Phonology-Syntax Interface in Turkish:

Evidence from Binding and

Scope Phenomena

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ABSTRACT

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This study analyzes the influence of one particular phonological feature – focus – on binding and scope phenomena in Turkish. The analysis of binding specifically includes pronominal binding. It basically specifies the influence of focus on coreferential reading between a pronoun and its antecedent. With respect to scope phenomena, this study investigates the influence of focus on relative scope order between some quantificational elements including the universal quantifier, the existential quantifier, numerals, reason clauses and negation

The basic claim on the interaction of focus with pronominal binding is that focus on either pronoun or its antecedent precludes coreferentiality. The ill-formed sentences in which the antecedent is focused is accounted for by Chomsky's (1981) Leftness Condition (LC). However, it has been noted that the LC is incapable of accounting for ill-formed sentences in which the pronoun, this time, is focused. Consequently, it is pointed out that it is in fact Lujan's (1989) Accessibility Principle (AP) and Bound-Variable Constraint (BVC) which can correctly explain the ill-formed sentences in question. Supportive evidence on the blocking effect of focus on

coreferentiality comes from discourse factors according to which the coindexation between a new entity (as a result of focusing) and an old entity gives rise to a clash.

With regard to the effect of focus on scope phenomena, it is claimed that two different prosodic patterns yield two different sentences with two different meanings. It has been noted that, the quantificational element, when focused takes wide scope interpretation but when the sentence is uttered with a sentential stress, negation takes wide scope. The focused quantificational element takes its wide scope interpretation through focus movement in the sense of Rizzi (1997) in order to satisfy Focus Criterion (Brody, 1995). The claim on the focused element taking wide scope is supported with the facts observed in the interaction between *ne.... ne* phrases, focus and negation and also from [wh-] elements having matrix clause scope.

Keywords: Focus; Binding; Scope; Quantificational elements; Discourse

KISA ÖZET

Türkçe'de Sesbilim ve Sözdizim Etkileşimi:

Bağlama ve Etki Alanı Olgularından Kanıtlar

Vahap Atilla Oğuşgil

Bu çalışma, sesletimsel bir özellik olan vurgunun Türkçe'deki bağlama ve etki alanı olguları üzerindeki etkisini incelemektedir. Bağlama çalışması adıl bağlama üzerinedir. Temel olarak, vurgunun adıl ve onun yerini tutan isim arasındaki gönderi ilişkisini tartışmaktadır. Etki alanına gelince, bu çalışma vurgunun bazı niceliksel öğelerle (evrensel niceleyici, belgisiz (bazı) niceleyici, sayısal niceleyiciler ve neden gösteren yan tümceler) olumsuzluk arasındaki etki alanı üzerindeki etkisini incelemektedir.

Vurgu ile adıl bağlama arasındaki etkileşim üzerindeki temel iddia, adıl veya onun yerini tutan isim üzerindeki vurgunun birbirlerine yapılan eşgöndermeyi engellediğidir. Vurgunun adılın yerini tutan isim üzerinde olduğu dilbigisel olmayan cümleler Chomsky'nin (1981) Sol Sınırlaması ile açıklanmaktadır. Ama bununla beraber, Sol Sınırlama'nın bu kez adıl üzerinde vurgu olan dilbigisel olmayan cümleler üzerinde yetersiz kaldığı tespit edilmiştir. Sonuç olarak, söz konusu cümleleri Lujan'ın (1985) Erişebilirlik İlkesi ve Bağlı Değişken Sınırlamaları doğru bir şekilde açıklamaktadır. Vurgunun eşgönderme üzerindeki engelleyici etkisine destekleyici kanıt söylem etkenlerinden gelir. Söylem etkenlerine göre, bilgisel statüsü açısından vurgudan kaynaklanan yeni bir varlık ile eski bir varlık arasındaki eşgönderim, çelişkiye neden olmaktadır.

Vurgunun etki alanı üzerindeki etkisine gelince, iki farklı sesletimin, anlamları farklı iki farklı cümle ürettiği iddia edilmektedir. Cümlesel vurgu olduğu durumlarda olumsuzluğun geniş etki alanına, niceliksel öğenin vurgulu olduğu durumlarda ise o niceliksel öğenin geniş etki alanına sahip olduğu tespit edilmiştir. Vurgulu niceliksel öğenin geniş etki alanı alması, Brody'nin (1995) Vurgu Kriterini tatmin etmesi için, o öğenin Rizzi (1997) çalışması ışığında Vurgu Öbeğine yükselmesi ile açıklanmıştır. Vurgunun geniş etki alanı alması, *ne...ne* ibareleri, vurgu ve olumsuzluk arasındaki etkileşimde ve ana tümce faaliyet alanı alabilen soru öğelerinde gözlenen gerçeklerle desteklenmiştir.

Anahtar sözcükler: Vurgu; Bağlama; Etki Alanı; Niceliksel Öğeler; Söylem

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CHAPTER 1

INTRODUCTION

1.1. Aim

The aim of this thesis is to investigate the interaction of focus with binding and scope phenomena in Turkish. In particular, it will discuss the role of focus on binding of pronouns by their (potential) antecedents and on the relative scope order between some quantificational elements and negation.

1.2. Data / Problem

1.2.1. Pronominal binding

Data from Turkish indicate that the referential interpretation of pronominals leads to ambiguity in some cases. However, the interaction of focus and pronominal binding is significant in that it gives rise to ungrammaticality which is otherwise unpredicted. Consider the following: (Throughout this thesis, the focused constituents will be represented by capitals with a subscript F)

(1) a. $O_{i/j}$ -nu davet et-mez-se-k Murat$_i$ çok sinirlen-ecek.
he-acc invite-neg-cond.-1pl Murat very get angry-fut
"If we don't invite him, Murat will get very angry"

b. *O_i -nu davet etmezsek [MURAT$_F$]$_i$ çok sinirlen-ecek.

c. *[O_i – NU$_F$] davet etmezsek Murat$_i$ çok sinirlen-ecek.

(2) a. Murat$_i$-ın Fatma$_j$ -yı aldat-acağ-ı o$_{i/j/k}$ -nun akl-ı-na hiç
Murat-gen Fatma-acc deceive-fut-poss 3 s/he-gen mind-poss-dat never
gel-me-miş-ti
come-neg-pst
"That Murat would deceive Fatma never occurred to him/her"

b. *[MURAT$_i$ -ın$_F$] Fatma'-yı aldat-acağ-ı o$_i$ -nun akl-ı-na hiç
gel-me-miş-ti.

c. *Murat-ın [FATMA$_i$ -yı$_F$] aldat-acağ-ı o$_i$-nun akl-ı-na hiç
gel-me -miş-ti.

In (1a), the referential dependency of the pronoun *O* exhibits ambiguity. As the indices on the pronoun *O* functioning as the complement of the conditional clause indicate, it may be coindexed with the subject of the matrix clause i.e. *Murat,* or it may be coindexed with any other person excluding *Murat*. What is crucial here is that focussing either the antecedent *Murat* as in (1b) or the pronoun *O* as in (1c) bars the coindexed reading between the pronoun and the potential antecedent. That is (1b) and (1c) cannot be interpreted in a way that *O* and *Murat* are coreferential.

(2a) is a sentence which includes two potential antecedents. It is three - ways ambiguous. The pronoun *O*, functioning as the possessor of the NP, may refer to either *Murat* or *Fatma*, both of which are potential antecedents. Alternatively, it may even refer to the third person except *Murat* and *Fatma*. Again, what is significant here is the consideration of (2b) and (2c). In both of them, focusing either *Murat* as in (2b) or *Fatma* as in (2c) prevents the pronoun from picking its reference from that element. Thus (2b) and (2c) are ungrammatical in a reading in which the pronoun and the focused antecedent are coindexed.

1.2.2. Scope phenomena

Similar to the facts of pronominal binding data, scopal interaction between quantificational elements and negation in Turkish also exhibits ambiguous[1] readings in terms of the relative scope order between quantificational elements such as quantifiers, numerals, reason clauses, and negation. However, the interaction of focus with quantificational elements sheds some light on their respective scope orders. The following sentences illustrate these facts:

(3) Herkes gel-me-di-ø.
everybody come-neg-past-3sg

(i) It is not the case that everybody came.
neg > everybody

(ii) It is true for every x such that x didn't come. = Nobody came.
everybody > neg

(4) [HERKES $_F$] gel-me-di-ø.[2]
everybody come-neg-past-3sg

(i) *It is not the case that everybody came .
neg > everybody

(ii) It is true for every x such that x didn't come. = Nobody came.
everybody > neg

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[1] The claim that the sentence (3) displays ambiguous readings will be modified in chapter 4 as: there are two distinct sentences with their particular phonological features and meanings.

[2] There seems to be a dialect difference with respect to grammaticality judgements of (4) . According to some Turkish speakers it is ungrammatical.

(5) Herkes GEL - me - di-ø.
everybody come-neg-past-3sg

(i) It is not the case that everybody came.
neg > everybody

(ii) *It is true for every x such that x didn't come. = Nobody came.
everybody > neg

(3) is an example which illustrates the scopal interaction of universal quantifier *herkes* and negation. As the two readings above demonstrate, sentence (3) is ambiguous in terms of the relative scope order of the quantifier and negation. In one interpretation, i.e. (3i), negation takes scope over the quantifier while in the other, i.e. (3ii), the quantifier takes scope over the negation. What is crucial is the interpretation of (4) and (5) where focusing universal quantifier rules out the other potential interpretation. The element, i.e universal quantifier, focused takes the interpretation of having wide scope, while if the sentence is uttered with a sentential stress it has the other interpretation in which negation takes scope over the quantifier (Throughout this thesis sentential stress will be indicated by capitals on the syllable immediately preceding the negative marker).

The scopal interaction between universal quantifier and negation is not the only case yielding ambiguous readings. Here is another example which illustrates interaction between another quantifier, indefinite *bazı*, and negation:

(6) Hasan bazı müşteri-ler-i ara-ma-dı.
Hasan some customer-pl-acc call-neg-past

(i) There are some customers x such that Hasan didn't call x.
bazı > neg

(ii) it is not the case that Hasan called some customers.
neg > bazı

(7) Hasan [BAZI $_F$] müşteri-ler-i ara-ma-dı.
Hasan some customer-pl-acc call-neg-past

(i) There are some customers x such that Hasan didn't call x.
bazı > neg

(ii) *it is not the case that Hasan called some customers.
neg > bazı

(8) Hasan bazı müşteri-ler-i aRA - ma -dı.
Hasan some customer-pl-acc call-neg-past

(i) *There are some customers x such that Hasan didn't call x.
bazı > neg

(ii) it is not the case that Hasan called some customers.
neg > bazı

(6) is an instance which exhibits the scopal interaction of another quantifier *bazı* and negation. The two different readings of sentence (6) shed some light on the fact that the quantifier *bazı* may also take scope above or below negation. However, in (7) where the quantifier *bazı* has focal accent, we have only the interpretation (i) in which the quantifier has scope over the negation. In (8), where the sentence is conveyed with a sentential stress, we have the interpretation (ii) in which negation has wide scope.

As an additional instance of scopal interaction between another type of element, i.e. reason clause and negation, consider sentence (9):

(9) Hasan bugün Pazar olduğu için ara-ma-dı.
Hasan today [because it is Sunday] call-neg-past
"Hasan didn't call because it is Sunday today"

(i) Because it is Sunday today, Hasan didn't call
(Hasan never calls me on Sundays)
because > neg

(ii) Hasan called but not because it is Sunday today
(He called because he had something important to say.)
neg > because

(10) Hasan bugün [PAZAR OLDUĞU İÇİN $_F$] ara-ma-dı.
Hasan [because it is Sunday] call-neg-past
"Hasan didn't call because it is Sunday today"

(i) Because it is Sunday today, Hasan didn't call
(Hasan never calls me on Sundays)
because > neg

(ii) *Hasan called but not because it is Sunday today
(He called because he had something important to say.)
neg > because

(11) Hasan bugün Pazar olduğu için aRA - ma -dı.
Hasan [because it is Sunday] call-neg-past
"Hasan didn't call because it is Sunday today"

(i) *Because it is Sunday today, Hasan didn't call
(Hasan never calls me on Sundays)
because > neg

(ii) Hasan called but not because it is Sunday today
(He called because he had something important to say.)
neg > because

The scopal interaction between reason clauses and negation and the effect of focus on these elements serve as another piece of evidence that highlights the focus- scope interplay in Turkish. As the interpretation of (9i) illustrates, the reason clause takes scope over negation. But in (9ii) the scope order becomes reversed in which negation takes scope above the reason clause. With focal accent on reason clause in (10) and sentential stress in (11), the sentences are no longer ambiguous, but have a single interpretation.

Last, consider the scopal interaction of another type quantificational element, i.e., numeral and negation in (12):

(12) Bir öğrenci gel-me-di.
a student come-neg-past
"A student didn't come"

(i) It is not the case that a student came.
Neg > numeral

(ii) There is a student x, x didn't come.
Numeral > neg

(13) [BİR $_F$] öğrenci gel-me-di.
a student come-neg-past
"A student didn't come"

(i) *It is not the case that a student came.
Neg > numeral

(ii) There is a student x, x didn't come.
Numeral > neg

(14) Bir öğrenci GEL - me -di.
a student come-neg-past
"A student didn't come"

(i) It is not the case that a student came.
Neg > numeral

(ii) *There is a student x, x didn't come.
Numeral > neg

As (12) clearly exemplifies, scopal ambiguity also manifests itself in the interaction between numerals and negation. Negation may take scope over the numeral in one reading such as in (12i) whereas the effect may be reversed in another reading such as in (12ii), in which the numeral takes scope over negation. The interpretation of (13) and (14), on the other hand, illustrates the role of focus and sentential stress on determining the relative scope order between numeral and negation. In (13), the numeral being focused takes scope over negation, in (14), on the other hand, where it has sentential stress, negation takes scope over the numeral.

1.3. Thesis Overview

In this chapter, I provided the goal of this thesis and some preliminary data which will serve as the starting point to my arguments in the following chapters. The significance of these data on binding and scope phenomenon will be discussed and accounted for in their respective chapters.

Chapter 2 will introduce the theoretical framework and basic properties of Focus. Phonological and semantic theories of Focus will be discussed and different views of Focus will be summarized. The relation of Focus with syntax will also be covered in this chapter. In particular, some cross-linguistic facts about the interaction of Focus with binding and scope phenomena will be investigated in Chapter 2

The task of Chapter 3 is to discuss the effect of Focus on binding. It will seek to determine how focus on the potential antecedent and the pronoun respectively affects co-referentiality. It will be pointed out that focusing either antecedent or pronoun rules out co-indexation between the pronoun and its antecedent in question and some explanations will be sought in order to account for these facts. Chomsky's (1981) *Leftness Condition* will be tested to account for some ungrammatical sentences in which the antecedent of the pronoun is focused. It will be pointed out that in some cases it can explain the deviant sentences but not the other ill-formed sentences in which the pronoun is focused. In order to reach a unified account I will test and then claim that Lujan's (1989) *Accessibility Principle* and *Bound-Variable Constraint* can account for the ill-formed sentences in which focusing either the antecedent or the pronoun crosses out coindexed reading between these elements.

In Chapter 4, I will cover the influence of Focus on scope phenomena in Turkish. The claim that scopal interaction between quantificational elements and negation exhibits the ambiguous scope readings will be modified like the folloeing: there are two distinct sentences uttered with two different prosodic patterns. The question of how Focus on these elements affects different (wide or narrow) scope interpretations will be the main discussion in Chapter 4. It will be argued that focusing quantificational element will give it wide scope interpretation via focus movement to the left periphery in the sense of Rizzi (1997), whereas sentential stress will give negation wide scope interpretation.

Chapter 5 will summarize and conclude the basic arguments made in the preceding chapters.

CHAPTER 2

THEORETICAL FRAMEWORK

2.1. Focus

The realization of focus involves many linguistic levels: syntax, phonetics-phonology, semantics, pragmatics and discourse structure.[1] According to Ladd (1996), focus has been typically associated with elements in an utterance that are perceived by hearers as stressed or emphasized by speakers. What is particularly significant in studies on focus is the connection between the most highly information bearing element and a change of pitch of the speaker's voice, which occurs because of the pitch accent (Ladd, 1996). According to Erteschik-Shir (1997), focus constitutes a phenomenon which has been related to the highlighting of information for communicative purposes. Zubizarreta (1998) defines focus in terms of the discourse notion of presupposition: that is, focus is the non-presupposed part of the sentence as opposed to the presupposed part of the sentence which the speaker and hearer assume to be the case (i.e. the shared assumptions) at the point at which the sentence is uttered in a discourse. It has been observed that the most highly information bearing word in an utterance is related to the question that the utterance answers (Cohan, 2000). Consider the following examples taken from Cohan (2000):

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[1]For more details the reader is referred to Erteschik-Shir (1997)

(1) a. Who will drive to Austin tomorrow?

b. Alex will drive to Austin tomorrow.

