. These elements are marked with Agr and Tense features while the thematic verb stays after the negative marker *not*. We hypothesised that moving the verb over the preverb and using the negative marker preverbally would be a diagnostic for the instantiation of FP in Hungarian negative sentences.

According to the hypotheses,

- 1) learners will initially transfer the absence of FP from their L1. Thus they will not raise the verb in their Hungarian ILG. They will prefer ungrammatical sentences.
- 2) subjects at lower levels of proficiency will not distinguish between the grammatical and ungrammatical sentence types i.e. they will accept both the moved and the unmoved versions of negatives. Their judgements will be indeterminate.
- 3) when the FP is instantiated in the ILG, the grammatical sentence with verb movement will be preferred to the ungrammatical sentence without verb movement.
- 4) the instantiation of FP should be concurrent in the case of negative and focused constructions.

The test sentences in this category have two linguistic variables: preverb type (no preverb, prefix, other verbal modifier (VM)) and verb type (main, auxiliary, copula). The copula sentences were not included in the analysis as they do not exactly fit the design of the ANOVA (they do not represent the same level of variable as main and auxiliary verbs).

| Preverb | Verb | Sentence type | Example |
|---------|------|----------------|--|
| no | main | [+ F-movement] | Nem iszik sört. <i>not drinks beer-ACC</i> 'He doesn't drink beer.' |
| | | [- F-movement] | *Nem fogat mos. <i>not tooth-ACC washes</i> 'He doesn't brush his teeth.' |
| | aux | [+ F-movement] | Nem fogok sírni. <i>not will-I cry-INF</i> 'I won't cry.' |
| | | [- F-movement] | *Nem varrni tud. <i>not sew-INF can-she</i> 'She can't sew.' |
| prefix | main | [+ F-movement] | Nem hitte el. <i>not believed-he PREF</i> 'He didn't believe it.' |
| | | [- F-movement] | *Nem rá-érek. <i>not PREF-have-time-I</i> 'I don't have time.' |
| | aux | [+ F-movement] | Nem fogok el-aludni. <i>not will-I PREF-sleep-INF</i> 'I won't go to sleep.' |
| | | [- F-movement] | *Nem meg akarom nézni. <i>not PREF want-I see-INF</i> 'I don't want to see it.' |
| VM | main | [+ F-movement] | Nem jut eszembe. <i>not comes mind-mine-to</i> 'I can't remember it.' |
| | | [- F-movement] | *Nem egyet-érték. |

| | | | |
|-----|----------------|--|--|
| | | <i>not one-ACC-agree-I</i> | |
| | | 'I don't agree.' | |
| aux | [+ F-movement] | Nem szoktam észre-venni. | |
| | | <i>not habitual-I mind-to-take-INF</i> | |
| | | 'I usually don't notice it.' | |
| | [- F-movement] | *Nem feleségül akarja venni. | |
| | | <i>not wife-as wants-he take-INF</i> | |
| | | 'He doesn't want to marry her.' | |
| cop | [+ F-movement] | Nem vagyok angol. | |
| | | <i>not am-I English</i> | |
| | | 'I'm not English.' | |
| | [- F-movement] | *Nem biztos vagyok. | |
| | | <i>not sure am-I</i> | |
| | | 'I'm not sure.' | |

The analysis took the same form as with neutral sentences. The copula sentences were not included in the analysis, as they do not have the same linguistic variables as the other types of sentences. The following statistical tests were carried out:

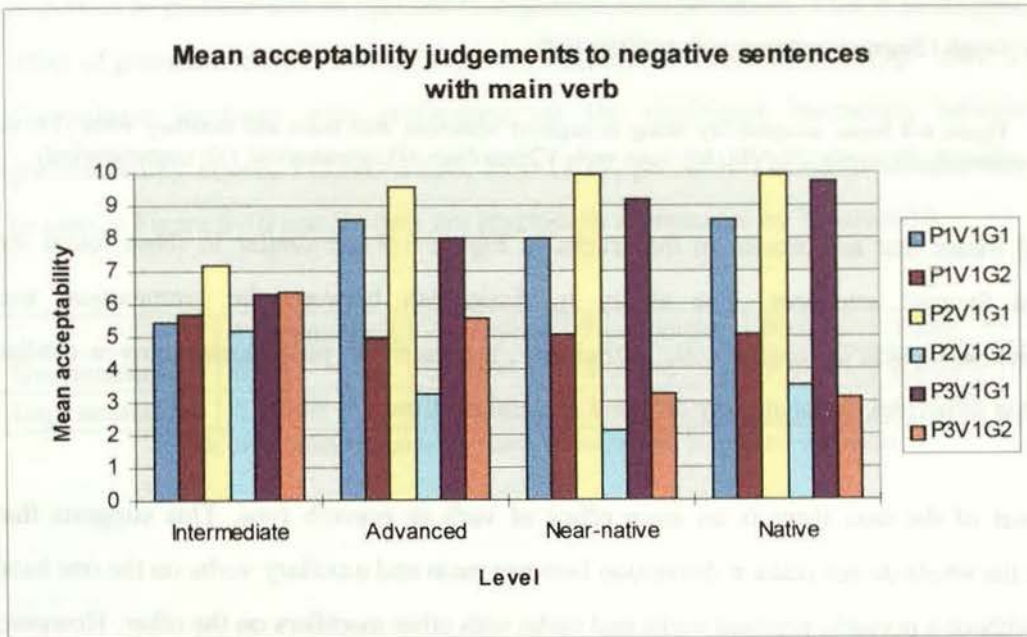
- a) A four-way ANOVA test with repeated measures for preverb type (no, prefix, VM), verb type (main, aux) and grammaticality (-,+ v-movement) was carried out on *mean acceptability* scores with proficiency level as grouping factor (see Table 3a in Appendix F).
- b) A three-way ANOVA test on the *mean preference* for the grammatical over the ungrammatical sentences was carried out with preverb and verb as repeated measures and level as grouping factor (see Table 3b in Appendix F).
- c) *Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

6.2.2.3.1 Results: all variables, mean acceptability

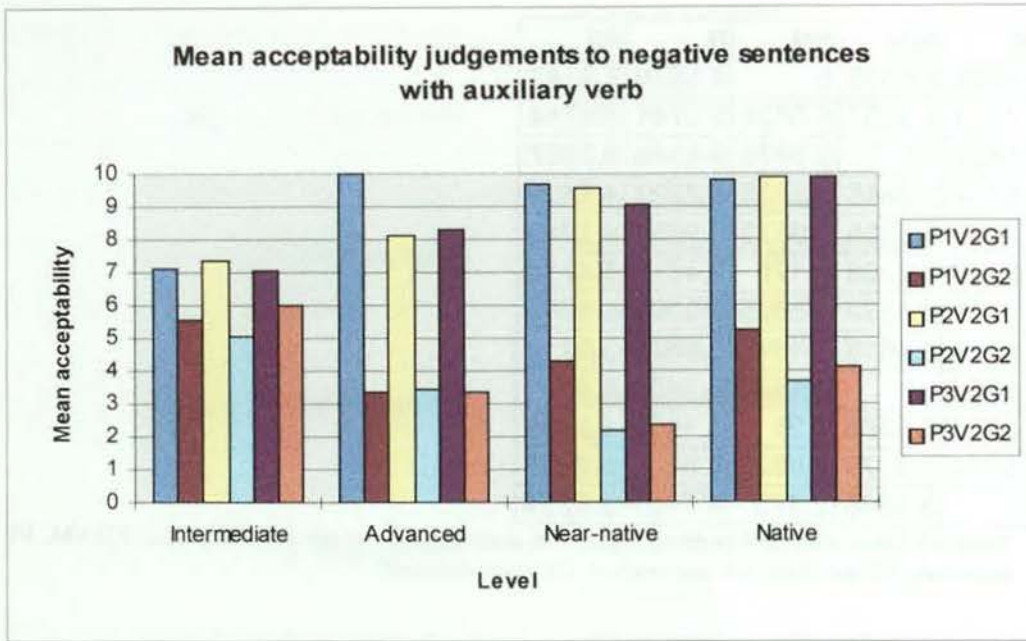
The results of the judgements for the acceptability of negative sentences are summarised in Table 6-9. The two graphs in Figure 6-9 show the graphical representation of the values in Table 6-9 for the main verbs and the auxiliary verbs separately.

| | Int | Adv | NN | N | All |
|---------------|--------|--------|--------|--------|---------------|
| P1V1G1 | 5.4286 | 8.5385 | 8 | 8.5926 | 7.8143 |
| P1V1G2 | 5.7143 | 4.9231 | 5.0625 | 5.0741 | 5.1714 |
| P1V2G1 | 7.1429 | 10 | 9.6875 | 9.8148 | 9.2857 |
| P1V2G2 | 5.5714 | 3.3846 | 4.3125 | 5.2222 | 4.7429 |
| P2V1G1 | 7.2143 | 9.5385 | 9.9375 | 9.963 | 9.3286 |
| P2V1G2 | 5.2143 | 3.2308 | 2.125 | 3.4815 | 3.4714 |
| P2V2G1 | 7.3571 | 8.1538 | 9.5625 | 9.8889 | 8.9857 |
| P2V2G2 | 5.0714 | 3.4615 | 2.1875 | 3.6667 | 3.5714 |
| P3V1G1 | 6.2857 | 8 | 9.1875 | 9.7407 | 8.6 |
| P3V1G2 | 6.3571 | 5.5385 | 3.25 | 3.1111 | 4.2429 |
| P3V2G1 | 7.0714 | 8.3077 | 9.0625 | 9.8889 | 8.8429 |
| P3V2G2 | 6 | 3.3846 | 2.375 | 4.1481 | 3.9714 |

Table 6-9 Mean acceptability rating in negative sentences (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary, G1: grammatical, G2: ungrammatical)



Graph e Negative sentences with main verb



Graph f Negative sentences with auxiliary verb

Figure 6-9 Mean acceptability rating to negative sentences with main and auxiliary verbs (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary, G1: grammatical, G2: ungrammatical)

The general trends that are present in the graphs in Figure 6-9 are similar to those found for neutral and focused sentences. The ability to distinguish between the grammatical and ungrammatical sentences increases with proficiency. Non-natives' judgements show a similar pattern to that of natives, being slightly different at the same time.

In this subset of the data there is no main effect of verb or preverb type. This suggests that subjects on the whole do not make a distinction between main and auxiliary verbs on the one hand and verbs without a preverb, prefixed verbs and verbs with other modifiers on the other. However, similarly to the previous analyses of neutral and focused sentences, there is a significant interaction of verb by grammaticality, $F(1,66)=9.05$, $MS=3.58$, $p=.004$ and the Tukey test (at $q=3.63$) shows that the source of the significant value is between the grammatical and ungrammatical versions of each verb type, such as it was in the case of focused sentences, where the interaction slightly missed significance ($p=.051$).

Figure 6-9 indicates that preverbs are judged differently. Although no main effect for preverb was found, there is nevertheless a significant interaction between preverb and grammaticality, $F(2,132)=8.83$, $MS=6.81$, $p=.001$ and *post hoc* multiple comparisons show ($q=4.03$) that the ungrammatical version of the verb with no preverb is judged significantly higher than the ungrammatical version of prefixed verbs.

Figure 6-9 suggests that the tendency to reject the incorrect prefixed verbs is more pronounced for main verbs than auxiliaries in the advanced group. This is confirmed by a significant three-way interaction between preverb, verb and grammaticality, $F(2,132)=8.06$, $MS=3.39$, $p=.000$.

Figure 6-9 also shows that subjects at all levels, except for the intermediate level, gave higher responses to grammatical as opposed to ungrammatical sentences. This is confirmed by the main effect of grammaticality in the ANOVA test, $F(1,66)=299.10$, $MS=12.27$, $p=.001$. This ability to discriminate increases with proficiency, as the significant interaction between level and grammaticality attests, $F(3,66)=18.58$, $MS=12.27$, $p=.001$. The mean acceptability ratings can be seen in Figure 6-10 and the data are graphically represented by Figure 6-10.

| | Intermediate | Advanced | Near-native | Native | Total |
|----------------------|---------------------|-----------------|--------------------|---------------|---------------|
| Grammatical | 6.75 | 8.7564 | 9.2396 | 9.6481 | 8.8095 |
| Ungrammatical | 5.6548 | 3.9872 | 3.2188 | 4.1173 | 4.1952 |

Table 6-10 Mean acceptability rating for movement in negative sentences

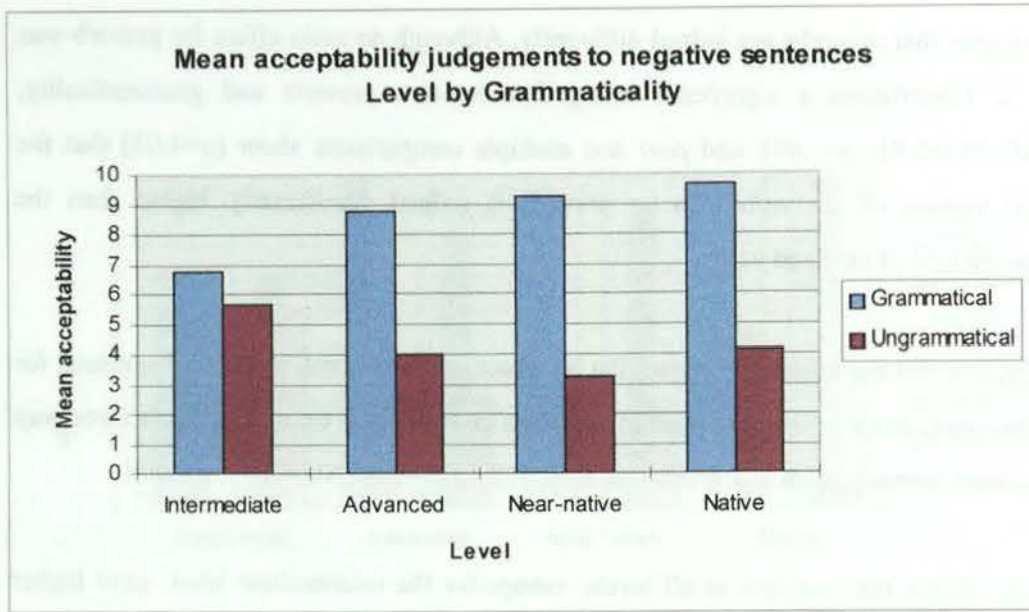


Figure 6-10 Mean acceptability rating for movement in negative sentences

As the interaction between level and grammaticality proved significant, we carried out the usual multiple comparisons to see where the source of the significant result is. The comparisons done by the *post hoc* Tukey test ($q=4.29$) show that there is a significant difference between acceptability scores given to grammatical and ungrammatical sentences from the advanced level onwards. Thus it is only the intermediate learners who cannot decide between the two versions, their judgements being indeterminate.

6.2.2.3.2 Preferences

Similarly to neutral and focused sentences, we investigated the preference scores given to the grammatical vs. ungrammatical versions of negative sentences. The results can be seen in Table 6-11 and the accompanying Figure 6-11.

| | Int | Adv | NN | N | All |
|------|---------|--------|--------|--------|---------------|
| P1V1 | -0.2857 | 3.6154 | 2.9375 | 3.5185 | 2.6429 |
| P1V2 | 1.5714 | 6.6154 | 5.375 | 4.5926 | 4.5429 |
| P2V1 | 2 | 6.3077 | 7.8125 | 6.4815 | 5.8571 |
| P2V2 | 2.2857 | 4.6923 | 7.375 | 6.2222 | 5.4143 |
| P3V1 | -0.0714 | 2.4615 | 5.9375 | 6.6296 | 4.3571 |

| | | | | | |
|-------------|--------|--------|--------|--------|---------------|
| P3V2 | 1.0714 | 4.9231 | 6.6875 | 5.7407 | 4.8714 |
|-------------|--------|--------|--------|--------|---------------|

Table 6-11 Mean preference in negative sentences for [+/-movement] (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary)

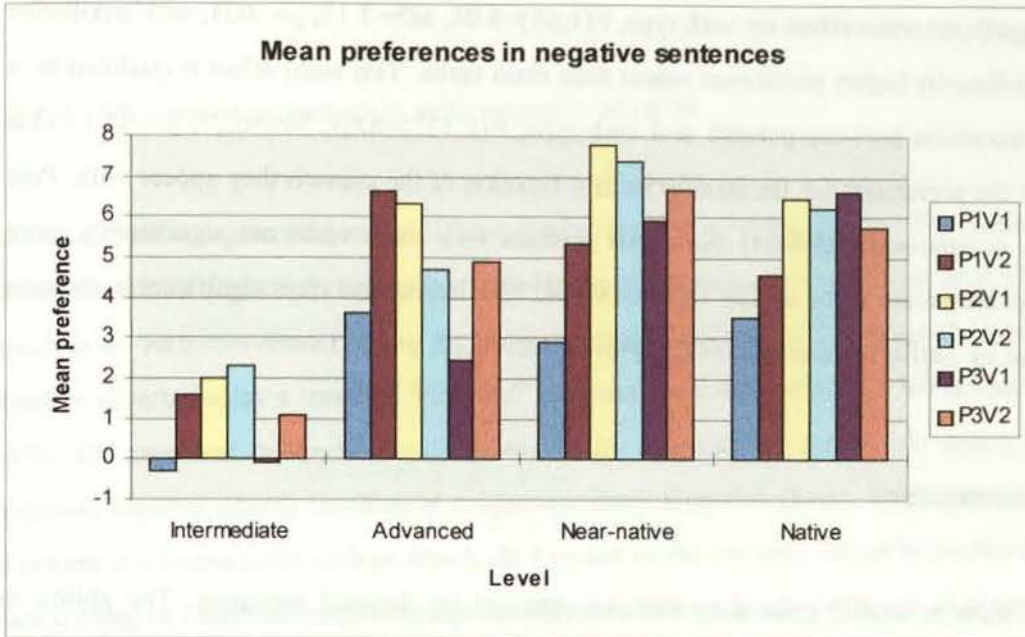


Figure 6-11 Mean preference in negative sentences for [+/-movement] (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary)

Figure 6-11 indicates that intermediate learners behave in a considerably different way from the more proficient groups. The strength of preferences increases strikingly at the advanced level. This is confirmed by the ANOVA test which shows a significant main effect for level, $F(3,66)=18.58$, $MS=24.55$, $p=.001$ and the *post hoc* Tukey test ($q=3.63$) shows that the significant main difference lies between the intermediate group and each of the higher proficiency level groups.

There is also a main effect of preverb, $F(2,132)=8.83$, $MS=13.63$, $p=.001$ and the Tukey test ($q=3.32$) reveals that there is significant difference between the bare verb and the preverb, with the preverb preferred significantly higher than the bare verb. This effect is qualified by the almost significant interaction between level and preverb, $F(6,132)=2.10$, $MS=13.63$, $p=.057$, which misses significance, but *post hoc* multiple comparisons ($q=4.62$) nevertheless indicate that the near-natives are the group who prefer the prefixed verb significantly higher than the bare verb, but

no one else. Preverb stays a significant main effect when we compare the near-natives with the natives, $F(2,82)=17.57$, $MS=10.17$, $p=.001$.

There is a significant main effect for verb type, $F(1,66)=9.05$, $MS=7.15$, $p=.004$, with auxiliaries receiving significantly higher preference scores than main verbs. This main effect is qualified by a significant interaction between preverb and verb type, $F(2,132)=8.06$, $MS=6.77$, $p=.001$. This suggests that the preference for the auxiliaries is a function of the preverb they appear with. *Post hoc* multiple comparisons ($q=4.03$) show that prefixes with main verbs are significantly more preferred than bare main verbs or VM-ed main verbs. This interaction stays significant in the case of near-native vs. native comparison, $F(2,82)=6.22$, $MS=4.22$, $p=.003$.

6.2.2.3.3 Summary

The results show a similar pattern to that we obtained for focused sentences. The ability to discriminate between grammatical and ungrammatical sentences appears at the advanced level. However, advanced learners' preferences were not so strong as near-natives in the case of focused sentences, indicating that their representations were still indeterminate. With regard to negative sentences, the strength of preference advanced learners exhibit is not significantly different from near-natives and natives, indicating that they have acquired the focus rule (i.e. they have set both the 'N' and 'V' features) in negative sentences. This finding seems to disconfirm the prediction that learners will first posit the FP projection in focused sentences and only then will they implement the same projection in negative sentences. Recall that this was the hypothesis predicted on the basis of findings from child language acquisition (see the study reported in Appendix A). We take it as further evidence for the view that the initial grammatical mistakes adults and children commit may appear to be similar. However, the acquisitional processes involved in L1 and L2 acquisition, in terms of both the route and rate of acquisition, are different in child and adult L2 acquisition. Additionally, the results show that subjects below the advanced level have indeterminate judgements, confirming our hypothesis that learners' judgements are indeterminate in the intermediate stages, showing optionality. Lastly, subjects differentiate between the two verb types, with auxiliaries receiving a higher acceptability rating than main verbs. This replicates the results

found in neutral and focused sentences and may be a result of the influence of the L1 of the learners, i.e. English where there is a distinction within thematic and non-thematic (auxiliary) verbs.

6.2.2.4 Movement in sentences with negative adverbs

Sentences with a negative adverb also have the FP projection in Hungarian. The negative adverb carries the double features [+neg] and [+wh]. Hence, the negative adverb moves to the Spec of FP resulting in verb-movement across the preverb up to the head of FP. English sentences with negative adverb display a 'residual V2 effect' (see sections 2.4.3 and 4.9.3). When used with main verbs, the aspectual or modal auxiliary and in its absence the dummy *do* appears after the preposed negative adverb resulting in subject-auxiliary inversion (SAI). This 'residual V2' effect is present in constructions such as *Rarely do I go out in the evening*, *Never in my life have I seen such a thing* or *Under no circumstances should you drive under the influence of alcohol*, etc. We hypothesised that moving the negative adverb and the verb over the preverb in Hungarian would be a diagnostic for the instantiation of FP in sentences with negative adverbs.

According to the hypotheses,

- 1) learners will initially transfer the absence of FP from their L1. However, as they have the residual V2 effect in their L1, they will accept the preposed negatives, but without the main verb raising as the acquisition of the strong non-interpretable 'V' feature of F is more difficult.
- 2) learners at intermediate stages will exhibit optionality. Hence they will not reject the ungrammatical sentence yet and they will accept both the grammatical and ungrammatical sentence types. Their judgements will be indeterminate.
- 3) when, eventually, FP is instantiated in the ILG, learners should reset the residual V2 parameter and use the FP for the negative adverbs and the verb to move to. Grammatical sentences with verb movement should be preferred to ungrammatical sentences without verb movement. However, as we hypothesised, the PLD is relatively rare and ambiguous, so delay in parameter setting is expected.

The test sentences in this category have two linguistic variables: verb type (main, copula) and preverb type (no preverb, prefix, other verbal modifier (VM)). Again, although we elicited judgements about copula sentences, they will be excluded from the analysis, as they did not fit the research design (since they do not have the same linguistic variables). See test examples below:

| Verb | Preverb | Sentence type | Example |
|--------|---------|----------------|---|
| main | no | [+ V-movement] | Igen, ritkán csinállok rendet. <i>yes, rarely make-I order-ACC</i> 'Yes, rarely do I put everything into order.' |
| | | [- V-movement] | *Nem, hiába franciául tanultam. <i>not, in-vain French learnt-I</i> 'No, I learnt French in vain.' |
| | prefix | [+ V-movement] | Nem, alig értettem meg. <i>no, hardly understood-I PREF</i> 'No, hardly did I understand.' |
| | | [- V-movement] | *Nem, ritkán el-szomorodok. <i>no, seldom PREF-sadden-I</i> 'No, I get sad rarely.' |
| | VM | [+ V-movement] | Nem, hiába keltünk korán. <i>no, in-vain got-up-we early</i> 'No, there was no point in our getting up early.' |
| | | [- V-movement] | *Nem, ritkán kezet mosnak. <i>no, rarely hand-ACC wash-they</i> 'No, they wash their hands rarely.' |
| copula | | [+ V-movement] | Nem, kevés van hátra. <i>no, little is behind</i> 'No, there is little left.' |
| | | [- V-movement] | *Nem, alig hideg volt. <i>no, barely cold was</i> 'No, it was not very cold.' |

The analysis took the same form as with neutral sentences:

- a) A three-way ANOVA test with repeated measures for preverb type (no, prefix, VM) and grammaticality (-,+ v-movement) was carried out on *mean acceptability* scores with proficiency level as grouping factor (see Table 4a in Appendix F).
- b) A three-way ANOVA test on the *mean preference* for the grammatical over the ungrammatical sentences was carried out with preverb as repeated measures and level as grouping factor (see Table 4b in Appendix F).
- c) *Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

6.2.2.4.1 Results: all variables, mean acceptability

The acceptability ratings given to all sentences with negative adverbs are given in Table 6-12 and the data are displayed in Figure 6-12.

| | Int | Adv | NN | N | All |
|-------------|------------|------------|-----------|----------|---------------|
| P1G1 | 6.7143 | 5.9231 | 9.5625 | 9.2593 | 8.2 |
| P1G2 | 6.9286 | 6.4615 | 6.125 | 4.3333 | 5.6571 |
| P2G1 | 6.3571 | 5.7692 | 8.75 | 8.1852 | 7.5 |
| P2G2 | 6.6429 | 8.0769 | 5.4375 | 5.0741 | 6.0286 |
| P3G1 | 6.6429 | 7 | 8.8125 | 8.7407 | 8.0143 |
| P3G2 | 7.1429 | 7.9231 | 5.25 | 3.3704 | 5.4 |

Table 6-12 Mean acceptability rating in sentences with negative adverb (P1: no preverb, P2: prefix, P3: VM, G1: grammatical, G2: ungrammatical)

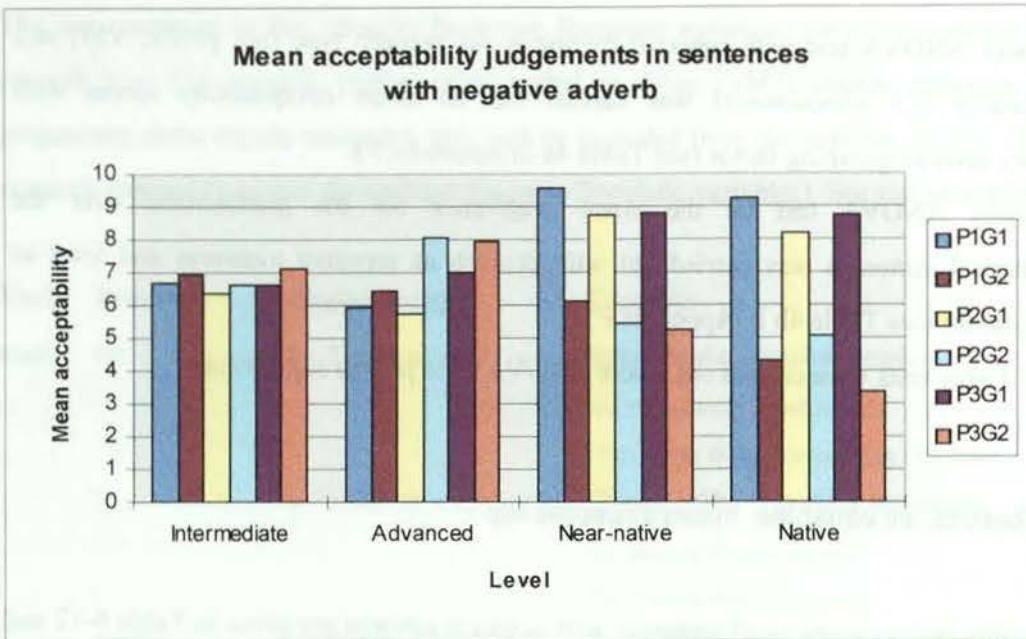


Figure 6-12 Mean acceptability rating in sentences with negative adverb (P1: no preverb, P2: prefix, P3: VM, G1: grammatical, G2: ungrammatical)

Figure 6-12 shows a clear new trend in the data. The ability to recognise the grammatical sentences and rate them with higher acceptability scores changes with proficiency level. In the intermediate and advanced levels learners give slightly higher acceptability scores to the ungrammatical sentences. This tendency changes only at the near-native level, where learners' judgements show a similar pattern to that of natives. The ANOVA test shows a significant main effect for grammaticality only, $F(1,66)=23.02$, $MS=10.49$, $p= .001$. There was no main effect for preverb type. The mean acceptability scores are given in Table 6-13 below and the data in that table are reproduced in a graph form in Figure 6-13:

| | Intermediate | Advanced | Near-native | Native | Total |
|----------------------|--------------|----------|-------------|--------|---------------|
| Grammatical | 6.5714 | 6.2308 | 9.0417 | 8.7284 | 7.9048 |
| Ungrammatical | 6.9048 | 7.4872 | 5.6042 | 4.2593 | 5.6952 |

Table 6-13 Mean acceptability rating for movement in sentences with negative adverb

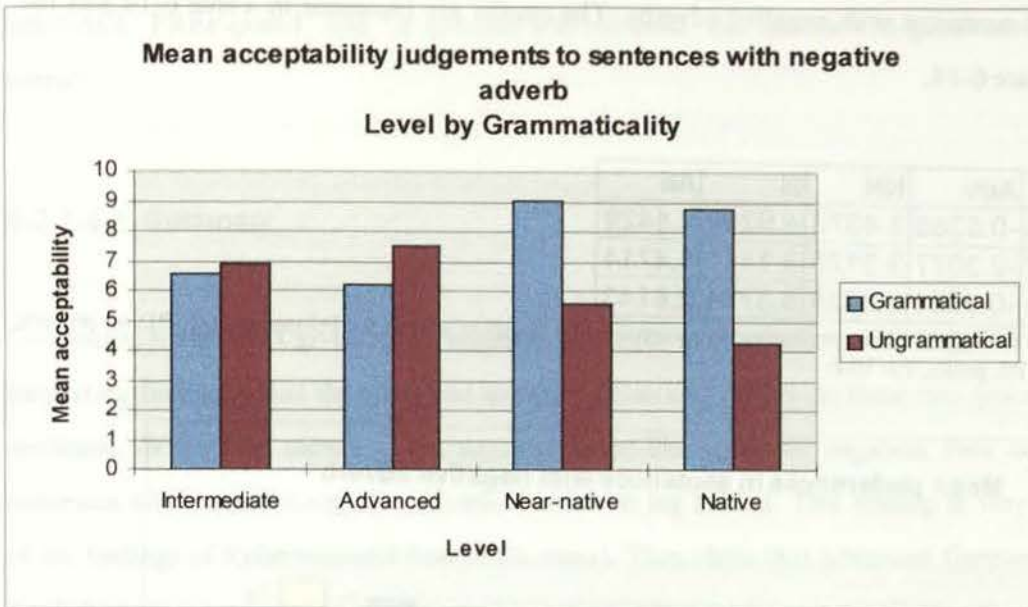


Figure 6-13 Mean acceptability rating for movement in sentences with negative adverb

As Figure 6-13 clearly indicates, there is a very strong difference between learners on the one hand and near-natives/natives on the other. The ANOVA test shows a significant interaction between level of proficiency and grammaticality, $F(3,66)=19.48$, $MS=10.49$, $p=.001$. The *post hoc* Tukey test ($q=4.29$) shows that the near-native and native groups' distinction between grammatical and ungrammatical sentences is significant, whereas the intermediate and advanced learners' judgements (for both the grammatical and ungrammatical sentences) significantly differ from that of natives and near-natives. This suggests a discontinuous developmental pattern, as there is a considerable gap between the advanced and near-native speakers' acceptability judgements. The significance of the developmental change will be discussed in the summary section.

6.2.2.4.2 Preferences

Next we examine the differences between the strength of the judgements as shown by the preference scores. This analysis is a reproduction of the earlier analyses on the mean acceptability scores. Its results show additional differences between the representations held by the near-native and native groups. Also, we hoped to gain a clearer picture of the differences between negative

sentences and sentences with negative adverbs. The results are presented in Table 6-14 and the attendant Figure 6-14.

| | Int | Adv | NN | N | All |
|-----------|---------|---------|--------|--------|---------------|
| P1 | -0.2143 | -0.5385 | 3.4375 | 4.9259 | 2.5429 |
| P2 | -0.2857 | -2.3077 | 3.3125 | 3.1111 | 1.4714 |
| P3 | -0.5 | -0.9231 | 3.5625 | 5.3704 | 2.6143 |

Table 6-14 Mean preference in sentences with negative adverb for [+/-movement] (P1: no preverb, P2: prefix, P3: VM)

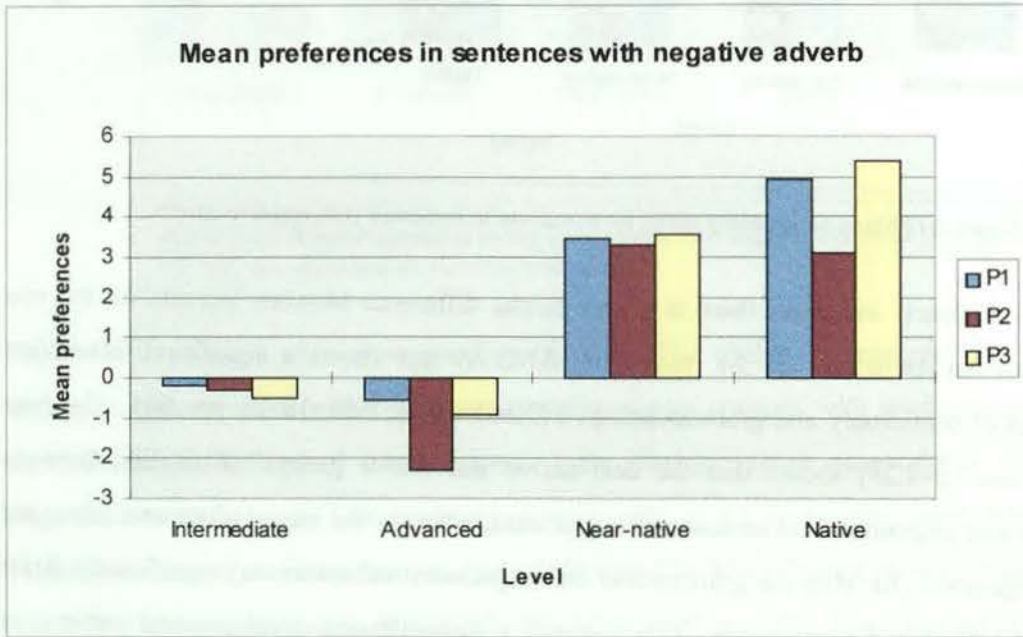


Figure 6-14 Mean preference in sentences with negative adverb for [+/-movement] (P1: no preverb, P2: prefix, P3: VM)

Figure 6-14 is a striking graphical representation of the main trend in sentences with negative adverbs. The divide between the learner groups and the near-native/native group is so great that the learners' behaviour seems to be the reverse of the near-native/native groups. Accordingly, level is a highly significant main effect, $F(3,66)=19.48$, $MS=20.98$, $p=.001$ and the *post hoc* Tukey test ($q=3.63$) shows that the source of this significant difference is indeed between the intermediate/advanced groups and near-native/native groups. There is no statistically significant difference between the native and near-native groups. Advanced learners seem to prefer the ungrammatical version of prefixed verbs most, accepting the incorrect **Ritkán el-szomorodok* 'rarely PREF-become-sad-I'. This resembles neutral sentences where **A levelet fel-adom* 'the

letter-ACC PREF-post-I' and **A kocsiját kölcsön-adta* 'the car-his VM-gave' are accepted as correct.

6.2.2.4.3 Summary

Comparing judgements given to the negative sentences and sentences with negative adverbs, the interesting finding is that the advanced learners' behaviour differs on these two types of negative sentences. While they seem to have acquired target-like sentential negation, their acquisition of sentences with preposed negative adverbial seems to lag behind. This finding is very reminiscent of the findings of Robertson and Sorace (in press). They show that advanced German learners of English show a tendency to produce and judge grammatical incorrect *V3 structures in English negative preposing sentences where English has the 'residual' V2 constraint otherwise. The proposed explanation given by Robertson and Sorace concerns the marked difference between syntactic and lexical acquisition. They argue for a strong lexicalist hypothesis according to which 'the learning process is dependent on lexical properties of the input rather than on triggering evidence' (1996:26). Our findings support their position in that because of a time lag in the acquisition of the lexical properties of negative adverbials (which are relatively rare in the input), learners' syntactic knowledge cannot yet be employed for the correct usage of those lexical items. This time lag seems only to disappear at the near-native level. Near-natives behave similarly to natives on negative adverbs, which indicates that they have had enough exposure to the TL data to acquire the correct lexical entries of these negative elements.

We hypothesised that the ambiguous nature of the data, i.e. the presence of positive adverbials which are permitted in both adjoined and moved operator positions might lead to the delay in the acquisition of feature specifications of negative adverbials and their syntactic position. This hypothesis seems to be supported in our data where we find a discontinuous developmental change between our advanced and near-native learner groups.

6.2.2.5 Movement in sentences with positive adverbs

Sentences with positive adverbs differ from sentences with negative adverbs in that they can, but do not necessarily have to, appear in the FP projection. Positive adverbs can be either adjoined or moved to the Spec,FP. When they are moved to the FP, the verb moves to the head F^0 and thus the sentence acquires a focused reading. The interpretation of the positive adverb in Spec,FP is that of a focused quantifier. On the other hand, when positive adverbs are adjoined, they retain their adjunct interpretation. In our experiment the context sentences called for an unfocused, adjunct interpretation. Hence judgements were elicited about sentences with positive adverbs but without verb-movement. This allows comparison with sentences with negative adverbs where verb-movement is obligatory. English sentences with positive adverb follow the SAVO order.

According to our hypotheses,

- 1) learners will accept the grammatical sentences with the positive adverb adjoined to IP, since their L1 also uses adjunction for adverbs. At the same time, learners will not reject the ungrammatical sentences as they resemble the L1 AVO order. Thus there will be indeterminacy in early ILG.
- 2) with proficiency, learners will acquire the distinction between the quantifier and adjunct interpretations of positive adverbs and will use them in the relevant syntactic structure. Therefore learners in the advanced and near-native level will reject the ungrammatical ([+movement]) sentences in favour of the grammatical ([-movement]) ones in the case of adjunct interpretation.

For the sake of comparability, the test sentences in this category have the same variables as the sentences with negative adverbs. The copula sentences were again excluded from the analysis.

| Verb | Preverb | Sentence type | Example |
|------|---------|----------------|---|
| main | no | [- V-movement] | Mindig tévét néz. <i>always TV-ACC watches-he</i> 'He's always watching TV.' |
| | | [+ V-movement] | *Mert folyton beszélek angolul. |

| | | | |
|--------|----------------|--|--|
| | | | <i>because continuously speak-I English</i> 'Because I speak only English.' |
| prefix | [- V-movement] | | Igen, állandóan el-hittem, amit mondott. <i>yes, all-the-time PREF-believed-I, what-ACC said-he</i> 'Yes, I believed everything he said.' |
| | [+ V-movement] | | *Igen, folyton fázik meg. <i>yes, repeatedly catches-cold-he PREF</i> 'Yes, he keeps getting a cold.' |
| VM | [- V-movement] | | Igen, időnként bolondnak tartom. <i>yes, sometimes mad-into take-I-him</i> 'Yes, sometimes I think he is mad.' |
| | [+ V-movement] | | *Igen, mindenki értett egyet. <i>yes, everybody understood one-ACC</i> 'Yes, everyone agreed.' |
| copula | [- V-movement] | | Igen, néha büszke vagyok rá. <i>yes, sometimes proud am-I him-onto</i> 'Yes, sometimes I'm proud of him.' |
| | [+ V-movement] | | *Minden nap lesz esős. <i>every day will-be rainy</i> 'It will be rainy every day.' |

The analysis took the same form as the neutral sentences:

- a) A three-way ANOVA test with repeated measures for preverb type (no, prefix, VM) and grammaticality (-,+ v-movement) was carried out on *mean acceptability* scores with proficiency level as grouping factor (see Table 5a in Appendix F).
- b) A three-way ANOVA test on the *mean preference* for the grammatical (-movement) over the ungrammatical (+movement) sentences was carried out with preverb as repeated measures and level as grouping factor (see Table 5b in Appendix F).
- c) *Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

6.2.2.5.1 Results: all variables, mean acceptability

The results of the ratings expressed to sentences with positive adverbs are reported in Table 6-15 and the accompanying Figure 6-15.

| | Int | Adv | NN | N | All |
|-------------|--------|--------|--------|--------|---------------|
| P1G1 | 7.8571 | 7.6154 | 9.3125 | 9.5926 | 8.8143 |
| P1G2 | 7.2857 | 6.6923 | 5.5 | 4.5185 | 5.7 |
| P2G1 | 8.5 | 7.6154 | 8.8125 | 9 | 8.6 |
| P2G2 | 7.6429 | 6.5385 | 4.75 | 3.4444 | 5.1571 |
| P3G1 | 7 | 6.8462 | 8.25 | 9.5926 | 8.2571 |
| P3G2 | 5.5 | 6.3846 | 8 | 4.4444 | 5.8286 |

Table 6-15 Mean acceptability rating in sentences with positive adverb (P1: no preverb, P2: prefix, P3: VM, G1: grammatical, G2: ungrammatical)

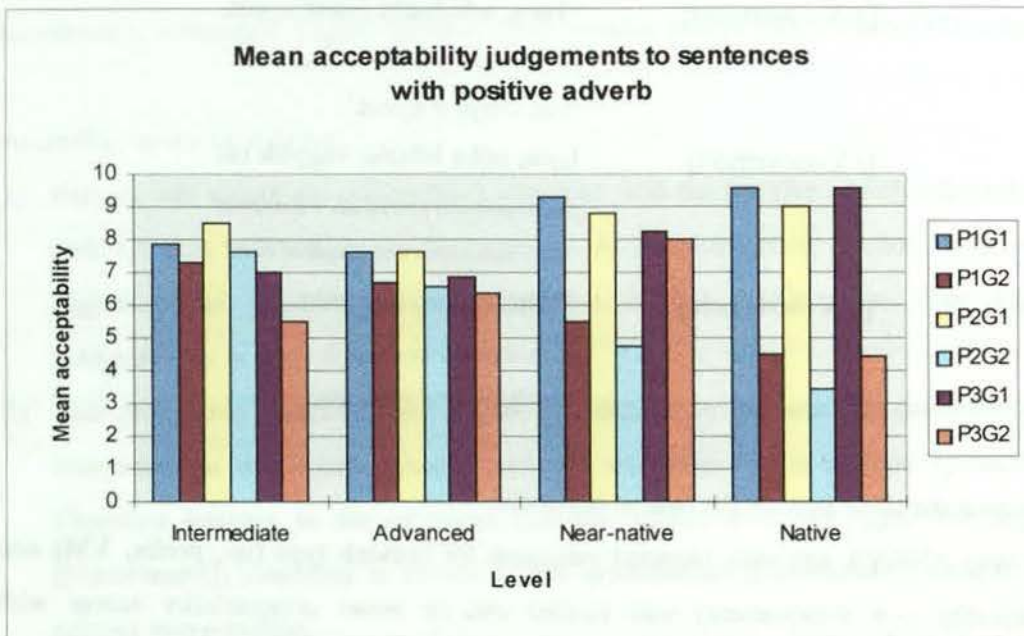


Figure 6-15 Mean acceptability rating in sentences with positive adverb (P1: no preverb, P2: prefix, P3: VM, G1: grammatical, G2: ungrammatical)

Figure 6-15 shows that the judgements given to sentences with positive adverbs are not uniform across proficiency levels. Further, there is a difference between the near-native and native students with respect to ungrammatical verbs with VM (the third red bar in Figure 6-15). The ANOVA test carried out on all subjects confirms this by showing a main interaction between level and preverb, $F(6,132)=4.07$, $MS=3.97$, $p=.001$. The *post hoc* Tukey test ($q=4.62$) indicates that intermediate learners rate the prefixed verbs higher than the other two preverb types, whereas near-natives rate the prefixed verbs significantly lower than the verbs with other VMs. This

interaction effect is qualified by a three-way interaction between level, preverb and grammaticality, $F(6,132)=2.78$, $MS=3.61$, $p=.014$.

Let us see the developmental profile with regard to the ability to distinguish between the two sentence types, i.e. the ability to reject the ungrammatical version and to accept the grammatical one. Table 6-16 and Figure 6-16 report the relevant data:

| | Intermediate | Advanced | Near-native | Native | Total |
|----------------------|--------------|----------|-------------|--------|---------------|
| Grammatical | 7.7857 | 7.359 | 8.7917 | 9.3951 | 8.5571 |
| Ungrammatical | 6.8095 | 6.5385 | 6.0833 | 4.1358 | 5.5619 |

Table 6-16 Mean acceptability rating for movement in sentences with positive adverb

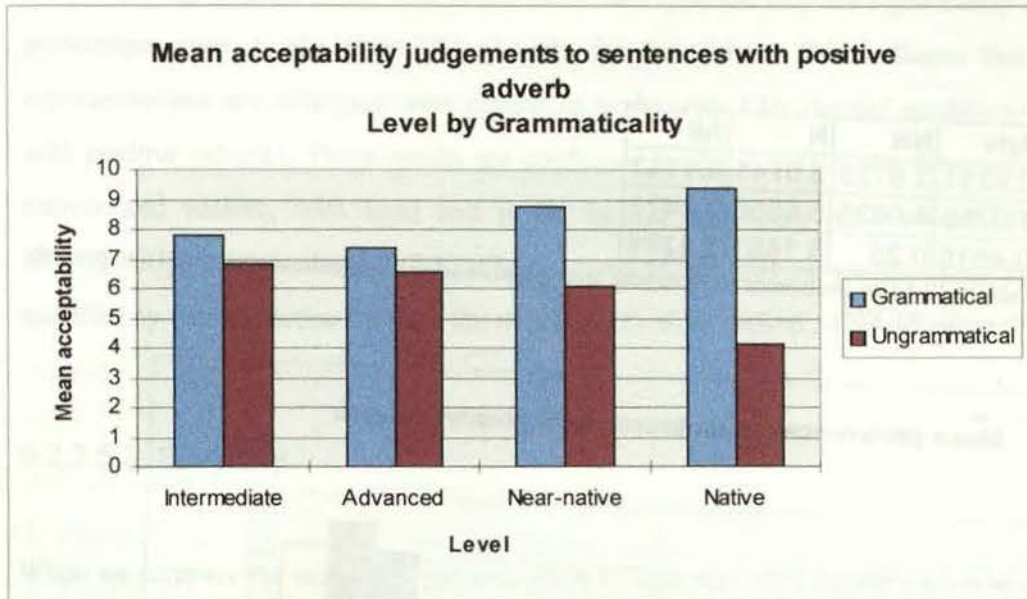


Figure 6-16 Mean acceptability rating for movement in sentences with positive adverb

As the ANOVA test shows, the main effect of grammaticality, $F(1,66)=65.53$, $MS=8.80$, $p=.001$ is qualified by a significant interaction between level and grammaticality, $F(3,66)=14.67$, $MS=8.80$, $p=.001$. The *post hoc* Tukey test shows (at a tabled value of $q=4.29$) that the ability to distinguish significantly between the grammatical and the ungrammatical version appears at near-native and native levels. However, there is a significant difference between near-natives and natives in the ungrammatical sentences, with near-natives expressing significantly higher acceptability for them as natives. This is the first obvious and significant difference between

natives and near-natives. Let us see more precisely what causes the difference between natives and near-natives.

6.2.2.5.2 Preferences

In order to gain a more precise analysis of native and near-native judgements, the preferences were calculated as usual, subtracting the ungrammatical from the grammatical judgements and taking the average across groups. This was to give a more finely grained indication of the changes in the ability to reject ungrammatical sentences. Also, we wished to compare the results with sentences with negative adverbial. The results are presented in Table 6-17 and the accompanying Figure 6-17:

| | Int | Adv | NN | N | All |
|-----------|--------|--------|--------|--------|---------------|
| P1 | 0.5714 | 0.9231 | 3.8125 | 5.0741 | 3.1143 |
| P2 | 0.8571 | 1.0769 | 4.0625 | 5.5556 | 3.4429 |
| P3 | 1.5 | 0.4615 | 0.25 | 5.1481 | 2.4286 |

Table 6-17 Mean preference in sentences with positive adverb for [+/-movement] (P1: no preverb, P2: prefix, P3: VM)

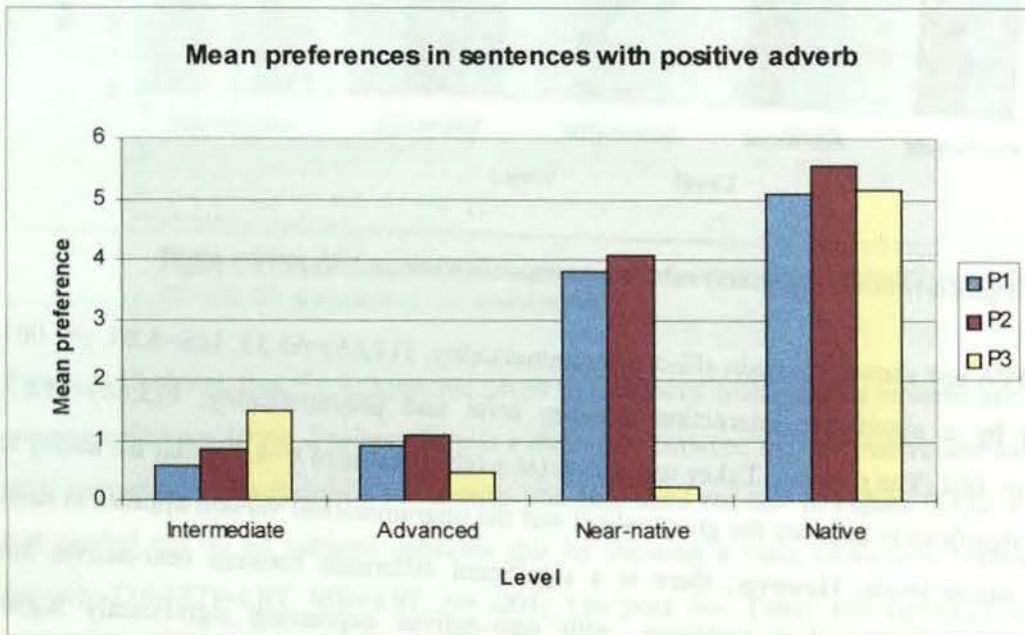


Figure 6-17 Mean preference in sentences with positive adverb for [+/-movement] (P1: no preverb, P2: prefix, P3: VM)

Figure 6-17 shows two clear trends in the preference scores. First, the established divide between the learners and near-natives/natives is still present. Second, even though near-native preferences resemble the natives' most, they are crucially different with respect to VM-ed verbs.

The ANOVA tests show that the main effect of level is highly significant, $F(3,66)=14.67$, $MS=17.61$, $p=.001$. The *post hoc* Tukey test ($q=3.63$) confirms our intuition that all of the non-native groups are significantly different from the natives, including the near-natives. The interaction between level by preverb is significant, $F(6,132)=2.78$, $MS=7.23$, $p=.014$. *Post hoc* multiple comparisons ($q=4.62$) confirm that the preferences given to VM-ed verbs by the near-natives are significantly lower than to any other verb type and they are significantly lower than the preferences given to the same VM-ed verbs by the natives. This indicates that *near-natives representations are divergent with regard to verbs with VMs (verbal modifiers) in sentences with positive adverbs*. These results are confirmed by the ANOVA test done only on the near-natives and natives, with level and prefix having significant main effects, $F(1,41)=12.33$, $MS=15.91$, $p=.001$ for level, $F(2,82)=7.81$, $MS=6.54$, $p=.001$ for prefix. These main effects are qualified by the interaction between the two, $F(2,82)=6.37$, $MS=6.54$, $p=.003$.

6.2.2.5.3 Summary

When we compare the judgement patterns given to sentences with negative adverbs as opposed to positive adverbs, we find that there is a discrepancy between the two in the case of near-native learners. While they seem to have acquired target-like syntactic representations for sentences with negative adverbs, they appear to have divergent representations for sentences with positive adverbs, particularly in sentences with VM-ed verbs. When we investigate the reason for the near-natives' behaviour on the VM-ed verbs, the possibility emerges that their judgements are different from the judgements given to other types of prefixed verbs, because there might have been an inadvertent selection-bias in the test materials. The VM sentences contain a *mindenki* 'everybody', which is a positive universal quantifier and not a positive adverb. From the self-reports the subjects provided after the experiment, it transpires that even at a very high level of proficiency

learners have problems with universal quantifiers. A quote from one of these reports is especially pertinent:

‘... a szórend ügyben nagyon segített egy előadás, amit a debreceni nyári egyetemen hallottam 1994-ben. Az előadó Kiss. É Katalin volt, és akkor tudtam meg először, hogy pl. a ‘mindenki’ típusú szavak nem állhatnak fókuszban, a negatívok azonban mindig fókuszban állnak. Az is nagyon hasznos volt, hogy fókusz és (?) quantifier helyek vannak a mondatban...’ (Michael Johnston, personal communication)

‘...as far as the word order is concerned, I found a lecture very useful that I heard at the Debrecen Summer School in 1994. The lecturer was Katalin É.Kiss and I heard for the first time that e.g. words of the type ‘mindenki’ can not appear in the focus position, whereas the negatives always appear in focus. It was also useful to hear that there are focus and quantifier slots in the sentence...’ (Michael Johnston, p.c., *my translation*)

This constitutes evidence that *learners overgeneralise the focus operator rule to universal quantifiers*. The recovery from this overgeneralization happens very late in the acquisition process and may be one of those features that need negative evidence⁹⁷. This is what the above quote from one of the most advanced students strongly suggests.

6.2.2.6 Movement in *wh*-questions

Hungarian *wh*-questions follow the pattern of focused sentences (see section 4.9.2.2). They contain an FP whose Spec hosts the *wh*-phrase and the verb moves to the F⁰ head. Therefore the sentence-initial position of the *wh*-phrase and the position of the verb before the preverb are diagnostics of an FP projection. In English *wh*-phrases are also sentence-initial, but they are moved to Spec,CP. There is subject-auxiliary inversion (SAI), which means that the auxiliary carrying Tense and Agr features appears in the head of C⁰ while the main verb (if there is one) stays in situ after the subject (see section 4.9.2.1). It was hypothesised that although learners at the early stages will prepose the *wh*-phrase to the sentence-initial position (they will be able to

⁹⁷ See White (1990/1991, 1991a,b) and Trahey and White (1993) for the argument that the configuration of the L1 and the TL may lead learners into a stage where only negative evidence can ‘disabuse’ them of a misconceived TL feature. Also, see Gibson and Wexler (1994), where it is pointed out that learners may end up in ‘local maxima’, i.e. a state where no further positive input can possibly improve the ILG representations of the learner.

instantiate a strong 'N' feature of a higher interpretable feature-projection), their ILG will not have the verb-movement diagnostic of instantiation of the 'V' feature of the FP projection. Thus their judgements regarding verb-movement will be indeterminate. According to the hypotheses,

- 1) learners will initially transfer the absence of FP from their L1. They will have sentence-initial *wh*-phrases but without the verb movement characteristic of Hungarian. Thus, they will accept sentences with unmoved verbs.
- 2) learners at the intermediate stages will not reject ungrammatical sentences, due to the enduring effect of L1, but they will accept the grammatical sentences as the FP becomes gradually instantiated in their ILG. Hence intermediate subjects will not distinguish between the grammatical and ungrammatical sentence types. Their judgements will be indeterminate.
- 3) when the FP is instantiated in the ILG, grammatical sentences with verb movement will be preferred to ungrammatical sentences. This should happen at the same time as the instantiation of the FP in focused sentences.

The test sentences in this category have three linguistic variables: preverb type (no preverb, prefix, VM), verb type (main, aux) and extraction type (subject, object). They are as follows:

| Preverb | Verb | Extr | Sentence type | Example |
|---------|------|------|----------------|--|
| No | main | S | [+ F-movement] | Ki hall rosszul? <i>who hears-he badly</i> 'Who is hard of hearing?' |
| | | | [- F-movement] | *Ki bátran viselkedett? <i>who bravely behaved-he?</i> 'Who was brave?' |
| | | O | [+ F-movement] | Mit iszol szívesebben? <i>what-ACC drink-you rather</i> 'What do you prefer drinking?' |
| | | | [- F-movement] | *Mit jól beszél? <i>what-ACC well speaks-he</i> 'What does he speak well?' |
| | aux | S | [+ F-movement] | Ki szokott mosogatni? <i>who habitual-he wash-up-INF</i> 'Who does the washing up usually?' |

| | | | | |
|--------|------|---|----------------|---|
| | | | [- F-movement] | *Ki aludni szeretne? <i>who sleep-INF would-like</i> 'Who would like to sleep?' |
| | | O | [+ F-movement] | Mennyit fogsz keresni? <i>how much-ACC will-you earn-INF</i> 'How much will you earn?' |
| | | | [- F-movement] | *Mit játszani akarsz? <i>what-ACC play-INF want-you</i> 'What do you want to play?' |
| prefix | main | S | [+ F-movement] | Ki érkezett meg? <i>who arrived-he PREF</i> 'Who arrived?' |
| | | | [- F-movement] | *Mi meg-van? <i>what PREF-is</i> 'What have you found?' |
| | | O | [+ F-movement] | Kit hívtál meg? <i>who-ACC invited-you PREF</i> 'Who did you invite?' |
| | | | [- F-movement] | *Mit el-felejtettél? <i>what-ACC PREF-forgot-you</i> 'What have you forgotten?' |
| | aux | S | [+ F-movement] | Ki fog meg-gyógyulni? <i>who will-he PREF-recover-INF</i> 'Who will recover?' |
| | | | [- F-movement] | *Ki el akar jönni? <i>who PREF wants-he come-INF</i> 'Who wants to come?' |
| | | O | [+ F-movement] | Mit fogsz meg-bocsátani neki? <i>what-ACC will-you PREF-forgive-INF him-for</i> 'What will you forgive him for?' |
| | | | [- F-movement] | *Mit el tudsz olvasni? <i>what-ACC PREF can-you read-INF</i> 'What can you read?' |
| VM | main | S | [+ F-movement] | Mi jutott eszedbe? <i>what came-it mind-yours-to</i> |

| | | | | |
|-----|---|--|----------------|---|
| | | | [- F-movement] | 'What did you remember? *Mi lassan múlik? <i>what slowly passes-it</i> 'What passes slowly?' |
| | O | | [+ F-movement] | Most mit adott kölcsön? <i>now what-ACC gave-he PREF</i> 'Now what did he lend?' |
| | | | [- F-movement] | *Mit finomra vágunk? <i>what-ACC fine-into chop-we</i> 'What do you chop finely?' |
| aux | S | | [+ F-movement] | Ki szokott videót nézni? <i>who habitual-he video-ACC watch-INF</i> 'Who does usually watch videos?' |
| | | | [- F-movement] | *Ki krumplit akar pucolni? <i>who spud-ACC wants-he clean-INF</i> 'Who wants to peel potatoes?' |
| | O | | [+ F-movement] | Kit fog feleségül venni? <i>who-ACC will-he wife-as take-INF</i> 'Who will he marry?' |
| | | | [- F-movement] | *Mit rendbe kell tenni? <i>what-ACC order-into must put-INF</i> 'What do you have to clean up?' |

The analysis took the following form:

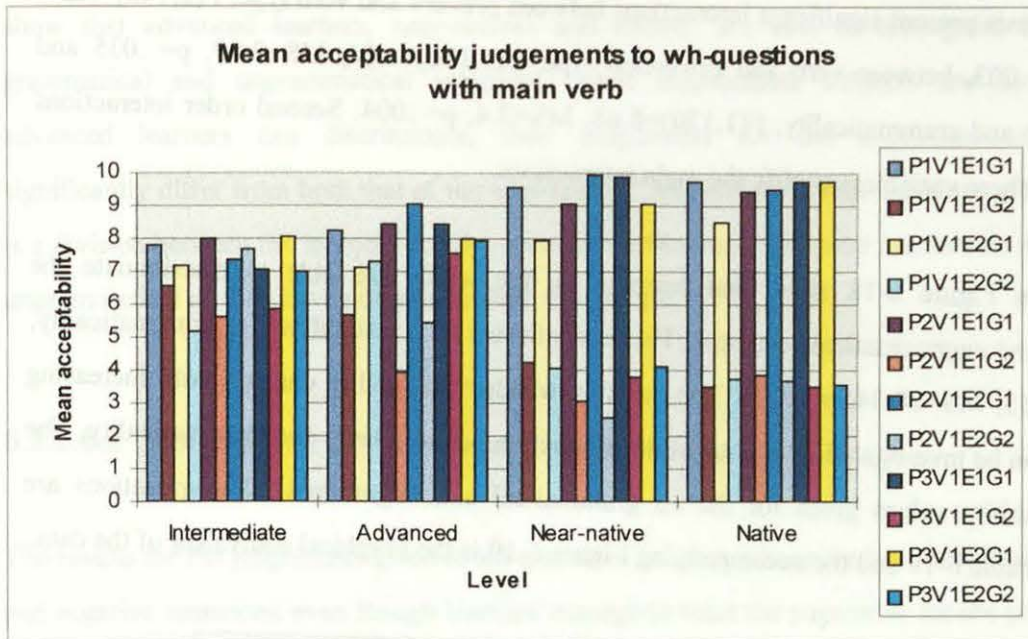
- A five-way ANOVA test with repeated measures for preverb type (no, prefix, VM), verb type (main, aux), extraction type (subject, object) and grammaticality (-,+ v-movement) was carried out on *mean acceptability* scores with proficiency level as grouping factor (see Table 6a in Appendix F).
- A four-way ANOVA test on the *mean preference* for the grammatical over the ungrammatical sentences was carried out with preverb, verb, extraction type as repeated measures and level as grouping factor (see Table 6b in Appendix F).
- Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

6.2.2.6.1 Results: all variables, mean acceptability

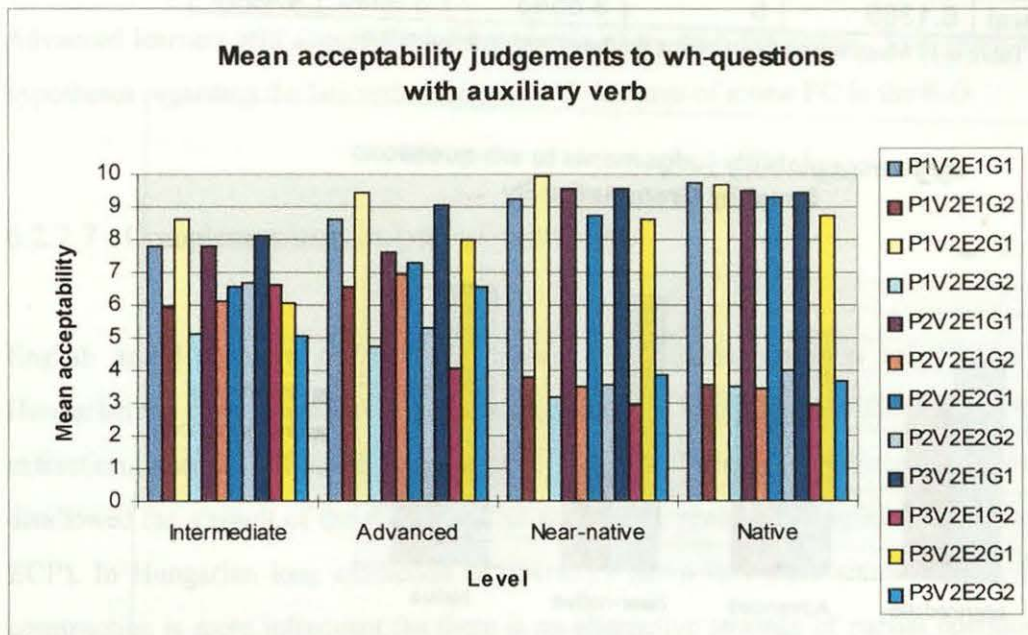
The acceptability scores given to all *wh*-questions are displayed in Table 6-18 and the data in this table are graphically presented in the two graphs in Figure 6-18. The graphs represent the mean acceptability judgements given to *wh*-questions with main verbs and auxiliaries separately.

| | Int | Adv | NN | N | All |
|----------|--------|--------|------|--------|--------|
| P1V1E1G1 | 7.7857 | 8.2308 | 9.55 | 9.7778 | 7.7857 |
| P1V1E1G2 | 6.5714 | 5.6923 | 4.25 | 3.5185 | 6.5714 |
| P1V1E2G1 | 7.2143 | 7.1538 | 7.95 | 8.5185 | 7.2143 |
| P1V1E2G2 | 5.2143 | 7.3077 | 4.05 | 3.7778 | 5.2143 |
| P1V2E1G1 | 7.7857 | 8.6154 | 9.25 | 9.7778 | 7.7857 |
| P1V2E1G2 | 5.9286 | 6.5385 | 3.8 | 3.5556 | 5.9286 |
| P1V2E2G1 | 8.6429 | 9.4615 | 9.95 | 9.6667 | 8.6429 |
| P1V2E2G2 | 5.1429 | 4.7692 | 3.2 | 3.5185 | 5.1429 |
| P2V1E1G1 | 8 | 8.4615 | 9.05 | 9.4074 | 8.4615 |
| P2V1E1G2 | 5.6429 | 3.9231 | 3.05 | 3.8889 | 3.9231 |
| P2V1E2G1 | 7.3571 | 9.0769 | 9.95 | 9.4815 | 9.0769 |
| P2V1E2G2 | 7.7143 | 5.4615 | 2.55 | 3.7037 | 5.4615 |
| P2V2E1G1 | 7.7857 | 7.6154 | 9.55 | 9.4815 | 7.6154 |
| P2V2E1G2 | 6.1429 | 6.9231 | 3.5 | 3.4444 | 6.9231 |
| P2V2E2G1 | 6.5714 | 7.3077 | 8.75 | 9.2963 | 7.3077 |
| P2V2E2G2 | 6.7143 | 5.3077 | 3.55 | 4 | 5.3077 |
| P3V1E1G1 | 7.0714 | 8.4615 | 9.85 | 9.7778 | 9.85 |
| P3V1E1G2 | 5.8571 | 7.5385 | 3.8 | 3.4815 | 3.8 |
| P3V1E2G1 | 8.0714 | 8 | 9.05 | 9.7407 | 9.05 |
| P3V1E2G2 | 7 | 7.9231 | 4.15 | 3.5926 | 4.15 |
| P3V2E1G1 | 8.1429 | 9.0769 | 9.55 | 9.4074 | 9.55 |
| P3V2E1G2 | 6.6429 | 4.0769 | 2.95 | 2.9259 | 2.95 |
| P3V2E2G1 | 6.0714 | 8 | 8.65 | 8.7407 | 8.65 |
| P3V2E2G2 | 5.0714 | 6.5385 | 3.85 | 3.6667 | 3.85 |

Table 6-18 Mean acceptability rating in all *wh*-questions (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary, E1: subject extraction, E2: object extraction, G1: grammatical, G2: ungrammatical)



Graph g *Wh*-questions with main verb



Graph h *Wh*-questions with auxiliary verb

Figure 6-18 Mean acceptability rating to *wh*-questions with a) main and b) auxiliary verbs (P1: no preverb, P2: prefix, P3: VM, V1: main verb, V2: auxiliary, E1: subject extraction, E2: object extraction, G1: grammatical, G2: ungrammatical)

The ANOVA tests present significant interactions between preverb and verb type, $F(2,140)=6.21$, $MS=3.84$, $p= .003$, between verb and extraction type, $F(1,170)=4.64$, $MS=2.09$, $p= .035$ and extraction type and grammaticality, $F(1,170)=8.68$, $MS=3.4$, $p= .004$. Second order interactions (ones between three variables) qualify the main interactions.

The graphs in Figure 6-18 show that learners on the whole are able to discriminate the grammatical and ungrammatical sentences. This is confirmed by a main effect for grammaticality, $F(1,70)=208.55$, $MS=28.34$, $p= .001$. The question whether this ability changes with increasing proficiency can be investigated if we look at the interaction between level and grammaticality. The mean acceptability values given for the all grammatical and ungrammatical *wh*-questions are displayed in Table 6-19 and the accompanying Figure 6-19 is the graphical equivalent of the data.

| | Intermediate | Advanced | Near-native | Native | Total |
|----------------------|--------------|----------|-------------|--------|---------------|
| Grammatical | 7.5417 | 8.2885 | 9.2583 | 9.4228 | 8.8232 |
| Ungrammatical | 6.1369 | 6 | 3.5583 | 3.5895 | 4.4865 |

Table 6-19 Mean acceptability rating for movement in *wh*-questions

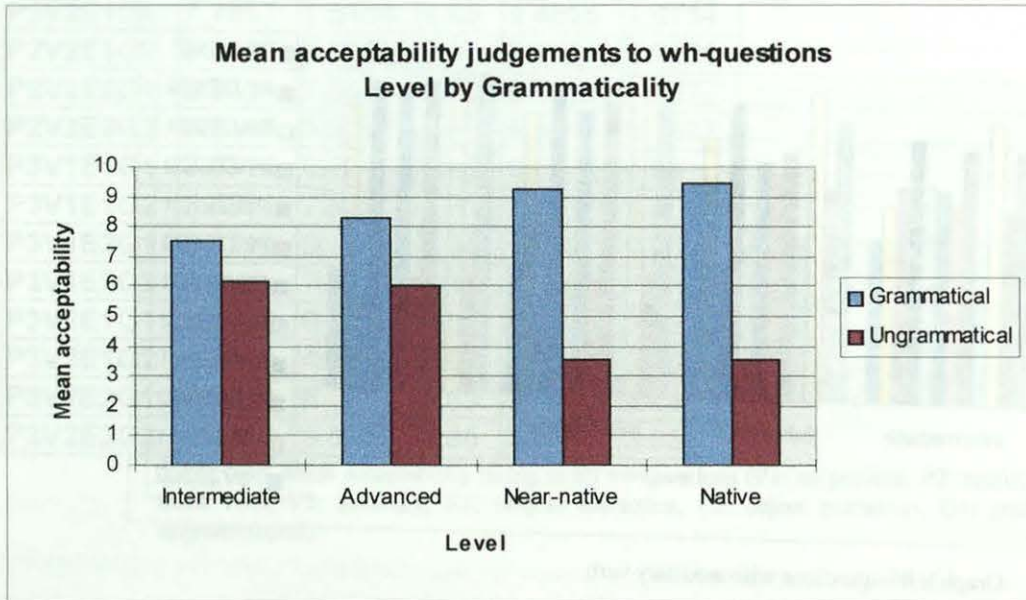


Figure 6-19 Mean acceptability rating for movement in *wh*-questions

The ANOVA test shows that the interaction between level and grammaticality is significant, $F(3,70)=19.23$, $MS=28.34$, $p= .001$. *Post hoc* multiple comparisons (at a tabled value of $q=4.29$)

show that advanced learners, near-natives and natives are able to distinguish between the grammatical and ungrammatical sentences, while intermediate subjects are not. Although advanced learners can discriminate, their judgements for the ungrammatical sentences significantly differ from both that of the near-natives' and natives'. This again suggests that there is a division between the learners and the near-natives/natives. Advanced learners do not reject the ungrammatical as they have not relinquished the L1 rule.

6.2.2.6.2 Summary

The results for the judgements given to *wh*-questions reinforce those we have obtained for focused and negative sentences: even though learners manage to reset the parameter for the preposition of operators in Hungarian, instantiation of verb movement does not follow automatically. In *wh*-questions preposition of *wh*-phrases alone does not indicate the projection of the Focus Phrase. Advanced learners still accept the L1-based rule of no verb movement. This again supports our hypotheses regarding the late instantiation of 'V' features of a new FC in the ILG.

6.2.2.7 Complementizers in long *wh*-extraction

English and Hungarian differ in the status of complementizers in subordinate clauses. In Hungarian the complementizer *hogy* 'that' is obligatory in subordinate clauses with long operator extraction, whereas in English it is optional, except in the case of subject extraction where it is disallowed (as a result of the subject-object asymmetry present in English - itself an effect of the ECP). In Hungarian long extraction of operators has a less clear status than in English. The construction is more infrequent (as there is an alternative strategy of partial operator movement, see next section) and its distribution within the grammar is more restricted.