(2) a. How will Alex get to Austin tomorrow?

b. Alex will drive to Austin tomorrow.

(3) a. When will Alex drive to Austin?

b. Alex will drive to Austin tomorrow.

(4) a. Where will Alex drive tomorrow?

b. Alex will drive to Austin tomorrow.

Thus, in (1b), *Alex*, which is the focus of the sentence, corresponds to the wh-constituent *who* in question (1a). In a similar way, the focus in (2b), *drive*, corresponds to the wh-constituent *how* in question (2a). The same goes for *tomorrow* in (3b) and for *Austin* in (4b), which correspond to *when* in (3a) and *where* in (4a), respectively. Traditionally, then, focus has been identifed as the constituent which answers a wh-question. (Rooth, 1996; Erteschik-Shir, 1997; Zubizarreta, 1998; among others)

2.1.1. Various terms for focus

The literature on focus comprises a number of terms used to describe different categories and functions of focus. The most frequently used are 'broad' vs. 'narrow' (Ladd, 1990), 'neutral' vs. 'contrastive' focus, and 'information' vs. 'identificational' focus (Kiss, 1998). In the literature, there has often been disagreement, since different researchers have used these terms to mean different things, and different terms for the same thing. The distinction between 'neutral' and 'contrastive' focus has to do with the relationship between the item in focus and

discourse in the case of neutral focus or a set of alternatives in the case of contrastive focus. In other words, neutral focus is used to add a new proposition to a discourse, while contrastive focus selects the member of a subset that makes the assertion of the sentence true (Cohan, 2000). Finally, 'information' focus can be equated with neutral focus, and 'identificational' focus with contrastive focus. Kiss (1998) in her study based on Hungarian and English, argues that identificational focus, which expresses exhaustive identification and occupies specifier of a functional projection, must be distinguished in language description from information focus, which conveys new information and involves no syntactic reordering. Göksel and Özsoy (2003), on the other hand, argue against the claim that identificational focus ("contrastive focus" in their terminology) and information focus ("presentational focus" in their terminology) are semantically two separate phenomena. Contrastive and presentational foci are shown to be different manifestations of the same phenomenon in Turkish. For example it is shown that in Turkish the immediately preverbal position, the position which may host a focused phrase, is also the position for sentential stress when the sentence is in the canonical SOV order. Thus sentence (5) is ambiguous between a contrastive focus sentence and a presentational out-of-the-blue sentence:

(5) Bugün Ahmet SEMRA-YI görmüş
today Ahmet Semra-acc see-ev (Göksel and Özsoy, 2003: 13)
"Ahmet saw Semra today"

The ambiguity in (5) serves as counter argument to one of the claims in favor of the distinctness of presentational and contrastive foci in terms of their discrete syntactic positions (Kiss,1998). But as (5) indicates, a single surface position (the immediately

pre-verbal position) may serve as the locus for both types of foci in Turkish (Göksel and Özsoy, 2003).

2.1.2. Semantic view of Focus

Semantic role of focus (Kiss, 1995) states, the focus operator 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. Consider, for example, the interpretation of the following Hungarian sentence:

(6) JANOS kapott jelest.
John got A+ (Kiss 1995:10)
"It was John who got A+"

(6) can be used in a context or situation which involves a previously established set of persons: for instance, the members of a class. The focusing of *Janos* means that of the members of this set *John* is the only one of whom it is true that he got A+.

The intuitive content of focusing has been formulated semantically in various ways. Szabolcsi (as cited in Kiss, 1995) describes the semantic function of focus in terms of first order predicate logic, showing that the proposed interpretation is equivalent to a higher order representation. In her formulation, the meaning of (6) can be paraphrased as follows:

(7) For every x, x got A+ if and only if x = John.

The significance of Szabolcsi's work on focus consisted, among other things, in arguing against the views that focus is a stylistic or pragmatic phenomenon or that its

semantic contribution can be analyzed as a mere conversational implicature. As Szabolcsi demonstrates on Hungarian material, a focus operator changes the truth conditions of a sentence (see also Rooth, 1996).

Kenesei (as cited in Kiss, 1995) while maintaining the quantificational approach to focus, argued against Szabolcsi's formula in (7), which treats focus as an operator expressing exhaustive listing, and proposed to analyze focus as an operator expressing identification, or, when contrastive, expressing exclusion by identification with respect to some domain of discourse. It is an appealing property of the quantificational approach to focus that it can easily account for the fact that the semantic operation performed by the focus has two versions: it can express contrast (that is, identification with exclusion), or identification only.

2.1.2.1. Structured meaning semantics

In one semantic approach –elaborated, among others, by Jacobs (as cited in Kiss, 1995), and Krifka (as cited in Kiss, 1995) –called the structured meaning approach, the focus feature of a constituent induces the partitioning of the semantic representation of the sentence into a focus part and a background/presupposition part. For instance, the focus structure in (a) determines the structured meaning (b) (cited in Rooth: 1996: 14):

(8) a. [$_S$ John [$_{VP}$ introduced [$_F$ Bill] to Sue]]
b. < λ x [introduced John x to Sue], Bill>

(8b) expresses that the individual who has the property of having been introduced to Sue by John is Bill.

As has been observed (Kiss, 1995 ; Rooth, 1996) the interpretation of a large set of operators (*only, even, must, not, always*) is sensitive to the focus-background structure of its sentence: the background is understood as the restrictor of the operator, and the focus is understood as its nuclear scope. Consider the logical paraphrasis of (9), involving the universal adverbial quantifier *always:*

(9) John always goes on vacation with MARY.

always c, ∃x(John goes on vacation with x in c), (Kiss, 1995:19)

John goes on vacation with Mary

In (9), *always* quantifies over cases in which there is someone who John goes on vacation with, and the sentence means that in each such case it is Mary that John goes on vacation with.

The "structured meaning" approach to focus has led to a non-quantificational, relational view of focus. According to this, the focused constituent itself is never an operator; it always represents the nuclear scope of an operator. If the sentence contains no overt operator (other than focus), an invisible illocutionary operator is assumed. When the focus appears to have scope over an operator, for instance, over a universal quantifier, as in *JOHN met everybody,* it is, in fact, the illocutionary operator that has wide scope.

2.1.2.2. Alternative semantic approach

An alternative semantic approach is put forth in Rooth (1992) who centres around the idea that focusing contrasts the denotation of a constituent with others. The basic idea of alternative semantics can be illustrated with the question-answer paradigm. (Rooth, 1996) The question [does Ede want tea or coffee] determines the basic answers "Ede wants tea" and "Ede wants coffee". Similiarly, focus in the answer [Ede wants $[\text{coffee}]_F$] indicates that propositions obtained by making substitutions in the position of the focused phrase –propositions of the form "Ede wants y" – are alternatives to the actual answer. Congruence is simply a matter of the question and answer characterizing the answer set consistently. Evoking alternatives is the general function of focus.

2.1.3. Pragmatic view of focus

The "pragmatic" view of focus formulated in the work of Vallduvi (1992) claims that focus is not part of the truth-conditional, logico-semantic interpretation of the sentence, but merely expresses the informational value of its logico-semantic content. Vallduvi assumes that the interpretative component of grammar also contains a special, non-truth-conditional module of sentence interpretation, called information packaging. The input to information packaging is the so-called information structure of the sentence, which is non-distinct from its S-structure in discourse configurational languages. (In the case of languages like English, the mapping of S-structure on information structure is more complex; it also takes the structure of pitch accents into consideration). Vallduvi describes the informational role of focus in the framework of "File Change Semantics": wide focus is the part of the sentence that is to be entered into the hearer's knowledge store. A narrow focus

may involve a more complex operation; for instance, the replacement of an entity in a previously stored proposition.

2.1.4. Focus as discourse dependent

A point that should be mentioned is that focus is eventually in many cases discourse dependent. Consider the example that follows, taken from Cohan (2000):

(10) He painted the shed.
What did John do today?
Did John paint the garage?

(10) shows that depending on the context question, the very same answer 'He painted the shed' can be classified either as neutral focus providing new information or as contrastive focus selecting a member from a set of alternatives. It appears then that the distinction between information focus and contrastive focus is blurred. Contrast is contextually constrained to occur only if a contrast set is available. Here is an example quoted from Erteschik-Shir (1997).

(11) A: Who wants to marry John, Janet or Ann?
B: Janet wants to marry him.

B's answer is contrastive because it selects 'Janet' from the contrast set provided in the context. If, however, no such context were provided by A, 'Janet' in B's answer would be non-contrastive, i.e. information focus (Erteschik-Shir, 1997). The focus of a sentence then can be said to be predictable in terms of the properties of the discourse and context that the sentence occurs in and of the sentence itself

(Rochemont and Culicover, 1990). In other words, it is a discourse property, which is assigned to a constituent in a context of conversation. For any sentence several focus assignments will be generally possible, one of which is realized in discourse (Erteschik-Shir, 1997).

2.1.5. Focus-Syntax Interface

2.1.5.1. Surface syntactic representation of Focus

Attempts to find a position for focus in both visible and invisible syntax have taken in the literature. In one of them, *Aspects of the Syntax of Focus in Portuguese,* Ambar (1995) concentrates on two major groups of Focus constructions in Portuguese, which is an SVO language: (i) contrastive focus – the one where new information is viewed in contrast with other specific old or new information, and (ii) presentational focus – the one where the focused constituent simply introduces new information without contrasting it with any other type of information, either old or new. The syntactic argument for treating these two types of focus as distinct centers around the presence of different positions for different kinds of focus. Contrastive focus is in complementary distribution with presentational focus. If the focused element – either the subject or the complement- has to precede the verb in the visible syntax, focus is then contrastive. If the focused element has to follow the verb, the focus interpretation is presentational[2] (Ambar, 1995)

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[2] Similar to Ambar (1999), see also Kiss (1998) for her study on Hungarian for bifurcation of the two focus types.

2.1.5.2. Abstract syntactic representation of Focus

The need for an abstract syntactic representation of information packaging has been pointed out in the literature, as well. One well-known proposal is the process of focus- interpretation or focus-raising due to Chomsky (1981). Focus constituents are treated as quantificational. They raise to an A'-position adjoined to the root IP node, just like quantifiers do by means of quantifier raising.

The output of focus raising, F-structure, is the level at which focus-ground relations are abstractly laid out, as in (12):

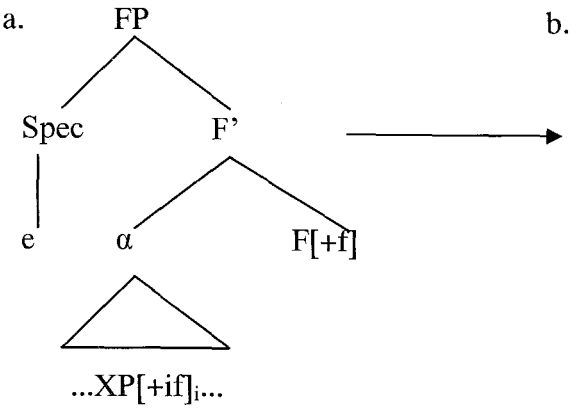
(12) [$FOCUS_1$] [$_{IP}$ ... t_1...]

The motivation for this rule is twofold: it is modeled after the overt construction of focus-preposing and it accounts for the weak crossover-effect that focus seems to create, parallel to the effect created by quantifiers and wh-words (Chomsky, 1981).

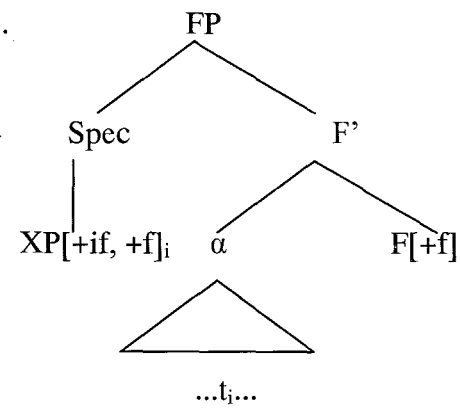
2.1.5.2.1. The landing site of Focus Movement and Licensing

The questions regarding where focus moves and how its scope interpretation is obtained have been raised by Choe (1995). In line with Brody's (as cited in Kiss, 1995) proposal for Hungarian and Tsimpli's (1995) for Modern Greek, Choe proposes that Korean employs a Functional category F with the feature [+F(ocus)] that selects the category α, which does not include topic position but includes all the grammatical functions of the clause, and projects its own projection, as in (13):

(13) a.



b.



(where [+if] means [+information focus])

As foci undergo preposing either in Syntax (Focus Movement) or in PF (PF-scrambling), Choe further proposes that like wh-phrases, information foci are base generated at D-structure with the feature [+if][3], which is read as stressed or focused and that an element with [+if] moves to Spec-FP either at S-structure or in LF to be properly licensed through a Spec-head agreement relation with F[+f].

Focus movement has a significant place in Rizzi's (1997) Split-CP hypothesis. Rizzi assumes that the complementizer (C) system is fundamentally distinct from the I system, the latter but not the former being V-related in the general case. He thinks of the C system as the interface between a propositional content (expressed by the IP) and the superordinate structure (a higher clause or the articulation of discourse).

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[3] Choe further explores the syntactic similarities between information focus and contrastive focus and concludes that like information focus, contrastive focus is base generated and it should also meet the licensing condition saying that it should be assigned [+f] by a functional category F to be properly licensed.

The C system minimally consists of a specification of force[4], accessible to higher selection, and a specification of finiteness, selecting a finite (or non-finite) IP.

Formerly the C layer was identified with a single X-bar projection (CP), but this assumption undergoes a significant change under the impact of Rizzi's Split-CP hypothesis. Rizzi argues the C layer is no longer identified with a single X-bar projection, more than a single X-bar schema seems to constitute the left periphery of the clause. So CP is dissolved into a series of functional projections, each corresponding to a single feature specification. The core of the empirical material discussed by Rizzi (1997) is drawn from Italian, French and English, with occasional comparative extensions to other Romance and Germanic languages. Four kinds of elements typically occurring in the left periphery are taken into account: Interrogative, Relative Pronouns, Topics and Focalized elements. Depending on the interactions between these elements, Rizzi postulates an articulated array of X-bar projections which constitute the C system as illustrated in (14):

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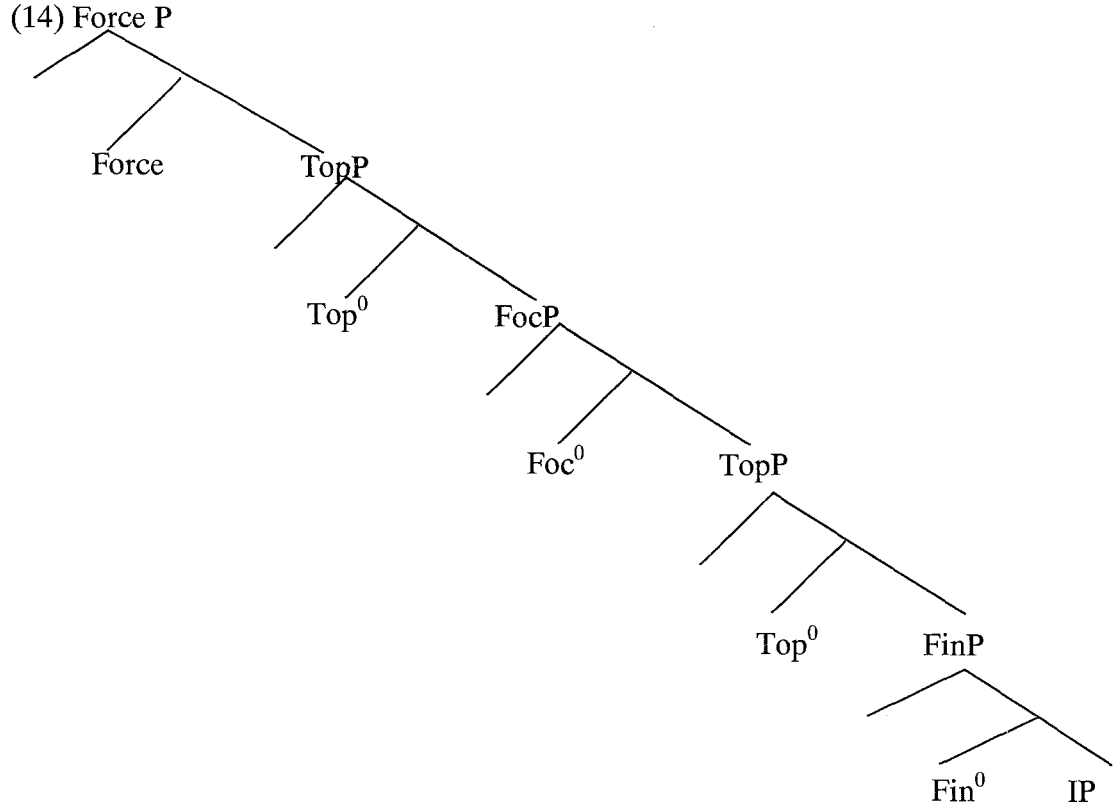
[4] Rizzi states that complementizers express the fact that a sentence is a question, a declerative, an exclamative, a relative, a comparative, an adverbial of a certain kind, etc., and can be selected as such by a higher selector.This information is sometimes called the clausal type or the specification of Force. Here, Rizzi adopts the latter terminology. "Force is expressed sometimes by overt morphological encoding on the head (special C morphology for declaratives, questions, relatives, etc.), sometimes by simply providing the structure to host an operator of the required kind, sometimes by both means". (Rizzi, 1997: 283)

(14) Force P



As (14) illustrates, one traditional articulation of the clause that typically involves the left periphery is the articulation in focus-presupposition, as expressed by the following Italian construction:

(15) IL TUO LIBRO ho letto (, non il suo)
Your book I read (, not his)

The focus-presupposition articulation can be expressed in Italian by preposing the focal element (focalization) and assigning it a special focal stress[5] (Rizzi, 1997).