The sentences that were tested are listed below. There were three independent linguistic variables: mood (declarative, subjunctive), extraction site (subject, object and adjunct extraction) and grammaticality (+,-*hogy*).

| Mood | Extr | Sentence type | Example sentence |
|------|------|---------------|--|
| decl | S | [+hogy] | Kit mondanak, hogy be-csapta Máriát? <i>who-ACC say-they, that PREF-cheated Mary-ACC</i> 'Who do they say cheated Mary?' |
| | | [-hogy] | *Mit hiszel, eszébe jutott? <i>what-ACC believe-you, mind-his-into came-it</i> 'What do you think, he remembered?' |
| | O | [+hogy] | Mit gondolsz, hogy meg-néztek? <i>what-ACC think-you, that PREF-saw-they</i> 'What do you think they saw?' |
| | | [-hogy] | *Mit hiszel, a tanár észre-vett? <i>what-ACC believe-you, the teacher mind-into-took-he</i> 'What do you think the teacher noticed?' |
| Adj | Adj | [+hogy] | Mikor gondolod, hogy haza-jön? <i>when think-you, that home-to-comes-he</i> 'When do you think he will come home?' |
| | | [-hogy] | *Kivel tudod, együtt-jár? <i>who-with know-you, together-goes-he</i> 'Who do you know he goes out with?' |
| | S | [+hogy] | Kit akarsz, hogy meg-nézzé a gyereket? <i>who-ACC want-you, that PREF-see-SUBJ-he the child-ACC</i> 'Who do you want to see the child?' |
| | | [-hogy] | *Kit szeretnél, reggelit készítsen? <i>who-ACC would-like-you, breakfast-ACC make-SUBJ-he</i> 'Who would you like to make breakfast?' |
| subj | O | [+hogy] | Kit akarsz, hogy be-mutasson? <i>who-ACC want-you, that PREF-introduce-SUBJ-he</i> 'Who do you want him to introduce to you?' |
| | | [-hogy] | *Mit szeretnél, rendbe rakjak? <i>what-ACC would-like-you, order-into put-SUBJ-I</i> 'What would you like me to clean?' |
| | Adj | [+hogy] | Hova szeretnéd, hogy el-utazzunk? <i>where-to would-like-you, that PREF-travel-SUBJ-we</i> 'Where would you like us to go?' |
| | | [-hogy] | *Hol akarod, autót béreljünk? |

where want-you, car-ACC borrow-SUBJ-we
 ‘Where would you like us to borrow a car?’

It was hypothesised that

1. initially, learners will transfer the values for complementation in their L1 into the ILG and accept the ungrammatical subject-extracted sentences without a complementizer. The object-extracted sentences will also be accepted without the complementizer, but to a lesser degree.
2. learners at later stages will have difficulty reanalysing the lexical specifications of the complementizer and assigning it the relevant TL values as relevant PLD is rare and obscure.

These hypotheses were tested by the following statistical tests:

- a) A four-way ANOVA test with repeated measures for mood (declarative, subjunctive), extraction site (subject, object, adjunct) and grammaticality (-,+*hogy*) was carried out on *mean acceptability* scores with proficiency level as grouping factor (Table 7a in Appendix F).
- b) A three-way ANOVA test on the *mean preference* for the grammatical [+*hogy*] over the ungrammatical [-*hogy*] sentences was carried out with mood and extraction type as repeated measures and level as grouping factor (see Table 7b in Appendix F).
- c) *Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

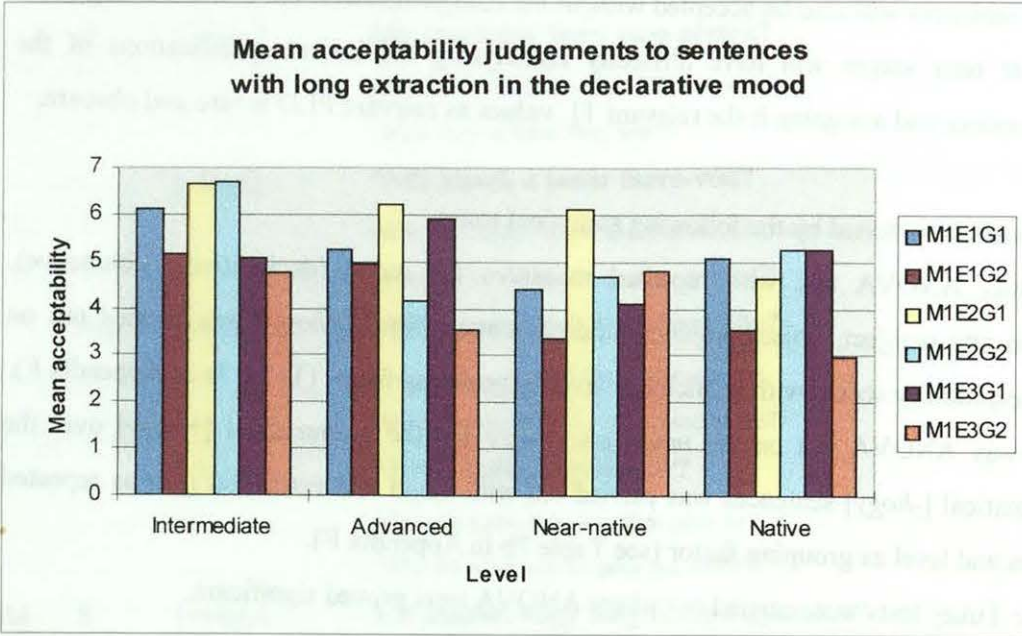
6.2.2.7.1 Results: all variables, mean acceptability

The mean scores given to the long extraction sentences are given in Table 6-20 with the accompanying graphs in Figure 6-20. The graphs display declarative and subjunctive sentences separately:

| | Int | Adv | NN | N | All |
|---------------|------------|------------|-----------|----------|------------|
| M1E1G1 | 6.1429 | 5.2308 | 4.4375 | 5.0741 | 5.1714 |
| M1E1G2 | 5.1429 | 4.9231 | 3.375 | 3.5556 | 4.0857 |
| M1E2G1 | 6.6429 | 6.2308 | 6.125 | 4.6296 | 5.6714 |
| M1E2G2 | 6.7143 | 4.1538 | 4.6875 | 5.2593 | 5.2143 |
| M1E3G1 | 5.0714 | 5.9231 | 4.125 | 5.2593 | 5.0857 |
| M1E3G2 | 4.7857 | 3.5385 | 4.8125 | 2.963 | 3.8571 |
| M2E1G1 | 6.3571 | 6.8462 | 6.4375 | 6.8889 | 6.6714 |

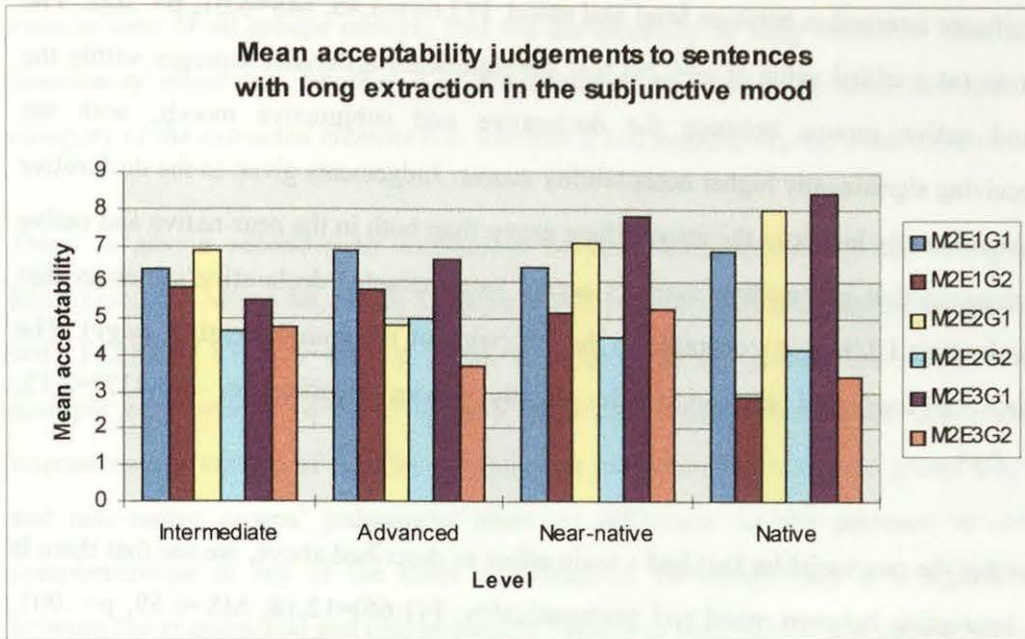
| | | | | | |
|---------------|--------|--------|--------|--------|--------|
| M2E1G2 | 5.8571 | 5.7692 | 5.1875 | 2.8519 | 4.5286 |
| M2E2G1 | 6.8571 | 4.8462 | 7.0625 | 7.963 | 6.9571 |
| M2E2G2 | 4.6429 | 5 | 4.5 | 4.1481 | 4.4857 |
| M2E3G1 | 5.5 | 6.6154 | 7.8125 | 8.4444 | 7.3714 |
| M2E3G2 | 4.7857 | 3.6923 | 5.3125 | 3.4444 | 4.1857 |

Table 6-20 Mean acceptability rating in sentences with long extraction (M1: declarative, M2: subjunctive, E1: subject, E2: object, E3: adjunct extraction, G1: grammatical [+hogy], G2: ungrammatical [-hogy])



Graph i Long extraction in declarative mood

| Condition | Intermediate | Advanced | Near-native | Native |
|-----------|--------------|----------|-------------|--------|
| M1E1G1 | 6.0 | 5.2 | 4.3 | 5.0 |
| M1E1G2 | 5.1 | 4.9 | 3.2 | 3.4 |
| M1E2G1 | 6.5 | 6.1 | 6.0 | 4.5 |
| M1E2G2 | 6.5 | 4.1 | 4.6 | 5.2 |
| M1E3G1 | 5.0 | 5.8 | 4.0 | 5.2 |
| M1E3G2 | 4.7 | 3.5 | 4.7 | 2.8 |



Graph j Long extraction in subjunctive mood

Figure 6-20 Mean acceptability rating in sentences with long extraction a) in declarative and b) subjunctive mood (M1: declarative, M2: subjunctive, E1: extracted subject, E2: extracted object, E3: extracted adjunct, G1: grammatical [+*hogy*], G2: ungrammatical [-*hogy*])

By comparing the graphs in Figure 6-20 we can make several observations. First, the judgements are very different for informants at various levels. Second, the distinction between grammatical and ungrammatical sentences is not always in the direction of the grammatical being rated higher. Third, the patterns of judgements given to declarative and subjunctive sentences are different. Last, comparing the near-natives with the natives, we can see that there are differences in the judgements.

The ANOVA tests showed a significant main effect for mood, $F(1,66)=16.51$, $MS=6.61$, $p=.001$ (with significantly higher scores for the subjunctive) and a significant main effect for grammaticality, $F(1,66)=66.66$, $MS=7.06$, $p=.001$ (with significantly higher scores for the [+*hogy*] embedded clauses). These main effects are qualified by significant interactions with level. There is a significant interaction between level and grammaticality, $F(3,66)=5.68$, $MS=7.06$, $p=.002$. We will see below where exactly the source of significance lies between the groups when we examine the developmental profile.

There is a significant interaction between level and mood, $F(3,66)=3.45$, $MS=6.61$, $p=.022$. The Tukey test shows (at a tabled value of $q=4.29$) that the significant difference emerges within the near-native and native groups between the declarative and subjunctive moods, with the subjunctive receiving significantly higher acceptability scores. Judgements given to the declarative sentences are significantly higher in the intermediate group than both in the near-native and native groups. This suggests that intermediate learners accept long extracted declarative sentences that are acceptable in their L1 but unacceptable in the L2 (without the complementizer *hogy*). The interaction between level and extraction site slightly misses significance, $F(3,132)=2.13$, $MS=6.52$, $p=.053$.

Examining further the two variables that had a main effect as described above, we see that there is a significant interaction between mood and grammaticality, $F(1,66)=12.18$, $MS=6.59$, $p=.001$. The results of the *post hoc* Tukey test (at a tabled value of $q=3.63$) indicate a significant difference between the two versions of the subjunctive, where the sentences with [+*hogy*] receive significantly higher scores than the ones without [-*hogy*]. Also, there is a significant difference between the ratings to the declaratives with [+*hogy*] and subjunctives with [+*hogy*], with the subjunctives receiving higher scores. These results are qualified by a second-order interaction effect between level, mood and grammaticality, $F(3,66)=4.87$, $MS=6.59$, $p=.004$. *Post hoc* Tukey tests show that the significant differences described earlier in this paragraph are present only at the near-native and native levels.

The ANOVA test also shows a significant interaction between mood and extraction site, $F(2,139)=4.91$, $MS=4.57$, $p=.009$, suggesting that *the acceptability of declarative and subjunctive sentences is a function of what constituent is extracted from them*. *Post hoc* multiple comparisons (at a tabled value of $q=4.03$) show that in the declarative mood there is a significant difference between object and adjunct extraction, with the object extraction being awarded significantly higher acceptability scores. Both subject and adjunct extraction is accepted significantly higher in the subjunctive mood than in the declarative mood. The ANOVA test still shows a significant interaction between mood and extraction site in the near-native/native comparisons, $F(2,82)=3.78$, $MS=4.02$, $p=.027$. However, *post hoc* Tukey tests do not show any relevant significant differences between the two groups. Nevertheless, the results from the

comparisons of all groups confirm that *the acceptability of long extracted sentences is a joint function of mood (i.e. whether it is a declarative or subjunctive sentence) and the syntactic category of the extracted element (i.e. whether it is a subject, object, or an adjunct)*.

There is also a second-order interaction between level, extraction site and grammaticality, $F(6,132)=2.67$, $MS=4.88$, $p=.018$, which is still present in the near-native/native comparisons as well, $F(2,82)=5.83$, $MS=4.39$, $p=.004$. Comparing all the groups, the results of the *post hoc* multiple comparisons ($q=5.01$) show a significant difference between the grammatical and ungrammatical version of adjunct extraction as judged by the advanced group. The intermediate and near-native groups' judgements show no difference for the presence or absence of the complementizer in any of the kinds of extraction. However, there is a significant difference between the grammatical and ungrammatical version of both subject and adjunct extraction for the native group. This shows that native speakers do not distinguish between [+hogy] and [-hogy] in object extraction, but they judge the subject and adjunct extraction without the complementizer *hogy* as ungrammatical. As we mentioned, for the advanced learners the [+hogy] vs. [-hogy] distinction exists only in adjunct extraction. This supports our hypothesis that learners will initially accept subject and object extraction *without* the complementizer. This shows the continued effect of the L1 at the advanced level. Learners at the intermediate level accept both the grammatical and ungrammatical versions, which suggests that they are still using the L1 value of optional complementizers, but do not reject the L2 value either. This is a characteristic of indeterminate grammars, as will be shown in the next section on preferences. Crucially, *near-natives differ from natives in their inability to make native-like differences in judgements for subject and adjunct long extraction*.

Above we have reported the F values for the significant main effect of grammaticality and the significant interaction between level and grammaticality. Table 6-21 displays the mean acceptability scores and Figure 6-21 shows the results graphically.

| | Intermediate | Advanced | Near-native | Native | Total |
|------------------------------|--------------|----------|-------------|--------|---------------|
| Grammatical [+hogy] | 6.0952 | 5.9487 | 6 | 6.3765 | 6.1548 |
| Ungrammatical [-hogy] | 5.3214 | 4.5128 | 4.6458 | 3.7037 | 4.3929 |

Table 6-21 Mean acceptability rating for complementizers in sentences with long extraction

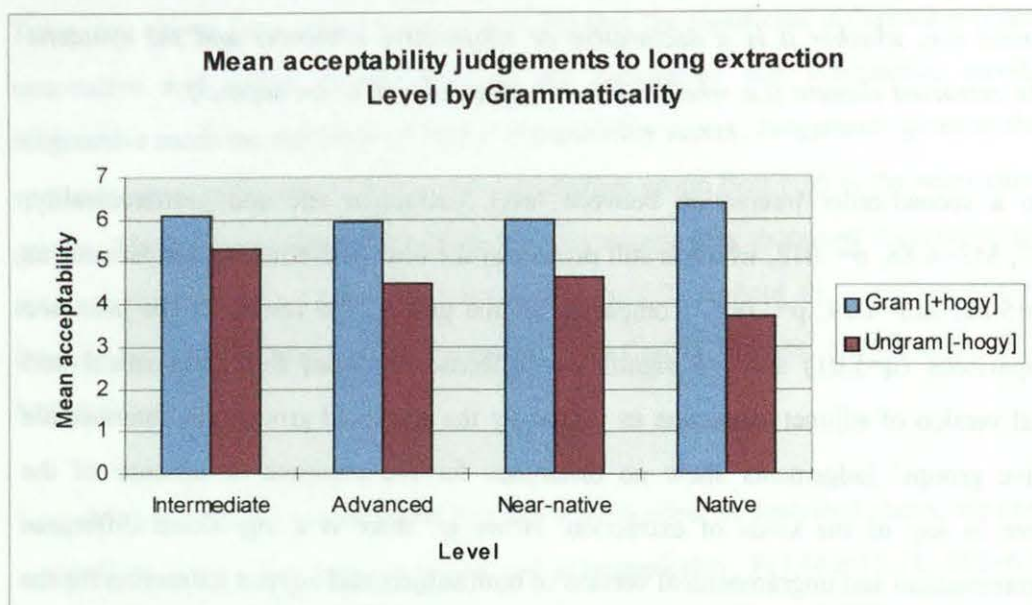


Figure 6-21 Mean acceptability rating for complementizers in sentences with long extraction

In the *post hoc* multiple comparisons (at a tabled value of $q=4.29$) significant differences were found between the grammatical [+*hogy*] and ungrammatical [-*hogy*] sentences from the advanced level onwards. This indicates that learners at the advanced level start to reject incorrect sentences without [-*hogy*], suggesting that the L1 value is rejected and the L2 preferred. However, near-natives are less able to discriminate between sentences with or without the complementizer *hogy*. There is a significant difference between the scores given to the ungrammatical version in the intermediate and native groups, with the natives rejecting them significantly more than the intermediates. This suggests that learners in the intermediate group have still not relinquished the L1 value for complementizers. Let us see the difference between the near-natives and natives.

6.2.2.7.2 Preferences

As usual, mean preference scores were calculated for each group and an ANOVA test was run on the means to see the development of strength of judgements and any differences between natives and near-natives. The results can be seen in Table 6-22 and the graphical representations of the

results are in Figure 6-22. Recall, that preferences in this set of data are for the presence or absence of complementizers, i.e. [+/-*hogy*] and not for the movement of an element.

| | Int | Adv | NN | N | All |
|------|---------|---------|---------|---------|--------|
| M1E1 | 1 | 0.3077 | 1.0625 | 1.5185 | 1.0857 |
| M1E2 | -0.0714 | 2.0769 | 1.4375 | -0.6296 | 0.4571 |
| M1E3 | 0.2857 | 2.3846 | -0.6875 | 2.2963 | 1.2286 |
| M2E1 | 0.5 | 1.0769 | 1.25 | 4.037 | 2.1429 |
| M2E2 | 2.2143 | -0.1538 | 2.5625 | 3.8148 | 2.4714 |
| M2E3 | 0.7143 | 2.9231 | 2.5 | 5 | 3.1857 |

Table 6-22 Mean preferences in long extraction for [+/-*hogy*] (M1: declarative, M2: subjunctive, E1: subject extraction, E2: object extraction, E3: adjunct extraction)

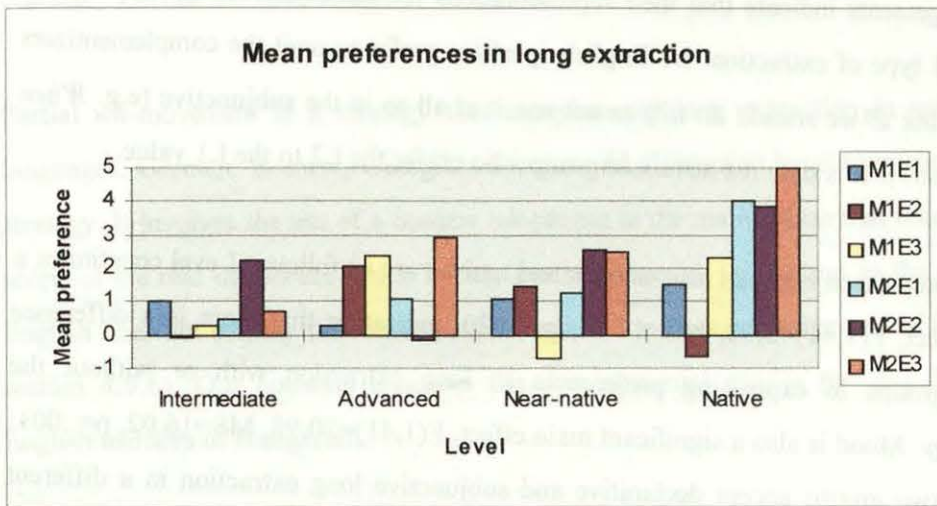


Figure 6-22 Mean preferences in long extraction for [+/-*hogy*] (M1: declarative, M2: subjunctive, E1: subject extraction, E2: object extraction, E3: adjunct extraction)

When we examine Figure 6-22 above, it transpires that there are differences in the group preferences in almost all categories and a systematic pattern is not easily detectable. The results of the ANOVA test show a significant main effect of level, $F(3,66)=5.68$, $MS=14.12$, $p=.002$ and *post hoc* comparisons ($q=3.63$) show that the source of the main effect is a significant difference between the intermediate and the native groups. The advanced and near-native groups do not differ significantly from natives. The other significant main effect is mood, $F(1,66)=12.18$, $MS=13.19$, $p=.001$ and this main effect is qualified by a significant interaction between level and mood, $F(3,66)=4.87$, $MS=13.19$, $p=.004$. The *post hoc* Tukey test ($q=4.29$) shows that there is a significant difference between the declarative and subjunctive moods in the natives, *with the*

subjunctive long extraction with [+hogy] receiving significantly higher preference scores than the declarative long extraction with [+hogy]. This suggests that natives accept long extraction more if it is used in the subjunctive mood. The intermediate and advanced learners' preference for the subjunctive with [+hogy] is significantly lower than that expressed by natives.

The interaction between level and extraction site is significant, $F(6,132)=2.67$, $MS=9.76$, $p=.018$. *Post hoc* comparisons ($q=4.62$) show that the intermediates' and near-natives' preference for adjunct extraction with [+hogy] is significantly lower than the natives' preference. This is the same result as we obtained above. Again, it suggests that intermediates and near-natives do not accept adjunct extraction with the complementizer *hogy* in Hungarian, although it is grammatical in the L1. Their judgements indicate that their representations for the adjunct long extraction is reminiscent to the L1 type of extraction. L1 English speakers prefer to omit the complementizers (e.g. *How do you think Ø we should do it?*) or not use it at all as in the subjunctive (e.g. *When would you like to meet?*). It is only the advanced group who prefer the L2 to the L1 value.

The results of the comparison between near-natives and natives are as follows. Level constitutes a significant main effect, $F(1,41)=5.90$, $MS=17.77$, $p=.020$, indicating that there is a difference between the two groups in expressing preferences to long extraction with or without the complementizer *hogy*. Mood is also a significant main effect, $F(1,41)=20.98$, $MS=16.02$, $p=.001$, indicating that the two groups accept declarative and subjunctive long extraction in a different way. The interaction between level and mood is not significant, but there is a significant interaction between level and extraction site, $F(2,82)=5.83$, $MS=8.79$, $p=.004$, with the natives preferring adjunct extraction with the complementizer *hogy* significantly more than the near-native speakers.

6.2.2.7.3 Summary

The results show that learners both at the intermediate and the near-native level prefer the L1 value for omitting the complementizer in clauses where the long extracted element is an adjunct. They also follow L1 complementation in accepting missing complementizers in subject and object

extracted sentences. This clearly shows an L1 influence, which is temporarily relinquished in the case of advanced students. Advanced students show some progress toward the TL by preferring adjunct extraction with the complementizer rather than without it, which is contrary to what their L1 allows. Crucially, near-native speakers show a significant difference from other learners in their ability to reject ungrammaticality in complementation in long extracted sentences. The interaction between mood and extraction in the mature language is picked up by the near-natives; however, their judgements are different on subject and adjunct long extractions (they accept them without the complementizer *hogy* which is non-target-like).

6.2.2.8 Partial *wh*-movement

Partial *wh*-movement is a strategy that complements long extraction in some of the worlds' languages. German, Romani, Georgian, Basque and Hungarian have been shown to employ this strategy. It involves the use of a dummy *wh*-phrase in the main clause that takes the reference and scope of the real *wh*-phrase which is only partially moved, i.e. it stays in the subordinate clause. English does not employ this construction, instead it makes extensive use of long extraction (see section 4.9.6). Our question concerns the developmental profile for this construction among English learners of Hungarian.

Our hypothesis was that in the beginning learners will accept long extraction but will not have determinate intuitions concerning the partial *wh*-movement construction which is missing in their L1. However, partial *wh*-movement is a UG strategy, thus we expect learners to be able to acquire it. We predict that only when the FP projection is instantiated will learners prefer the correct version with the filled FP in the subordinate clause and the dummy *wh*-phrase in the main clause.

These hypotheses were tested using the following statistical measures:

- a) A four-way ANOVA test with repeated measures for mood (declarative, subjunctive), extraction site (subject, object, adjunct) and grammaticality (-,+ verb movement) was carried out on *mean acceptability* scores with proficiency level as grouping factor (see Table 8a in Appendix F).

- b) A three-way ANOVA test on the *mean preference* for the grammatical over the ungrammatical sentences was carried out with mood and extraction site as repeated measures and level as a grouping factor (see Table 8b in Appendix F).
- c) *Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

The test sentences had the same linguistic variables as the long-extracted sentences, except that the grammaticality of the partial *wh*-moved sentences depended on verb-movement or the lack of it. The test sentences are exemplified below.

| Mood | Ext | Gram | Example sentence |
|------|-----|--------|--|
| decl | S | [+mov] | Mit mondanak, hogy ki vette el Jutkát? <i>what-ACC say-they, that who took-he PREF Judy-ACC</i> 'Who do they say married Judy?' |
| | | [-mov] | *Mit hiszel, hogy mi a fejedbe szállt? <i>what-ACC believe-you, that what the head-yours-into flew-it</i> 'What do you think has gone into your head?' |
| | O | [+mov] | Mit gondolsz, hogy kit kérdezett meg? <i>what-ACC think-you, that who-ACC asked-he PREF</i> 'Who do you think he asked?' |
| | | [-mov] | *Mit hiszel, hogy mit nyilvánosságra hozott a kormány? <i>what-ACC think-you, that what-ACC publicity-into brought the government</i> 'What do you think the government announced?' |
| Adj | | [+mov] | Mit gondolsz, hogy hol esett ki a táskából? <i>what-ACC think-you, that where fell-it out the bag-yours-from</i> 'Where do you think it fell out of your bag?' |
| | | [-mov] | *Mit tudsz, hogy miért otthon maradt? <i>what-ACC know-you, that why home-at stayed-he</i> 'Why do you think he stayed at home?' |
| subj | S | [+mov] | Mit akartok, hogy ki mondja el a beszédet? <i>what-ACC want-you-pl, that who say-SUBJ-he PREF the speech-ACC</i> 'Who do you want to make the speech?' |
| | | [-mov] | *Mit szeretnél, hogy ki részt vegyen? <i>what-ACC would-like-you, that who part-ACC take-SUBJ-he</i> 'Who would you like to take part?' |

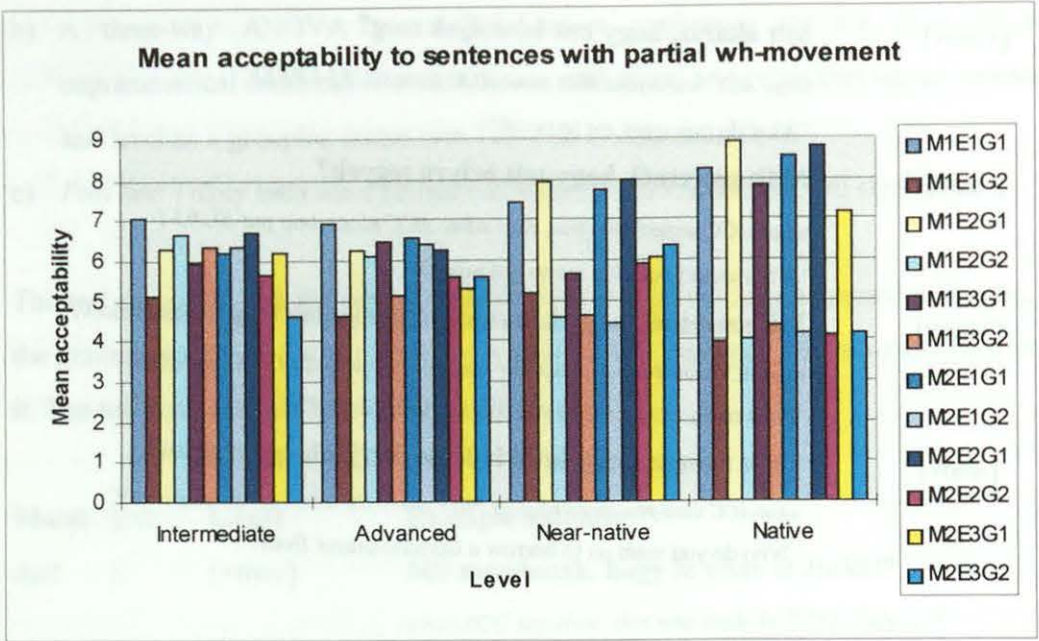
| | | |
|-----|--------|---|
| O | [+mov] | Mit akarsz, hogy mit kóstoljak meg? <i>what-ACC want-you, that what-ACC taste-SUBJ-I PREF</i> 'What do you want me to taste?' |
| | [-mov] | *Mit szeretnél, hogy mit helyre tegyek? <i>what-ACC would-like-you, that what-ACC place-into put-SUBJ-I</i> 'What would you like me to put away?' |
| Adj | [+mov] | Mit szeretnél, hogy hányszor látogassalak meg benneteket? <i>what-ACC would-like-you that how-many-times visit-SUBJ-I PREF you-pl-ACC</i> 'How many times would you like me to visit you?' |
| | [-mov] | *Mit akarsz, hogy kitől kölcsön kérjünk egy magnót? <i>what-ACC want-you, that who-from PREF ask-SUBJ-we a cassette-player-ACC</i> 'Who do you want us to borrow a cassette-player from?' |

6.2.2.8.1 Results: all variables, mean acceptability

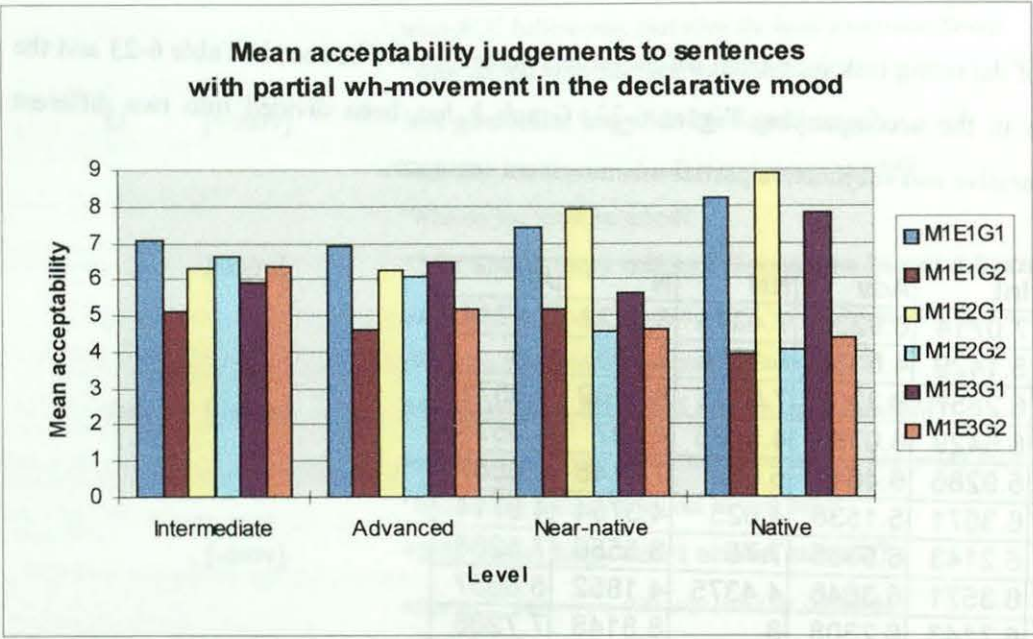
The results of the rating task for partial *wh*-movement sentences can be seen in Table 6-23 and the three graphs in the accompanying Figure 6-23. Graph k has been divided into two different graphs: declarative and subjunctive partial *wh*-movement sentences.

| | Int | Adv | NN | N | All |
|---------------|--------|--------|--------|--------|--------|
| M1E1G1 | 7.0714 | 6.9231 | 7.4375 | 8.2222 | 7.5714 |
| M1E1G2 | 5.1429 | 4.6154 | 5.1875 | 3.963 | 4.6 |
| M1E2G1 | 6.2857 | 6.2308 | 7.9375 | 8.8889 | 7.6571 |
| M1E2G2 | 6.6429 | 6.0769 | 4.5625 | 4.037 | 5.0571 |
| M1E3G1 | 5.9286 | 6.4615 | 5.625 | 7.8148 | 6.6857 |
| M1E3G2 | 6.3571 | 5.1538 | 4.625 | 4.3704 | 4.9714 |
| M2E1G1 | 6.2143 | 6.5385 | 7.75 | 8.5556 | 7.5286 |
| M2E1G2 | 6.3571 | 6.3846 | 4.4375 | 4.1852 | 5.0857 |
| M2E2G1 | 6.7143 | 6.2308 | 8 | 8.8148 | 7.7286 |
| M2E2G2 | 5.6429 | 5.6154 | 5.875 | 4.1111 | 5.1 |
| M2E3G1 | 6.2143 | 5.3077 | 6.0625 | 7.1852 | 6.3857 |
| M2E3G2 | 4.6429 | 5.6154 | 6.375 | 4.1481 | 5.0286 |

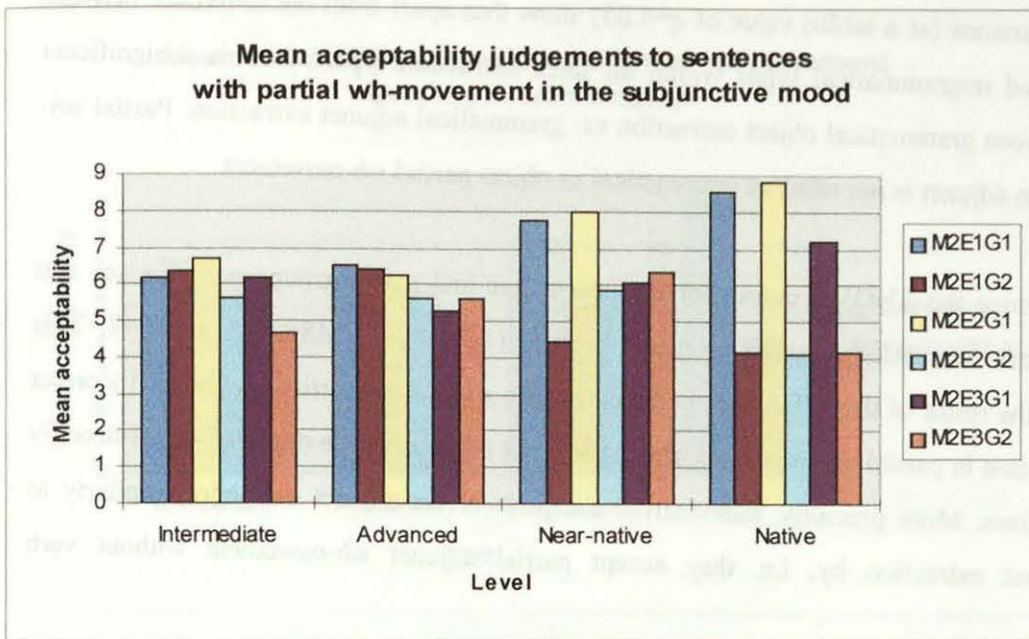
Table 6-23 Mean acceptability rating in sentences with partial *wh*-movement (M1: declarative, M2: subjunctive, E1: extracted subject, E2: extracted object, E3: extracted adjunct, G1: grammatical [+movement], G2: ungrammatical [-movement])



Graph k All partial *wh*-movement sentences



Graph l Partial *wh*-movement in declarative mood



Graph m Partial *wh*-movement in subjunctive mood

Figure 6-23 Mean acceptability rating in a) all sentences with partial *wh*-movement, b) in declarative partial *wh*-movement and c) in subjunctive partial *wh*-movement (M1: declarative, M2: subjunctive, E1: extracted subject, E2: extracted object, E3: extracted adjunct, G1: grammatical [+movement], G2: ungrammatical [-movement])

The graphs in Figure 6-23 testify to some trends in the data. There are differences in the way partial *wh*-movement sentences are judged by speakers at every level of proficiency. Also, there are differences between the sentences according to mood, i.e. whether they are declarative or subjunctive. Declarative sentences show slightly more determinate judgement patterns, especially for the non-native learners. And last, the differences between the near-native and native groups seem to lie in the area of adjunct partial extraction.

The ANOVA tests confirm these informal observations by showing a main effect for extraction type, $F(2,132)=6.21$, $MS=4.15$, $p=.003$ and a main effect for grammaticality, $F(1,66)=42.12$, $MS=15.66$, $p=.001$. The main effect for extraction type and a lack of interaction with level suggests that speakers' judgements across the board are influenced by the syntactic category of the extracted item. This means that all speakers, regardless of proficiency level, see the three kinds of extraction (subject, object, adjunct extraction) as different. However, there is a significant interaction between extraction type and grammaticality, $F(2,132)=5.77$, $MS=4.06$, $p=.004$.

Multiple comparisons (at a tabled value of $q=4.03$) show that apart from the difference between grammatical and ungrammatical types within all three extraction types, there is a significant difference between grammatical object extraction vs. grammatical adjunct extraction. Partial *wh*-movement of an adjunct is not rated as grammatical as object partial *wh*-movement.

When we examine the ANOVA output for the near-native and native groups only, we see that there is an extra interaction between level and mood, $F(1,41)=4.17$, $MS=2.35$, $p=.048$. This interaction is the result of the differences in the extraction site in subjunctive sentences. Incorrect adjunct extraction in partial *wh*-movement sentences is not rejected by the near-natives as strongly as by the natives. More precisely, near-natives accept incorrect adjunct extraction similarly to correct adjunct extraction by, i.e. they accept partial adjunct *wh*-movement without verb movement.

Now we examine the grammaticality variable. As mentioned above there is a main effect of grammaticality. As with the other sentence categories, the same question arises about development. Does the ability to tell the grammatical and the ungrammatical partial *wh*-moved sentences apart increase with proficiency? We need to see if there is a significant interaction between level and grammaticality. Table 6-24 represents the mean acceptability scores within the groups and Figure 6-24 is a graphical representation of the same data:

| | Intermediate | Advanced | Near-native | Native | Total |
|----------------------|---------------------|-----------------|--------------------|---------------|---------------|
| Grammatical | 6.4048 | 6.2821 | 7.1354 | 8.2469 | 7.2595 |
| Ungrammatical | 5.7976 | 5.5769 | 5.1771 | 4.1358 | 4.9738 |

Table 6-24 Mean acceptability rating for movement in sentences with partial *wh*-movement

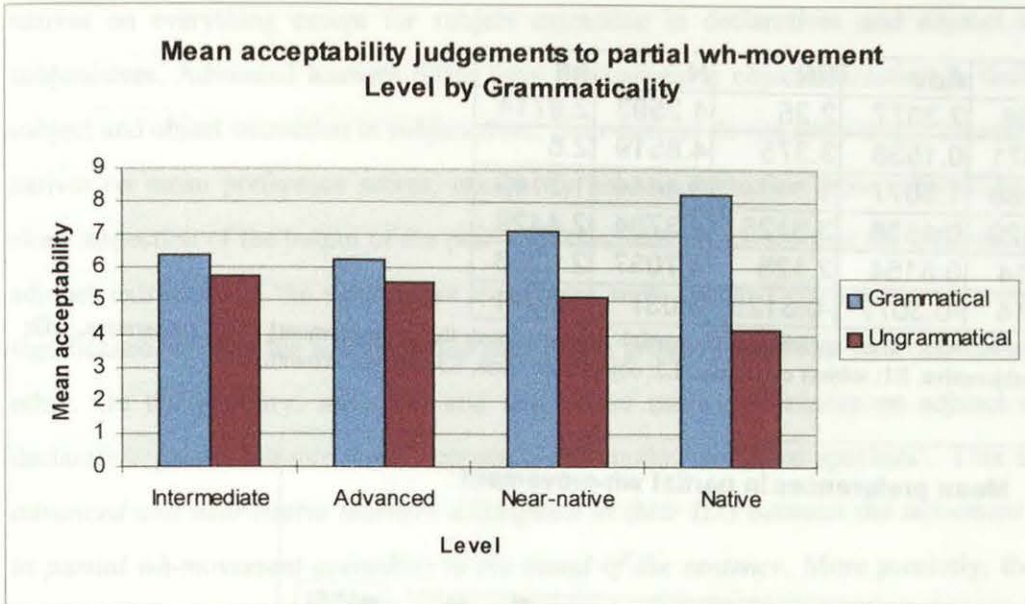


Figure 6-24 Mean acceptability rating for movement in sentences with partial *wh*-movement

The ANOVA test indicates that the main effect of grammaticality is qualified by the significant interaction between level and grammaticality, $F(3,66)=10.45$, $MS=15.66$, $p=.001$. The *post hoc* Tukey test (at a tabled value of $q=4.29$) reveals that the significant differences between the judgements given to grammatical and ungrammatical partial *wh*-moved sentences appear only at the near-native and native levels. Learners at lower levels of proficiency do not reject the incorrect sentences without verb movement, suggesting that they have not instantiated the FP projection in their ILG. This finding is interesting, as learners at the advanced level seem to have instantiated the FP and use the correct verb movement in focused, negative and (to some degree) main *wh*-sentences. This suggests that the ability to reject incorrect partial *wh*-movement sentences emerges later in the developmental process, as learners have to first notice the new complementary construction type and subsequently grant it the status it has in the L2.

6.2.2.8.2 Preferences

The results of the preference scores for partial *wh*-movement can be seen in Table 6-25 and the accompanying Figure 6-25. The preference scores are expressed for [+/- movement] in the lower clause of the sentences. In this they resemble main *wh*-questions.

| | Int | Adv | NN | N | All |
|------|---------|---------|---------|--------|--------|
| M1E1 | 1.9286 | 2.3077 | 2.25 | 4.2593 | 2.9714 |
| M1E2 | -0.3571 | 0.1538 | 3.375 | 4.8519 | 2.6 |
| M1E3 | -0.4286 | 1.3077 | 1 | 3.4444 | 1.7143 |
| M2E1 | -0.1429 | 0.1538 | 3.3125 | 4.3704 | 2.4429 |
| M2E2 | 1.0714 | 0.6154 | 2.125 | 4.7037 | 2.6286 |
| M2E3 | 1.5714 | -0.3077 | -0.3125 | 3.037 | 1.3571 |

Table 6-25 Mean preferences in partial *wh*-movement for [+/-movement] (M1: declarative, M2: subjunctive, E1: subject extraction, E2: object extraction, E3: adjunct extraction)

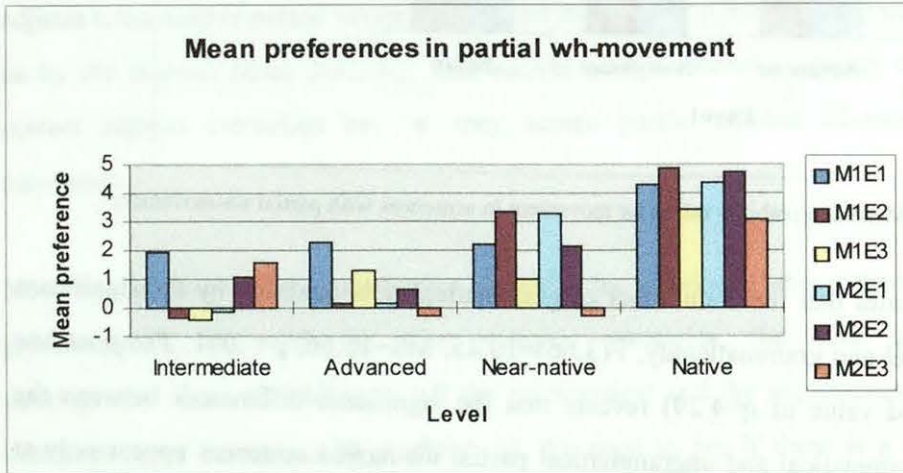


Figure 6-25 Mean preferences in partial *wh*-movement for [+/-movement] (M1: declarative, M2: subjunctive, E1: subject extraction, E2: object extraction, E3: adjunct extraction)

Figure 6-25 shows that the preference scores are not uniform across groups. Near-native preferences are somewhat similar to natives except for the adjunct extraction in the subjunctive sentences where their preferences resemble that of the advanced learners' (look at M2E3, i.e. the sixth bar in Figure 6-25 in the advanced, near-native and near-native groups). Let us see the statistical results.

The ANOVA test showed a highly significant main effect of level, $F(3,66)=10.45$, $MS=31.31$, $p=.001$ and *post hoc* comparisons ($q=3.63$) show that *all three non-native groups are significantly different from the natives, including the near-native group*. There is a main effect for extraction site, $F(2,132)=5.77$, $MS=8.11$, $p=.004$, but it is qualified by a significant second-order interaction between level, mood and extraction site, $F(6,132)=2.66$, $MS=7.41$, $p=.018$. *Post hoc* multiple comparisons ($q=5.01$) show that intermediate learners differ from natives and near-

natives on everything except for subject extraction in declaratives and adjunct extraction in subjunctives. Advanced learners differ from the natives in object extraction in declaratives and subject and object extraction in subjunctives. Near-natives do not seem to significantly differ from natives on mean preference scores, except for adjunct extraction from subjunctive clauses. On close inspection of the output of the pair-wise comparisons we see that the difference between the adjunct extraction in the subjunctive mood (the sixth bar in Figure 6-25) very slightly misses significance between the advanced and near-native groups on the one hand and the natives on the other. On the contrary, advanced and near-native mean preferences on adjunct extraction in declarative partial *wh*-movement sentences are similar to native speakers'. This suggests that *advanced and near-native learners distinguish in their ILG between the movement possibilities in partial wh-movement according to the mood of the sentence*. More precisely, they prefer the incorrect non-moved version in subjunctive adjunct extraction.

When we compare the natives with the non-natives only, we find that level is a significant main effect, $F(1,41)=7.23$, $MS=38.65$, $p=.010$, confirming the difference we found in the mean acceptability scores in the previous section. There is a main effect of extraction site, $F(2,82)=14.75$, $MS=6.37$, $p=.001$, but no interaction between level and extraction site. The Tukey test ($q=3.32$) shows that adjunct extraction is accepted significantly lower than both subject or object extraction. From the previous results, it is clear that near-natives' preference for the correct subjunctive adjunct extraction is weaker than their preference for the correct declarative adjunct extraction, so this weaker preference is the source of the main effect.

6.2.2.8.3 Summary

Although partial *wh*-movement is not present in English, children use the strategy at an early stage of acquisition of English (Whitman 1994). Thus, adult English learners of Hungarian were hypothesised to have no difficulty in acquiring a strategy that is allowed for by UG and was used by them in the course of acquisition of the L1. This is borne out by our data: learners of Hungarian accept partial *wh*-movement from an early stage. However, acquisition of focus-related constraints within partial *wh*-movement seems to be delayed and does not seem to be target-like

even at the near-native level. Learners at both the advanced and near-native levels have different representations about adjunct partial *wh*-movement in subjunctive sentences, notably they do not seem to have fully acquired verb-movement. This is in contrast to acquisition of verb-movement in main sentences: negatives, focused sentences and main *wh*-questions. It clearly indicates later acquisition of the verb-raising rule in subordinate sentences. Near-natives, again, differ from natives on adjunct extraction from subjunctive clauses. However, they have target-like judgements to any other partial operator-extraction. Again, similarly to long extraction, the interaction of mood with extraction seems to be significant both in the near-native and native judgements. This reflects a function of mood in the theoretical possibilities of long and partial extracted sentences.

6.2.2.9 Movement in embedded clauses

Hungarian embedded clauses show the same syntactic pattern as that of main clauses. If the embedded clause is a focused sentence or a *wh*-question, it will contain an FP projection and this will entail operator-movement to Spec,FP as well as V-movement to the head F^0 in the embedded clause (see section 4.9.2.5). In contrast, English embedded *wh*-clauses are different from main *wh*-questions (section 4.9.2.4). The difference between English embedded and main *wh*-questions is that embedded *wh*-clauses do not have subject-auxiliary-inversion (SAI) which is characteristic of main *wh*-clauses only. English embedded declaratives have the same structure as main declaratives and embedded negatives are identical to main negatives.

We hypothesised that English learners will not have the FP projection in their early ILG. Learners will accept the focused sentences only when the FP is instantiated in their ILG. Thus the hypotheses are as follows:

1. learners at an early stage will prefer the incorrect embedded sentences without verb movement, both in embedded focused and interrogative sentences.
2. once learners acquire the focus-rule in main sentences, they will accept correct verb movement in embedded clauses and reject the incorrect, L1-based version.

To test the above hypotheses, the following statistical tests were applied:

- a) A four-way ANOVA test with repeated measures for operator (*wh*, focus), extraction site (subject, object) and grammaticality (-,+ movement) was carried out on *mean acceptability* scores with proficiency level as grouping factor (see Table 9a in Appendix F).
- b) A three-way ANOVA test on the *mean preference* for the grammatical over the ungrammatical sentences was carried out with operator and extraction site as repeated measures and level as grouping factor (see Table 9b in Appendix F).
- c) *Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

The test sentences are exemplified below. Although the test elicited judgements to embedded negative sentences as well, we did not include them in the analysis as they did not have the same linguistic variables as embedded *wh* and focus sentences.

| Oper | Extr | Gram | Example sentence |
|-----------|------|--------|--|
| <i>wh</i> | S | [+mov] | Nem tudom, hogy kinek az autója nyerte meg a versenyt. <i>not know-I, that whose the car-POSS won-it PREF the race-ACC</i> 'I don't know whose car won the race.' |
| | | [-mov] | *Azt akartuk meg-nézni, hogy melyik gyerek anyukája el-jön. <i>that-ACC wanted-we PREF-see-INF, that which child mum-POSS PREF-comes-she</i> 'We wanted to see which child's mother comes.' |
| | O | [+mov] | Azt kérdezed, hogy milyen vizsgát tettem le? <i>that-ACC ask-you, that what exam-ACC took-I PREF</i> 'Are you asking what exam I took?' |
| | | [-mov] | *Az érdekel, hogy mit el-olvastál. <i>that interests-me, that what-ACC PREF-read-you</i> 'I'm interested in what you've read.' |
| focus | S | [+mov] | Tegnap azt mondtad, hogy a tévéd ment tönkre! <i>yesterday that-ACC said-you, that the TV-yours went spoilt</i> 'Yesterday you said it was your TV that went wrong.' |
| | | [-mov] | *Azt hiszem, hogy a Szabóék meg-vették. <i>that-ACC believe-I, that the Szabós PREF-bought-they-it</i> 'I think it's the Szabós who bought it.' |
| | O | [+mov] | Csak az zavar, hogy túl sok poharat tört össze! <i>only that bothers-me, that too many glasses-ACC broke-he PREF</i> |

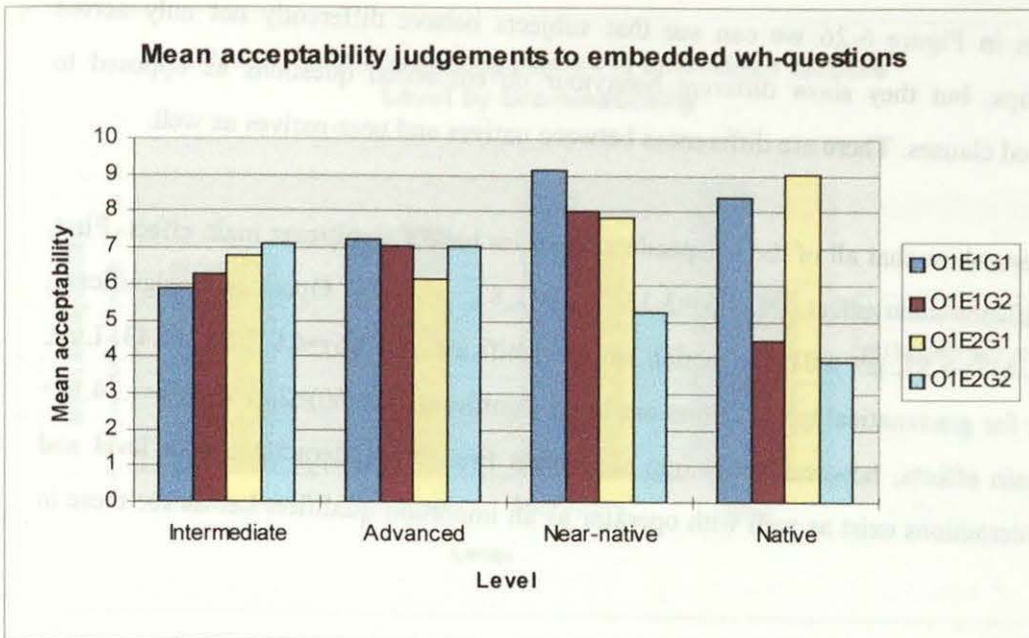
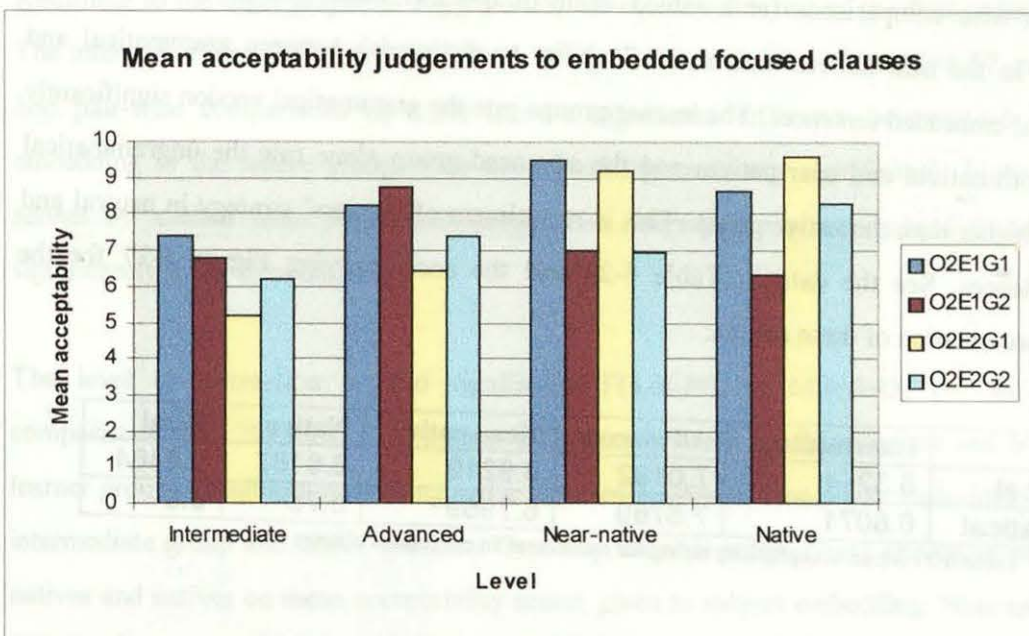
| | | |
|-----|--------|--|
| | | 'The only thing that bothers me is that he broke too many glasses.' |
| | [-mov] | *Nem tudtam, hogy Katit feleségül vette. <i>not knew-I, that Kate-ACC wife-as took-he</i> |
| | | 'I didn't know that he married Kate.' |
| neg | [+mov] | Azt mondta, hogy még nem fejezte be. <i>that-ACC said-he, that yet not finished-he-it PREF</i> |
| | | 'He said he had not finished it yet.' |
| | [-mov] | *Úgy hallottam, hogy nem el-váltak. <i>so heard-I, that not PREF-divorced-they</i> |
| | | 'I heard that they haven't got a divorce yet.' |

6.2.2.9.1 Results: all variables, mean acceptability

The mean acceptability ratings on the embedded sentences are given in Table 6-26 and the accompanying graphs in Figure 6-26:

| | Int | Adv | NN | N | All |
|---------------|--------|--------|--------|--------|---------------|
| O1E1G1 | 5.8571 | 7.2308 | 9.125 | 8.4074 | 7.8429 |
| O1E1G2 | 6.2857 | 7.0769 | 8 | 4.4444 | 6.1143 |
| O1E2G1 | 6.7857 | 6.1538 | 7.875 | 9.037 | 7.7857 |
| O1E2G2 | 7.1429 | 7.0769 | 5.25 | 3.9259 | 5.4571 |
| O2E1G1 | 7.4286 | 8.2308 | 9.5 | 8.6296 | 8.5143 |
| O2E1G2 | 6.7857 | 8.7692 | 7 | 6.3333 | 7.0286 |
| O2E2G1 | 5.2143 | 6.4615 | 9.1875 | 9.5926 | 8.0429 |
| O2E2G2 | 6.2143 | 7.3846 | 6.9375 | 8.2963 | 7.4 |

Table 6-26 Mean acceptability rating in embedded clauses (O1: *wh*, O2: focus, E1: subject extraction, E2: object extraction, G1: grammatical, G2: ungrammatical)

Graph n Embedded *wh*-questions

Graph o Embedded focused clauses

Figure 6-26 Mean acceptability rating in a) embedded *wh*-questions and b) embedded focused clauses (O1: *wh*, O2: focus, E1: subject extraction, E2: object extraction, G1: grammatical, G2: ungrammatical)

From the graphs in Figure 6-26 we can see that subjects behave differently not only across proficiency groups, but they show different behaviour on embedded questions as opposed to embedded focused clauses. There are differences between natives and near-natives as well.

The ANOVA tests show that all of the independent variables have a significant main effect. First, level is a significant main effect, $F(3,66)=3.33$, $MS=11.83$, $p=.025$. Operator is significant, $F(1,66)=11.60$, $MS=6.57$, $p=.001$. Extraction site is significant, $F(1,66)=4.91$, $MS=4.43$. Last, the main effect for grammaticality also turns out to be significant, $F(1,66)=29.89$, $MS=5.34$, $p=.001$. These main effects, however, enter into significant first-order interactions with level and second-order interactions exist as well with operator as an important qualifier. Let us see these in turn.

The level by grammaticality interaction is highly significant, $F(3,66)=22.57$, $MS=5.34$, $p=.001$. *Post hoc* pair-wise comparisons (at a tabled value of $q=4.29$) show that the source of this interaction is in the near-natives' and natives' ability to distinguish between grammatical and ungrammatical embedded sentences. The learner groups rate the grammatical version significantly lower than both natives and near-natives and the advanced group alone rate the ungrammatical significantly higher than the native group. This is reminiscent of learners' strategy in neutral and negative sentences. See the data in Table 6-27 and the accompanying Figure 6-27 for the graphical representation of these results:

| | Intermediate | Advanced | Near-native | Native | Total |
|----------------------|--------------|----------|-------------|--------|---------------|
| Grammatical | 6.3214 | 7.0192 | 8.9219 | 8.9167 | 8.0464 |
| Ungrammatical | 6.6071 | 7.5769 | 6.7969 | 5.75 | 6.5 |

Table 6-27 Mean acceptability rating for movement in embedded clauses

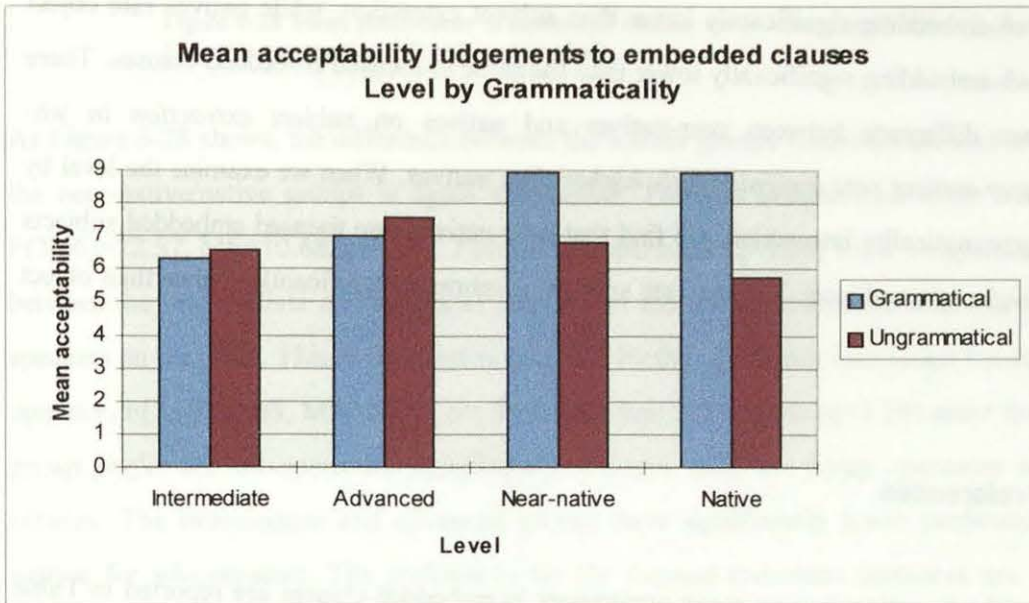


Figure 6-27 Mean acceptability rating for movement in embedded clauses

Returning to the main graphs in Figure 6-26, we examine the rest of the first-order interactions. The interaction between level and operator is significant, $F(3,66)=3.61$, $MS=6.57$, $p=.018$. *Post hoc* pair-wise comparisons ($q=4.29$) show a significant difference between *wh* and focused embedding in the native group, with *wh*-embedding receiving significantly higher judgement scores by natives than focus embedding. The intermediate group judged focus embedding significantly lower than natives.

The level by extraction is also significant, $F(3,66)=7.10$, $MS=4.43$, $p=.001$. Pair-wise comparisons ($q=4.29$) show a significant difference between the intermediate and both the other learner groups on subject embedding and a significant difference on object embedding between the intermediate group and native speakers. Crucially, there is a significant difference between near-natives and natives on mean acceptability scores given to subject embedding. Near-natives accept them higher than natives. This indicates that there might be second-order interaction between level, extraction and operator (*wh* or focus).

As expected, the significant second-order interactions are the following: level by operator by extraction, $F(3,66)=8.63$, $MS=3.60$, $p=.001$ and level by operator by grammaticality, $F(3,66)=3.65$, $MS=6.57$, $p=.017$. Tukey tests ($q=4.84$) show that near-natives rate object

extraction in *wh*-embedding significantly lower than subject extraction, while natives rate object extraction in *wh*-embedding significantly lower than the same in focused embedded clauses. There is a significant difference between near-natives and natives on *subject extraction in wh-embedding: near-natives rate it significantly higher than natives*. When we examine the level by operator by grammaticality interaction, we find that near-natives rate focused embedded subjects significantly higher than objects. Natives rate subject *wh*-phrases significantly higher than object *wh*-phrases.

6.2.2.9.2 Preferences

The results of the investigations on mean preferences in embedded clauses are reported in Table 6-28 and the following Table 6-28.

| | Int | Adv | NN | N | All |
|-------------|---------|---------|-------|--------|---------------|
| O1E1 | -0.4286 | 0.1538 | 1.125 | 3.963 | 1.7286 |
| O1E2 | -0.3571 | -0.9231 | 2.625 | 5.1111 | 2.3286 |
| O2E1 | 0.6429 | -0.5385 | 2.5 | 2.2963 | 1.4857 |
| O2E2 | -1 | -0.9231 | 2.25 | 1.2963 | 0.6429 |

Table 6-28 Mean preferences in embedded clauses for [+/-movement] (O1: *wh*-phrase, O2: focus, E1: subject extraction, E2: object extraction)

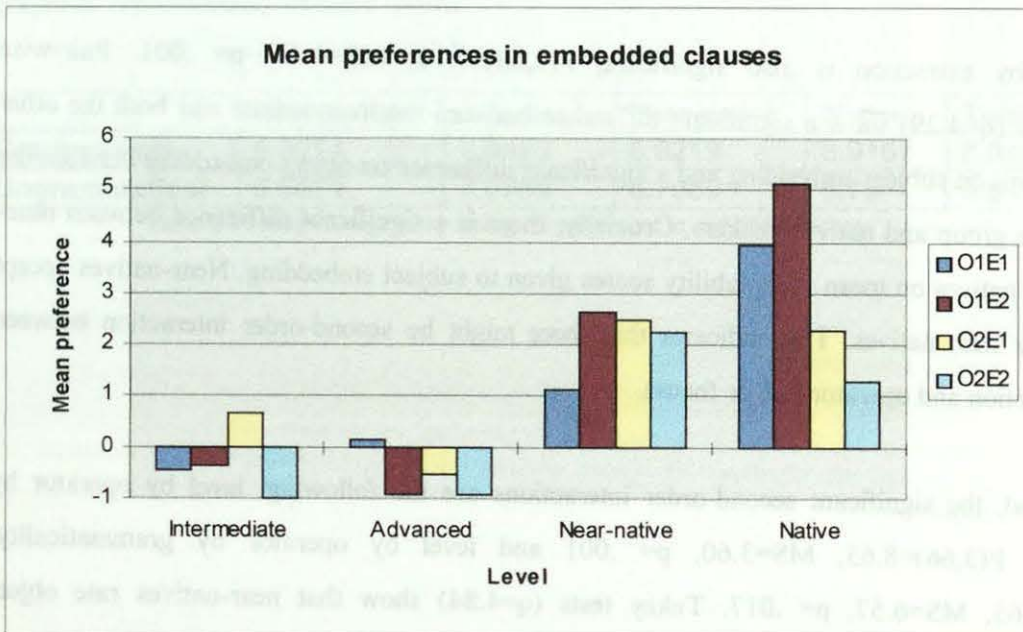


Figure 6-28 Mean preferences in embedded clauses for [+/-movement] (O1: *wh*-phrase, O2: focus, E1: subject extraction, E2: object extraction)

As Figure 6-28 shows, the difference between the learner groups (intermediate and advanced) and the near-native/native groups is again substantial. There is a significant main effect of level, $F(3,66)=22.57$, $MS=10.68$, $p=.001$. *Post hoc* comparisons ($q=3.63$) show a significant difference between the intermediate and advanced learners on the one hand and the near-native and native speakers on the other. This main effect is qualified by the significant interaction between level and operator, $F(3,66)=3.65$, $MS=13.15$, $p=.017$. *Post hoc* Tukey tests ($q=4.29$) attest that *the native group prefer the wh-operators significantly stronger than the focus operators in embedded clauses*. The intermediate and advanced groups have significantly lower preferences from the natives for *wh*-operators. The preferences for the focused embedded sentences are significantly different in the advanced and near-native groups.

When the comparisons are between natives and near-natives, operator is a significant main effect, $F(1,41)=4.50$, $MS=11.20$, $p=.040$ and there is a significant interaction between level and operator, $F(1,41)=9.42$, $MS=11.20$, $p=.004$ and between operator and extraction site, $F(1,41)=6.85$, $MS=5.58$, $p=.012$. Multiple comparisons ($q=3.68$) show a significant difference between the two groups *on wh-embedding, with near-natives having significantly lower preference scores*.

6.2.2.9.3 Summary

Embedded clauses containing an operator (i.e. *wh*-phrase or focus) were predicted to 'come on line' when the FP is projected in main clauses. The evidence we collected did not support this. Advanced and near-native speakers still have significantly different representations for subordinate clauses from natives. This finding is similar to the one we found for partial *wh*-movement. The verb-movement rule, although already in place in simple main clauses, is acquired considerably later in more complex syntactic constructions. The reasons of this might be in the nature and amount of input, in the demands for processing load or indeed in a continued effect of the L1 even at these advanced stages. Subordination is less frequent than simple main sentences,

and the structures involved are more complex. Acquisition seems to take longer. However, it might equally be argued that the results can be accounted for by the decreased processing load characterising L2 learners comprehension of long strings in the target language.

6.2.3 Acquisition of optional features

6.2.3.1 Double focus sentences

Double focus sentences are possible in two forms in Hungarian: *wh+V+XP+pref* or *wh+V+pref+XP* (section 4.9.8.3). We investigated whether there is genuine optionality in Hungarian in the position of the second focused element. Optionality is evidenced if native speakers accept both options to the same degree. If we find genuine stable optionality in the TL, the next question we need to address is how learners of Hungarian manage to acquire the TL in the face of optional input. We hypothesised that optional structures will be acquired by L2 learners unless the L1 has an influence. On the other hand, if the genuine optionality is more apparent than real in the mature language, and there is pseudo-optionality instead, learners will be expected to exhibit incomplete representations as the input is rare and highly obscure (not salient in the sense of prevalent in the system).

The hypotheses we set up are as follows:

1. Natives will express different judgements to the two word orders. In the [*wh+V+XP+pref*] order the XP signals contrastive focus and in the [*wh+V+pref+XP*] order the XP carries new information.
2. Learners will have indeterminate judgements at the beginning stages of acquisition.
3. At the stage when the FP projection is instantiated in the ILG, learners will accept the [*wh+V+pref+XP*] order.
4. The [*wh+V+XP+pref*] order will be acquired latest, as it is highly marked.

The test sentences have two linguistic variables: NP-type (full noun, pronoun) and position (before preverb, after preverb). The sentences are exemplified below:

| NP | Position | Example sentence |
|-----------|-----------------|--|
| full NP | bef [XP+pref] | De én azt kérdeztem, hogy melyik városban ismerted Évát meg? <i>but I that-CC asked-I, that which city-in met-you Eva-ACC PREF</i> 'But I was asking which city you met Eva?' |
| | after [pref+XP] | De a tanár azt akarta tudni, hogy melyik órára nem ment be János? <i>but the teacher that-ACC wanted-he know-INF, that which lesson-to not went-he PREF John</i> 'But the teacher wanted to know which lesson did John not attend?' |
| pron | bef [XP+pref] | Fordítva, én hívtam őt meg. <i>on the contrary, I invited-I him PREF</i> 'On the contrary, it was me who invited him.' |
| | after [pref+XP] | Nem, én bántottam meg őt. <i>no, I hurt-I PREF him</i> 'No, it was me who hurt him.' |

The following statistical tests were carried out to test the hypotheses above:

- A three-way ANOVA test with repeated measures for NP type (full NP, pronoun) and position (before [XP+pref], after [pref+XP]) was carried out on *mean acceptability* scores with proficiency level as grouping factor (see Table 10a in Appendix F).
- A two-way ANOVA test on the *mean preference* for the position was carried out with NP type as repeated measure and level as grouping factor (see Table 10b in Appendix F).
- Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

6.2.3.1.1 Results: all variables, mean acceptability

The mean acceptability ratings given to double focus sentences by all the groups are reported in Table 6-29. The following Figure 6-29 is the graphical representation of the same data.

| | Intermediate | Advanced | Near-native | Native | Total |
|------------------------|---------------------|-----------------|--------------------|---------------|---------------|
| full NP, before | 6.3571 | 5.6923 | 3.6875 | 6.2222 | 5.5714 |
| full NP, after | 6.6429 | 7.6154 | 7.125 | 8 | 7.4571 |
| pronoun, before | 5.7143 | 5.7692 | 5.4375 | 7.6296 | 6.4 |
| pronoun, after | 6.2857 | 9.1538 | 8.1875 | 8.8148 | 8.2286 |

Table 6-29 Mean acceptability rating for position of second focus in double focus constructions

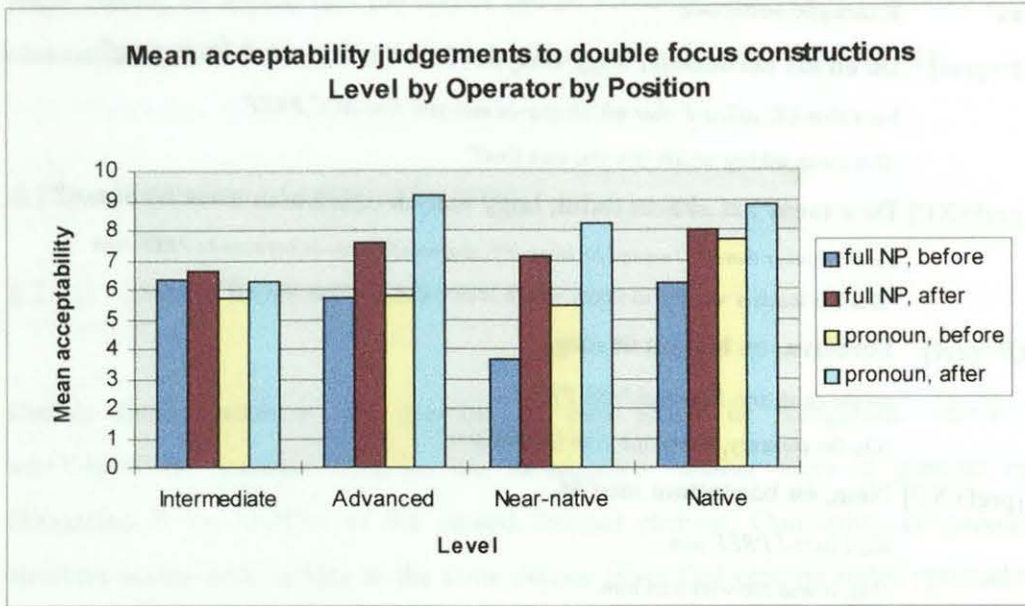


Figure 6-29 Mean acceptability rating for position of second focus in double focus constructions

The trends that Figure 6-29 reveals are the following. The non-native learners' judgements replicate the pattern of the native judgements, although to differing degrees. Even the near-native judgements differ considerably from that of the natives. All of the groups judge the sentences where the focused element comes after the prefix higher than the ones where it comes before.

The results of the ANOVA test confirm these tendencies. Level was found to be a significant main effect, $F(3,66)=4.55$, $MS=9.40$, $p=.006$, implying that subjects at different levels judged the double focus sentences with a different strategy. *Post hoc* analytical comparisons show (at a tabled value of $q=3.63$) that the significant differences are between the intermediate and native groups, as well as between the near-native and native groups. This suggests that these groups differ considerably in their view of the example sentences.

The other significant main effect is constituted by the type of the noun phrase in the second focus position (i.e. whether it is a full noun or a pronoun), $F(1,66)=4.14$, $MS=7.77$, $p=.046$. This main effect is modified by a highly significant interaction between the NP-type and the position it appears in, $F(1,66)=46.96$, $MS=5.04$, $p=.001$. *Post hoc* multiple comparisons (at a tabled value of $q=3.63$) indicate that the second focused element is preferred when it comes *after* the prefix, i.e.

in the [pref+XP] order sentence-finally, irrespective of its syntactic category. However, this result again is qualified by the grouping factor, level of proficiency, indicating that there is a developmental dimension to the judgement of double focus sentences.

The three-way interaction between level, NP type and position is significant, $F(3,66)=4.31$, $MS=5.04$, $p=.008$. *Post hoc* multiple comparisons (at a tabled value of $q=4.84$) show that while all three groups from advanced up discriminate significantly between the positions for the full noun, only the advanced and near-native groups distinguish significantly between the positions for the pronoun. The native groups do not, which strongly indicates that they treat the two positions for the pronoun as optional.

When we compare the near-native and native groups only, the same main effects and interactions prove significant as the ones observed for all group comparisons. The fact that level is still significant, $F(1,41)=10.35$, $MS=9.41$, $p=.003$, proves that near-natives judge the sentences in a significantly different way from the natives. The type of NP is also a significant main effect between these two groups, $F(1,41)=44.59$, $MS=4.72$, $p=.008$. The significant interaction between type of NP and position, $F(1,41)=44.59$, $MS=4.72$, $p=.001$, is qualified by a significant second-order interaction between level, type of NP and position, $F(1,41)=5.54$, $MS=4.72$, $p=.023$. The *post hoc* Tukey test shows that *while the native group makes categorical judgements for the position of the full NP, significantly preferring it sentence-finally, they treat the position of the pronoun as optional. The near-native group differs from the natives in that they differentiate both types of NP, turning an optional rule into a categorical one in the case of pronouns.*

6.2.3.1.2 Preferences

In order to see the differences between strength of preference, we examined the preference scores, displayed in Table 6-30 and Figure 6-30 below. Positive values indicate a preference for 'before-the-preverb' [XP+pref] position and negative values indicate a preference for the 'after-the-preverb' [pref+XP] position. The length of the bar indicates strength of preference.

| | Int | Adv | NN | N | All |
|----------------|---------|---------|---------|---------|----------------|
| full NP | -0.2857 | -1.9231 | -3.4375 | -1.7778 | -1.8857 |
| pronoun | 0.5714 | 3.3846 | 2.75 | 1.1852 | 1.8286 |

Table 6-30 Mean preferences in double focus sentences

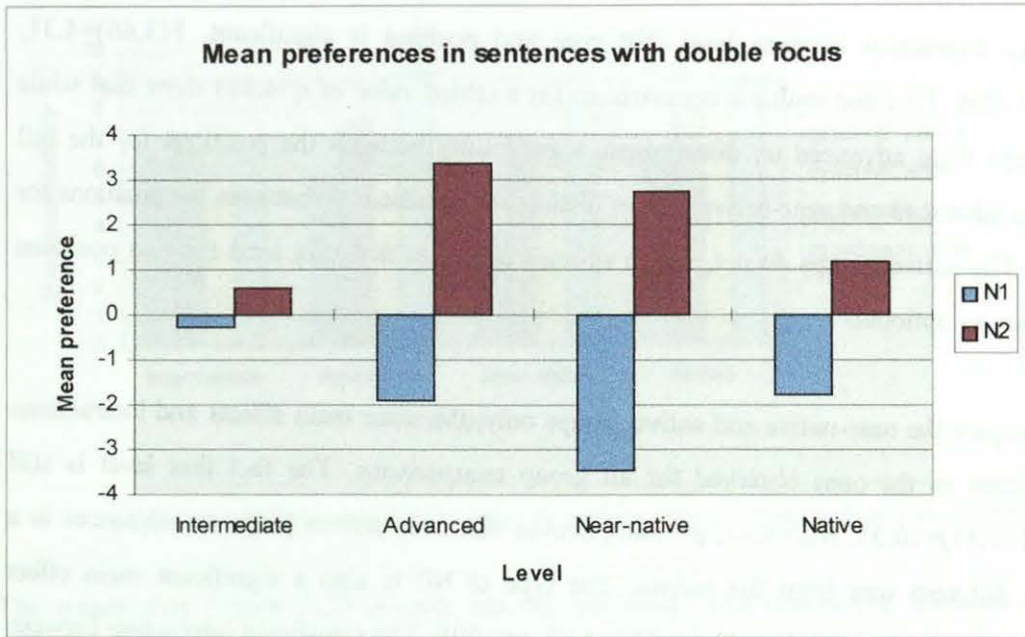


Figure 6-30 Mean preferences in double focus sentences (N1: full NP, N2: pronoun)

The ANOVA tests show a significant main effect of NP-type, $F(1,66)=46.96$, $MS=10.07$, $p= .001$ and a significant interaction between level and NP-type, $F(3,66)=4.31$, $MS=10.07$, $p= .008$. The *post hoc* Tukey test ($q=4.29$) shows that advanced, near-native and native subjects gave significantly different judgements to the two NP-types. Near-natives and natives gave significantly more determinate judgements to full NPs. However, *there seems to be a decline in the strength of preferences with proficiency.*

When we compare the natives with the near-natives, NP-type remains a significant main effect, $F(1,41)=44.59$, $MS=9.43$, $p= .001$. The two levels behave differently when judging the NP-types, as evidenced by the significant interaction between level and NP-type, $F(1,41)=52.23$, $MS=9.43$, $p= .023$. The *post hoc* Tukey test shows that near-natives' preferences are significantly strong both in the case of full NPs and pronouns, while natives make a significant preference only for full NPs.

6.2.3.1.3 Summary

Double focus is the first construction we examined for evidence of stable and developmental optionality. The source of optionality in this case is the word order of the second focused element in relation to the verbal particle which appears postverbally after the moved verb. Although the theoretical literature on Hungarian syntax predicts that the two positions are interchangeable, i.e. they are genuinely optional, we predicted that there are semantic differences between the interpretations for the two orders. The context sentences were constructed to set up a contrastive focus interpretation. According to our hypothesis natives should have accepted the [XP+pref] order for both NP-types. The evidence we found is not compatible with our predictions. We found that if the second focused phrase is a full NP, native speakers prefer it sentence finally, i.e. in the [pref+XP] order. This finding is in accordance with Varga's (1981) claims according to which emphasised polysyllabic material appears at the end of the sentence after any monosyllabic clitic-like elements (e.g. the verbal prefixes). However, we found that if the second element is a pronoun, natives do treat its position optionally, accepting both orders to the same degree. This constitutes evidence for stable optionality.

The learners of Hungarian from advanced level onwards seem to agree with natives on the position of the full noun phrase, but differ in their judgements about the position of the pronoun. While natives treat the position of the pronoun optionally, learners from the advanced stage up, including near-natives, change the optional rule into a categorical one. Effectively, they do not notice that there is optionality in the target input but form their IL rule on the basis of overgeneralisation or analogy. In other words, they treat the pronouns similarly to the full nouns.

Another consideration with respect to the treatment of pronouns by natives and non-natives concerns their frequency of occurrence in the input. Constructions such as *Fordítva, én hívtam őt meg* 'On the contrary, it was ME who invited HIM' or *Nem, én bántottam meg őt* 'No, I hurt HIM' are fairly frequent in the input. Thus, for native children noticing and acquiring the two possibilities for the position of the pronoun should proceed on the basis of the PLD alone. However, we argue that the resulting PLD will be ambiguous for the non-native L2 learner of the

language *precisely* because it contains optionality. We argue that ambiguity of this kind explains why non-natives are forced to employ general learning strategies or fall back on their L1.

Incidentally, the sentence-final position of the second focused phrase is similar to their L1. This is a potential source of fossilisation (Zobl 1982) since the co-occurrence of a developmental feature (here the overgeneralisation of the position of the full NP to pronouns) with an L1 feature leads to delayed recovery from an incorrect ILG rule. Thus, near-native representations seem divergent, retaining a categorical rule for a genuinely optional TL rule. This is what Sorace (1993) reported for French-Italian ILG with respect to auxiliary selection (see section 3.5.3.2). Here we have found additional evidence that optional TL rules may be turned into categorical ones by way of general learning strategies (overgeneralization and analogy) as a result of L1 influence.

6.2.3.2 Double *wh*-questions

Double *wh*-constructions (or multiple *wh*-questions as they are referred to alternatively) are different in English and Hungarian in that Hungarian allows for multiple preposing whereas English does not. Hungarian also allows for a construction similar to English multiple questions in which there is one moved and one in-situ *wh*-phrase (see section 4.9.8.2). The two types of double *wh*-questions in Hungarian (multiple preposing and in-situ *wh*-questions) have been claimed to have different semantic interpretation, i.e. they allegedly carry different presuppositions. É.Kiss (1994) argues that multiple preposed sentences are used by natives when they are referring to a situation with more than one pair of people involved, cf. *Ki kit vett el?* Who married whom?. In this case the preposed multiple question enquires about the pairings among the participants of the situation. On the contrary, the English type in-situ multiple questions carry the presupposition that there are only two people involved in the situation and the question enquires about one member of the pair, cf. *Ki hívott fel kit?* Who called up whom?. The semantic distinction described is highly context-sensitive. We hoped to investigate the existence and nature of the distinction among native speakers. Also, we wished to find out how learners of Hungarian, whose L1 constitutes a smaller grammar, would come to acquire the larger L2 grammar. We hoped to find out whether learners would acquire both alternatives and whether they would make the relevant TL distinctions.

The test sentences in the double *wh*-question set have two linguistic variables: semantic interpretation (one couple, more couples) and movement (in situ, multiple preposition). The sentences are exemplified below:

| Semantic | Movement | Example sentence |
|--------------|------------|--|
| one couple | [in situ] | Ki hívott fel kit? <i>who called up whom</i> 'Who phoned whom?' |
| | [preposed] | (*?)Ki kit vert meg? <i>who whom beat PREF</i> 'Who beat whom?' |
| more couples | [preposed] | Ki kit ismert fel? <i>who whom recognised</i> 'Who recognised whom?' |
| | [in situ] | (*?)Ki köszöntött fel kit? <i>who greeted PREF whom</i> 'Who greeted whom?' |

The hypotheses we wished to test are as follows:

1. Native speakers will make a distinction between the acceptability of multiple *wh*-questions according to the interpretation/presupposition. More precisely, they will prefer the multiple preposed sentences in the context of more than one couple and they will prefer the in-situ multiple questions in the context when only two participants are involved in the situation.
2. Learners at an early stage will accept the in-situ multiple question, which is similar in structure to the L1 value for multiple questions.
3. Later at higher levels of proficiency learners will accept both types of double *wh*-questions, but they will not be able to make the distinctions that are argued to exist in the native representations.

To test these hypotheses, the following statistical tests were carried out:

- a) A three-way ANOVA test with repeated measures for semantic interpretation (one couple, more couples) and movement (correct, incorrect for the semantic interpretation, i.e. in situ *wh* vs. multiply preposed *wh*) was carried out on *mean acceptability* scores with proficiency level as grouping factor (see Table 11a in Appendix F).
- b) A two-way ANOVA test on the *mean preference* for the in situ vs. the multiply preposed *wh*-phrase was carried out with semantic interpretation as repeated measures and level as grouping factor (see Table 11b in Appendix F).
- c) *Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

6.2.3.2.1 Results: all variables, mean acceptability

The mean acceptability ratings for double *wh*-questions are presented in Table 6-31 and the accompanying Figure 6-31.

| | Int | Adv | NN | N | All |
|--|------------|------------|-----------|----------|------------|
| one couple, correct [in situ] | 6.8571 | 7.3846 | 8 | 7.9259 | 7.6286 |
| one couple, incorrect [preposed] | 3.8571 | 7.3846 | 8.5625 | 7.2222 | 6.8857 |
| more couples, correct [preposed] | 5.8571 | 7.8462 | 7.875 | 7.5556 | 7.3429 |
| more couples, incorrect [in situ] | 6.6429 | 6.4615 | 7.1875 | 6.7407 | 6.7714 |

Table 6-31 Mean acceptability rating in double *wh*-questions

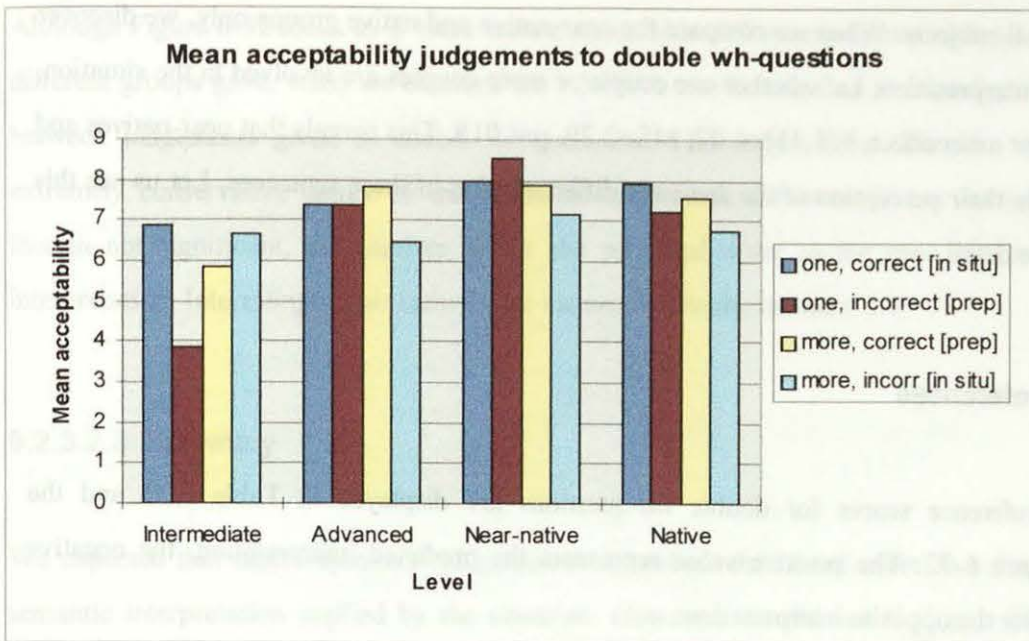


Figure 6-31 Mean acceptability rating in double *wh*-questions

As Figure 6-31 attests, the judgements given to double *wh*-questions are variable, i.e. not uniform. The intermediate learners give highest acceptability judgements to the in situ sentences, irrespective of their semantic meaning. This strongly corroborates our prediction that they will recognise the structure resembling the L1 equivalent structure and reject the L2 structure. The advanced learners show an increased tendency to accept both structures. The near-natives give the highest acceptability scores, but their judgements do not reproduce that of natives.

There is a significant main effect of level, $F(3,66)=3.53$, $MS=13.57$, $p=.019$ and *post hoc* multiple comparisons ($q=3.63$) show that the source of the significant difference is between the intermediate and near-native levels. This indicates that these two groups judge the sentences in a markedly different way. The level by semantics interaction misses significance ($p=.061$), which indicates that there is no significant and systematic developmental process in the acquisition of multiple questions. The claim that these constructions are quasi-optional, i.e. they carry different interpretations/presuppositions, cannot stand, since native speakers treat them as optional in their intuitions.

There is a significant main effect for movement type, $F(1,66)=7.99$, $MS=3.47$, $p=.006$. This implies that the movement-type, i.e. in situ or preposed multiple *wh* word order, is viewed

differently by all subjects. When we compare the near-native and native groups only, we discover that semantic interpretation, i.e. whether one couple or more couples are involved in the situation, has a significant main effect, $F(1,41)=6.07$, $MS=2.29$, $p=.018$. This reveals that near-natives and natives differ in their perception of the semantic differentiation of these sentences. Let us see this finding in more detail.

6.2.3.2.2 Preferences

The mean preference scores for double *wh*-questions are displayed in Table 6-32 and the following Figure 6-32. The positive value represents the predicted interpretation, the negative value represents the opposite interpretation:

| | Int | Adv | NN | N | All |
|---------------------|---------|--------|---------|--------|--------|
| one couple | 3 | 0 | -0.5625 | 0.7037 | 0.7429 |
| more couples | -0.7857 | 1.3846 | 0.6875 | 0.8148 | 0.5714 |

Table 6-32 Mean preferences in double *wh*-questions

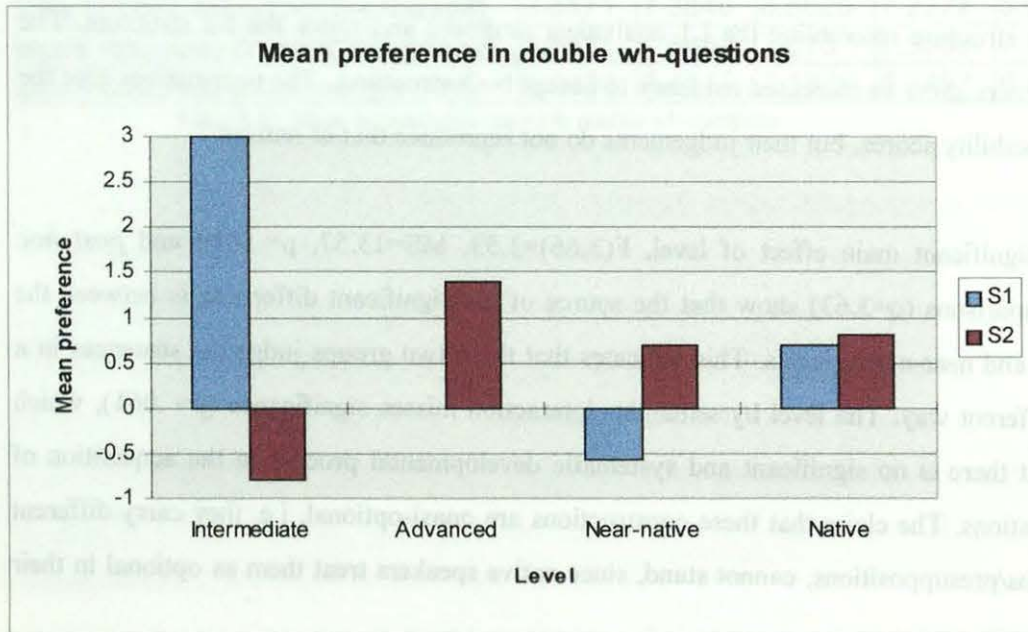


Figure 6-32 Mean preferences in double *wh*-questions (S1: one couple, S2: more couples)

Although Figure 6-32 looks as if there were considerable differences between the preferences the different groups gave, when we examine the ANOVA results, we find no significant differences between judgements given to double *wh*-questions. This might have been the result of the extremely conservative nature of the statistical tests used. However, it can be seen that even though not significant, near-natives prefer the preposed order in the case of the one couple interpretation. Interestingly, this order is not instantiated in the learners' L1.

6.2.3.2.3 Summary

We expected that native speakers' judgements will reflect that word order is a function of the semantic interpretation implied by the situation. However, we did not find any differentiation. Native speakers appear to treat both orders interchangeably, irrespective of the semantic interpretation involved. Learners of Hungarian did not show any discernible pattern either. We conclude that multiple *wh*-movement is treated as optional in native speakers of Hungarian and learners of Hungarian, including those at the near-native level. Non-natives show judgements which reflect native optionality.

6.2.3.3 Focused infinitives

Focused infinitives have repeatedly been employed as evidence in the theoretical debate about the position and feature values of the FP projection in Hungarian (Bródy 1995, Kenesei 1989). It has been claimed that infinitive clauses containing a focused phrase can optionally employ the verb-movement characteristic of focused sentences. The alternative to verb movement in infinitives is focused infinitives without verb movement. The possibility of lack of verb movement turns focused infinitives into an exception to the focus rule. We included them in our study in order to ascertain their status among native speakers and investigate their development in the ILG of learners.

The test sentences in this category have two linguistic variables: operator (negative, focused) and movement (+,- verb movement). The sentences are exemplified below:

| Operator | Movement | Example sentence |
|--------------|-------------------|---|
| negative adv | [- verb movement] | Nem lenne jó hibásan be-adni. <i>not would-be good faulty PREF-gave-INF</i> 'It would not be good to hand it in with mistakes.' |
| | [+ verb movement] | Jó lenne ezt ritkábban élni át. <i>good would-be this-ACC more-rarely live-INF through</i> 'It would be good to live though this more rarely.' |
| focused NP | [- verb movement] | Jobb lenne anyut fel-hívni. <i>better would-be mom-ACC up-call-INF</i> 'We'd better call mom.' |
| | [+ verb movement] | Jobban szeretném Jánoshoz vinni el az autót. <i>better would-like-I John-to take-INF PREF the car-ACC</i> 'I'd rather take to car to John.' |

The hypotheses we hoped to test are as follows:

1. natives will accept both [- verb movement] and [+ verb movement] to the same degree, i.e. they will treat them as optional.
2. learners at an early stage will not have instantiated the FP projection, thus they will rate the [- verb movement] higher than the [+ verb movement] sentences.
3. once the FP projection is instantiated as diagnosed by the acceptance of F-operator and verb-movement in other constructions, learners will accept both [- verb movement] and [+ verb movement].

To test these hypotheses we carried out the following statistical tests:

- a) A three-way ANOVA test with repeated measures for operator type (negative adverbial, focused NP) and movement (-,+ verb movement) was carried out on *mean acceptability* scores with proficiency level as grouping factor (see Table 12a in Appendix F).
- b) A two-way ANOVA test on the *mean preference* for the [- verb movement] vs. [+ verb movement] was also carried out with operator type as repeated measures and level as grouping factor (see Table 12b in Appendix F).
- c) *Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

6.2.3.3.1 Results: all variables, mean acceptability

The mean acceptability scores for focused infinitives are reported in Table 6-33 and the accompanying Figure 6-33 below:

| | Int | Adv | NN | N | All |
|----------------------------|--------|--------|--------|--------|--------|
| Negative, -movement | 6.0714 | 5.8462 | 7.4375 | 8.6667 | 7.3429 |
| Negative, +movement | 4.3571 | 4.7692 | 3.75 | 5.963 | 4.9143 |
| Focused, -movement | 7.4286 | 7.0769 | 8.3125 | 8.7778 | 8.0857 |
| Focused, +movement | 6 | 5.5385 | 4.5625 | 5.7037 | 5.4714 |

Table 6-33 Mean acceptability rating in focused infinitives

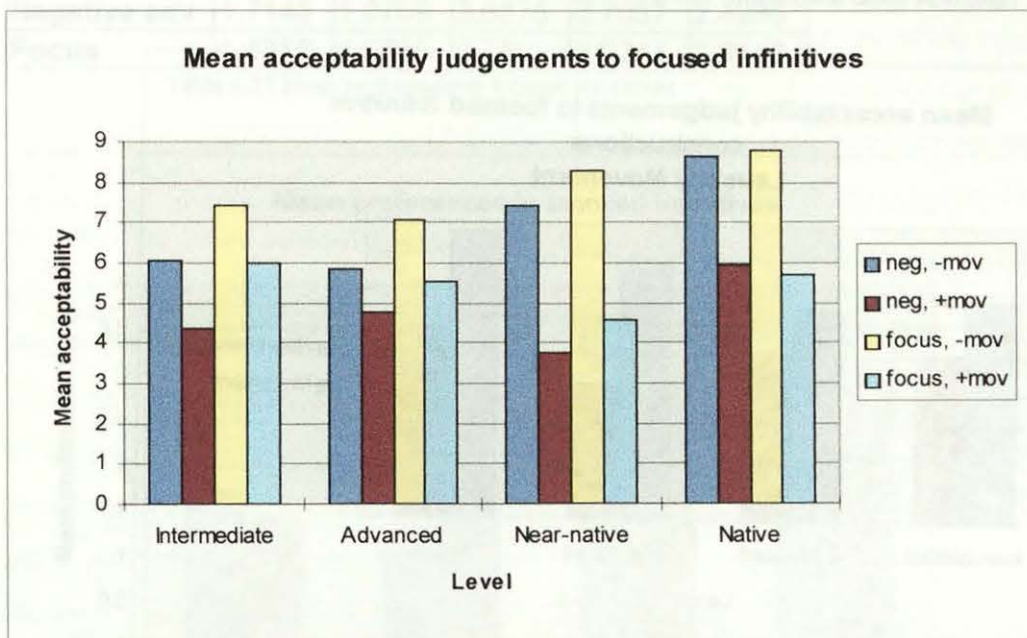


Figure 6-33 Mean acceptability rating in focused infinitives

There is an interesting trend that can be observed in Figure 6-33. All the groups prefer the [-verb movement] version, including the natives! This immediately questions the claim that these two versions are optional in Hungarian. Clearly, natives (as well as learners) strongly prefer the construction which is a counterexample to the focus-rule characteristic of all other focus-related constructions in the grammar.

The results of the ANOVA tests show that there are only significant main effects and no significant interactions. This suggests that variables have strong individual effects on the judgements of subjects, but do not enter into interaction with each other. The main affect of level is significant, $F(3,66)=3.12$, $MS=12.88$, $p= .032$. The type of operator is a significant main effect too, $F(1,66)=12.08$, $MS=3.57$, $p= .001$. Verb movement proves to be a highly significant main effect, too, $F(1,66)=52.86$, $MS=6.87$, $p= .001$. The only significant interaction is between level and verb movement, $F(3,66)=2.83$, $MS=6.87$, $p= .045$. The relevant mean acceptability scores are displayed in Table 6-34 and Figure 6-34.

| | Intermediate | Advanced | Near-native | Native | Total |
|--------------------|--------------|----------|-------------|--------|---------------|
| No movement | 6.75 | 6.4615 | 7.875 | 8.7222 | 7.7143 |
| Movement | 5.1786 | 5.1538 | 4.1562 | 5.8333 | 5.1929 |

Table 6-34 Mean acceptability rating for verb movement in focused infinitives

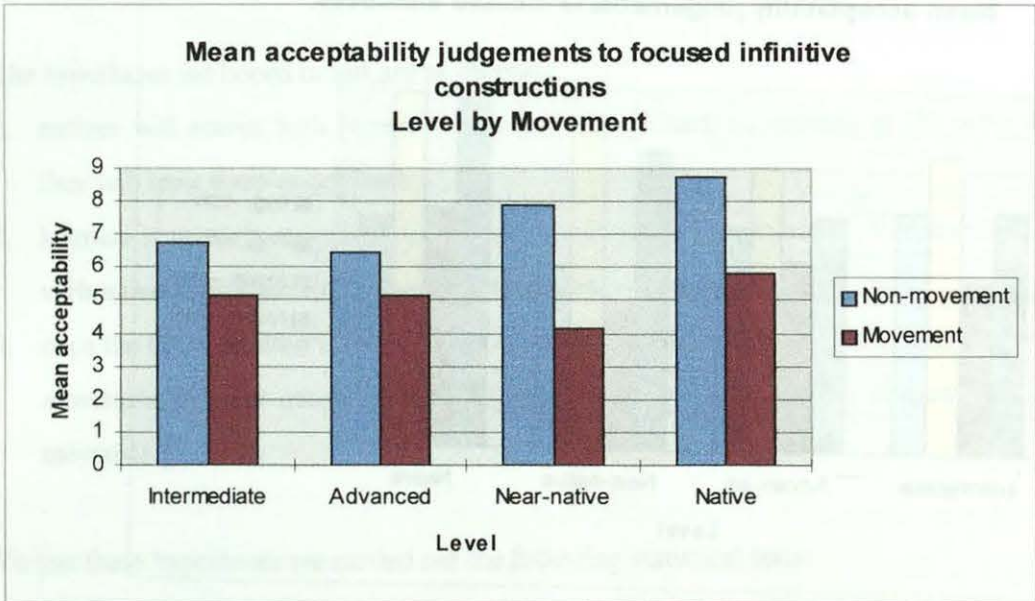


Figure 6-34 Mean acceptability rating for verb movement in focused infinitives

We can see from Figure 6-34 that all subjects make similar distinctions between [-/+ movement] focus infinitives: they prefer non-movement [-movement]. *Post hoc* multiple comparisons (at a tabled value of $q=4.29$) prove that the ability to discriminate to a significant degree is present in near-natives and natives only. Advanced learners' judgements are significantly lower for [-movement] sentences than natives, showing indeterminate features in their ILG.

The judgements given by native and near-native speakers seem to differ. This is confirmed in the ANOVA tests by a significant main effect of level between the two groups, $F(1,41)=5.80$, $MS=11.03$, $p=.021$. This proves that natives and near-natives have different representation of focused infinitives.

6.2.3.3.2 Preferences

The mean preferences for focused infinitives are reported in Table 6-35 and Figure 6-35 below:

| | Int | Adv | NN | N | All |
|---------------------|--------|--------|--------|--------|--------|
| Negative adv | 1.7143 | 1.0769 | 3.6875 | 2.7037 | 2.4286 |
| Focus | 1.4286 | 1.5385 | 3.75 | 3.0741 | 2.6143 |

Table 6-35 Mean preferences in focused infinitives

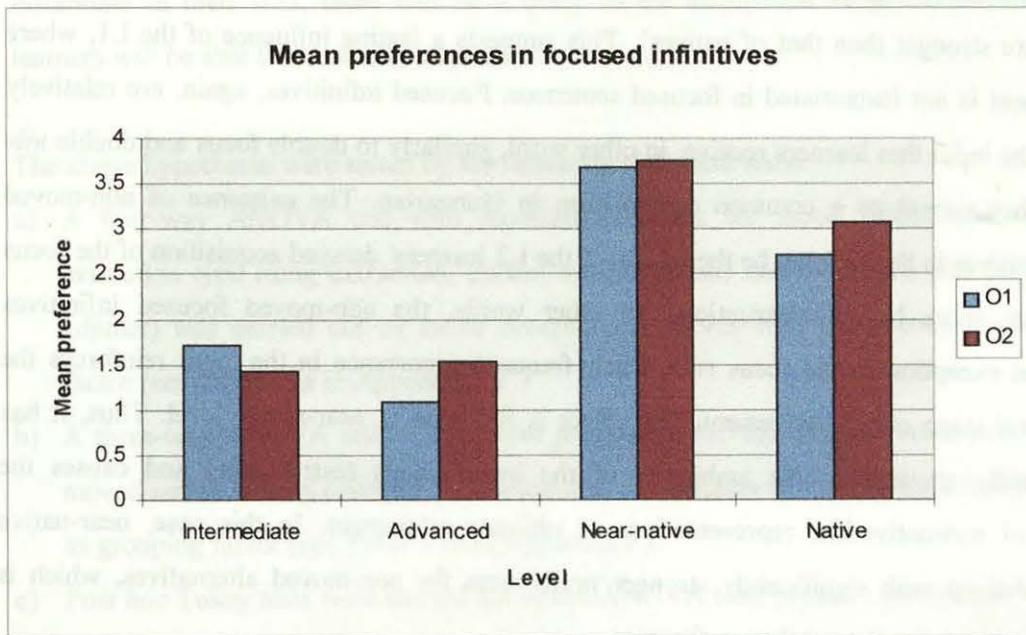


Figure 6-35 Mean preferences in focused infinitives (O1: negative adverbial, O2: focus)

As Figure 6-35 indicates, level is a significant main effect, $F(3,66)=2.83$, $MS=13.74$, $p=.045$, but surprisingly multiple comparisons ($q=3.69$) do not indicate any significant difference between any of the groups. The reason for this may be the high probability level of the main effect ($p=.045$),

implying that our significant result may have been caused by chance effects. This tendency was observed in the case of double focus sentences as well (see Figure 6-30). Both double focus and focused infinitive constructions receive stronger preferences from near-natives than natives.

6.2.3.3.3 Summary

In contrast to the account of focused infinitives in the literature, our data show that the natives do not treat focused infinitives as optional. Their preference is for the non-movement alternative, which constitutes a counter-example to the robust focus-rule in Hungarian. Thus, to use minimalist terminology adopted in Bródy (1995 and Kenesei 1993), we need to conclude that non-finite T^0 tends to be weak rather than strong. This pattern of judgement is replicated in the near-natives who also prefer the non-moved alternative. In spite of the similarity of judgement, near-natives were shown to have significantly different judgements from natives, indicating that their representations are non-target-like, i.e. divergent. We saw that their preferences for the non-moved alternative are stronger than that of natives'. This suggests a lasting influence of the L1, where verb-movement is not instantiated in focused sentences. Focused infinitives, again, are relatively frequent in the input that learners receive, in other word, similarly to double focus and double *wh*-sentences, they constitute a common construction in Hungarian. The existence of non-moved focused infinitives in the TL may be the source of the L2 learners' delayed acquisition of the focus rule in other, more basic constructions. In other words, the non-moved focused infinitives constitute an exception to the focus rule. Their frequent occurrence in the input reinforces the developmental stage of non-movement. The effect is felt even at near-native level. Thus, it has been repeatedly shown that the ambiguity of the input delays restructuring and causes the emergence of non-native-like representations at ultimate attainment. In this case, near-native learners ended up with significantly stronger preferences for non-moved alternatives, which is target-like but stronger than native preferences.

6.2.4 Acquisition of rare constructions

6.2.4.1 Long extraction vs. partial *wh*-movement

In sections 6.2.2.7 and 6.2.2.8 we analysed long extraction and partial *wh*-movement separately. Our aim there was to see how the linguistic variables affected the acquisition of those sentences. In particular, we were interested in the ability to judge the grammaticality of those structures. In this section we are going to compare the acquisition of these two construction *vis-à-vis* each other.

The hypothesis we hoped to test was that long extraction would receive higher acceptability ratings than partial *wh*-movement at the beginning stages of acquisition. The motivation for this prediction was that since English instantiates long extraction, learners will be familiar with it from the L1. Therefore, learners at the beginning stages will recognise long extraction easier and rate it higher. On the other hand, since partial *wh*-movement is a new construction that learners need to instantiate in their ILG, there will be a delay in the acquisition of partial *wh*-movement but learners will be able to eventually acquire it.

The above hypotheses were tested by the following statistical tests:

- a) A four-way ANOVA test with repeated measures for mood (declarative, subjunctive), extraction type (long extraction, partial *wh*-movement) and extraction site (subject, object, adjunct) was carried out on *mean acceptability* scores with proficiency level as grouping factor (see Table 13a in Appendix F).
- b) A three-way ANOVA test on the *mean preference* for the long extracted over the partially moved sentences was carried out with mood and extraction site as repeated measures and level as grouping factor (see Table 13b in Appendix F).
- c) *Post hoc* Tukey tests were carried out where ANOVA tests proved significant.

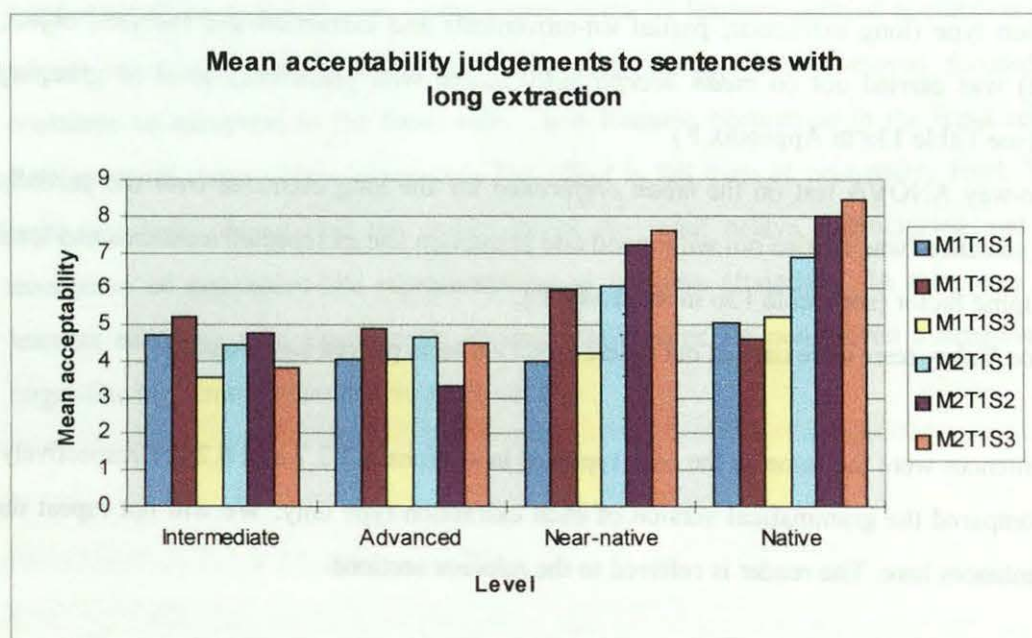
The test sentences were the same as the ones reported in sections 6.2.2.7 and 6.2.2.8 respectively. Here we compared the grammatical version of each extraction type only. We will not repeat the example sentences here. The reader is referred to the relevant sections.

6.2.4.1.1 Results: all variables, mean acceptability

The mean acceptability ratings for the correct long extracted vs. the correct partially moved sentences are displayed in Table 6-36 below. The graphs in Figure 6-36 are the graphical representation of the data. All 74 subjects were included in the analysis comparing long extraction vs. partial *wh*-movement.

| | Int | Adv | NN | N | All |
|---------------|------|--------|------|--------|---------------|
| M1T1S1 | 4.75 | 4.0526 | 4 | 5.0741 | 4.5233 |
| M1T1S2 | 5.25 | 4.8947 | 5.95 | 4.6296 | 5.1395 |
| M1T1S3 | 3.55 | 4.0526 | 4.2 | 5.2593 | 4.3488 |
| M1T2S1 | 4.95 | 4.7368 | 7.7 | 8.2222 | 6.5698 |
| M1T2S2 | 4.4 | 4.2632 | 8 | 8.8889 | 6.6163 |
| M1T2S3 | 4.15 | 4.4211 | 5.65 | 7.8148 | 5.7093 |
| M2T1S1 | 4.45 | 4.6842 | 6.1 | 6.8889 | 5.6512 |
| M2T1S2 | 4.8 | 3.3158 | 7.2 | 7.963 | 6.0233 |
| M2T1S3 | 3.85 | 4.5263 | 7.6 | 8.4444 | 6.314 |
| M2T2S1 | 4.35 | 4.4737 | 7.8 | 8.5556 | 6.5 |
| M2T2S2 | 4.7 | 4.2632 | 8.3 | 8.8148 | 6.7326 |
| M2T2S3 | 4.35 | 3.6316 | 5.7 | 7.1852 | 5.3953 |

Table 6-36 Mean acceptability rating in long extraction and partial *wh*-movement sentences (M1: declarative, M2: subjunctive, T1: long extraction, T2: partial *wh*-movement, S1: extracted subject, S2: extracted object, S3: extracted adjunct)



Graph p Long extraction

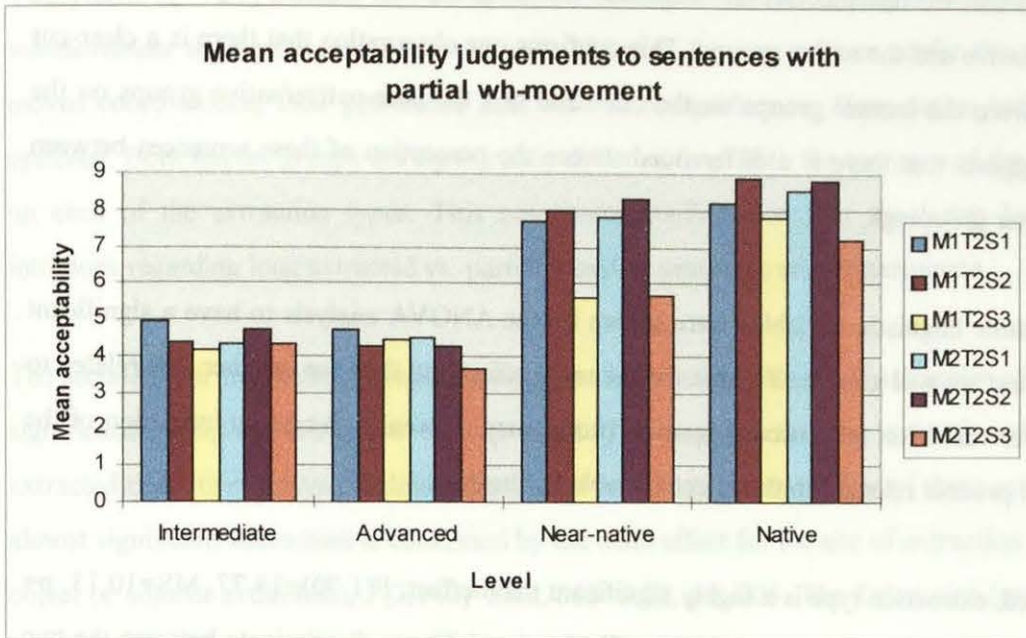
Graph q Partial *wh*-movement

Figure 6-36 Mean acceptability rating in a) long extraction and b) partial *wh*-movement sentences (M1: declarative, M2: subjunctive, T1: long extraction, T2: partial *wh*-movement, S1: extracted subject, S2: extracted object, S3: extracted adjunct)

The main tendencies that can be observed by looking at the graphs in Figure 6-36 are the following. The near-natives and natives behave in a markedly different way from the learners in the intermediate and advanced groups. This difference is most striking in the case of partial *wh*-movement, whereas in the case of long extraction development does not seem to be discontinuous to such a degree, i.e. the differences are smaller between the advanced and near-native groups. The near-natives seem to judge the long extracted sentences in the declarative mood similarly to the advanced learners. They behave more like the natives on the long extracted subjunctive sentences and on all the partial *wh*-movement sentences. Adjunct long extraction in the subjunctive mood is judged with high acceptability, whereas adjunct partial *wh*-movement in the same subjunctive mood is judged with low acceptability by both the near-natives and the natives. Let us examine these tendencies closer and see if the statistical results prove these informal observations right.

There is a significant main effect of level, $F(3,70)=3.35$, $MS=21.52$, $p= .024$. The Tukey test ($q=3.63$) shows that the intermediate and advanced learner groups are significantly different from both the near-native and the native groups. This confirms our observation that there is a clear-cut difference between the learner groups on the one hand and the near-native/native groups on the other. This suggests that there is a difference between the perception of these sentences between these two greater groupings.

All the other three linguistic variables were shown by the ANOVA analysis to have a significant main effect. First we will give the F value for the main effect and then see whether it is related to any of the other variables, in particular level of proficiency. It would give us an indication of the developmental process relevant to the effect/variable in question.

As we expected, extraction type is a highly significant main effect, $F(1,70)=18.77$, $MS=10.13$, $p= .001$. When we examine the developmental profile for the ability to discriminate between the two types of extraction (long extraction vs. partial *wh*-movement), the ANOVA tests show that the interaction between level and type of extraction is significant, $F(3,70)=3.25$, $MS=10.13$, $p= .026$. See Figure 6-37 below for the graphical representation of subjects' judgements to grammatical long extracted and partially moved operator sentences.

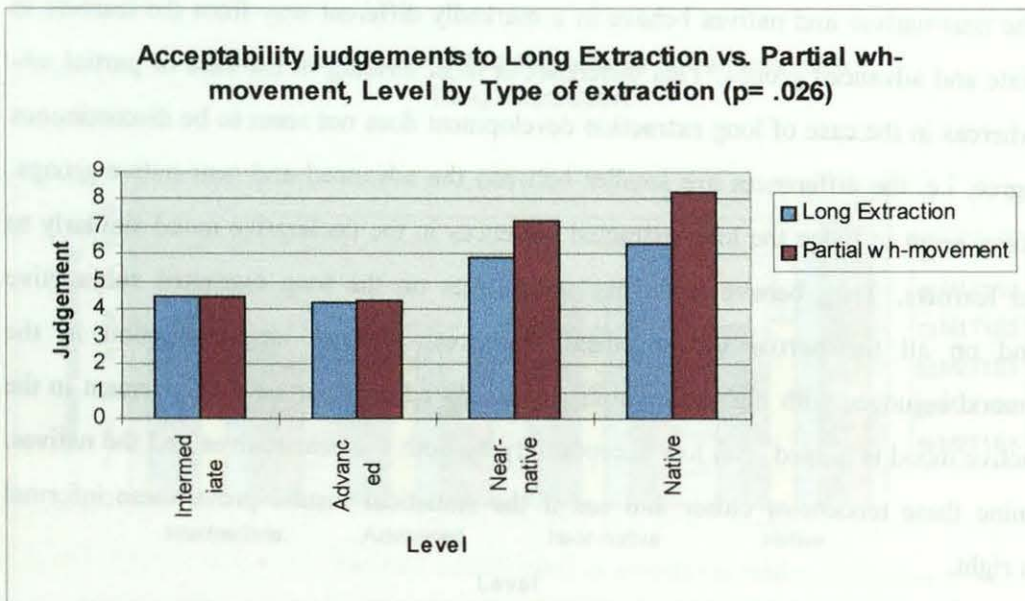


Figure 6-37 Long extraction vs. partial operator movement

Tukey tests ($q=4.29$) indicate that *the ability to distinguish between long extraction and partial wh-movement is present only in the natives*. Although the near-natives prefer the partially *wh*-moved constructions, their preference does not reach significance. *Near-native judgements are optional*. Both learner groups are significantly different from both the natives and the near-natives on each of the extraction types. This constitutes confirmation that the lower level learners' intuitions regarding long extracted vs. partially moved sentences are indeterminate.

The second order interaction between level, type of extraction and site of extraction slightly misses significance, $F(6,140)=2.16$, $MS=5.33$, $p=.051$. This suggests that the syntactic category of the extracted constituent plays an almost significant part in the acceptability of these sentences. This almost significant interaction is confirmed by the main effect for the site of extraction (i.e. subject, object or adjunct extraction), $F(2,140)=5.48$, $MS=5.88$, $p=.005$. The Tukey test ($q=3.31$) shows a significant difference between object and adjunct extraction.

Interestingly, the interaction of level with site of extraction does not prove significant ($p=.068$) when we compare all groups together. When only the near-native and native groups are compared, the level and site of extraction interaction turns out to be significant, $F(2,90)=3.20$, $MS=4.98$, $p=.046$. This suggests that near-natives' and natives' judgements are not similar, but rather they are a function of the site of extraction. We will discuss this tendency later.

The interaction between type and site of extraction is significant, $F(2,140)=6.04$, $MS=5.33$, $p=.003$. *Post hoc* multiple comparisons ($q=4.03$) show a significant difference between long and partial *wh*-movement on subject as well as on object extraction and a significant difference between subject and adjunct extraction and also between object and adjunct extraction within partial *wh*-movement.

The main effect of mood also turns out to be significant, $F(1,70)=12.57$, $MS=6.56$, $p=.001$. The interaction between level and mood is also significant, $F(3,70)=4.23$, $MS=6.56$, $p=.008$. The *post hoc* Tukey test ($q=4.29$) shows that both the near-native and native groups distinguish between

declarative and subjunctive mood, rating the subjunctive significantly higher. Both learner groups significantly differ on both types of mood from the near-natives as well as from the natives.

There is a significant interaction between mood and type of extraction, $F(1,70)=24.21$, $MS=4.99$, $p=.001$ and this interaction is qualified by a three-way interaction between mood, type and site of extraction, $F(2,140)=3.17$, $MS=3.47$, $p=.045$. Also, there is a second-order interaction between level, mood and type of extraction, $F(3,70)=3.86$, $MS=4.99$, $p=.013$. Tukey tests ($q=4.84$) show that *both near-natives and natives make a significant distinction between long extracted and partially moved declarative sentences, preferring the partially moved declaratives significantly more. Also, the two groups both make a distinction between long extracted declaratives and subjunctives, preferring the long extracted subjunctives significantly more.* The learner groups gave significantly lower judgements to all sentences, thus exhibiting incomplete knowledge representations.

6.2.4.1.2 Summary

Our results confirm the hypothesis that native speakers of Hungarian do not treat partial operator movement as an optional construction to long operator extraction. Long extraction is allowed to a greater degree in subjunctive sentences. We found that long extraction is a function of mood (declarative or subjunctive) in native Hungarian. English-speaking learners, whose L1 exhibits only long operator extraction, proved to have difficulties in instantiating partial operator movement in their ILG. Near-natives *approximate* natives on subjunctive long extracted sentences and all partial *wh*-movement sentences. However, the TL distinction between long and partial movement does not seem to be acquired by near-native level. Near-natives still treat long-extraction and partial *wh*-movement as optional, whereas natives prefer partial *wh*-movement significantly more to long extraction.

6.3 Summary

In this chapter we have analysed all 12 construction-types separately for the native and non-native speakers of Hungarian. Although we have given a summary at the end of each individual analysis, what remains to be done is a comprehensive outline of the results gained and a discussion as to their interpretation. In Chapter 7 we shall pick up the two main original hypotheses, namely those of optionality and acquisition of feature values in L2 acquisition, relate them to our findings and finally we shall draw conclusions about the more general implications of the findings for a theory of SLA.

7 Discussion and Conclusions

In this chapter we give a summary and discussion of our findings (section 7.1). In section 7.2 we offer some further discussion and in section 7.3 we draw our conclusions and point out the implications of our study for a theory of SLA. The limitations of the study are highlighted in section 7.4. Finally, we provide our suggestions for further research in section 7.5.

7.1 Summary and discussion of findings

This thesis set out to address two main issues: the status of optionality in native and non-native grammars and the relevance of the nature of evidence in the acquisition of a target language. These issues were addressed with respect to the acquisition of focus constructions in Hungarian. Additionally, a hypothesis related to the differential learnability of interpretable versus non-interpretable features was tested. Acceptability judgements were elicited from English learners of Hungarian and native Hungarian speakers in order to bear upon the issues investigated. The success of this enterprise rests in the ability of providing empirical evidence for the presence of optional representations in stable and developing grammars (both native and non-native) and offer plausible explanations for them within the current theoretical framework (the Principles and Parameters Theory and its more recent Minimalist version expounded in Chomsky 1995).

As stated, one of the aims of this thesis was to test the hypothesis proposed by Radford (1997) and Tsimpli (1996b, 1997) that non-interpretable features are more difficult to acquire than interpretable features in language acquisition. This hypothesis is crucially dependent on the assumption that the different features are examined on the same functional head category. In our investigations of the acquisition of Hungarian focus projection by adult English speakers we found that this hypothesis was only partially borne out. The reasons are outlined below.

In our observational as well as experimental studies it was found that learners of Hungarian (both child L1 and adult L2 learners) are able to prepose operators into special left-peripheral operator positions long before they manage to compute the syntactic consequences of positing a new functional projection. In particular, the special properties of Hungarian verb

movement seem to be acquired later and with more inter- and intra-learner variation than the positioning of operators (*wh*, negative and focused operators). We argued in our study conducted out on five children's data in the CHILDES database (reported in Appendix A) that child learners of Hungarian as a first language manage to acquire target-like positioning of verbs and adjectival predicates by the age of 2;9 years. The two constructions with which they have continued difficulties after this age were reported to be negative and *is*-'only' constructions. It was argued that children's mistakes at this stage can be accounted for by the fact that the input for these constructions is ambiguous: learners are misled by contrastive negation and quantificational *is*-'also' clauses in the input. It is argued that this might constitute the cause of the delay in target-like attainment in this domain of the structure of Hungarian. Obviously, child learners of Hungarian eventually overcome the developmental optionality characteristic of these constructions. Thus we are forced to assume that the evidence child learners receive is sufficient and sufficiently robust.

In L2 acquisition, adult learners of Hungarian were also found to have difficulties with the verb-movement properties of the target language. Interestingly, adult L2 learners were found to acquire verb-movement in negative sentences (the ones which caused child learners a persistent difficulty) earlier than other operator constructions. This shows that although similar on the surface, the rate, route and, as we shall see, the ultimate attainment of child and adult learners are different. In the L2 data, only at the near-native level do we find target-like and consistent verb movement to the functional head F^0 in all relevant constructions. We argue that acquisition of verb-movement is possible by this level as data crucial for the acquisition of target-like verb-movement is robust enough (i.e. frequent, simple and salient) to facilitate parameter-resetting. The discrepancies between the near-native non-native grammar and the native grammar are manifest not in knowledge of verb-movement but in knowledge of other properties which have less robust manifestation in the input.

In what follows we shall attempt to account for the delay and eventual attainment of verb-movement properties in Hungarian within the current theoretical framework. We shall also see whether our hypotheses regarding the role of [+/-interpretable] features are supported by our data. In Minimalist terminology, feature checking of operators happens in the specifier position of functional heads. The features of operators, such as [+*wh*], [+neg] and [+focus] features, are interpretable. These features stay visible to the computation after they have been checked since they carry a semantic interpretation which is manifest in their type-changing

character or force in Rizzi's (1990, 1995) terminology. These features are strong in Hungarian, therefore an operator carrying the them needs to move for reasons of feature-checking. However, in the Minimalist framework, whether a given feature is interpretable or not depends not only on the feature itself but whether it appears on the target of movement (the checker) or on the moved element (the checkee). Features which are interpretable on the checkee (the moved element) are non-interpretable on the checker (the target of the movement). This is what Chomsky (1995:278) refers to in the distinction between the phi-features of verbs and adjectives which are non-interpretable as opposed to the same phi-features appearing on the nouns which are interpretable. Thus, in Hungarian, the moved operators carry an interpretable feature, but the N feature of the F^0 head category which is supposed to check them is non-interpretable. Thus, the [+f], [+wh] and [+neg] features are concurrently interpretable and non-interpretable depending whether they appear on the moved element or on the target of the movement.

Translating our results into Minimalist terminology, the findings of our study suggest that the strong interpretable interrogative [Q], focus [F] and negative [NEG] features characterising non-declarative sentences are noticed and instantiated at an early stage of L2A of Hungarian as operator movement. However, what our results also show is that learners at a lower proficiency level have not yet been able to compute the relevant checking relations for these operators. In other words, the spec-head agreement between the checker and checkee is not satisfied, since the checkee (the verb) is missing from the required position. All this suggests is that learners are late in computing the feature specifications of the head category, i.e. both the 'N'- and the 'V'-features of the F^0 head. This leads to lack of verb-movement. Since both of these features are non-interpretable on the head, this finding follows our prediction that non-interpretable features will be more difficult to instantiate. However, our prediction is not supported regarding the scenario when the L1 and L2 differ in the non-interpretable features they instantiate. We hypothesised that in this case adult L2 learners will always show L1 influence throughout development and at ultimate attainment (Hypothesis 4 in section 5.2.4). This hypothesis is not supported, since our near-native group seems to have acquired target-like verb-movement. It is important to realise that the acquisition of Hungarian verb-movement in focused sentences has little to say about the difference between the ease of acquisition of interpretable and non-interpretable features on the *same* head (such as the Tense and Agr features on English main verbs, or the phi-features and plural on nouns). Both of the features of the head F^0 are non-interpretable. Therefore, our results do not constitute direct evidence either for or against the hypothesis regarding the

differential acquisition of [+/- interpretable] features of the same head in L2 acquisition (Tsimpli 1996a, 1997). All we can claim is that the interpretable features of operators are noticed and integrated in the grammar before the non-interpretable features of the head are instantiated.

However, our results are directly describable and constitute partial support for the more 'traditional' hypothesis which proposes that head-, i.e. verb-movement is the part of the grammar which is impaired in L2 acquisition (Beck 1996, 1998). We found that learners at a lower level of proficiency do manifest difficulties with verb-movement to a new functional projection. However, contrary to what Beck (1996, 1997, 1998) predicts and finds in the grammar of English learners of German, our near-native group appears to recover from this impairment, as they exhibit target-like head-movement in their acceptability judgements at this stage. Thus, although we agree that head-movement is later acquired in L2 development, we would like to argue that it is not a permanent deficiency which results from the effect of the critical period on this part of the grammar. Rather, the representational deficit in head-movement is a temporary shortcoming which can be overcome at later stages of L2 acquisition *given sufficient and sufficiently robust evidence from the target language*.

This last qualification is what we see as the crucial criterion for successful acquisition of target-like features specifications in an L2. We propose that the less than robust nature of the input does indeed pose limitations on the end-state grammar L2 learners can attain. Our suggestions for Beck's (1996, 1998) findings of optional verb-movement at an advanced stage are the following. First, it is conceivable that Beck's English learners of German might not have reached the end-state of their ILG, that is, they might be at a stage where they are still to recover from the temporary deficit in underlying knowledge of target-like verb movement. Alternatively, the structure of the evidence necessary for the resetting the verb-movement properties of German might be less robust as to be sufficient for parameter resetting. These two possibilities may account for why the advanced students still evidence optional verb-movement in German.

Next, we need to consider the involvement of the first language of our subjects, i.e. English, in the acquisition of Hungarian focus related constructions. In this study we took the influence of the L1 on the development of L2 grammars as one of our *a priori* assumptions. Although this assumption is reasonable in the light of most studies on L2 acquisition (see references later in this paragraph), it is far from non-controversial that the effect of the L1

can be taken as an *a priori* assumption without further empirical confirmation. The questions related to the effect of the mother tongue on the development of a second language concern the extent and precise nature of L1 influence on the different stages of L2 development (Hoekstra and Schwartz 1994, Schwartz and Eubank 1996). Thus our results need to be discussed in terms of the presence of evidence for L1 influence on learners' representations of Hungarian at the developmental stages we examined. Most recent large- and small-scale experimental studies that have dealt with the development of L2 knowledge have found an influence of the L1 on the representations of L2 learners. They have focused on different stages of acquisition: Schwartz and Sprouse (1994, 1996), Gavrusseva and Lardiere (1996) and Hazdenar (1997) etc. found L1 influence at the initial state; White (1990/1991, 1992) found L1 effects at the intermediate stages, Coppetiers (1987), Sorace (1993), Lardiere (1997) found lasting L1 effects even at the end-state of L2 acquisition.

In our study we did not investigate learners at a very early stage of acquisition. Our results however do show an L1 effect at the intermediate stages in the case of focus-movement. English learners at the intermediate stage appear to transfer the L1 value for no movement of focus operators and the value of [-verb movement] in sentences with an operator (*wh*, negative and focus operators). They also appear to make a distinction between main and thematic verbs in their ILG of Hungarian, a dichotomy absent in the target language but present in the syntactic structure of their L1, English. However, this L1 influence seems to disappear as learners gradually instantiate the target-like FP projection and learn to move all operators and the verb to the positions within the FP. A lasting effect of the L1 on L2 representations at ultimate attainment was only found in those cases where the input was not sufficient or sufficiently robust for the correct feature specifications of the target language. This was the case with the double focus constructions, focused infinitives, some subtypes of long and partially extracted constructions (particularly in the case of extracted adjuncts) and in embedded sentences. Our hypothesis regarding the influence of the L1 on the shape of TL representations in the face of non-robust evidence from the target language is thus empirically supported.

We argued that when the input is less than robust, learners' representations of the target language will turn out to be incomplete or divergent. The question is what makes an end state non-native grammar incomplete or divergent? Our suggestion is that the L2 grammar will be *incomplete* when the L1 does not play a role in the formation of L2 representations but learners are led to use general learning strategies (overgeneralisation, analogy, or the

like); whereas the L2 grammar will be *divergent* when the L1 has a lasting effect as a result of non-sufficient input.

It was shown that in the case of double focus constructions, a native optionality in the position of the postverbal pronoun was not reflected in L2 learners' grammar. Instead, we argued that L2 learners use analogy, a general learning strategy, as a result of which they represent a native optional rule as categorical. Another case where overgeneralisation was argued to operate in the L2 learners' grammar was in the case of universal quantifiers which were found to be incorrectly treated as focus operators. The reason why non-natives are found to employ these general learning strategies are precisely the same as those we found for children's delayed acquisition of negative and *is*-phrases. Note that in both cases the input learners receive is ambiguous in a sense that there exist two different constructions in the input for both negation and *is*-phrases. We do not have the relevant data from L1 acquisition to show that child learners too are misled by the evidence provided in the input with regard to double focus constructions. It is merely a question of empirical evidence whether this hypothesis is on the correct path. However, as children finally acquire the relevant distinctions on exposure to relevant and crucial data, so can L2 learners be expected to notice the discrepancy between their ILG and the positive linguistic data and revise their incorrectly formed hypotheses. The problem is that L2 learners at the asymptotic near-native level do not seem to notice relevant data even if provided in sufficient quantities (Sorace 1993).

We argued that whenever the L1 has a lasting influence, learners' end-state grammar is divergent. This is the case of focused infinitives, long extracted and partially moved operators, as well as embedded sentences in the case of our English learners of Hungarian. The effect of the L1 can be argued to be prevalent in these constructions precisely as a direct result of the nature of the relevant evidence L2 learners receive. Crucially, if the evidence was sufficient and sufficiently robust, the effect of the L1 influence could perhaps be preempted in the ILG.

Thus we have arrived at the third claim of our thesis according to which the nature of the input is paramount for successful acquisition of target language FCs and their feature specifications. Remember that it was predicted that only robust data (simple, salient and frequent occurrence of a target language property) can lead to target-like representations. The results of our study largely supported this hypothesis. It was found that robust evidence leads to the acquisition of target language FCs and their feature specifications in the case of

main focused, negative and *wh*-clauses. However, when target language input is less than robust (less simple, less salient and/or rarer), we expected, and found, that acquisition of the TL property is delayed or even permanently halted. This was found in the case of long and partially extracted operators. In the case of those constructions which, although relatively frequent in the input but which at the same time constitute ambiguous evidence in the sense that more than one parameter setting can account for the optionality of the data we found that learners' representations were effected by the ambiguity and proved to be non-target-like. This was the situation in the case of double focus, double *wh*, and focused infinitive constructions. If there is some exceptional data in the TL, in a sense that there are constructions which constitute a counter-example to the general parameter setting observed throughout the TL system, acquisition was hypothesised to be delayed as rule formulation is hindered. This was indeed found in constructions with negative adverbials. We argued that learners are delayed by the presence of exceptional data and the acquisition of these constructions proceeds on the basis of lexical learning: learners need to figure out the lexical specifications of negative adverbials in Hungarian. Although learners at this stage exhibited knowledge of the relevant syntactic properties, their acquisition was found dependant on lexical learning. This supports the strong lexicalist hypothesis of Robertson and Sorace (1999) according to which there is a dissociation between syntactic and lexical learning in L2 acquisition.

The existence of optional representations within a stable, mature grammar was argued to be rare except in periods of language change (cf. Chomsky 1995 vs. Kroch 1989). We found that Hungarian native speakers do not treat theoretically optional constructions as optional, with the exception of monosyllabic postverbal focused elements. These monosyllabic postverbal focused elements can appear in two positions. This might be the result of a stylistic option. However, no optionality in verb-movement in focused infinitives or between long extracted and partially moved operators was found in the native speakers' judgements. Natives made categorical judgements about these, preferring one alternative significantly more to the other (i.e. the preferred constructions were focused infinitives without verb-movement and partial *wh*-movement). On the other hand, somewhat surprisingly, Hungarian natives were found to treat constructions that were argued to be quasi-optional as mutually interchangeable, that is, optional. Specifically, double focus and double *wh* sentences were not differentiated by a semantic difference in interpretation. These findings highlight the difficulty in predicting and finding evidence in stable grammars for optionality of expression and representation. Where predicted, we did not find native optionality; and where not

predicted, natives did show optionality. The question is whether this difficulty in finding empirical evidence is the result of the relative infrequency of these constructions compared to the totality of the positive linguistic data.

It therefore transpires that frequency of occurrence plays a crucial part in the formation of optional representations in both native and non-native grammars. Constructions which receive less than categorical judgements tend to be less frequent in the input. This is suggested by Kroch (1989), Sprouse and Vance (1999) and DeGraff (1996) with regard to native languages. It is especially relevant for adult L2 acquisition that pidgin languages are created in the face of less than robust evidence (DeGraff 1996). Frequency as a crucial factor in acquisition has been recognised by Henry and Tangney (1996), DeGraff (1996), Hayes (1997), Boersma (1998), and in the connectionist view of language acquisition, e.g. Elman et al (1996). We therefore argue that frequency is paramount in the acquisition of a first or second language, and it is a potential candidate for the explanation of the presence of optional representations and forms of expression in both native and non-native languages.

7.2 Further discussion

Our findings indicate that optionality of representations and expression is a very elusive phenomenon. Sometimes, even if optionality is possible to predict theoretically and widely observed in production, it is in fact very difficult to capture in native speaker intuitional data. On the other hand, when optionality is predicted to be more apparent than real, it in fact turns out to be genuine in native speakers' intuitions. However, this might be an artefact of the statistical analysis used, since group results average out any individual differences and tendencies. Thus it is very important to carry out research on grammaticality judgements relating to optionality that is carefully designed, uses precise and appropriate statistical analysis and is cross-validated with other data elicited in a different way, such as production data. Any suggestion to this effect, such as those of Schütze's (1996), Cowart (1997) and Sorace (1996a), is highly welcome and should be followed up in studies of optionality in grammars of both native and non-native speakers.

It has been claimed that for the theoretical description of Hungarian, questions of gradient optionality may not be regarded as relevant thus they are very seldom considered (Kenesei 1997 personal communications). Moreover, it seems that for grammatical theory even the fact that one of the alternatives in an optional construction is *significantly* more acceptable

than the other constitutes no information of interest. This seems to be the case in the theoretical treatment of focused infinitives as optional but where we found a significant preference for the variant with the non-moved verb. From the point of view of theoretical linguistics, what seems to be interesting is whether both of the alternatives of a construction are possible sentences of the language or not, rather than the questions of the *extent* to which these alternatives are acceptable within the population of native speakers, or the *proportion* of native speakers who accept one as opposed to the other. We would like to argue that this is a serious oversight in theoretical linguistics.

The reason why questions of gradient optionality have not been appropriately handled in theoretical accounts of linguistic systems may be related to the difficulty of measuring the extent of acceptability, i.e. gradients of (un)grammaticality and strength of preference for one variant over the other, within a population of subjects. However, this argument is no longer valid with the introduction of more rigorous techniques of elicitation, research designs and measurement techniques as well as statistical methods of analysis as recommended by Bard et al (1996), Sorace (1996a), Schütze (1996) and Cowart (1997). The results of this thesis strongly suggest that the questions of gradient acceptability and strength of preference should take pride of place in empirical linguistic research whether on native or non-native grammars. The extent to which a construction is acceptable does have a crucial bearing on language acquisition, first and second. This is so, because the level of acceptability will be presumably reflected in the input (L1 or L2) learners receive during acquisition and they will create their grammar of the target language accordingly.

7.3 Conclusions and implications for a theory of SLA

As far as the difference between L1 and L2 acquisition is concerned, we have argued that child L1 learners manage to recover from developmental optionality because of the ability to notice crucial evidence available in the input. In L2 acquisition, the temporary impairment of the module that provides access to knowledge of verb-movement in the target language leads to the persistence of developmental optionality in L2 acquisition. This developmental optionality in itself is the result of grammatical competition between the L1 FCs and their feature specifications and the FCs of the target language, especially those implicated in verb-movement. However, we argued that this temporary deficit in knowledge representation can be overcome by the provision of relevant TL evidence. This is what we found in the near-native learners of Hungarian.

As for the L2 findings, we have argued that looking at the nature of the TL input, especially properties less than robust in the target language, will help provide an insight into L2 acquisition that has so far been largely ignored. The existence of less robust data can explain a series of phenomena in L2 acquisition: incomplete and divergent representations formed by learners, the use of general learning strategies such as analogy and overgeneralization, and the employment of L1 properties even at a high level of proficiency.

The results of the non-native learners' judgements in our study seem to support the view of those researchers who argue that representations at ultimate attainment do approximate those of native speakers' in the face of robust and non-ambiguous target language input (Birdsong 1992, White and Genesee 1996). However, we found substantial differences where the input was less than robust or ambiguous. It has been demonstrated that non-native speakers' representations are less determinate or even outright divergent from native representations (Coppetiers 1987, Johnson et al 1996, Tsimpli and Roussou 1991, Sorace 1993, Schwartz and Sprouse 1994, 1996, Ratwatte 1995, Lardiere 1997, 1998, Beck 1996, 1997, 1998, Dube 1998). We would like to argue that these results were found either as a result of misanalysis of the target language input (Tsimpli and Roussou 1991, Schwartz and Sprouse 1994, 1996, Dube 1998) or because the target language input is less than sufficient for correct analysis of the target language. Thus, our study has corroborated the findings of these studies but it has additionally argued that the nature of the evidence plays a crucial part in the acquisition of TL properties.

7.4 Limitations of the study

We are aware that the selection procedure of our main study has led to a situation where our results can be generalised only to the population from which we drew our sample. This was, however, inevitable given the difficulties of finding a sufficient number of English speakers who started learning Hungarian in adulthood. Also, we would have preferred to use another elicitation technique for the cross-validation of our results in the main study. However, we felt that the three preliminary studies in which we collected production data as well as acceptability judgements through magnitude estimation served as an informal validation for our main results. Also, it would have been desirable to carry out a study on the individual differences between our subjects, as an investigation to this effect could have thrown more light on the acquisition process by individual second language learners. However, we

contend that our findings, even if not generalisable for a wider range of L2 learners in a wider variety of learning situations, carry enough empirical content to be of some theoretical interest.

7.5 Further research

We realise that this thesis presents only a small proportion of the whole picture on the acquisition of Hungarian focus projection by children and adults. Recent theoretical research such as presented in Olsvay (1998), Alberti (1998), Puskás (1996, 1998), Lipták (1998), Kenesei (1998) is more than welcome and essential for future investigations into the acquisition of Hungarian syntax and prosody by first and second language learners. Particularly, historical investigations on the facts of optionality would considerably enhance the value of acquisitional studies.

It is generally felt that more data should be collected and made available on both Hungarian child and adult L2 acquisition, respectively. Spontaneous corpus data could be effectively used to generate new working hypotheses and would consequently enable further research to be conducted. There has been a lot of interest shown towards the theoretical description of Hungarian due to its unique status among the languages of Europe and its unique syntactic and prosodic properties. These theoretical investigations should be complemented by more first and second language acquisition studies. In particular, it would be interesting to carry out further cross-linguistic studies with learners of Hungarian whose L1 is other than English. Specifically, an empirical study with speakers of Japanese, Korean or Chinese (whose L1 does not instantiate any overt operator movement) and speakers of other discourse-configurational languages (such as Russian, Finnish or Greek) would shed light on the cross-linguistic differences in the ability to acquire the Hungarian focus projection. These will, however, have to be left for future investigations.

Bibliography

- Abondolo, D. (1987) Hungarian. In: Comrie, B. (ed.) *The World's Major Languages. The Major Languages of Eastern Europe*, pp. 577-592. London: Routledge.
- Abraham, W. and de Mey, S. (eds.) (1986) *Topic, Focus, and Configurationality. Papers from the 6th Groningen Grammar Talks, 1984*. Amsterdam: John Benjamins.
- Ackermann, F. and Komlósy, A. (1983) Néhány lépés a magyar szórend megértése felé. *Conference Proceedings*, Pécs, Hungary.
- Adger, D. (1996) Economy and optionality: Interpretations of subjects in Italian. *York Papers in Linguistics* 17, 1-21.
- Adjemian, C. (1976) On the nature of interlanguage systems. *LL* 26, 297-320.
- Aitchison, J. (1988) All paths lead to the mental lexicon. In: Flynn, S. and O'Neil, W. (eds.) *Linguistic Theory and Second Language Acquisition*, pp. 346-361. Dordrecht: Kluwer.
- Alberti, G. and Medve, A. (1998) *Constituents in special operator positions*, Talk presented at the 4th International Conference on the Structure of Hungarian, August 1998, Pécs, Hungary.
- Andersen, R. (1983) Transfer to somewhere. In: Gass, S. and Selinker, L. (eds.) *Language Transfer in Language Learning*, pp. 177-201. Rowley, Mass.: Newbury House.
- Andersen, R.W. (1989) The theoretical status of variation in interlanguage development. In: Gass, S. et al (eds.) *Variation in Second Language Acquisition: Psycholinguistic issues*, pp. 46-64. Clevedon: Multilingual Matters.
- Anderson, A. et al (1991) The HCRC Map Task Corpus. *Language and Speech* 34: 351-366.
- Archangeli, D. (1997) Optimality Theory: An introduction to linguistics in the 1990s. In: Archangeli, D. and Langendoen, D.T. (eds.) *Optimality Theory: An overview*, pp. 1-32. Oxford: Blackwell.
- Archangeli, D. and Langendoen, D.T. (eds.) (1997) *Optimality Theory: An overview*, Oxford: Blackwell.
- Atkinson, M. (1992) *Children's Syntax. An introduction to Principles and Parameters Theory*, Oxford: Blackwell.
- Babarczy, A. (1995) *The linguistic development of a Hungarian child*. MA dissertation. University of Edinburgh.
- Bailey, B.L. (1966) *Jamaican Creole Syntax*, Cambridge: CUP.
- Bailey, C.N. (1973a) The patterning of language variation. In: Bailey, R.W. and Robinson, J.L. (eds.) *Varieties of Present-Day English*, pp. 156-186. New York: Macmillan.
- Bailey, C.N. (1973b) *Variation in Syntactic Theory*, Arlington, Virginia: Center for Applied Linguistics.
- Bailey, N., Madden, C. and Krashen, S. (1974) Is there a "natural sequence" in adult second language learning? *LL* 24, 235-243.
- Bak, P. and Chen, K. (1991) Self-organized criticality. *Scientific American* 264/1, 26-33.
- Baker, M.C. (1988) *Incorporation: A theory of grammatical function changing*, Chicago: University of Chicago Press.
- Barbosa, P., Fox, D., Hangstrom, P., McGinnis, M. and Pesetsky, D. (eds.) (1998) *Is the Best Good Enough? Optimality and competition in syntax*, Cambridge, Mass.: MIT Press.
- Bard, E.G., Robertson, D. and Sorace, A. (1996) Magnitude estimation of linguistic acceptability. *Language* 72/1, 32-68.