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[5] Italian also possesses a lower focalization, involving focal stress on an element in situ e.g.,

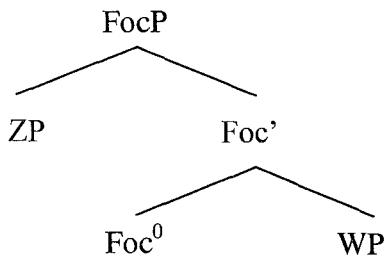
(i) Ho letto IL TUO LIBRO (, non il suo)

I read YOUR BOOK, not his

But, it is conceivable that at LF (i) will have a representation involving (16), if the focal element must be moved to a peripheral position. (Rizzi, 1997: 287)

In (15) the structural option is restricted to contrastive focus, i.e., (15) presupposes that you believe that I have read something different from your book. Rizzi assumes that this type of articulation is expressed by the usual building block of syntactic representation: the X-bar schema. i.e., focus-presupposition has the following structure:

(16)



ZP = Focus
WP = Presupposition

A Foc^0 head, a functional head belonging to the complementizer system, projects its own X-bar schema with the following functional interpretation: its specifier is the Focus, its complement is the presupposition.

Rizzi further claims that all kinds of movements to the left periphery must be motivated by the satisfaction of some criterion. For example, a constituent endowed with topic or focus features must end up in a Spec/head configuration with Top or Foc, respectively; in other words, there are Topic and Focus Criteria, reminiscent of Wh and Neg Criteria. The following is the Focus Criterion adopted from Brody (as cited in Kiss, 1995)

(17) Focus Criterion

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.

2.1.6. Focus-Phonology Interface

2.1.6.1. Stress and Focus assignment Rules: Jackendoff (1972)

Jackendoff (1972) conceives of focus as a semantic notion, which is marked intonationally by pitch accent. Since in the generative model, syntax mediates between phonological and semantic interpretation, Jackendoff (1972, 240) introduces the focus feature *F* in syntax: "One artificial construct is required: a syntactic marker F which can be associated with any node in the surface structure." This feature is interpreted on the phonological side according to the Stress Assignment Rule, and on the semantic side according to the Focus Assignment Rule:

(18) Stress Assignment Rule (Jackendoff 1972, 237)
If a phrase P is chosen as the focus of a sentence S, the highest stress in S will be on the syllable of P that is assigned highest stress by the regular stress rule.

(19) Focus Assignment Rule (Jackendoff 1972, 240)
The semantic material associated with surface structure nodes dominated by F is the Focus of the sentence. To derive the presupposition, substitute appropriate semantic variables for the focused material.

2.1.6.2. F-Assignment Rules: Selkirk (1984, 1995)

The relation between focus and accent is also studied by Selkirk (1984, 1995)[4]. She argues that there is a relation between the position of pitch accents and the size of a focused constituent. This relation is expressed by two focus assignment rules. Selkirk proposes that an accented word is marked by an F-feature (her Basic Focus Rule).

The F-feature projects focus along the functor-argument structure up the tree, starting from the accented word: it projects from a head to its maximal projection, and from a maximal projection to a selecting head (her Focus Projection):

(20) F-Assignment Rules (Selkirk 1995:555)

a. Basic Focus Rule
An accented word is F-marked

b. Focus Projection

(i) F-marking of the head of a phrase licenses the F-marking of the phrase.

(ii) F-marking of an internal argument of a head licenses the F-marking of the head.

She then illustrates the workings of the focus rules by the sentence (21):

(21) She sent a BOOK to MARY.

Given these pitch accent assignments, the Basic Focus Rule says that the nouns BOOK and MARY are both foci, as shown in (22a), and the Phrasal Focus Rule, through which the focus of a higher constituent is legitimated by the focus of a lower constituent, gives the options in (22b).

(22) $_{S'}$[$_{S}$[$_{NP}$[She] $_{VP}$[$_{V}$[sent] $_{NP}$[a $_{N}$[BOOK]] $_{PP}$[to $_{NP}$[$_{N}$[MARY]]]]]]

a. Basic Focus Rule	F(N)	F(N)
b. Phrasal Focus Rule	F(NP) F(VP) F(S)	F(NP) F(PP) F(VP) F(S)

The NP Mary may be focussed because its head N is focussed. The PP to Mary may be focussed because Mary, an argument of the head P to which is contained in the PP, is focussed. The VP may be focussed because an argument of the head V, namely the PP to Mary, is focussed. And, if the VP is the head of the sentence, then the S may be focussed here because the VP is.

2.1.6.3. Stress-focus correspondence: Neeleman & Reinhart (1998)

Neeleman & Reinhart (1998) view focus as a property defined in PF. In particular they argue that the focus of an utterance is determined by its intonation in the following way. A particular utterance may have more than one focus interpretation. They define the set of possible foci for a given utterance as follows.

(23) The focus set of IP consists of the constituents containing the main stress of IP.
(Neeleman & Reinhart 1998: 333, Ex.51)

Thus the utterance in (24), where main stress falls on the object, has the focus set given in (25).

(24) a. A: What's this noise?
B: My neighbour is building a DESK.

b. A: What's your neighbour doing?
B: My neighbour is building a DESK.

c. A: What's your neighbour building?

B: My neighbour is building a DESK.

(Neeleman & Reinhart 1998: 333, Ex.53)

(25) Focus set: {IP, VP, DPDO}

2.1.7. Syntax-prosody mapping

2.1.7.1. Direct relation of syntax-prosody mapping

Acoustic investigations of Umeda (1982) and the prosodic theory of Selkirk (1984) are the notable studies and represent the two main approaches to syntax/prosody relation. In Umeda (1982), the connection from syntax to prosodic phrasing is unmediated by any filtering process, that is, it is proposed that the details of prosodic phrasing can be determined directly from syntactic structure by associating particular syntactic nodes (or constituent boundaries) with a phonetic value, either pausing, or segmental lengthening.

2.1.7.2. Indirect relation of syntax-prosody mapping

Contrary to Umeda (1982), Selkirk (1984) holds that the syntax-prosody relation is indirect: prosodic phrasing is derived by rules that refer to left-to-right ordering, length (or branching patterns). Bachenko, Fitzpatrick and Wright's (1986) experimental system study *The Contribution of Parsing to Prosodic Phrasing in an Experimental Text-To-Speech System* indicates an organization of the prosodic phrases that supports the "indirect relationship" approach of Selkirk (1984). They found that, in their corpus, prosodic phrasing depends on three aspects of structure:

the breakdown into syntactic constituents, the grammatical function of a constituent, and constituent length.

2.1.7.3. Bidirectional model of phonology-syntax interface

Zec and Inkelas (1995) in *Syntax-phonology Interface* investigate the organization of the syntactic and phonological components of grammar with respect to each other. They aim to determine whether these two modules are independent or somehow influence one another and if they do, what the directionality of this influence is. They first explore the influence of s-structure on p-structure and then the reverse. For example, evidence for the influence of p-structure on s-structure is given in (26) in which syntactic constructions are subject to phonological constraints best described in terms of prosodic branchingness.

In the first example they present data from Serbo-Croatian and argue that Serbo-Croatian topicalization is subject to the constraint that the topic must be a branching phonological phrase. Thus, topics consisting of only one phonological word are judged ungrammatical, as in (26b):

(26) (a) $[[\text{Taj}]_{\omega}$[6] $[\text{covek}]_{\omega}]_{NP}$ voleo-je Mariju
that man loved-AUX Mary
"that man loved Mary"

(b) * $[[\text{ Petar }]_{\omega}]_{NP}$ voleo-je Mariju
Peter loved_AUX Mary
"Peter loved Mary"

Similiarly, constraints on Heavy NP Shift in English are characterized in prosodic terms according to them. (27) exemplifies their claim:

(27) (a) Mark showed to John [[some letters]$_{\phi}$[7] [from Paris]$_{\phi}$]$_{NP}$
(b) *Mark showed to John [[some letters]$_{\phi}$]$_{NP}$

"In grammatical Heavy NP Shift constructions, such as that in (a), the shifted noun phrase contains at least two phonological phrases, while any attempt to shift an NP consisting of only a single phonological phrase is judged ungrammatical (e.g.,(b))." Zec and Inkelas 1995:546)

In conclusion, Zec and Inkelas concluded that just as s-structure constraints p-structure, p-structure may affect s-structure as well. So, they proposed a bidirectional model of the syntax-phonology interface.

2.2. The theory of binding

Theory of Binding tries to define particular circumstances on the occurrence of the particular NPs in a sentence. Whether the NP (anaphor, pronoun or other referring expressions) is bound by its antecedent or is free and also under what conditions they are allowed is the crucial dimension of Binding Theory.

2.2.1. Chomsky (1981)

Within the Government and Binding framework (henceforth GB), Chomsky (1981) proposes a configurational system (based on phrase structure configurations, i.e. c-command relationships) accounting for the distribution, positioning and interpretation of anaphors in relation to their antecedents.

[6,7] Zec and Inkelas (1995) use subscript symbols ω and ϕ to signal phonological word and phonological phrase, respectively.

The reference of an element (a reflexive, reciprocal, pronoun or fully referential expression (R-expression)) is determined by its index. While R-expressions have an independent index (Chomsky, 1981) which assigns 'inherent' reference to them, pronominals and anaphors depend on a coindexed antecedent for their reference. The two coindexed elements (anaphors or pronominals and their antecedents) must have the same φ-features (person, number and gender) (Chomsky, 1981): Chomsky's binding proposal includes three basic principles:

(28) Binding Theory

(A) An anaphor is bound in its governing category.

(B) A pronominal is free in its governing category.

(C) An R-expression is free.

In order to understand the principles it is important to explain the meaning of the terms 'bound' and 'governing category'. 'Binding' has to do with constituent command (c-command) a term introduced by Reinhart (as cited in Ntelitheos, 2001), which in turn relies on the structural relation of 'dominance' (one constituent α of a sentence dominates another constituent β if β is contained in α)

(29) "Node A c(onstituent)-commands node B iff the branching node most immediately dominating A also dominates B." (Reinhart, as cited in Ntelitheos, 2001)

Bringing together the coindexing requirement for anaphors and pronominals and the c-command relation, we can explain the term 'binding' as:

(30) "α binds β if α c-commands β and is coindexed with β." (Chomsky,1981)

And the relevant domain for binding theory is the governing category:

(31) "β is a governing category for α if and only if β is the minimal category containing α, a governor of α and a SUBJECT accessible to α" (Chomsky, 1981)

2.2.1.1. Binding applying at LF or S-structure

Chomsky first makes the assumption that binding conditions apply at the level of LF. He illustrates the workings of Binding conditions by first considering the case of overt anaphors such as *each other* which has to be bound in its governing category by principle (A). For instance:

(32) [$_{S*}$ they believe [$_{S}$ each other to be intelligent.]]

In (32), where *each other* is in the position of the subject of an infinitive, the anaphor is governed and assigned case by *believe*, so that its governing category is *S** and it is bound in *S**.

Consider next the case of pronominals. A pronoun is necessarily case-marked, hence has a governing category in which it must be free by principle (B) of the binding theory. (Chomsky, 1981) We have such examples as (33) with disjoint reference and (34) with free reference of the pronoun:

(33) (i) John saw him
(ii) John told Bill about him

(34) (i) John expected Mary to catch him.
(ii) John expected that he would catch Mary.

After briefly discussing principles (A) and (B) of the binding theory, Chomsky then proceeds with principle (C), which asserts that R-expressions are free. For example:

(35) (i) He said that John would win
(ii) John said that John would win

The sentences are understood with the embedded occurrence of *John* distinct in reference from the matrix subject. (Chomsky, 1981)

Chomsky further discusses the case of variables which is considered more interesting. Principle (C) gives the basic facts of strong crossover. Consider the following examples:

(36) (i) who did he say Mary had kissed (for which x, he said Mary had kissed x)
(ii) who did he say had kissed Mary (for which x, he said x had kised Mary)
(iii) who said Mary had kissed him (for which x, x said Mary had kissed him)
(iv) who said he had kissed Mary (for which x, x said he had kissed Mary)

In (i) and (ii), *he* cannot be replaced by the variable x in the associated LF-representation, whereas in (iii) and (iv) it can. (37i,ii) are not possible interpretations of (36i,ii), respectively, but they are possible interpretations of (36iii,iv), respectively (Chomsky, 1981):

(37) (i) for which x, x said Mary had kissed x

(ii) for which x, x said x had kissed Mary

Chomsky expresses the central facts in terms of the binding theory. In the LF representation for (36i,ii), *he* must be indexed differently from x, whereas in (36iii,iv) it may or may not be, giving the interpretations just indicated, where the option of interpreting *he* as identical to the variable bound by "for which x" is contingent on coindexing. These possibilities are consequences of principle C of the binding theory, with variables behaving like names in this respect (Chomsky, 1981).

Based on the crossover facts, Chomsky argues that variables, whether bound by quantifiers or by quasi-quantifiers such as wh-phrases, behave alike; furthermore, they behave as names generally. The similarity of the several types of variables suggests that principle C of the binding theory applies at the level of LF-representation as he has so far been assuming, though other facts, to which he will turn directly, run counter to this assumption.

Principle C of the binding theory also eliminates cases of improper wh-movement, as in (38i-iii) which reflect the categorial representations of Chomsky (1981):

(38) (i) *who [$_S$ t tried [$_{\acute{S}}$ t' [$_S$ t'' to win]]]

(ii) *who [$_S$ t thought [$_{\acute{S}}$ t' [$_S$ John would see t'']]

(iii) *who [$_S$ t is possible [$_{\acute{S}}$ t' [$_S$ John will see t'']]]

Chomsky argues that the examples of (38) can be derived by successive application of the rule Move-α, moving *who* from the D-structure position of t'' to the COMP position of t', then to the matrix subject position of t, and finally to the matrix COMP position of *who*. Since t'' is a variable, by definition, it is subject to principle C of the binding theory and therefore cannot be A-bound by t, so that the structures are ungrammatical.