Bibliography

- Bartos, H. (1998) *Affix order in Hungarian and the Mirror Principle*, Talk presented at the 4th International Conference on the Structure of Hungarian, August 1998, Pécs, Hungary.
- Battistella, E.L. (1995) Jakobson and Chomsky on markedness. In: Hajicová, E., Cervenka, M., Leska, O. and Sgall, P. (eds.) *Prague Linguistic Circle Papers, Vol.1.*, pp. 55-72. Amsterdam: John Benjamins.
- Battistella, E.L. (1996) *The Logic of Markedness*, Oxford: OUP.
- Battye, A. and Roberts, I. (1995) Introduction. In: Battye, A. and Roberts, I. (eds.) *Clause Structure and Language Change*, pp. 3-28. Oxford: OUP.
- Beck, M-L. (1996) The status of verb-raising among English-speaking learners of German. In: Kellerman, E., Weltens, E. and Bongaerts, T. (eds.) *EuroSLA 6: A selection of papers*, pp. 23-33. Amsterdam: TTWiA.
- Beck, M-L. (1997) Regular verbs, past tense and frequency: tracking down a potential source of NS/NNS competence differences. *SLR* **13,2**, 93-115.
- Beck, M-L. (1998) L2 acquisition and obligatory head movement: English-speaking learners of German and the Local Impairment Hypothesis. *SSLA* **20**, 311-348.
- Beck, M-L. (1998) (ed.) *Morphology and Its Interfaces in Second Language Knowledge*. Amsterdam: John Benjamins.
- Beck, M., Schwartz, B.D. and Eubank, L. (1995) Data, evidence and rules. In: Eubank, L., Selinker, L. and Sharwood Smith, M. (eds.) *The Current State of Interlanguage*, pp. 177-195. Amsterdam: John Benjamins.
- Beckman, J.N., Walsh Dickey, L. and Urbanczyk, S. (eds.) (1995) *Papers in Optimality Theory*, Amherst, MA: University of Massachusetts Occasional Papers 18.
- Belletti, A. and Rizzi, L. (eds.) (1996) *Parameters and Functional Heads: Essays in comparative syntax*, New York: OUP.
- Berent, G.P. (1996) The acquisition of English syntax by deaf learners. In Ritchie, W.C. and Bhatia, T.K. (eds.) *The Handbook of Second Language Acquisition*, pp. 469-506. San Diego: Academic Press.
- Bertolo, S. (1995) Maturation and learnability in parametric systems. *LA* **4/4**, 277-318.
- Berwick, R.C. (1985) *The Acquisition of Syntactic Knowledge*, Cambridge, Mass.: MIT Press.
- Berwick, R.C. and Niyogi, P. (1993) Learning from triggers. *LI* **27/4**, 605-622.
- Bhatt, R. and Yoon, J. (1992) On the composition of COMP and parameters of V2. *Proceedings of the West Coast Conference on Formal Linguistics* **10**, 41-52.
- Bialystok, E. (1978) A theoretical model of second language learning. *LL* **28**, 69-83.
- Bialystok, E. (1997) The structure of age: in search of barriers to second language acquisition. *SLR* **13,2**, 116-137.
- Bialystok, E. and Hakuta, K. (1994) *In Other Words: The science and psychology of second language acquisition*, New York: Basic Books.
- Bialystok, E. and Sharwood Smith, M. (1985) Interlanguage is not a state of mind: An evaluation of the construct for second-language acquisition. *AL* **6/3**, 101-118.
- Bickerton, D. (1992) *Language and Species*, Chicago: Chicago University Press.
- Bierwisch, M. (1997) Universal Grammar and the Basic Variety. *SLR* **13/4**, 348-366.
- Birdsong, D. (1992) Ultimate attainment in second language acquisition. *Language* **68**, 706-755.
- Bishop, D.V.M. (1994) Grammatical errors in specific language impairment: competence or performance limitations? *Applied Psycholinguistics* **15**, 507-550.
- Bley-Vroman, R.W. (1989) What is the logical problem of second language learning? In: Gass, S. and Schachter, J. (eds.) *Linguistic Perspectives on Second Language Acquisition*, pp. 41-68. Cambridge: CUP.

- Bley-Vroman, R.W., Felix, S.W. and Ioup, G.L. (1988) The accessibility of Universal Grammar in adult language learning. *SLR* 4, 1-32.
- Boersma, P. (1997) How we learn variation, optionality, and probability. *Rutgers Optimality Archive*, <http://rucss.rutgers.edu/roa.html>
- Boersma, P. (1998) *Functional Phonology: Formalizing the interactions between articulatory and perceptual drives*. Netherlands Graduate School of Linguistics. University of Amsterdam. Holland Academic Graphics: The Hague.
- Bongaerts, T., Planken, B. and Schils, E. (1995) Can late learners attain a native accent in a foreign language? A test of the critical period hypothesis. In: Singleton, D. and Lengyel, Zs. (eds.) *The Age Factor in Second Language Acquisition*, pp. 30-50. Clevedon: Multilingual Matters.
- Borer, H. (1984) *Parametric Syntax. Case studies in Semitic and Romance languages*, Dordrecht: Foris.
- Borer, H. and Wexler, K. (1987) The maturation of syntax. In: Roeper, T. and Williams, E. (eds.) *Parameter Setting*, pp. 123-172. Dordrecht: Reidel.
- Bornstein, M.H. (1989) Sensitive periods in development: structural characteristics and causal interpretations. *Psychological Bulletin* 105, 179-197.
- Bródy, M. (1990) Some remarks on the focus field in Hungarian. *UCL Working Papers in Linguistics* 2, 201-221.
- Bródy, M. (1995) Focus and checking theory. In: Kenesei, I. (ed.) *Approaches to Hungarian. Vol.5.*, pp. 29-43. Szeged: JATE.
- Brown, R. and Hanlon, C. (1970) Derivational complexities and the order of acquisition of child speech. In: Hayes, J.R. (ed.) *Cognition and Development of Language*, New York: Wiley.
- Brown, R.W. (1973) *A First Language: The early stages*, London: George Allen & Unwin.
- Bruhn-Garavito, J. and Montrul, S.A. (1997) Verb movement and clitic placement in French and Spanish as a second language. In: Hughes, E. et al (eds.) *BUCLD 21 Proceedings*, pp. 123-134. Somerville, MA: Cascadilla Press.
- Campbell, G.L. (1995) *Concise Compendium of the World's Languages*, London: Routledge.
- Carroll, S. (1989) Second language acquisition and the computational metaphor. *LL* 39/4: 535-595.
- Carterette, E.C. and Friedman, M.P. (1974) *Handbook of Perception. Vol.2. Psychophysical judgement and measurement*, New York: Academic Press.
- Cazden, C.E., Cancino, E., Rosansky, E. and Schumann, J. (1975) *Second language acquisition sequences in children, adolescents and adults*. Washington, D.C.: US Department of Health, Education and Welfare, National Institute of Education.
- Chomsky, N. (1965) *Aspects of the Theory of Syntax*, Cambridge, Mass.: MIT Press.
- Chomsky, N. (1970) Remarks on nominalization. In: Jacobs, R.A. and Rosenbaum, P.S. (eds.) *Readings in Transformational Grammar*, pp. 184-221. Waltham, Mass.: Ginn & Company.
- Chomsky, N. (1981) *Lectures on Government and Binding*, Dordrecht: Foris.
- Chomsky, N. (1986) Concepts of language. In *Knowledge of Language - Its Nature, Origin, and Use*, pp. 15-50. New York: Praeger.
- Chomsky, N. (1991) Some notes on the economy of derivation and representation. In: Freidin, R. (ed.) *Principles and Parameters in Comparative Grammar*, pp. 417-454. Cambridge, Mass.: MIT Press.
- Chomsky, N. (1993) A minimalist program for linguistic theory. In: Hale, K. and Keyser, S.J. (eds.) *The View from Building 20: Essays in linguistics in honor of Sylvan Bromberger*, pp. 1-52. Cambridge, Mass.: MIT Press.
- Chomsky, N. (1995) *The Minimalist Program*, Cambridge, Mass.: MIT Press.

Bibliography

- Chomsky, N. and Lasnik, H. (1993) Principles and parameters theory. In: Jacobs, J., von Stechow, A., Sternefeld, W. and Vennemann, T. (eds.) *Syntax: An international handbook of contemporary research*, pp. 506-569. Berlin: Walter de Gruyter.
- Clahsen, H. (1988) Parameterized grammatical theory and language acquisition: A study of acquisition of verb placement and inflection by children and adults. In: Flynn, S. and O'Neil, W. (eds.) *Linguistic Theory and Second Language Acquisition*, pp. 47-75. Dordrecht: Kluwer.
- Clahsen, H. (1990/1991) The comparative study of first and second language development. *SSLA* 12, 135-153.
- Clahsen, H. (1991) *Child Language and Developmental Dysphasia: Linguistic studies of the acquisition of German*, Amsterdam: John Benjamins.
- Clahsen, H. (ed.) (1996) *Generative Perspectives on Language Acquisition*, Amsterdam: John Benjamins.
- Clahsen, H. and Muysken, P. (1986) The availability of Universal Grammar to adult and child learners: A study of the acquisition of German word order. *SLR* 2, 93-119.
- Clahsen, H. and Muysken, P. (1989) The UG paradox in L2 acquisition. *SLR* 5/1, 1-29.
- Clark, R. (1992) The selection of syntactic knowledge. *LA* 2, 85-149.
- Clark, R. and Roberts, I. (1993) A computational model of language learnability and language change. *LI* 24/2, 299-345.
- Collins, P.C. (1991) *Cleft and Pseudo-Cleft Constructions in English*, London: Routledge.
- Comrie, B. (1987) Uralic languages. In: Comrie, B. (ed.) *The World's Major Languages. The major languages of Eastern Europe*, pp. 569-576. London: Routledge.
- Comrie, B. (1989) *Language Universals and Linguistic Typology: Syntax and morphology (2nd ed)*, Oxford: Blackwell.
- Cook, V.J. (1973) The comparison of language development in native children and foreign adults. *International Review of Applied Linguistics* 11, 13-28.
- Cook, V.J. (1991) The poverty-of-the-stimulus argument and multicompetence. *SLR* 7/2, 103-117.
- Cook, V.J. (1992) Evidence for multicompetence. *LL* 42/4, 557-591.
- Cook, V.J. (1993) *Linguistics and Second Language Acquisition*, London: Macmillan.
- Cook, V.J. (1996) Competence and multi-competence. In: Brown, G., Malmkjaer, K. and Williams, J. (eds.) *Performance and Competence in Second Language Acquisition*, pp. 57-69. Cambridge: CUP.
- Cook, V.J. and Newson, M. (1996) *Chomsky's Universal Grammar: An introduction*, Oxford: Blackwell.
- Coppetiers, R. (1987) Competence differences between natives and fluent non-native speakers. *Language* 63/3, 544-573.
- Corder, S.P. (1973) The study of learners' language: Error analysis. In: *Introducing Applied Linguistics*, London: Penguin.
- Corder, S.P. (1981) *Error Analysis and Interlanguage*, Oxford: OUP.
- Cowart, W. (1997) *Experimental Syntax: Applying objective methods to sentence judgments*, Thousand Oaks: Sage.
- Croft, W. (1990) *Typology and Universals*, Cambridge: CUP.
- Culicover, P.W. (1997) *Principles and Parameters: An introduction to syntactic theory*, Oxford: OUP.
- Culicover, P.W. and Rochemont, M. (1983) Stress and focus in English. *Language* 59, 123-165.
- Curtiss, S. (1988) Abnormal language acquisition and the modularity of language. In: Newmeyer, F.J. (ed.) *Linguistics: The Cambridge Survey. Vol.2.*, pp. 96-116. Cambridge: CUP.

- DeGraff, M. (1996) UG and acquisition in pidginization and creolization. *BBS* 19/4, 723-724.
- de Groot, C. and Kenesei, I. (eds.) (1998) *Approaches to Hungarian Vol.6. Papers from the Amsterdam conference*, Szeged: József Attila Tudomány Egyetem.
- de Mey, S. and Marác, L.K. (1986) On question sentences in Hungarian. In: Abraham, W. and de Meij, S. (eds.) *Topic, Focus, and Configurationality*, pp. 253-276. Amsterdam: John Benjamins.
- de Villiers, J. (1995) Empty categories and complex sentences: the case of wh-questions. In: Fletcher, P. and MacWhinney, B. (eds.) *The Handbook of Child Language*, pp. 508-540. Oxford: Blackwell.
- Dekkers, J., van der Leeuw, F. and van de Weijer, J. (eds.) (to appear) *Conceptual Studies in Optimality Theory*, UCLA.
- Delin, J. (1989) The focus structure of It-clefts. *Research Paper EUCCS/RP-25*, University of Edinburgh.
- Delin, J. (1991) Towards a model for generating cleft sentences. In: Verschuere, J. (ed.) *Pragmatics at Issue. Vol.I. Selected papers of the International Pragmatics Conference, Antwerp, 1987*, Amsterdam: John Benjamins.
- Dezső, L. (1980) Word order, theme and rheme in Hungarian and the problems of word order acquisition. In: Dezső, L. and Nemser, W. (eds.) *Studies in English and Hungarian Contrastive Linguistics*, pp. 245-298. Budapest: Akadémiai Kiadó.
- Dik, S.C. (1989) *The Theory of Functional Grammar*, Dordrecht: Foris.
- Dube, S. (1998) *The initial state of Zulu L2 syntax: A study of the emergence of the CP projection in the Zulu grammar of native English speakers*. Unpublished PhD thesis. University of Edinburgh.
- Dulay, H.C. and Burt, M.K. (1974) Natural sequence in child second language acquisition. *LL* 24, 37-53.
- Dulay, H.C., Burt, M.K. and Krashen, S.D. (1982) *Language Two*, Rowley, Mass.: Newbury House.
- du Plessis, J., Solin, D., Travis, L. and White, L. (1987) UG or not UG, that is the question: a reply to Clahsen and Muysken. *SLR* 3/1, 56-75.
- É.Kiss, K. (1981a) Focus and Topic: the marked constituents of Hungarian sentence structure. In: Belletti, A., Brandi, L. and Rizzi, L. (eds.) *Theory of Markedness in Generative Grammar. Proceedings of the 1979 Glow Conference*, pp. 347-361. Pisa: Scuola Normale Superiore.
- É.Kiss, K. (1981b) Structural relations in Hungarian, a 'free' word order language. *LI* 12, 185-213.
- É.Kiss, K. (1981c) Topic and Focus: the operators of the Hungarian sentence. *Folia Linguistica* XV/3-4, 305-330.
- É.Kiss, K. (1987) *Configurationality in Hungarian*, Dordrecht: D. Reidel.
- É.Kiss, K. (1992) Az egyszerű mondat szerkezete. In: Kiefer, F. (ed.) *Strukturális magyar nyelvtan. I. kötet. Mondattan*, pp. 79-177. Budapest: Akadémiai Kiadó.
- É.Kiss, K. (1992) Move-alpha and scrambling in Hungarian. In: Kenesei, I. and Pléh, Cs. (eds.) *Approaches to Hungarian. Vol.4.* pp. 67-98. Szeged: JATE.
- É.Kiss, K. (1993) Wh-movement and specificity. *NLLT* 11, 85-120.
- É.Kiss, K. (1994) Sentence structure and word order. In: Kiefer, F. and É.Kiss, K. (eds.) *The Syntactic Structure of Hungarian*, pp. 1-89. New York: Academic Press.
- É.Kiss, K. (ed.) (1995a) *Discourse Configurational Languages*, Oxford: OUP.
- É.Kiss, K. (1995b) Introduction. In: É.Kiss, K. (ed.) *Discourse Configurational Languages*, pp. 3-27. Oxford: OUP.
- É.Kiss, K. (1995c) NP movement, operator movement, and scrambling in Hungarian. In: É.Kiss, K. (ed.) *Discourse Configurational Languages*, pp. 207-243. Oxford: OUP.

- É.Kiss, K. (1998a) Identificational focus versus information focus. *Language* 74/2, 245-273.
- É.Kiss, K. (1998b) Multiple topic, one focus? *Acta Linguistica Hungarica* 45, 1-12.
- É.Kiss, K., Keifer, F. and Siptár, P. (eds) *Új magyar nyelvtan*. Budapest: Osiris.
- Eckman, F.R. (1977) Markedness and the contrastive analysis hypothesis. *LL* 27, 315-330.
- Eckman, F.R. (1996) A functional-typological approach to second language acquisition theory. In: Ritchie, W.C. and Bhatia, T.K. (eds.) *Handbook of Second Language Acquisition*, pp. 195-211. San Diego: Academic Press.
- Eckman, F.R., Bell, L. and Nelson, D. (1988) On the generalization of relative clause instruction in the acquisition of English as a second language. *AL* 9: 1-20.
- Ellis, N.C. (1995) Consciousness in second language acquisition: a review of field studies and laboratory experiments. *Language Awareness* 4/3, 123-146.
- Ellis, R. (1985a) *Understanding Second Language Acquisition*. Oxford: OUP.
- Ellis, R. (1985b) Sources of variability in interlanguage. *AL* 6/2, 118-131.
- Ellis, R. (1989) Sources of intra-learner variability in language use and their relationship to second language acquisition. In: Gass, S. et al (eds.) *Variation in Second Language Acquisition: Psycholinguistic issues*, pp. 22-45. Clevedon: Multilingual Matters.
- Ellis, R. (1994) *The Study of Second Language Acquisition*, Oxford: OUP.
- Elman, J.L., Bates, E.A., Johnson, M.H., Karmiloff-Smith, A., Parisi, D. and Plunkett, K. (1996) *Rethinking Innateness: A connectionist perspective on development*, Cambridge, Mass.: MIT Press.
- Emonds, J. (1985) *A Unified Theory of Syntactic Categories*, Dordrecht: Foris.
- Epstein, S., Flynn, S. and Martohardjono, G. (1996) Second language acquisition: Theoretical and empirical issues in contemporary research. *BBS* 19, 677-758.
- Epstein, S., Flynn, S. and Martohardjono, G. (1998) The Strong Continuity Hypothesis: some evidence concerning functional categories in adult L2 acquisition. In Flynn, S., Martohardjono, G. and O'Neil, W. (eds.) *The Generative Study of Second Language Acquisition*, pp. 61-77. Mahwah, N.J.: Lawrence Erlbaum.
- Eubank, L. (ed.) (1991) *Point Counterpoint: Universal Grammar in the second language*, Amsterdam/Philadelphia: John Benjamins.
- Eubank, L. (1992) Verb movement, agreement, and tense in L2 acquisition. In: Meisel, J.M. (ed.) *The Acquisition of Verb Placement*, pp. 225-244. Dordrecht: Kluwer.
- Eubank, L. (1993/1994) On the transfer of parametric values in L2 development. *LA* 3/3, 183-208.
- Eubank, L. (1994a) Optionality and the initial state in L2 development. In: Hoekstra, T. and Schwartz, B.D. (eds.) *Language Acquisition Studies in Generative Grammar*, pp. 369-388. Philadelphia, PA: John Benjamins.
- Eubank, L. (1994b) Towards an explanation for the late acquisition of agreement in L2 English. *SLR* 10/1, 84-93.
- Eubank, L. (1995) Generative research on second language acquisition. *Annual Review of Applied Linguistics* 15, 93-107.
- Eubank, L. (1996) Negation in early German-English interlanguage: more valueless features in the L2 initial state. *SLR* 12, 73-106.
- Eubank, L. and Grace, S. (1996) Where's the mature language? Where's the native language? In: Stringfellow, A. et al (eds.) *BUCLD 20 Proceedings*, pp. 189-200. Somerville, MA: Cascadilla Press.
- Eubank, L. and Grace, S. (1998) V-to-I and inflection in non-native grammars. In Beck, M. (ed.) *Morphology and its Interfaces in Second Language Knowledge*, pp. 69-88. Philadelphia: John Benjamins.

- Eubank, L. and Gregg, K. (1996) Critical periods and (S)LA. *Working Papers in English and Applied Linguistics, Research Centre for English and Applied Linguistics, University of Cambridge* 3, 1-21.
- Eubank, L. and Gregg, K. (1998) Critical periods and (Second) Language Acquisition: Divide et impera. In: Birdsong, D. (ed.) *Second Language Acquisition and the Critical Period Hypothesis*. Mahwah, NJ: Lawrence Erlbaum.
- Eubank, L., Bischof, J., Huffstutler, A., Leek, P. and West, C. (1997) "Tom eats slowly cooked eggs": thematic verb-raising in L2 knowledge. *LA* 6/3, 171-199.
- Eubank, L., Selinker, L. and Sharwood Smith, M. (eds.) (1995) *The Current State of Interlanguage: Studies in honour of William E. Rutherford*, Amsterdam: John Benjamins.
- Farkas, D. (1986) On the syntactic position of focus in Hungarian. *NLLT* 4, 77-96.
- Farkas, D. and Sadock, J.M. (1989) Preverb climbing in Hungarian. *Language* 65: 318-338.
- Fathman, A. (1975) Language background, age and the order of acquisition of English structures. In: Burt, M. and Dulay, H. (eds.) *On TESOL '75*, Washington D.C.: TESOL.
- Fletcher, P. and Ingham, R. (1995) Grammatical impairment. In: Fletcher, P. and MacWhinney, B. (eds.) *The Handbook of Child Language*, pp. 603-622. Oxford: Blackwell.
- Fletcher, P. and MacWhinney, B. (eds.) (1995) *The Handbook of Child Language*, Oxford: Blackwell.
- Flynn, S. (1983) Similarities and differences between first and second language acquisition: setting parameters of UG. In: Rogers, D. and Sloboda, J. (eds.) *Acquisition of Symbolic Skills*, New York: Plenum Press.
- Flynn, S. (1987) *A Parameter-Setting Model of L2 Acquisition: Experimental studies in anaphora*, Dordrecht: Reidel.
- Flynn, S. (1996) A parameter-setting approach to second language acquisition. In: Ritchie, W.C. and Bhatia, T.K. (eds.) *Handbook of Second Language Acquisition*, pp. 121-158. San Diego: Academic Press.
- Flynn, S. and O'Neil, W. (eds.) (1988) *Linguistic Theory and Second Language Acquisition*, Dordrecht: Kluwer.
- Fodor, J.D. (1994) How to obey the Subset Principle: Binding and locality. In: Lust, B. et al (eds.) *Syntactic Theory and First Language Acquisition: Cross-linguistic perspectives. Vol.2. Binding, dependencies and learnability*, pp. 429-451. Hillsdale, N.J.: Lawrence Erlbaum.
- Fodor, J.D. (1998) Unambiguous triggers. *LI* 29/1, 1-36.
- Frank, R. and Kapur, S. (1996) On the use of triggers in parameter setting. *LI* 27/4, 623-660.
- Fukui, N. (1993) Parameters and optionality. *LI* 24/3, 399-420.
- Gair, J.W. (1998) Functional categories in L2 acquisition: homegrown or imported? Commentary on Part I. In Flynn, S., Martohardjono, G. and O'Neil, W. (eds.) *The Generative Study of Second Language Acquisition*, pp. 79-86. Mahwah, N.J.: Lawrence Erlbaum.
- Gass, S. (1979) Language transfer and universal grammatical relations. *LL* 29: 327-344.
- Gass, S.M., Madden, C., Preston, D. and Selinker, L. (Eds.) (1989) *Variation in Second Language Acquisition: Psycholinguistic issues*, Clevedon, UK: Multilingual Matters.
- Gass, S.M. and Schachter, J. (eds.) (1989) *Linguistic Perspectives on Second Language Acquisition*, Cambridge: CUP.
- Gass, S.M. and Selinker, L. (eds.) (1983) *Language Transfer in Language Learning*, Rowley, Mass.: Newbury House.

Bibliography

- Gass, S.M. and Selinker, L. (eds.) (1994) *Language Transfer in Language Learning (Revised ed)*, Amsterdam: John Benjamins.
- Gavruseva, L. and Lardiere, D. (1996) The emergence of extended phrase structure in child L2 acquisition. In: Stringfellow, A. et al (eds.) *BUCLD 20 Proceedings*, pp. 225-236. Somerville, MA: Cascadilla Press.
- Gergely, G. (1991) *Free Word Order and Discourse Interpretation*, Budapest: Akadémiai Kiadó.
- Gibson, E. and Wexler, K. (1994) Triggers. *LI* 25/3, 407-454.
- Givón, T. (Ed.) (1979) *Syntax and Semantics Vol.12. Discourse and syntax*, New York: Academic Press.
- Givón, T. (1984) Universals of discourse structure and second language acquisition. In: Rutherford, W. (ed.) *Language Universals and Second Language Acquisition*, pp. 109-136. Amsterdam: John Benjamins.
- Goodluck, H. (1991) *Language Acquisition: A linguistic introduction*, Oxford: Blackwell.
- Gopnik, M. (1990) Feature blindness: A case study. *LA* 1/2, 139-164.
- Gopnik, M. (1994) The auditory perception/processing hypothesis revisited. *McGill Working Papers in Linguistics* 10/1-2, 135-141.
- Gopnik, M. and Crago, M. (1991) Familial aggregation of a developmental language disorder. *Cognition* 39, 1-50.
- Greenbaum, S. and Quirk, R. (1970) *Elicitation Experiments in English: Linguistic studies in use and attitude*, Harlow: Longman.
- Greenberg, J.H. (1966) *Universals of Language*, Cambridge, Mass.: MIT Press.
- Gregg, K.R. (1996) The logical and developmental problems of second language acquisition. In: Ritchie, W.C. and Bhatia, T.K. (eds.) *Handbook of Second Language Acquisition*, pp. 49-81. San Diego: Academic Press.
- Gregg, K.R. (1997) UG and SLA theory: the story so far. *Revista Canaria de Estudios Ingleses* 34, 69-99.
- Grimshaw, J. (1991) *Extended projection*, Ms. Brandeis University, Waltham, Mass.
- Grimshaw, J. (1993) *Minimal projection, heads, and optimality*, Ms., Rutgers University Center for Cognitive Science, New Brunswick, Piscataway, N.J. Technical Report #4.
- Grimshaw, J. (1994) Minimal projection and clause structure. In: Lust, B. et al (eds.) *Syntactic Theory and First Language Acquisition: Cross-linguistic perspectives. Vol.1, Heads, projections, and learnability*, pp. 75-83. Hillsdale, N.J.: Lawrence Erlbaum.
- Grimshaw, J. (1997) Projection, heads, and optimality. *LI* 28/3, 373-422.
- Grimshaw, J. and Samek-Lodovici, V. (1995) Optimal subjects. In: Beckman, J. et al (eds.) *Papers on Optimality Theory*. pp. 598-605. Amherst: GLSA, University of Massachusetts.
- Grimshaw, J. and Samek-Lodovici, V. (1998) Optimal subjects and subject universals. In: Barbosa, P. et al (eds.) *Is the Best Good Enough? Optimality and competition in syntax*. pp. 193-219. Cambridge, Mass.: MIT Press.
- Grodzinsky, Y. (1989) The language learner: A trigger-happy kid? *BBS* 12, 342-343.
- Grodzinsky, Y. (1990) *Theoretical Perspectives on Language Deficits*, London: MIT Press.
- Grondin, N. and White, L. (1996) Functional categories in child L2 acquisition of French. *LA* 5/1, 1-34.
- Guilfoyle, E. and Noonan, M. (1992) Functional categories and language acquisition. *Canadian Journal of Linguistics* 37/2, 241-272.
- Haegeman, L. (1993) Introduction: the syntax of sentential negation. *Rivista di Linguistica* 5/2, 183-214.

- Haegeman, L. (1994) *Introduction to Government and Binding Theory (2nd ed)*, Oxford: Blackwell.
- Haegeman, L. (1995) *The Syntax of Negation*, Cambridge: CUP.
- Haegeman, L. (1996) Root infinitives, clitics and truncated structures. In: Clahsen H. (ed.) *Generative Perspectives on Language Acquisition*, pp. 271-307. Amsterdam: John Benjamins.
- Haegeman, L. and Zanuttini, R. (1991) Negative heads and the Neg criterion. *The Linguistic Review* 8/2-4, 233-251.
- Håkansson, G. (1994) On the unmarked word order in the acquisition of German by Swedish and Danish school children. To appear in *International Journal of Applied Linguistics* 5/2.
- Hansson, K. and Nettelblatt, U. (1995) Grammatical characteristics of Swedish children with SLI. *Journal of Speech and Hearing Research* 38, 589-598.
- Harris, T. and Wexler, K. (1996) The optional-infinitive stage in child English. In: Clahsen H. (ed.) *Generative Perspectives on Language Acquisition*, pp. 1-42. Amsterdam: John Benjamins.
- Hatch, E.M. (1977) Optimal age or optimal learners? *Workpapers in TESL* 11, 45-56.
- Hawkins, J.A. (1987) Implicational universals as predictors of language acquisition. *Linguistics* 25, 453-473.
- Hawkins, R. and Chan, C.Y. (1997) The partial availability of Universal Grammar in second language acquisition: the 'failed functional features hypothesis'. *SLR* 13/3, 187-226.
- Hawkins, R., Towell, R. and Bazergui, N. (1993) Universal Grammar and the acquisition of French verb movement by native speakers of English. *SLR* 9, 189-233.
- Hayes, B.P. (1997) Gradient well-formedness in Optimality Theory, Ms. To appear in: Dekkers, J. et al (eds.) *Conceptual Studies in Optimality Theory*, UCLA.
- Hazdenar, B. (1997) L2 acquisition by a Turkish-speaking child: evidence for L1 influence. In: Hughes, E. et al (eds.) *BUCLD 21 Proceedings*, pp. 245-256. Somerville, MA: Cascadilla Press.
- Henry, A. (1995) *Belfast English and Standard English. Dialect variation and parameter setting*, Oxford: OUP.
- Henry, A. (1998) Dialect variation, optionality and the learnability guarantee. In: Heycock, C. et al (eds.) *Proceedings of the GALA 1997 Conference on Language Acquisition*, pp. 62-67. Edinburgh: Edinburgh University Press.
- Henry, A. and Tangney, D. (1996) Functional categories in child L2 acquisition of Irish. In: Stringfellow, A. et al (eds.) *BUCLD 20 Proceedings*, pp. 318-327. Somerville, MA: Cascadilla Press.
- Henry, A., Wilson, J. and Finlay, C. (1998) Language acquisition and optionality. In: Heycock, C. et al (eds.) *Proceedings of GALA 1997 Conference on Language Acquisition*, pp. 68-72. Edinburgh: Edinburgh University Press.
- Herschensohn, J. (1997) Parametric variation in French L2 speakers. In: Hughes, E. et al (eds.) *BUCLD 21 Proceedings*, pp. 281-292. Somerville, MA: Cascadilla Press.
- Heycock, C., Shillcock, R. and Sorace, A. (eds.) (1998) *Proceedings of the GALA 1997 Conference on Language Acquisition*, Edinburgh: Edinburgh University Press.
- Hilles, S. (1986) Interlanguage and the pro-drop parameter. *SLR* 2: 33-52.
- Hilles, S. (1991) Access to Universal Grammar in second language acquisition. In: Eubank, L. (ed.) *Point Counterpoint: Universal Grammar in the Second Language*, pp. 305-338. Amsterdam: John Benjamins.
- Hoekstra, T. and Schwartz, B.D. (eds.) (1994) *Language Acquisition Studies in Generative Grammar*, Amsterdam: John Benjamins.
- Horn, L.R. (1985) Metalinguistic negation and pragmatic ambiguity. *Language* 61, 121-174.

Bibliography

- Hornstein, N. and Lightfoot, D. (1981) Introduction. In: Hornstein, N. and Lightfoot, D. (eds.) *Explanation in Linguistics. The logical problem of language acquisition*, pp. 9-31. London: Longman.
- Horváth, J. (1986) *Focus in the Theory of Grammar and the Syntax of Hungarian*, Dordrecht: Foris.
- Horváth, J. (1995) Structural focus, structural case, and the notion of feature- assignment. In: É.Kiss, K. (ed.) *Discourse Configurational Languages*, pp. 28-64. Oxford: OUP.
- Horváth, J. (1997) The status of 'wh-expletives' and the partial wh-movement construction of Hungarian. *NLLT* 15, 509-572.
- Hughes, E., Hughes, M. and Greenhill, A. (eds.) (1997) *Proceedings of the 21st Annual Boston University Conference on Language Development*, Somerville, MA: Cascadilla Press.
- Hulk, A. (1991) Parameter setting and the acquisition of word order in L2 French. *SLR* 7/1, 1-34.
- Hulk, A. (1996) Parameter-setting and the acquisition of *wh*-questions in L2 French. In Jordens, P. and Lalleman, J. (eds.) *Investigating Second Language Acquisition*, pp. 237-259. Berlin: Mouton de Gruyter.
- Hyams, N. (1986) *Language Acquisition and the Theory of Parameters*, Dordrecht: Reidel.
- Hyams, N. (1992) The genesis of clausal structure. In: Meisel, J.M. (ed.) *The Acquisition of Verb Placement*, pp. 371-400. Dordrecht: Kluwer.
- Hyams, N. (1996) The underspecification of functional categories in early grammar. In: Clahsen, H. (ed.) *Generative Perspectives on Language Acquisition*, pp. 91-127. Amsterdam: John Benjamins.
- Ioup, G., Boustaoui, E., Tigi, M.E. and Moselle, M. (1994) Reexamining the critical period hypothesis: A case study of successful adult SLA in a naturalistic environment. *SSLA* 16/1, 73-98.
- Jaeggli, O. and Safir, K.J. (eds.) (1989) *The Null Subject Parameter*, Dordrecht: Kluwer Academic Press.
- Jakobson, R. (1941/1968) *Child Language, Aphasia, and Phonological Universals*, The Hague: Mouton.
- Jakobson, R. (1971) *Studies on Child Language and Aphasia*, The Hague: Mouton.
- Johnson, J.S. (1992) Critical period effects in second language acquisition: the effect of written versus auditory materials on the assessment of grammatical competence. *LL* 42, 217-248.
- Johnson, J.S. and Newport, E.L. (1989) Critical period effects in second language learning: the influence of maturational state on the acquisition of English as a second language. *Cognitive Psychology* 21, 60-99.
- Johnson, J.S. and Newport, E.L. (1991) Critical period effects on universal properties of language: The status of subjacency in the acquisition of a second language. *Cognition* 39, 215-258.
- Johnson, J.S., Shenkman, K.D., Newport, E.L. and Medin, D.L. (1996) Indeterminacy in the grammar of adult language learners. *Journal of Memory and Language* 35, 335-352.
- Joseph, J.E. (1992) 'Core' and 'periphery' in historical perspective. *Historiographia Linguistica* 19/2-3, 317-332.
- Joseph, J. (1997) *The lexical-functional divide through the ages*. Lecture given at the departmental research seminar, Department of Applied Linguistics, University of Edinburgh.
- Juffs, A. and Harrington, M. (1995) Parsing effects in L2 sentence processing: subject and object asymmetries in Wh-extraction. *SSLA* 17, 483-516.

- Kálmán, C.G., Kálmán, L., Nádasdy, Á. and Prószéky, G. (1989) A magyar segédigék rendszere. In: Telegdi, Z. and Kiefer, F. (eds.) *Általános Nyelvészeti Tanulmányok XVII. Tanulmányok a magyar mondattan köréből*, pp. 49-103. Budapest: Akadémiai Kiadó.
- Kálmán, L. (1985) Word order in neutral sentences. Word order in non-neutral sentences. In: Kenesei, I. (ed.) *Approaches to Hungarian. Vol.1.* pp. 13-37. Szeged: JATE.
- Kálmán, L., Prószéky, G., Nádasdy, Á. and Kálmán, C.G. (1986) Hocus, focus, and verb types in Hungarian infinitive constructions. In: Abraham, W. and de Meij, S. (eds.) *Topic, Focus, and Configurationality.* pp. 129-142. Amsterdam: John Benjamins.
- Kapur, S. (1994) Some applications of formal learning theory results to natural language acquisition. In: Lust, B. et al (eds.) *Syntactic Theory and First Language Acquisition: Cross-linguistic perspectives. Vol.2. Binding, dependencies and learnability*, pp. 491-508. Hillsdale, N.J.: Lawrence Erlbaum.
- Kayne, R. (1994) *The Antisymmetry of Syntax*, Cambridge, Mass.: MIT Press.
- Keenan, E. and Comrie, B. (1977) Noun phrase accessibility and universal grammar. *LI* 8, 63-99.
- Kellerman, E. (1983) Now you see it, now you don't. In: Gass, S. and Selinker, L. (eds.) *Language Transfer in Language Learning*, pp. 112-134. Rowley, Mass.: Newbury House.
- Kellerman, E. (1995a) Age before beauty: Johnson and Newport revisited. In: Eubank, L. et al (eds.) *The Current State of Interlanguage*, pp. 219-231. Amsterdam: John Benjamins.
- Kellerman, E. (1995b) Crosslinguistic influence: transfer to nowhere? *Annual Review of AL* 15, 125-150.
- Kellerman, E. and Sharwood Smith, M. (eds.) (1986) *Crosslinguistic Influence in Second Language Acquisition*, Oxford: Pergamon Press.
- Kenesei, I. (1984) Word order in Hungarian complex sentences. *LI* 15, 328-342.
- Kenesei, I. (ed.) (1985) *Approaches to Hungarian. Vol.1. Data and Descriptions*, Szeged: József Attila Tudomány Egyetem.
- Kenesei, I. (1986) On the logic of word order in Hungarian. In: Abraham, W. and de Meij, S. (eds.) *Topic, Focus, and Configurationality*, pp. 143-159. Amsterdam: John Benjamins.
- Kenesei, I. (ed.) (1987) *Approaches to Hungarian. Vol.2. Theories and Analyses*, Szeged: József Attila Tudomány Egyetem.
- Kenesei, I. (1989) Logikus-e a magyar szórend?. In: Telegdi, Zs. and Kiefer, F. (eds.) *Általános Nyelvészeti Tanulmányok*, pp. 105-152. Budapest: Akadémiai Kiadó.
- Kenesei, I. (ed.) (1990) *Approaches to Hungarian. Vol.3. Structures and Arguments*, Szeged: József Attila Tudomány Egyetem.
- Kenesei, I. (1992) Az alárendelt mondatok szerkezete. In: Kiefer, F. (ed.) *Strukturális magyar nyelvtan.1. kötet. Mondattan*, pp. 529-713. Budapest: Akadémiai Kiadó.
- Kenesei, I. (1992) *Functional categories in Finno-Ugric*, Ms., Szeged: JATE.
- Kenesei, I. (1993) *A minimalist program for the syntax of focus*, Ms., Szeged: JATE.
- Kenesei, I. (1994) Subordinate clauses. In Kiefer, F. and É.Kiss, K. (eds.) *The Syntactic Structure of Hungarian, Syntax and Semantics Vol. 27.*, pp. 275-354. San Diego: Academic Press.
- Kenesei, I. (ed.) (1995) *Approaches to Hungarian Vol.5. Levels and Structures*, Szeged: József Attila Tudomány Egyetem.
- Kenesei, I. (1998) Adjuncts and arguments in VP focus in Hungarian. *Acta Linguistica Hungarica* 45, 61-88.

Bibliography

- Kenesei, I. (1998) *Auxiliaries and VPs*, Talk given at the 4th International Conference on the Structure of Hungarian, Aug 1998, Pécs, Hungary.
- Kenesei, I. and Pléh, Cs. (eds.) (1992) *Approaches to Hungarian. Vol.4. The Structure of Hungarian*, Szeged: József Attila Tudomány Egyetem.
- Kenesei, I., Vago, R.M. and Fenyvesi, A. (1998) *Hungarian: Descriptive grammars series*, London: Routledge.
- Kiefer, F. (1967) *On Emphasis and Word Order in Hungarian*, Bloomington: Indiana University Press.
- Kiefer, F. (1992) Bevezető. In: Kiefer, F. (Ed.) *Strukturális magyar nyelvtan. I. kötet. Mondattan*, pp. 7-19. Budapest: Akadémiai Kiadó.
- Kiefer, F. (ed.) (1992) *Strukturális magyar nyelvtan. I. kötet. Mondattan (A Structural Grammar of Hungarian Vol. I. Syntax)*, Budapest: Akadémiai Kiadó.
- Kiefer, F. and É.Kiss, K. (eds.) (1994) *The Syntactic Structure of Hungarian, Syntax and Semantics Vol. 27.*, San Diego: Academic Press.
- Kim, K., Relkin, N., Lee, K. and Hirsch, J. (1997) Distinct cortical areas associated with native and second languages. *Nature* **388**, 171-174.
- Kiparsky, P. (1995) Indo-European origins of Germanic syntax. In: Battye, A. and Roberts, I. (eds.) *Clause Structure and Language Change*, pp. 140-169. Oxford: OUP.
- Klein, E.C. (1995) Evidence for a 'wild' L2 grammar: when PPs rear their empty heads. *AL* **16/1**, 87-117.
- Klein, W. (1986) *Second Language Acquisition*, Cambridge: CUP.
- Klein, W. and Perdue, C. (1992) *Utterance Structure. Developing grammars again*, Amsterdam/Philadelphia: John Benjamins.
- Klein, W. and Perdue, C. (1997) The Basic Variety (or: Couldn't natural languages be much simpler?). *SLR* **13/4**, 301-347.
- Klima, J. (1964) Negation in English. In Fodor, J. and Katz, J. (eds.) *The Structure of Language*. pp. 246-332. N.J.: Prentice Hall.
- Klima, E. and Bellugi, U. (1966) Syntactic regularities in the speech of children. In Lyons, J. and Wales, R.J. (eds.) *Psycholinguistic Papers*. Edinburgh: Edinburgh University Press.
- Komlósy, A. (1992) Régensek és vonzatok. In: Kiefer, F. (ed.) *Strukturális magyar nyelvtan . I. kötet. Mondattan*, pp. 299-527. Budapest: Akadémiai Kiadó.
- Komlósy, A. (1994) Complements and adjuncts. In: Kiefer, F. and É.Kiss, K. (eds.) *The Syntactic Structure of Hungarian*, pp. 91-178. San Diego: Academic Press.
- Kroch, A. (1989) Reflexes of grammar in patterns of language change. *Language Variation and Change* **1**, 199-244.
- Kroch, A. (1998) *Revisiting 'do'*, Talk given at the University of Edinburgh, Department of Linguistics, May 1998.
- Kroch, A. and Taylor, A. (1997) Verb movement in Old and Middle English: dialect variation and language contact. In: van Kemenade, A. and Vincent, N. (eds.) *Parameters of Morphosyntactic Change*, pp. 297-325. Cambridge: CUP.
- Labov, W. (1972) *Sociolinguistic Patterns*, Philadelphia: University of Pennsylvania Press.
- Labov, W. (1975) Empirical foundations of linguistic theory. In: Austerlitz, R.P. (ed.) *The Scope of American Linguistics*, pp. 77-133. Lisse: Peter du Ridder.
- Ladd, D.R. (1996) *Intonational Phonology*, Cambridge: CUP.
- Lado, R. (1957) *Linguistics Across Cultures*, Ann Arbor: University of Michigan Press.

- Lakoff, G. (1973) Fuzzy grammars and the performance/competence terminology game. In: Corum, C., Smith-Stark, T.C. and Weiser, A. (eds.) *Papers from the Ninth Regional Meeting*, pp. 271-291. Chicago: Chicago Linguistic Society.
- Lakshmanan, U. (1998) Functional categories and related mechanisms in child second language acquisition. In Flynn, S., Martohardjono, G. and O'Neil, W. (eds.) *The Generative Study of Second Language Acquisition*, pp. 3-16. Mahwah, N.J.: Lawrence Erlbaum.
- Lamendella, J. (1977) General principles of neurofunctional organisation and their manifestations in primary and non-primary language acquisition. *LL* 27, 155-196.
- Langer, N. (1995) Scrambling is not optional. *Newcastle and Durham Working Papers in Linguistics* 3, 125-145.
- Lardiere, D. (1997) *Dissociating syntax from morphology in a divergent L2 end-state grammar*, Ms. Georgetown University.
- Lardiere, D. (1998a) Case and tense in the 'fossilized' steady state. *SLR* 14/1, 1-25.
- Lardiere, D. (1998b) Parameter-setting and morphology: evidence from compounding. In Beck, M. (ed.) *Morphology and its Interfaces in Second Language Knowledge*, pp. 283-305. Philadelphia: John Benjamins.
- Larsen-Freeman, D. (1997) Chaos/complexity science and second language acquisition. *AL* 18/2, 141-165.
- Larsen-Freeman, D. and Long, M.H. (1991) *An Introduction to Second Language Acquisition Research*, London & New York: Longman.
- Lebeaux, D.S. (1988) *Language Acquisition and the Form of the Grammar*, Unpublished PhD, University of Massachusetts.
- Lebeaux, D.S. (1990) The grammatical nature of the acquisition sequence: adjoin-a and the formation of relative clauses. In: Frazier, L. and de Villiers, J.G. (eds.) *Language Processing and Acquisition*, Dordrecht: Kluwer.
- Lenneberg, E. (1967) *Biological Foundations of Language*, New York: John Wiley.
- Leonard, L.B. (1995) Functional categories in the grammars of children with Specific Language Impairment. *Journal of Speech and Hearing Research* 38, 1270-1283.
- Liceras, J. (1988) Syntax and stylistics: more on the pro-drop parameter. In: Pankhurst, J. et al (eds.) *Learnability and Second Languages*, pp. 71-93. Dordrecht: Foris.
- Liceras, J. (1989) On some properties of the "pro-drop" parameter: Looking for missing subjects in non-native Spanish. In Gass, S.M. and Schachter, J. (eds.) *Linguistic Perspectives on Second Language Acquisition*, pp. 109-133. Cambridge: CUP.
- Lightfoot, D.W. (1995) Why UG needs a learning theory: triggering verb movement. In: Battye, A. and Roberts, I. (eds.) *Clause Structure and Language Change*, pp. 31-52. Oxford: OUP.
- Lightfoot, D.W. and Hornstein, N. (eds.) (1994) *Verb Movement*, Cambridge: CUP.
- Lightfoot, D.W. (1991) *How to Set Parameters: Arguments from language change*, Cambridge, Mass.: MIT Press.
- Lipták, A. (1998) Multiple relativization in Hungarian. Talk presented at the 4th International Conference on the Structure of Hungarian, August 1998, Pécs, Hungary.
- Lodge, M. (1981) *Magnitude Scaling: Quantitative measurement of opinions*, Beverly Hills: Sage.
- Long, M.H. (1990) Maturational constraints on language development. *SSLA* 12, 251-285.
- Lust, B., Hermon, G. and Kornfilt, J. (eds.) (1994) *Syntactic Theory and First Language Acquisition: Cross-linguistic perspectives. Vol.2. Binding, dependencies and learnability*, Hillsdale, N.J.: Lawrence Erlbaum.

Bibliography

- Lust, B., Suñer, M. and Whitman, J. (eds.) (1994) *Syntactic Theory and First Language Acquisition: Cross-linguistic perspectives. Vol.1. Heads, projections, and learnability*, Hillsdale, N.J.: Lawrence Erlbaum.
- MacLaughlin, D. (1995) Language acquisition and the Subset Principle. *The Linguistic Review* 12, 143-191.
- MacLaughlin, D. and McEwen, S. (eds.) (1995) *Proceedings of the 19th Annual Boston University Conference on Language Development Vol.1.*, Somerville, MA: Cascadilla Press.
- MacWhinney, B. (1974) *How Hungarian children learn to speak*. Unpublished PhD dissertation, Berkeley, University of California.
- MacWhinney, B. (1985) Hungarian language acquisition as an exemplification of a general model of grammatical development. In: Slobin, D.I. (ed.) *The Crosslinguistic Study of Language Acquisition. Vol.2. Theoretical Issues*, pp. 1069-1155. Hillsdale, N.J.: Lawrence Erlbaum.
- MacWhinney, B. (1995) *The CHILDES Project: Tools for analyzing talk (2nd ed)*, Hillsdale, N.J.: Lawrence Erlbaum.
- MacWhinney, B. and Snow, C. (1985) The child language exchange system. *Journal of Child Language* 12, 271-296.
- MacWhinney, B. and Bates, E. (1978) Sentential devices for conveying givenness and newness: A cross-cultural developmental study. *Journal of Verbal Learning and Verbal Behaviour* 17: 539-558.
- Manzini, M.R. and Wexler, K. (1987) Parameters, binding theory and learnability. *LI* 18, 413-444.
- Marác, L. (1989/1991) *Asymmetries in Hungarian*. PhD dissertation. Rijksuniversität Groningen.
- Marác, L. (1990) V-movement in Hungarian: a case of minimality. In: Kenesei, I. (ed.) *Approaches to Hungarian Vol.3.*, pp. 1-27. Szeged: JATE.
- Marantz, A. (1995) The Minimalist Program. In: Webelhuth, G. (ed.) *Government and Binding Theory and the Minimalist Program*, pp. 349-382. Oxford: Blackwell.
- Marcus, G.F. (1993) Negative evidence in language acquisition. *Cognition* 46, 53-85.
- Martohardjono, G. and Gair, J.W. (1993) Apparent UG inaccessibility in second language acquisition: misapplied principles or principled misapplications? In: Eckman, F. (ed.) *Confluence: Linguistics, L2 acquisition and speech pathology*, pp. 79-103. Amsterdam: John Benjamins.
- Matthews, R.J. and Demopoulos, W. (eds.) (1989) *Learnability and Linguistic Theory*, Dordrecht: Kluwer Academic Publishers.
- May, R. (1985) *Logical Form: Its structure and derivation*, Cambridge, Mass.: MIT Press.
- Mazurkewich, I. (1988) The acquisition of infinitive and gerund complements by second language learners. In: Flynn, S. and O'Neil, W. (Eds.) *Linguistic Theory and Second Language Acquisition*, pp. 127-143. Dordrecht: Kluwer.
- McDaniel, D. (1989) Partial and multiple wh-movement. *NLLT* 7, 565-604.
- McDaniel, D., McKee, C. and Cairns, H.S. (Eds.) (1996) *Methods for Assessing Children's Syntax*, pp. 23-53. Cambridge, Mass.: MIT Press.
- McLaughlin, B. (1987) *Theories of Second Language Learning*, London: Edward Arnold.
- McLaughlin, B. (1990) Restructuring. *AL* 11/2, 113-128.
- McLaughlin, B., Rossman, T. and MacLeod, B. (1983) Second language learning: an information-processing perspective. *LL* 33, 135-158.
- Meisel, J.M. (1991) Principles of Universal Grammar and strategies of language learning: Some similarities and differences between first and second language acquisition. In:

- Eubank, L. (ed.) *Point Counterpoint: Universal Grammar in second language acquisition*, pp. 231-276. Amsterdam: John Benjamins.
- Meisel, J.M. (ed.) (1992) *The Acquisition of Verb Placement: Functional categories and V2 phenomena in language development*, Dordrecht: Kluwer.
- Meisel, J.M. (1995) Parameters in acquisition. In: Fletcher, P. and MacWhinney, B. (eds.) *The Handbook of Child Language*, pp. 10-35. Cambridge, Mass.: Blackwell.
- Meisel, J.M. (1997a) The acquisition of the syntax of negation in French and German: contrasting first and second language development. *SLR* **13/3**, 227-264.
- Meisel, J.M. (1997b) The L2 Basic Variety as an I-language. *SLR* **13/4**, 374-385.
- Michell, J. (1986) Measurement scales and statistics: A clash of paradigms. *Psychological Bulletin* **100**, 398-407.
- Michell, J. (1990) *An Introduction to the Logic of Psychological Measurement*, Hillsdale, N.J.: Erlbaum.
- Mohan, B.A. (1977) Acceptability testing and fuzzy grammar. In: Greenbaum, S. (ed.) *Acceptability in Language*, pp. 133-148. The Hague: Mouton.
- Montrul, S.A. (1996) The second language acquisition of dative case: from absolute L1 influence to optionality. In: Stringfellow, A. et al (eds.) *BUCLD 20 Proceedings*, pp. 506-517. Somerville, MA: Cascadilla Press.
- Müller, G. (1997) Partial wh-movement and Optimality Theory. *The Linguistic Review* **14/3**, 249-306.
- Müller, N. (1998) UG access without parameter setting: a longitudinal study of (L1 Italian) German as a second language. In Beck, M. (ed.) *Morphology and its Interfaces in Second Language Knowledge*, pp. 115-163. Philadelphia: John Benjamins.
- Murphy, V. (1997) The effect of modularity on a grammatical judgement task. *SLR* **13**, 34-65.
- Muxí, I. (1995) Optional participial agreement in Barcelonian Catalan. *Newcastle and Durham Working Papers in Linguistics* **3**, 197-210.
- Nakajima, H. (1996) Complementizer selection. *The Linguistic Review* **13**, 143-164.
- Neeleman, A. and Weerman, F. (1997) L1 and L2 word order acquisition. *LA* **6/2**, 125-170.
- Neville, H. (1995) Developmental specificity in neurocognitive development in humans. In: Gazzaniga, M.S. (ed.) *The Cognitive Neurosciences*, pp. 219-231. Cambridge, Mass.: MIT Press.
- Neville, H.J., Coffey, S.A., Lawson, D.S., Fischer, A., Emmorey, K. and Bellugi, U. (1997) Neural systems mediating American sign language: Effects of sensory experience and age of acquisition. *Brain and Language* **57/3**, 285-308.
- Neville, H.J., Mills, D.L. and Lawson, D.S. (1992) Fractionating language: Different neural subsystems with different sensitive periods. *Cerebral Cortex* **2**, 244-258.
- Newport, E.L., Gleitman, H. and Gleitman, L.R. (1977) Mother, I'd rather do it myself: some effects and non-effects of maternal speech style. In: Snow, C.E. and Ferguson, C.A. (eds.) *Talking to Children: Language input and acquisition*, pp. 109-149. Cambridge: CUP.
- Novoa, L., Fein, D. and Obler, L. (1988) Talent in foreign languages: A case study. In: Obler, L. and Fein, D. (eds.) *The Exceptional Brain: The neuropsychology of talent and special abilities*, pp. 294-302. New York: Guildford Press.
- Odlin, T. (1989) *Language Transfer. Cross-linguistic influence in language learning*, Cambridge: CUP.
- O'Grady, W. (1987) *Principles of Grammar and Learning*, Chicago: Chicago University Press.
- Oller, J.W.J. (1973) Cloze tests of second language proficiency and what they measure. *LL* **23**, 105-118.

Bibliography

- Olsvay, Cs. (1998) *On the syntax of negation and quantification in Hungarian*, Talk presented at the 4th International Conference on the Structure of Hungarian, August 1998, Pécs, Hungary.
- O'Malley, J.M. and Chamot, A.U. (1990) *Learning Strategies in Second Language Acquisition*, Cambridge: CUP.
- Ouhalla, J. (1990) Sentential negation, Relativized Minimality and the aspectual status of auxiliaries. *The Linguistic Review* 7, 183-231.
- Ouhalla, J. (1991) *Functional Categories and Parametric Variation*, London: Routledge.
- Ouhalla, J. (1992a) Focus in standard Arabic: the identification requirement and the Principles of Economy. Ms. Queen Mary and Westfield College, London.
- Ouhalla, J. (1992b) Functional categories, agrammatism and language acquisition. Sprachwissenschaft in Frankfurt, Arbeitspapier Nr 9, J. W. Goethe-Universität, Frankfurt a. M.
- Ouhalla, J. (1993) Negation, focus and tense: the Arabic *maa* and *laa*. *Rivista di Linguistica* 5/2, 275-300.
- Pankhurst, J., Sharwood Smith, M. and van Buren, P. (eds.) (1988) *Learnability and Second Languages: A book of readings*, Dordrecht: Foris.
- Papp, Sz. (1998) The acquisition of Hungarian negation, wh-questions and focus by L1 and adult L2 learners. In: de Groot, C. and Kenesei, I. (eds.) *Approaches to Hungarian Vol.6.*, pp. 253-280. Szeged: JATE.
- Patkowsky, M. (1994) The critical age hypothesis and interlanguage phonology. In: Yavas, M. (ed.) *First and Second Language Phonology*, pp. 209-221. San Diego: Singular Publishing Group.
- Payne, J. (1987) *Colloquial Hungarian*, London: Routledge.
- Pearce, E. (1995) V-movement and optionality. *Wellington Working Papers in Linguistics* 7, 30-37.
- Penfield, N. and Roberts, L. (1959) *Speech and Brain Mechanisms*, New York: Atheneum Press.
- Percival, V., Howerd, F. and Hill, B. (1994) Age of arrival vs. time of arrival: A reconsideration of Johnson and Newport 1989. *University of Hawai'i Working Papers in ESL* 12/2, 141-151.
- Pesetsky, D. (1987) Wh-in-situ: Movement and unselective binding. In: Reuland, E.J. and ter Meulen, A.G.B. (eds.) *The Representation of (In)definiteness*, pp. 98-129. Cambridge, Mass.: MIT Press.
- Pesetsky, D. (1997) Optimality Theory and syntax: movement and pronunciation. In: Archangeli, D. and Langendoen, D.T. (eds.) *Optimality Theory: An overview*, pp. 134-170. Oxford: Blackwell.
- Pettward, A. (1997) *Movement and Optionality in Syntax*, Unpublished PhD thesis, SOAS, London.
- Phinney (1987) The pro-drop parameter in second language acquisition. In: Roeper, T. and Williams, E. (eds.) *Parameter Setting*, pp. 221-238. Dordrecht: D. Reidel.
- Pienemann, M. and Johnston, M. (1987) Factors influencing the development of language proficiency. In: Nunan, D. (ed.) *Applying Second Language Acquisition Research*, Adelaide: NCRC.
- Pierce, A. (1992) *Language Acquisition and Syntactic Theory: A comparative analysis of French and English child grammars*, Dordrecht: Kluwer.
- Pinker, S. (1984) *Learnability and Language Development*, Cambridge, Mass.: Harvard University Press.
- Piñón, C.J. (1992) Heads in the focus field. In: Kenesei, I. and Pléh, Cs. (eds.) *Approaches to Hungarian Vol.4.*, pp. 99-122. Szeged: JATE.

- Pintzuk, S. (1993) Verb seconding in Old English: Verb movement to Infl. *The Linguistic Review* 10, 5-35.
- Pintzuk, S. (1995) Variation and change in Old English clause structure. *Language Variation and Change* 7/2, 229-260.
- Pintzuk, S. (1996) From OV to VO in the history of English. In: Dufresne, M. and Dupuis, F. (eds.) *Papers from the Fourth Diachronic Generative Syntax Conference, Montreal, October 1995*, Amsterdam: Benjamins.
- Pintzuk, S. (1998) *Verb-complement order in the history of English*, Talk given at the University of Edinburgh Linguistics Circle, February 1998.
- Platzack, C. (1995) The loss of verb second in English and French. In: Battye, A. and Roberts, I. (eds.) *Clause Structure and Language Change*, pp. 200-226. Oxford: OUP.
- Platzack, C. (1996) The Initial Hypothesis of Syntax: A minimalist perspective on language acquisition and attrition. In: Clahsen, H. (ed.) *Generative Perspectives on Language Acquisition*, pp. 369-414. Amsterdam: Benjamins.
- Pléh, Cs. (1992) Verbal prefixes in Hungarian children. In: Kenesei, I. and Pléh, Cs. (eds.) *Approaches to Hungarian Vol.4.*, pp. 269-281. Szeged: JATE.
- Poepfel, D. and Wexler, K. (1993) The Full Competence Hypothesis of clause structure in early German. *Language* 69, 1-33.
- Pollock, J.-Y. (1989) Verb movement, Universal Grammar, and the structure of IP. *LI* 20, 365-424.
- Pontifex, Zs. (1993) *Teach Yourself Hungarian. A complete course for beginners*, London: Hodder & Stoughton.
- Prince, E. (1988) Discourse analysis: a part of the study of linguistic competence. In: Newmeyer, F. (ed.) *Linguistics: the Cambridge survey, Vol.2. Linguistic theory: Extensions and implications*, pp.164-182. New York: CUP.
- Prince, A. and Smolensky, P. (1993) Optimality Theory: Constraint interaction in generative grammar. Technical Report RuCCS TR-2, Rutgers Center for Cognitive Science. (to appear)
- Puskás, G. (1992) The wh-criterion in Hungarian. *Rivista di Grammatica Generativa* 17, 141-186.
- Puskás, G. (1994) Sentential negation in Hungarian. *Rivista di Linguistica* 6/1, 58-90.
- Puskás, G. (1996) *Word Order in Hungarian. The syntax of A'-positions*. Unpublished PhD thesis, University of Geneva.
- Puskás, G. (1998) *Verb focusing in Hungarian*, Talk given at the 4th International Conference on the Structure of Hungarian, Aug 1998, Pécs, Hungary.
- Quartz, S.R. and Sejnowski, T.J. (1997) The neural basis of cognitive development: A constructivist manifesto. *BBS* 20/4, 537-596.
- Quirk, R. and Svartvik, S. (1966) *Investigating Linguistic Acceptability*, The Hague: Mouton.
- Quirk, R., Greenbaum, S., Leech, G. and Svartvik, S. (1985) *A Comprehensive Grammar of the English Language*, London: Longman.
- Radford, A. (1990) *Syntactic Theory and the Acquisition of English Syntax: The nature of early child grammars of English*, Oxford: Blackwell.
- Radford, A. (1992) The acquisition of the morphosyntax of finite verbs in English. In: Meisel, J.M. (ed.) *The Acquisition of Verb Placement: Functional categories and V2 phenomena in language development*, pp. 23-62. Dordrecht: Kluwer.
- Radford, A. (1994) The syntax of questions in child English. *Journal of Child Language* 21, 211-236.

Bibliography

- Radford, A. (1995a) Children - architects or brickies?. In: MacLaughlin, D. and McEwen, S. (eds.) *BUCLD 19 Proceedings Vol. 1.*, pp. 1-19. Somerville, MA: Cascadilla Press.
- Radford, A. (1995b) Phrase structure and functional categories. In: Fletcher, P. and MacWhinney, B. (eds.) *The Handbook of Child Language*, pp. 483-507. Cambridge, Mass.: Blackwell.
- Radford, A. (1996a) The nature of children's initial clauses. In: Aldridge, M. (ed.) *Child Language*, pp. 112-148. Clevedon: Multilingual Matters.
- Radford, A. (1996b) Towards a structure-building model of acquisition. In: Clahsen, H. (ed.) *Generative Perspectives on Language Acquisition*, pp. 43-89. Amsterdam: John Benjamins.
- Radford, A. (1997) *Syntactic Theory and the Structure of English: A minimalist approach*, Cambridge: CUP.
- Randall, J.H. (1990) Catapults and pendulums: The mechanisms of language acquisition. *Linguistics* **28**, 1381-1406.
- Randall, J.H. (1992) The catapult hypothesis: Grammars as machines for unlearning. In: Weissenborn, J. et al (eds.) *Theoretical Issues in Language Acquisition*, Hillsdale, N.J.: Lawrence Erlbaum.
- Ratnasabapathy, R. (1994) Age and second language acquisition: An appraisal of selected studies. *Working Papers in English and Applied Linguistics, Research Centre for English and Applied Linguistics, University of Cambridge* **1**, 161-169.
- Ratwatte, H. (1995) *Activating vs. resetting functional categories in SLA: The acquisition of AGR and TNS in English by Sinhalese first language speakers*, Unpublished PhD thesis, University of Edinburgh.
- Ribeiro (1995) Evidence for a verb-second phase in Old Portuguese. In: Battye, A. and Roberts, I. (eds.) *Clause Structure and Language Change*, pp. 110-139, Oxford: OUP.
- Rice, M.L., Wexler, K. and Cleave, P.L. (1995) Specific Language Impairment as a period of extended optional infinitive. *Journal of Speech and Hearing Research* **38**, 850-863.
- Ringen, J.D. (1975) Linguistic facts: A study of the empirical scientific status of transformational generative grammars. In: Cohen, D. and Wirth, J.R. (eds.) *Testing Linguistic Hypotheses*, pp. 1-41. Washington: Hemisphere.
- Rizzi, L. (1990) Speculations on verb second. In: Mascaro, J. and Nespor, M. (eds.) *Grammar in Progress. GLOW essays for Henk van Riemsdijk*, pp. 375-386. Dordrecht: Foris.
- Rizzi, L. (1993/1994) Some notes on linguistic theory and language development: The case of root infinitives. *LA* **3/4**, 371-394.
- Rizzi, L. (1994) Early null subjects and root null subjects. In: Hoekstra, T. and Schwartz, B. (eds.) *Language Acquisition Studies in Generative Grammar*, pp. 151-176. Amsterdam: John Benjamins.
- Rizzi, L. (1995) *The fine structure of the left periphery*, Ms. Université de Genève.
- Rizzi, L. (1996) Residual verb second and the Wh-criterion. In: Belletti, A. and Rizzi, L. (eds.) *Parameters and Functional Heads: Essays in comparative syntax*, pp. 63-90. New York: OUP.
- Roberts, C. (1996) *Focus, the flow of information, and Universal Grammar*, Ms. Ohio State University.
- Roberts, I. (1997) *Comparative Syntax*, London: Arnold.
- Robertson, D. (1996) The Neg-Criterion in second language acquisition: evidence for a dissociation between function and syntax. In: Stringfellow, A. et al (eds.) *BUCLD 20 Proceedings*, pp. 622-633. Somerville, MA: Cascadilla Press.

- Robertson, D. and Sorace, A. (1999) Losing the V2 constraint. In Klein, E. and Martohardjono, G., (eds.) *The Development of Second Language Grammars. A Generative Approach*, Amsterdam: John Benjamins.
- Rochemont, M.S. and Culicover, P.W. (1990) *English Focus Constructions and the Theory of Grammar*, Cambridge: CUP.
- Rohrbacher, B. (1994) *The Germanic VO languages and the full paradigm: A theory of V-to-I raising*. Unpublished doctoral dissertation, University of Massachusetts at Amherst: The Graduate Linguistic Student Association.
- Roeper, T. and Rohrbacher, B. (1994) *Null subjects in early child English and the theory of economy of projection*, Ms. University of Massachusetts at Amherst and University of Pennsylvania, Philadelphia.
- Sampson, G. (1996) From central embedding to corpus linguistics. In: Thomas, J. and Short, M. (eds.) *Using Corpora for Language Research*. pp. 14-26. Oxford: OUP.
- Santorini, B. (1992) Variation and change in Yiddish subordinate clause word order. *NLLT* 10, 595-640.
- Santorini, B. (1995) Two types of verb second in the history of Yiddish. In: Battye, A. and Roberts, I. (eds.) *Clause Structure and Language Change*, pp. 53-79. Oxford: OUP.
- Schachter, J. (1989) Testing a proposed universal. In: Gass, S. and Schachter, J. (eds.) *Linguistic Perspectives on Second Language Acquisition*, pp. 73-88. Cambridge: CUP.
- Schachter, J. (1990) On the issue of completeness in second language acquisition. *SLR* 6, 93-124.
- Schachter, J. (1996) Maturation and the issue of Universal Grammar in second language acquisition. In: Ritchie, W.C. and Bhatia, T.K. (eds.) *The Handbook of Second Language Acquisition*, pp. 159-193. San Diego: Academic Press.
- Schmidt, R. (1994) Deconstructing consciousness in search of useful definitions for applied linguistics. *AILA Review* 11, 11-26.
- Schneiderman, E. and Desmarais, C. (1988) The talented language learner: Some preliminary findings. *SLR* 4, 91-109.
- Schütze, C.T. (1996) *The Empirical Base of Linguistics. Grammaticality judgements and linguistic methodology*, Chicago: University of Chicago Press.
- Schwartz, B.D. (1986) The epistemological status of second language acquisition. *SLR* 2, 120-159.
- Schwartz, B.D. (1996) Parameters in non-native language acquisition. In Jordens, P. and Lalleman, J. (eds.) *Investigating Second Language Acquisition*, pp. 211-235. Berlin: Mouton de Gruyter.
- Schwartz, B.D. (1997) On the basis of the Basic Variety *SLR* 13/4, 386-402.
- Schwartz, B.D. (1998) On two hypotheses of "transfer" in L2A: Minimal Trees and Absolute L1 Influence. In Flynn, S., Martohardjono, G. and O'Neil, W. (eds.) *The Generative Study of Second Language Acquisition*, pp. 35-59. Mahwah, N.J.: Lawrence Erlbaum.
- Schwartz, B.D. and Eubank, L. (1996) What is the 'L2 initial state'? *SLR* 12, 1-6.
- Schwartz, B.D. and Gubala-Ryzak, M. (1992) Learnability and grammar reorganization in L2A: against negative evidence causing the unlearning of verb-movement. *SLR* 8, 1-38.
- Schwartz, B.D. and Sprouse, R. (1994) Word order and nominative case in nonnative language acquisition: a longitudinal study of (L1 Turkish) German interlanguage. In:

Bibliography

- Hoekstra, T. and Schwartz, B.D. (eds.) *Language Acquisition Studies in Generative Grammar*, pp. 317-368. Philadelphia, PA: John Benjamins.
- Schwartz, B.D. and Sprouse, R.A. (1996) L2 cognitive states and the Full Transfer/Full Access model. *SLR* 12/1, 40-72.
- Seliger, H.W. (1978) Implications for a multiple critical period hypothesis for second language learning. In: Ritchie, W.C. (ed.) *Second Language Acquisition Research: Issues and implications*, pp. 11-19. New York: Academic Press.
- Selinker, L. (1992) *Rediscovering Interlanguage*, London: Longman.
- Shaugnessy, J.J. and Zechmeister, E.B. (1994) *Research Methods in Psychology (3rd ed)*, New York: McGraw-Hill.
- Siewierska, A. (1991) *Functional Grammar*, London: Routledge.
- Siewierska, A. (1995) *Word order variation*. Paper given at the University of Edinburgh.
- Singleton, D. (1995) Introduction: A critical look at the critical period hypothesis in second language acquisition research. In: Singleton, D. and Lengyel, Zs. (eds.) *The Age Factor in Second Language Acquisition*, pp. 1-29. Clevedon: Multilingual Matters.
- Singleton, D. and Lengyel, Zs. (eds.) (1995) *The Age Factor in Second Language Acquisition*, Clevedon: Multilingual Matters.
- Slobin, D.I. (1985) Crosslinguistic evidence for the language-making capacity. In: Slobin, D.I. (ed.) *The Crosslinguistic Study of Language Acquisition. Vol.2: Theoretical issues*, pp. 1157-1249. Hillsdale, N.J.: Lawrence Erlbaum.
- Smith, N.V. and Tsimpli, I.M. (1991) Linguistic modularity? A case study of a 'savant' linguist. *Lingua* 84, 315-351.
- Smith, N.V., Tsimpli, I.M. and Ouhalla, J. (1993) Learning the impossible: the acquisition of possible and impossible languages by a polyglot savant. *Lingua* 91, 279-347.
- Smith, N.V. and Tsimpli, I.M. (1995) *The Mind of a Savant: Language learning and modularity*, Oxford: Blackwell.
- Smolensky, P. (1996) On the comprehension/production dilemma in child language. *LI* 27, 720-731.
- Snow, C.E. (1975) Linguists as behavioral scientists: Towards a methodology for testing linguistic intuitions. In: Kraak, A. (ed.) *Linguistics in the Netherlands 1972-973*, pp. 271-275. Assen: Van Gorcum.
- Sorace, A. (1985) Metalinguistic knowledge and language use in acquisition-poor environment. *AL* 6, 239-254.
- Sorace, A. (1988) Linguistic intuitions in interlanguage development: the problem of indeterminacy. In: Pankhurst, J. et al (eds.) *Learnability and Second Languages*, Dordrecht: Foris.
- Sorace, A. (1990) Indeterminacy in first and second languages: theoretical and methodological issues. In: De Jong, J. and Stevenson, D. (eds.) *Individualizing the Assessment of Language Abilities*, Clevedon: Multilingual Matters.
- Sorace, A. (1992) *Lexical conditions on syntactic knowledge: auxiliary selection in native and non-native grammars of Italian*. Unpublished PhD thesis, University of Edinburgh.
- Sorace, A. (1993) Incomplete vs. divergent representations of unaccusativity in non-native grammars of Italian. *SLR* 9/1, 22-47.
- Sorace, A. (1993) Unaccusativity and auxiliary choice in nonnative grammars of Italian and French: asymmetries and predictable indeterminacy. *Journal of French Language Studies* 3, 71-93.
- Sorace, A. (1996a) The use of acceptability judgements in second language acquisition research. In: Ritchie, W.C. and Bhatia, T.K. (eds.) *The Handbook of Second Language Acquisition*, pp. 375-409. San Diego: Academic Press.