So far, Chomsky has been assuming that the binding theory applies at the LF-level. Another possibility he assumes is that it applies at S-structure.The choice has no effect on the foregoing discussion of principles A and B, but it does affect the applicability of principle C. He proposes a number of considerations that suggest that in fact the binding theory does apply at S-structure. S-structure differs from LF-representation by the rules of the LF-component (Chomsky, 1981). There are three rules that Chomsky discusses, namely, (39):

(39) (i) the rule of quantifier-movement

(ii) the LF-rule of wh-movement

(iii) the rule of focus

Rule (39i) maps the S-structure (40i) to (40ii); rule (39ii), in conjunction with the rule interpreting *who*, maps the S-structure (40iii) to (40iv); and rule (39iii) maps the S-structure (40v) to (40vi):

(40) (i) his mother loves everyone

(ii) for every person x, his mother loves x

(iii) I don't remember [who [t expected [his mother to love whom]]]

(iv) I don't remember [for which persons x, y [y expected [his mother to love x]]]

(v) his mother loves JOHN (*JOHN* with focal stress)

(vi) for x = John, his mother loves x

These examples illustrate the phenomenon of weak crossover. In each case we have the clause "his mother INFL love x" at LF-representation. In this structure, *his* cannot be interpreted as a variable identical to x, as it can, say, in "everyone loves his mother" (= "for every person x, x loves x's mother", under one interpretation); though the effect is weaker than in the strong crossover cases (Chomsky, 1981).

To determine whether the binding theory applies at S-structure or LF, Chomsky asks what effect the rules of the LF-component have on the functioning of the binding theory. In the case of each of the rules of (39), it appears that the binding theory applies prior to the application of the rule (Chomsky, 1981). Therefore, Chomsky concludes that the binding theory applies at S-structure rather than at LF. He illustrates this with the following examples:

(41) (i) which book that John read did he like

(ii) he liked every book that John read

(iii) I don't remember who thinks that he read which book that John likes

(iv) John said that Bill had seen HIM. (*HIM* with focal stress)

In (i), *he* may be proximate to *John*, but not in (ii) or (iii); and in (iv), *HIM* may be proximate to *John*. These are the predicted results if the binding theory applies at S-structure. At this level, *he* does not c-command *John* in (i), but it does c-command

John in (ii) and (iii); and *HIM* in (iv) is a pronominal , so that it may be bound by *John*. But at the LF-level, the represention for (41i-iv) are the ones in (42i-iv):

(42) (i) for which book x that John read, he liked x

(ii) for every book x that John read, he liked x

(iii) I don't remember for which person y and which book x that John likes, y thinks that he read x

(iv) for x = he, John said that Bill had seen x

In (42ii,iii), as in (42i), *he* does not c-command *John*; and in (36iv), *HIM* has been replaced by a variable which must be free, hence not bound by *John*, in accordance with principle (C) of the binding theory. Thus the rules (39) of the LF-component obliterate the distinction between (41i) and (41ii,iii), and they convert (41iv) to a structure that prevents binding, contrary to fact (Chomsky, 1981).

To Chomsky, such examples indicate that syntactic movement and movement in the LF-component have quite different effects with respect to the binding theory. This theory applies properly after syntactic movement, but each rule of the LF component converts S-structures to which the binding theory applies correctly to LF-representations to which it applies incorrectly. Therefore these examples provide evidence that the binding theory applies at S-structure, a conclusion that Chomsky adopts[8].

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[8] However, Chomsky states that the argument is only of limited weight. There are many open questions about the interpretation of focus at LF, in addition to well-known problems about the effect of focal stress on choice of referent in other constructions that do not seem to relate to binding theory (e.g., "John hit Bill and then HE hit HIM"). (Chomsky; 1981: 197)

2.2.2. Focus and Binding

Chomsky (1971) first defines focus as a sentence constituent containing the intonation peak, that is, the highest pitch and stress. The presupposition of a sentence is an expression derived by replacing the focus of that sentence with an appropriate variable. The presupposition of a sentence represents information that is shared by the speaker and the hearer in relation to a universe of discourse, while the focus represents information that is assumed by the speaker to be new to the hearer.

The focus – presupposition relations of a sentence may be specified as a two – part expression: a focus operator and a sentence containing a variable bound by that operator (Jackendoff 1972). Accordingly, various utterances of a sentence that differ in the location of main stress have different focal structures, each representing different assumptions on the part of the speaker as to what information is new and what is already known to the hearer.

The identification of focus is carried out by the syntactic component, which assigns representations with a given constituent as "in focus". These are assigned a logical interpretation at LF, which is the only level of representation provided by sentence grammar that is relevant to the rules of discourse grammar (Williams 1977). The latter rules specify the structural and meaning relationships of sentences in a given discourse. That these rules apply exclusively to logical forms of sentences is an important point, as the interpretation of focus must be context-dependent and therefore, subject to discourse interpretation (Williams 1977).

2.2.2.1. Leftness Condition

Chomsky (1981) treats a stress – focused phrase as binding a variable at LF in its surface structure position, and argues that focused NPs behave like quantified expressions with respect to pronominal binding, in that *the variable they bind cannot be the antecedent of a pronoun to its left* (Leftness Condition (LC). This is shown in the logical representations (b) that would correspond to the acceptable readings of the sentences (a) in (43) – (44). Compare them with the well – formed example in (45):

(43) a. *The woman he loved betrayed someone.

b. for some person x [the woman he loved betrayed x] (he $\neq x$)

(44) a. The woman he loved betrayed JOHN

b. for x: John [the woman he loved betrayed x] (he $\neq x$)

(45) a. Someone was betrayed by the woman he loved

b. for some person x [x was betrayed by the woman he loved]

c. for some person x [x was betrayed by the woman x loved]

In accordance with the LC, the variables in (43) and (44) cannot serve as antecedent for the pronouns, since they are to their left. But in (45), since the pronoun is to the right of the variable, it can have an anaphoric relation with it, as represented in (c).

2.3. Scope Phenomenon

As Kelepir (2001) states, it has been reported that in English the universal quantifier *every* can take scope below or above negation. Therefore, the interpretation of sentence (46) leads to duality. It may either have the (a) reading in which negation takes scope over the quantifier or (b) reading in which quantifier takes scope over negation.

(46) Everybody didn't come today.

a. "It is not the case that everybody came"

neg > everybody

b. "It is true for every x such that x did not come" (logically nobody came)

everybody > neg

To Kelepir (2001), on the other hand, the Turkish counterpart of (46) is unambiguous. She exemplifies this by (47) (her 208):

(47) Bugün herkes gel-me-di-ø.

Today everybody come-neg-past-3sg

(i) It is not the case that everybody came today.

(ii) *It is true for every x such that x didn't come today. = Nobody came.

Kelepir (2001) claims that the unavailable reading of (47ii) indicates that sentence (47) can only be interpreted in a way in which negation takes scope over the universal quantifier. The reverse is not allowed. Thus she concludes that "it is a

property of the universal quantifier in Turkish that it cannot be interpreted immediately outside the scope of negation[9] (Kelepir, 2001)

Similar facts involving the scope of negation have been discussed by other linguists such as Jackendoff (1972). To take an example, consider the following sentence:

(48) All the men didn't go
  a. 'No man went' (ALL > NOT)
  b. 'Some men went' (NOT > ALL)

The sentence in (48) has been widely reported to have at least two interpretations (the most frequently cited early reference for such examples is Jackendoff 1972), shown in (48a) and (48b).

Each of these interpretations is realized with a different intonation of the sentence, what Jackendoff (1972) called contour A for (48a) and contour B for (48b). The meaning difference in (48a) and (48b) is attributed to different scope relations between *all* and *not*. These facts about the disambiguating effect of prosody in utterances involving scope as in (48) have been discussed cross-linguistically in the literature (Jackendoff ,1972; Krifka, 1998; Ionin, 2001 among others) (See section 2.3.2).

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[9] She acknowledges that "This is not completely true. It turns out that if there is an indefinite intervening between the universal quantifier and negation, the universal quantifier can take scope outside negation" (Kelepir 2001: 144):

(i) Her öğrenci bir ödev-i yapmadı
  every student one homework-acc do-neg-past
  "It is true for every student x such that x didn't do one of the homeworks"

2.3.1. The syntax of scope

The relative scope of operators can be represented in syntax. The linguistics literature treats scope relations as the direct result of c-command. This is the base of the syntactic theory on quantifier scope and it is widely assumed among theories of scope (May 1985, Kural 1997, among others).

Sentences containing two operators usually give rise to scope ambiguities, represented in syntax by different c-command relations between the two quantifiers, the c-commanding QP taking wide scope. Under this view, the derivation of inverse scope, (as opposed to linear scope) B having scope over A is problematic because c-command relations between A and B need to be reversed for the right interpretation. The syntactic theories approach this problem with syntactic movement mechanisms. Operators / quantifiers have to move to positions which determine their scope in a phrase structure tree. For English, for example, this is achieved by movement called quantifier raising (QR) which is assumed to occur at a level of representation referred to as the invisible syntax also known as Logical Form (LF). With QR the quantifier moves out of its argument position to a position where it takes scope, leaving a trace x (the bound variable in the logical representation) coindexed with the quantifier.

2.3.1.1. May (1985)

May (1985) states that LF is a level of representation which interfaces linguistic form and interpretation by mapping syntactic structures onto logical representations. He defines scope as follows:

(49) The scope of α is the set of nodes that α c-commands at LF. (p.5)

The general rule Move-Alpha characterizes both overt movement and Quantifier Raising (QR) which gives rise to structures in which a quantifier phrase (QP) moves to an A'-position to take scope over its domain. The following example is from May (1985):

(50) a. Every student admires some professor.

b. $[_{S'}$ $[_{S}$ every student$_2$ $[_{S}$ some professor$_3$ $[_{S}$ e_2 admires $e_3]]]]$

c. $[_{S'}$ $[_{S}$ some professor$_3$ $[_{S}$ every student$_2$ $[_{S}$ e_2 admires $e_3]]]]$

May (1985) argues that the effect of ECP differentiates between (50b) and (50c). The empty category in the internal argument position (e_3) satisfies the ECP through theta government. The empty category in the external argument position (e_2) however is not properly governed in sentence (50b). Being in the external argument position it can only satisfy ECP via antecedent government, but this is blocked by the intervening phrase [some professor]. The LF representation in (50c) satisfies the ECP in that both of the empty categories are properly governed, e_2 by antecedent-government and e_3 by theta-government (May, 1985).

The question now arises as to how the ambiguity of (50a) will be represented. May argues that (50c), in fact, represents both interpretations in which either the some-phrase or the every-phrase takes broader scope. The quantified phrases are adjoined to S and have the same c-command domain, i.e., they c-command each other. Therefore, the quantifiers in this structure are free to take on any type of relative scope relation. May refers to this assumption as the Scope Principle.

2.3.1.2. Quantifier raising approach

Quantifier interactions in English show an availability of inverse scope readings that do not reflect the surface order of constituents. Beginning with May (1985), there has been much work motivating covert movement of quantifiers as the means for deriving inverse scope. For example, (51b), an LF for (51a), has the object, a universal QP, undergoing obligatory QR to a position adjoined to the VP. The subject (which has moved to the spec of IP in order to satisfy EPP) takes scope over the object at LF. (51a) can also have an inverse scope reading, however, i.e. the object taking scope over the subject. Fox (as cited in Ionin 2001) proposes two possible LFs for the inverse reading. In (51c), the object undergoes optional QR to a position above the subject. In (51d), the subject is reconstructed into its base position, below the LF position of the object. Fox points out that QL is never obligatory, since it is never forced by type considerations (the subject being always interpretable in its surface position). All of the LFs in (51) are from Ionin, 2001:3

(51) a. A boy loves every girl

b. obligatory instance of QR: $[_{IP}$ a boy_1... $[_{VP}$ every $girl_2$ $[_{VP}$ t_1 loves $t_2]]]$

c. optional instance of QR: $[_{IP}$ every $girl_2$ $[_{IP}$ a boy_1... $[_{VP}$ t_2 $[_{VP}$ t_1 loves $t_2]]]]$

d. optional instance of QL: $[_{IP}$ ------- ... $[_{VP}$ every $girl_2$ $[_{VP}$ a boy_1 loves $t_2]]]$

2.3.1.3. Feature-checking approach

The previous section showed how various scope readings in English can be derived via applications of covert QR and reconstruction. Other languages, by contrast, depend more on overt movement to derive different scope readings. One example is Hungarian which has been argued to "wear its LF on its sleeve" (Szabolcsi, 1997)

According to Szabolcsi (1997), verbal arguments originate postverbally and scramble to various preverbal positions. Scope is then read off the surface order of the elements. Frozen scope holds between all pairs of elements, including quantifiers, adverbs, and negation. Some examples, from Ionin (2001), are given below:

(52) a. [$_S$ gyakran [$_{VP}$ ket ferfival$_i$ [$_{V'}$ vacsorazik együtt e$_i$]]]

often two man-with dines-she together

"On many occasions, it is two men that she dines out with" (often > two)

b. [$_S$ [$_{VP}$ Ket ferfival$_i$ [$_{V'}$ vacsorazik gyakran együtt e$_i$]]]

"It is two men she often dines out with" (two > often)

(53) a. sok ember mindenkit felhivott

many man everyone-acc up-called

"Many men phoned everyone" = many men > everyone

b. mindenkit sok ember felhivott

everyone-acc many man up-called

"Many men phoned everyone" = everyone > many men

Covert quantifier movement seems to be absent in Hungarian – QPs move overtly to preverbal positions, where they are interpretable (Ionin, 2001). They do not reconstruct to their base positions (hence the impossibility of *two men* taking scope under *often* in (52b); they do not undergo covert QR (hence the impossibility of *two men* scoping over *often* in (52a). As far as overt movement is concerned, however,

scope bearing elements can scramble in more than one order, thus allowing for different surface scope configurations (53) (Ionin, 2001).

Szabolcsi (1997) analyzes overt QR in terms of a feature-checking theory of scope. According to Ionin (2001), in this framework, QR is not one single movement rule which can apply across quantifier types. Different types of quantifiers carry specific features – e.g., a distributive feature on universal quantifiers, a referential/topic feature on specific indefinites, and so on. The functional heads corresponding to these features are arranged in a rigid order: thus Topic is above quantifier which is above focus and predicator operator positions. The reason that different surface orders of quantifiers are possible is that indefinites are ambiguous between a referential reading and an existential reading. Referential indefinites move to the Topic position, thus taking scope over universals (53a); existential indefinites move to the Focus or PredOp position, thus taking scope under universals (53b) (Ionin, 2001).

2.3.2. Focus and scope

Sentences which have more than one QP in contrastive focus tend to show scope ambiguity. (Ionin, 2001) This is illustrated from Russian in (54) and (55). Thus, (54a) could be used either to convey that "One boy saw every single girl – whereas there may have been two or three boys who saw just some of the girls" or that "For every girl, there was at least one boy who saw her– whereas for some of the girls, there may have been as many as two or three boys who saw them". In Russian, modifiers such as *xotja by* or *po krajnej mere* ("at least") help obtain the narrow-scope reading of the indefinite (these modifiers, when in put in preverbal position,

make non-emotive sentences ungrammatical). On the other hand, *tol'ko* ("only") helps force the wide-scope reading of the indefinite (Ionin, 2001):

(54) a. (xotja by) ODIN mal'chik videl KAZHDUJU devochku

(at least) ONE boy-NOM saw EVERY girl-ACC

"(at least) ONE boy saw EVERY girl" (every>one), ?(one>every)

b. KAZHDUJU devochku videl tol'ko ODIN mal'chik

EVERY girl-ACC saw only ONE boy-NOM

"EVERY girl, only ONE boy saw" (every>one), ?(one>every)

(55) a) KAZHDYJ mal'chik videl tol'ko ODNU devochku

EVERY boy-NOM saw only ONE girl-ACC

"EVERY boy saw only ONE girl" (every>one), ?(one>every)

b) (xotja by) ODNU devochku videl KAZHDYJ mal'chik

(at least) ONE girl-ACC saw EVERY boy-NOM

"(At least) ONE girl, EVERY boy saw" (every>one), ?(one>every)

Focussing only one of the two QPs does not allow for the inverse scope order. Focussing just the subject (56a) or just the object (56b) is not enough to make the sentence ambiguous. (Ionin, 2001) :

(56) a. (??xotja by) ODIN mal'chik videl kazhduju devochku

(??at least) ONE boy-NOM saw kazhduju girl-ACC

"ONE boy saw ever girl" *(every>one), (one>every)

b. (??xotja by) odin mal'chik videl KAZHDUJU devochku

(??at least) one boy-NOM saw EVERY girl-ACC

"One boy saw EVERY girl" *(every>one), (one>every)

2.3.2.1. Focus and scope in German – Krifka's proposal

A similar phenomenon of scope inversion when both quantifiers are in focus has also been noted for German by Krifka (1998). German has frozen scope in non-scrambled sentences. However, as Krifka shows, when the first operator in the sentence (which is in the spec of CP) receives rising stress ("/"), and second operator (in the spec of IP) receives falling stress ("\"), the sentence becomes ambiguous. The example in (57) is from Krifka (1998, p. 80):

(57) Mindestens /EIN Student hat \JEDen Roman gelesen

at least one-NOM student has every novel read

(one>every), (every>one)

Krifka's explanation of this phenomenon depends on three assumptions (which he discusses in some detail in his paper): that focus is usually assigned to the immediately preverbal constituent; that focus assignment may occur prior to syntactic movement; and that in contrastive topic constructions, focus within the topic is realized by a rise accent. His derivation of (57) from the base-generated structure in (58a) proceeds as follows: first, the auxiliary *hat* moves to C (this could also happen at any other point in the derivation); then, the object QP *jeden roman* is scrambled to a position in front of the subject, within the IP; then, the subject, *mindestens ein Student,* which is now in the preverbal position, receives focus; then, the focused subject QP moves to the spec of CP: Krifka points out that this

movement carries a specific discourse function, contrastive topicalization; then, *jeden Roman,* now preverbal, receives focus. The resulting representation is given in (58b).