- Sorace, A. (1996b) On gradience and optionality in non-native grammars. Commentary to D. Epstein et al "Second language acquisition: theoretical and experimental issues in contemporary research". *BBS* 19/4, 741-742.
- Sorace, A. (1998) Near-nativeness, optionality, and L1 attrition. (to appear)
- Speas, M. (1990) *Phrase Structure in Natural Languages*, Dordrecht: Kluwer.
- Speas, M. (1993) Null arguments in a theory of economy of projection. In Benedicto, E. and Runner, J. (eds.) *University of Massachusetts Occasional Papers in Linguistics 17: Functional Projections.*, pp. 179-208. Amherst, Mass.: The Graduate Linguistic Student Association, Department of Linguistics, University of Massachusetts.
- Speas, M. (1997) Optimality Theory and syntax: null pronouns and control. In: Archangeli, D. and Langendoen, D.T. (eds.) *Optimality Theory: An overview*, pp. 171-199. Oxford: Blackwell.
- Sprouse, R. (1998) Some notes on the relationship between inflectional morphology and parameter setting in first and second language acquisition. In Beck, M. (ed.) *Morphology and its Interfaces in Second Language Knowledge*, pp. 41-67. Philadelphia: John Benjamins.
- Stevens, S.S. (1975) *Psychophysics: Introduction to its perceptual, neural, and social prospects*, New York: John Wiley.
- Stringfellow, A., Cahana-Amitay, D., Hughes, E. and Zukowski, A. (eds.) (1996) *Proceedings of the 20th Annual Boston University Conference on Language Development*, Somerville, MA: Cascadilla Press.
- Stromswold, K. (1990) Learnability and the acquisition of auxiliaries. Unpublished PhD dissertation. Massachusetts Institute of Technology.
- Stromswold, K. (1995) The acquisition of inversion and negation in English: A reply to Deprez and Pierce. Ms. Rutgers University.
- Stromswold, K. (1996) Analyzing children's spontaneous speech. In: McDaniel, D. et al (eds.) *Methods for Assessing Children's Syntax*, pp. 23-53. Cambridge, Mass.: MIT Press.
- Szalamín, E. (1978) A mai magyar beszélt nyelv mondattanának kérdéséhez. *Magyar Nyelv* 74, 293-303.
- Tarone, E. (1988) *Variation in Interlanguage*, London: Edward Arnold.
- Tarone, E., Frauenfelder, U. and Selinker, L. (1976) Systematicity/variability and stability/instability in interlanguage systems. *LL Special Issue Number 4*, 93-134.
- Tesar, B. and Smolensky, P. (1998) Learnability in Optimality Theory. *LI* 29/2, 229-268.
- Towell, R. and Hawkins, R. (1994) *Approaches to Second Language Acquisition*, Clevedon: Multilingual Matters.
- Trahey, M. and White, L. (1993) Positive evidence and preemption in the second language classroom. *SSLA* 15, 181-204.
- Truscott, J. (1998) Noticing in second language acquisition: a critical review. *SLR* 14/2, 103-135.
- Truscott, J. and Wexler, K. (1989) Some problems in the parametric analysis of learnability. In: Matthews, R.J. and Demopoulos, W. (eds.) *Learnability and Linguistic Theory*, pp. 155-176. Dordrecht: Kluwer.
- Tsimpli, I.M. (1995) Focusing in Modern Greek. In: É.Kiss, K. (ed.) *Discourse Configurational Languages*, Cambridge: CUP.
- Tsimpli, I.M. (1996a) *The Prefunctional Stage of First Language Acquisition: A crosslinguistic study*, New York: Garland.
- Tsimpli, I.M. (1996b) Resumptive pronouns, learnability and L2A: a minimalist account. *Working Papers in English and Applied Linguistics, Research Centre for English and Applied Linguistics, University of Cambridge* 3, 23-42.

Bibliography

- Tsimpli, I.M. (1997) Resumptive strategies and L2A: a minimalist account. In: Hughes, E. et al (eds.) *BUCLD 21 Proceedings*, pp. 639-655. Somerville, MA: Cascadilla Press.
- Tsimpli, I.M. and Roussou, A. (1991) Parameter-resetting in L2? *UCL Working Papers in Linguistics* 3, 149-169.
- Tsimpli, I.M. and Smith, N.V. (1991) Second language learning: evidence from a polyglot savant. *UCL Working Papers in Linguistics* 3, 171-184.
- Tsimpli, I.M. and Stavrakaki, S. (to appear) The effects of a morphosyntactic deficit in the determiner system: the case of a Greek SLI child. To appear in *Lingua*.
- Turkel, W.J. (1994a) *The acquisition of Optimality Theoretic systems*, Ms., University of British Columbia.
- Turkel, W.J. (1994b) *The NK model of parameter space*, Ms., 17 Dec 1994, University of British Columbia.
- Ullman, M. and Gopnik, M. (1994) The production of inflectional morphology in hereditary specific language impairment / Past tense production: regular, irregular and nonsense verbs. *McGill Working Papers in Linguistics* 10/1-2, 81-118.
- Vainikka, A. (1993/1994) Case in the development of English syntax. *LA* 3, 257-325.
- Vainikka, A. and Young-Scholten, M. (1994) Direct access to X'-theory: evidence from Korean and Turkish adults learning German. In: Hoekstra, T. and Schwartz, B.D. (eds.) *Language Acquisition Studies in Generative Grammar*, pp. 265-316. Philadelphia, PA: John Benjamins.
- Vainikka, A. and Young-Scholten, M. (1996) Gradual development of L2 phrase structure. *SLR* 12, 7-39.
- Vainikka, A. and Young-Scholten, M. (1998a) The initial state in the L2 acquisition of phrase structure. In Flynn, S., Martohardjono, G. and O'Neil, W. (eds.) *The Generative Study of Second Language Acquisition*, pp. 17-34. Mahwah, N.J.: Lawrence Erlbaum.
- Vainikka, A. and Young-Scholten, M. (1998b) Morphosyntactic triggers in adult SLA. In Beck, M. (ed.) *Morphology and its Interfaces in Second Language Knowledge*, pp. 88-113. Philadelphia: John Benjamins.
- Valian, V. (1990) Logical and psychological constraints on the acquisition of syntax. In: Frazier, L. and de Villiers, J.G. (eds.) *Language Processing and Language Acquisition*, pp. 119-145. Dordrecht: Kluwer.
- Vallduvi, E. (1992) *The Informational Component*, New York: Garland.
- Vallduvi, E. (1993) Information packaging: a survey. *Edinburgh HCRC Publications No 44*.
- Vallduvi, E. and Engdahl, E. (1996) The linguistic realization of information packaging. *Linguistics* 34/3, 459-519.
- van Kemenade, A. (1987) *Syntactic Case and Morphological Case in the History of English*, Dordrecht: Foris.
- Varga, L. (1981) A magyar intonáció funkcionális szempontból. *Nyelvtudományi közlemények* 83, 313-339.
- Varga, L. (1983) Hungarian sentence prosody: An outline. *Folia Linguistica* 17, 117-151.
- Varga, L. (1985) Intonation in the Hungarian sentence. In: Kenesei, I. (ed.) *Approaches to Hungarian Vol. 1.*, pp. 205-224. Szeged: JATE.
- Verrips, M. and Weissenborn, J. (1992) Routes to verb placement in early German and French: the independence of finiteness and agreement. In: Meisel, J.M. (ed.) *The Acquisition of Verb Placement: Functional categories and V2 phenomena in language development*, pp. 283-331. Dordrecht: Kluwer.
- Vikner, S. (1995) V^o-to-I^o movement and inflection for person in all tenses. *Working Papers in Scandinavian Syntax* 55: 1-27.

- Vilkuna, M. (1989) *Free Word Order in Finnish. Its syntax and discourse functions*, Helsinki: Suomalaisen Kirjallisuuden Seura, Hakapaino Oy.
- Vilkuna, M. (1995) Discourse configurability in Finnish. In: É.Kiss, K. (ed.) *Discourse Configurational Languages*, pp. 244-268. Oxford: OUP.
- Vögelin, C.F. and Vögelin, F.M. (1977) *Classification and Index of the World's Languages*, New York: Elsevier.
- Webelhuth, G. (eds.) (1995) *Government and Binding Theory and the Minimalist Program: Principles and parameters in syntactic theory*, Oxford: Blackwell.
- Weber-Fox, C.M. and Neville, H.J. (1996) Maturation constraints on functional specializations for language processing: ERP and behavioural evidence in bilingual speakers. *Journal of Cognitive Neuroscience* 8/3, 231-256.
- Weissenborn, J. (1992) Null subjects in early grammars: implications for parameter-setting theory. In: Weissenborn, J. et al (eds.) *Theoretical Issues in Language Acquisition: Continuity and change in development*, pp. 269-299. Hillsdale, N.J.: Lawrence Erlbaum.
- Weissenborn, J., Goodluck, H. and Roeper, T. (eds.) (1992) *Theoretical Issues in Language Acquisition: Continuity and change in development*, Hillsdale, N.J.: Lawrence Erlbaum.
- Wexler, K. (1994) Optional infinitives, head movement and the economy of derivations. In: Lightfoot, D. and Hornstein, N. (eds.) *Verb Movement*, pp. 305-350. Cambridge: CUP.
- Wexler, K. (to appear) Very early parameter setting and the Unique Checking Constraint: a new explanation of the optional infinitive stage. To appear in: Sorace, A., Heycock, C. and Shillcock, R. (eds.) *Language Acquisition: Knowledge representation and processing*, Amsterdam: Elsevier.
- Wexler, K. and Manzini, M.R. (1987) Parameters and learnability in binding theory. In: Roeper, T. and Williams, E. (eds.) *Parameter Setting*, pp. 41-89. Dordrecht: D. Reidel.
- White, L. (1985) The "pro-drop" parameter in adult second language acquisition. *LL* 35, 47-62.
- White, L. (1986) Implications of parametric variation for adult second language acquisition: an investigation of the pro-drop parameter. In: Cook, V. (ed.) *Experimental Approaches to Second Language Learning*, pp. 55-72. Oxford: Pergamon.
- White, L. (1988) Island effects in second language acquisition. In Flynn, S. and O'Neil, W. (eds.) *Linguistic Theory and Second Language Acquisition*, pp. 144-172. Dordrecht: Kluwer.
- White, L. (1989) *Universal Grammar and Second Language Acquisition*, Amsterdam: John Benjamins.
- White, L. (1990/1991) The verb-movement parameter in second language acquisition. *LA* 1/4, 337-360.
- White, L. (1991) Adverb placement in second language acquisition: some effects of positive and negative evidence in the classroom. *SLR* 7/2, 133-161.
- White, L. (1992a) Long and short verb movement in second language acquisition. *Canadian Journal of Linguistics* 37, 273-286.
- White, L. (1992b) On triggering data in L2 acquisition: a reply to Schwartz and Gubala-Ryzak. *SLR* 8, 120-137.
- White, L. (1996a) Universal Grammar and second language acquisition: Current trends and new directions. In: Ritchie, W.C. and Bhatia, T.K. (eds.) *Handbook of Second Language Acquisition*, pp. 85-120. San Diego: Academic Press.
- White, L. (1996b) The tale of the ugly duckling (or the coming of age of second language

Bibliography

- acquisition research). In: Stringfellow, A. et al (eds.) *BUCLD 20 Proceedings*, pp. 1-17. Somerville, MA: Cascadilla Press.
- White, L. and Genesee, F. (1996) How native is near-native? The issue of ultimate attainment in second language acquisition. *SLR* **12/3**, 233-265.
- Whitman, J. (1994) In defence of the strong continuity account of the acquisition of verb-second. In: Lust, B. et al (eds.) *Syntactic Theory and First Language Acquisition: Cross-linguistic perspectives. Vol. 1, Heads, projections, and learnability*, Hillsdale, N.J.: Lawrence Erlbaum.
- Wolfe-Quintero, K. (1996) Nativism does not equal Universal Grammar. *SLR* **12/4**, 335-373.
- Yuan, B. (1993) *Directionality of difficulty in second language acquisition of Chinese and English*. Unpublished PhD thesis, University of Edinburgh.
- Zobl, H. (1982) A direction for contrastive analysis: The comparative study of developmental sequences. *TESOL Quarterly* **16**, 169-183.
- Zobl, H. (1989) Modularity in adult L2 acquisition. *LL* **39**, 49-79.
- Zobl, H. (1990) Evidence for parameter-sensitive acquisition: a contribution to domain-specific vs. central processing debate. *SLR* **6**, 39-59.
- Zobl, H. (1995) Converging evidence for the 'acquisition-learning' distinction. *AL* **16/1**, 35-56.
- Zobl, H. and Licerias, J. (1994) Functional categories and acquisition orders. *LL* **44/1**, 159-180.
- Zolnai, G. (1926) Mondatátszövődés. *Értekezések a nyelv- és széptudományok köréből* **XXIV/8**.

Appendix A: L1 vs. L2 acquisition of Hungarian focus

In this exploratory study we examined the CHILDES database of child production data for information on L1 acquisition of focus movement and compared these results with those obtained from adult L2 production data. This study has been placed in the Appendix of the thesis as it appeared in publication (see Papp 1998). However, it forms a crucial part of our thesis since the results contributed to the formulation of the main hypotheses of our subsequent research.

A.1 An observational study of child Hungarian

In order to explore the acquisition of Hungarian focus movement by child (L1) learners, first we will give a brief summary of the relevant literature on Hungarian L1 acquisition. Then we will describe the observational study we carried out on the five Hungarian children's files in the CHILDES database (MacWhinney and Snow 1985). The questions we set out to study both in the existing literature and our own investigations were the following:

1. Does the instantiation of the focus projection cause any difficulties in child language acquisition? Do children make typical and systematic mistakes with regard to focus operator and verb movement in Hungarian?
2. Does the instantiation of the focus projection result in acquisition of correct *wh*- and negative sentences? In other words, when children set the parameter for the F(ocus)P(hrase) and assign it the correct feature values, does their grammar show evidence of clusters, i.e. concurrently acquired structures that parameter-setting is supposed to bring about?
3. Do children's production data show any optionality?

A.1.1 Previous studies of child L1 Hungarian

The literature on the acquisition of Hungarian as an L1 is fair in size, as detailed by MacWhinney (1974), but mostly comprises observational diary-studies which have well-

known limitations (Stromswold 1996). They usually work with anecdotal or at best single-example (i.e. atomist) evidence that have not been subjected to statistical analyses. However, there are some studies that deal with the question of focus movement directly, among them MacWhinney (1974, 1985), MacWhinney and Bates (1978), Pléh (1992) and Babarczy (1995). These are the studies we will review in this section. MacWhinney (1974) investigated the Hungarian acquired by a child named Zoli from the age of 1;5 to 2;2, MacWhinney (1985) is a study of five children between the ages of 1;5-2;2, Pléh (1992) reports on a child's utterances aged 2;1-2;7, and finally Babarczy (1995) re-examined the production of MacWhinney's Zoli between the ages of 1;5-2;2. The subjects of MacWhinney and Bates (1978) are slightly older, pre-schooler children. This latter study is interesting in its findings, although it looks at the acquisition of focus from a different theoretical perspective and in a cross-linguistic comparative design.

As attested by MacWhinney (1974:30) it is clear that early on in L1 development (already around age 1;8) Hungarian children prepose elements for various focusing reasons: either for emotional import, or to contrast it with previously communicated information, or simply to guide attention to elements of central significance. In a crosslinguistic study MacWhinney and Bates (1978) have shown that already at the early stages of acquisition, Hungarian children seem to have learnt to rely more on the strategy of preposing new or contrastively focused elements, rather than using emphatic stress on them. MacWhinney (1974) argues that by the age of 2;2 all the semantic grounds for focusing are well established, including contrast, selection, emphasis, disagreement, and inclusion (see MacWhinney 1974:429).

In spite of the ability to use word order instead of stress for focusing reasons, children have been observed to make a number of errors in the filling of the preverbal Focus position. Let us see some examples from the literature.

Children sometimes have verb movement which results in a postverbal prefix although no other item qualifies for focus or other operator status. This has been observed in the following *yes/no* questions:

- (1) *Éva fürdik meg? for the correct Éva meg-fürdik?
Eva bathe-3sg PREF Eva PREF-bathe-3sg
 'Is Eva having a bath?'

(from MacWhinney 1985:1125)

- (2) *Mosogatunk el? for the correct El-mosogatunk?
wash-1pl PREF *PREF-wash-1pl*
 'Do we wash up?'

(from Pléh 1992:271)

The same type of mistake was observed by Pléh (1992:271) in an imperative sentence, see example (3). The appearance of the prefix in postverbal position might be, as Pléh suggests, the result of emphasis the child wants to convey:

- (3) *Nézem meg! for the correct Meg-nézem!
look-1sg-DEF PREF *PREF-look-1sg-DEF*
 'I look it up.'

(from Pléh 1992:271)

Showing a more pervasive opposite tendency, children have been frequently observed to fail to raise the verb when some other material occupies the focus position. The examples below represent *negative* sentences, see examples (4) and (5); *imperatives*, see examples (6) and (7); *questions*, see example (8); and sentences with *auxiliaries*, see example (9). In all these examples verb-movement would be obligatory in the mature grammar:

- (4) *nem meg-eszem for the correct nem eszem meg
not PREF-eat-1sg-DEF *not eat-1sg-DEF PREF*
 'I won't eat it.'

(from MacWhinney 1985)

- (5) *Még nem el-mentek! for the correct Még nem mentek el!
yet not away.go-past-3pl *yet not go-past-3pl away*
 'They haven't left yet.'

(from Pléh 1992)

- (6) *Meg-nézzük! for the correct Nézzük meg!
PREF-see-1pl-SUB-DEF *see-1pl-SUB-DEF PREF*

'Let's have a look at it!'

(from MacWhinney 1985)

- | | | | |
|-----|---|-----------------|--|
| (7) | *Fel-ébredjél! <i>up-wake 2sg-IMP</i> 'Wake up!' | for the correct | Ébredjél fel! <i>wake 2sg-IMP up</i> |
| (8) | *Erre ki-megyünk? <i>this-way out.go-1pl</i> 'Do we go out this way?' | for the correct | Erre megyünk ki? <i>this-way go-1pl out</i> |
| (9) | *Át-menni kell! <i>across.go-INF must</i> '(We) must go across.' | for the correct | Át kell menni! <i>across must go-INF</i> |

(last three examples from Pléh 1992)

These observations suggest that children's acquisition of focus movement is not devoid of grammatical mistakes. We agree with Radford that even if these examples are atomist by nature, they 'clearly need to be given a proper syntactic description' (1996:81 fn.19), regardless of what percentage they represent of the total utterances by these children. Apart from a suitable syntactic analysis, the following questions arise: How systematic are these grammatical errors in spontaneous speech data in children? Do all children make the same kind of mistakes? What causes the emergence of these mistakes? What developmental course characterises their use, i.e. their appearance, persistence and final abandonment?

A.1.2 Exploratory analysis of L1 acquisition

Remember that the constructions related to the focus movement, i.e. focused, interrogative and negative sentences, have similar syntactic requirements in Hungarian. Our aim was to compare the L1 acquisition of each of these construction types with an eye to ultimately proposing a developmental sequence for focus-related constructions in L1 Hungarian.

In the literature on child language acquisition of other languages, there are relatively few acquisitional studies which *compare* the development of *wh*-questions and negation in L1 acquisition. Exceptions are Roeper and Rohrbacher (1994) and Radford (1995, 1996) where English L1 acquisition of both *wh*-question formation and negation are dealt with and compared.

As we saw in chapter 2, the theory of focus movement in Hungarian predicts that *wh*-questions, negative and focused sentences will appear in a cluster as a consequence of the child realising that Hungarian has a strong [+f] feature on the F⁰ head. Recognition of the strong head feature in one type of construction should in principle entail the simultaneous and concurrent acquisition of the other structures, thus we would expect children to raise the verb in all three circumstances.

In order to address these questions we examined the files for the five children acquiring Hungarian as a first language in the CHILDES database (MacWhinney and Snow 1985). The age range that the five children represent in the database is 1;5-3;2. We examined the frequency of occurrence of various words that are related to either focused, *wh*-, or negative sentences by culling all the utterances with auxiliaries, *is*- 'too'-phrases, negation, prefixes, quantifiers, and *wh*-phrases. All efforts were made to follow the recommendations set out in Stromswold (1996) regarding precautions suggested when working with child production data. The problems we faced will be described below.

The classes of words and the words themselves we investigated are listed below:

Appendix A L1 vs. L2 acquisition of Hungarian focus

| | | | |
|---------------------|---------------------|--------|---------|
| a) Auxiliari | nincs* | mit | kihez |
| es | sincs* | minek | kin |
| fog* | soká* | mié | kire |
| szok* | sehol | miben | kibe |
| akar* | sehova | mivel | kinél |
| kell | sehová | mitől | kiből |
| kéne | sehogy* | miről | kiért |
| lehet | semerre | mihez | kivé |
| szabad | semelyik* | min | kiként |
| szeret* | semedig | mire | kiket |
| szeretn* | semennyi* | mibe | kiknek |
| tetszik | sehány* | minél | kikben |
| tud* | semekkora | miből | kikkel |
| bír* | | miért | kiktől |
| próbál* | d) Prefixes | mivé | kikről |
| kezd* | meg | miként | kikhez |
| mer* | el | miket | kiken |
| kíván* | be | miknek | kikre |
| óhajt* | ki | mikben | kikbe |
| szándékoz* | át | mikkel | kiknél |
| talál* | össze | miktől | kikből |
| | vissza | mikről | kikké |
| b) Is/Csak | le | mikhez | hol |
| is | fel | miken | hova |
| csak | föl | mikre | hová |
| | oda | mikbe | mikor |
| c) Negation | ide | miknél | melyik* |
| ne | | mikből | milyen |
| nem | e) Quantifie | mikké | meddig |
| se | rs | kit | mennyi* |
| sem | mind* | kinek | hány* |
| semmi* | vala* | kié | merre |
| senki* | bár* | kiben | mekkora |
| soha | akár* | kivel | micsod* |
| sose | | kitől | kicsod* |
| sosem | f) Wh-words | kiről | hogy* |

Although the original intentions were for a statistical investigation of the five children's data in order to glean insights about the acquisitional clusterings and sequences, the statistical tests recommended by Stromswold (1996) could not be accomplished for several reasons. First, the CHILDES data represent a limited sample of Hungarian L1 data, altogether five children: Zoli, Andi, Móni, Gyuri, and Éva. This in itself would not have been a problem, as five children should in theory be enough to test simple ordering and clustering hypotheses. However, some of these children were recorded in only three sessions over a short period of time, which leaves the time-range of their samples somewhat narrow. Second, the actual ages of the children and the dates of sampling as well as the calculated MLU figures given are not clear in some of the cases, thus preventing reliable investigations of developmental sequences. Therefore, appropriate statistical tests (sign-tests and *t*-tests advised by Stromswold 1996) necessary for determining acquisitional clusters and/or orders could not be carried out. We are thus compelled to report single-sentence examples thus perpetuating the atomist nature of this kind of investigation. However, we are aware that a comprehensive statistical analysis of more extensive Hungarian child data is required. Next we report our findings.

After the exploratory analysis of the five children's data files in the CHILDES database, the generalisation that emerges is the following: even after children have acquired the semantic and syntactic criteria for focused and *wh*-structures, they still make mistakes in verb-movement in negation and in the use of '*is*-phrases'. In what follows we examine this claim in some detail.

Although children have been argued to show knowledge of focus movement in Hungarian (see MacWhinney 1974, 1985, MacWhinney and Bates 1978), our investigations found that the preposing of focused elements may not necessarily involve the building of an independent functional projection. Evidence for raised verbs comes from constructions where the verbal prefix appears postverbally but these constructions are rare in the early sessions. Imperative constructions with a postverbal prefix can be argued to be unanalysed, rote-learned units¹. Sporadic evidence for a higher projection can be found in a raised prefix construction with an auxiliary (10), a negated verb construction with a postverbal prefix (11), and in a sentence with a focused element (12) in Zoli's earliest files:

¹Just as contracted forms of auxiliaries in early child English are argued to be unanalysed units by Brown (1973) and consequently by many researchers (e.g. Stromswold 1990, 1995).

(10) Zoli 1;8 itt be tudu[nk menni]
 here PREF can-we go-INF
 ‘here we can [go] in’

(11) Zoli 1;8 nem ment be
 not went-3sg PREF
 ‘he didn’t go in’

(12) Zoli 1;8 ide mászom be
 here-to climb-I PREF
 ‘I’m climbing in here’

However, these raised constructions co-occur with non-raised structures, such as (13) and (14).

(13) Zoli 1;8 nem el-vitte
 not PREF-took-3sg
 ‘he didn’t take it away’

(14) Zoli 1;8 nem le-szedtem
 not PREF-took-I
 ‘I didn’t take it off’

The *concurrent* use of raised and non-raised structures suggests that children at this stage use two strategies. They sometimes use substitution in a posited FP projection, as examples (10-12) imply, and they sometimes use an alternative structure when they merely adjoin an element to the IP, as suggested by examples (13-14). Thus, similarly to the studies on English children's *wh*-question and negative formation (Klima and Bellugi 1967, Roeper and Rohrbacher 1994, Stromswold 1990, 1995, Radford 1994, 1995b, 1996a, *inter alia*), we witness a developmental stage where there is *optionality* of a higher functional projection in children's grammar.

A similar kind of optionality can be found in root clauses in early child language of French, German, Dutch, Mainland Scandinavian (Wexler 1994, Pierce 1992), as well as in child English (Rice, Wexler and Cleave 1995, Harris and Wexler 1996, Poeppel and Wexler 1993). The underlying theory and cause of the optional infinitive stage has been investigated by Wexler (1994, to appear), Rizzi (1993/1994, 1994), Haegeman (1996) and Hyams (1996) and Radford (1990, 1994, 1995a,b, 1996a,b). Wexler and Hyams, proposing a maturational account, argue that young children do not yet have the pragmatic/interpretative component to distinguish between the tenses that adult grammars use. They hypothesise that the feature Tense matures around the age of 2;5. The claim is that before this age and after it for some time (between the ages of 1;10 and 2;7 and sometimes even later) Tense is optionally used by children. This is proposed as the reason for why they produce both *she go* and *she goes* as well as *she not go* and *she doesn't go* concurrently during this stage. In their account late maturation of functional categories has been proposed to account for the optional stage in children's grammar.

In a different line of argument which does not make use of the maturational account, Radford (e.g. 1996) argues that children's early grammar, and within it the optional stage, can best be accounted for by a structure-building account of early syntactic development. Based on well-established arguments for economy in syntactic representation (Chomsky 1991, Grimshaw 1993, 1994, 1997, Speas 1993, etc.), Radford proposes that children optionally project higher projections in their early grammar when they are entering a new, more advanced stage. This would account for the presence/absence of functional projections in early child grammar.

Grimshaw (1994) argues that children have all the functional projections represented in their grammar but the principle of Minimal Projection always ensures that projections are legitimate only when they are motivated. Thus, a *wh*-phrase motivates a CP projection in English and a preposed focused phrase can be argued to motivate an FP projection in Hungarian. Rizzi (1995) takes the same argument further. He states that "no free preposing and adjunction to IP is permissible, all kinds of movements to the left periphery must be motivated by the satisfaction of some criterion, hence by the presence of a head entering into the required Spec-head configuration with the preposed phrase" (Rizzi, 1995:2). Aware of these two proposals Radford (*op.cit.*) still claims that children do make use of the earlier strategy of adjunction, which enables them to avoid positing a higher projection. However, adjunction makes it possible for children to prepose the operator for scope reasons.

It is clear that if Hungarian children posited an FP projection without filling the head category with the raised verb, they would violate Grimshaw's (1993, 1997) Obligatory Heads Principle, as well as Haegeman's (1992) general Affect-Criterion. This type of violation, although not missing, is very rare in the child data. There is one case of the violation of the Neg-Criterion in Zoli's files, where a negative head is missing. This leads to a failure of the Spec-head agreement between the negative operator *senki* 'nobody' and the missing negative marker *nem*, see example (15):

- (15) Zoli 2;0 *csak senki jött ... Barna bácsi*
 only nobody came Barna uncle
 'no-one came, Uncle Barna'

Similarly, there is one child, Gyuri at the age of 2;3, who violates the *wh*-criterion by occasionally not raising the verb after a preposed *wh*-phrase, as shown in (16) and (17). Please note that the *wh*-phrase that precedes these non-raised verbs is *miért* 'why' which we would like to argue explains the occurrence of these mistakes²:

- (16) Gyuri 2;3 *miér(t) be-mennek?*
 why PEF-go-they
 'why are they going in?'
- (17) Gyuri 2;3 *mié(rt) mért ki-esett a kereke? miért ki-esett?*
 why why PEF-fell the wheel? why PEF-fell
 'why did its wheel fall out? why did it fall out?'

²It is interesting to note the parallel between English and Hungarian children's acquisition of *why wh*-phrases. *Why*-phrases have been argued to be base generated by English children as sentential adverbs in an IP-adjunct position. In Hungarian it can be argued that there are three kinds of *miért* 'why'-phrases akin to the three kinds of *nem* negative markers: a) a sentential adverbial *miért*: [*Miért ment el János?*] 'Why has John left?', b) a constituent-adverbial *miért*, similar to the constituent negator: [*Miért János ment el?*] 'Why is it John that's left?', and c) a propositional adverbial *miért*, corresponding to *hogyhogy* 'how come', which does allow a non-raised verb construction: [*János miért ELSÉTÁLT (miért nem ELROHANT)?*] 'Why did John walk away, why didn't he run away?', see also *Hogyhogy János elment?* 'How come John has left?' (cf. É.Kiss 1994). We argued that this use of *miért* 'why' is the metalinguistic use, see section 4.9.3.2.

Altogether, Hungarian children seem to fail to raise the verb about 20% of the time (cf. Babarczy 1995). However, the majority of these mistakes involve negative sentences with an adjoined negative marker *nem*. This has already been attested in the numerous non-target-like negative constructions in the literature (e.g. MacWhinney 1974, 1985, Pléh 1992). The five children's data represented in the CHILDES database clearly show the existence of an *optional rule in negation* up until age 2;9. It can be seen throughout Gyuri's production at age 2;3, where non-raised negation co-occurs with correct raised negation. Móni's data from age 2;2 throughout age 2;5, as well as Éva's utterances between the ages 2;7 and 2;9 contain numerous examples of an incorrect rule for the placement of the negative marker, see examples (18-25):

- (18) Gyuri 2;3 *nem el-veszi*
 not PREF-take-3sg
 'he won't take it away'
- (19) Móni 2;2 *én nem el-rontottam*
 I not PREF-spoilt-I-DEF
 'I didn't spoil it'
- (20) Móni 2;5 *nem ki-kapom*
 not PREF-get-punished-I-DEF
 'I won't be punished'
- (21) Móni 2;5 *az nem el-dobta*
 that not PREF-threw-DEF
 'he didn't throw it away'
- (22) Éva 2;7 *ne nem le-ülsz ide*
 don't not PREF-sit-you here
 'no, you won't sit here'
- (23) Éva 2;7 *ne össze-görbítsd*
 don't PREF-fold-SUBJ-you-EDF
 'don't fold it up'

- (24) Éva 2;9 nem ki-jött
 not PEF-came-3sg
 ‘it didn’t come out’
- (25) Éva 2;9 nem meg-harapta a kutya a cicát
 not PEF-bit-3sg the dog-NOM the kitten-ACC
 ‘the dog didn’t bite the kitten’

We need to point out again that these non-target-like negatives appear concurrently with target-like negatives and correct *wh*-questions. This is in line with the assumption suggested by Grimshaw's (1993, 1994) Minimal Projection Principle, Speas' (1993) Principle of Economy of Projection, as well as Rizzi's (1993/1994) truncation hypothesis. The general hypothesis common to these works suggests that children sometimes project only as far as VP, sometimes as far as IP, and sometimes as far as CP. In the case of the negatives cited above, children seem to adjoin the negative marker to the IP, in spite of the fact that they already project the correct higher projection for other negatives, *wh*-questions, and focused sentences³.

Our proposal for the reason for this optional use of negative constructions is that children misanalyse the unstressed contrastive *nem* used in contrastive (metalinguistic) negation. They

³ Zoli's first correct *wh*-construction with a raised verb appeared at 2;2. It is reported to have been uttered with a rise-fall intonation characteristic of *yes/no* questions (MacWhinney 1974) and the verb incidentally appears uninflected, but the syntactic structure is nevertheless correct, as can be seen in (i):

- (i) Zoli 2;2 Mikor ad oda Barna bácsinak?
 when give PEF Barna uncle-DAT
 ‘When (are you) giving it to Uncle Barna?’

All of the other children attest similar correct and productive use of raised *wh*-questions after this age, see examples (ii-iv). Thus we can argue that the Focus Projection with a *wh*-phrase in [Spec,FP] is acquired by age 2;2 (except for *why wh*-questions, as we saw above in examples (16-17)).

- (ii) Gyuri 2;3 Hol dugjam be?
 where put-SUBJ-I PEF
 ‘Where shall I put it in?’
- (iii) Móni 2;4 Hova csücsülünk le?
 where-to sit-we PEF
 ‘Where are we going to sit down?’
- (iv) Éva 2;7 Láttad hogy dült le?
 saw-you how fell-3sg PEF
 ‘Did you see how it fell?’

may incorrectly analyse these as the negative marker of sentential negation. More precisely, we propose that children may sometimes use the contrastive (metalinguistic) negator *nem* in sentential negation and adjoin it to the proposition, as it is in contrastive negation. This proposal is supported by constructions such as (26-29).

- (26) Zoli 2;2 én nem össze-rontom csak a
 I not PREF-ruin-I just the
 ‘I won’t ruin it just ...’
- (27) Zoli 2;2 csak nem el-rontottam csak meg-csináltam
 just not PREF-ruined-I just PREF-fixed-I
 ‘I didn’t ruin it I just fixed it’
- (28) Zoli 2;2 nem meg-eszi csak
 not PREF-eat-3sg just
 ‘it won’t eat it just ...’
- (29) Zoli 2;2 le-törni nem csak
 PREF-break-INF not just
 ‘not break it just ...’

In the above utterances (26-29) it is clear that the child is using *nem* as an operator that has scope over the whole proposition, rather than over the IP as in sentential negation. This proposal is in line with the classical analysis of children's early negative sentences in English as the negative element *no* + nucleus, i.e. anaphoric negation (Klima and Bellugi 1966). Naturally, phonological information from the original files would corroborate the present analysis of the children's sentential negation. We believe however, that the existence of the structures above in (26-29) strongly suggests that children overgeneralise from contrastive negation to sentential negation and this leads to a prolonged period of optionality in their grammar.

The additional information revealed by our analysis showed that optional incorrect negatives seem to coexist with optional incorrect ‘*is*-phrases’. Only a few of these structures are shown here from the database. In examples (30-33) there is a failure to raise the prefix before the

auxiliary. That is, the prefix does not raise from the lower clause to the higher clause before the auxiliary resulting in lack of the necessary 'prefix-climbing' (see Farkas and Sadock 1989):

- (30) Zoli 2;2 én is tudom föl-húzni
 I also can-I PREF-pull-INF
 'I can also put it on'
- (31) Zoli 2;2 ezt is kell meg-mosni
 this-ACC also necessary PREF-wash-INF
 'this has to be washed as well'
- (32) Gyuri 2;3 én is akarom meg-nézni
 I also want-I PREF-look-INF
 'I also want to have a look at it'
- (33) Éva 2;7 én is akarok föl-szállni
 I also want-I PREF-climb-INF
 'I want to get on as well'

Examples (34) and (35) seem to be evidence of a misanalysis of quantificational *is*-phrases as emphatic *is*-phrases⁴:

- (34) Éva 2;7 bele-fél ... az is fér bele
 PREF-fits that also fits PREF
 'it'll fit ... that'll also fit'
- (35) Éva 2;7 ez is tör össze
 this also breaks PREF
 'this will also break'

⁴ See Piñón (1992) for a distinction between quantificational and emphatic *is*-phrases. Basically, quantificational *is*-phrases do not require focus-movement, while emphatic *is*-phrases do.

What clearly emerges from the data is an optional stage for *is*-phrases, very much similar to the one we witnessed in negative sentences. The distinction between quantificational and emphatic *is*-phrases seems to be problematic and late acquired, similarly to the different kinds of negative constructions. If we adopt Piñón's (1992) analysis, we see that in the examples above children project a Σ P normally used for emphatic *is*-phrases, although the intended meaning (as judged by the context of utterance) requires quantificational *is*-phrases in quantifier positions, i.e. *without* verb-movement. In these cases children seem to overgeneralise the verb-movement rule they have acquired for *wh*-questions and focused sentences to sentences containing quantificational *is*-phrases.

Interestingly, the constructions children appear to acquire latest in Hungarian, i.e. those involving emphatic *is*-phrases and sentential negation are the two functional heads posited by Piñón (1992) inside the Sigma-Phrase. Piñón's analysis has *nem* and emphatic *is* as part of this extended projection (Σ P), rather than analysing *nem* as a negative phrase marker adjoined to the verb (É.Kiss 1987, Farkas 1986), or as a clitic cliticised to the verb, as in Puskás's (1994, 1996) analysis. Even more significantly, Piñón's Σ P also contains the focused phrase. The occasional violation of the Affect criterion as exemplified by examples (15-17) would indicate that children in this stage have not managed to establish the relevant feature specifications required for the extended projection above the VP.

In this section I have argued that although children initially prepose focused elements in a clause, they only optionally raise the verb. This leads to occasional violation of the Affect Criterion. Later, when they have posited an extra projection for focused and *wh*-phrases, they still, on occasion, adjoin the negative marker to the IP. I suggested that this might be because of a possible misanalysis of the contrastive negator *nem* as the sentential negator, and a late-acquired distinction between quantificational and emphatic *is*-phrases. As I argued, the data suggests that children have not managed to work out the correct feature specifications for Piñón's (1992) Sigma Phrase (Σ P) which incorporates sentential negative markers, emphatic *is*-phrases as well as the focused constituent.

A.2 Exploratory analysis of L2 production data

In order to be able to compare L1 and L2 acquisitional data, we conducted an observational study of the production of English learners of Hungarian. The L2 data was collected by using the Map Task (Anderson et al 1991) for semi-elicited spoken data. Additionally, we analysed the spontaneous written production of adult learners in compositions. In the following, only representative examples of the L2 learners production are cited.

The L2 data show that intermediate and advanced English learners of Hungarian still employ stress on the last element of the sentence as a means of focusing. This is indicative of the L1 rule of using prosody for indicating focus in the sentence. However, they already show evidence of a higher projection by preposing certain elements (and moving the verb accordingly) for the purpose of focusing⁵.

However, even at these higher levels, L2 learners show the same optionality for negative constructions that was found in the L1 interlanguage. Mistakes occur most frequently with direct or indirect negation⁶. The following mistakes were attested in the written production of one of the adult learners of Hungarian.

(36) is an example of unmotivated movement, similar to the L1 examples (1-3). The adult learner moves the verb, thus evidencing knowledge of the prefix as a syntactically independent element, although this move is not motivated in a neutral level-prosody sentence:

- (36) *A hentes nagyon haragszik a kutyára, mert **lopta el** a virslit.
the butcher very is-angry the dog-to because stole-def PREF the sausage-ACC
 'The butcher is very angry with the dog, because it stole the sausage.'

⁵ Examples such as (i) and (ii) testify knowledge of verb-movement by L2 learners at this stage of acquisition:

- (i) Az első félév előtt nem tudtam mit fogok tanítani.
the first term before not knew-I what-ACC will-I teach-INF
 'Before the first term I didn't know what I'll be teaching.'
- (ii) egy amerikai angol irodalom tanszéken senki soha sem tart előadást irodalomból
an American English literature department-on nobody never not gives lecture-ACC literature-in
 'In an American English literature department nobody gives lectures on literature.'

(correct 'mert **el-lopta** a virslit')

because **PREF-stole-def** the sausage-ACC

The following sentences in (37-58) are examples of failure to move the verb in obligatory contexts. There is a failure of verb-movement in (37) with sentential negation, similar to the L1 examples in (4) and (5):

- (37) *És amikor havazik, a hó **nem el-olvad** tavasz előtt.
and when snows the snow not PREF-melts spring before
 'And when it snows the snow doesn't melt before spring.'

(correct: 'a hó **nem olvad el** tavasz előtt')

the snow not melts PREF spring before

Similarly, in (38-39) a focused element (i.e. a negative adverb of frequency, *ritkán* 'rarely', and a *csak* 'only' phrase, respectively) appears in the Focus position, but it does not seem to cause verb-movement in the ILG:

- (38) *Csak **ritkán rá-érek** szórakozni és barátkozni.
only rarely PREF-'arrive'-I have-fun-INF and make-friends-INF
 'Only rarely do I have the time to go out and make friends.'

(correct: 'Csak **ritkán érek rá** szórakozni')

only rarely 'arrive'-I PREF have-fun-INF

- (39) *Csak három nap a kezdet előtt **el-mondta** a kötelességemet.
only three day the start before PREF-told-he-def the responsibility-my-ACC
 'They told me about my responsibilities only three days before the start.'

⁶ Direct negation is marked with the negative marker *nem* in sentential or constituent negation, indirect negation is marked with negative quantifiers (*kevés* 'few' etc.) or negative adverbials of frequency, manner and degree (e.g. *ritkán* 'rarely', *rosszul* 'badly', *alig* 'hardly').

(correct: '**Csak** három nappal a tanítás kezdete előtt **mondták** el ...
only three day-with the teaching start-POSS before told-they-def PREF

The data in (40-44) testify that L2 learners have difficulty not only in moving the verb to leave its prefix behind. They have problems with verbs with other semi-incorporated elements (VMs) which are subject to the same syntactic requirements as prefixes. Failing to comply with the verb-movement rule in the case of VMs results in sharply ungrammatical sentences in the L2 data:

(40) ***Nem szorgalmasan tanultam**, inkább jól szórakoztam.
not diligently studied-I rather well had-fun-I
'I didn't study hard but I had a good time instead.'

(correct '**nem tanultam szorgalmasan**')
not studied-I diligently

(41) ***Az a hét előtt, soha sem szorgalmasan tanultam**
that the week before never not diligently studied-I
'Before that week I had never studied hard.'

(correct '**Az előtt a hét előtt soha sem tanultam szorgalmasan**')
that before the week before never not studied-I diligently

(42) ***Csak ritkán arról gondolkozom**, hogy ...
only rarely that-about ponder-I that
'Only rarely do I ponder why ...'

(correct order: '**csak ritkán gondolkozom arról**' better '**ritkán gondolok arra**')
only rarely ponder-I that-about only rarely think-I that-to
'only rarely do I think about why'

(43) ***túl ritkán eszembe jut**, hogy...
too rarely mind-my-to comes that
'too rarely does it occur to me that'

(correct 'túl ritkán jut eszembe')

too rarely comes mind-my-to

- (44) *a régi tanárok **nem mindig komolyan dolgoztak**, de mindig szórakoztak
the old teachers not always seriously worked-they, but always had-fun-they
 'the old teachers didn't work hard all the time but they were always having fun'

(correct 'nem mindig dolgoztak komolyan')

not always worked-they seriously

The parallel between the L1 and L2 data can immediately be observed. Obviously, the range of vocabulary of the advanced learners is wider, hence the syntactic ungrammaticality of the constructions is more salient. Also, advanced L2 learners usually know the relevant lexical items necessary for the expression of direct and indirect negation, thus lack of lexical knowledge cannot be brought to account for the failure to move the verb, a frequent argument employed in L1 acquisition (see e.g. Hyams 1996). L2 learners show evidence that they have not yet identified the specific feature specifications of these lexical items which appear in the lexical entry of these items. In other word, L2 learners have not yet identified that these negatives carry both the necessary [+n] feature as well as the [+f] feature, which makes them appear in the Focus slot in Spec,FP necessarily resulting in verb-movement. This might be one reason why they fail to move the verb in these constructions.

Interestingly, Robertson and Sorace (1999) observed a similar phenomenon in their German-English subjects' behaviour. They found that 13% of their subjects either used an incorrect V2 constraint in places where English requires V3 word order, or used an incorrect V3 rule in the rare 'residual' V2 contexts in English⁷. They found that the magnitude of the errors stemming from a still V2-based grammar is small but substantial. The above mentioned 13% of the learners used the incorrect V2 rule in 10% of the obligatory contexts. In spite of the relatively rare manifestations of the incorrect rule, Robertson and Sorace (1999) argue that the existence of these mistakes must be explained (an argument echoed in Radford 1996 as well).

⁷ The residual V2 constraint is operative in negative inversion in English, such as *In no circumstances are guests allowed to smoke in the bedrooms* or *Only one mountain have I climbed as high as this one* (examples taken from Robertson and Sorace 1999).

Robertson and Sorace's (1999) results have several features in common with our results. First, both types of attested mistakes involve word order, more specifically verb movement in relation to syntactic operators. Second, the mistakes are never categorical, but they sporadically occur at very early stages and persist into quite advanced stages of development. Third, the mistakes arise from the influence of the L1 grammar. Fourth, the mistakes occur in the written production of some of the students. Lastly, the mistakes occur *in spite of* actual explicit negative evidence the learners had previously received. All these common features are reminiscent of the findings in the series of research on optionality of word order in French-English adult ILG (White 1990/1991, 1991, 1992a, 1992b, Grondin and White 1996, Trahey and White 1993, and for discussions of these results see Eubank 1993/4, 1994a, 1996).

To summarise our results, the Hungarian observational L2 data, similarly to the Hungarian L1 data, show that negative elements do appear preposed as in the mature grammar, but this does not always result in verb-movement. This constitutes evidence for the claim that these learners have not fully instantiated the [+f] feature on the Hungarian F⁰ head in the case of negation (but are already using an extra position to place the focused material in front of the clause in *wh*-questions and focused sentences). We contend that L2 learners also go through a stage, similar to L1 learners, when they optionally adjoin, rather than integrate, negative elements into the structure of the clause⁸. We argued that this is probably the result of a time lag in the successful identification of the feature specifications of negative elements.

As far as the data from our observational study show, our intermediate and advanced L2 learners do prepose *wh*-phrases. However, no information could be gained from the production data about the precise syntactic position of *wh*-phrases and the developmental sequence for their acquisition. It became evident that it was necessary to collect more developmental data about the formation of *wh*-questions by L2 learners of Hungarian. It is conceivable that English learners of Hungarian initially use CP as a landing site for *wh*-phrases. If this hypothesis was correct, it would entail that English learners do not associate focus

⁸ With this observation we do not wish to support the view widely held in the 1970s that L1 and L2 acquisition are the same with regard to the principles and the mechanisms used in the acquisition processes and with regards to the nature of the knowledge attained. The existence of an optional period in both types of acquisition can be seen as independent of the different rates and routes of acquisition processes as well as the different initial and final states of L1 and L2 development (see e.g. Meisel 1997).

interpretation with the *wh*-word, neither do they assign obligatory stress to it in these early stages.

The observational study raised many of the issues which are of paramount importance in current SLA research, including the similarities and differences between L1 and L2 acquisition, the influence of the L1 in L2 acquisition, optionality, and the potential role of negative evidence, among others.

Appendix B: List of nominal cases in Hungarian

| Case | Marker | English equivalent |
|--------------------|----------------------|--------------------|
| Nominative | -Ø | (subj) |
| Accusative | -t | (obj) |
| Dative | -nak/-nek | 'to' |
| Instrumental | -val/-vel | 'with' |
| Illative | -ba/-be | 'into' |
| Sublative | -ra/-re | 'onto' |
| Allative | -hoz/-hez/-höz | 'to' |
| Inessive | -ban/-ben | 'in' |
| Superessive | -on/-en/-ön | 'on' |
| Adessive | -nál/-nél | 'at' |
| Elicative | -ból/-ből | 'out of' |
| Delative | -ról/-ről | 'of' |
| Ablative | -tól/-től | 'from' |
| Causalis | -ért | 'for' |
| Translative/Essive | -vá/-vé, -ul/-ül | 'to become sg' |
| Formalis/Essive | -ként, -képp -ul/-ül | 'like' |
| Terminative | -ig | 'up to' |

Adapted from Kenesei, I. and Pléh, Cs. (eds.) (1992) *Approaches to Hungarian, Vol. 4: The Structure of Hungarian*. Szeged: JATE.

Appendix C(i)
LI pilot study: List of experimental sentences

Items for magnitude estimation, carried out in April 1996

Szilvia Papp 6 May 1996

Items for magnitude estimation by 19 Hungarian native speakers

- 1 0 Marit Péternek mutatta be.
Mary-ACC PETER-DAT introduced-3sg PREF
'He introduced Mary to PETER.'
- 1 1 **Nem igaz. Marit Jánosnak gondolom, hogy bemutatta.**
not true. Mary-ACC JANOS-DAT think-I that PREF-introduced-3sg
'It's not true. I think he introduced Mary to JOHN.'
- 1 2 Nem igaz. Marit Jánosnak gondolom, hogy mutatta be.
not true. Mary-ACC JANOS-DAT introduced-3sg PREF
- 2 0 Jutkát Bélával ismertette meg.
Jutka-ACC BELA-INSTR acquainted-3sg PREF
'He acquainted Jutka with BELA.'
- 2 1 **De hát Jutkát Péterrel akarom, hogy megismertesse!**
but Jutka-ACC PETER-INSTR want-I that PREF-acquaint-SUBJ
'But I want him to acquaint Jutka with PETER.'
- 2 2 De hát Jutkát Péterrel akarom, hogy ismertesse meg!
but Jutka-ACC PETER-INSTR want-I that acquaint-SUBJ PREF
- 3 0 Éva Zoliban bízik meg.
Eva ZOLI-INES trust-3sg PREF
'Eva trusts ZOLI.'
- 3 1 De én Laciban vagyok kíváncsi, hogy megbízik-e?
but I LACI-INES am curious that PREF-trust-3sg-Q
'But I wonder if she trusts LACI.'
- 3 2 **De én Laciban kíváncsi vagyok, hogy megbízik-e?**
but I LACI-INES curious am that PREF-trust-3sg-Q
- 4 0 Ibolya Paliról feledkezett el.
Ibolya PALI-DEL forgot-3sg PREF
'Ibolya forgot about PALI.'
- 4 1 **Azonban én Laciról lennék kíváncsi, hogy elfeledkezett-e?**
however I LACI-DEL would-be-I curious that PREF-forgot-3sg-Q
'However, I would be curious to know whether she forgot about LACI.'
- 4 2 Azonban én Laciról kíváncsi lennék, hogy elfeledkezett-e?
however I LACI-DEL curious would-be-I that PREF-forgot-3sg-Q
- 5 0 Marit Péternek mutatta be.
Mary-ACC PETER-DAT introduced-3sg PREF
'He introduced Mary to PETER.'
- 5 1 **Marit Jánosnak szeretném, ha bemutatná.**
Mary-ACC JOHN-DAT would-like-I if PREF-introduce-3sg-COND
'I would like him to introduce Mary to JOHN.'
- 5 2 Marit Jánosnak szeretném, ha mutatná be.
Mary-ACC JOHN-DAT would-like-I if introduce-3sg-COND PREF
- 6 0 Ildit Péternek már bemutatta.
Ildi-ACC Peter-DAT already PREF-introduced-3sg
'He has already introduced Ildi to Peter.'
- 6 1 **Évát Jánosnak vagyok kíváncsi, hogy bemutatja-e?**
Eva-ACC John-DAT am curious that PREF-introce-3sg-Q

- 'I wonder if he introduces Eva to John.'
- 6 2 **Évát Jánosnak kíváncsi vagyok, hogy bemutatja-e?**
Eva-ACC John-DAT curious am that PREF-introce-3sg-Q
- 7 0 **Évát Jánosnak mutatta be.**
Éva-ACC JOHN-DAT introduced-3sg PREF
'He introduced Eva to JOHN.'
- 7 1 **Marit kinek gondolod, hogy bemutatta?**
Mary-ACC WHO-DAT think-you that PREF-introduced-3sg?
'Who do you think he introduced MARY to?'
- 7 2 **Marit kinek gondolod, hogy mutatta be?**
Mary-ACC WHO-DAT think-you that introduced-3sg PREF?
- 8 0 **Jutkát Bélával ismertette meg.**
Jutka-ACC Bela-with acquainted PREF
'He acquainted Jutka with BELA'
- 8 1 **Marit kivel akarod, hogy megismertesse?**
Mary-ACC who-with want-you that PREF-acquaint-SUBJ?
'Who do you want him to acquaint Mary with?'
- 8 2 **Marit kivel akarod, hogy ismertesse meg?**
Mary-ACC who-with want-you that acquaint-SUBJ PREF?
- 9 0 **A kocsiját Jánosnak adta el.**
the car-his-ACC John-DAT sold-3sg PREF
'He sold his car to JOHN.'
- 9 1 **A házát kinek vagy kíváncsi, hogy eladja-e?**
the house-his-ACC who-DAT are-you curious that PREF-sells-Q?
'Who do think he will sell his house to?'
- 9 2 **A házát kinek kíváncsi vagy, hogy eladja-e?**
the house-his-ACC who-DAT curious are-you that PREF-sells-Q?
- 10 0 **A tervet Péterrel beszélte meg.**
the plan-ACC Peter-with talked-3sg PREF
'He talked the plan over with PETER.'
- 10 1 **A találkozót kivel lennél kíváncsi, hogy megbeszéli-e?**
the meeting who-with would-be-you curious that PREF-talks-Q?
'Who do you think he will arrange the meeting with?'
- 10 2 **A találkozót kivel kíváncsi lennél, hogy megbeszéli-e?**
the meeting who-with curious would-be -you that PREF-talks-Q?
- 11 0 **Évát Jánosnak mutatta be.**
Eva-ACC John-DAT introduced-3sg PREF
'He introduced Eva to JOHN.'
- 11 1 **Marit kinek szeretnéd, ha bemutatná?**
Mary-ACC who-DAT would-like-you if PREF-introduce-COND-3sg?
'Who would you like him to introduce Mary to?'
- 11 2 **Marit kinek szeretnéd, ha mutatná be?**
Mary-ACC who-DAT would-like-you if introduce-COND-3sg PREF?
- 12 0 **Tegnap autóversenyen voltunk. János és Péter autói voltak legelől.**
yesterday car-race-on were-we. John and Peter cars-POSS were in-front
'Yesterday we went to a car-race. John's and Peter's cars were in front.'
- 12 1 **János autója volt a leggyorsabb?**
John car-POSS was the fastest?

- ‘Was John’s car the fastest?’
12 2 Volt János autója a leggyorsabb?
was John car-POSS the fastest?
- 13 0 Múlt vasárnap lóversenyen voltunk.
last Sunday horse-race-on were-we
‘Last Sunday we went to a horse race.’
- 13 1 **Kinek a lova nyerte meg a versenyt?**
whose the horse-POSS won PREF the race-ACC?
‘Whose horse won the race?’
- 13 2 Kinek a lova megnyerte a versenyt?
whose the horse-POSS PREF-won the race-ACC?
- 14 0 Tegnap autóversenyen voltunk.
yesterday car-race-on were-we
‘Yesterday we went to a car race’
- 14 1 **Kinek az autója gyorsult fel a leggyorsabban?**
whose the car -POSS speeded PREF the fastest?
‘Whose car speeded up the fastest?’
- 14 2 Kinek az autója felgyorsult a leggyorsabban?
whose the car -POSS PREF0-speeded the fastest?
- 15 0 Valaki az asztalra tette az edényeket.
somebody the table-onto put-3sg the dishes-ACC
‘Somebody put the dishes on the table.’
- 15 1 **Ki tette az asztalra az edényeket?**
who put-3sg the table-onto the dishes-ACC?
‘Who put the dishes on the table?’
- 15 2 Ki az asztalra tette az edényeket?
who the table-onto put-3sg the dishes-ACC?
- 16 0 Múlt héten beteg voltam.
last week ill was-I
‘Last week I was ill.’
- 16 1 **Melyik barátod látogatott meg?**
which friend-your visited PREF?
‘Which of your friends visited you?’
- 16 2 Melyik barátod meglátogatot?
which friend-your PREF-visited?
- 17 0 Tegnap nem tudtam elmenni elmenni az autóversenyre.
yesterday not could-I PREF-go-INF the car-race-to
‘Yesterday I couldn’t go to the car-race.’
- 17 1 **Nem tudom, hogy kinek az autója nyerte meg a versenyt.**
not know-I that whose the car-POSS won PREF the race-ACC
‘I don’t know whose car won the race.’
- 17 2 Nem tudom, hogy kinek az autója megnyerte a versenyt.
not know-I that whose the car-POSS PREF-won the race-ACC
- 18 0 Tegnap szülőértekezletet tartottunk.
yesterday parents’ meeting-ACC held-we
‘Yesterday we had a parents’ meeting.’
- 18 1 **Azt akartuk megnézni, hogy melyik gyerek anyukája jön el.**
that-ACC wanted-we PREF-see-INF that which child mother-POSS comes PREF

- 18 2 Azt akartuk megnézni, hogy melyik gyerek anyukája eljön.
that-ACC wanted-we PREF-see-INF that which child mother-POSS PREF-comes
- 19 0 Az órák után bementem a könyvesboltba.
the classes after PREF-went-I the bookstore-into
'After the classes I went to the bookstore.'
- 19 1 **Melyik könyvet vetted meg?**
which book-ACC bought-you PREF?
'Which book did you buy?'
- 19 2 Melyik könyvet megvetted?
which book-ACC PREF-bought-you?
- 20 0 Mari az asztalra tett valamit.
Mary the table-onto put-3sg something-ACC
'Mary put something on the table.'
- 20 1 **Mari mit tett az asztalra?**
Mary what-ACC put-3sg the table-onto?
'What did Mary put on the table?'
- 20 2 Mari mit az asztalra tett?
Mary what-ACC the table-onto put-3sg?
- 21 0 Mari levett valamit a polcról.
Mary PREF-took something-ACC the shelf-from
'Mary took something from the shelf.'
- 21 1 **Mari mit vett le a polcról?**
Mary what-ACC took PREF the shelf-from?
'What did Mary take from the shelf?'
- 21 2 Mari mit levett a polcról?
Mary what-ACC PREF-took the shelf-from?
- 22 0 Zoli odaadta a kocsiját valakinek.
Zoli PREF-gave the car-his-ACC somebody-DAT
'Zoli gave his car to somebody.'
- 22 1 **Zoli kinek adta oda a kocsiját?**
Zoli who-DAT gave PREF the car-his-ACC?
'Who did Zoli give his car to?'
- 22 2 Zoli kinek odaadta a kocsiját?
Zoli who-DAT PREF-gave the car-his-ACC?
- 23 0 Miből vizsgáztál?
what-from took-exam-you?
'What subject did you take an exam in?'
- 23 1 **Azt kérdezed, hogy milyen vizsgát tettem le?**
that-ACC ask-you that what exam-ACC took-I PREF?
'Are you asking what exam I took?'
- 23 2 Azt kérdezed, hogy milyen vizsgát letettem?
that-ACC ask-you that what exam-ACC PREF-took-I?
- 24 0 Az nem számít, hogy mit láttál a tv-ben.
that not matter that what-ACC saw-you the tv-in
'It doesn't matter what you saw on the TV'
- 24 1 **Az érdekel, hogy mit olvastál el.**
that interests-me that what-ACC read-you PREF

- 'I'm interested in what you've read.'
- 24 2 Az érdekel, hogy mit elolvastál.
that interests-me that what-ACC PREF-read-you
- 25 0 Azt hiszem, hogy Mari az asztalra tett valamit.
that-ACC believe-I that Mary-NOM th table-onto put-3sg something-ACC
'I think Mary put something on the table.'
- 25 1 **Mari mit hiszel, hogy az asztalra tett?**
Mary-NOM what-ACC believe-you that the table-onto put?
'What do you think Mary put on the table?'
- 25 2 Mari mit hiszel, hogy tett az asztalra?
Mary-NOM what-ACC believe-you that put the table-onto?
- 26 0 Hallottam, hogy Mari megvette ezt a könyvet valakinek.
heard-I that Mary PREF-bought this-ACC the book-ACC somebody-for
'I heard that Mary bought this book for somebody.'
- 26 1 **Kinek hallottad, hogy Mari megvette ezt a könyvet?**
who-DAT heard-you that Mary PREF-bought this-ACC the book-ACC?
'Who did you hear that Mary bought this book for?'
- 26 2 Kinek hallottad, hogy vette meg Mari ezt a könyvet?
who-DAT heard-you that bought PREF Mary this-ACC the book-ACC?
- 27 0 Kétlem, hogy Mari kivett valamit a táskámból.
doubt-I that Mary PREF-took -3sg something-ACC the bag-my-from
'I doubt if Mary took something from my bag.'
- 27 1 Mit kétlesz, hogy vett ki a táskádból?
what-ACC doubt-you that took-3sg PREF the bag-your-from?
'What is it that you doubt she took from your bag?'
- 27 2 **Mit kétlesz, hogy kivett a táskádból?**
what-ACC doubt-you that PREF-took-3sg the bag-your-from?
- 28 0 Hallottam a hírt, hogy Mari vett egy könyvet valakinek.
heard-I the news that Mary-NOM bought a book-ACC somebody-for
'I heard the news that Mary bought a book for somebody.'
- 28 1 **Kinek hallottad, hogy Mari vett egy könyvet?**
who-Dat heard-you that Mari-NOM bought a book-ACC?
'Who did you hear that Mary bought a book for?'
- 28 2 Kinek hallottad a hírt, hogy Mari vett egy könyvet?
who-Dat heard-you the news-ACC that Mari-NOM bought a book-ACC?
- 29 0 Megtudtam a tényt, hogy Mari vett egy könyvet valakinek.
PREF-learned-I the fact-ACC that Mary bought a book-ACC somebody-for
'I learned the fact that Mary bought a book for somebody.'
- 29 1 **Kinek tudtad meg, hogy Mari vett egy könyvet?**
who-DAT learned-you that Mary bought a book-ACC
'Who did you find out that Mary bought a book for?'
- 29 2 Kinek tudtad meg, hogy ^{the fact} Mari vett egy könyvet?
who-DAT learned-you that ^{the fact} Mary bought a book-ACC
'For whom did you find out the fact that Mary bought a book?'
- 30 0 Nem tudtam elmenni az autóversenyre, így nem tudom az eredményt.
not could-I PREF-go-INF the car-race-to so not know-I the result-ACC
'I couldn't go to the car race so I don't know the results.'
- 30 1 **János autója nyerte meg a versenyt?**

- John car-POSS won PREF the race-ACC?
'Did John's car win the race?'
- 30 2 János autója megnyerte a versenyt?
John car-POSS PREF-won the race-ACC?
- 31 0 Voltam a könyvesboltban, és láttam egy érdekes szakácskönyvet és egy regényt.
was-I the book-store-in and saw-I an interesting cookbook-ACC and a novel-ACC
'I went into the bookstore and I saw an interesting cookbook and a novel.'
- 31 1 A szakácskönyvet vetted meg?
the cookbook-ACC bouhgt-you PREF?
'Did you buy the COOKBOOK?'
- 31 2 A szakácskönyvet megvetted?
the cookbook-ACC PREF-bouhgt-you ?
- 32 0 Réka azt gondolta, hogy Péter hozott a főigazgatónak egy üveg bort.
Reka that-ACC thought that Peter brought the director-DAT a bottle wine-ACC
'Reka thought that Peter brought the director a bottle of wine.'
- 32 1 Réka kinek gondolta, hogy Péter mit hozott?
Reka who-DAT thought that Peter what-ACC brought?
'Who did Reka think Peter brought what?'
- 32 2 Réka kinek gondolta, hogy Péter hozott egy üveg bort?
Reka who-DAT thought that Peter brought a bottle wine-ACC?
'Who did Reka think Peter brought a bottle of wine for?'
- 33 0 Enikô azt gondolta, hogy András adott a fiának egy pofont.
Eniko that-CC thought that Andras gave the son-his-DAT a slap-ACC
'Eniko thought that Andrew slapped his son.'
- 33 1 Enikô mit gondolt, hogy András kinek adott?
Eniko what-CC thought that Andras who-DAT gave?
'What did Eniko think Andras gave whom?'
- 33 2 Enikô mit gondolt, hogy András adott a fiának?
Eniko what-CC thought that Andras gave son-his-DAT?
'What did Eniko think that Andras gave his son?'
- 34 0 Eszter azt gondolta, hogy Zsuzsa mutatott a főnökének egy jó cipőboltot.
Esther that-ACC thought that Zsuzsa showed the boss-her-DAT a good shoeshop-ACC
'Esther thought that Sue showed her boss a good shoeshop.'
- 34 1 Eszter mit gondolt, hogy Zsuzsa kinek mutatott egy jó cipőboltot?
Esther what-ACC thought that Zsuzsa who-DAT showed a good shoeshop-ACC?
'Who did Esther think that Sue showed a good shoeshop to?'
- 34 2 Eszter mit gondolt, hogy Zsuzsa mit mutatott a főnökének?
Esther what-ACC thought that Zsuzsa what-ACC showed the boss-her-DAT?
'What did Esther think that Sue showed her boss?'
- 35 0 Kati nem tudta, hogy az apósa mindig szalámit hozott a fiúknak, és csokit a lányoknak.
Kate not knew that the father-in-law-her always salami-ACC brought the boys-DAT and chocolate-ACC the girls-DAT
'Kate didn't know that her father-in-law always brought salami for the boys and chocolate for the girls.'
- 35 1 Kati nem tudta, hogy az apósa kinek mikor mit hozott.
Kate not knew that the father-in-law-her who-DAT when what-ACC brought
'Kate didn't know what or when her father-in-law brought, or for whom.'
- 35 2 Kati kinek nem tudta, hogy az apósa mikor mit hozott?
Kate who-DAT not knew that the father-in-law-her when what-ACC brought

'For whom didn't Kate know what her father-in-law brought, and when?'

36 0 Az anyukám nem tudta, hogy a tanárnő mindig piros pontot adott a fiúknak, és fekete
the mother-my not knew that the teacher always red mark-ACC gave the boys-DAT and
pontot a lányoknak.

black mark-ACC the girls-DAT

'My mother didn't know that the teacher always gave good marks to the boys and bad marks to the girls.'

36 1 Az anyukád mit nem tudott, hogy a tanárnő kinek mikor adott piros pontot
the mother-your what-ACC not knew that the teacher who-DAT when gave red mark-
és kinek mikor adott fekete pontot?

ACC and who-DAT when gave black mark-ACC

'What didn't your mother know about, that the teacher gave a good mark and a bad mark for whom, and when?'

36 2 Az anyukád mit nem tudott, hogy a tanárnő kinek mikor adott?

the mother-your what-ACC not knew that the teacher who-DAT when gave

'What didn't your mother know that the teacher gave whom and when?'

37 0 Átnézem még a megoldást, hátha van benne hiba.

PREF-look-I still the result-ACC in-case is in-it error

'I'll go through the results in case there's a mistake in them.'

37 1 Nem lenne jó hibásan adni be.

not would-be good faultily give-INF PREF

'It wouldn't be nice to hand it in with mistakes.'

37 2 Nem lenne jó hibásan beadni.

not would-be good faultily PREF-give-INF

38 0 A titkárnőnk nagyon érzékeny lélek.

the secretary-our very sensitive person

'Our secretary is a very sensitive person.'

38 1 Nekem sikerült a legkevésbé megbántani.

I-DAT succeeded the least PREF-hurt-INF

'I managed to offend her the least.'

38 2 Nekem sikerült a legkevésbé bántani.

I-DAT succeeded the least hurt-INF PREF

39 0 Ez egy szörnyű élmény volt!

this a terrible experience was

'This was a terrible experience!'

39 1 Jó lenne ezt ritkábban élni át.

good would-be this-ACC more-rarely live-INF PREF

'I'd prefer to live through this more rarely.'

39 2 Jó lenne ezt ritkábban átélni.

good would-be this-ACC more-rarely PREF-live-INF

40 0 Igyekszem alaposan megcsinálni a feladatot.

attempt-I thoroughly PREF-do-INF the task-ACC

'Ill try to do the task thoroughly.'

40 1 Nem szeretném hiába csinálni meg.

not would-like in vain do-INF PREF

'I wouldn't like to do it in vain.'

40 2 Nem szeretném hiába megcsinálni.

not would-like in vain PREF-do-INF

- 41 0 Sokszor gondolkozol ezen?
frequently think-you this-about?
'Do you frequently think about this?'
- 41 1 **Nem, ritkán jut eszembe.**
no, seldom comes mind-mine-to
'No, it rarely crosses my mind.'
- 41 2 Nem, ritkán eszembe jut.
no, seldom mind-mine-to comes
- 42 0 Sokszor vagy szomorú?
frequently are-you sad?
'Are you often sad?'
- 42 1 **Nem, ritkán szomorodok el.**
no, rarely become-sad-I PREF
'No, I'm rarely sad.'
- 42 2 Nem, ritkán elszomorodok el.
no, rarely PREF-become-sad-I
- 43 0 Az orvosok gyakran megmossák a kezüket?
the doctors often PREF-wash-they the hands-their-ACC
'Do the doctors often wash their hands?'
- 43 1 **Nem, ritkán mosnak kezet.**
no, rarely wash-they hands-ACC
'No, they rarely wash their hands.'
- 43 2 Nem, ritkán kezet mosnak.
no, rarely hands-ACC wash-they
- 44 0 Érdemes volt elmenni?
worthwhile was PREF-go-INF
'Was it worth going to?'
- 44 1 **Nem, hiába mentünk el.**
no, in vain went-we PREF
'No, we went in vain.'
- 44 2 Nem, hiába elmentünk.
no, in vain PREF-went-we
- 45 0 Követed a napi eseményeket?
follow-you the daily events-ACC
'Do you follow the daily news?'
- 45 1 Rendszeretlenül nézem meg a híradót.
infrequently watch-I PREF the news-ACC
'I watch the news irregularly.'
- 45 2 **Rendszeretlenül megnézem meg a híradót.**
infrequently PREF-watch-I the news-ACC
- 46 0 Hányan voltak a fogadáson?
how many people were the reception-at
'How many people came to the reception?'
- 46 1 **Kevesen jöttek el.**
few people came PREF
'Few people came.'
- 46 2 Kevesen eljöttek.
few people PREF-came

- 47 0 Érthető volt az előadás?
understandable was the lecture
'Was the lecture easy to understand?'
- 47 1 **Nem, alig értettem meg.**
no, hardly understood-I PREF
'No, I could hardly understand it.'
- 47 2 Nem, alig megértettem.
no, hardly PREF-understood
- 48 0 Hány verset mondtál fel?
how many verse-ACC said-you PREF
'How many verses did you recite?'
- 48 1 **Keveset mondtam fel.**
few-ACC said-I PREF
'I recited only a few'
- 48 2 Keveset felmondtam.
few-ACC PREF-said-I
- 49 0 Sokszor büszkélkedsz a fiaddal?
frequently show-off-you the son-yours-INSTR
'Do you frequently show off with your son?'
- 49 1 **Igen, néha büszke vagyok rá.**
yes, sometimes proud am-I he-SUBL
'Yes, sometimes I am proud of him.'
- 49 2 Igen, néha vagyok büszke rá.
yes, sometimes am-I proud he-SUBL
- 50 0 Sokszor vitáztok a férjeddal?
often argue-you-pl the husband-your-with
'Do you often argue with your husband?'
- 50 1 **Igen, néha ellentmond nekem.**
yes, sometimes counter-says me
'Yes, he sometimes contradicts me.'
- 50 2 Igen, néha mond nekem.
yes, sometimes says PREF me
- 51 0 Gyakran gondolod, hogy Zsuzsa egy kicsit bolond?
often think-you that Sue a little-ACC mad
'Do you often think that Sue is a bit mad?'
- 51 1 **Igen, időnként bolondnak tartom.**
yes, from-time-to-time mad-DAT consider-I
'Yes, I consider her mad sometimes.'
- 51 2 Igen, időnként tartom bolondnak.
yes, from-time-to-time consider-I mad-DAT
- 52 0 Ki szoktad javítani a gyerekek házi feladatát?
PREF habitual-you correct-INF the children homework-ACC
'Do you correct the children's homework?'
- 52 1 **Igen, néha észreveszek egy-egy hibát.**
yes, sometimes PREF-notice a-a mistake
'Yes, sometimes I notice a mistake.'
- 52 2 Igen, néha veszek észre egy-egy hibát.
yes, sometimes notice-PREF a-a mistake

- 53 0 Mindenkinék ez volt a közös véleménye?
everybody-DAT this was the shared opinion-POSS
'Did everybody have the same opinion?'
- 53 1 **Igen, néhányan egyetértettek.**
yes, some people PREF-agreed
'Yes, some people agreed.'
- 53 2 Igen, néhányan értettek egyet
yes, some people agreed PREF
- 54 0 Érthető volt a szeminárium?
understandable was the seminar
'Was the seminar easy to understand?'
- 54 1 **Igen, tökéletesen megértettem.**
yes, entirely PREF-understood-I
'Yes, I understood it completely.'
- 54 2 Igen, tökéletesen értettem meg.
yes, entirely understood-I PREF
- 55 0 Hány pogácsa égett meg?
how many scone burnt PREF
'How many scones were burnt?'
- 55 1 **Mindent szénné égettem.**
all-ACC coal-into burnt-I
'I burnt all of them.'
- 55 2 Mindet égettem szénné.
all-ACC burnt-I coal-into
- 56 0 Hozott valamennyi pénzt.
brought-3sg some money-ACC
'He brought some money.'
- 56 1 Mennyi pénzt gondolod, hogy hozott?
how much money-ACC think-you-DEF that brought-3sg
'How much money do you think he brought?'
- 56 2 **Mennyi pénzt gondolsz, hogy hozott?**
how much money-ACC think-you-INDEF that brought-3sg
- 57 0 Azt mondtad, hogy hozzunk pénzt.
that-ACC said-you that bring-we-SUBJ money-ACC
'You told us to bring money.'
- 57 1 Mennyi pénzt akarsz, hogy hozzunk?
how much money-ACC want-you-DEF that bring-we-SUBJ
'How much money do you want us to bring?'
- 57 2 **Mennyi pénzt akarsz, hogy hozzunk?**
how much money-ACC want-you-INDEF that bring-we-SUBJ
- 58 0 Hozott valamit.
brought-he something-ACC
'He brought something.'
- 58 1 **Mit gondolsz, hogy hozott?**
what-ACC think-you-INDEF that brought-he
'What do you think he brought?'
- 58 2 Mit gondolod, hogy hozott?
what-ACC think-you-DEF that brought-he

- 59 0 Apu nem igazán tud ebben segíteni.
dad not really can-3sg this-in help-INF
'Dad cannot really help with this.'
- 59 1 **Jobb lenne anyut felhívni.**
better would-be mom-ACC PREF-call-INF
'We'd better phone MOM instead.'
- 59 2 Jobb lenne anyut hívni fel.
better would-be mom-ACC call-INF PREF
- 60 0 Ildikó nem szereti az operát.
Ildiko not likes the opera-ACC
'Ildiko doesn't like opera.'
- 60 1 **Nehéz lenne őt elcsalni az operában.**
difficult would-be she-ACC PREF-entice-INF the opera-into
'It would be difficult to take HER to the opera.'
- 60 2 Nehéz lenne őt csalni el az operában.
difficult would-be she-ACC entice-INF PREF the opera-into
- 61 0 Péter nem ért az autószereléshez.
Peter not understands the car-mending-to
'Peter is not good at car-mechanics.'
- 61 1 **Jobban szeretném Jánoshoz elvinni az autót.**
better would-like-I John-to PREF-take-INF the car-ACC
'I'd like to take the car to JOHN instead.'
- 61 2 Jobban szeretném Jánoshoz vinni el az autót.
better would-like-I John-to take-INF PREF the car-ACC
- 62 0 Laci mondta el a titkot Évának.
Laci-NOM told-3sg PREF the secret-ACC Eva-DAT
'LACI told Eva the secret.'
- 62 1 Na jó, de kinek mondta Zoli el a titkot?
well ok but who-DAT told-3sg Zoli-NOM PREF the secret-ACC?
'Alright, but who did ZOLI tell the secret to?'
- 62 2 **Na jó, de kinek mondta el Zoli a titkot?**
well ok but who-DAT told-3sg PREF Zoli-NOM the secret-ACC?
- 63 0 Zsolt árulta el nekem a tervet.
Zsolt-NOM revealed-3sg PREF I-DAT the plan-ACC
'ZSOLT told me about the plan.'
- 63 1 Na jó, de kinek Zoli árulta el a tervet?
well ok but who-DAT Zoli-NOM revealed-3sg PREF the plan-ACC?
'Very well, but who did ZOLI tell the plan to?'
- 63 2 **Na jó, de Zoli kinek árulta el a tervet?**
well ok but Zoli-NOM who-DAT revealed-3sg PREF the plan-ACC?
- 64 0 Sokan rakták le a középfokú nyelvvizsgát.
many people took PREF the intermediate language-exam-ACC
'Many people took the intermediate exam.'
- 64 1 **De én azt kérdeztem, hogy hányan rakták le a felsőfokút?**
but I that-ACC asked-I that how-many-people took PREF the advanced-ACC
'But I was asking how many people took THE ADVANCED EXAM?'
- 64 2 De én azt kérdeztem, hogy hányan rakták a felsőfokút le?
but I that-ACC asked-I that how-many-people took the advanced-ACC PREF

- 65 0 Sokan kerültek be az egyetemre.
many-people got-they PREF the university-into
'Lots of people were admitted to university.'
- 65 1 De én arra vagyok kíváncsi, hogy hányan a főiskolára kerültek be.
but I that-on am-I curious that how-many-people the college-into got PREF
'But I wonder how many people were admitted TO COLLEGE.'
- 65 2 De én arra vagyok kíváncsi, hogy a főiskolára hányan kerültek be.
but I that-on am-I curious that the college-into how-many-people got PREF
- 66 0 Zoli nem oldotta meg az utolsó kérdést.
Zoli not solved PREF the last question-ACC
'Zoli didn't solve the last question.'
- 66 1 De én azt kérdeztem, hogy melyik kérdést nem oldotta meg János?
but I that-ACC asked-I that which question-ACC not solved PREF John
'But I asked which question didn't JOHN solve?'
- 66 2 De én azt kérdeztem, hogy melyik kérdést nem oldotta János meg?
but I that-ACC asked-I that which question-ACC not solved John PREF
- 67 0 Balázs nem találta ki az utolsó kérdést.
Balazs not found PREF the last question
'Balazs didn't figure out the last question.'
- 67 1 De én azt kérdeztem, hogy János melyik kérdést nem találta ki?
but I that-ACC asked-I that John which question-ACC not found PREF
'But I was asking which question didn't JOHN figure out?'
- 67 2 De én azt kérdeztem, hogy melyik kérdést János nem találta ki?
but I that-ACC asked-I that which question-ACC John not found PREF
- 68 0 Sok múzeumot látogattak meg a turisták.
many museum-ACC visited PREF the tourists
'The tourists visited many museums.'
- 68 1 Melyik múzeumba nem ment el senki?
which museum-into not went PREF nobody
'Which museum didn't anybody visit?'
- 68 2 Melyik múzeumba nem ment senki el?
which museum-into not went nobody PREF
- 69 0 Sok filmet néztünk meg.
many film-ACC watched-we PREF
'We watched many films.'
- 69 1 Senki melyik filmet nem nézte meg?
nobody which film-ACC not watched PREF
'Which film didn't anybody watch?'
- 69 2 Melyik filmet senki nem nézte meg?
which film-ACC nobody not watched PREF
- 70 0 Néhány ember semmit nem vett észre.
some people nothing-ACC not noticed PREF
'Some people didn't notice anything.'
- 70 1 Ki nem vett észre semmit?
who not noticed PREF nothing-ACC
'Who didn't notice anything?'
- 70 2 Ki nem vett semmit észre?
who not noticed nothing-ACC PREF

- 71 0 Néhány ember semmit nem hagy félbe.
some people nothing-ACC not leaves in-half
'Some people don't leave anything unfinished.'
- 71 1 **Ki semmit nem hagy félbe?**
who nothing-ACC not leaves in-half
'Who doesn't leave anything unfinished?'
- 71 2 Semmit ki nem hagy félbe?
who nothing-ACC not leaves in-half
- 72 0 Én busszal érek be az iskolába a leggyorsabban.
I bus-INSTR get-I PREF the school-into the fastest
'The fastest I get to school is by BUS.'
- 72 1 **Mivel ér be János a leggyorsabban?**
what-INSTR get-3sg PREF John-NOM the fastest?
'How does JOHN get to school the fastest?'
- 72 2 Mivel ér János be a leggyorsabban?
what-INSTR get-3sg John-NOM PREF the fastest?
- 73 0 Kati biciklivel ér oda a munkahelyére a leghamarabb.
Kate bike-with gets PREF the workplace-her the fastest
'Kate gets to her workplace fastest by BIKE.'
- 73 1 **De engem az érdekkel, hogy János mivel ér oda a leghamarabb?**
but I-ACC that interests that John what-with gets PREF the fastest
'But I'm interested how does JOHN get there the fastest?'
- 73 2 De engem az érdekkel, hogy mivel János ér oda a leghamarabb?
but I-ACC that interests that what-with John gets PREF the fastest
- 74 0 Régebben Tamás értette meg a leghamarabb a feladatokat.
before Tom understood PREF the quickest the tasks-ACC
'It used to be TOM who understood the exercises first.'
- 74 1 És mióta érti meg János a leghamarabb a feladatokat?
and since when understands PREF John the quickest the tasks-ACC
'And since when does JOHN understand the exercises first?'
- 74 2 **És mióta érti János meg a leghamarabb a feladatokat?**
and since when understands John PREF the quickest the tasks-ACC
- 75 0 Laci fogja fel a fizikát a legjobban.
Laci comprehends PREF the physics the best
'Laci is the best at understanding physics.'
- 75 1 És mit fog Béla fel a legjobban?
and what comprehends Bela PREF the best
'And what is BELA best at understanding?'
- 75 2 **És mit fog fel Béla fel a legjobban?**
and what comprehends PREF Bela the best
- 76 0 Tamás tudta meg a hírt a leghamarabb.
Tom learnt PREF the news-ACC first
'Tom heard the news first.'
- 76 1 És mikor tudta János meg a hírt?
and when learnt John PREF the news
'And when did JOHN hear the news?'
- 76 2 **És mikor tudta meg János a hírt?**
and when learnt PREF John the news

Items for magnitude estimation, carried out in April 1996

- 77 0 'Kit szeret Mari?' - kérdeztem.
who-ACC loves-3sg Mary-NOM? - asked-I
'Who does Mary like?' - I asked.
- 77 1 **Mit kérdeztél, hogy kit szeret Mari?**
what-ACC asked-you that who-ACC loves Mary-NOM
'Who did you ask who Mary likes?'
- 77 2 Kit kérdeztél, hogy szeret Mari?
who-ACC asked-you that loves Mary-NOM
- 78 0 'Edit Józsit szereti' - mondtam.
'Edit Joseph-ACC likes' - said-I
'Edith likes JOSEPH' I said.
- 78 1 **Mit mondtál, hogy Edit kit szeret?**
what said-you that Edith who-ACC likes
'Who did you say Edith likes?'
- 78 2 Kit mondtál, hogy Edit szeret?
who-ACC said-you that Edith likes
- 79 0 Elfelejtettem, hogy beszéltem-e már a tanszékvezetővel.
PREF-forgot-I that talked-I-Q already the head-of-department-with
'I forgot whether I have talked to the head of department.'
- 79 1 Mit felejtettél el, hogy beszéltél-e már a tanszékvezetővel?
what-ACC forgot-you PREF that talked-you-Q already the head-of-department-with
'Did you forget whether you have talked to the head of department?'
- 79 2 **Mit felejtettél el, hogy kivel beszéltél-e már?**
what-ACC forgot-you PREF that who-with talked-you-Q already
'Who did you forget who you have talked to?'
- 80 0 A film végén egy hatalmas esküvőt rendeznek.
the film end-POSS-on a large wedding-ACC hold-they
'At the end of the film they have an enormous wedding.'
- 80 1 Igen? És ki vesz el kit?
yes? and who-NOM marries PREF who-ACC?
'Yes? and who marries who?'
- 80 2 **Igen? És ki kit vesz el?**
yes? and who-NOM who-ACC marries PREF?

Appendix C (ii): L1 pilot study: Instructions for magnitude estimation in Hungarian

Szöveggörnyezetben álló mondatok helyességének megítélése számok segítségével

A Bevezető részben számokat használt vonalak hosszúságának megítélésére. A következő rész arra nyújt gyakorlati lehetőséget, hogy hogyan tudjuk ugyanilyen módon, számokkal *mondatok* elfogadhatóságát értékelni.

Két mondat fog megjelenni a képernyőn, az alábbiakhoz hasonlóan:

- 1) Mari adott egy doboz csokoládét Jánosnak.
János nem szereti a csokoládét.

Minden mondatpár esetében a feladat a következő: azt kell megítélni, hogy a második mondat mennyire ‘jó’ vagy ‘rossz’ az első mondat szöveggörnyezetében. Az értékelést egy szabadon választott szám formájában kell adni. Hasonlóan a Bevezető részhez, az első mondatpár megítélésénél bármilyen számot kiválaszthat. Az ezt követő mondatpárokat az első párnak odaítélt szám fényében, azzal arányosan kell adni. Lássunk néhány konkrét példát:

Az 1) mondatpárban például a második mondat tökéletesen helyes és természetesen hangzik az első mondat szöveggörnyezetében, tehát egy ‘magas’ számot fog neki adni (persze Ön dönti el, hogy mekkora egy ‘alacsony’, vagy egy ‘magas’ szám). Most lássunk egy másik példát.

- 2) Mari adott egy doboz csokoládét Jánosnak.
János nem szeret a csokoládét.

Habár a második mondat itt is helyes a szöveggörnyezetben, nyelvtanilag mindenképpen helytelen (természetesen ‘János nem szereti a csokoládét’ lenne a helyes válasz), így alacsony számot fog odaítélni neki. Például, ha úgy gondolja, hogy tízszer olyan rosszul hangzik, mint az elsőként értékelt mondat, egy tizedannyit érő számmal fogja osztályozni.

Most lássunk egy harmadik példát:

- 3) Mari adott egy doboz csokoládét Jánosnak.
Megköszönted az ajándékot.

Ebben az esetben a második mondat helyes, viszont nem túl sok értelme van az adott szövegkörnyezetben, így megint csak egy alacsony számmal lehet ellátni. Azonban lehet, hogy úgy gondolja, hogy ez nem annyira rossz, mint a 2)-es példa, így elképzelhető, hogy úgy dönt, hogy az első számnak ötödét erő számot ad neki.

Bármilyen pozitív számot használhat, beleértve a törteket és tizedesjegyűeket. (Emlékeztetőül: az angol tizedesjegyűeket nem vesszővel, hanem ponttal választják el!) A használható számoknak nincs felső vagy alsó határa, kivéve természetesen a nullát és a negatív számokat. Próbáljon minél több árnyalati különbséget megkülönböztetni a mondatok helyességében illetve 'magyartalanságában'.

Ebben a feladatban nincsenek 'helyes' válaszok, így minden válasz, ami Önnek megfelelőnek tűnik értékes a kutatás számára. Az első benyomásokat mérem, ezért nem szeretném, ha túl sokáig gondolkozna nyelvtani szabályokon. Kérem, hogy az értékelést az első megérzésére támassza, annak megfelelően, hogy jól hangzik-e az adott mondat magyarul, vagy sem?

A kísérlet előtt lesz alkalom gyakorolni. 12 mondat áll a Gyakorló részben erre a célra.

Tehát emlékeztetőül:

- Mindig a második mondat helyességét értékeli.
- Az első mondatpárnak tetszés szerinti számot adhat.
- Minden ezt követő mondatpárt az elsőnek kiválasztott szám arányában értékeli.
- Bármilyen pozitív számot (törteket, tizedeseket) felhasználhat.
- A 'jó' mondatokra magas számot, a 'rossz' mondatokra alacsony számot adjon, és a közepes helyességű mondatokat közepes nagyságú számmal jutalmazza.
- Próbálja megkülönböztetni az elfogadhatóság minél több fokát.

Kérem, hogy amikor készen áll a Gyakorló rész elvégzésére, hívja a kísérletvezetőt.

Appendix C (iii): L1 pilot study: Questionnaire

Kérdőív:

Kérem, hogy töltsd ki ezt a kérdőívet, amíg pihensz. Az őszinte válaszok a legértékesebbek!

1. Nehéznek tartod a feladatot (magyar mondatok számmal való értékelését)?

2. Mi volt a legnehezebb a feladatban?

3. Milyennek találtad a sebességet, amivel a mondatok eltűntek a képernyőről?

túl gyors

túl lassú

megfelelt

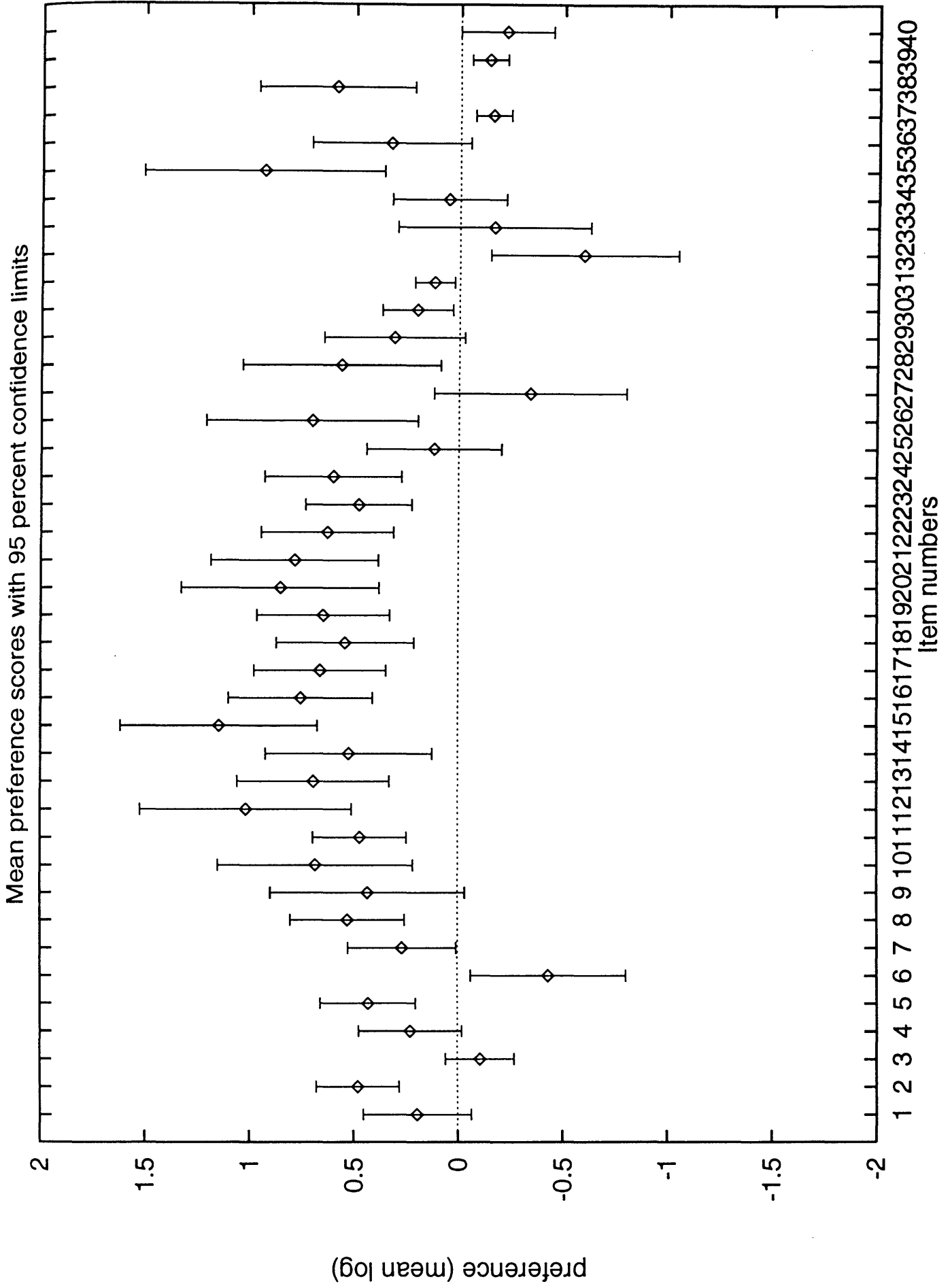
4. Eszedbe jutott néhány nyelvtani szabály a feladat elvégzése alatt?

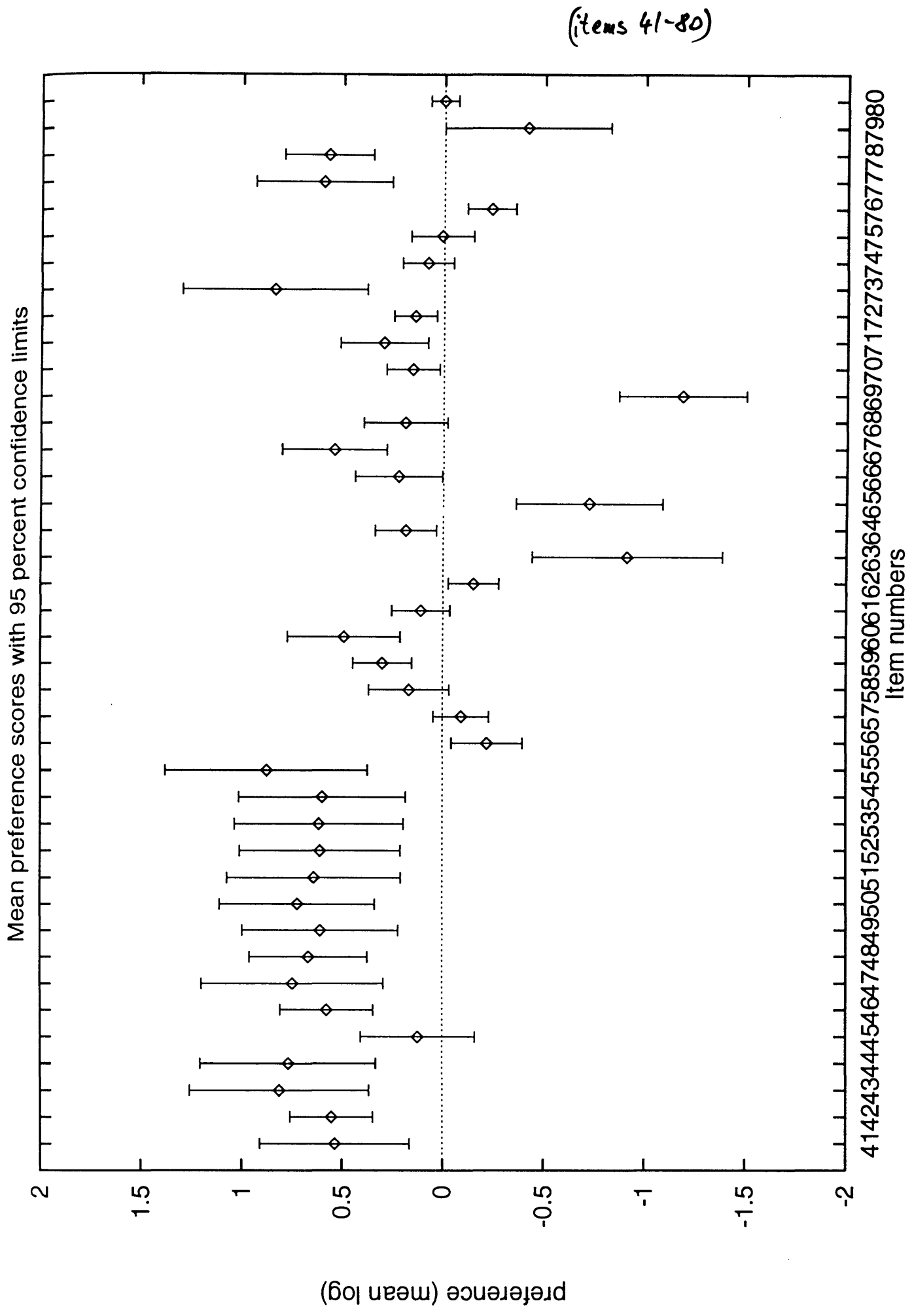
5. Véleményed szerint ez a feladat alkalmazható külföldi magyarul tanuló diákokkal?

Neved:.....

Nagyon szépen köszönöm a segítségedet ebben a kísérletben. Ezután a kérdőív után még egy sorozat mondat értékelését kérem, és utána végeztünk.

Appendix C (iv) L1 pilot study: Plot graphs of the results of magnitude estimation (items 1-40)





Appendix D (i): L2 pilot study: Word list

a franciák = *the French*
 a skótok = *the Scots*
 akar = *want*
 alig = *hardly*
 állandóan = *constantly*
 alszik = *sleep*
 amit = *that (ACC)*
 angolul = *in English*
 anyu(ka) = *mum*
 apu = *dad*
 átél = *experience*
 átnéz = *look through*
 átszáll = *change*
 autót bérel = *hire a car*
 autót szerel = *fix a car*
 autóverseny = *car race*
 az angolok = *the English*
 bátran viselkedik = *behave bravely*
 bead = *hand in*
 becsap = *cheat/deceive somebody*
 befejez = *finish*
 beleszeret egy lányba = *fall in love with a girl*
 bemegy = *go in*
 bemutat = *introduce*
 benne = *in it*
 beszél = *talk*
 beszélget = *chat*
 beteg = *ill*
 bevásárol = *do the shopping*
 birkózó = *wrestler*
 biztos valamiben = *be certain about something*
 bolond = *mad*

bolondnak tart = *consider somebody mad*
 büszke valakire = *be proud of somebody*
 büszkélkedik = *show off*
 csak = *only*
 család = *family*
 csalás = *cheating*
 csinál = *do*
 de = *but*
 délelőtt = *in the morning*
 délután = *in the afternoon*
 döntés = *decision*
 ebben = *in this*
 egész = *the whole*
 Egri Csillagok = *(Stars of Eger, title of a novel)*
 egy kicsit = *a little*
 egyetem = *university*
 egyetért = *agree*
 egyezik a véleménye = *be of the same opinion*
 egyszer = *once*
 együttjár = *go out together*
 él = *live*
 elalszik = *go to sleep*
 elfelejt = *forget*
 elhisz = *believe*
 eljön = *come*
 elmegy = *go*
 elmosogat = *wash up*
 előadás = *lecture*
 elolvas = *read*
 elszomorodik = *get sad*
 elutazik = *travel*
 elválnak = *get divorced*

elvesz = *marry (a woman)*
 elvisz = *take away*
 ember = *man*
 emlékezik = *remember*
 érdekel = *interest*
 érdemes = *worthwhile*
 érthető = *understandable*
 esős = *rainy*
 esténként = *in the evenings*
 esti program = *evening program*
 eszébe jut = *remember*
 eszik = *eat*
 észrevesz = *notice*
 felad = *send*
 feladat = *task*
 feleségül vesz = *marry (take as wife)*
 felhív = *call*
 felismer = *recognise*
 felköszönt = *toast somebody*
 felöltözik = *get dressed*
 férfi = *man*
 férj = *husband*
 fia = *one's son*
 finomra vág = *cut finely*
 fog = *shall*
 fogat mos = *brush one's teeth*
 fogorvos = *dentist*
 folyton = *all the time*
 fordítva = *vice versa*
 franciául = *in French*
 gondol = *think*
 gyakran = *often*

Appendix D (i): L2 pilot study: Word list

gyalog = *on foot*
 gyerek = *child*
 gyógyszert szed = *take medicine*
 ha = *if*
 hagyma = *onion*
 hátha = *maybe*
 hátra van = *remain*
 ház = *house*
 hazajön = *come home*
 házasodik = *get married*
 hét = *week*
 hiába = *in vain*
 hiba = *mistake*
 hibásan = *wrong (adverb)*
 hideg = *cold*
 hirtelen = *suddenly*
 hisz = *believe*
 hova = *where*
 húg = *younger sister*
 idő = *time, weather*
 időnként = *from time to time*
 ilyen = *like this*
 is = *also*
 iszik = *drink*
 játék = *toy*
 játszik = *play*
 jézusom = *my god*
 jobban szeretne = *would rather*
 jól esik = *feels good*
 jön = *come*
 jövő héten = *next week*
 kabát = *coat*
 kastély = *palace*
 kell = *have to*
 kellene = *would have to*

kérdez = *ask*
 keres = *earn*
 kert = *garden*
 később = *later*
 kevés = *few*
 kevesebb = *fewer*
 kéz = *hand*
 kezet fog = *shake hands*
 kezet mos = *wash one's hands*
 kimos = *wash*
 kinek = *whose*
 kisbaba = *baby*
 kisfiad = *your little son*
 kit = *whom*
 kivel = *with whom*
 kocsis = *car*
 kölcsönad = *lend*
 korán kel = *get up early*
 krumplit pucol = *peel potatoes*
 kulcs = *key*
 külföldre utazik = *go abroad*
 lakás = *flat*
 lánya = *one's daughter*
 lassan múlik = *pass slowly*
 lát = *see*
 leckét ír = *write homework*
 leesik = *fall down*
 lenne = *would be*
 lesz = *will be*
 letesz egy vizsgát = *sit an exam*
 levél = *letter*
 magyarul = *in Hungarian*
 már = *already*
 matek óra = *maths lesson*
 még = *still, yet*

még egyszer = *once more*
 megbánt = *offend somebody*
 megbocsát = *forgive*
 megérkezik = *arrive*
 megért = *understand*
 megfázik = *catch a cold*
 meggyógyul = *recover*
 meghív = *invite*
 megint = *again*
 megismer = *get to know*
 megmos = *wash*
 megnéz = *see*
 megnyer = *win*
 megvan = *be found*
 megver = *beat up*
 megvesz = *buy*
 melyik = *which*
 mennyi = *how many*
 mert = *because*
 mi = *what*
 miből = *from what*
 miért = *why*
 mikor = *when*
 milyen = *what ... like*
 minden nap = *every day*
 mindenki = *everybody*
 mindenkinek = *for everybody*
 mindig = *always*
 mit = *what*
 mond = *say*
 most = *now*
 moziba megy = *go to the cinema*
 működik = *work*
 munkába jár = *go to work*
 munkahely = *workplace*

nadrág = *trousers*
 nagybátyja = *one's uncle*
 nagy = *granny*
 nagymama = *grandmother*
 nagypapa = *grandfather*
 napfény = *sunshine*
 napozik = *sunbathe*
 néha = *sometimes*
 néhány = *a few*
 nem igazán = *not really*
 nem számít = *doesn't matter*
 név = *name*
 nincs = *there is not*
 nő = *woman*
 nőnap = *Women's day*
 nyár = *summer*
 olyan = *like that*
 orosz = *Russian*
 orvos = *doctor*
 ösztetör = *break*
 osztálytalálkozót tart = *hold a class reunion*
 pedig = *however*
 pohár = *glass*
 ráér = *have time for*
 reggelit készít = *make breakfast*
 rendbe hoz/rak/tesz = *tidy up, put in order*
 rendet csinál = *make order*
 rendetlen = *messy*
 részt vesz = *take part*
 ritkábban = *more rarely*
 ritkán = *rarely*
 rosszul hall *hear badly*
 segít = *help*
 sír = *cry*
 soha = *never*

sokan = *many*
 sokszor = *often*
 sört iszik = *drink beer*
 szépen = *nicely*
 szeret = *like*
 szeretne = *would like*
 szívesebben = *would rather*
 szoba = *room*
 szokott = *no equivalent (do something habitually)*
 szomorú = *sad*
 szomszéd = *neighbour*
 szörnyű élmény = *terrible experience*
 szülei = *one's parents*
 szülőértekezletet tart = *hold a parents' meeting*
 szünetben = *in the break*
 tanár = *teacher*
 tanul = *learn*
 tányér = *plate*
 téged = *you (ACC)*
 tegnap = *yesterday*
 terv = *plan*
 tévét néz = *watch TV*
 tönkremegy = *break down*
 történik = *happen*
 tud = *know*
 túl sok = *too many*
 úgy = *like that*
 új munkát kap = *get a new job*
 úszik = *swim*
 uszoda = *swimming pool*
 utazik = *travel*
 üzletember = *businessman*
 üzletet köt = *make a deal*
 vacsorát főz = *cook supper*
 vagy = *or*

valahol = *somewhere*
 valaki = *somebody*
 valakivel = *with somebody*
 valami = *something*
 változik = *change*
 van = *is*
 város = *town*
 varr = *sew*
 vélemény = *opinion*
 videót néz = *watch videos*
 víz = *water*
 vizsga = *exam*
 vizsgázik = *take an exam*
 zavar = *disturb*

Appendix D (ii): L2 pilot study: List of experimental sentences for magnitude estimation

1.

Mit csinálnak a gyerekek?

what do-they the children

'What are the children doing?'

Éva leckét ír, Jancsi moziba megy.*Eve homework writes, John cinema-to goes*

'Eve is writing homework, John is going to the cinema.'

Éva ír leckét, Jancsi megy moziba.

2.

Mit csinál egy üzletember?

what does a businessman

'What does a businessman do?'

Külföldre utazik és üzletet köt.*abroad travels and deals makes*

'He travels abroad and makes deals.'

Utazik külföldre és köt üzletet.

3.

Mi az esti programod?

what the evening program-yours

'What are you doing in the evening?'

Tanulni fogok.*study-INF will-I*

'I will be studying.'

Fogok tanulni.

4.

Mi a terved nyárra?

what the plan-yours summer-for

'What are your plans for the summer?'

Utazni akarok Európában.*travel-INF want-I Europe-in*

'I want to travel in Europe.'

Akarok utazni Európában.

5.

Mi történik a filmben?

what happens in the film

'What happens in the film?'

A fiú beleszeret a lányba.*the boy PREF-loves the girl*

'The boys falls in love with the girl.'

A fiú a lányba beleszeret.

6.

Hová mész?

where go-you

'Where are you going?'

Feladom a levelet.*PREF-post the letter-ACC*

'I'm going to post the letter.'

A levelet feladom.

7.

Mit fogsz csinálni a szünetben?

what-ACC will-you do-INF the holidays-in

'What will you do in the holidays?'

El fogom olvasni az Egri Csillagokat.

PREF will-I read-INF the Eger Stars-ACC

'I'll read *The Stars of Eger*.'

Fogom elolvasni az Egri Csillagokat.

8.

Mit tud már a kisbaba?

what-ACC knows already the baby

'What can the baby do yet?'

Fel tud öltözni.

PREF knows dress-INF

'She can get dressed.'

Tud felöltözni.

9.

Miért szeretsz napozni?

why like-you sunbathe-INF

'Why do you like sunbathing?'

Jól esik a napfény.

good feels the sunshine

'I like the sun.'

A napfény jól esik.

10.

Miért jött ma Kati gyalog?

why came today Kate on-foot

'Why did Kate come on foot today?'

Kölcsönadta a kocsiját.

PREF-gave the car-hers

'She's lent her car to somebody.'

A kocsiját kölcsönadta.

11.

Mit kell tenni, ha beteg vagy?

what-ACC must do-INF if ill are-you

'What do you have to do if you are ill?'

Gyógyszert kell szedni.

medicine-ACC must take-INF

'You have to take some medicine.'

Kell gyógyszert szedni.

12.

Miért megy János Edinburghba?

why goes John Edinburgh-to

'Why is John going to Edinburgh?'

Részt akar venni a fesztiválon.

part-ACC wants take-INF the festival-on

'He wants to perform at the Festival.'

Akar részt venni a fesztiválon.

13.

Kit szeret Éva? Az angolokat?

who-ACC likes Eve? the English-ACC

'Who does Eve like? The English?'

A skótokat szereti, nem az angolokat.
the Scots-ACC likes not the English-ACC
 'She likes the Scots, not the English.'
Szereti a skótokat, nem az angolokat.

14.
 Hova megy Zoli? A koncertre?
where goes Zoli? the concert-to?
 'Where is Zoli going? To the concert?'
A moziba megy, nem a koncertre.
the cinema-to goes not the concert-to
 'He is going to the cinema, not the concert.'
Megy a moziba, nem a koncertre.

15.
 Mit szokott Tamás csinálni? Teniszezni?
what-ACC habitual Tom do-INF? play-tennis-INF
 'What does Tom do? Does he play tennis?'
Úszni szokott, nem teniszezni.
swim-INF habitual not play-tennis-INF
 'He usually swims and does not play tennis.'
Szokott úszni, nem teniszezni.

16.
 Mit akarsz enni?
what-ACC want-you eat-INF
 'What do you want to eat?'
Inni akarok, nem enni.
drink-INF want-I not eat-INF
 'I want to drink, not eat.'
Akarok inni, nem enni.

17.
 Leesett a pohár.
PREF-fell the glass
 'The glass has fallen.'
A tányér esett le, nem a pohár.
the plate fell down not the glass
 'It's the plate that's fallen, not the glass.'
A tányér leesett, nem a pohár.

18.
 Kimostad a kabátom?
PREF-washed-you the coat-mine
 'Did you wash my coat?'
A nadrágod mostam ki, nem a kabátod.
the trousers-yours washed-I PREF not the coat-your
 'I washed your trousers, not your coat.'
Kimostam a nadrágod, nem a kabátod.

19.
 Délután mész bevásárolni?
in-the-afternoon go-you PREF-shop-INF
 'Are you going shopping in the afternoon?'
Délelőtt fogok bevásárolni, nem délután.
in-the-morning will-I PREF-shop-INF not in-the-afternoon
 'I'm doing shopping in the morning, not in the afternoon.'
Fogok bevásárolni délelőtt, nem délután.

20.

Át kell szállni az Oktogonnál?

PREF must change-INF the Oktogon-at

'Do you have to change at Oktogon?'

Az Astoriánál kell átszállni, nem pedig az Oktogonnál.

the Astoria-at must PREF-change not the Oktogon-at

'You have to change at Astoria, not Oktogon.'

Kell átszállni az Astoriánál, nem pedig az Oktogonnál.

21.

Nagypapa sok gyógyszert szed.

grandfather many medicine takes

'Grandfather takes a lot of medicine.'

Nagymama szed gyógyszert, nem nagypapa.

grandmother takes medicine not grandfather

'It's grandmother who takes medicine, not grandfather.'

Nagymama gyógyszert szed, nem nagypapa.

22.

Zoli rendbe hozta a házat.

Zoli order-into brought the house-ACC

'Zoli has cleaned up the house.'

A kerttet hozta rendbe, nem a házat.

the garden-ACC brought order-into not the house-ACC

'It's the garden he cleaned up, not the house.'

Rendbe hozta a kerttet, nem a házat.

23.

Mi fog változni az új munkahelyeden?

what will change-INF the new workplace-yours-on

'What will be different at your new workplace?'

Később fogok munkába járni.

later will-I work-into go-INF

'I'll be leaving for work later in the morning.'

Fogok munkába járni később.

24.

Soha nincs időm.

never is-not time-mine

'I never have enough time.'

Kevesebbet kellene tévét nézni.

less-ACC should TV-ACC watch-INF

'You should be watching less TV.'

Kellene tévét nézni kevesebbet.

25.

Szokott sört inni a férjed?

habitual beer-ACC drink-INF the husband-yours

'Does you husband drink beer?'

Nem iszik sört.

not drinks beer-ACC

'He doesn't drink beer.'

Nem sört iszik.

26.

Szeret fogat mosni a kisfiad?

likes tooth-ACC wash-INF the son-yours

'Does your son like brushing his teeth?'

Nem mos fogat.

not washes tooth-ACC

'He doesn't brush his teeth.'

Nem fogat mos.

27.

Sírni fogsz a fogorvosnál?

cry-INF will-you the dentist-at

'Will you cry at the dentist's?'

Nem fogok sírni.

not will-I cry-INF

'I won't cry.'

Nem sírni fogok.

28.

Tud varrni az anyukád?

can saw-INF the mother-yours

'Can your mother saw?'

Nem tud varrni.

not can saw-INF

'She cannot saw.'

Nem varrni tud.

29.

Elhitte neked?

PREF-believed you-for

'Did he believe you?'

Nem hitte el.

not believed PREF

'He didn't believe me.'

Nem elhitte.

30.

Ráérsz?

PREF-have-time-you

'Have you got time?'

Nem érek rá.

not have-time PREF

'I haven't got time.'

Nem ráérek.

31.

Mi lesz, ha elalszol?

what will-be if PREF-sleep-you

'What will happen if you go to sleep?'

Nem fogok elaludni.

not will-I PREF-sleep-INF

'I won't go to sleep.'

Nem el fogok aludni.

32.

Meg akarod nézni a filmet?

PREF want-you see-INF the film-ACC

'Do you want to see the film?'

Nem akarom megnézni.

not want-I PREF-see-INF

'I don't want to see it.'

Nem meg akarom nézni.

33.

Emlékszel a nevére?

remember-you the name-his-onto

'Do you remember his name?'

Nem jut eszembe.

not comes mind-mine-to

'I can remember it just now.'

Nem eszembe jut.

34.

Egyetértesz a döntéssel?

PREF-agree-you the decision-with

'Do you agree with the decision?'

Nem értek egyet.

not agree-I PREF

'I don't agree with it.'

Nem egyetérték.

35.

Észre szoktad venni?

to-mind habitual-you take-INF

'Do you usually notice it?'

Nem szoktam észrevenni.

not habitual-I to-mind-take-INF

'I don't usually notice it.'

Nem észre szoktam venni.

36.

Feleségül akarja venni Évát?

wife-as wants take-INF Eve-ACC

Does he want to marry Eve?'

Nem akarja feleségül venni.

not wants wife-as take-INF

'He doesn't want to marry her.'

Nem feleségül akarja venni.

37.

Angol vagy?

English are-you

'Are you English?'

Nem vagyok angol.

not am-I English

'I'm not English.'

Nem angol vagyok.

38.

Biztos vagy benne?

sure are-you in-it

'Are you sure in it?'

Nem vagyok biztos.

not am-I sure

'I'm not sure.'

Nem biztos vagyok.

39.

Mindig ilyen rendetlen a szobád?
always such messy the room-yours
 'Is your room always so messy?'

Igen, ritkán csinálok rendet.
yes, rarely make-I order-ACC
 'Yes, I clean it only rarely.'

Igen, ritkán rendet csinálok.

40.

Tudtál a franciákkal beszélni?
could-you the French-with talk-INF
 'Could you talk to the French?'

Nem, hiába tanultam franciául.
no, in-vain learnt-I French
 'No, I learnt it in vain.'

Nem, hiába franciául tanultam.

41.

Érthető volt az előadás?
understandable was the lecture
 'Was the lecture clear?'

Nem. Alig értettem meg.
no, hardly understood-I PREF
 'No, I could hardly understand it.'

Nem. Alig megértettem.

42.

Sokszor vagy szomorú?
often are-you sad
 'Are you often sad?'

Nem, ritkán szomorodok el.
no, rarely get-sad-I PREF
 'No, I get sad only rarely.'

Nem, ritkán elszomorodok.

43.

Érdemes volt korán kelni?
worth was early raise-INF
 'Was it worth getting up so early?'

Nem. Hiába keltünk korán.
no, in-vain raised-we early
 'No, we shouldn't have got up so early. (We got up early in vain.)'

Nem. Hiába korán keltünk.

44.

Az orvosok gyakran megmossák a kezüket?
the doctors often PREF-wash-they the hands-theirs-ACC
 'Do the doctors often wash their hands?'

Nem, ritkán mosnak kezet.
no, rarely wash-they hands-ACC
 'No, they rarely wash their hands.'

Nem, ritkán kezet mosnak.

45.

Sok vizsgát kell még letenned?
many exam-ACC must yet PREF-take-you-INF
 'Do you have to take lots of exams?'

Nem. Kevés van hátra.

no, few is behind

‘No, I have only a few.’

Nem. Kevés hátra van.

46.

Hideg volt a víz az uszodában?

cold was the water the swimming-pool-in

‘Was the water cold in the swimming pool?’

Nem. Alig volt hideg.

no, hardly was cold

‘No it was not so cold.’

Nem. Alig hideg volt.

47.

Esténként mit csinál a férjed?

evenings what-ACC does the husband-yours

‘What does your husband do in the evenings?’

Mindig tévét néz.

always TV watches

‘He always watches TV.’

Mindig néz tévét.

48.

Miért nem tudsz még magyarul?

why not know-you yet Hungarian

‘Why can’t you speak Hungarian yet?’

Mert folyton angolul beszélek.

because always English speak-I

‘Because I always speak English.’

Mert folyton beszélek angolul.

49.

Elhitted, amit mondott?

PREF-believed-you what-ACC said-he

‘Did you believe what he said?’

Igen. Állandóan elhittem, amit mondott.

yes, always PREF-believed-I what-ACC said-he

‘Yes, I always believed what he said.’

Igen. Állandóan hittem el, amit mondott.

50.

Ági megint beteg?

Agnes again ill

‘Is Agnes ill again?’

Igen. Folyton megfázik.

yes, always PREF-catches-cold

‘Yes, she keeps catching a cold.’

Igen. Folyton fázik meg.

51.

Gyakran gondolod, hogy Zsuzsa egy kicsit bolond?

often think-you that Zsuzsa a little mad

‘Do you often think that Zsuzsa is a bit mad?’

Igen. Időnként bolondnak tartom.

yes, sometimes mad-DAT think-I

‘Yes, I sometimes think she is mad.’

Igen. Időnként tartom bolondnak.

52.

Mindenkinek egyezett a véleménye?
everybody-DAT agreed the opinion-his
 'Did everybody agree?'

Igen. Mindenki egyetértett.

yes, everybody one-agreed

'Yes, everybody agreed.'

Igen. Mindenki értett egyet.

53.

Sokszor büszkélkedsz a fiaddal?
often be-proud-you the son-yours-with
 'Do you often boast off with your son?'

Igen. Néha büszke vagyok rá.

yes, sometimes proud am-I on-him

'Yes, sometimes I'm proud of him.'

Igen. Néha vagyok büszke rá.

54.

Milyen lesz novemberben az idő?
what will-be November-in the weather
 'What will the weather be like in November?'

Minden nap esős lesz.

every day rainy will-be

'It will be rainy every day.'

Minden nap lesz esős.

55.

Rosszul hall a nagypapa.
badly hears the grandfather
 'Grandfather cannot hear well.'

Ki hall rosszul?

who hears badly?

'Who cannot hear well?'

Ki rosszul hall?

56.

Bátran viselkedett.
bravely behaved
 'He behaved very bravely.'

Ki viselkedett bátran?

who behaved bravely

'Who behaved very bravely?'

Ki bátran viselkedett?

57.

Készíték kávét és teát.
make-I coffee-ACC and tea-ACC
 'I'll make coffee and tea.'

Mit iszol szívesebben?

what-ACC drink-you rather-more

'Which one would you rather have?'

Mit szívesebben iszol?

58.

Jól beszéli az orosz.
well speaks the Russian-ACC

'He speaks good Russian.'

Mit beszél jól?

what-ACC speaks well

'What does he speak well?'

Mit jól beszél?

59.

Mindenkinek van feladata a családban.

everybody-DAT is task-his the family-in

'Everybody has a task in the family.'

Ki szokott mosogatni?

who habitual wash-up-INF

'Who does the washing up?'

Ki mosogatni szokott?

60.

A nagyai aludni szeretne.

the granny sleep-INF would-like-she

'Granny would like to sleep.'

Ki szeretne aludni?

who would-like sleep-INF

'Who would like to sleep?'

Ki aludni szeretne?

61.

Új munkát kaptam.

new job-ACC got-I

'I've got a new job.'

Mennyit fogsz keresni?

how-much-ACC will-you earn-INF

'How much will you earn?'

Mennyit keresni fogsz?

62.

Apa, játsszunk valamit!

daddy, play-SUB-we something-ACC

'Daddy, let's play something.'

Mit akarsz játszani?

what-ACC want-you play-INF

'What do you want to play?'

Mit játszani akarsz?

63.

Valaki megérkezett.

somebody PREF arrived

'Somebody has arrived.'

Ki érkezett meg?

who arrived PREF

'Who has arrived?'

Ki megérkezett?

64.

Megvan a kulcsom.

PREF-is the key-mine

'I've found my key.'

Mi van meg?

what is PREF

'What have you found?'

Mi megvan?

65.

Néhány embert meghívtam estére.
some people-ACC PREF-invited-I evening-for
 'I've invited some people for the evening.'

Kit meghívtál?

who-ACC PREF-invited-you
 'Who did you invite?'

Kit hívtál meg?

66.

Jézusom, elfelejtettem.
Jesus-mine, PREF-forgot-I
 'Jesus, I've forgotten.'

Mit felejtettél el?

what-ACC forgot-you PREF
 'What have you forgotten?'

Mit elfelejtettél?

67.

Meg fog gyógyulni.
PREF will recover-INF
 'She'll recover.'

Ki fog meggyógyulni?

who will PREF-recover-INF
 'Who will recover?'

Ki meg fog gyógyulni?

68.

Ő is el akar jönni.
he also PREF wants come-INF
 'He also wants to come.'

Ki akar eljönni?

who wants PREF-come-INF
 'Who wants to come?'

Ki el akar jönni?

69.

Meg fogok bocsátani neki.
PREF will-I forgive-INF he-DAT
 'I'll forgive him/her.'

Mit fogsz megbocsátani neki?

what-ACC will-you PREF-forgive-INF he-DAT
 'What will you forgive him/her?'

Mit meg fogsz bocsátani neki?

70.

El tudom olvasni.
PREF can-I read-INF
 'I can read it.'

Mit tudsz elolvasni?

what-ACC can-you PREF-read-INF
 'What can you read?'

Mit el tudsz olvasni?

71.

Hirtelen eszembe jutott valami.
suddenly mind-mine-to came something
'Suddenly I remembered something.'

Mi jutott eszedbe?

what came mind-yours-to
'What did you remember?'

Mi eszedbe jutott?

72.

Olyan lassan múlik ez a hét.
so slowly passes this the week
'This week goes so slowly.'

Mi múlik lassan?

what passes slowly
'What goes slowly?'

Mi lassan múlik?

73.

Kati mindig kölcsönadja a játékeit.
Kate always PREF-gives the toys-hers
'Kate always lend her toys.'

Most mit adott kölcsön?

now what-ACC gave PREF
'What did she lend now?'

Most mit kölcsönadott?

74.

Finomra vágjuk a hagymát.
fine-onto chop-we the onion-ACC
'We chop the onions finely.'

Mit vágunk finomra?

what-ACC chop-we fine-onto
'What do we chop finely?'

Mit finomra vágunk?

75.

A nagybátyám sokszor néz videót.
the uncle-mine often watches video-ACC
'My uncle watches a lot of videos.'

Ki szokott videót nézni?

who habitual video-ACC watch-INF
'Who watches a lot of videos?'

Ki videót szokott nézni?

76.

Vacsorát kell főzni.
supper-ACC must cook-INF
'We have to cook supper.'

Ki akar krumplit pucolni?

who wants potatoes-ACC peel-INF
'Who wants to peel potatoes?'

Ki krumplit akar pucolni?

77.

Tamás házasodni akar.
Tom marry-INF wants
'Tom wants to get married.'

Kit fog feleségül venni?

who-ACC will-he wife-as take-INF

‘Who does he want to marry?’

Kit feleségül fog venni?

78.

Az egész ház rendetlen.

the whole house messy

‘The whole house is messy.’

Mit kell rendbe tenni?

what-ACC must order-into put-INF

‘What needs to be cleaned?’

Mit rendbe kell tenni?

79.

Mondtam, hogy Katit Párizsban ismertem meg.

said-I that Kate-ACC Paris-in learn-t-I PREF

‘I said I met Kate in Paris.’

De én azt kérdeztem, hogy melyik városban ismerted Évát meg?

but I that-ACC asked-I that which city-in learnt-you Eve-ACC PREF

‘But I asked which town did you meet Eve in?’

De én azt kérdeztem, hogy melyik városban ismerted meg Évát?

80.

Péter nem ment be matek órára.

Peter not went in Maths lesson-to

‘Peter didn’t go to Maths.’

De a tanár azt akarta tudni, hogy melyik órára nem ment János be?

but the teacher that-ACC wanted know-INF that which lesson-to not went John PREF

‘But the teacher wanted to know which lesson did John not go into?’

De a tanár azt akarta tudni, hogy melyik órára nem ment be János?

81.

János bántott meg téged, vagy fordítva?

John hurt PREF you-ACC or vice versa

‘Did John hurt you or did you hurt him?’

Nem, én bántottam őt meg.

no, I hurt-I him PREF

‘No, I hurt him.’

Nem, én bántottam meg őt.

82.

Ő hívott meg bennünket?

he invited PREF us

‘Did he invite us?’

Fordítva, én hívtam őt meg.

other-way-round, I invited-I him PREF

‘No, I invited him.’

Fordítva, én hívtam meg őt.

83.

Laci és Éva telefonon beszélgettek.

Lesley and Eve phone-on talked-they

‘Lesley and Eve were talking on the phone.’

Ki hívott fel kit?

who called PREF whom

‘Who called up whom?’

Ki kit hívott fel?

84.

Két birkózó volt a ringben.

two wrestler was the ring-in

'There were two wrestlers in the ring.'

Ki vert meg kit?

who beat PREF whom

'Who beat whom?'

Ki kit vert meg?

85.

Osztálytalálkozót tartottunk, és sokan eljöttek.

class-reunion-ACC held-we and many PREF-came-they

'We had a class reunion and lots of people turned up.'

Ki kit ismert fel?

who whom recognised PREF

'Who recognised whom?'

Ki ismert fel kit?

86.

A nőnapon minden férfi felköszöntött egy nőt.

the women's-day-on every man PREF-greeted a woman-ACC

'On international women's day every man greeted a woman.'

Ki kit köszöntött fel?

who whom greeted PREF

'Who greeted whom?'

Ki köszöntött fel kit?

87.

Átnézem még egyszer a feladatot, hátha van benne hiba.

PREF-look-I yet once the exercise-ACC in-case is in-it mistake

'I'll go through the exercise in case there is a mistake in it.'

Nem lenne jó hibásan adni be.

not would-be good faulty hand-INF in

'It wouldn't be good to hand it in with mistakes in it.'

Nem lenne jó hibásan beadni.

88.

Ez szörnyű élmény volt!

this horrific experience was

'This was a horrific experience.'

Jó lenne ezt ritkábban élni át.

good would-be this-ACC rarely-more live-INF through

'I wish I didn't have to live through it again.'

Jó lenne ezt ritkábban átélni.

89.

Apu nem igazán tud ebben segíteni.

dad not really can-he in-this help-INF

'Dad cannot really help with this.'

Jobb lenne anyut hívni fel.

better would-be mom-ACC call-INF up

'We'd better call Mum.'

Jobb lenne anyut felhívni.

90.

Péter nem tud autót szerelni.

Peter not can-he auto-ACC fix-INF

‘Peter cannot fix cars.’

Jobban szeretném Jánoshoz vinni el az autót.*better would-like-I John-to take-INF PREF the car-ACC*

‘I’d rather take it to John.’

Jobban szeretném Jánoshoz elvinni az autót.

91.

Azt mondják, valaki becsapta Máriát.

that-ACC say-they somebody PREF-cheated Mary-ACC

‘They say somebody cheated Mary.’

Kit mondanak, hogy becsapta Máriát?*who-ACC say-they that PREF-cheated Mary-ACC*

‘Who do they say cheated Mary?’

Kit mondanak, becsapta Máriát?

92.

Azt mondják, valaki becsapta Máriát.

that-ACC say-they somebody PREF-cheated Mary-ACC

‘They say somebody cheated Mary.’

Mit mondanak, hogy ki csapta be Máriát?*what-ACC say-they that who cheated PREF Mary-ACC*

‘Who do they say cheated Mary?’

93.

Azt hiszem, valami eszébe jutott.

that-ACC believe-I something mind-his-to came

‘I think he remembered something.’

Mit hiszel, hogy eszébe jutott?*what-ACC believe-you that mind-his-to came*

‘What do you think he remembered?’

Mit hiszel, eszébe jutott?

94.

Azt hiszem, valami eszébe jutott.

that-ACC believe-I something mind-his-to came

‘I think he remembered something.’

Mit hiszel, hogy mi jutott eszébe?*what-ACC believe-you that what came mind-his-to*

‘What do you think he remembered?’

95.

Gondolom, megnézték a kastélyt.

think-I PREF-saw-they the palace-ACC

‘I believe they had a look at the palace.’

Mit gondolsz, hogy megnézték?*what-ACC think-you that PREF-saw-they*

‘What do you believe they had a look at?’

Mit gondolsz, megnézték?

96.

Gondolom, megnézték a kastélyt.

think-I PREF-saw-they the palace-ACC

‘I believe they had a look at the palace.’

Mit gondolsz, hogy mit néztek meg?*what-ACC think-you that what-ACC saw-they PREF*

‘What do you believe they had a look at?’

97.

Azt hiszem, a tanár észrevette a csalást.

that-ACC believe-I the teacher mind-to-took the cheating

‘I think the teacher noticed the cheating.’

Mit hiszel, hogy a tanár észrevett?

what-ACC believe-you that the teacher mind-to-took

‘What do you think the teacher noticed?’

Mit hiszel, a tanár észrevett?

98.

Azt hiszem, a tanár észrevette a csalást.

that-ACC believe-I the teacher mind-to-took the cheating

‘I think the teacher noticed the cheating.’

Mit hiszel, hogy mit vett észre a tanár?

what-ACC believe-you that what-ACC took mind-to the teacher

‘What do you think the teacher noticed?’

99.

Gondolom, hogy a jövő héten hazajön a fiunk.

think-I that the next week-on home-comes the son-ours

‘I think our son is coming home next week.’

Mikor gondolod, hogy hazajön?

when think-you that home-comes

‘When do you think he is coming home?’

Mikor gondolod, hazajön?

100.

Gondolom, hogy a jövő héten hazajön a fiunk.

think-I that the next week-on home-comes the son-ours

‘I think our son is coming home next week.’

Mit gondolsz, hogy mikor jön haza?

what-ACC think-you that when comes home

‘When do you think he is coming home?’

101.

Tudom, hogy valakivel együttjár.

know-I that somebody-with together-goes-he

‘I know he’s going out with somebody.’

Kivel tudod, hogy együttjár?

who-with know-you that together-goes-he

‘Who do you know he’s going out with?’

Kivel tudod, együttjár?

102. Tudom, hogy valakivel együttjár.

know-I that somebody-with together-goes

‘I know he’s going out with somebody.’

Mit tudsz, hogy kivel jár együtt?

what-ACC know-you that who-with goes together

‘Who do you know he’s going out with?’

103.

Azt akarom, hogy orvos nézze meg a gyereket.

that-ACC want-I that doctor look-SUB-he PREF the child-ACC

‘I want a doctor to see the child.’

Kit akarsz, hogy megnézzze a gyereket?

who-ACC want-you that PREF-look-SUB-he the child-ACC

'Who do you want to see the child?'

Kit akarsz, megnézzte a gyereket?

104.

Azt akarom, hogy orvos nézze meg a gyereket.

that-ACC want-I that doctor look-SUB-he PREF the child-ACC

'I want a doctor to see the child.'

Mit akarsz, hogy ki nézze meg a gyereket?

what-ACC want—you that who look-SUB-he PREF the child-ACC

'Who do you want to see the child?'

105.

Azt szeretném, hogy Éva készítsen reggelit.

that-ACC would-like-I that Eve make-SUB-she breakfast-ACC

'I would like Eve to make breakfast.'

Kit szeretnél, hogy reggelit készítsen?

who-ACC woul-like-you that breakfast-ACC make-SUB-she

'Who would you like to make breakfast?'

Kit szeretnél, reggelit készítsen?

106.

Azt szeretném, hogy Éva készítsen reggelit.

that-ACC would-like-I that Eve make-SUB-she breakfast-ACC

'I would like Eve to make breakfast.'

Mit szeretnél, hogy ki készítsen reggelit?

what-ACC would-like-you that who make-SUB-she breakfast

'Who would you like to make breakfast?'

107.

Azt akarom, hogy a húgát mutassa be.

that-ACC want-I that sister-ACC introduce-SUB-he PREF

'I want him to introduce his sister.'

Kit akarsz, hogy bemutasson?

who-ACC want-you that PREF-introduce-SUB-he

'Who do you want him to introduce?'

Kit akarsz, bemutasson?

108.

Azt akarom, hogy a húgát mutassa be.

that-ACC want-I that sister-ACC introduce-SUB-he PREF

'I want him to introduce his sister.'

Mit akarsz, hogy kit mutasson be?

what-ACC want-you that who-ACC introduce-SUB-he PREF

'Who do you want him to introduce?'

109.

Szeretném, ha a szobádat rendberaknád.

would-like-I if the room-yours-ACC order-into-take-COND-you

'I would like you to clean up your room.'

Mit szeretnél, hogy rendbe rakjak?

what-ACC would-like-you that order-into take-SUB-I

'What would you like me to clean up?'

Mit szeretnél, rendbe rakjak?

110.

Szeretném, ha a szobádat rendberaknád.

would-like-I if the room-yours-ACC order-into-take-COND-you

'I would like you to clean up your room.'

Mit szeretnél, hogy mit rakjak rendbe?

what-ACC would-like-you that what-ACC take-SUB-I order-into

‘What would you like me to clean up?’

111.

Szeretném, ha Amerikába utaznánk el.

would-like-I if America-to travel-COND-we PREF

‘I would like to travel to America.’

Hova szeretnéd, hogy elutazzunk?

where would-like-you that travel-SUB-we

‘Where would you like to travel?’

Hova szeretnéd, elutazzunk?

where would-like-you travel-SUB-we

112.

Szeretném, ha Amerikába utaznánk el.

would-like-I if America-to travel-COND-we PREF

‘I would like to travel to America.’

Mit szeretnél, hogy hova utazzunk el?

what-ACC would-like-you that where travel-SUB we

‘Where would you like to travel?’

113.

Béreljünk egy autót valahol.

hire-SUB-we a car-ACC somewhere

‘Let’s hire a car somewhere.’

Hol akarsz, hogy autót béreljünk?

where want-you that car-ACC hire-SUB-we

‘Where do you want to hire a car?’

Hol akarsz, autót béreljünk?

114.

Béreljünk egy autót valahol.

hire-SUB-we a car-ACC somewhere

‘Let’s hire a car somewhere.’

Mit akarsz, hogy hol béreljünk autót?

what-ACC want-you that where hire-SUB-we car-ACC

‘Where do you want to hire a car?’

Mit akarsz, hogy hol béreljünk autót?

115.

Tegnap nem tudtam elmenni az autóversenyre.

yesterday not could-I PREF-go-INF the car-race-to

‘Yesterday I could not go to the car race.’

Nem tudom, hogy kinek az autója nyerte meg a versenyt.

not know-I that whose the car-his won PREF the race-ACC

‘I don’t know whose car won the race.’

Nem tudom, hogy kinek az autója megnyerte a versenyt.

116.

Tegnap szülőértekezletet tartottunk.

yesterday parent-meeting-ACC held-us

‘Yesterday we held a parents’ meeting.’

Azt akartuk megnézni, hogy melyik gyerek anyukája jön el.

that-ACC wanted-we PREF-see-INF that which child mom-his come PREF

‘We wanted to see which child’s mother will come.’

Azt akartuk megnézni, hogy melyik gyerek anyukája eljön.

117.

Miből vizsgáztál?

what-from exam-take-you

‘What did you take an exam in?’

Azt kérdezed, hogy milyen vizsgát tettem le?*that-ACC ask-you that what exam took-I PREF*

‘Are you asking what exams I have already taken?’

Azt kérdezed, hogy milyen vizsgát letettem?

118.

Az nem számít, hogy mit láttál a tévében.

that not matters that what-ACC saw-you the TV-in

‘It doesn’t matter what you saw on TV.’

Az érdekel, hogy mit olvastál el.*that interests-me that what-ACC read-you PREF*

‘I’m interested in what you’ve read.’

Az érdekel, hogy mit elolvastál.

119.

Nem működik a telefonom.

not works the telephone-mine

‘My phone is out of order.’

Tegnap azt mondtad, hogy a tévéd ment tönkre!*yesterday that-ACC said-you that the TV-yours went wrong*

‘Yesterday you said your TV was out of order.’

Tegnap azt mondtad, hogy a tévéd tönkrement!

120.

A szomszéd lakást megvették.

the neighbour flat-ACC PREF-bought-they

‘The flat next door has been bought.’

Azt hiszem, hogy a Szabóék vették meg.*that-ACC think-I that the Szabós bought-they PREF*

‘I think the Szabós bought it.’

Azt hiszem, hogy a Szabóék megvették.

121.

Szépen elmosogatott a lányod.

nicely PREF-washed-up the daughter-yours

‘Your daughter did a nice job washing up.’

Csak az zavar, hogy túl sok poharat tört össze!*only that bothers-me that too many glass-ACC broke-she PREF*

‘I’m only worried because she broke too many glasses.’

Csak az zavar, hogy túl sok poharat összetört!

122.

Tudtad, hogy Józsi elvette Katit?

knew-you that Joseph PREF married Kate-ACC

‘Did you know that Joseph married Kate?’

Nem tudtam, hogy Katit vette feleségül.*not knew-I that Kate-ACC took wife-as*

‘I didn’t know that he married Kate.’

Nem tudtam, hogy Katit feleségül vette.

123.

Befejezte az egyetemet?

PREF-finished the university-ACC

‘Did he finish university?’

Appendix D (ii) L2 pilot study: List of experimental sentences for magnitude estimation

Azt mondta, hogy még nem fejezte be.

that-ACC said-he that yet not finished PREF

‘He said he hadn’t finished it yet.’

Azt mondta, hogy még nem befejezte.

124.

Elváltak a szülei?

PREF-divorced the parents-his

‘Have his parents got divorced?’

Úgy hallottam, hogy nem váltak el.

so heard-I that not divorced PREF

‘I heard that they haven’t had a divorce yet.’

Úgy hallottam, hogy nem elváltak.

Appendix C (iii): L2 pilot study: Instructions for magnitude estimation

General instructions

This is an experiment to find out what you as an English speaker think about Hungarian. I would like your opinion on some Hungarian sentences. There are no 'correct' or 'wrong' answers, whatever opinion you express will be useful and interesting.

I want you to decide whether sentences are 'possible' sentences in Hungarian. That is, what you intuitively 'feel' about sentences rather than 'correct' according to the 'grammar rule'.

Two sentences will be shown to you at a time. You will have to decide whether the second sentence sounds good or not. You will be given ten seconds to read the sentences and decide on your answer.

I am interested in your spontaneous impression of the sentences, so please don't change the answer once you've decided. I don't want you to spend too long thinking about 'grammar rules', so I'm going to pace the test so that you won't have time to think about them.

Some sentences may sound strange. Everybody has a different opinion as to exactly how bad these sentences sound. Even Hungarian native speakers cannot agree on them! So if you are not sure whether a sentence is correct or not, it's possible that a Hungarian person would agree with you. So don't worry if you can't decide or if you don't know. I don't expect you to have a definite opinion about every sentence. There are no 'correct' answers, so whatever seems right to you is a valid response.

It is very important that you answer all the questions. Please don't leave any out. Remember to write each of your answers on the answer sheet.

Please do not write your name.

Appendix D (v): L2 pilot study: Answer sheet for magnitude estimation

Student ID:

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Pr2.

Pr3.

Pr4.

Pr5.

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Appendix D (v) L2 pilot study: Answer sheet for magnitude estimation

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Appendix D (vi): L2 pilot study: Questionnaire

Student ID:

Questionnaire



I would like you to fill out this questionnaire which is asking about your particulars and facts regarding your language learning. Your help would greatly help me in my research. Thank you very much.

About your language learning experiences

1. What is your mother tongue?

- British English
- American English
- Canadian English
- Australian English
- Russian
- German
- Other

2. What other languages do you speak? How long have you been studying each one? What level of knowledge have you reached in each one?

| <i>Language:</i> | <i>Years of study/experience with it:</i> | <i>Level (i.e. beginner/lower intermediate/upper intermediate/advanced/near-native):</i> |
|------------------|---|--|
| | | |
| | | |
| | | |
| | | |

3. Is Hungarian the most recent language you are learning? YES NO

4. If no, what language have you been learning apart from Hungarian?

5. Could you list the languages you speak in chronological order as you started learning them?
 1st 2nd 3rd 4th 5th

6. How long have you been learning Hungarian? Please give number of years or months.

7. How long have you been living in Hungary? Please specify number of years and months.

8. How long do you intend to stay in Hungary? Please indicate year and month.

9. Do you learn Hungarian on a language course? YES NO

10. Do you learn it with a private teacher? YES NO

11. If yes, how many Hungarian lessons do you have per week?

12. How long is a lesson? Please circle. 45 mins 60 mins 1 hour 30 mins Other:

Appendix D (vi) L2 pilot study: Questionnaire

13. Which **activities** do you usually undertake in class? Please tick or add your own.

- | | | | |
|---|--------------------------|--|--------------------------|
| <i>casual conversation</i> | <input type="checkbox"/> | <i>task-based spoken exercises</i> | <input type="checkbox"/> |
| <i>discussion of current affairs</i> | <input type="checkbox"/> | <i>language games</i> | <input type="checkbox"/> |
| <i>grammar exercises</i> | <input type="checkbox"/> | <i>Other (please specify):</i> | <input type="checkbox"/> |
| <i>discussion of a short article</i> | <input type="checkbox"/> | | <input type="checkbox"/> |
| <i>following one particular course book</i> | <input type="checkbox"/> | | <input type="checkbox"/> |

14. What **materials** (course books, short articles, short stories, taped conversations, videos etc.) do you use? Please give the title/ author of the textbook(s) you can recall.

.....

.....

.....

15. When did you **start** learning Hungarian **with a teacher** (either on a course or with a private teacher)?

.....

16. If you are not going to Hungarian classes any longer, when did you **stop** studying it **with a teacher**?

.....

17. **Why** do you learn Hungarian? Please tick the reasons from the list and/or add any additional ones you might have.

- | | | |
|--|-----|----|
| • <i>I have Hungarian relatives</i> | YES | NO |
| • <i>I need it for my studies/ job</i> | YES | NO |
| • <i>I have Hungarian ancestors</i> | YES | NO |
| • <i>Other:</i> | | |
| • | | |

18. Do you **agree** or **disagree** with the following statements? Please indicate.

- | | strongly agree | agree | undecided | disagree | strongly disagree |
|---|----------------|-------|-----------|----------|-------------------|
| • <i>It is an intriguing language to learn</i> | | | | | |
| • <i>I want to be able to communicate with Hungarians around me</i> | | | | | |
| • <i>I'm interested in the culture</i> | | | | | |
| • <i>I'm only learning it because I have to</i> | | | | | |

19. Could you assess **your fluency in Hungarian** on a scale from 1 (Very hesitant) to 5 (Completely fluent). Tick the appropriate box.

| | 1 | 2 | 3 | 4 | 5 | |
|----------------------------|---|---|---|---|---|--------------------------------|
| Very hesitant in speaking | | | | | | Completely fluent in speaking |
| Very hesitant in writing | | | | | | Completely fluent in writing |
| Very hesitant in reading | | | | | | Completely fluent in reading |
| Very hesitant in listening | | | | | | Completely fluent in listening |

20. Could you assess **your confidence in Hungarian** on a scale from 1 (Lacking in confidence) to 5 (Completely confident). Tick the appropriate box.

| | 1 | 2 | 3 | 4 | 5 | |
|--------------------------------------|---|---|---|---|---|-----------------------------------|
| Lacking in confidence when speaking | | | | | | Completely confident in speaking |
| Lacking in confidence when writing | | | | | | Completely confident in writing |
| Lacking in confidence when reading | | | | | | Completely confident in reading |
| Lacking in confidence when listening | | | | | | Completely confident in listening |

21. In using Hungarian in conversation I feel

- | | strongly agree | agree | undecided | disagree | strongly disagree |
|---------------|----------------|-------|-----------|----------|-------------------|
| • frustrated | | | | | |
| • stressed | | | | | |
| • hesitant | | | | | |
| • comfortable | | | | | |
| • confident | | | | | |
| • talkative | | | | | |

22. Learning the grammar structures of Hungarian is

| | strongly agree | agree | undecided | disagree | strongly disagree |
|---------------|----------------|-------|-----------|----------|-------------------|
| • difficult | | | | | |
| • challenging | | | | | |
| • boring | | | | | |
| • important | | | | | |

23. When meeting Hungarian speakers I

| | strongly agree | agree | undecided | disagree | strongly disagree |
|--|----------------|-------|-----------|----------|-------------------|
| • try to avoid conversations | | | | | |
| • tend to switch to my native language | | | | | |
| • ask questions for clarification | | | | | |
| tend to keep quiet and try to understand | | | | | |

24. Could you assess your use of Hungarian **word order**?

| | strongly agree | agree | undecided | disagree | strongly disagree |
|---|----------------|-------|-----------|----------|-------------------|
| • conscious attempt to get it right | | | | | |
| • using only the rules my teacher taught..... | | | | | |
| • using random word order | | | | | |
| • by 'feel' | | | | | |

25. Do you try to find rules in native Hungarian speakers' **word order**? YES NO

26. **What rules**, if any, can you specify that you have observed?

.....

.....

.....

27. For what **purposes** do you use Hungarian? **How much time** do you spend on each per day?

| | Never | Less than 1 hr | 1-2 hrs | 2-3 hrs | more than 4 hrs |
|--|-------|----------------|---------|---------|-----------------|
| • <i>talking to friends/relatives/colleagues in H.</i> | | | | | |
| • <i>doing homework/ grammatical exercises in H.</i> | | | | | |
| • <i>watching Hungarian TV/ Hungarian movies</i> | | | | | |
| • <i>reading Hungarian newspapers/ books</i> | | | | | |
| • <i>listening to Hungarian radio programs</i> | | | | | |
| • <i>writing letters/ notes/etc.</i> | | | | | |
| • <i>talking on the phone</i> | | | | | |
| • <i>thinking in Hungarian for practice</i> | | | | | |
| • | | | | | |
| • | | | | | |

28. **How much** do you use **your mother tongue** per day? Please estimate the time.

.....