(58) a. $[_{CP}$ e $[_{C'}$ e [mindestens ein Student [jeden Roman [gelesen]] hat]]]

b. $[_{CP}$ [mindestens ein Student]$_{F,3}$ $[_{C'}$ hat$_1$ [[jeden Roman]$_{F,2}$ [t_3 [t_2 [gelesen]]] t_1]]]

CHAPTER 3

FOCUS AND BINDING

3.1. Introduction

In this chapter, the interaction between focus and binding will be discussed. The main concern will be, particularly, the effect of focus on co-referentiality. That is, the basic question will be how focus affects co-referential reading of pronouns and their antecedents. The structure of this chapter will be as follows: Section 2 will give some introductory remarks on the application of Binding Conditions in Turkish. Section 3 will present a relevant topic from English data on the relation between focus and binding. Section 4 will include Turkish data from different environments which will be used to test the effect of focus we encounter in English data and also the applicability of Binding Condition B to the Turkish data in question. Section 5 will be about Chomsky's (1981) Leftness Condition and its application to Turkish data. Section 6 will review Lujan's (1989) Accessibility Principle and Bound–Variable Constraint and also its application to Turkish data. Section 7 will present evidence to our claim on the effect of focus on coreferentiality. Finally, Section 8 will serve as the summary and the conclusion of this chapter.

3.2. Binding facts of Turkish

As discussed in Chapter 2, Theory of Binding tries to define particular conditions on the occurrence of the particular NPs in a sentence. Whether the NP (anaphor,

pronoun or other referring expressions) is bound by an antecedent or is free and also under what conditions coindexations are allowed is the crucial dimension of Binding Theory. According to the Binding Condititions, an anaphor is expected to be bound in its governing category whereas a pronoun or an R-expression is expected to be free in its governing category.

The application of Binding Conditions in Turkish is investigated by some scholars such as Kornfilt (1984). In her study, Kornfilt (1984) investigates the applications of Binding Theory (within the GB-theory) in Turkish and embedded sentences and claims that the AGR element governs the subject position of sentences as well as of possessive NPs. She further claims that the AGR element also creates governing categories by acting as a governor and as an accessible subject for elements in the syntactic position of those governing categories. Therefore, according to the Binding Conditions, we would expect pronouns to be possible in subject position of the domains in question (since they will be free within these domains and hence satisfy Condition B), and anaphors to be excluded from those positions (since they would be ruled out by Condition A).

However the observed facts don't pattern as clearly as we would expect. The facts (quoted from Kornfilt, 1984) are the following:

(1). Anaphors: Reciprocals are allowed in subject position of NPs, reflexives are not.

(2). Pronominals: Overt pronouns as subjects of NPs are disjoint in reference from an antecedent outside the NP, pro is free in reference (thus can co-refer with an antecedent outside the NP) (Kornfilt, 1984: 74).

And here are the illustrations of these facts:

(3) Çocuk - lar [birbir – lerin - in sırt – ın] - ı yıka – dı - lar.

child - pl e.o. – 3.pl. –gen back-3.prs–acc. wash-past-3.pl

"The children washed each other's backs"

(4) *Çocuk - lar $_i$ [kendi – lerin - in $_i$ sırt – ın] - ı yıka – dı - lar.

child - pl self – 3.pl. –gen back-3.prs–acc. wash-past-3.pl

"The children washed self's backs"

(5) Çocuk - lar $_i$ [onlar - ın $_{*i/j}$ sırt – ın] - ı yıka – dı - lar.

"The children washed their backs"

(6) Çocuk - lar $_i$ [ø $_{i/j}$ sırt – ların] - ı yıka – dı.

"The children washed their backs"

The distribution of the reflexive and pro reflects binding properties of anaphors and pronominals, respectively, more clearly than the distribution of reciprocals and overt pronouns. These members behave just as predicted by the Binding Theory, and in particular, are in complementary distribution: pro and reflexives, with the first being allowed by Condition B and the second disallowed by Condition A from occupying subject position of NPs with overt AGR (Kornfilt, 1984).

3.2.1. Direct Complements and Condition A

After briefly discussing the application of Binding Conditions to the subject of NPs, let us now proceed with the application of such conditions to the subject of embedded sentences. Consider the following ones as they are cited in Kornfilt (1984):

(7) a. *Biz [birbirimiz sinema – ya git – ti – k] san – ıyor – du – k.
we e.o –nom -dat go-past-1pl think-prog-past-3pl
"We thought e.o went to the cinema"

b. Biz [birbirimiz - i sinema – ya git – ti] san – ıyor – du – k.
-acc
"We believed e.o to have gone to the the cinema"

In (7a), where AGR is present in the embedded S, the reciprocal is ungrammatical, while in (7b), where AGR is missing, it is grammatical. The same correlation between grammaticality and presence versus absence of AGR can be observed, when the embedded subject is a reflexive:

(8) a. * Siz [kendiniz sınıf – ta kal – dı – nız] san – ıyor – muş – sunuz.
2pl yourselves class-loc stay-past-2pl believe-prog-past-2pl
"It is said that you believe yourselves to have flunked"

Since the tense element is exactly the same in all examples, the permeability of the embedded S to anaphoric binding cannot be due to Tense, but has to be due to the

AGR element (Kornfilt, 1984). It is clear that AGR is the main factor that determines the domains within which Binding Theory holds. Where there is no AGR element at all, the NP or S in question is not a governing category and anaphors occur freely in subject position (Kornfilt, 1984).

3.2.2. Direct Complements and Condition B

A parallel argument with respect to Condition B can be made against the "Tensed-S" proposal. Consider the following examples cited from Kornfilt (1984):

(9) a. Ali $_i$ [o $_{*i/j}$ sınıf-ta kal-dı-AGR] san-ıyor-du

"Ali thought he flunked"

b. Ali $_i$ [on-u $_{*i/j}$ sınıf-ta kal-dı] san-ıyor-du

"Ali believed him to have flunked"

Kornfilt claims that sentences (9a) and (9b) are problematic for any theory that attributes prime relevance for defining binding domains to the Tense elements, since Direct Complements are fully differentiated for Tense and Aspect. Kornfilt further claims that, as she does for Possesive NPs, the ungrammaticality of the (a) sentence above is due not to the binding conditions, but to the Avoid Pronoun Principle, (Chomsky, 1981) since pro is available in such a construction. The ungrammaticality of the (b) sentence above, however, is due to the Binding Conditions: the lack of AGR makes the direct complement totally permeable to the application of Condition B, in other words, the binding domain for the embedded accusative pronominal

subject is the higher clause, hence its disjointness in reference from its antecedent which is also a constituent of the same binding domain (Kornfilt, 1984).

3.3. Stress and anaphora switching effect

In *Coreferentiality and Stress,* Akmajian and Jackendoff (1970) present examples which show that interpretation of coreferentiality in some cases depends crucially on stress patterns. The following is their Case 1:

Case 1: Contrastive stress on either a pronoun or noun will prohibit coreference.

They exemplify Case 1 by the following sentences:

(10) After he $_{i}$ woke up, John $_{i}$ went to town.

(11) After HE $_{*i/j}$ woke up, John $_{i}$ went to town.

(12) After he $_{*i/j}$ woke up, JOHN $_{i}$ went to town.

In (10) there is a possible reading on which *John* and *he* are coreferential. In (11), in which the pronoun *he* is stressed, and in (12), in which the antecedent *John* is stressed, they must be distinct (Akmajian and Jackendoff ,1970).

Differences in the stress of antecedents producing anaphora switching effects are also discussed by them in cases where the pronoun has two potential antecedents. Consider the following sentences:

(13) That George $_{i}$ would be Tom's $_{j}$ thesis advisor never occurred to him $_{i/j}$

(14) That GEORGE $_{i}$ would be Tom's$_{j}$ thesis advisor never occurred to him $_{*i/j}$

(15) That George $_i$ would be TOM's $_j$ thesis advisor never occurred to him $_{i/*j}$

As the sentences (13) – (15) demonstrate, when there are two possible NPs for a pronoun to be coreferential with, contrastive stress on one of the NPs forces the pronoun to be coreferential with the other NP (Akmajian and Jackendoff; 1970).

3.4. Turkish Data Analysis

3.4.1. Sentences with one potential antecedent

Let us consider some parallel Turkish sentences in order to see whether the same effect holds for Turkish or not. Consider the following sentences:

(16) a. O $_{i/j}$ -nu davet et-mez-se-k, Murat $_i$ çok sinirlen-ecek.
he-acc invite-neg-cond.-1pl Murat very get angry-fut
"If we don't invite him, Murat will get very angry"

b. Murat-ı $_i$ davet et-mez-se-k, O $_{i/j}$ çok sinirlen-ecek.
Murat-acc invite-neg-cond.-1pl he very get angry-fut
"If we don't invite Murat, he will get very angry"

c. O$_{*i/j}$ -nu davet et-mez-se-k, MURAT $_i$ çok sinirlen-ecek.
he-acc invite-neg-cond.-1pl Murat very get angry-fut
"If we don't invite him, Murat will get very angry"

d. O$_{*i/j}$ -NU davet et-mez-se-k, Murat$_i$ çok sinirlen-ecek.

he-acc invite-neg-cond.-1pl Murat very get angry-fut

"If we don't invite him, Murat will get very angry"

Each of the sentences in (16) includes a conditional clause as one of its constituents. They, except (16b), include the pronoun *O* in the conditional clause and its antecedent *Murat* in the matrix clause. (16b), on the other hand, includes the pronoun in the matrix clause and its antecedent in the conditional clause. Regardless of the relative location of the pronoun and its antecedent, there is a possible reading in which the pronoun *O* and its antecedent *Murat* are coreferential, as (16a) and (16b) demonstrate.

Since (16a) and (16b) are grammatical sentences with a coreferential reading, they are expected to satisfy the relevant condition for pronominal binding, which is Condition B. The governing category of the pronoun in (16a) is the conditional clause which includes the pronoun itself, an accessible subject *biz*, which is recoverable from the agreement morphology on the embedded verb and the governor which is the embedded verb. The governing category of the pronoun in (16b), on the other hand is the matrix clause. But in both cases, the pronoun *O* is free within its governing category, thus satisfying condition B and yielding grammatical structures.

(16c) and (16d) exemplify the sentences with focused antecedent and pronoun, respectively. In (16c), focusing the antecedent cancels out a reading in which *O* and *Murat* are coreferential. Similiarly, in (16d) focusing the pronoun blocks a coreferential reading between *Murat* and *O*. Thus, (16c) and (16d) must be

interpreted in a way that the pronoun *O* and its antecedent *Murat* are distinct individuals as illustrated by their indices. However, depending on the prediction of Condition B, we would expect (16c) and (16d) to be grammatical with a coreferential reading. If we compare (16a) with (16c) and (16d), we note that there is no difference between them in terms of satisfying the requirement of Condition B. Like (16a), (16c) and (16d) also satisfy Condition B, by being free within their governing categories which are conditional clauses like the one in (16a). So the question is, what makes these two sets of sentences, one being uttered in neutral intonation i.e. (16a) and (16b) and the other being uttered with either focused antecedent or focused pronoun i.e. (16c and 16d) different in terms of their grammaticality judgements under the coindexation patterns indicated.

Before taking a stand on the explanation of the effect of focus on coreferential reading, by considering further sentences, let us test whether we have the same effect in different environments (in addition to the interaction of a conditional clause with a matrix clause). The following section deals with embedding of relative and other adverbial clauses with matrix clauses.

3.4.1.1. Relative Clause – Matrix Clause

Consider the following sentences:

(17) a. [O $_{i/j}$ -nun hakk–ı-nda söyle–diğ-im söz–ler-e] Murat $_i$ çok
he-gen about-poss-loc say-nom-1sg word-pl-dat Murat very
sinirlen-di.
get angry-past
"Murat got very angry with the words I said about him".

b. [Murat $_i$ hakk-ı-nda söyle-diğ-im söz-ler-e] O $_{i/j}$ çok sinirlen-di.
M. about-poss-loc say-nom-1sg word-pl-dat he very get angry-past
"He got very angry with the words I said about Murat"

c. [O$_{*i/j}$ -NUN hakk–ı-nda söyle–diğ-im söz–ler-e] Murat $_i$ çok
he-gen about-poss-loc say-nom-1sg word-pl-dat Murat very
sinirlen-di.
get angry-past
"Murat got very angry with the words I said about him".

d. [O$_{*i/j}$ -nun hakk–ı-nda söyle–diğ-im söz–ler-e] MURAT $_i$ çok
he-gen about-poss-loc say-nom-1sg word-pl-dat Murat very
sinirlen-di.
get angry past
"Murat got very angry with the words I said about him".

(18) a. [O $_{i/j}$ -nun hakk–ı-nda söyle–diğ-im söz–ler] Murat-ı $_i$ çok
he-gen about-poss-loc say-nom-1sg word-pl Murat-acc very
sinirlen-dir-di.
get angry-caus-past
"The words I said about him made Murat very angry"

b. [Murat $_i$ hakk–ı-nda söyle–diğ-im söz–ler] O $_{i/j}$ -nu çok sinirlen-dir-di.
M about-poss-loc say-nom-1sg word-pl he-acc very get angry-caus-p
"The words I said about Murat made him very angry"

c. [O$_{*i/j}$ -NUN hakk–ı-nda söyle–diğ-im söz–ler] Murat-ı $_i$ çok sinirlen-dir-di.
he-gen about-poss-loc say-nom-1sg word-pl M-acc very getangry-caus
"The words I said about him made Murat very angry"

d. [$O_{*i/j}$ -nun hakk–ı-nda söyle–diğ-im söz–ler] MURAT-I$_i$ çok
he-gen about-poss-loc say-nom-1sg word-pl Murat-acc very
sinirlen-dir-di.
get angry causpast
"The words I said about him made Murat very angry"

(19) a. [$O_{i/j}$ -nun hakk–ı-nda söyle–diğ-im söz–ler] Murat-a$_i$ dokun-du
he-gen about-poss-loc say-nom-1sg word-pl M.-dat touch-past
"The words I said about him touched Murat"

b. [Murat$_i$ hakk–ı-nda söyle–diğ-im söz–ler] $O_{i/j}$-na dokun-du.
Murat about-poss-loc say-nom-1sg word-pl he-dat touch-past
"The words I said about Murat touched him"

c. [$O_{*i/j}$ -NUN hakk–ı-nda söyle–diğ-im söz–ler] Murat-a$_i$ dokun-du
he-gen about-poss-loc say-nom-1sg word-pl M.-dat touch-past
"The words I said about him touched Murat"

d. [$O_{*i/j}$-nun hakk–ı-nda söyle–diğ-im söz–ler] MURAT-A$_i$ dokun-du
he-gen about-poss-loc say-nom-1sg word-pl M.-dat touch-past
"The words I said about him touched Murat"

Each of the sentences in (17) – (19) includes a relative clause as one of its constituents. In the (a) sentences, the antecedent *Murat* is in the matrix clause and the pronoun *O* is in the relative clause. In the (b) sentences, on the other hand, the places of antecedent and pronoun are switched, that is, the pronoun is in the matrix clause and the antecedent is in the relative clause. But, altering the positions of the antecedent and the pronoun does not bar coreferential readings as is seen by the comparison between (a) and (b) sentences. (17a) and (17b), being grammatical sentences, are expected to satisfy Condition B. This is the case, indeed. The governing category of the pronoun in (17a) is the relative clause whereas the

governing category of the pronoun in (17b) is the matrix clause. In both cases, the pronoun is free in its governing category as expected. So (17a) and (17b), by satisfying Condition B, yield well-formed structures.