About yourself

29. How old are you? Please circle the age group you belong to.

under 18 18-22 23-30 31-40 over 40

30. Please circle: Are you *male* or *female*?

31. Please tick your qualifications (or the equivalent) below and add any additional ones you have.

- *High school finals (A-levels)*
- *College/University degree* in
- *Teachers' certificate*
-

32. Please give your name

THANK YOU VERY MUCH FOR YOUR CO-OPERATION, I AM LOOKING FORWARD TO WORKING WITH YOU IN THE FUTURE !!!

Appendix D (vii): L2 pilot study: Cloze test

Student ID:

Please fill in the empty gaps with ONE suitable word. To help you, the first letter of each missing word is provided. Write your answers on the dotted lines.
Remember to write only one word on each line.

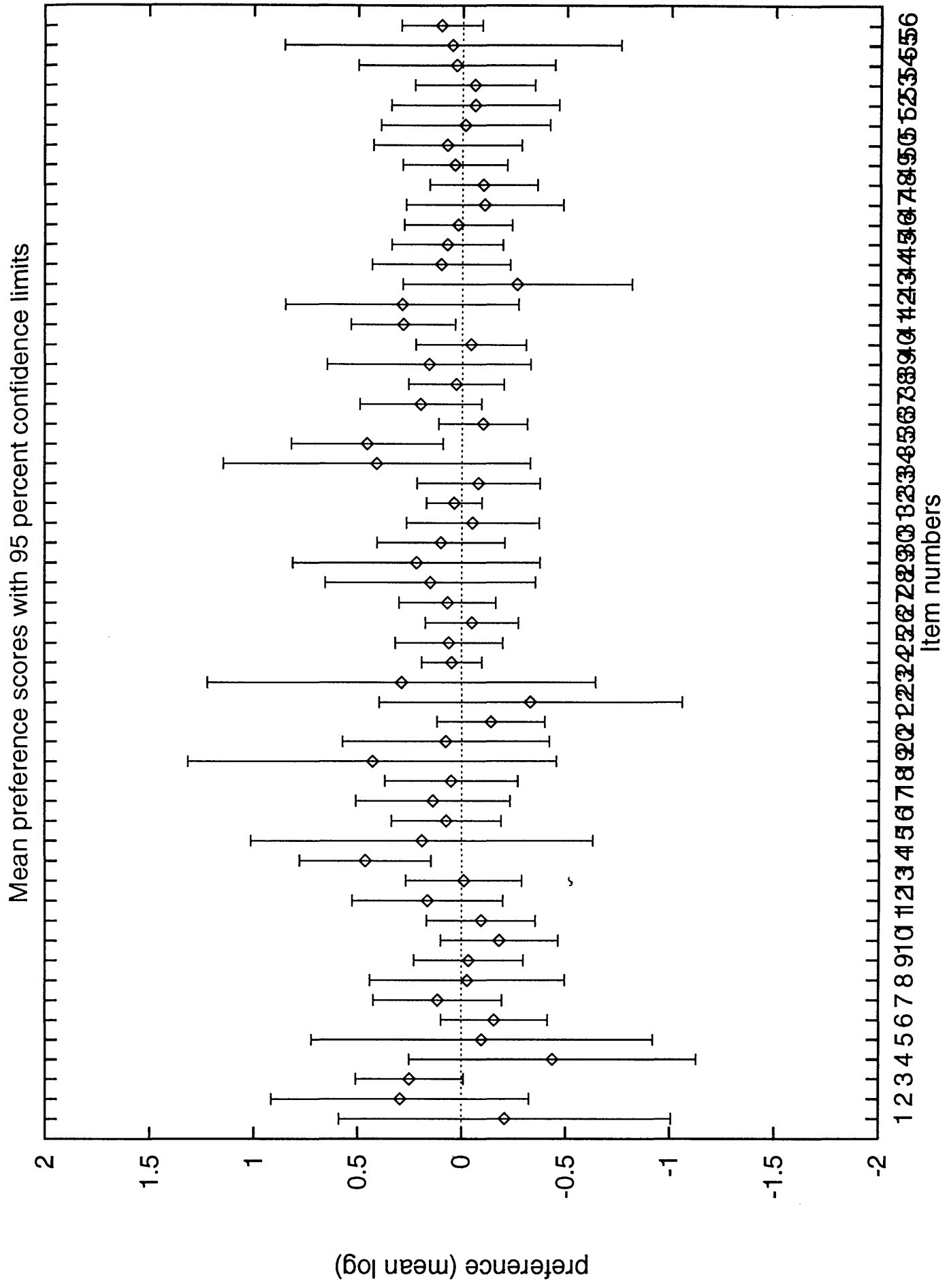
A szakértők szerint a pozitív beállítódás gyakran jó eredményhez vezet. Aki azzal az érzéssel (1) k..... föl reggel, hogy nagyszerű (2) n..... áll előtte, jobb kedvvel (3) i..... munkába. Aki nagy önbizalommal (4) l..... munkához, sikeresebb lesz, mint (5) a..... kételkedik önmaga képességeiben. Ha a (6) p..... hozzáállás mellett még azt a (7) k..... is elsajátítjuk, hogy a szerencsétlenséget (8) n..... nagyítjuk fel, könnyebben túljutunk a kellemetlen (9) p..... Ha viszont a kákán (10) i..... csomót keresünk, meg is (11) t..... A türelem fontos mérföldkő a (12) b..... vezető úton.

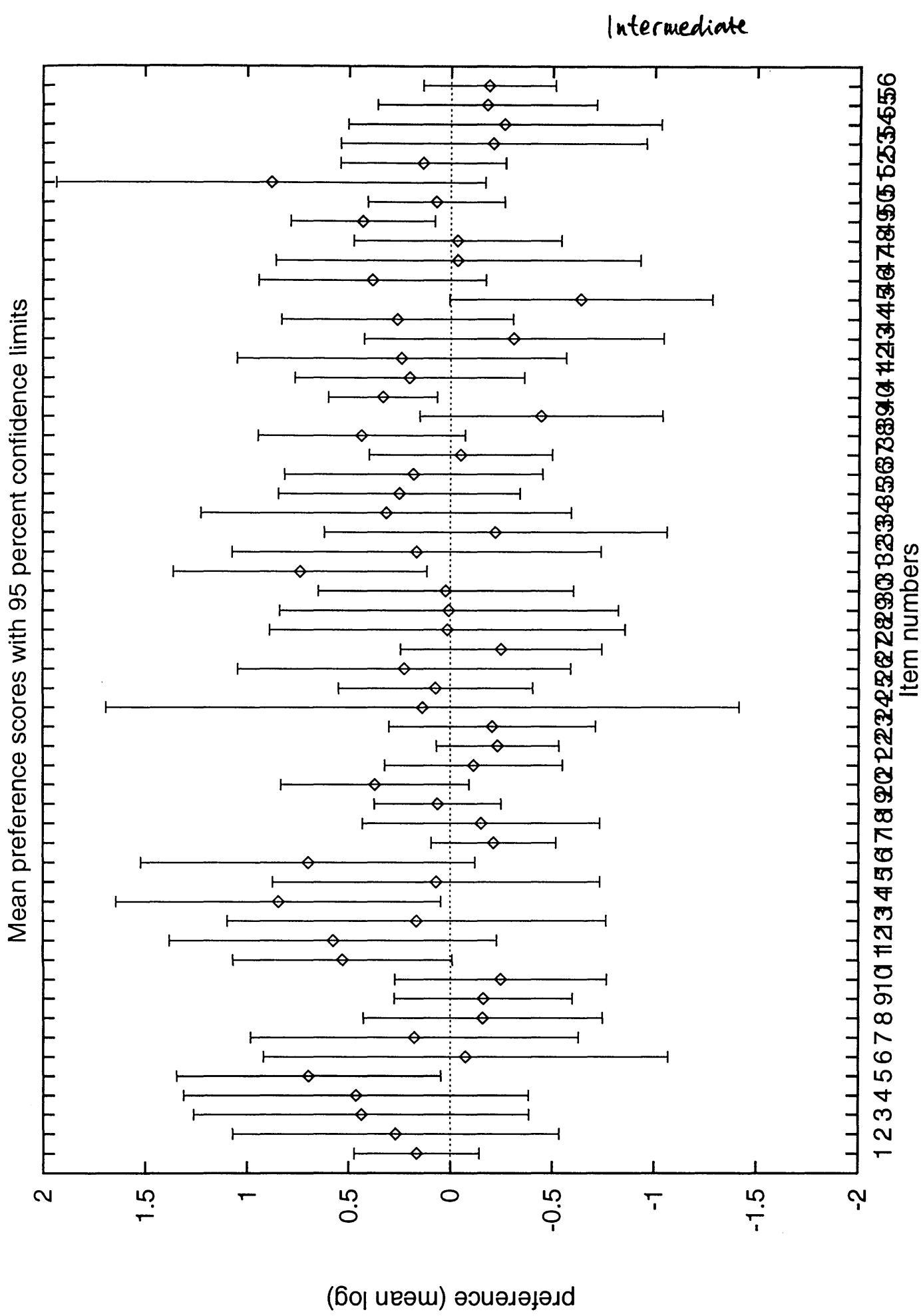
Az idén nem megyünk nyaralni - határozzuk el, majd pihenünk a nagymamánál. Az olcsóbb. Aztán a könyvekről kell (13) l..... Színházba, moziba évek óta (14) n..... járunk, ez már nem (15) i..... fáj, csak mikor kedvenc (16) ú..... előfizetésén gondolkodunk el, akkor (17) sz..... össze a torkunk. De a (18) gy..... kell a cipő és (19) a..... gondolunk, néha gyümölcsöt is (20) k..... ennie. A ruháit igyekszünk (21) m..... És persze magunknak is, (22) h..... szeretnénk valami olyat, ami (23) h..... a divatoshoz. Arról, hogy (24) f..... valami kis pénzt, már (25) n..... is álmodunk, pedig jó (26) l..... valami normális lakásba költözni. (27) D..... mindent elvisz a rezszi (28) é..... az egyre magasabb élelmiszerárak.

Nagyon sok gyerek van, aki azt gondolja, akkor lesz felnőtt, ha nézheti a televíziót. Gyerekkoromban én is ilyen tévébolond (29) v..... Aztán egyetemistaként albérletbe kellett (30) k..... egy öreg nénihez. Egyetlen (31) v..... ajtó választott el bennünket, s a (32) n..... sajnos nagyothallott. Reggeltől (33) e..... otthon ült és teljes (34) h..... bömböltette a készüléket. Három (35) k..... húztam a fülemre és (36) ú..... aludtam. Örök életre megutáltam a (37) t..... A lányom persze, ha (38) v..... tévéhez jut a nagymamánál, (39) k..... szemmel képes nézni hosszú-hosszú (40) p....., különösen a reklámokat. De (41) h..... van helyette más program, (42) a..... egyáltalán nem érdekl, mi (43) m..... a tévében. Engem sem (44) é..... Azt viszont egészen furcsának (45) t....., hogy az emberek képesek (46) ó..... tárgyalni, mi van most (47) é..... Pamelával, miközben egyáltalán nem (48) f..... őket saját családjuk gondja.

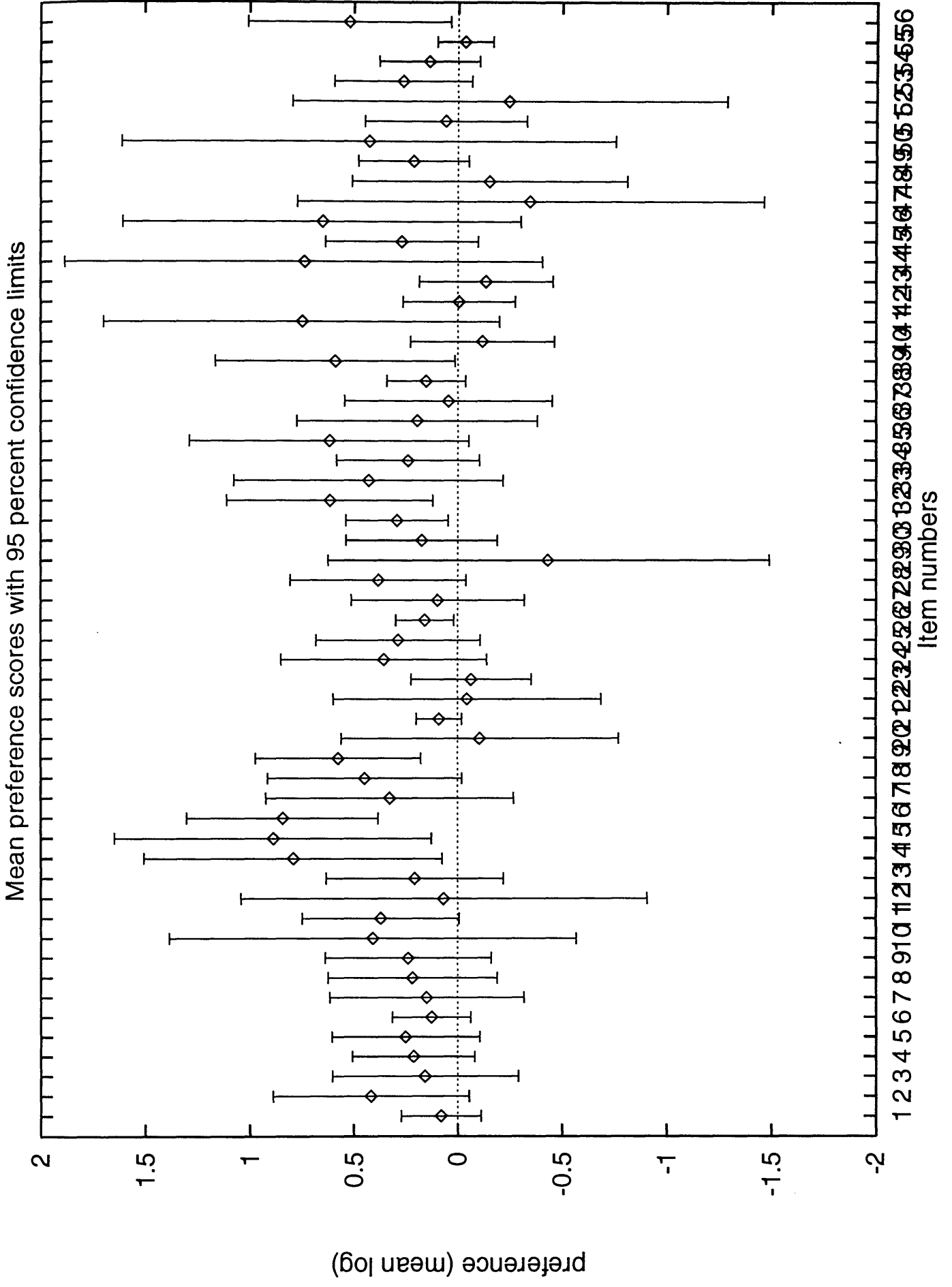
Appendix D (viii) L2 pilot study: Plot graphs of the results of magnitude estimation

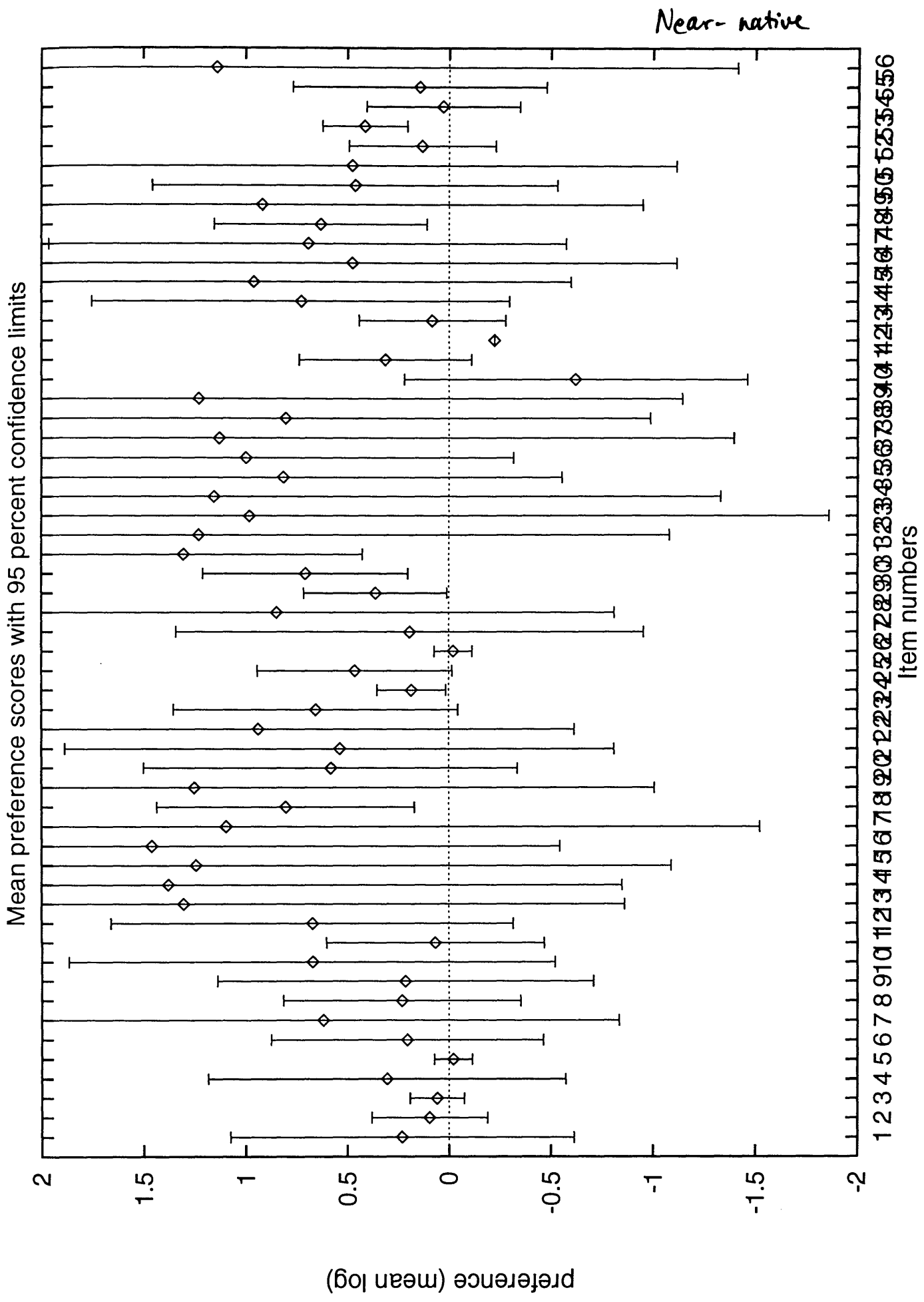
Beginners





Advanced





Appendix E (i): List of experimental sentences for rating on a scale of 1-10

1.

Mit csinálnak a gyerekek?

what-ACC do-they the children

'What are the children doing?'

Éva leckét ír, Jancsi moziba megy.*Eve homework-ACC writes, John cinema-to goes****Éva ír leckét, Jancsi megy moziba.***Eve writes homework-ACC, John goes cinema-to*

'Eve is writing homework, John is going to the cinema.'

2.

Mit csinál egy üzletember?

what-ACC does a businessman

'What does a businessman do?'

Külföldre utazik és üzletet köt.*abroad-to travels and deal-ACC brokers****Utazik külföldre és köt üzletet.***travels abroad-to and brokers deal-ACC*

'He travels abroad and buys and sells.'

3.

Mi az esti programod?

what the evening program-yours

'What are you doing in the evening?'

Tanulni fogok.*study-INF will-I****Fogok tanulni.***will-I study-INF*

'I will be studying.'

4.

Mi a terved nyárra?

what the plan-yours summer-for

'What are your plans for the summer?'

Utazni akarok Európában.*travel-INF want-I Europe-in****Akarok utazni Európában.***want-I travel-INF Europe-in*

'I want to travel in Europe.'

5.

Mi történik a filmben?

what happens the film-in

'What happens in the film?'

A fiú bele-szeret a lányba.*the boy PREF-loves the girl-into****A fiú a lányba bele-szeret.***the boy the girl-into PREF-loves*

'The boys falls in love with the girl.'

6.

Hová mész?

where go-you

'Where are you going?'

Fel-adom a levelet.*PREF-post-I the letter-ACC****A levelet fel-adom.***the letter-ACC PREF-post-I*

'I'm going to post the letter.'

7.

Mit fogsz csinálni a szünetben?
what-ACC will-you do-INF the holidays-in
'What will you do in the holidays?'

El fogom olvasni az Egri Csillagokat.
PREF will-I read-INF the Eger Stars-ACC
***Fogom el-olvasni az Egri Csillagokat.**
will-I PREF-read-INF the Eger Stars-ACC
'I'll read *The Stars of Eger*.'

8.

Mit tud már a kisbaba?
what-ACC knows already the baby
'What can the baby do yet?'

Fel tud öltözni.
PREF knows dress-INF
***Tud fel-öltözni.**
knows PREF-dress-INF
'She can get dressed.'

9.

Miért szeretsz napozni?
why like-you sunbathe-INF
'Why do you like sunbathing?'

Jól esik a napfény.
good feels the sunshine
***A napfény jól esik.**
the sunshine good feels
'I like the sun.'

10.

Miért jött ma Kati gyalog?
why came today Kate on-foot
'Why did Kate come on foot today?'

Kölcsön-adta a kocsiját.
PREF-gave the car-hers-ACC
***A kocsiját kölcsön-adta.**
the car-hers-ACC PREF-gave
'She's lent her car to somebody.'

11.

Mit kell tenni, ha beteg vagy?
what-ACC must do-INF if ill are-you
'What do you have to do if you are ill?'

Gyógyszert kell szedni.
medicine-ACC must take-INF
***Kell gyógyszert szedni.**
must medicine-ACC take-INF
'You have to take some medicine.'

12.

Miért megy János Edinburghba?
why goes John Edinburgh-to
'Why is John going to Edinburgh?'

Részt akar venni a fesztiválon.
part-ACC wants take-INF the festival-on
***Akar részt venni a fesztiválon.**
wants part-ACC take-INF the festival-on
'He wants to perform at the Festival.'

13.

Kit szeret Éva? Az angolokat?
who-ACC likes Eve? the English-ACC
'Who does Eve like? The English?'

A skótokat szereti, nem az angolokat.
the Scots-ACC likes not the English-ACC
***Szereti a skótokat, nem az angolokat.**
likes the Scots-ACC not the English-ACC
'She likes the Scots, not the English.'

14.

Hova megy Zoli? A koncertre?
where goes Zoli? the concert-to?
'Where's Zoli going? To the concert?'

A moziba megy, nem a koncertre.
the cinema-to goes not the concert-to
***Megy a moziba, nem a koncertre.**
goes the cinema-to not the concert-to
'He's going to the cinema, not the concert.'

15.

Mit szokott Tamás csinálni? Teniszezni?
what-ACC habitual Tom do-INF? play-tennis-INF
'What does Tom usually do? Does he play tennis?'

Úszni szokott, nem teniszezni.
swim-INF habitual not play-tennis-INF
***Szokott úszni, nem teniszezni.**
habitual swim-INF not play-tennis-INF
'He usually swims and does not play tennis.'

16.

Mit akarsz enni?
what-ACC want-you eat-INF
'What do you want to eat?'

Inni akarok, nem enni.
drink-INF want-I not eat-INF
***Akarok inni, nem enni.**
want-I drink-INF not eat-INF
'I want to drink, not eat.'

17.

Le-esett a pohár.
down-fell the glass
'The glass has fallen.'
A tányér esett le, nem a pohár.
the plate fell down not the glass
***A tányér le-esett, nem a pohár.**
the plate down-fell not the glass
'It's the plate that's fallen, not the glass.'

18.

Ki-mostad a kabátom?
PREF-washed-you the coat-mine-ACC
'Did you wash my coat?'
A nadrágod mostam ki, nem a kabátod.
the trousers-yours-(ACC) washed-I PREF not the coat-yours-(ACC)
***Ki-mostam a nadrágod, nem a kabátod.**
PREF-washed-I the trousers-yours-(ACC) not the coat-yours-(ACC)
'I washed your trousers, not your coat.'

19.

Délután mész be-vásárolni?
in-the-afternoon go-you PREF-shop-INF
'Are you going shopping in the afternoon?'
Délelőtt fogok be-vásárolni, nem délután.
in-the-morning will-I PREF-shop-INF not in-the-afternoon
***Fogok be-vásárolni délelőtt, nem délután.**
will-I PREF-shop-INF in-the-morning not in-the-afternoon

'I'm doing shopping in the morning, not in the afternoon.'

20.

Át kell szállni az Oktogonnál?

PREF must change-INF the Oktogon-at

'Do you have to change at the Oktogon?'

Az Astoriánál kell át-szállni, nem pedig az Oktogonnál.

the Astoria-at must PREF-change not indeed the Oktogon-at

***Kell át-szállni az Astoriánál, nem pedig az Oktogonnál.**

must PREF-change the Astoria-at not indeed the Oktogon-at

'You have to change at Astoria, not Oktogon.'

21.

Nagypapa sok gyógyszert szed.

grandfather many medicine-ACC takes

'Grandfather takes a lot of medicine.'

Nagymama szed gyógyszert, nem nagypapa.

grandmother takes medicine-ACC not grandfather

***Nagymama gyógyszert szed, nem nagypapa.**

grandmother medicine-ACC takes not grandfather

'It's grandmother who takes medicine, not grandfather.'

22.

Zoli rendbe hozta a házat.

Zoli order-into brought the house-ACC

'Zoli has cleaned up the house.'

A kertét hozta rendbe, nem a házat.

the garden-ACC brought order-into not the house-ACC

***Rendbe hozta a kertét, nem a házat.**

order-into brought the garden-ACC not the house-ACC

'It's the garden he cleaned up, not the house.'

23.

Mi fog változni az új munkahelyeden?

what will change-INF the new workplace-yours-on

'What will be different at your new workplace?'

Később fogok munkába járni.

later will-I work-into go-INF

***Fogok munkába járni később.**

will-I work-into go-INF later

'I'll be leaving for work later in the morning.'

24.

Soha nincs időm.

never is-not time-mine

'I never have enough time.'

Kevesebbet kellene tévét nézni.

less-ACC should TV-ACC watch-INF

***Kellene tévét nézni kevesebbet.**

should TV-ACC watch-INF less-ACC

'You should be watching less TV.'

25.

Szokott sört inni a férjed?

habitual beer-ACC drink-INF the husband-yours

'Does your husband drink beer?'

Nem iszik sört.

not drinks beer-ACC

***Nem sört iszik.**

not beer-ACC drinks

'He doesn't drink beer.'

26.

Szeret fogat mosni a kisfiad?
likes tooth-ACC wash-INF the little-son-yours
'Does your son like brushing his teeth?'

Nem mos fogat.

not washes tooth-ACC

***Nem fogat mos.**

not tooth-ACC washes

'He doesn't brush his teeth.'

27.

Sírni fogsz a fogorvosnál?
cry-INF will-you the dentist-at
'Will you cry at the dentist's?'

Nem fogok sírni.

not will-I cry-INF

***Nem sírni fogok.**

not cry-INF will-I

'I won't cry.'

28.

Tud varrni az anyukád?
can saw-INF the mother-yours
'Can your mother saw?'

Nem tud varrni.

not can saw-INF

***Nem varrni tud.**

not saw-INF can

'She cannot saw.'

29.

El-hitte neked?
PREF-believed you-for
'Did he believe you?'

Nem hitte el.

not believed PREF

***Nem el-hitte.**

not PREF-believed

'He didn't believe me.'

30.

Rá-érsz?
PREF-have-time-you
'Have you got time?'

Nem érek rá.

not have-time PREF

***Nem rá-érek.**

not PREF- have-time

'I haven't got time.'

31.

Mi lesz, ha el-alszol?
what will-be if PREF-sleep-you
'What will happen if you go to sleep?'

Nem fogok el-aludni.

not will-I PREF-sleep-INF

***Nem el fogok aludni.**

not PREF will-I sleep-INF

'I won't go to sleep.'

32.

Meg akarod nézni a filmet?
PREF want-you see-INF the film-ACC
'Do you want to see the film?'

Nem akarom meg-nézni.

not want-I PREF-see-INF

***Nem meg akarom nézni.**

not PREF want-I see-INF

'I don't want to see it.'

33.

Emlékszel a nevére?

remember-you the name-his-onto

'Do you remember his name?'

Nem jut eszembe.

not comes mind-mine-to

***Nem eszembe jut.**

not mind-mine-to comes

'I can remember it just now.'

34.

Egyet-értesz a döntéssel?

PREF-agree-you the decision-with

'Do you agree with the decision?'

Nem értek egyet.

not agree-I PREF

***Nem egyet-értek.**

not PREF-agree

'I don't agree with it.'

35.

Észre szoktad venni?

to-mind habitual-you take-INF

'Do you usually notice it?'

Nem szoktam észre-venni.

not habitual-I to-mind-take-INF

***Nem észre szoktam venni.**

not to-mind habitual-I take-INF

'I don't usually notice it.'

36.

Feleségül akarja venni Évát?

wife-as wants take-INF Eve-ACC

'Does he want to marry Eve?'

Nem akarja feleségül venni.

not wants wife-as take-INF

***Nem feleségül akarja venni.**

not wife-as wants take-INF

'He doesn't want to marry her.'

37.

Angol vagy?

English are-you

'Are you English?'

Nem vagyok angol.

not am-I English

***Nem angol vagyok.**

not English am-I

'I'm not English.'

38.

Biztos vagy benne?

sure are-you in-it

'Are you sure in this?'

Nem vagyok biztos.

not am-I sure

***Nem biztos vagyok.**

not sure am-I

'I'm not sure.'

39.

Mindig ilyen rendetlen a szobád?
always so messy the room-yours
'Is your room always so messy?'

Igen, ritkán csinállok rendet.

yes, rarely make-I order-ACC

***Igen, ritkán rendet csinállok.**

yes, rarely order-ACC make-I

'Yes, I put it in order only rarely.'

40.

Tudtál a franciákkal beszélni?
could-you the French-with talk-INF
'Could you talk to the French?'

Nem, hiába tanultam franciául.

no, in-vain studied-I French

***Nem, hiába franciául tanultam.**

no, in-vain French studied-I

'No, I learnt it in vain.'

41.

Érthető volt az előadás?
understandable was the lecture
'Was the lecture clear?'

Nem. Alig értettem meg.

no, hardly understood-I PREF

***Nem. Alig meg-értettem.**

no, hardly PREF- understood-I

'No, I could hardly understand it.'

42.

Sokszor vagy szomorú?
often are-you sad
'Are you often sad?'

Nem, ritkán szomorodok el.

no, rarely get-sad-I PREF

***Nem, ritkán el-szorodok.**

no, rarely PREF- get-sad-I

'No, I get sad only rarely.'

43.

Érdemes volt korán kelni?
worthwhile was early raise-INF
'Was it worth getting up so early?'

Nem. Hiába keltünk korán.

no, in-vain raised-we early

***Nem. Hiába korán keltünk.**

no, in-vain early raised-we

'No, we shouldn't have got up so early.'

44.

Az orvosok gyakran meg-mossák a kezüket?
the doctors often PREF-wash-they the hands-theirs-ACC
'Do the doctors often wash their hands?'

Nem, ritkán mosnak kezet.

no, rarely wash-they hands-ACC

***Nem, ritkán kezet mosnak.**

no, rarely hands-ACC wash-they

'No, they rarely wash their hands.'

45.

Sok vizsgát kell még le-tenned?
many exam-ACC must yet PREF-take-you-INF
 'Do you have to take lots of exams?'

Nem. Kevés van hátra.

no, few is behind

***Nem. Kevés hátra van.**

no, few behind is

'No, I have only a few.'

46.

Hideg volt a víz az uszodában?
cold was the water the swimming-pool-in
 'Was the water cold in the swimming pool?'

Nem. Alig volt hideg.

no, hardly was cold

***Nem. Alig hideg volt.**

no, hardly cold was

'No it was not so cold.'

47.

Esténként mit csinál a férjed?
evenings what-ACC does the husband-yours
 'What does your husband do in the evenings?'

Mindig tévét néz.

always TV-ACC watches

***Mindig néz tévét.**

always watches TV-ACC

'He always watches TV.'

48.

Miért nem tudsz még magyarul?
why not know-you yet Hungarian
 'Why can't you speak Hungarian yet?'

Mert folyton angolul beszélek.

because always English speak-I

***Mert folyton beszélek angolul.**

because always speak-I English

'Because I always speak English.'

49.

El-hitted, amit mondott?
PREF-believed-you what-ACC said-he
 'Did you believe what he said?'

Igen. Állandóan el-hittem, amit mondott.

yes, always PREF-believed-I what-ACC said-he

***Igen. Állandóan hittem el, amit mondott.**

yes, always believed-I PREF what-ACC said-he

'Yes, I always believed what he said.'

50.

Ági megint beteg?

Agnes again ill

'Is Agnes ill again?'

Igen. Folyton meg-fázik.

yes, always PREF-catches-cold

***Igen. Folyton fázik meg.**

yes, always catches-cold PREF

'Yes, she keeps catching a cold.'

51.

Gyakran gondolod, hogy Zsuzsa egy kicsit bolond?
often think-you that Zsuzsa a little-ACC mad

'Do you often think that Sue is a bit mad?'

Igen. Időnként bolondnak tartom.

yes, sometimes mad-DAT think-I

***Igen. Időnként tartom bolondnak.**

yes, sometimes think-I mad-DAT

‘Yes, I sometimes think she is mad.’

52.

Mindenkinek egyezett a véleménye?

everybody-DAT coincided the opinion-his

‘Did everybody agree?’

Igen. Mindenki egyet-értett.

yes, everybody PREF-agreed

***Igen. Mindenki értett egyet.**

yes, everybody agreed PREF

‘Yes, everybody agreed.’

53.

Sokszor büszkélkedsz a fiaddal?

often boast-you the son-yours-with

‘Do you often boast off with your son?’

Igen. Néha büszke vagyok rá.

yes, sometimes proud am-I onto-him

***Igen. Néha vagyok büszke rá.**

yes, sometimes am-I proud onto-him

‘Yes, sometimes I’m proud of him.’

54.

Milyen lesz novemberben az idő?

what will-be November-in the weather

‘What will the weather be like in November?’

Minden nap esős lesz.

every day rainy will-be

***Minden nap lesz esős.**

every day will-be rainy

‘It will be rainy every day.’

55.

Rosszul hall a nagypapa.

poorly hears the grandfather

‘Grandfather cannot hear well.’

Ki hall rosszul?

who hears poorly?

‘Who cannot hear well?’

***Ki rosszul hall?**

who poorly hears?

‘Who cannot hear well?’

56.

Bátran viselkedett.

bravely behaved

‘He behaved bravely.’

Ki viselkedett bátran?

who behaved bravely

‘Who behaved bravely?’

***Ki bátran viselkedett?**

who bravely behaved

‘Who behaved bravely?’

57.

Készítetek kávét és teát.

make-I coffee-ACC and tea-ACC

‘I’ll make coffee and tea.’

Mit iszol szívesebben?

what-ACC drink-you rather-more

***Mit szívesebben iszol?**

what-ACC rather-more drink-you

‘Which one would you rather have?’

58.

Jól beszél az orosz.

well speaks the Russian-ACC

‘He speaks good Russian.’

Mit beszél jól?

what-ACC speaks well

***Mit jól beszél?**

what-ACC well speaks

‘What does he speak well?’

59.

Mindenkinek van feladata a családban.

everybody-DAT is task-his the family-in

‘Everybody has a task in the family.’

Ki szokott mosogatni?

who habitual wash-up-INF

***Ki mosogatni szokott?**

who wash-up-INF habitual

‘Who does the washing up?’

60.

A nagyfi aludni szeretne.

the granny sleep-INF would-like-she

‘Granny would like to sleep.’

Ki szeretne aludni?

who would-like sleep-INF

***Ki aludni szeretne?**

who sleep-INF would-like

‘Who would like to sleep?’

61.

Új munkát kaptam.

new job-ACC got-I

‘I’ve got a new job.’

Mennyit fogsz keresni?

how-much-ACC will-you earn-INF

***Mennyit keresni fogsz?**

how-much-ACC earn-INF will-you

‘How much will you earn?’

62.

Apa, játsszunk valamit!

daddy, play-SUB-we something-ACC

‘Daddy, let’s play something.’

Mit akarsz játszani?

what-ACC want-you play-INF

***Mit játszani akarsz?**

what-ACC play-INF want-you

‘What do you want to play?’

63.

Valaki meg-érkezett.

somebody PREF arrived

‘Somebody has arrived.’

Ki érkezett meg?

who arrived PREF

***Ki meg-érkezett?**

who PREF- arrived

‘Who has arrived?’

64.

Meg-van a kulcsom.

PREF-is the key-mine

‘I’ve found my key.’

Mi van meg?

what is PREF

***Mi meg-van?**

what PREF-is

‘What have you found?’

65.

Néhány embert meg-hívtam estére.

some people-ACC PREF-invited-I evening-for

‘I’ve invited some people for the evening.’

Kit hívtál meg?

who-ACC invited-you PREF

***Kit meg-hívtál?**

who-ACC PREF-invited-you

‘Who did you invite?’

66.

Jézusom, el-felejtettem.

Jesus-mine, PREF-forgot-I

‘Jesus, I’ve forgotten.’

Mit felejtettél el?

what-ACC forgot-you PREF

***Mit el-felejtettél?**

what-ACC PREF-forgot-you

‘What have you forgotten?’

67.

Meg fog gyógyulni.

PREF will recover-INF

‘She’ll recover.’

Ki fog meg-gyógyulni?

who will PREF-recover-INF

***Ki meg fog gyógyulni?**

who PREF will recover-INF

‘Who will recover?’

68.

Ő is el akar jönni.

he also PREF wants come-INF

‘He also wants to come.’

Ki akar el-jönni?

who wants PREF-come-INF

***Ki el akar jönni?**

who PREF wants come-INF

‘Who wants to come?’

69.

Meg fogok bocsátani neki.

PREF will-I forgive-INF he-DAT

‘I’ll forgive him/her.’

Mit fogsz meg-bocsátani neki?

what-ACC will-you PREF-forgive-INF he-DAT

***Mit meg fogsz bocsátani neki?**

what-ACC PREF will-you forgive-INF he-DAT

‘What will you forgive him/her?’

70.

El tudom olvasni.

PREF can-I read-INF

‘I can read it.’

Mit tudsz el-olvasni?

what-ACC can-you PREF-read-INF

***Mit el tudsz olvasni?**

what-ACC PREF can-you read-INF

‘What can you read?’

71.

Hirtelen eszembe jutott valami.

suddenly mind-mine-to came something

‘Suddenly I remembered something.’

Mi jutott eszedbe?

what came mind-yours-to

***Mi eszedbe jutott?**

what mind-yours-to came

‘What did you remember?’

72.

Olyan lassan múlik ez a hét.

so slowly passes this the week

‘This week goes so slowly.’

Mi múlik lassan?

what passes slowly

***Mi lassan múlik?**

what slowly passes

‘What goes slowly?’

73.

Kati mindig kölcsön-adja a játékait.

Kate always PREF-gives the toys-hers-ACC

‘Kate always lends her toys.’

Most mit adott kölcsön?

now what-ACC gave PREF

***Most mit kölcsön-adott?**

now what-ACC PREF-gave

‘What did she lend now?’

74.

Finomra vágjuk a hagymát.

fine-onto chop-we the onion-ACC

‘We chop the onions finely.’

Mit vágunk finomra?

what-ACC chop-we fine-onto

***Mit finomra vágunk?**

what-ACC finely chop-we

‘What do we chop finely?’

75.

A nagybátyám sokszor néz videót.

the uncle-mine often watches video-ACC

‘My uncle watches a lot of videos.’

Ki szokott videót nézni?

who habitual video-ACC watch-INF

***Ki videót szokott nézni?**

who video-ACC habitual watch-INF

‘Who watches a lot of videos?’

76.

Vacsorát kell főzni.

supper-ACC must cook-INF

‘We have to cook supper.’

Ki akar krumplit pucolni?

who wants potatoes-ACC peel-INF

***Ki krumplit akar pucolni?**

who potatoes-ACC wants peel-INF

'Who wants to peel potatoes?'

77.

Tamás házasodni akar.

Tom marry-INF wants

'Tom wants to get married.'

Kit fog feleségül venni?

who-ACC will-he wife-as take-INF

***Kit feleségül fog venni?**

who-ACC wife-as will-he take-INF

'Who does he want to marry?'

78.

Az egész ház rendetlen.

the whole house messy

'The whole house is a mess.'

Mit kell rendbe tenni?

what-ACC must order-into put-INF

***Mit rendbe kell tenni?**

what-ACC order-into must put-INF

'What needs to be cleaned?'

79.

Mondtam, hogy Katit Párizsban ismertem meg.

said-I that Kate-ACC Paris-in learnt-I PREF

'I said I met Kate in Paris.'

De én azt kérdeztem, hogy melyik városban ismerted Évát meg?

but I that-ACC asked-I that which city-in met-you Eve-ACC PREF

De én azt kérdeztem, hogy melyik városban ismerted meg Évát?

but I that-ACC asked-I that which city-in met-you PREF Eve-ACC

'But I asked which town did you meet Eve in?'

80.

Péter nem ment be matek órára.

Peter not went in Maths lesson-to

'Peter didn't go to Maths.'

De a tanár azt akarta tudni, hogy melyik órára nem ment János be?

but the teacher that-ACC wanted know-INF that which lesson-to not went John PREF

De a tanár azt akarta tudni, hogy melyik órára nem ment be János?

but the teacher that-ACC wanted know-INF that which lesson-to not went PREF John

'But the teacher wanted to know which lesson did John not go into?'

81.

János bántott meg téged, vagy fordítva?

John hurt PREF you-ACC or vice versa

'Did John hurt you or did you hurt him?'

Nem, én bántottam őt meg.

no, I hurt-I him PREF

Nem, én bántottam meg őt.

no, I hurt-I PREF him

'No, I hurt him.'

82.

Ő hívott meg bennünket?

he invited PREF us

'Did he invite us?'

Fordítva, én hívtam őt meg.

other-way-round, I invited-I him PREF

Fordítva, én hívtam meg őt.

other-way-round, I invited-I PREF him

'No, I invited him.'

83.

Laci és Éva telefonon beszélgettek.

Laci and Eve phone-on talked-they

‘Laci and Eve were talking on the phone.’

Ki hívott fel kit?

who called PREF who-ACC

Ki kit hívott fel?

who who-ACC called PREF

‘Who called up whom?’

84.

Két birkózó volt a ringben.

two wrestler was the ring-in

‘There were two wrestlers in the ring.’

Ki vert meg kit?

who beat PREF who-ACC

Ki kit vert meg?

who who-ACC beat PREF

‘Who beat whom?’

85.

Osztálytalálkozót tartottunk, és sokan el-jöttek.

class-reunion-ACC held-we and many PREF-came-they

‘We had a class reunion and lots of people turned up.’

Ki kit ismert fel?

who whom recognised PREF

Ki ismert fel kit?

who recognised PREF whom

‘Who recognised whom?’

86.

A nőnapon minden férfi fel-köszöntött egy nőt.

the women 's-day-on every man PREF-greeted a woman-ACC

‘On international women’s day every man greeted a woman.’

Ki kit köszöntött fel?

who whom greeted PREF

Ki köszöntött fel kit?

who greeted PREF whom

‘Who greeted whom?’

87.

Át-nézem még egyszer a feladatot, hátha van benne hiba.

PREF-look-I yet once the task-ACC in-case is in-it mistake

‘I’ll go through the exercise in case there is a mistake in it.’

Nem lenne jó hibásan adni be.

not would-be good faulty hand-INF in

Nem lenne jó hibásan be-adni.

not would-be good faulty in- hand-INF

‘It wouldn’t be good to hand it in with mistakes in it.’

88.

Ez szörnyű élmény volt!

this horrific experience was

‘This was a horrific experience.’

Jó lenne ezt ritkábban élni át.

good would-be this-ACC rarely-more live-INF through

Jó lenne ezt ritkábban át-élni.

good would-be this-ACC rarely-more through-live-INF

‘I wish I didn’t have to live through it again.’

89.

Apu nem igazán tud ebben segíteni.

Dad not really can-he in-this help-INF

‘Dad cannot really help with this.’

Jobb lenne anyut hívni fel.
better would-be Mom-ACC call-INF up
Jobb lenne anyut fel-hívni.
better would-be Mom-ACC up-call-INF
'We'd better call Mum.'

90.

Péter nem tud autót szerelni.
Peter not can-he auto-ACC fix-INF
'Peter cannot fix cars.'

Jobban szeretném Jánoshoz vinni el az autót.
better would-like-I John-to take-INF PREF the car-ACC

Jobban szeretném Jánoshoz el-vinni az autót.
better would-like-I John-to PREF-take-INF the car-ACC

'I'd rather take it to John.'

91.

Azt mondják, valaki be-csapta Máriát.
that-ACC say-they somebody PREF-cheated Mary-ACC
'They say somebody cheated Mary.'

Kit mondanak, hogy be-csapta Máriát?
who-ACC say-they that PREF-cheated Mary-ACC

***Kit mondanak, be-csapta Máriát?**
who-ACC say-they PREF-cheated Mary-ACC

Mit mondanak, hogy ki csapta be Máriát?
what-ACC say-they that who cheated PREF Mary-ACC

'Who do they say cheated Mary?'

92.

Azt hiszem, valami eszébe jutott.
that-ACC believe-I something mind-his-to came
'I think he remembered something.'

Mit hiszel, hogy eszébe jutott?
what-ACC believe-you that mind-his-to came

***Mit hiszel, eszébe jutott?**
what-ACC believe-you mind-his-to came

Mit hiszel, hogy mi jutott eszébe?
what-ACC believe-you that what came mind-his-to

'What do you think he remembered?'

93.

Gondolom, meg-nézték a kastélyt.
think-I PREF-saw-they the palace-ACC
'I believe they had a look at the palace.'

Mit gondolsz, hogy meg-néztek?
what-ACC think-you that PREF-saw-they

***Mit gondolsz, meg-néztek?**
what-ACC think-you PREF-saw-they

Mit gondolsz, hogy mit néztek meg?
what-ACC think-you that what-ACC saw-they PREF

'What do you believe they had a look at?'

94.

Azt hiszem, a tanár észrevette a csalást.
that-ACC believe-I the teacher mind-to-took the cheating-ACC
'I think the teacher noticed the cheating.'

Mit hiszel, hogy a tanár észrevett?
what-ACC believe-you that the teacher mind-to-took

***Mit hiszel, a tanár észre-vett?**
what-ACC believe-you the teacher mind-to-took

Mit hiszel, hogy mit vett észre a tanár?
what-ACC believe-you that what-ACC took mind-to the teacher

'What do you think the teacher noticed?'

95.

Gondolom, hogy a jövő héten haza-jön a fiunk.
think-I that the next week-on home-comes the son-ours
 'I think our son is coming home next week.'

Mikor gondolod, hogy haza-jön?

when think-you that home-comes

***Mikor gondolod, haza-jön?**

when think-you home-comes

Mit gondolsz, hogy mikor jön haza?

what-ACC think-you that when comes home

'When do you think he is coming home?'

96.

Tudom, hogy valakivel együtt-jár.
know-I that somebody-with together-goes-he
 'I know he's going out with somebody.'

Kivel tudod, hogy együtt-jár?

who-with know-you that together-goes-he

***Kivel tudod, együtt-jár?**

who-with know-you together-goes-he

Mit tudsz, hogy kivel jár együtt?

what-ACC know-you that who-with goes together

'Who do you know he's going out with?'

97.

Azt akarom, hogy orvos nézze meg a gyermeket.
that-ACC want-I that doctor look-SUB-he PREF the child-ACC
 'I want a doctor to see the child.'

Kit akarsz, hogy meg-nézze a gyermeket?

who-ACC want-you that PREF-look-SUB-he the child-ACC

***Kit akarsz, meg-nézze a gyermeket?**

who-ACC want-you PREF-look-SUB-he the child-ACC

Mit akarsz, hogy ki nézze meg a gyermeket?

what-ACC want-you that who look-SUB-he PREF the child-ACC

'Who do you want to see the child?'

98.

Azt szeretném, hogy Éva készítsen reggelit.
that-ACC would-like-I that Eve make-SUB-she breakfast-ACC
 'I would like Eve to make breakfast.'

Kit szeretnél, hogy reggelit készítsen?

who-ACC would-like-you that breakfast-ACC make-SUB-she

***Kit szeretnél, reggelit készítsen?**

who-ACC would-like-you breakfast-ACC make-SUB-she

Mit szeretnél, hogy ki készítsen reggelit?

what-ACC would-like-you that who make-SUB-she breakfast-ACC

'Who would you like to make breakfast?'

99.

Azt akarom, hogy a húgát mutassa be.
that-ACC want-I that the sister-his-ACC introduce-SUB-he PREF
 'I want him to introduce his sister.'

Kit akarsz, hogy be-mutasson?

who-ACC want-you that PREF-introduce-SUB-he

***Kit akarsz, be-mutasson?**

who-ACC want-you PREF-introduce-SUB-he

Mit akarsz, hogy kit mutasson be?

what-ACC want-you that who-ACC introduce-SUB-he PREF

'Who do you want him to introduce?'

100.

Szeretném, ha a szobádat rendbe-raknád.
would-like-I if the room-yours-ACC order-into-take-COND-you
'I would like you to clean up your room.'

Mit szeretnél, hogy rendbe rakjak?
what-ACC would-like-you that order-into take-SUB-I

***Mit szeretnél, rendbe rakjak?**
what-ACC would-like-you order-into take-SUB-I

Mit szeretnél, hogy mit rakjak rendbe?
what-ACC would-like-you that what-ACC take-SUB-I order-into
'What would you like me to clean up?'

101.

Szeretném, ha Amerikába utaznánk el.
would-like-I if America-to travel-COND-we PREF
'I would like to travel to America.'

Hova szeretnéd, hogy el-utazzunk?
where would-like-you that PREF-travel-SUB-we

***Hova szeretnéd, el-utazzunk?**
where would-like-you PREF-travel-SUB-we

Mit szeretnél, hogy hova utazzunk el?
what-ACC would-like-you that where travel-SUB-we PREF
'Where would you like to travel?'

102.

Béreljünk egy autót valahol.
hire-SUB-we a car-ACC somewhere
'Let's hire a car somewhere.'

Hol akarod, hogy autót béreljünk?
where want-you that car-ACC hire-SUB-we

***Hol akarod, autót béreljünk?**
where want-you car-ACC hire-SUB-we

Mit akarsz, hogy hol béreljünk autót?
what-ACC want-you that where hire-SUB-we car-ACC
'Where do you want to hire a car?'

103.

Azt mondják, valaki el-vette Jutkát.
that-ACC say-they somebody PREF-married Judy-ACC
'They say somebody married Jude.'

Mit mondanak, hogy ki vette el Jutkát?
what-ACC say-they that who married PREF Judy-ACC

***Mit mondanak, hogy ki el-vette Jutkát?**
what-ACC say-they that who PREF-married Judy-ACC
'Who do they say married Jude?'

104.

Azt hiszem, a fejembe szállt a bor.
that-ACC believe-I the head-mine-into flew the wine
'I think the wine has gone right into my head.'

Mit hiszel, hogy mi szállt a fejedbe?
what-ACC believe-you that what flew the head-yours-into

***Mit hiszel, hogy mi a fejedbe szállt?**
what-ACC believe-you that what the head-yours-into flew
'What do you think has gone right into your head?'

105.

Gondolom, meg-kérdezte az apját.
think-I PREF-asked-she the father-hers-ACC
'I think she asked her father.'

Mit gondolsz, hogy kit kérdezett meg?
what-ACC think-you that who-ACC asked PREF

***Mit gondolsz, hogy kit meg-kérdezett?**

Appendix E (i) Main study: List of experimental sentences for rating on a scale of 1-10

what-ACC think-you that who-ACC PREF-asked

'Who do you think she asked?'

106.

Azt hiszem, a kormány nyilvánosságra hozta a döntést.

that-ACC believe-I the government public-into brought the decision

'I think the government has announced the decision.'

Mit hiszel, hogy mit hozott nyilvánosságra a kormány?

what-ACC believe-you that what-ACC brought public-into the government

***Mit hiszel, hogy mit nyilvánosságra hozott a kormány?**

what-ACC believe-you that what-ACC public-into brought the government

'What do you think that the government has announced?'

107.

Gondolom, valahol kiesett a táskából a kulcs.

think-I somewhere PREF-fell the bag-mine-from the key

'I think my keys have fallen out of my bag.'

Mit gondolsz, hogy hol esett ki a táskából?

what-ACC think-you that where fell PREF the bag-yours-from

***Mit gondolsz, hogy hol ki-esett ki a táskából?**

what-ACC think-you that where PREF-fell the bag-yours-from

'Where do you think they fell out?'

108.

Tudom, hogy tegnap otthon maradt.

know-I that yesterday at-home stayed-he

'I know he stayed at home yesterday.'

Mit tudsz, hogy miért maradt otthon?

what-ACC know-you that why stayed-he at-home

***Mit tudsz, hogy miért otthon maradt?**

what-ACC know-you that why at-home stayed-he

'He stayed at home? Why?'

109.

Azt akarjuk, hogy ne az igazgató mondja el a beszédet.

that-ACC want-we that no the director tell-SUB-he PREF the speech-ACC

Mit akartok, hogy ki mondja el a beszédet?

what-ACC want-you-pl that who say-SUB-he PREF the speech-ACC

***Mit akartok, hogy ki el-mondja a beszédet?**

what-ACC want-you-pl that who PREF-say-SUB-he the speech-ACC

'Who would you like to hold the speech?'

110.

Azt szeretném, hogy ők is részt vegyenek.

that-ACC like-COND-I that they too part-ACC take-SUB-they

'I would like them too to take part.'

Mit szeretnél, hogy ki vegyen részt?

what-ACC like-COND-you that who take-SUB-he part-ACC

***Mit szeretnél, hogy ki részt vegyen?**

what-ACC like-COND-you that who part-ACC take-SUB-he

'Who would you like to take part?'

111.

Azt akarom, hogy a spenótot kóstold meg.

that-ACC want-I that the spinach-ACC taste-SUB-you PREF

'I want you to try the spinach.'

Mit akarsz, hogy mit kóstoljak meg?

what-ACC want-you that what-ACC taste-SUB-I PREF

***Mit akarsz, hogy mit meg-kóstoljak?**

what-ACC want-you that what-ACC PREF-taste-SUB-I

'What do you want me to try?'

112.

Szeretném, ha a széket helyre tennéd.
like-COND-I if the chair-ACC place-to put-COND-you
'I would like you to put the chair back.'

Mit szeretnél, hogy mit tegyek helyre?
what-ACC like-COND-you that what-ACC put-SUB-I place-into
***Mit szeretnél, hogy mit helyre tegyek?**
what-ACC like-COND-you that what-ACC place-into put-SUB-I
'What would you like me to put back?'

113.

Szeretném, ha sokszor meg-látogatnál bennünket.
like-COND-I if often PREF-visit-COND-you-sg us-ACC
'I would like you to visit us often.'

Mit szeretnél, hogy hányszor látogassalak meg benneteket?
what-ACC like-COND-you-sg that how many times visit-SUB-I PREF you-pl-ACC
***Mit szeretnél, hogy hányszor meg-látogassalak benneteket?**
what-ACC like-COND-you-sg that how many times PREF-visit-SUB-I you-pl-ACC
'How many time would you like me to visit you?'

114.

Kérjünk kölcsön egy magnót.
ask-SUB-we loan a cassette-player-ACC
'Let's borrow a cassette player.'

Mit akarsz, hogy kitől kérjünk kölcsön egy magnót?
what-ACC want-you that who-from ask-SUB-we loan a cassette-player-ACC
***Mit akarsz, hogy kitől kölcsön kérjünk egy magnót?**
what-ACC want-you that who-from loan ask-SUB-we a cassette-player-ACC
'Who do you want to borrow a cassette-player from?'

115.

Tegnap nem tudtam el-menni az autóversenyre.
yesterday not could-I PREF-go-INF the car-race-to
'Yesterday I could not go to the car race.'

Nem tudom, hogy kinek az autója nyerte meg a versenyt.
not know-I that whose the car-his won PREF the race-ACC
***Nem tudom, hogy kinek az autója meg-nyerte a versenyt.**
not know-I that whose the car-his PREF-won the race-ACC
'I don't know whose car won the race.'

116.

Tegnap szülőértekezletet tartottunk.
yesterday parent-meeting-ACC held-us
'Yesterday we held a parents' meeting.'

Azt akartuk meg-nézni, hogy melyik gyerek anyukája jön el.
that-ACC wanted-we PREF-see-INF that which child mom-his come PREF
***Azt akartuk meg-nézni, hogy melyik gyerek anyukája el-jön.**
that-ACC wanted-we PREF-see-INF that which child mom-his PREF-come
'We wanted to see which child's mother will come.'

117.

Miből vizsgáztál?
what-from exam-took-you
'What did you take an exam in?'

Azt kérdezed, hogy milyen vizsgát tettem le?
that-ACC ask-you that what exam-ACC took-I PREF
***Azt kérdezed, hogy milyen vizsgát le-tettem?**
that-ACC ask-you that what exam-ACC PREF-took-I
'Are you asking what exams I have already taken?'

118.

Az nem számít, hogy mit láttál a tévében.
that not matters that what-ACC saw-you the TV-in
'It doesn't matter what you saw on TV.'

Az érdekel, hogy mit olvastál el.
that interests-me that what-ACC read-you PREF

***Az érdekel, hogy mit el-olvastál.**
that interests-me that what-ACC PREF- read-you
 'I'm interested in what you've read.'

119.

Nem működik a telefonom.
not works the telephone-mine
 'My phone is out of order.'

Tegnap azt mondtad, hogy a tévéd ment tönkre!
yesterday that-ACC said-you that the TV-yours went wrong

***Tegnap azt mondtad, hogy a tévéd tönkre ment!**
yesterday that-ACC said-you that the TV-yours wrong went
 'Yesterday you said your TV was out of order.'

120.

A szomszéd lakást meg-vették.
the neighbour flat-ACC PREF-bought-they
 'The flat next door has been bought.'

Azt hiszem, hogy a Szabóék vették meg.
that-ACC think-I that the Szabós bought-they PREF

***Azt hiszem, hogy a Szabóék meg-vették.**
that-ACC think-I that the Szabós PREF-bought-they
 'I think the Szabós bought it.'

121.

Szépen el-mosogatott a lányod.
nicey PREF-washed-up the daughter-yours
 'Your daughter did a nice job washing up.'

Csak az zavar, hogy túl sok poharat tört össze!
only that bothers-me that too many glass-ACC broke-she PREF

***Csak az zavar, hogy túl sok poharat össze-tört!**
only that bothers-me that too many glass-ACC PREF-broke-she
 'I'm only worried because she broke too many glasses.'

122.

Tudtad, hogy Józsi el-vette Katit?
knew-you that Joseph PREF-married Kate-ACC
 'Did you know that Joseph married Kate?'

Nem tudtam, hogy Katit vette feleségül.
not knew-I that Kate-ACC took wife-as

***Nem tudtam, hogy Katit feleségül vette.**
not knew-I that Kate-ACC wife-as took
 'I didn't know that he married Kate.'

123.

Be-fejezte az egyetemet?
PREF-finished-he the university-ACC
 'Did he finish university?'

Azt mondta, hogy még nem fejezte be.
that-ACC said-he that yet not finished-he PREF

***Azt mondta, hogy még nem be-fejezte.**
that-ACC said-he that yet not PREF-finished-he
 'He said he hadn't finished it yet.'

124.

El-váltak a szülei?
PREF-divorced the parents-his
 'Have his parents got divorced?'

Úgy hallottam, hogy nem váltak el.
so heard-I that not divorced PREF

***Úgy hallottam, hogy nem el- váltak.**
so heard-I that not PREF-divorced

'I heard that they haven't had a divorce yet.'

125.

Mari adott egy almát Jánosnak.

Mari gave-she an apple-ACC John-to

'Mary gave John an apple.'

***János nem szeret az alma.**

John not like-INDEF the apple-NOM

'John does not like apples.'

126.

A háziasszony hozott nekünk tortát.

the hostess brought-she us-for cake-ACC

'The hostess brought us some cake.'

***A torta nem szeretünk.**

the cake-NOM not like-we-INDEF

'We do not like cake.'

127.

Mit csinálnak a gyerekek?

what-ACC do-they the children

'What are the children doing?'

***Meg-esznek a fagyit.**

PREF-eat-they-INDEF the ice-cream-NOM

'They eat ice-cream.'

128.

Honnan van kutyájuk?

where-from is dog theirs

'Where do they have a dog from?'

***Meg-találtak egy kiskutyát.**

PREF-found-they-INDEF a puppy-NOM

'They found a puppy.'

129.

Én meg-főzöm a vacsorát.

I PREF-cook-I the supper-ACC

'I'll cook supper.'

***És mi csinálom én?**

and what-NOM do-DEF I

'And what will I do?'

130.

Szereted a kollegáidat?

like-you the colleagues-yours-ACC

'Do you like your colleagues?'

***Nem nagyon szeretem mindenki.**

not very like-I everybody-NOM

'I don't like everybody very much.'

131.

Élvezed a tanítást?

enjoy-you the teaching-ACC

'Do you enjoy teaching?'

***Igen. Nagyon szeretem előadás tartani.**

yes very like-I-DEF lecture-NOM hold-INF

'Yes, I like giving lectures.'

132.

Lát engem, Mariska néni?

see-you-sg me-ACC, Mary aunt

'Can you see me aunt Mary?'

***Sajnos te nem látom már.**

unfortunately you-NOM not see-it already

'Unfortunately I cannot see you any more.'

Appendix E (i) Main study: List of experimental sentences for rating on a scale of 1-10

133.

Miért nem szeretted a Karácsonyt?

why not like-you the Christmas-ACC

'Why do you not like Christmas?'

***Sokan van az üzletek.**

many is the shops

'There are many people in the shops.'

134.

Magyarországon hol lehet gyümölcsöt venni?

Hungary-on where possible fruit-ACC buy-INF

'Where can you buy fruits in Hungary?'

***Rengetegen vásárol a piac.**

many shop-he the market

'Lots of people go to the market place.'

135.

Miért nem mész ki a térre?

why not go-you out the square-to

'Why don' you go out to the square?'

***Mert az messze.**

because that far

'Because it is far.'

136.

Miért nem vetted meg a tankönyveket?

why not buy-you PREF the course-books-ACC

'Why didn't you buy the course books?'

***Mert az túl drága van.**

because that too expensive is

'Because they are too expensive.'

Appendix E (ii) Main study: Cover letter (sent
-from Hungary)

6725 Szeged
Apalca u. 26
Tel.: 06/62/310 016
10/12/96

Dear Speaker of Hungarian,

Thank you very much for offering to assist me in the linguistic experiment I am doing for my PhD thesis. You are one of the 240 people who will take part in this study. It is the first of its kind, so your help is greatly appreciated. The completion of the test should take you approximately an hour.

Please find enclosed the materials necessary for the experiment. On the first page you will find the Instructions for the rating task. The next eleven pages contain the actual linguistic materials. You are kindly asked to follow the instructions and record your answers on the following Answersheet. Please do not write on the pages with the Hungarian sentences on. This task should take about 30 mins.

Next, on the Questionnaire I would like to ask some questions about you and your linguistic experiences. It will take you less than 10 mins to answer all the questions.

Finally, please spend 20 mins at the most on the last task. It is a so-called cloze-test consisting of three short passages from a popular Hungarian magazine.

Once finished, please put all of the materials (incl. the Hungarian sentences for re-cycling) into the envelope and post it to me as soon as possible, ~~but not later than by 15 January.~~

If you know of anybody else who would be interested in taking part in this experiment, please send me their address.

And finally, please feel free to keep in touch with me if you have any queries or comments about this study. If you are interested, I will try to find a way to let you know about the results, findings and my interpretations of the study. I will be in Hungary until the 22nd January 1997 under the above address, but

afterwards you can contact me at

Silvia Papp

The University of Edinburgh
Department of Applied Linguistics
14 Buccleuch Place
Edinburgh EH8 9LN

Tel: 00 44 131 650 3864

Fax: 00 44 131 650 6526

email: papps@srvø.apl.ed.ac.uk

Thank you for your kind co-operation in this study.
I hope you will enjoy doing the test. And last but
not least please let me express my respect for you
for studying Hungarian, this beautiful unique language.

Yours

Silvia

The University of Edinburgh
Department of Applied Linguistics
14 Buccleuch Place
Edinburgh EH8 9LN
Tel: day: 0131 650 3864/6881,
evening: 0131 553 5684
e-mail: papps@srv0.apl.ed.ac.uk

3rd February, 1997

Dear Speaker of Hungarian,

Thank you very much for offering to assist me in the linguistic experiment I am doing for my PhD thesis. You are one of the 240 people who will take part in this study. It is the first of its kind, so your help is greatly appreciated. If you follow the instructions closely, the completion of the test should take you approximately an hour.

Please find enclosed the materials necessary for the experiment. On the first page you will find the **Instructions for the rating task**. The next eleven pages contain the actual linguistic materials. You are kindly asked to follow the instructions and record your answers on the following **Answersheet**. (Please feel free to take the staple off to remove the Answersheet.) Please do not write on the pages with the Hungarian sentences on. This task should take about 30 mins.

Next, on the **Questionnaire** I would like to ask some questions about you and your linguistic experiences. It will take you less than 10 mins to answer all the questions.

Finally, please spend 20 mins at the most on the last task. It is a so-called **Cloze-test** consisting of three short passages from a popular Hungarian magazine. Please do not leave this task out. Do attempt to fill in the gaps with the missing words even if you find the first passage too difficult.

Once finished, please put all of the materials (including the Hungarian sentences for re-use) into the envelope and post it to me as soon as possible.

If you know of anybody else who would be interested in taking part in this experiment, please send me their address.

And finally, please feel free to keep in touch with me if you have any queries or comments about this study. If you are interested, I will try to find a way to let you know about the results of this experiment, my findings and also my interpretations of this study. I can be contacted at the above address.

Thank you for your kind co-operation in this study. I hope you will enjoy doing the test. And last but not least please let me express my respect for you for studying Hungarian, this beautiful unique language.

Yours,



Szilvia Papp

Appendix E (iii) Main study: Instructions for rating (Hungarian)

Instrukciók

Szeretném, ha eldöntened, vajon néhány mondat lehetségesen előfordulhat-e a magyar nyelvben.

A következőkben két mondatot fogsz látni egyszerre. Az első csak azért van, hogy háttérkönyvetet szolgáljon a második mondatnak. A második mondatról kell eldöntened, vajon jól hangzik-e vagy sem, és ítéletednek megfelelően egy 1-től 10-ig terjedő számot kell adnod neki.

Ha úgy gondolod, hogy a mondat nagyon rossz, 1-est fogsz neki adni, és ha úgy döntesz, hogy egy mondat teljesen jó, 10-est fogsz neki adni. Azonban a mondatokhoz, amik nem teljesen jók vagy rosszak, kérek adj az 1-től 10-ig terjedő skálán bármely számot. Próbáld használni a skálán az összes értéket.

A spontán benyomásaidra vagyok kíváncsi, így légy szíves ne változtasd meg a válaszodat, ha már egyszer döntöttél. Ne gondolkodj túl sokat 'nyelvtani szabályokon'. Mikor megválaszoltál egy mondatot, ne nézz vissza az előző mondatokra.

Néhány mondat furcsán fog hangzani. Mindegyikre más a véleménye, hogy pontosan mennyire rosszak ezek a mondatok. Ezekben az esetekben középű számokkal illesd a bizonytalan helyességi mondatot. Nincsenek 'helyes' válaszok ebben a kísérletben, így bármilyen választ ad értékelhető adatot szolgálhat számomra. Még egyszer, ha nem vagy biztos egy mondatban, kérek adj egy középű értéket neki a skálán.

Olvasd el a mondatokat figyelmesen mielőtt válaszolsz. A második mondat helyességére koncentrálj. Nagyon fontos, hogy az összes kérdésre válaszolj. Ne hagyd ki egyet sem. Ne felejtse a válaszádat a különálló Answer sheet-re /válaszlapon/ írni.

36 mondatpár van a tesztben. Maximum 30 perc alatt mindegyiket meg lehet válaszolni. Az elején 5 mondatpár szolgál gyakorlásként.

Még egyszer:

- Mindig a második mondatot kell értékelni.
- Használd az összes értéket 1 és 10 között, hogy minél több nyelvtani helyességi fokot meg tudj különböztetni. A legrosszabb az 1-es, a legjobb a 10-es, de a kettő között van 8 különböző érték. Nyugodtan használd mind a 10 értéket.
- Középű értéket használj azoknál a mondatoknál, amelyek előfordulhatnak száraz közepes, vagy nem tudod eldönteni, hogy mennyire helyes a mondat.
- Ne hagyd ki egy mondatpárt se.

Appendix E (iii) Main study: Instructions for rating (English)

Instructions for rating task

This is a linguistic experiment designed to find out how and to what extent the grammar of English, your native language, affects your intuitions about the grammar of Hungarian. Therefore I would like your opinion on some Hungarian sentences.

I want you to decide whether sentences are 'possible' sentences in Hungarian. That is, what you intuitively 'feel' about the sentences rather than what is 'correct' according to some 'grammar rule'.

On the following pages two sentences will be shown to you at a time. The first sentence is only there for you to give a context for the second. You will have to decide whether the *second sentence* sounds good or not and assign it a number between 1 and 10 according to your judgement. If you think the sentence sounds very bad, you give it a 1, and if you decide that a sentence sounds absolutely good, you will give it 10. For sentences that are not absolutely good or bad, please assign any number on the scale from 1 to 10. Please try to judge sentences using *the whole range* between 1 and 10.

I am interested in your spontaneous impressions of the sentences, so please don't change your answer once you've decided. Please do not spend too long thinking about 'grammar rules'. Once you've answered a question, please do not look back at previous sentences.

Some sentences will sound strange. Everybody has a different opinion as to exactly how bad these sentences sound. Even Hungarian native speakers cannot agree on them! So if you are not sure whether a sentence is correct or not, it's possible that a Hungarian person would agree with you. So don't worry if you can't decide or if you don't know. I don't expect you to have a definite opinion about every sentence. You can indicate your uncertainty by assigning the item an intermediate number on the scale. There are no 'correct' answers, so whatever seems right to you is a valid response. Remember that if you are not sure about a sentence, please give it an intermediate number on the scale.

Please read each item carefully before you answer. Concentrate on the structure of the *second sentence*. It is very important that you answer all the questions. Please don't leave any out. Remember to write each of your answers on the separate answer sheet provided. Do not consult a native speaker or a dictionary, otherwise your data will invalidate the results.

There are 136 sentences to judge here. It should take you *at most 30 minutes* to answer all of them. At the beginning you'll have a chance to practice on five items.

Please remember:

- This experiment is not a test of proficiency since there are no 'correct' or 'wrong' answers. Whatever opinion you express will be useful and interesting.
- You are judging the *second sentence* each time.
- Use *all* of the numbers between 1 and 10 to distinguish a wide range of acceptability. The worst judgement is 1 and the best judgement is 10, but there are 8 different grades in between on the scale. Try to distinguish as many degrees of acceptability as you can, so feel free to *use all of the numbers!*
- Use intermediate numbers for sentences which are intermediate in acceptability or in cases when you can't decide or don't know the answer.
- Do not leave any questions unanswered on the answer sheet.
- Do not consult a native speaker or a dictionary.
- Please do not write your name.