In (17) – (19), the functions of the antecedent are also changed. For instance, in (17) *Murat* is functioning as the subject of the matrix clause whereas in (18) and (19) it functions as the direct and indirect object, respectively. But the different functions of the antecedent *Murat* do not affect the well-formed coreferential reading as is illustrated in (a) sentences. In (18a) and (19a), the governing category of the pronun is again the relative clause. The pronoun is free in its governing category as required by Condition B. In (18b) and (19b), on the other hand, the governing category of the pronoun is the whole clause since the accessible subject is within the relative clause. But the pronoun is still free within this governing category since *Murat*, the accessible subject, does not c-command the pronoun. Thus (18b) and (19b) also satify Condition B and they yield well-formed structures.

The (c) and (d) sentences in (17) and (19) illustrate the impact of Focus on coreferentiality. Focusing either the pronoun, in the (c) examples, or its antecedent, in the (d) examples, blocks coreference. That is, the pronouns can only be interpreted as referring to third person other than Murat. But depending on Condition B, we could expect both the (c) and (d) sentences to be grammatical since the pronoun in these sentences is free in its governing category, thus satisfying Condition B. There is no difference between (a) and (b) and (c) and (d) sentences in that all of them satisfy Condition B by being free in their governing categories. However, the ungrammaticality of (c) and (d) sentences indicates that Condition B cannot account for the deviance we encounter in these sentences.

3.4.1.2. Adverbial Clause – Matrix Clause

3.4.1.2.1. Reason adjunct – matrix clause

Consider now the following examples:

(20) a. [O $_{i/j}$ -nu şikayet et-tiğ-im için] Murat $_i$ çok sinirlen-di.
he-acc complain-nom-1sg Murat for very get angry-past
"Murat got very angry since I complained about him"

b. [Murat'-ı $_i$ şikayet et-tiğ-im için] O $_{i/j}$ çok sinirlen-di.
Murat-acc complain-nom-1sg for he very get angry-past
"He got very angry since I complained about Murat"

c. [O$_{*i/j}$ -NU şikayet et-tiğ-im için] Murat $_i$ çok sinirlen-di.
he-acc complain-nom-1sg Murat for very get angry-past
"Murat got very angry since I complained about him

d. [O$_{*i/j}$ -nu şikayet et-tiğ-im için] MURAT $_i$ çok sinirlen-di.
he-acc complain-nom-1sg Murat for very get angry-past
"Murat got very angry since I complained about him

(21) a. [O $_{i/j}$ -na söz ver-diğ-im için] Murat-ı $_i$ parti-ye çağır-dık.
he-dat promise-nom-1sg for Murat-acc party-dat call-past
"I invited Murat to the party since I promised him"

b. [Murat-a $_i$ söz ver-diğ-im için] O $_{i/j}$ -nu parti-ye çağır-dık.
Murat-dat promise-nom-1sg for he-acc party-dat call-past
"I invited him to the party since I promised Murat"

c. [$O_{*i/j}$ -NA söz ver-diğ-im için] Murat-ı $_i$ parti-ye çağır-dık.
he-dat promise-nom-1sg for Murat-acc party-dat call-past
"I invited Murat to the party since I promised him"

d.[$O_{*i/j}$ -na söz ver-diğ-im için] MURAT-I $_i$ parti-ye çağır-dık.
he-dat promise-nom-1sg for Murat-acc party-dat call-past
"I invited Murat to the party since I promised him"

(22) a. [$O_{i/j}$ -nun-la bir daha görüş-me-diğ-im için] Murat-a $_i$ bilgi ver-e-
he-gen-com once more meet-neg-nom-1sg for Murat-dat info give-abl-
me-dim
neg-past
"I couldn't inform Murat since I didn't meet him any longer"

b. [Murat-la $_i$ bir daha görüş-me-diğ-im için] $O_{i/j}$ -na bilgi ver-e-
Murat-com once more meet-neg-nom-1sg for he-dat info give-abl-
me-dim.
neg-past
"I couldn't inform him since I didn't meet Murat any longer"

c. [$O_{*i/j}$ -NUN-LA bir daha görüş-me-diğ-im için] Murat-a $_i$ bilgi ver-e-
he-gen-com once more meet-neg-nom-1sg for Murat-dat info give-abl-
me-dim
neg-past
"I couldn't inform Murat since I didn't meet him any longer"

d. [$O_{*i/j}$ -nun-la bir daha görüş-me-diğ-im için] MURAT-A $_i$ bilgi ver-e-
he-gen-com once more meet-neg-nom-1sg for Murat-dat info give-abl-
me-dim
neg-past
"I couldn't inform Murat since I didn't meet him any longer"

Each of the sentences in (20) – (22) includes a reason clause as one of its constituents. In the (a) sentences the antecedent *Murat* is in the matrix clause and the pronoun *O* is in the reason adjunct. But, in the (b) sentences the places of antecedent and pronoun are reversed, that is, the pronoun is in the matrix clause and the antecedent is in the reason clause. In addition to this, *Murat*, which is functioning as the subject of the matrix clause in (20), functions as the direct object in (21) and indirect object in (22). Regardless of the nature of the grammatical function of the antecedent in the matrix clause and regardless of the position of the pronoun and its antecedent, the pronoun *O* can be coreferential with its antecedent *Murat* as can be seen in (a) sentences and in (b) sentences, respectively. In all (a) sentences the governing category of the pronoun is the adverbial clause denoting reason whereas in all (b) sentences the governing category of the pronoun is the matrix clause. But in both cases the pronoun is free in its governing category as required by Condition B.

In the (c) and (d) sentences of (20) – (22), focus is again in effect. In (c) sentences, the pronoun and in (d) sentences, the antecedent is focused. But, in both cases we have the same effect in that focusing any one of them blocks coindexed reading between the pronoun and its antecedent. They must be kept and interpreted as distinct individuals. What is significant and to be noted here again is the fact that like the pronouns (a) and (b) sentences, the pronouns in (c) and (d) sentences also satisfy Condition B, by being free in their governing categories. But the ill-formed (c) and (d) sentences again indicate that Condition B is not enough to yield well-formed structures. Because if so, (c) and (d) sentences should be grammatical, but they are not.

3.4.1.2.2. Temporal adjunct – matrix clause

Consider now the following cases which illustrate binding relations involving temporal clauses:

(23) a. $O_{i/j}$ -na bilet-i ver-diğ-im zaman Murat$_i$ çok şaşır-dı.
He-dat ticket-acc give-nom-1sg time Murat very be surprised-past
"When I gave him the ticket, Murat was very surprised"

b. Murat-a$_i$ bilet-i ver-diğ-im zaman $O_{i/j}$ çok şaşır-dı.
Murat-dat ticket-acc give-nom-1sg time he very be surprised-past
"When I gave Murat the ticket, he was very surprised"

c. $O_{*i/j}$ -NA bilet-i ver-diğ-im zaman Murat$_i$ çok şaşır-dı.
He-dat ticket-acc give-nom-1sg time Murat very be surprised-past
"When I gave him the ticket, Murat was very surprised"

d. $O_{*i/j}$ -na bilet-i ver-diğ-im zaman MURAT$_i$ çok şaşır-dı.
He-dat ticket-acc give-nom-1sg time Murat very be surprised-past
"When I gave him the ticket, Murat was very surprised"

(24) a. $O_{i/j}$-na bilet-i ver-diğ-im zaman Murat-ı$_i$ çok şaşır-t-mış-tım.
He-dat ticket-acc give-nom-1sg time M-acc very be surprised-caus-p
"When I gave him the ticket, I made Murat very surprised "

b. Murat-a$_i$ bilet-i ver-diğ-im zaman $O_{i/j}$ -nu çok şaşır-t-mış-tım .
M-dat ticket-acc give-nom-1sg time he very be surprised-caus-past
"When I gave Murat the ticket, I made him very surprised"

c. $O_{*i/j}$ -NA bilet-i ver-diğ-im zaman Murat-ı$_i$ çok şaşır-t-mış-tım.
He-dat ticket-acc give-nom-1sg time M-acc very be surprised-caus-p
"When I gave him the ticket, I made Murat very surprised "

d. $O_{*i/j}$ -na bilet-i ver-diğ-im zaman MURAT-ı$_i$ çok şaşır-t-mış-tım.
He-dat ticket-acc give-nom-1sg time M-acc very be surprised-caus-p
"When I gave him the ticket, I made Murat very surprised "

(25) a. $O_{i/j}$ bilet-i ver-me-diğ-i zaman Murat-a$_i$ çok kız-mış-tım.
He ticket-acc give-neg-nom-3sg time Murat-dat very get angry-past
"When he didn't give the ticket, I got very angry with Murat"

b. Murat$_i$ bilet-i ver-me-diğ-i zaman $O_{i/j}$ -na çok kız-mış-tım.
Murat ticket-acc give-neg-nom-3sg time he-dat very get angry-past
"When Murat didn't give the ticket, I got very angry with him"

c. $O_{*i/j}$ bilet-i ver-me-diğ-i zaman Murat-a$_i$ çok kız-mış-tım.
He ticket-acc give-neg-nom-3sg time Murat-dat very get angry-past
"When he didn't give the ticket, I got very angry with Murat"

d. $O_{*i/j}$ bilet-i ver-me-diğ-i zaman MURAT-A$_i$ çok kız-mış-tım.
He ticket-acc give-neg-nom-3sg time Murat-dat very get angry-past
"When he didn't give the ticket, I got very angry with Murat"

Each of the sentences in (23) – (25) include a temporal adjunct as one of its constituent. The position of the antecedent and the pronoun are again reversed in the (b) sentences. Also, the function of the antecedent undergoes a change as is demonstrated in the a) sentences. Regardless of the position of the antecedent and the pronoun and regardless of the grammatical function of the antecedent, there is a coreferential reading between the elements in question as is demonstrated in (a) and (b) sentences. Both the pronoun in (a) sentences and the pronoun in (b) sentences satisfy Condition B in that they are free in their respective governing categories: the

former being temporal adjunct as in (a) sentences and the latter being the matrix clause as in (b) sentences.

But just as we observed in the examples in the preceding sub-sections, the picture gets complex when we consider the interaction of focus and coreferentiality. The influence of Focus on coreferential reading is again illustrated in (c) and (d) sentences. (c) sentences focus the pronoun whereas (d) sentences focus the antecedent. No matter which element is focused, the examples yield ungrammatical sentences in which the pronoun and its antecedent refer to the same individual. Like we expect for the (c) and (d) examples in the preceding sub-sections, we also expect (c) and (d) examples in (23) – (25) to be well-formed since they satisfy Condition B, like (a) and (b) examples. However, the ill-formed (c) and (d) examples above again supports the inadequacy of Condition B according to which the (c) and (d) sentences are expected to be grammatical, which is not the case, in fact.

3.4.2. Sentences with two potential antecedents

In the last section we considered sentences which include one potential antecedent and noted that focus on the antecedent blocks coreferential reading between that antecedent and the pronoun it is expected to bind. This section, on the other hand, concerns sentences which include two potential antecedents for the pronoun and tests what kind of effect focus has on coreferential reading between the potential antecedents and the pronoun. Consider the following example:

(26) a. [Murat$_i$ -ın Fatma$_j$ -yı aldat-acağ-ı] O$_{i/j/k}$ -nun akl-ı-na hiç gel-

Murat-gen Fatma-acc deceive-fut-poss s/he-gen mind-poss-dat never

me-miş-ti.

come-neg-pst

"That Murat would deceive Fatma never occurred to him/her"

b. [O$_i$-nun Fatma'-yı aldat-acağ-ı] Murat$_i$-ın akl-ı-na hiç gel-me-miş-ti.

he-gen Fatma-acc deceive-fut-poss M.-gen mind-poss-dat never come-neg-pst

"That he would deceive Fatma never occurred to Murat"

c. [Murat-ın O$_i$-nu aldat-acağ-ı] Fatma$_i$-nın akl-ı-na hiç gel-me-miş-ti.

M.-gen F-acc deceive-fut-poss s/he-gen mind-poss-dat never come-neg-pst

"That Murat would deceive her never occurred to Fatma"

(27) a. *[MURAT$_i$-ın Fatma'-yı aldat-acağ-ı] O$_i$-nun akl-ı-na hiç gelmemişti

M-gen F-acc deceive-fut-poss s/he-gen mind-poss-dat never come-neg-p

"That Murat would deceive Fatma never occurred to him"

b. *[Murat'-ın FATMA$_i$-yı aldat-acağ-ı] O$_i$-nun akl-ı-na hiç gel-me-miş-ti.

M-gen F-acc deceive-fut-poss s/he-gen mind-poss-dat never come-neg-pst

"That Murat would deceive Fatma never occurred to him/her"

c. *[Murat$_i$-ın Fatma$_j$ -yı aldat-acağ-ı] O$_{i,j}$-NUN akl-ı-na hiç gel-me-miş-ti.

M-gen F-acc deceive-fut-poss s/he-gen mind-poss-dat never come-neg-pst

"That Murat would deceive Fatma never occurred to him/her"

(26) and (27) illustrate a complex structure with a sentential subject. Note that Sentence (26a) is three - ways ambiguous; the pronoun *O* functioning as the possessor of NP may be co-indexed with the subject of the embedded clause *Murat* or it may be co-indexed with the object of embedded clause *Fatma*, or as another alternative it may refer to third person other than *Murat* and *Fatma*. That is, the pronoun *O* may be bound by either *Murat* or *Fatma*, which are potential antecedents in the sentence or it may be free. In (26b) and (26c), the place of the pronoun is changed with the potential antecedents: with Murat in (26b) and with Fatma in (26c). Still, both (26b) and (26c) have a coreferential reading between the pronoun in the sentential subject and the antecedent in the matrix clause. All of the pronouns in (26) satisfy Condition B in that they are free within their governing categories thus yielding well-formed sentences.

What is significant is the disallowed interpretations in (27): in (27a), focus on one of the potential antecedents, i.e. the embedded subject, *Murat*, blocks the pronoun from getting its reference from that element, hence the coindexation with the other potential antecedent which is the embedded object *Fatma*. Similiarly, as (27b) demonstrates, focus on the other potential antecedent, this time the embedded object, *Fatma*, blocks the pronoun from getting its reference from that element, allowing the other potential antecedent, *Murat*, to bind the pronoun. Likewise, as (27c) illustrates, focusing the pronoun in the matrix clause blocks the coreferential reading between the pronoun in the matrix clause and any one of the two potential antecedents in the matrix clause. The sentences in (27) should also be expected to be grammatical since they also satisfy Condition B, by being free in their governing categories. But contrary to the prediction of Condition B, the sentences in (27) are ungrammatical.

This again necessitates a further condition which would be capable of accounting for the ill-formedness of (27).

To sum up, as is clear from the sentences in section (3.4.1) which include one potential antecedent and in section (3.4.2) which include two potential antecedents, the same effect in English sentences as illustrated under Case 1 of Akmajian and Jackendoff (1970) can be observed in Turkish, as well.

Before taking a stand on the account of ungrammatical sentences (observed in all the (c) and (d) examples of section (3.4.1) and the sentences in (26) and (27) of section (3.4.2)) which arise as a result of the effect of Focus on either pronoun or its antecedent, let us consider one basic condition on the role of Focus on coreferential reading.

3.5. Leftness Condition-Revisited

In this section, I will review the Leftness Condition (Chomsky 1981), a condition on pronominal binding, and its implications for Turkish sentences.

As pointed out in Chapter 2, Chomsky (1981) treats a focused phrase as binding a variable at LF in its surface structure position. He argues that focused NPs behave like quantified expressions with respect to pronominal binding in that they have to obey Leftness Condition (LC) which states *that the variable they bind cannot be the antecedent of a pronoun to its left*. Consider the pertinent examples which are repeated here for convenience and the configurational LF representation in order to show how focused constituents leave behind a variable:

(28) a. *The woman he loved betrayed someone.

b. for some person x [the woman he loved betrayed x] (he $\neq x$)

(29) a. The woman he loved betrayed JOHN

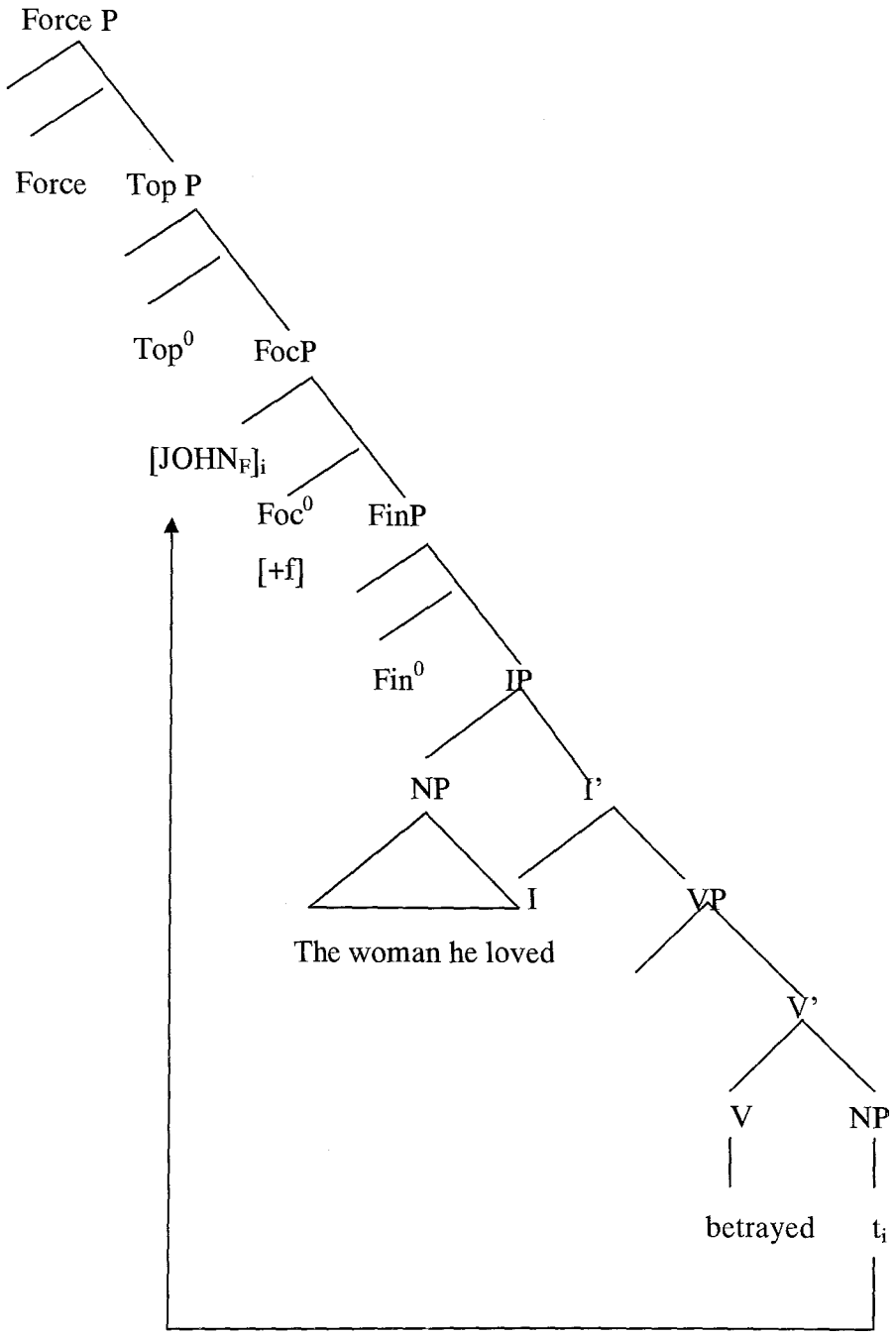
b. for x: John [the woman he loved betrayed x] (he $\neq x$)

(30) a. Someone was betrayed by the woman he loved

b. for some person x [x was betrayed by the woman he loved]

c. for some person x [x was betrayed by the woman x loved]

(31)



The S-structure of the sentences are represented in (28a), (29a) and (30a). (28b), (29b) and (30b-c) are the LF representations and (31) is the tree structure of (29b) which illustrates the movement of focused constituent leaving behind a variable. In (31), the focused constituent is the potential antecedent *John* which is the internal argument of the matrix verb. Since it is focused, it moves to [Spec FocP] (in the sense of Rizzi, 1997) in order to check [+F] feature of the head F through Spec-head

agreement thus satisfying Focus Criterion (Brody, 1995) which states that (i) At S-structure and LF, the Spec of an FP must contain a +f-phrase and (ii) At LF, all +f-phrases must be in an FP. Once the focused potential antecedent *John* moves, it leaves behind a variable. (31) yields a structure in which the variable follows the pronoun. So, as is clear from both LF representations in (28b), (29b) and tree structure in (31), the variables are to the right of the pronouns. Thus in accordance with the LC, the variables cannot serve as antecedents for the pronouns, since the latter precede the former, violating the (LC). But in (30), since the pronoun is to the right of the variable, it can have an anaphoric relation with it, as represented in (c).

Let us first check whether the LC is relevant for Turkish by testing it on some examples. Consider the following pertinent examples which are repeated here for convenience and a sample tree prereresentation which demonstrates how focused phrases leave behind a variable through focus raising:

(32) $O_{i/j}$ -nu davet etmezsek Murat$_i$ çok sinirlen-ecek.
he-acc invite Murat very get angry-fut
"If we don't invite him, Murat will get very angry"

(33) a. *O_i -nu davet etmezsek MURAT$_i$ çok sinirlen-ecek.
he-acc invite Murat very get angry-fut
"If we don't invite him, Murat will get very angry"

b. for x: Murat [if we don't invite him, x will get very angry] (he $\neq x$)

(34). a. *[O_i -nun hakk–ı-nda söyle–diğ-im söz–ler-e] MURAT$_i$ çok
he-gen about-poss-loc say-nom-1sg word-pl-dat Murat very
sinirlen-di.
get angry-past
"Murat got very angry with the words I said about him".

b. for *x*: Murat [To the words I said about him, x got very angry] (he $\neq x$)

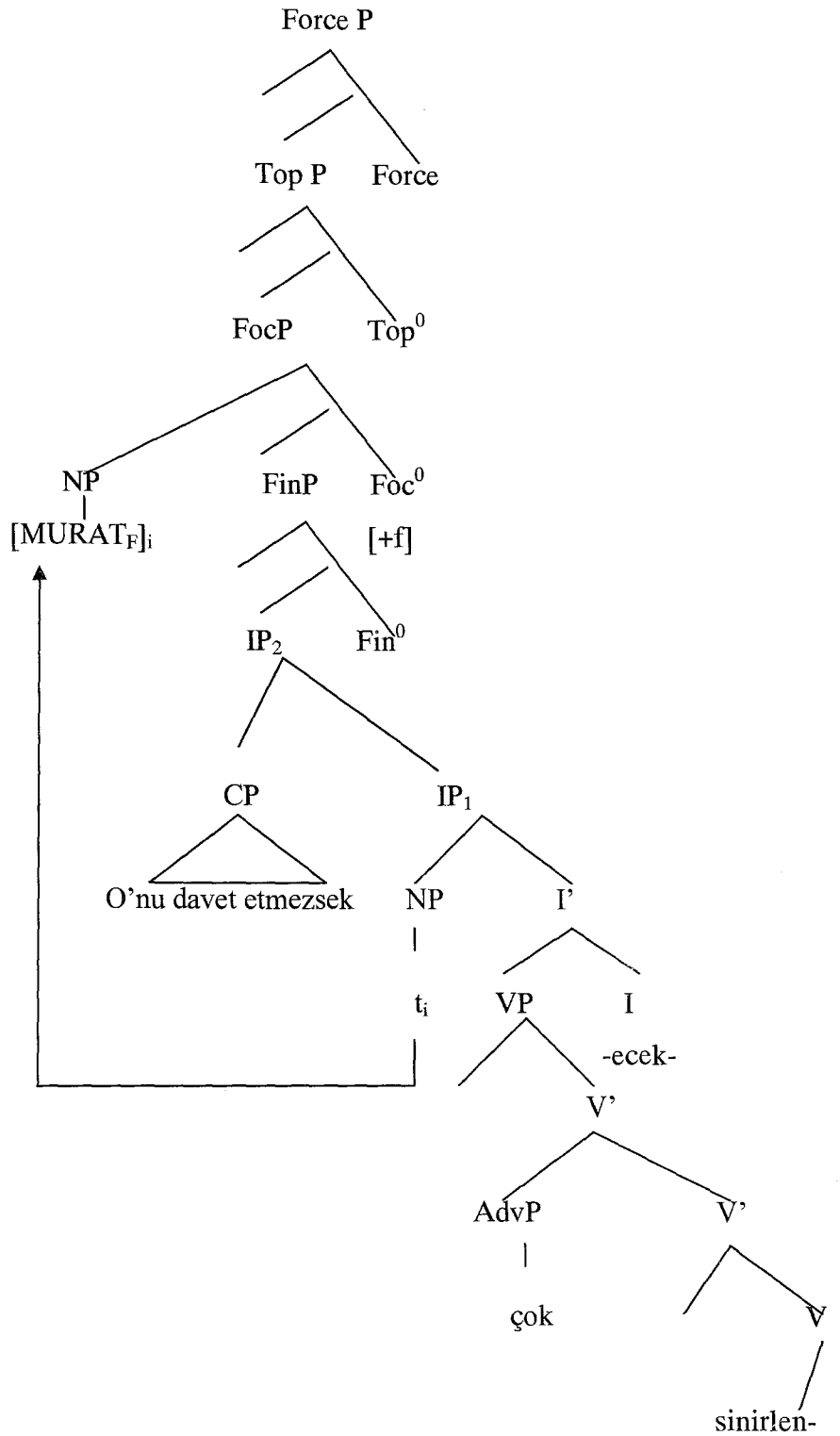
(35) a. *[O_i -nu şikayet et-tiğ-im için] MURAT$_i$ çok sinirlen-di.
he-acc complain-nom-1sg Murat for very get angry-past
"Murat got very angry since I complained about him

b. for x: Murat [Since I complianed about him, x got very angry] (he $\neq x$)

(36) a. *[O_i -na bilet-i ver-diğ-im zaman] MURAT$_i$ çok şaşır-dı.
He-dat ticket-acc give-nom-1sg time Murat very be surprised-past
"When I gave him the ticket, Murat was very surprised"

b.for x: Murat [When I gave the ticket to him, x was very surprised](he≠x)

(33) c.



The interpretation of (32) leads to ambiguity. The pronoun *O* which is functioning as the object of the embedded clause may be coreferential with the subject of the higher clause, which is *Murat*, or it may receive free interpretation as referring to any other

person excluding *Murat.* But as the sentences (33) – (36) demonstrate, focusing the potential antecedent affects the coreferential reading in that it precludes the first interpretation just stated above. Thus the sentences (33) – (36) cannot be read in a way that the antecedent *Murat* and the pronoun *O* are identical in reference: they denote distinct individuals.

Starting by (33c), let us check the relevance of the (LC) for the Turkish sentences above. (33c) illustrates step by step how we get (33b) as an outcome LF representation for the sentence (33a). The antecedent in (33a) is in the matrix clause and the pronoun is in the conditional clause which is functioning as an IP adjunct as clearly demonstrated in the tree representation (33c). (33c) further illustrates that the antecedent *Murat* functioning as the matrix subject is focused. Since it is focused it undergoes focus movement. It moves out of its extracting site which is [Spec IP] and lands in [Spec FocP] for feature checking. Once it moves, it leaves in its extraction site a variable coindexed with it. As can be noted from (33b) and (33c) and also from the other LF representations in (34) – (36), the pronoun is to the left of the variable left behind as a result of focus raising. Since this order is inconsistent with the LC, the sentences (33) – (36) are ruled out as deviant structures by this condition. Consequently, the LC can account for the ungrammatical sentences in (33) – (36).

3.5.1. Counterexamples to LC

In the preceding section, grammaticality judgements of structures which include focused items are licensed by (LC) on logical representation. However further analysis of sentences with different focal patterns poses some problems about the applicability of LC to Turkish data. First, LC is incapable of accounting for the

deviant structures (observed in (c) sentences in the preceding sub-sections) in which the pronoun, this time, is focussed. To illustrate, consider the pertinent (c) examples which are repeated here as (37) for convenience:

(37) a. *O $_i$ - NU davet etmezsek Murat $_i$ çok sinirlen-ecek.
he-acc invite Murat very get angry-fut
"If we don't invite him, Murat will get very angry"

b. for *x*: he [if we don't invite x, Murat will get very angry] (Murat $\neq x$)

(38) a. [O$_{*i/j}$ -NUN hakk–ı-nda söyle–diğ-im söz–ler-e] Murat $_i$ çok
he-gen about-poss-loc say-nom-1sg word-pl-dat Murat very
sinirlen-di.
get angry-past
"Murat got very angry with the words I said about him".

b. for *x*: he[To the words I said about x, Murat got very angry] (Murat≠*x*)

(39) a. [O$_{*i/j}$ -NU şikayet et-tiğ-im için] Murat $_i$ çok sinirlen-di.
he-acc complain-nom-1sg Murat for very get angry-past
"Murat got very angry since I complained about him

b. for *x*: he [Since I complained about x, Murat got very angry] (Murat $\neq x$)

(40) a. O$_{*i/j}$ -NA bilet-i ver-diğ-im zaman Murat $_i$ çok şaşır-dı.
He-dat ticket-acc give-nom-1sg time Murat very be surprised-past
"When I gave him the ticket, Murat was very surprised"

b. for *x*: he [When I gave the ticket to x, Murat was very surprised](Murat $\neq x$)

The only difference between the sentences (33) – (36) and (37) – (40) is that the former set has focused potential antecedent whereas the latter set has focused

pronoun. So these two structures have two different focus patterns. But they are identical in their grammatical judgements, that is, both of them are ungrammatical in a reading in which the pronoun *O* and the potential antecedent *Murat* are coindexed. As is clear from the LF representation of (b) in (37) – (40), the pronoun this time is focused and thus (like the focused antecedents discussed in the preceding section) undergoes focus movement leaving behind a variable which precedes the antecedent. That is, LC has nothing to say for sentences (37) – (40) where the focused constituent is the pronoun, and again coreference is not allowed.

Second, the LC, again, offers no account for the sentences (9a) and (9b) repeated here as (41) which remained unexplained but which will be discussed in the following sections:

(41) a. *MURAT$_i$ -ın Fatma'-yı aldat-acağ-ı O$_i$ -nun akl-ı-na hiç gel-
Murat-gen Fatma-acc deceive-fut-poss s/he-gen mind-poss-dat never come
me-miş-ti.
neg-pst

b. For x: Murat [that x would deceive Fatma never occurred to him]

In (41), one of the potential antecedents, *Murat*, functioning as the subject of the embedded clause is focused, yielding an ungrammatical sentence in which *Murat* and *O* are coreferential. This potential antecedent being focused undergoes focus raising at LF leaving behind a variable. But as (41b) illustrates, the variable precedes the pronoun, which is in keeping with the LC as is observed in (19). Yet the sentence is ungrammatical. So this sentence presents a counterexample to the LC. The LC, again, is incapable of explaining why this sentence is ruled out.

Consequently, sentences like (33) will be assimilated to weak crossover cases by the LC, while sentences like (37) and (38) must be dealt with separately. This is counterintuitive and must be rejected. An account capable of describing the sentences in question with the same principles must be sought, as the phenomenon that must be captured here is that "contrastive stress on either pronoun or noun prohibits coreference" (Akmajian & Jackendoff, 1970). Obviously, this phenomenon and the switching anaphoric effects pointed out by the examples above are all manifestations of the same systematic correlation between stress and anaphora. In order to reach a unified account and explain the deviant sentences (23) and (24) with this account, let us review two basic principles operating on the relation between focus and binding.