THANK YOU FOR YOUR KIND CO-OPERATION. Let's start.

| | |
|-------------|---|
| Practice 1. | Hányan voltak a boltban? Sok ember voltak a boltban. |
| Practice 2. | Tegnap nem volt iskolában. Ki nem volt iskolában tegnap? |
| Practice 3. | Ki jött el? Senki eljött. |
| Practice 4. | Tudsz magyarul beszélni? Igen, már két éve tanulok. |
| Practice 5. | Mit láttál Angliában? Látok a királynő. |

Now please start. Remember: Read each item only once and assign it a number immediately. Do not change your decision once you have decided. Do not look back to an item once you have answered it. Try to use *all* the numbers, including 1 and 10. If you are not sure about an item, give it an intermediate number. Write the appropriate number on the answersheet for each item. Please do not consult a native speaker or a dictionary!

| | |
|----|--|
| 1. | Tudom, hogy valakivel együttjár. Kivel tudod, hogy együttjár? |
| 2. | A háziasszony hozott nekünk tortát. A torta nem szeretünk. |
| 3. | Ráérsz? Nem érek rá. |
| 4. | Magyarországon hol lehet gyümölcsöt venni? Rengetegen vásárol a piac. |
| 5. | Mindenkinek van feladata a családban. Ki mosogatni szokott? |
| 6. | Az nem számít, hogy mit láttál a tévében. Az érdekel, hogy mit olvastál el. |
| 7. | Elhitted, amit mondott? Igen. Állandóan hittem el, amit mondott. |

| | |
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| 8. | Kati mindig kölcsönadja a játékeit. Most mit kölcsönadott? |
| 9. | Miért szeretsz napozni? A napfény jól esik. |
| 10. | Sok vizsgát kell még letenned? Nem. Kevés hátra van. |
| 11. | Emlékszel a nevére? Nem eszembe jut. |
| 12. | Hová mész? Feladom a levelet. |
| 13. | Mit csinálnak a gyerekek? Éva ír leckét, Jancsi megy moziba. |
| 14. | Egyetértesz a döntéssel? Nem értek egyet. |
| 15. | Meg fog gyógyulni. Ki meg fog gyógyulni? |
| 16. | Mindig ilyen rendetlen a szobád? Igen, ritkán rendet csinálok. |
| 17. | Miből vizsgáztál? Azt kérdezed, hogy milyen vizsgát letettem? |
| 18. | Nem működik a telefonom. Tegnap azt mondtad, hogy a tévéd tönkrement! |
| 19. | Gyakran gondolod, hogy Zsuzsa egy kicsit bolond? Igen. Időnként tartom bolondnak. |
| 20. | Elhitte neked? Nem elhitte. |

| | |
|-----|--|
| 21. | Készítek kávét és teát. Mit szívesebben iszol? |
| 22. | Azt akarom, hogy a spenótot kóstold meg. Mit akarsz, hogy mit megkóstoljak? |
| 23. | Mi fog változni az új munkahelyeden? Fogok munkába járni később. |
| 24. | Mit csinál egy üzletember? Külföldre utazik és üzletet köt. |
| 25. | Szokott sört inni a férjed? Nem sört iszik. |
| 26. | Jól beszél az orosz. Mit beszél jól? |
| 27. | Sími fogsz a fogorvosnál? Nem sírni fogok. |
| 28. | Mit fogsz csinálni a szünetben? Fogom elolvasni az Egri Csillagokat. |
| 29. | Bátran viselkedett. Ki viselkedett bátran? |
| 30. | Mi történik a filmben? A fiú a lányba beleszeret. |
| 31. | Jézusom, elfelejtettem. Mit felejtettél el? |
| 32. | Miért nem vetted meg a tankönyveket? Mert az túl drága van. |
| 33. | Érthető volt az előadás? Nem. Alig megértettem. |

| | |
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| 34. | Milyen lesz novemberben az idő? Minden nap esős lesz. |
| 35. | Mit akarsz enni? Inni akarok, nem enni. |
| 36. | Hirtelen eszembe jutott valami. Mi eszedbe jutott? |
| 37. | Angol vagy? Nem angol vagyok. |
| 38. | Mari adott egy almát Jánosnak. János nem szeret az alma. |
| 39. | Soha nincs időm. Kevesebbet kellene tévét nézni. |
| 40. | Valaki megérkezett. Ki megérkezett? |
| 41. | Mit kell tenni, ha beteg vagy? Kell gyógyszert szedni. |
| 42. | Sokszor vagy szomorú? Nem, ritkán szomorodok el. |
| 43. | Miért jött ma Kati gyalog? Kölcsönadta a kocsiját. |
| 44. | Meg fogok bocsátani neki. Mit meg fogsz bocsátani neki? |
| 45. | Zoli rendbe hozta a házat. A kertet hozta rendbe, nem a házat. |
| 46. | Hideg volt a víz az uszodában? Nem. Alig volt hideg. |

| | |
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| 47. | Azt akarjuk, hogy ne az igazgató mondja el a beszédet. Mit akartok, hogy ki elmondja a beszédet? |
| 48. | Ő is el akar jönni. Ki akar eljönni? |
| 49. | Tamás házasodni akar. Kit feleségül fog venni? |
| 50. | Tegnap szülőértekezletet tartottunk. Azt akartuk megnézni, hogy melyik gyerek anyukája jön el. |
| 51. | Tud varmi az anyukád? Nem tud varrni. |
| 52. | Mindenkinek egyezett a véleménye? Igen. Mindenki egyetértett. |
| 53. | Sokszor büszkélkedsz a fiaddal? Igen. Néha vagyok büszke rá. |
| 54. | Mi lesz, ha elalszol? Nem el fogok aludni. |
| 55. | Néhány embert meghívtam estére. Kit meghívtál? |
| 56. | A nagybátyám sokszor néz videót. Ki videót szokott nézni? |
| 57. | Nagypapa sok gyógyszert szed. Nagymama gyógyszert szed, nem nagypapa. |
| 58. | Miért megy János Edinburghba? Részt akar venni a fesztiválon. |
| 59. | A szomszéd lakást megvették. Azt hiszem, hogy a Szabóék vették meg. |

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| 60. | A nagy aludni szeretne. Ki szeretne aludni? |
| 61. | Új munkát kaptam. Mennyit keresni fogsz? |
| 62. | Miért nem szereted a Karácsonyt? Sokan van az üzletek. |
| 63. | Tudtál a franciákkal beszélni? Nem, hiába tanultam franciául. |
| 64. | Megvan a kulcsom. Mi van meg? |
| 65. | Szereted a kollegáidat? Nem nagyon szeretem mindenki. |
| 66. | Elváltak a szülei? Úgy hallottam, hogy nem váltak el. |
| 67. | Péter nem ment be matek órára. De a tanár azt akarta tudni, hogy melyik órára nem ment János be? |
| 68. | Miért nem tudsz még magyarul? Mert folyton angolul beszélek. |
| 69. | Azt mondják, valaki becsapta Máriát. Kit mondanak, becsapta Máriát? |
| 70. | Kit szeret Éva? Az angolokat? Szereti a škótokat, nem az angolokat. |
| 71. | Azt hiszem, valami eszébe jutott. Mit hiszel, hogy eszébe jutott? |
| 72. | Olyan lassan múlik ez a hét. Mi múlik lassan? |

| | |
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| 73. | Délután mész bevásárolni? Fogok bevásárolni délelőtt, nem délután. |
| 74. | Észre szoktad venni? Nem észre szoktam venni. |
| 75. | Béreljük egy autót valahol. Hol akarsz, hogy autót béreljünk? |
| 76. | Befejezte az egyetemet? Azt mondta, hogy még nem fejezte. |
| 77. | Tudtad, hogy Józsi elvette Katit? Nem tudtam, hogy Katit vette feleségül. |
| 78. | Azt hiszem, a tanár észrevette a csalást. Mit hiszel, hogy a tanár észrevett? |
| 79. | Mi a terved nyárra? Utazni akarok Európában. |
| 80. | Ez szörnyű élmény volt! Jó lenne ezt ritkábban átélni. |
| 81. | Lát engem, Mariska néni? Sajnos te nem látom már. |
| 82. | Honnan van kutyájuk? Megtaláltak egy kiskutya. |
| 83. | Laci és Éva telefonon beszélgettek. Ki kit hívott fel? |
| 84. | Át kell szállni az Oktogonnál? Az Astoriánál kell átszállni, nem pedig az Oktogonnál. |
| 85. | János bántott meg téged, vagy fordítva? Nem, én bántottam őt meg. |

Experimental sentences for rating on a scale of 1-10

Group A

| | |
|-----|--|
| 86. | Péter nem tud autót szerelni. Jobban szeretném Jánoshoz elvinni az autót. |
| 87. | Átnézem még egyszer a feladatot, hátha van benne hiba. Nem lenne jó hibásan adni be. |
| 88. | Mondtam, hogy Katit Párizsban ismertem meg. De én azt kérdeztem, hogy melyik városban ismerted meg Évát? |
| 89. | Azt hiszem, a kormány nyilvánosságra hozta a döntést. Mit hiszel, hogy mit hozott nyilvánosságra a kormány? |
| 90. | Szeretném, ha a szobádat rendberaknád. Mit szeretnél, hogy rendbe rakjak? |
| 91. | Gondolom, megnézték a kastélyt. Mit gondolsz, megnézték? |
| 92. | Osztálytalálkozót tartottunk, és sokan eljöttek. Ki ismert fel kit? |
| 93. | Ő hívott meg bennünket? Fordítva, én hívtam meg őt. |
| 94. | Meg akarsz nézni a filmet? Nem akarom megnézni. |
| 95. | Gondolom, hogy a jövő héten hazajön a fiunk. Mikor gondolod, hazajön? |
| 96. | Feleségül akarja venni Évát? Nem akarja feleségül venni. |
| 97. | Apa, játszunk valamit! Mit akarsz játszani? |
| 98. | Azt szeretném, hogy Éva készítse reggelit. Kit szeretnél, hogy reggelit készítse? |

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| 99. | Ági megint beteg? Igen. Folyton megfázik. |
| 100. | Azt akarom, hogy a húgát mutassa be. Kit akarsz, bemutasson? |
| 101. | Szeretném, ha Amerikába utaznánk el. Hova szeretnéd, elutazzunk? |
| 102. | Azt hiszem, a fejembe szállt a bor. Mit hiszel, hogy mi szállt a fejedbe? |
| 103. | Esténként mit csinál a férjed? Mindig néz tévét. |
| 104. | Szeretném, ha sokszor meglátogatnál bennünket. Mit szeretnél, hogy hányszor meglátogassalak benneteket? |
| 105. | Mit tud már a kisbaba? Fel tud öltözni. |
| 106. | Szépen elmosogatott a lányod. Csak az zavar, hogy túl sok poharat összetört! |
| 107. | Gondolom, valahol kiesett a táskámból a kulcs. Mit gondolsz, hogy hol kiesett a táskádból? |
| 108. | Tudom, hogy tegnap otthon maradt. Mit tudsz, hogy miért maradt otthon? |
| 109. | Kimostad a kabátom? A nadrágod mostam ki, nem a kabátod. |
| 110. | Azt szeretném, hogy ők is részt vegyenek. Mit szeretnél, hogy ki vegyen részt? |
| 111. | Szeret fogat mosni a kisfiad? Nem mos fogat. |

| | |
|------|--|
| 112. | Mi az esti programod? Fogok tanulni. |
| 113. | Biztos vagy benne? Nem vagyok biztos. |
| 114. | Az egész ház rendetlen. Mit kell rendbe tenni? |
| 115. | Tegnap nem tudtam elmenni az autóversenyre. Nem tudom, hogy kinek az autója megnyerte a versenyt. |
| 116. | Finomra vágjuk a hagymát. Mit vágunk finomra? |
| 117. | Leesett a pohár. A tányér leesett, nem a pohár. |
| 118. | Gondolom, megkérdezte az apját. Mit gondolsz, hogy kit megkérdezett? |
| 119. | Kérjünk kölcsön egy magnót. Mit akarsz, hogy kitől kérjünk kölcsön egy magnót? |
| 120. | El tudom olvasni. Mit tudsz elolvasni? |
| 121. | A nőnapon minden férfi felköszöntött egy nőt. Ki kit köszöntött fel? |
| 122. | Azt mondják, valaki elvette Jutkát. Mit mondanak, hogy ki elvette Jutkát? |
| 123. | Érdemes volt korán kelni? Nem. Hiába korán keltünk. |
| 124. | Rosszul hall a nagypapa. Ki rosszul hall? |

| | |
|------|---|
| 125. | Hova megy Zoli? A koncertre? A moziba megy, nem a koncertre. |
| 126. | Én megfőzöm a vacsorát. És mi csinálom én? |
| 127. | Mit csinálnak a gyerekek? Megecsznek a fagyi. |
| 128. | Az orvosok gyakran megmossák a kezüket? Nem, ritkán mosnak kezet. |
| 129. | Szeretném, ha a székét helyre tennéd. Mit szeretnél, hogy mit tegyek helyre? |
| 130. | Vacsorát kell főzni. Ki akar krumplit pucolni? |
| 131. | Élvezed a tanítást? Igen. Nagyon szeretem előadás tartani. |
| 132. | Miért nem mész ki a térre? Mert az messze. |
| 133. | Mit szokott Tamás csinálni? Teniszezni? Szokott úszni, nem teniszezni. |
| 134. | Azt akarom, hogy orvos nézze meg a gyereket. Kit akarsz, megnézzze a gyereket? |
| 135. | Apu nem igazán tud ebben segíteni. Jobb lenne anyut hívni fel. |
| 136. | Két birkózó volt a ringben. Ki vert meg kit? |

Instructions for rating task

This is a linguistic experiment designed to find out how and to what extent the grammar of English, your native language, affects your intuitions about the grammar of Hungarian. Therefore I would like your opinion on some Hungarian sentences.

I want you to decide whether sentences are 'possible' sentences in Hungarian. That is, what you intuitively 'feel' about the sentences rather than what is 'correct' according to some 'grammar rule'.

On the following pages two sentences will be shown to you at a time. The first sentence is only there for you to give a context for the second. You will have to decide whether the *second sentence* sounds good or not and assign it a number between 1 and 10 according to your judgement. If you think the sentence sounds very bad, you give it a 1, and if you decide that a sentence sounds absolutely good, you will give it 10. For sentences that are not absolutely good or bad, please assign any number on the scale from 1 to 10. Please try to judge sentences using *the whole range* between 1 and 10.

I am interested in your spontaneous impressions of the sentences, so please don't change your answer once you've decided. Please do not spend too long thinking about 'grammar rules'. Once you've answered a question, please do not look back at previous sentences.

Some sentences will sound strange. Everybody has a different opinion as to exactly how bad these sentences sound. Even Hungarian native speakers cannot agree on them! So if you are not sure whether a sentence is correct or not, it's possible that a Hungarian person would agree with you. So don't worry if you can't decide or if you don't know. I don't expect you to have a definite opinion about every sentence. You can indicate your uncertainty by assigning the item an intermediate number on the scale. There are no 'correct' answers, so whatever seems right to you is a valid response. Remember that if you are not sure about a sentence, please give it an intermediate number on the scale.

Please read each item carefully before you answer. Concentrate on the structure of the *second sentence*. It is very important that you answer all the questions. Please don't leave any out. Remember to write each of your answers on the separate answer sheet provided. Do not consult a native speaker or a dictionary, otherwise your data will invalidate the results.

There are 136 sentences to judge here. It should take you *at most 30 minutes* to answer all of them. At the beginning you'll have a chance to practice on five items.

Please remember:

- This experiment is not a test of proficiency since there are no 'correct' or 'wrong' answers. Whatever opinion you express will be useful and interesting.
- You are judging the *second sentence* each time.
- Use *all* of the numbers between 1 and 10 to distinguish a wide range of acceptability. The worst judgement is 1 and the best judgement is 10, but there are 8 different grades in between on the scale. Try to distinguish as many degrees of acceptability as you can, so feel free to *use all of the numbers!*
- Use intermediate numbers for sentences which are intermediate in acceptability or in cases when you can't decide or don't know the answer.
- Do not leave any questions unanswered on the answer sheet.
- Do not consult a native speaker or a dictionary.
- Please do not write your name.

THANK YOU FOR YOUR KIND CO-OPERATION. Let's start.

| | |
|-------------|---|
| Practice 1. | Hányan voltak a boltban? Sok ember voltak a boltban. |
| Practice 2. | Tegnap nem volt iskolában. Ki nem volt iskolában tegnap? |
| Practice 3. | Ki jött el? Senki eljött. |
| Practice 4. | Tudsz magyarul beszélni? Igen, már két éve tanulok. |
| Practice 5. | Mit láttál Angliában? Látok a királynő. |

Now please start. Remember: Read each item only once and assign it a number immediately. Do not change your decision once you have decided. Do not look back to an item once you have answered it. Try to use **all** the numbers, including 1 and 10. If you are not sure about an item, give it an intermediate number. Write the appropriate number on the answersheet for each item. Please do not consult a native speaker or a dictionary!

| | |
|----|---|
| 1. | Szeret fogat mosni a kisfiad? Nem fogat mos. |
| 2. | Egyetértesz a döntéssel? Nem egyetérték. |
| 3. | Szeretném, ha sokszor meglátogatnál bennünket. Mit szeretnél, hogy hányszor látogassalak meg benneteket? |
| 4. | Feleségül akarja venni Évát? Nem feleségül akarja venni. |
| 5. | Két birkózó volt a ringben. Ki kit vert meg? |
| 6. | Tudom, hogy valakivel együttjár. Kivel tudod, együttjár? |
| 7. | Azt hiszem, a fejembe szállt a bor. Mit hiszel, hogy mi a fejedbe szállt? |

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|-----|---|
| 8. | Gondolom, megkérdezte az apját. Mit gondolsz, hogy kit kérdezett meg? |
| 9. | A nagyfi aludni szeretne. Ki aludni szeretne? |
| 10. | Elhitted, amit mondott? Igen. Állandóan elhittem, amit mondott. |
| 11. | A háziasszony hozott nekünk tortát. A torta nem szeretünk. |
| 12. | Át kell szállni az Oktogonnál? Kell átszállni az Astoriánál, nem pedig az Oktogonnál. |
| 13. | Készítetek kávé és teát. Mit iszol szívesebben? |
| 14. | Bátran viselkedett. Ki bátran viselkedett? |
| 15. | Mit szokott Tamás csinálni? Teniszezni? Úszni szokott, nem teniszezni. |
| 16. | Mit kell tenni, ha beteg vagy? Gyógyszert kell szedni. |
| 17. | Délután mérsz bevásárolni? Délelőtt fogok bevásárolni, nem délután. |
| 18. | Mi történik a filmben? A fiú beleszeret a lányba. |
| 19. | Mit csinál egy üzletember? Utazik külföldre és köt üzletet. |
| 20. | Érthető volt az előadás? Nem. Alig értettem meg. |

| | |
|-----|--|
| 21. | Nagypapa sok gyógyszert szed. Nagymama szed gyógyszert, nem nagypapa. |
| 22. | János bántott meg téged, vagy fordítva? Nem, én bántottam meg őt. |
| 23. | Ő hívott meg bennünket? Fordítva, én hívtam őt meg. |
| 24. | Mit fogsz csinálni a szünetben? El fogom olvasni az Egri Csillagokat. |
| 25. | Kit szeret Éva? Az angolokat? A skótokat szereti, nem az angolokat. |
| 26. | Én megfőzöm a vacsorát. És mi csinálom én? |
| 27. | Az nem számít, hogy mit láttál a tévében. Az érdekel, hogy mit elolvastál. |
| 28. | Roszul hall a nagypapa. Ki hall rosszul? |
| 29. | Ráérsz? Nem ráérek. |
| 30. | Vacsorát kell főzni. Ki krumplit akar pucolni? |
| 31. | Gondolom, valahol kiesett a táskámból a kulcs. Mit gondolsz, hogy hol esett ki a táskádból? |
| 32. | Meg akarsz nézni a filmet? Nem meg akarom nézni. |
| 33. | Miért nem szereted a Karácsonyt? Sokan van az üzletek. |

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| 34. | Szeretném, ha a szobádat rendberaknád. Mit szeretnél, rendbe rakjak? |
| 35. | Szeretném, ha a széket helyre tennéd. Mit szeretnél, hogy mit helyre tegyek? |
| 36. | Azt hiszem, a kormány nyilvánosságra hozta a döntést. Mit hiszel, hogy mit nyilvánosságra hozott a kormány? |
| 37. | A nagybátyám sokszor néz videót. Ki szokott videót nézni? |
| 38. | Kérjünk kölcsön egy magnót. Mit akarsz, hogy kitől kölcsön kérjünk egy magnót? |
| 39. | Mit akarsz enni? Akarok inni, nem enni. |
| 40. | Ez szörnyű élmény volt! Jó lenne ezt ritkábban élni át. |
| 41. | Apu nem igazán tud ebben segíteni. Jobb lenne anyut felhívni. |
| 42. | Miért nem mész ki a térre? Mert az messze. |
| 43. | Érdemes volt korán kelni? Nem. Hiába keltünk korán. |
| 44. | Finomra vágjuk a hagymát. Mit finomra vágunk? |
| 45. | Tudom, hogy tegnap otthon maradt. Mit tudsz, hogy miért otthon maradt? |
| 46. | Szépen elmosogatott a lányod. Csak az zavar, hogy túl sok poharat tört össze! |

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| 47. | Mit csinálnak a gyerekek? Megesznek a fagyit. |
| 48. | Emlékszel a nevére? Nem jut eszembe. |
| 49. | Mi a terved nyárra? Akarok utazni Európában. |
| 50. | Hideg volt a víz az uszodában? Nem. Alig hideg volt. |
| 51. | Befejezte az egyetemet? Azt mondta, hogy még nem fejezte be. |
| 52. | Mindenkinek egyezett a véleménye? Igen. Mindenki értett egyet. |
| 53. | Mi fog változni az új munkahelyeden? Később fogok munkába járni. |
| 54. | Tudtál a franciákkal beszélni? Nem, hiába franciául tanultam. |
| 55. | Az orvosok gyakran megmossák a kezüket? Nem, ritkán kezét mosnak. |
| 56. | Azt hiszem, valami eszébe jutott. Mit hiszel, eszébe jutott? |
| 57. | Nem működik a telefonom. Tegnap azt mondtad, hogy a tévéd ment tönkre! |
| 58. | Tud varrni az anyukád? Nem varrni tud. |
| 59. | Azt akarom, hogy a húgát mutassa be. Kit akarsz, hogy bemutasson? |

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| 60. | Mit tud már a kisbaba? Tud felöltözni. |
| 61. | Új munkát kaptam. Mennyit fogsz keresni? |
| 62. | Hová mész? A levelet feladom. |
| 63. | Valaki megérkezett. Ki érkezett meg? |
| 64. | Tegnap szülőértekezletet tartottunk. Azt akartuk megnézni, hogy melyik gyerek anyukája eljön. |
| 65. | Mit csinálnak a gyerekek? Éva leckét ír, Jancsi moziba megy. |
| 66. | Mi az esti programod? Tanulni fogok. |
| 67. | Lát engem, Mariska néni? Sajnos te nem látom már. |
| 68. | Szereted a kollegáidat? Nem nagyon szeretem mindenki. |
| 69. | Osztálytalálkozót tartottunk, és sokan eljöttek. Ki kit ismert fel? |
| 70. | Meg fogok bocsátani neki. Mit fogsz megbocsátani neki? |
| 71. | Olyan lassan múlik ez a hét. Mi lassan múlik? |
| 72. | Kimostad a kabátom? Kimostam a nadrágod, nem a kabátod. |

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| 73. | Azt mondják, valaki becsapta Máriát. Kit mondanak, hogy becsapta Máriát? |
| 74. | Miért szeretsz napozni? Jól esik a napfény. |
| 75. | Esténként mit csinál a férjed? Mindig tévét néz. |
| 76. | Tamás házasodni akar. Kit fog feleségül venni? |
| 77. | A nőnapon minden férfi felköszöntött egy nőt. Ki köszöntött fel kit? |
| 78. | Az egész ház rendetlen. Mit rendbe kell tenni? |
| 79. | Honnan van kutyájuk? Megtaláltak egy kiskutya. |
| 80. | Néhány embert meghívtam estére. Kit hívtál meg? |
| 81. | Kati mindig kölcsönadja a játékait. Most mit adott kölcsön? |
| 82. | Észre szoktad venni? Nem szoktam észrevenni. |
| 83. | Laci és Éva telefonon beszélgettek. Ki hívott fel kit? |
| 84. | Soha nincs időm. Kellene tévét nézni kevesebbet. |
| 85. | El tudom olvasni. Mit el tudsz olvasni? |

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| 86. | Sok vizsgát kell még letenned? Nem. Kevés van hátra. |
| 87. | Gondolom, hogy a jövő héten hazajön a fiunk. Mikor gondolod, hogy hazajön? |
| 88. | Tudtad, hogy Józsi elvette Katit? Nem tudtam, hogy Katit feleségül vette. |
| 89. | A szomszéd lakást megvették. Azt hiszem, hogy a Szabóék megvették. |
| 90. | Péter nem tud autót szerelni. Jobban szeretném Jánoshoz vinni el az autót. |
| 91. | Azt akarom, hogy a spenótot kóstold meg. Mit akarsz, hogy mit kóstoljak meg? |
| 92. | Péter nem ment be matek órára. De a tanár azt akarta tudni, hogy melyik órára nem ment be János? |
| 93. | Mondtam, hogy Katit Párizsban ismertem meg. De én azt kérdeztem, hogy melyik városban ismerted Évát meg? |
| 94. | Azt hiszem, a tanár észrevette a csalást. Mit hiszel, a tanár észrevett? |
| 95. | Átnézem még egyszer a feladatot, hátha van benne hiba. Nem lenne jó hibásan beadni. |
| 96. | Azt szeretném, hogy ők is részt vegyenek. Mit szeretnél, hogy ki részt vegyen? |
| 97. | Gondolom, megnézték a kastélyt. Mit gondolsz, hogy megnézték? |
| 98. | Azt szeretném, hogy Éva készítsen reggelit. Kit szeretnél, reggelit készítsen? |

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| 99. | Szokott sört inni a férjed? Nem iszik sört. |
| 100. | Milyen lesz novemberben az idő? Minden nap lesz esős. |
| 101. | Szeretném, ha Amerikába utaznánk el. Hova szeretnéd, hogy elutazzunk? |
| 102. | Meg fog gyógyulni. Ki fog meggyógyulni? |
| 103. | Jól beszéli az orosz. Mit jól beszél? |
| 104. | Jézusom, elfelejtettem. Mit elfelejtettél? |
| 105. | Elváltak a szülei? Úgy hallottam, hogy nem elváltak. |
| 106. | Leesett a pohár. A tányér esett le, nem a pohár. |
| 107. | Tegnap nem tudtam elmenni az autóversenyre. Nem tudom, hogy kinek az autója nyerte meg a versenyt. |
| 108. | Zoli rendbe hozta a házat. Rendbe hozta a kertet, nem a házat. |
| 109. | Azt akarjuk, hogy ne az igazgató mondja el a beszédet. Mit akartok, hogy ki mondja el a beszédet? |
| 110. | Miért nem vetted meg a tankönyveket? Mert az túl drága van. |
| 111. | Ági megint beteg? Igen. Folyton fázik meg. |

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| 112. | Miért nem tudsz még magyarul? Mert folyton beszélek angolul. |
| 113. | Béreljünk egy autót valahol. Hol akarsz, autót béreljünk? |
| 114. | Biztos vagy benne? Nem biztos vagyok. |
| 115. | Azt mondják, valaki elvette Jutkát. Mit mondanak, hogy ki vette el Jutkát? |
| 116. | Miért megy János Edinburghba? Akar részt venni a fesztiválon. |
| 117. | Hova megy Zoli? A koncertre? Megy a moziba, nem a koncertre. |
| 118. | Mi lesz, ha elalszol? Nem fogok elaludni. |
| 119. | Mindenkinek van feladata a családban. Ki szokott mosogatni? |
| 120. | Sími fogsz a fogorvosnál? Nem fogok sírni. |
| 121. | Hirtelen eszembe jutott valami. Mi jutott eszedbe? |
| 122. | Megvan a kulcsom. Mi megvan? |
| 123. | Miért jött ma Kati gyalog? A kocsiját kölcsönadta. |
| 124. | Mindig ilyen rendetlen a szobád? Igen, ritkán csinálok rendet. |

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| 125. | Mari adott egy almát Jánosnak. János nem szeret az alma. |
| 126. | Miből vizsgáztál? Azt kérdezed, hogy milyen vizsgát tettem le? |
| 127. | Angol vagy? Nem vagyok angol. |
| 128. | Elhitte neked? Nem hitte el. |
| 129. | Gyakran gondolod, hogy Zsuzsa egy kicsit bolond? Igen. Időnként bolondnak tartom. |
| 130. | Sokszor vagy szomorú? Nem, ritkán elszomorodok. |
| 131. | Élvezed a tanítást? Igen. Nagyon szeretem előadás tartani. |
| 132. | Sokszor büszkélkedsz a fiaddal? Igen. Néha büszke vagyok rá. |
| 133. | Ő is el akar jönni. Ki el akar jönni? |
| 134. | Magyarországon hol lehet gyümölcsöt venni? Rengetegen vásárol a piac. |
| 135. | Azt akarom, hogy orvos nézze meg a gyereket. Kit akarsz, hogy megnézzék a gyereket? |
| 136. | Apa, játszunk valamit! Mit játszani akarsz? |

Appendix E(v) Main study: Answer Sheet for Rating

Student ID: 3-009

Answer Sheet for Rating Task on a Scale of 1-10
Remember to use the whole range between 1-10:
(very bad) 1 2 3 4 5 6 7 8 9 10 (perfect)

Pr1.

Pr2.

Pr3.

Pr4.

Pr5.

1.

2.

3.

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38.

39.

40.

Answer Sheet for Rating Task on a Scale of 1-10
Remember to use the whole range between 1-10:
(very bad) 1 2 3 4 5 6 7 8 9 10 (perfect)

Student ID:

| | | | | | |
|-----|----------------------|-----|----------------------|------|----------------------|
| 41. | <input type="text"/> | 61. | <input type="text"/> | 81. | <input type="text"/> |
| 42. | <input type="text"/> | 62. | <input type="text"/> | 82. | <input type="text"/> |
| 43. | <input type="text"/> | 63. | <input type="text"/> | 83. | <input type="text"/> |
| 44. | <input type="text"/> | 64. | <input type="text"/> | 84. | <input type="text"/> |
| 45. | <input type="text"/> | 65. | <input type="text"/> | 85. | <input type="text"/> |
| 46. | <input type="text"/> | 66. | <input type="text"/> | 86. | <input type="text"/> |
| 47. | <input type="text"/> | 67. | <input type="text"/> | 87. | <input type="text"/> |
| 48. | <input type="text"/> | 68. | <input type="text"/> | 88. | <input type="text"/> |
| 49. | <input type="text"/> | 69. | <input type="text"/> | 89. | <input type="text"/> |
| 50. | <input type="text"/> | 70. | <input type="text"/> | 90. | <input type="text"/> |
| 51. | <input type="text"/> | 71. | <input type="text"/> | 91. | <input type="text"/> |
| 52. | <input type="text"/> | 72. | <input type="text"/> | 92. | <input type="text"/> |
| 53. | <input type="text"/> | 73. | <input type="text"/> | 93. | <input type="text"/> |
| 54. | <input type="text"/> | 74. | <input type="text"/> | 94. | <input type="text"/> |
| 55. | <input type="text"/> | 75. | <input type="text"/> | 95. | <input type="text"/> |
| 56. | <input type="text"/> | 76. | <input type="text"/> | 96. | <input type="text"/> |
| 57. | <input type="text"/> | 77. | <input type="text"/> | 97. | <input type="text"/> |
| 58. | <input type="text"/> | 78. | <input type="text"/> | 98. | <input type="text"/> |
| 59. | <input type="text"/> | 79. | <input type="text"/> | 99. | <input type="text"/> |
| 60. | <input type="text"/> | 80. | <input type="text"/> | 100. | <input type="text"/> |

Answer Sheet for Rating Task on a Scale of 1-10
Remember to use the whole range between 1-10:
(very bad) 1 2 3 4 5 6 7 8 9 10 (perfect)

101.

121.

102.

122.

103.

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Appendix E(vi) Main study: Questionnaire

Questionnaire 1996

Student ID:

Questionnaire



I would like you to fill in this questionnaire. It asks you about your language learning and your particulars. Your help would greatly help me in my research. Thank you very much.

About your language learning experiences

1. What is your mother tongue?

- British English
- American English
- Canadian English
- Australian English
- Russian
- German
- Other

2. What other languages do you speak? How long have you been studying each one?
What level of knowledge have you reached in each one?

| Language: | Years of study/experience with it: | Level (i.e. beginner / intermediate / advanced / near-native): |
|-----------|------------------------------------|--|
| 1st | | |
| 2nd | | |
| 3rd | | |
| 4th | | |

3. Is Hungarian the most recent language you are learning? YES NO

4. How old were you when you first started learning Hungarian? years old

5. How much time have you spent in Hungary? years months weeks days

6. On average, how many hours per day do you use Hungarian (speak/read/write/listen to it)?
appr.hours

7. Have you learnt Hungarian on a language course? YES NO

8. Have you learnt it with a private teacher? YES NO

9. What materials (coursebooks, short articles, short stories, taped conversations, videos etc.) do you use? Please give the title/author of the coursebook(s) you can recall.
.....
.....
.....

10. Why do you learn Hungarian? Please circle the reasons from the list and/or add any additional ones you might have.

- I have Hungarian ancestors / relatives (incl. spouses) YES NO
- I need it for my studies / job YES NO
- For personal development / interest YES NO
- Other(s):
-

11. Indicate the extent to which you agree with the following statements.

When I speak Hungarian,

strongly disagree disagree undecided agree strongly agree

- I consult the rules my teacher taught
- I have a 'feel' for what sounds good or wrong.....
- I don't know how to tell what is right or wrong.....

12. Have you been able to work out any rules for Hungarian word order that you weren't actually taught?

YES NO

13. What rules, if any, can you specify that you have observed?

.....

.....

.....

.....

.....

.....

About yourself

15. Please circle: Are you *male* or *female*?

16. How old are you? years old

17. What is your occupation?

THANK YOU VERY MUCH FOR YOUR CO-OPERATION.

Next there is a so-called 'cloze test' for you to fill in. After that we are finished!

Szilvia

Please fill in the empty gaps with ONE suitable word. To help you, the first letter of each missing word is provided. Write your answers on the dotted lines. Please spend *max. 20 minutes* on this task. Remember to write only one word on each line. Please do not consult a dictionary or a native speaker.

A szakértők szerint a pozitív beállítódás gyakran jó eredményhez vezet. Aki azzal az érzéssel (1) k..... föl reggel, hogy nagyszerű (2) n..... áll előtte, jobb kedvvel (3) i..... munkába. Aki nagy önbizalommal (4) l..... munkához, sikeresebb lesz, mint (5) a..... kételkedik önmaga képességeiben. Ha a (6) p..... hozzáállás mellett még azt a (7) k..... is elsajátítjuk, hogy a szerencsétlenséget (8) n..... nagyítjuk fel, könnyebben túljutunk a kellemetlen (9) p..... Ha viszont a kákán (10) i..... csomót keresünk, meg is (11) t..... A türelem fontos mérföldkő a (12) b..... vezető úton.

Az idén nem megyünk nyaralni - határozzuk el, majd pihenünk a nagymamánál. Az olcsóbb. Aztán a könyvekről kell (13) l..... Színházba, moziba évek óta (14) n..... járunk, ez már nem (15) i..... fáj, csak mikor kedvenc (16) ú..... előfizetésén gondolkodunk el, akkor (17) sz..... össze a torkunk. De a (18) gy..... kell a cipő és (19) a..... gondolunk, néha gyümölcsöt is (20) k..... ennie. A ruháit igyekszünk (21) m..... És persze magunknak is, (22) h..... szeretnénk valami olyat, ami (23) h..... a divatoshoz. Arról, hogy (24) f..... valami kis pénzt, már (25) n..... is álmodunk, pedig jó (26) l..... valami normális lakásba költözni. (27) D..... mindent elvisz a rezi (28) é..... az egyre magasabb élelmiszerárak.

Nagyon sok gyerek van, aki azt gondolja, akkor lesz felnőtt, ha nézheti a televíziót. Gyerekkoromban én is ilyen tévébolond (29) v..... Aztán egyetemistaként albérletbe kellett (30) k..... egy öreg nénihez. Egyetlen (31) v..... ajtó választott el bennünket, s a (32) n..... sajnos nagyothallott. Reggeltől (33) e..... otthon ült és teljes (34) h..... bömböltette a készüléket. Három (35) k..... húztam a fülemre és (36) ú..... aludtam. Örök életre megutáltam a (37) t..... A lányom persze, ha (38) v..... tévéhez jut a nagymamánál, (39) k..... szemmel képes nézni hosszú-hosszú (40) p....., különösen a reklámokat. De (41) h..... van helyette más program, (42) a..... egyáltalán nem érdeklí, mi (43) m..... a tévében. Engem sem (44) é..... Azt viszont egészen furcsának (45) t....., hogy az emberek képesek (46) ó..... tárgyalni, mi van most (47) é..... Pamelával, miközben egyáltalán nem (48) f..... őket saját családjuk gondja.

Thank you for your help! Please return the Answer sheet, the Questionnaire and the Cloze test to me in the envelope provided. Szilvia

Appendix F: Main study: ANOVA tables for rating

Table 1a: Neutral sentences: Mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|----------------------------------|---------|-----|--------|-------|----------|
| WITHIN+RESIDUAL | 1011.72 | 66 | 15.33 | | |
| LEVEL | 30.54 | 3 | 10.18 | .66 | .577 |
| WITHIN+RESIDUAL | 522.56 | 132 | 3.96 | | |
| PREVERB | 47.18 | 2 | 23.59 | 5.96 | .003 |
| LEVEL BY PREVERB | 158.89 | 6 | 26.48 | 6.69 | .000 |
| WITHIN+RESIDUAL | 298.12 | 66 | 4.52 | | |
| VERB | 16.28 | 1 | 16.28 | 3.60 | .062 |
| LEVEL BY VERB | 156.83 | 3 | 52.28 | 11.57 | .000 |
| WITHIN+RESIDUAL | 649.41 | 66 | 9.84 | | |
| GRAM | 579.59 | 1 | 579.59 | 58.90 | .000 |
| LEVEL BY GRAM | 352.88 | 3 | 117.63 | 11.95 | .000 |
| WITHIN CELLS | 602.31 | 132 | 4.56 | | |
| PREVERB BY VERB | 10.02 | 2 | 5.01 | 1.10 | .337 |
| LEVEL BY PREVERB BY VERB | 91.91 | 6 | 15.32 | 3.36 | .004 |
| WITHIN CELLS | 487.49 | 132 | 3.69 | | |
| PREVERB BY GRAM | .73 | 2 | .36 | .10 | .906 |
| LEVEL BY PREVERB BY GRAM | 54.34 | 6 | 9.06 | 2.45 | .028 |
| WITHIN CELLS | 360.65 | 66 | 5.46 | | |
| VERB BY GRAM | 99.41 | 1 | 99.41 | 18.19 | .000 |
| LEVEL BY VERB BY GRAM | 41.81 | 3 | 13.94 | 2.55 | .063 |
| WITHIN CELLS | 670.97 | 132 | 5.08 | | |
| PREVERB BY VERB BY GRAM | 44.55 | 2 | 22.27 | 4.38 | .014 |
| LEVEL BY PREVERB BY VERB BY GRAM | 49.09 | 6 | 8.18 | 1.61 | .149 |

Table 1b: Neutral sentences: Mean preferences

| Source of Variation | SS | DF | MS | F | Sig of F |
|--------------------------|---------|-----|--------|-------|----------|
| WITHIN+RESIDUAL | 1298.82 | 66 | 19.68 | | |
| LEVEL | 705.76 | 3 | 235.25 | 11.95 | .000 |
| WITHIN+RESIDUAL | 974.98 | 132 | 7.39 | | |
| PREVERB | 1.45 | 2 | .73 | .10 | .906 |
| LEVEL BY PREVERB | 108.68 | 6 | 18.11 | 2.45 | .028 |
| WITHIN+RESIDUAL | 721.30 | 66 | 10.93 | | |
| VERB | 198.81 | 1 | 198.81 | 18.19 | .000 |
| LEVEL BY VERB | 83.62 | 3 | 27.87 | 2.55 | .063 |
| WITHIN CELLS | 1341.94 | 132 | 10.17 | | |
| PREVERB BY VERB | 89.10 | 2 | 44.55 | 4.38 | .014 |
| LEVEL BY PREVERB BY VERB | 98.19 | 6 | 16.36 | 1.61 | .149 |

Appendix F ANOVA tables for rating

Table 2a: Focused sentences: Mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|----------------------------------|---------|-----|---------|--------|----------|
| WITHIN CELLS | 1129.73 | 66 | 17.12 | | |
| LEVEL | 64.25 | 3 | 21.42 | 1.25 | .298 |
| WITHIN CELLS | 506.41 | 132 | 3.84 | | |
| PREVERB | 60.34 | 2 | 30.17 | 7.86 | .001 |
| LEVEL BY PREVERB | 125.27 | 6 | 20.88 | 5.44 | .000 |
| WITHIN CELLS | 356.31 | 66 | 5.40 | | |
| VERB | 51.26 | 1 | 51.26 | 9.50 | .003 |
| LEVEL BY VERB | 19.62 | 3 | 6.54 | 1.21 | .313 |
| WITHIN CELLS | 809.68 | 66 | 12.27 | | |
| GRAM | 1491.09 | 1 | 1491.09 | 121.54 | .000 |
| LEVEL BY GRAM | 625.5 | | | | |
| WITHIN CELLS | 678.83 | 132 | 5.14 | | |
| PREVERB BY VERB | 20.02 | 2 | 10.01 | 1.95 | .147 |
| LEVEL BY PREVERB BY VERB | 41.66 | 6 | 6.94 | 1.35 | .240 |
| WITHIN CELLS | 662.09 | 132 | 5.02 | | |
| PREVERB BY GRAM | 26.72 | 2 | 13.36 | 2.66 | .073 |
| LEVEL BY PREVERB BY GRAM | 42.99 | 6 | 7.16 | 1.43 | .208 |
| WITHIN CELLS | 410.30 | 66 | 6.22 | | |
| VERB BY GRAM | 24.59 | 1 | 24.59 | 3.96 | .051 |
| LEVEL BY VERB BY GRAM | 41.13 | 3 | 13.71 | 2.21 | .096 |
| WITHIN CELLS | 562.14 | 132 | 4.26 | | |
| PREVERB BY VERB BY GRAM | 18.04 | 2 | 9.02 | 2.12 | .124 |
| LEVEL BY PREVERB BY VERB BY GRAM | 82.92 | 6 | 13.82 | 3.25 | .005 |

Table 2b: Focused sentences: Mean preferences

| Source of Variation | SS | DF | MS | F | Sig of F |
|--------------------------|---------|-----|--------|-------|----------|
| WITHIN+RESIDUAL | 1619.37 | 66 | 24.54 | | |
| LEVEL | 1251.03 | 3 | 417.01 | 17.00 | .000 |
| WITHIN+RESIDUAL | 1324.19 | 132 | 10.03 | | |
| PREVERB | 53.44 | 2 | 26.72 | 2.66 | .073 |
| LEVEL BY PREVERB | 85.98 | 6 | 14.33 | 1.43 | .208 |
| WITHIN+RESIDUAL | 820.59 | 66 | 12.43 | | |
| VERB | 49.19 | 1 | 49.19 | 3.96 | .051 |
| LEVEL BY VERB | 82.26 | 3 | 27.42 | 2.21 | .096 |
| WITHIN CELLS | 1124.27 | 132 | 8.52 | | |
| PREVERB BY VERB | 36.09 | 2 | 18.04 | 2.12 | .124 |
| LEVEL BY PREVERB BY VERB | 165.84 | 6 | 27.64 | 3.25 | .005 |

Table 3a: Negative sentences: Mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|----------------------------------|---------|-----|---------|--------|----------|
| WITHIN CELLS | 904.35 | 66 | 13.70 | | |
| LEVEL | 78.98 | 3 | 26.33 | 1.92 | .135 |
| WITHIN CELLS | 565.35 | 132 | 4.28 | | |
| PREVERB | 22.37 | 2 | 11.19 | 2.61 | .077 |
| LEVEL BY PREVERB | 30.53 | 6 | 5.09 | 1.19 | .317 |
| WITHIN CELLS | 276.22 | 66 | 4.19 | | |
| VERB | .50 | 1 | .50 | .12 | .732 |
| LEVEL BY VERB | 27.64 | 3 | 9.21 | 2.20 | .096 |
| WITHIN CELLS | 810.03 | 66 | 12.27 | | |
| GRAM | 3670.88 | 1 | 3670.88 | 299.10 | .000 |
| LEVEL BY GRAM | 684.06 | 3 | 228.02 | 18.58 | .000 |
| WITHIN CELLS | 636.42 | 132 | 4.82 | | |
| PREVERB BY VERB | 17.47 | 2 | 8.73 | 1.81 | .167 |
| LEVEL BY PREVERB BY VERB | 7.14 | 6 | 1.19 | .25 | .960 |
| WITHIN CELLS | 899.30 | 132 | 6.81 | | |
| PREVERB BY GRAM | 120.26 | 2 | 60.13 | 8.83 | .000 |
| LEVEL BY PREVERB BY GRAM | 85.80 | 6 | 14.30 | 2.10 | .057 |
| WITHIN CELLS | 446.84 | 132 | 3.39 | | |
| PREVERB BY VERB BY GRAM | 54.55 | 2 | 27.27 | 8.06 | .000 |
| LEVEL BY PREVERB BY VERB BY GRAM | 27.43 | 6 | 4.57 | 1.35 | .240 |
| WITHIN CELLS | 235.95 | 66 | 3.58 | | |
| VERB BY GRAM | 32.34 | 1 | 32.34 | 9.05 | .004 |
| LEVEL BY VERB BY GRAM | 16.05 | 3 | 5.35 | 1.50 | .224 |

Table 3b: Negative sentences: Mean preferences

| Source of Variation | SS | DF | MS | F | Sig of F |
|--------------------------|---------|-----|--------|-------|----------|
| WITHIN+RESIDUAL | 1620.05 | 66 | 24.55 | | |
| LEVEL | 1368.13 | 3 | 456.04 | 18.58 | .000 |
| WITHIN+RESIDUAL | 1798.60 | 132 | 13.63 | | |
| PREVERB | 240.52 | 2 | 120.26 | 8.83 | .000 |
| LEVEL BY PREVERB | 171.60 | 6 | 28.60 | 2.10 | .057 |
| WITHIN+RESIDUAL | 471.90 | 66 | 7.15 | | |
| VERB | 64.67 | 1 | 64.67 | 9.05 | .004 |
| LEVEL BY VERB | 32.09 | 3 | 10.70 | 1.50 | .224 |
| WITHIN CELLS | 893.69 | 132 | 6.77 | | |
| PREVERB BY VERB | 109.10 | 2 | 54.55 | 8.06 | .000 |
| LEVEL BY PREVERB BY VERB | 54.85 | 6 | 9.14 | 1.35 | .240 |

Appendix F ANOVA tables for rating

Table 4a: Sentences with negative adverb: Mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|--------------------------|--------|-----|--------|-------|----------|
| WITHIN+RESIDUAL | 830.50 | 66 | 12.58 | | |
| LEVEL | 42.03 | 3 | 14.01 | 1.11 | .350 |
| WITHIN+RESIDUAL | 538.72 | 132 | 4.08 | | |
| PREVERB | 1.05 | 2 | .52 | .13 | .880 |
| LEVEL BY PREVERB | 49.25 | 6 | 8.21 | 2.01 | .069 |
| WITHIN+RESIDUAL | 692.38 | 66 | 10.49 | | |
| GRAM | 241.46 | 1 | 241.46 | 23.02 | .000 |
| LEVEL BY GRAM | 613.01 | 3 | 204.34 | 19.48 | .000 |
| WITHIN CELLS | 664.51 | 132 | 5.03 | | |
| PREVERB BY GRAM | 18.72 | 2 | 9.36 | 1.86 | .160 |
| LEVEL BY PREVERB BY GRAM | 21.80 | 6 | 3.63 | .72 | .633 |

Table 4b: Sentences with negative adverb: Mean preferences

| Source of Variation | SS | DF | MS | F | Sig of F |
|---------------------|---------|-----|--------|-------|----------|
| WITHIN+RESIDUAL | 1384.75 | 66 | 20.98 | | |
| LEVEL | 1226.03 | 3 | 408.68 | 19.48 | .000 |
| WITHIN+RESIDUAL | 1329.01 | 132 | 10.07 | | |
| PREVERB | 37.44 | 2 | 18.72 | 1.86 | .160 |
| LEVEL BY PREVERB | 43.61 | 6 | 7.27 | .72 | .633 |

Table 5a: Sentences with positive adverb: Mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|--------------------------|--------|-----|--------|-------|----------|
| WITHIN CELLS | 708.90 | 66 | 10.74 | | |
| LEVEL | 33.45 | 3 | 11.15 | 1.04 | .382 |
| WITHIN CELLS | 523.79 | 132 | 3.97 | | |
| PREVERB | 6.67 | 2 | 3.34 | .84 | .434 |
| LEVEL BY PREVERB | 96.79 | 6 | 16.13 | 4.07 | .001 |
| WITHIN CELLS | 581.10 | 66 | 8.80 | | |
| GRAM | 576.92 | 1 | 576.92 | 65.53 | .000 |
| LEVEL BY GRAM | 387.40 | 3 | 129.13 | 14.67 | .000 |
| WITHIN CELLS | 476.91 | 132 | 3.61 | | |
| PREVERB BY GRAM | 18.88 | 2 | 9.44 | 2.61 | .077 |
| LEVEL BY PREVERB BY GRAM | 60.34 | 6 | 10.06 | 2.78 | .014 |

Table 5b: Sentences with positive adverb: Mean preferences

| Source of Variation | SS | DF | MS | F | Sig of F |
|---------------------|---------|-----|--------|-------|----------|
| WITHIN+RESIDUAL | 1162.19 | 66 | 17.61 | | |
| LEVEL | 774.80 | 3 | 258.27 | 14.67 | .000 |
| WITHIN+RESIDUAL | 953.83 | 132 | 7.23 | | |

Appendix F ANOVA tables for rating

| | | | | | |
|------------------|--------|---|-------|------|------|
| PREVERB | 37.75 | 2 | 18.88 | 2.61 | .077 |
| LEVEL BY PREVERB | 120.68 | 6 | 20.11 | 2.78 | .014 |

Table 6a: Wh-questions: Mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|--------------------------------------|---------|-----|---------|--------|----------|
| WITHIN CELLS | 2223.91 | 66 | 33.70 | | |
| LEVEL | 89.86 | 3 | 29.95 | .89 | .452 |
| WITHIN CELLS | 626.34 | 132 | 4.75 | | |
| PREVERB | 4.68 | 2 | 2.34 | .49 | .612 |
| LEVEL BY PREVERB | 36.90 | 6 | 6.15 | 1.30 | .263 |
| WITHIN CELLS | 200.38 | 66 | 3.04 | | |
| VERB | 10.04 | 1 | 10.04 | 3.31 | .073 |
| LEVEL BY VERB | 2.67 | 3 | .89 | .29 | .830 |
| WITHIN CELLS | 210.70 | 66 | 3.19 | | |
| EXTRACTI | 3.17 | 1 | 3.17 | .99 | .322 |
| LEVEL BY EXTRACTI | 4.95 | 3 | 1.65 | .52 | .672 |
| WITHIN CELLS | 1868.08 | 66 | 28.30 | | |
| GRAM | 5281.23 | 1 | 5281.23 | 186.59 | .000 |
| LEVEL BY GRAM | 1477.45 | 3 | 492.48 | 17.40 | .000 |
| WITHIN CELLS | 523.99 | 132 | 3.97 | | |
| PREVERB BY VERB | 40.52 | 2 | 20.26 | 5.10 | .007 |
| LEVEL BY PREVERB BY VERB | 12.46 | 6 | 2.08 | .52 | .790 |
| WITHIN CELLS | 371.70 | 132 | 2.82 | | |
| PREVERB BY EXTRACTI | 9.99 | 2 | 4.99 | 1.77 | .174 |
| LEVEL BY PREVERB BY EXTRACTI | 6.59 | 6 | 1.10 | .39 | .884 |
| WITHIN CELLS | 647.26 | 132 | 4.90 | | |
| PREVERB BY GRAM | 4.60 | 2 | 2.30 | .47 | .627 |
| LEVEL BY PREVERB BY GRAM | 51.66 | 6 | 8.61 | 1.76 | .113 |
| WITHIN CELLS | 133.59 | 66 | 2.02 | | |
| VERB BY EXTRACTI | 8.93 | 1 | 8.93 | 4.41 | .040 |
| LEVEL BY VERB BY EXTRACTI | 28.54 | 3 | 9.51 | 4.70 | .005 |
| WITHIN CELLS | 312.85 | 66 | 4.74 | | |
| VERB BY GRAM | 7.54 | 1 | 7.54 | 1.59 | .212 |
| LEVEL BY VERB BY GRAM | 7.24 | 3 | 2.41 | .51 | .677 |
| WITHIN CELLS | 237.04 | 66 | 3.59 | | |
| EXTRACTI BY GRAM | 30.56 | 1 | 30.56 | 8.51 | .005 |
| LEVEL BY EXTRACTI BY GRAM | .66 | 3 | .22 | .06 | .980 |
| WITHIN CELLS | 601.01 | 132 | 4.55 | | |
| PREVERB BY VERB BY EXTRACTI | 25.69 | 2 | 12.84 | 2.82 | .063 |
| LEVEL BY PREVERB BY VERB BY EXTRACTI | 65.57 | 6 | 10.93 | 2.40 | .031 |
| WITHIN CELLS | 636.49 | 132 | 4.82 | | |
| PREVERB BY VERB BY GRAM | 103.03 | 2 | 51.51 | 10.68 | .000 |

Appendix F ANOVA tables for rating

| | | | | | |
|----------------------|--------|-----|-------|------|------|
| RAM | | | | | |
| LEVEL BY PREVERB BY | 88.24 | 6 | 14.71 | 3.05 | .008 |
| VERB BY GRAM | | | | | |
| WITHIN CELLS | 522.84 | 132 | 3.96 | | |
| PREVERB BY EXTRACTI | 32.09 | 2 | 16.04 | 4.05 | .020 |
| BY GRAM | | | | | |
| LEVEL BY PREVERB BY | 62.66 | 6 | 10.44 | 2.64 | .019 |
| EXTRACTI BY GRAM | | | | | |
| WITHIN CELLS | 265.84 | 66 | 4.03 | | |
| VERB BY EXTRACTI BY | 6.88 | 1 | 6.88 | 1.71 | .196 |
| GRAM | | | | | |
| LEVEL BY VERB BY EXT | 11.81 | 3 | 3.94 | .98 | .409 |
| RACTI BY GRAM | | | | | |
| WITHIN CELLS | 423.47 | 132 | 3.21 | | |
| PREVERB BY VERB BY E | 55.45 | 2 | 27.73 | 8.64 | .000 |
| XTRACTI BY GRAM | | | | | |
| LEVEL BY PREVERB BY | 37.03 | 6 | 6.17 | 1.92 | .082 |
| VERB BY EXTRACTI BY | | | | | |
| GRAM | | | | | |

Table 6b: Wh questions: Mean preferences

| Source of Variation | SS | DF | MS | F | Sig of F |
|---------------------|---------|-----|---------|-------|----------|
| WITHIN+RESIDUAL | 3967.31 | 70 | 56.68 | | |
| LEVEL | 3270.43 | 3 | 1090.14 | 19.23 | .000 |
| WITHIN+RESIDUAL | 1342.79 | 140 | 9.59 | | |
| PREVERB | 8.90 | 2 | 4.45 | .46 | .630 |
| LEVEL BY PREVERB | 98.44 | 6 | 16.41 | 1.71 | .123 |
| WITHIN+RESIDUAL | 649.14 | 70 | 9.27 | | |
| VERB | 23.00 | 1 | 23.00 | 2.48 | .120 |
| LEVEL BY VERB | 11.24 | 3 | 3.75 | .40 | .751 |

Table 7a: Long extraction: Mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|----------------------|---------|-----|--------|-------|----------|
| WITHIN+RESIDUAL | 1894.86 | 66 | 28.71 | | |
| LEVEL | 50.17 | 3 | 16.72 | .58 | .629 |
| WITHIN+RESIDUAL | 436.40 | 66 | 6.61 | | |
| TENSE | 109.15 | 1 | 109.15 | 16.51 | .000 |
| LEVEL BY TENSE | 68.36 | 3 | 22.79 | 3.45 | .022 |
| WITHIN+RESIDUAL | 861.00 | 132 | 6.52 | | |
| EXTRACT | 29.38 | 2 | 14.69 | 2.25 | .109 |
| LEVEL BY EXTRACT | 83.55 | 6 | 13.93 | 2.13 | .053 |
| WITHIN+RESIDUAL | 466.08 | 66 | 7.06 | | |
| GRAM | 470.73 | 1 | 470.73 | 66.66 | .000 |
| LEVEL BY GRAM | 120.34 | 3 | 40.11 | 5.68 | .002 |
| WITHIN CELLS | 603.46 | 132 | 4.57 | | |
| TENSE BY EXTRACT | 44.94 | 2 | 22.47 | 4.91 | .009 |
| LEVEL BY TENSE BY EX | 42.19 | 6 | 7.03 | 1.54 | .171 |
| TRACT | | | | | |

Appendix F ANOVA tables for rating

| | | | | | |
|-----------------------------------|--------|-----|-------|-------|------|
| WITHIN CELLS | 435.11 | 66 | 6.59 | | |
| TENSE BY GRAM | 80.33 | 1 | 80.33 | 12.18 | .001 |
| LEVEL BY TENSE BY GRAM | 96.39 | 3 | 32.13 | 4.87 | .004 |
| WITHIN CELLS | 644.47 | 132 | 4.88 | | |
| EXTRACT BY GRAM | 13.23 | 2 | 6.61 | 1.35 | .262 |
| LEVEL BY EXTRACT BY GRAM | 78.09 | 6 | 13.02 | 2.67 | .018 |
| WITHIN CELLS | 636.22 | 132 | 4.82 | | |
| TENSE BY EXTRACT BY GRAM | 7.94 | 2 | 3.97 | .82 | .441 |
| LEVEL BY TENSE BY EXTRACT BY GRAM | 56.20 | 6 | 9.37 | 1.94 | .078 |

Table 7b: Long extraction: Mean preferences

| Source of Variation | SS | DF | MS | F | Sig of F |
|--------------------------------------|---------|-----|--------|-------|----------|
| WITHIN+RESIDUAL | 932.17 | 66 | 14.12 | | |
| LEVEL | 240.69 | 3 | 80.23 | 5.68 | .002 |
| WITHIN+RESIDUAL | 870.21 | 66 | 13.19 | | |
| TENSE | 160.65 | 1 | 160.65 | 12.18 | .001 |
| LEVEL BY TENSE | 192.78 | 3 | 64.26 | 4.87 | .004 |
| WITHIN+RESIDUAL | 1288.95 | 132 | 9.76 | | |
| EXTRACT | 26.46 | 2 | 13.23 | 1.35 | .262 |
| LEVEL BY EXTRACT | 156.18 | 6 | 26.03 | 2.67 | .018 |
| WITHIN CELLS | 1272.43 | 132 | 9.64 | | |
| TENSE BY EXTRACT | 15.88 | 2 | 7.94 | .82 | .441 |
| LEVEL BY TENSE BY EXTRACT | 112.39 | 6 | 18.73 | 1.94 | .078 |
| WITHIN+RESIDUAL | 476.42 | 70 | 6.81 | | |
| EXTRACTI | 59.10 | 1 | 59.10 | 8.68 | .004 |
| LEVEL BY EXTRACTI | 2.33 | 3 | .78 | .11 | .951 |
| WITHIN CELLS | 1315.99 | 140 | 9.40 | | |
| PREVERB BY VERB | 201.51 | 2 | 100.75 | 10.72 | .000 |
| LEVEL BY PREVERB BY VERB | 174.59 | 6 | 29.10 | 3.10 | .007 |
| WITHIN CELLS | 1089.29 | 140 | 7.78 | | |
| PREVERB BY EXTRACTI | 55.27 | 2 | 27.64 | 3.55 | .031 |
| LEVEL BY PREVERB BY EXTRACTI | 126.84 | 6 | 21.14 | 2.72 | .016 |
| WITHIN CELLS | 556.03 | 70 | 7.94 | | |
| VERB BY EXTRACTI | 9.79 | 1 | 9.79 | 1.23 | .271 |
| LEVEL BY VERB BY EXTRACTI | 25.72 | 3 | 8.57 | 1.08 | .363 |
| WITHIN CELLS | 869.98 | 140 | 6.21 | | |
| PREVERB BY VERB BY EXTRACTI | 129.21 | 2 | 64.60 | 10.40 | .000 |
| LEVEL BY PREVERB BY VERB BY EXTRACTI | 76.12 | 6 | 12.69 | 2.04 | .064 |

Appendix F ANOVA tables for rating

Table 8a: Partial wh-movement: Mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|---|-------------------|----------|-----------------|-------|----------|
| WITHIN+RESIDUAL LEVEL | 1623.29 7.61 | 66 3 | 24.60 2.54 | | |
| WITHIN+RESIDUAL TENSE | 321.58 .67 | 66 1 | 4.87 .67 | .14 | .711 |
| LEVEL BY TENSE | 15.85 | 3 | 5.28 | 1.08 | .362 |
| WITHIN+RESIDUAL EXTRACT | 547.39 51.50 | 132 2 | 4.15 25.75 | | |
| LEVEL BY EXTRACT | 5.66 | 6 | .94 | .23 | .967 |
| WITHIN+RESIDUAL GRAM | 1033.38 659.45 | 66 1 | 15.66 659.45 | 42.12 | .000 |
| LEVEL BY GRAM | 490.81 | 3 | 163.60 | 10.45 | .000 |
| WITHIN CELLS TENSE BY EXTRACT | 612.26 3.55 | 132 2 | 4.64 1.78 | .38 | .683 |
| LEVEL BY TENSE BY EX TRACT | 31.12 | 6 | 5.19 | 1.12 | .355 |
| WITHIN CELLS TENSE BY GRAM | 220.22 5.10 | 66 1 | 3.34 5.10 | 1.53 | .221 |
| LEVEL BY TENSE BY GR AM | 13.16 | 3 | 4.39 | 1.31 | .277 |
| WITHIN CELLS EXTRACT BY GRAM | 535.51 46.78 | 132 2 | 4.06 23.39 | 5.77 | .004 |
| LEVEL BY EXTRACT BY GRAM | 44.29 | 6 | 7.38 | 1.82 | .100 |
| WITHIN CELLS TENSE BY EXTRACT BY GRAM | 488.86 6.33 | 132 2 | 3.70 3.17 | .86 | .428 |
| LEVEL BY TENSE BY EX TRACT BY GRAM | 59.12 | 6 | 9.85 | 2.66 | .018 |

Table 8b: Partial wh-movement: Mean preferences

| Source of Variation | SS | DF | MS | F | Sig of F |
|----------------------------------|-------------------|----------|-----------------|-------|----------|
| WITHIN+RESIDUAL LEVEL | 2066.75 981.63 | 66 3 | 31.31 327.21 | 10.45 | .000 |
| WITHIN+RESIDUAL TENSE | 440.44 10.20 | 66 1 | 6.67 10.20 | 1.53 | .221 |
| LEVEL BY TENSE | 26.32 | 3 | 8.77 | 1.31 | .277 |
| WITHIN+RESIDUAL EXTRACT | 1071.02 93.56 | 132 2 | 8.11 46.78 | 5.77 | .004 |
| LEVEL BY EXTRACT | 88.59 | 6 | 14.76 | 1.82 | .100 |
| WITHIN CELLS TENSE BY EXTRACT | 977.72 12.67 | 132 2 | 7.41 6.33 | .86 | .428 |
| LEVEL BY TENSE BY EX TRACT | 118.25 | 6 | 19.71 | 2.66 | .018 |

Table 9a: Embedded sentences: Mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|--------------------------------------|--------|----|--------|-------|----------|
| WITHIN+RESIDUAL | 780.46 | 66 | 11.83 | | |
| LEVEL | 118.11 | 3 | 39.37 | 3.33 | .025 |
| WITHIN+RESIDUAL | 433.36 | 66 | 6.57 | | |
| OPERATOR | 76.18 | 1 | 76.18 | 11.60 | .001 |
| LEVEL BY OPERATOR | 71.11 | 3 | 23.70 | 3.61 | .018 |
| WITHIN+RESIDUAL | 292.63 | 66 | 4.43 | | |
| EXTRACT | 21.76 | 1 | 21.76 | 4.91 | .030 |
| LEVEL BY EXTRACT | 94.45 | 3 | 31.48 | 7.10 | .000 |
| WITHIN+RESIDUAL | 352.50 | 66 | 5.34 | | |
| GRAM | 159.64 | 1 | 159.64 | 29.89 | .000 |
| LEVEL BY GRAM | 361.57 | 3 | 120.52 | 22.57 | .000 |
| WITHIN CELLS | 237.77 | 66 | 3.60 | | |
| OPERATOR BY EXTRACT | .02 | 1 | .02 | .01 | .938 |
| LEVEL BY OPERATOR BY EXTRACT | 93.30 | 3 | 31.10 | 8.63 | .000 |
| WITHIN CELLS | 433.87 | 66 | 6.57 | | |
| OPERATOR BY GRAM | 11.35 | 1 | 11.35 | 1.73 | .193 |
| LEVEL BY OPERATOR BY GRAM | 71.96 | 3 | 23.99 | 3.65 | .017 |
| WITHIN CELLS | 264.38 | 66 | 4.01 | | |
| EXTRACT BY GRAM | 1.35 | 1 | 1.35 | .34 | .564 |
| LEVEL BY EXTRACT BY GRAM | 10.48 | 3 | 3.49 | .87 | .460 |
| WITHIN CELLS | 275.25 | 66 | 4.17 | | |
| OPERATOR BY EXTRACT BY GRAM | 12.21 | 1 | 12.21 | 2.93 | .092 |
| LEVEL BY OPERATOR BY EXTRACT BY GRAM | 9.40 | 3 | 3.13 | .75 | .525 |

Table 9b: Embedded sentences: Mean preferences

| Source of Variation | SS | DF | MS | F | Sig of F |
|------------------------------|--------|----|--------|-------|----------|
| WITHIN+RESIDUAL | 705.01 | 66 | 10.68 | | |
| LEVEL | 723.14 | 3 | 241.05 | 22.57 | .000 |
| WITHIN+RESIDUAL | 867.73 | 66 | 13.15 | | |
| OPERATOR | 22.71 | 1 | 22.71 | 1.73 | .193 |
| LEVEL BY OPERATOR | 143.93 | 3 | 47.98 | 3.65 | .017 |
| WITHIN+RESIDUAL | 528.77 | 66 | 8.01 | | |
| EXTRACT | 2.70 | 1 | 2.70 | .34 | .564 |
| LEVEL BY EXTRACT | 20.95 | 3 | 6.98 | .87 | .460 |
| WITHIN CELLS | 550.51 | 66 | 8.34 | | |
| OPERATOR BY EXTRACT | 24.41 | 1 | 24.41 | 2.93 | .092 |
| LEVEL BY OPERATOR BY EXTRACT | 18.81 | 3 | 6.27 | .75 | .525 |

Appendix F ANOVA tables for rating

Table 10a: Double focus sentences: mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|---------------------------|--------|----|--------|-------|----------|
| WITHIN+RESIDUAL | 620.56 | 66 | 9.40 | | |
| LEVEL | 128.38 | 3 | 42.79 | 4.55 | .006 |
| WITHIN+RESIDUAL | 513.05 | 66 | 7.77 | | |
| OPERATOR | 32.20 | 1 | 32.20 | 4.14 | .046 |
| LEVEL BY OPERATOR | 32.15 | 3 | 10.72 | 1.38 | .257 |
| WITHIN+RESIDUAL | 324.51 | 66 | 4.92 | | |
| GRAM | .22 | 1 | .22 | .04 | .833 |
| LEVEL BY GRAM | 11.43 | 3 | 3.81 | .78 | .512 |
| WITHIN CELLS | 332.47 | 66 | 5.04 | | |
| OPERATOR BY GRAM | 236.56 | 1 | 236.56 | 46.96 | .000 |
| LEVEL BY OPERATOR BY GRAM | 65.10 | 3 | 21.70 | 4.31 | .008 |

Table 10b: Double focus: Mean preferences

| Source of Variation | SS | DF | MS | F | Sig of F |
|---------------------|--------|----|--------|-------|----------|
| WITHIN+RESIDUAL | 649.02 | 66 | 9.83 | | |
| LEVEL | 22.86 | 3 | 7.62 | .78 | .512 |
| WITHIN+RESIDUAL | 664.94 | 66 | 10.07 | | |
| OPERATOR | 473.11 | 1 | 473.11 | 46.96 | .000 |
| LEVEL BY OPERATOR | 130.20 | 3 | 43.40 | 4.31 | .008 |

Table 11a: Double wh: Mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|---------------------------|--------|----|-------|------|----------|
| WITHIN+RESIDUAL | 895.42 | 66 | 13.57 | | |
| LEVEL | 143.66 | 3 | 47.89 | 3.53 | .019 |
| WITHIN+RESIDUAL | 196.25 | 66 | 2.97 | | |
| SEMANTIC | 1.07 | 1 | 1.07 | .36 | .552 |
| LEVEL BY SEMANTIC | 22.95 | 3 | 7.65 | 2.57 | .061 |
| WITHIN+RESIDUAL | 228.98 | 66 | 3.47 | | |
| GRAM | 27.72 | 1 | 27.72 | 7.99 | .006 |
| LEVEL BY GRAM | 8.79 | 3 | 2.93 | .84 | .474 |
| WITHIN CELLS | 701.28 | 66 | 10.63 | | |
| SEMANTIC BY GRAM | 1.09 | 1 | 1.09 | .10 | .750 |
| LEVEL BY SEMANTIC BY GRAM | 62.21 | 3 | 20.74 | 1.95 | .130 |

Table 11b: Double wh: Mean preferences

| Source of Variation | SS | DF | MS | F | Sig of F |
|---------------------|---------|----|-------|-----|----------|
| WITHIN+RESIDUAL | 457.96 | 66 | 6.94 | | |
| LEVEL | 17.58 | 3 | 5.86 | .84 | .474 |
| WITHIN+RESIDUAL | 1402.55 | 66 | 21.25 | | |

Appendix F ANOVA tables for rating

| | | | | | |
|-------------------|--------|---|-------|------|------|
| SEMANTIC | 2.18 | 1 | 2.18 | .10 | .750 |
| LEVEL BY SEMANTIC | 124.42 | 3 | 41.47 | 1.95 | .130 |

Table 12a: Focused infinitives: Mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|-------------------------------|--------|----|--------|-------|----------|
| WITHIN+RESIDUAL LEVEL | 850.41 | 66 | 12.88 | | |
| | 120.74 | 3 | 40.25 | 3.12 | .032 |
| WITHIN+RESIDUAL OPERATOR | 235.71 | 66 | 3.57 | | |
| | 43.13 | 1 | 43.13 | 12.08 | .001 |
| LEVEL BY OPERATOR | 26.46 | 3 | 8.82 | 2.47 | .070 |
| WITHIN+RESIDUAL GRAM | 453.35 | 66 | 6.87 | | |
| | 363.06 | 1 | 363.06 | 52.86 | .000 |
| LEVEL BY GRAM | 58.37 | 3 | 19.46 | 2.83 | .045 |
| WITHIN CELLS OPERATOR BY GRAM | 323.83 | 66 | 4.91 | | |
| | .37 | 1 | .37 | .08 | .783 |
| LEVEL BY OPERATOR BY GRAM | 1.32 | 3 | .44 | .09 | .966 |

Table 12b: Focused infinitives: Mean preferences

| Source of Variation | SS | DF | MS | F | Sig of F |
|--------------------------|--------|----|-------|------|----------|
| WITHIN+RESIDUAL LEVEL | 906.70 | 66 | 13.74 | | |
| | 116.74 | 3 | 38.91 | 2.83 | .045 |
| WITHIN+RESIDUAL OPERATOR | 647.66 | 66 | 9.81 | | |
| | .75 | 1 | .75 | .08 | .783 |
| LEVEL BY OPERATOR | 2.63 | 3 | .88 | .09 | .966 |

Table 13a: Long extraction vs. partial movement of operators: Mean acceptability

| Source of Variation | SS | DF | MS | F | Sig of F |
|---------------------------|---------|-----|--------|-------|----------|
| WITHIN+RESIDUAL LEVEL | 1444.06 | 66 | 21.88 | | |
| | 211.90 | 3 | 70.63 | 3.23 | .028 |
| WITHIN+RESIDUAL MOOD | 431.24 | 66 | 6.53 | | |
| | 80.76 | 1 | 80.76 | 12.36 | .001 |
| LEVEL BY MOOD | 83.03 | 3 | 27.68 | 4.24 | .008 |
| WITHIN+RESIDUAL TYPE | 658.07 | 66 | 9.97 | | |
| | 161.11 | 1 | 161.11 | 16.16 | .000 |
| LEVEL BY TYPE | 97.29 | 3 | 32.43 | 3.25 | .027 |
| WITHIN+RESIDUAL SITE | 805.65 | 132 | 6.10 | | |
| | 53.53 | 2 | 26.76 | 4.38 | .014 |
| LEVEL BY SITE | 52.44 | 6 | 8.74 | 1.43 | .207 |
| WITHIN CELLS MOOD BY TYPE | 320.44 | 66 | 4.86 | | |
| | 108.65 | 1 | 108.65 | 22.38 | .000 |
| LEVEL BY MOOD BY TYPE | 56.71 | 3 | 18.90 | 3.89 | .013 |

Appendix F ANOVA tables for rating

| | | | | | |
|----------------------------------|--------|-----|-------|------|------|
| WITHIN CELLS | 701.35 | 132 | 5.31 | | |
| MOOD BY SITE | 5.90 | 2 | 2.95 | .56 | .575 |
| LEVEL BY MOOD BY SITE | 35.49 | 6 | 5.91 | 1.11 | .358 |
| WITHIN CELLS | 666.32 | 132 | 5.05 | | |
| TYPE BY SITE | 48.20 | 2 | 24.10 | 4.77 | .010 |
| LEVEL BY TYPE BY SITE | 52.52 | 6 | 8.75 | 1.73 | .118 |
| WITHIN CELLS | 471.38 | 132 | 3.57 | | |
| MOOD BY TYPE BY SITE | 20.56 | 2 | 10.28 | 2.88 | .060 |
| LEVEL BY MOOD BY TYPE BY SITE | 41.51 | 6 | 6.92 | 1.94 | .079 |