3.6. Lujan (1985)

Lujan (1985), in *Stress and binding of Pronouns,* investigates the role of stress on the binding of pronouns. She proposes two principles, which like the LC, are conditions on logical representations. One of these is the *Accessibility Principle* (AP) which states that:

(42) Accessibility Principle
In the scope of an operator a pronoun must prefer a lexical name as an antecedent over a formal variable. (Lujan, 1985: 259)

for a name is more readily accessible, given its overt feature specifications. The AP would prevent the pronoun from being co-indexed with the variable in (43), while allowing co-indexation with the lexical name in the same scope. Thus, only two

readings are allowed, one is defined in (44a), and the other as in (44b), where the pronoun is free (Lujan, 1985). (The example is originally from Akmajian and Jackendoff, 1970):

(43) a.*That GEORGE$_i$ would be Tom's thesis advisor never occurred to him$_i$
b. for x:George [that x would be Tom's thesis advisor never occurred to him]
(Akmajian and Jackendoff, 1970: 5)

(44) That GEORGE would be Tom's thesis advisor never occurred to him
a. for x: George [that x would be Tom$_z$ thesis advisor never occurred to z]
b. for x: George [that x would be Tom$_z$ thesis advisor never occurred to y]
c.*for x: George [that x would be Tom$_z$ thesis advisor never occurred to x]
(Lujan, 1985 : 65)

The other principle Lujan (1985) proposes in the Bound-Variable Constraint (BVC), stated as (45):

(45) Bound-Variable Constraint (BVC)
A lexical name cannot be coindexed with a bound variable.

Lujan argues that this condition is needed for obvious reasons[1]. In addition, it accounts for the interpretation of (46) which comes originally from Akmajian and Jackendoff, 1970):

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[1] Lujan notes that *John* cannot be co-indexed with the variables bound by *someone* and *who*. She illustrates this with the following examples:

(i) John loves a woman who betrayed somenone
for some x [John loves a woman who betrayed x]

(ii) Who did the woman John loved betray?
for which x [the woman John loved betrayed x]

(46) a. *After HE woke up, John went to town.

b. for x: he [after x woke up, John went to town]

(Akmajian and Jackendoff, 1970: 2)

Let us come back to our present concern, namely to the issue of how to account for the ungrammatical sentences like (37) and (41). The question, here, is whether these two principles (AP) and (BVC) account for the problems we encounter in Turkish data like (37) and (41) to which the LC has nothing to say. In order to answer this question let us turn back to (37) and (41), which are repeated here as (47) and (48), in order to test the applicability of (AP) and (BVC) .

(47) a. *MURAT$_i$ -ın Fatma'-yı aldat-acağ-ı O$_i$-nun akl-ı-na hiç gel-
Murat-gen Fatma-acc deceive-fut-poss s/he-gen mind-poss-dat never come
me-miş-ti.
neg-pst

b. For x: Murat [that x would deceive Fatma never occurred to him]

(48) a. *O$_i$ - NU davet etmezsek, Murat$_i$ çok sinirlen-ecek.
he-acc invite Murat very get angry-fut
"If we don't invite him, Murat will get very angry"

b. for *x*: he [if we don't invite x, Murat will get very angry] (Murat $\neq x$)

In (47), the AP would prevent the pronoun from being coindexed with the variable while allowing co-indexation with the lexical name in the same scope. Thus, only

two readings are allowed, one as defined in (49a), and the other as in (49b), where the pronoun is free:

(49) $MURAT_k$-ın $Fatma_i$ -yı aldat-acağ-ı $O_{i/j}$-nun akl-ı-na hiç gel-me-miş-ti.

a. for *x*: Murat [that *x* would deceive Fatma $_z$ never occurred to *z*]

b. for *x*: Murat [that *x* would deceive Fatma $_z$ never occurred to *y*]

c. *for *x*: Murat [that *x* would deceive Fatma $_z$ never occurred to *x*]

The LF representation of (48) has both a variable *x* and a lexical name *Murat.* Since they cannot be coindexed according to (BVC), the sentence is ruled out as an ungrammatical construction. So (BVC) can account for the deviance of (48).

Another proposal to account for the ungrammaticality of (48) comes from consideration of Condition C of Binding Principles. We propose that (48) induces Condition C violation, if we assume that the focused pronoun undergoes focus movement and lands in [Spec, FocP] at LF in order to satisfy focus criterion, as is discussed in Chapter 2. (50) illustrates LF movement of focus phrase representation of (48):

(50) *[$_{FORCE\ P}$[$_{TOP\ P}$[$_{FOC\ P}$ O - NU_i [$_{FIN\ P}$ [$_{IP2}$ pro t_i davet etmezsek]]], [$_{IP1}$ [$Murat_i$ çok sinirlen-ecek]]]]]].

through spec – head agreement. From its landing site it c-commands its antecedent *Murat,* which becomes bound by the pronoun. Thus this movement gives rise to Condition C violation which states that an R-expression must be free. We can conclude that the ill-formedness of (48) can be accounted for by both Lujan's (BVC) and also by the fact that it yields Condition C violation.

To turn back to the condition (BVC), it also accounts for the switching anaphoric effect that stressing the pronoun has in (47). Observe that coreference is again allowed:

(51) MURAT'-ın$_i$ Fatma'-yı aldat-acağ-ı O'-NUN$_i$ akl-ı-na hiç gel-me-miş-ti.

The logical representations here require two bound variables. Since the focused pronoun is one of them, the BVC will not allow a lexical name in its scope, such as *Fatma* in (51), to be co-indexed with it. On the other hand, nothing prevents the variables in the conjoined focus operator from being anaphorically related, i.e. x = y or *MURAT* = *O*. If x ≠ y, then *O* is a free pronoun. The following are representations of these two posible readings of (51):

(52) *x*: Murat & *x*: he [that *x* would deceive Fatma$_z$ never occurred to *x*]

(53) *x*: Murat & *y*: he [that *x* would deceive Fatma$_z$ never occurred to *y*]

3.7. Evidence from Discourse

One piece of evidence for the blocking effect of focus on coreferentiality comes from discourse factors. It is generally clear that the interpretation of focus interacts with

discourse factors and pragmatic information (Solan, 1984). In general focusing, for instance, a pronoun informs the hearer that the speaker intends its antecedent to be something unexpected and to be absent in the relevant discourse. To take an example, consider the following:

(54) a. Jüri üye-ler-i Murat $_i$ -ın işle–diğ - i suç hakk–ın-da O $_{i/j}$ – nun
verdict member-pl-acc M-gen commit-nom-agr crime about-agr-abl he-gen

fikr-i-ni al - ma karar – ı - na var – dı – lar.
view-agr-acc take-nom decision-agr-dat take-past-agr

" The verdict members took the decision of having his opinion about the crime Murat committed ".

b.*Jüri üye-ler - i Murat $_i$ - ın işle – diğ - i suç hakk – ın - da O $_i$ – NUN
verdict member-pl-acc M-gen commit-nom-agr crime about-agr-abl he-gen

fikr – i - ni al - ma karar – ı - na var – dı – lar.
view-agr-acc take-nom decision-agr-dat take-past-agr

" The verdict members took the decision of having his opinion about the crime Murat committed ".

c. *Jüri üye-ler-i MURAT$_i$ - IN işle – diğ-i suç hakk – ın - da O$_i$ - nun
verdict member-pl-acc M-gen commit-nom-agr crime about-agr-abl he-gen

fikr-i-ni al - ma karar – ı - na var – dı – lar.
view-agr-acc take-nom decision-agr-dat take-past-agr

" The verdict members took the decision of having his opinion about the crime Murat committed ".

(54a) has a possible reading in which the embedded clause subject *Murat* and the genitive subject pronoun of possessive NP *O* are coreferential. In (54b) and (54c) where the pronoun and the antecedent are focused respectively, they can only be understood as distinct entities. So, the pronoun *O* can refer to any other person, excluding *Murat*, which is one of the possible antecedents. What differentiates between the well-formed (54a) and ill-formed (54b) and (54c) is their information structure. (54a) is uttered with a neutral intonation, whereas (54b) and (54c) are uttered with contrastively marked elements, one being the pronoun and the other antecedent, respectively.

Following Gueron (1980), we claim that the impossibility of coindexing *O* and *Murat* in (54b) and (54c) may be due to a clash in discourse semantics: the semantic function of focus is to introduce a new identity in the universe of discourse; but for example if *Murat* is such a new entity, its coindexation with *O* will result in a contradiction, since *O* can only represent old information. Stressing the pronoun destroys its status as old information and opens a "new file" in the discourse (Erteschik-Shir, 1997). It gives it a new status not accessible or recoverable from the discourse in question. This yields a clash between the status of the pronoun and the antecedent, which is by definition given or old in terms of its status, unless stressed.

This claim is also in line with Neeleman and Reinhart (1998) who argue that discorse linked material is destressed. Just we have seen in detail in Chapter 2 that stress strengthening is an operation on the focus set, employed to derive foci not in the set, we claim that destressing is an anaphoric process. The following principle regulates the marking of discourse linked elements in the grammar.

(55) Anaphoric interpretation principle

Material is discourse linked if it is unstressed. (Neeleman and Reinhart,1998: 338)

3.8. Conclusion

In this chapter, the interaction of focus with pronominal binding in Turkish was discussed. I attempted to find out how focus affects pronominal binding. By testing the pronoun and its antecedent in different environments, I argued that focusing either pronoun or its antecedent blocks coreferential reading between the elements in question. In order to account for ungrammatical sentences caused by focusing the antecedent, I applied Chomsky's (1981) Leftness Condition (LC) which seems to be relevant for Turkish sentences. However, it was noted that the LC could not account for some ungrammatical sentences in which the pronoun rather than its antecedent is focused. In addition, some Turkish sentences, which have two potential antecedents for a pronoun, pose some problems in terms of the applicability of LC. Such sentences served as counterexamples to the LC. Thus, I sought an account which would be capable of explaining the ill-formed sentences with the same principles. The systematic relation between focus and anaphora in sentences in question was accounted for by Lujan's (1989) Accessibility Principle (AP) and Bound-Variable Constraint (BVC) which are, like the LC, two basic conditions on logical representations. I argued that these two principles could constitute a unified account for the deviant sentences in question. Supportive evidence to the claim that focus blocks coreferentiality came from discourse factors. Since the pragmatic function of focus is introducing a new information or a new identity to the universe of discourse,

the coindexation of a new entity with an old or given entity would give rise to a clash, hence the impossibility of coindexation with that element. Our claim on the blocking effect of focus on coreferentiality was also in line with Neeleman and Reinhart's (1998) Anaphoric Interpretation Principle, which highlights the association between discourse linking and stress.

CHAPTER 4

FOCUS AND SCOPE PHENOMENA

4.1. Introduction

In this chapter I will discuss the scopal relationships between various quantificational elements in the structure of Turkish. These elements will be universal quantifier *her*, indefinite *bazı*, numerals, reason clauses formed by different structures and negation. The main discussion will be on the relative scope of quantifiers, numerals and reason clauses with respect to negation. The structure of this chapter will be as follows: Section 2 will be an investigation of the quantifier scope relations in Turkish. Section 3 will be the main body of this chapter in which scopal relations between quantificational elements and negation will be discussed in detail. Section 4 will present our claim on the effect of Focus on the scope orders. Section 5 and 6 will include supportive evidence to our claim. And Section 7 will summarize and conclude the discussion we had throughout this chapter.

4.2. Quantifier Scope Relations

As discussed in Chapter 2, sentences with multiple quantification usually give rise to scope ambiguities. Under such cases, the derivation of inverse scope is problematic because c-command relations between the quantifiers need to be reversed for the right interpretation. The syntactic theories approach this problem with syntactic movement mechanisms. Operators / quantifiers have to move to positions which determine their scope in a phrase structure tree. May (1985) accounts for each case

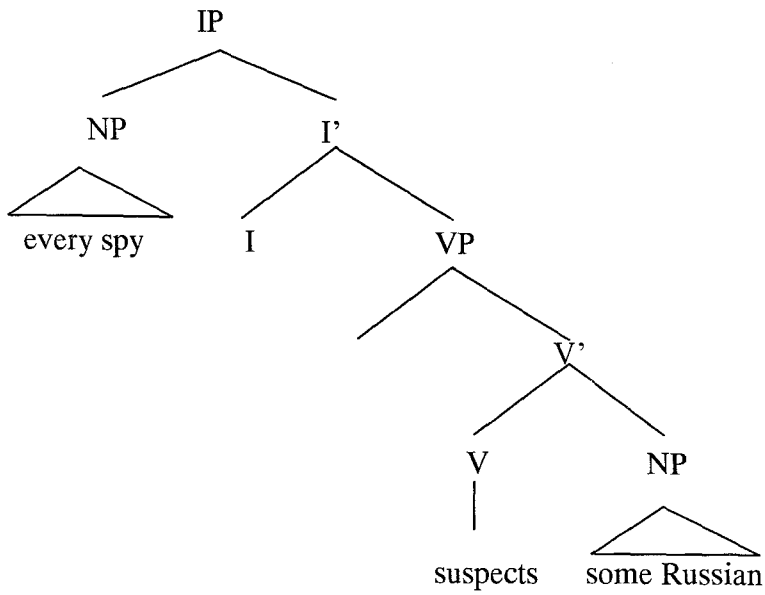
by the rule of quantifier raising (QR) which applies at LF to raise a quantifier to a scope position. Consider the following sentence:

(1) a. [s [NP every spy] [VP suspects [NP some Russian]]] (May (1985) (26))

$\forall > \exists$

$\exists > \forall$

b.



(1b) is the tree structure representation of (1a). As illustrated, the universal quantifier *every spy* c-commands and thus takes scope over existential quantifier *some Russian*, yielding ($\forall > \exists$) interpretation. But the derivation of inverse scope i.e. $\exists > \forall$ is problematic since the existential quantifier occupying the lowest position in (1b) cannot c-command and thus cannot take scope over the universal quantifier. So c-command relations between the quantifiers need to be reversed for the right interpretation. As indicated above, the syntactic theories approach this problem with syntactic movement mechanisms. Applications of QR to NPs in (1)

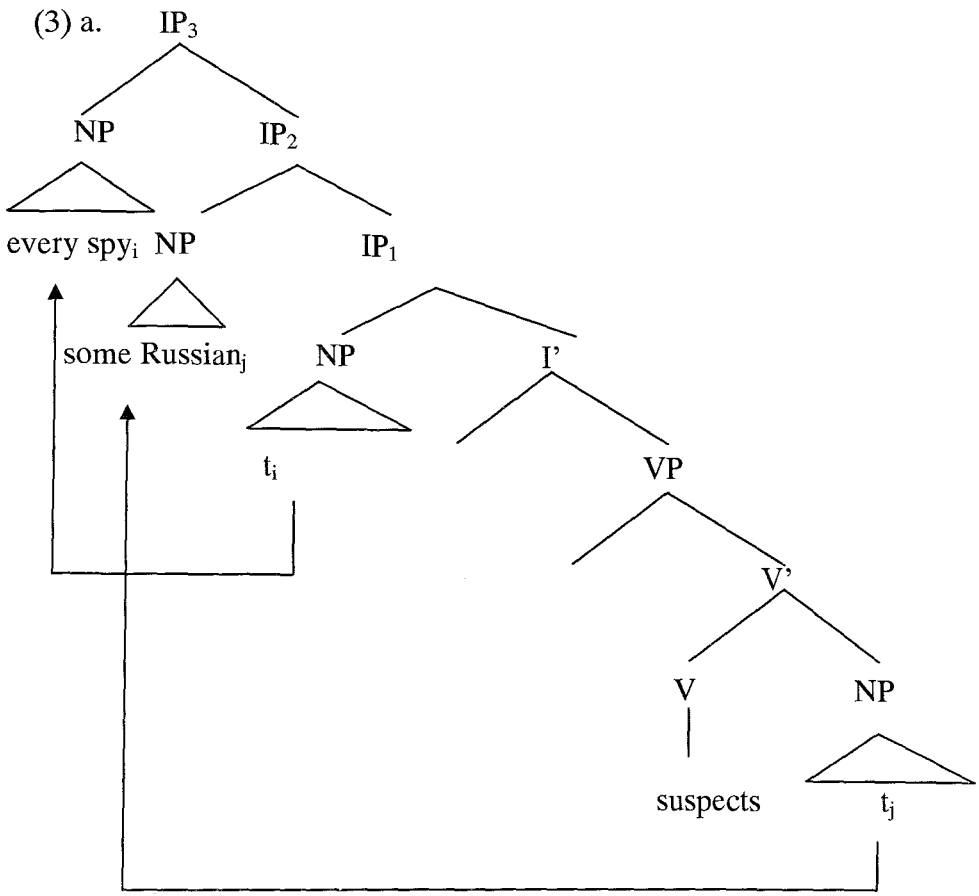
yield the representations given in (2) and these representations are illustrated in tree structures in (3):

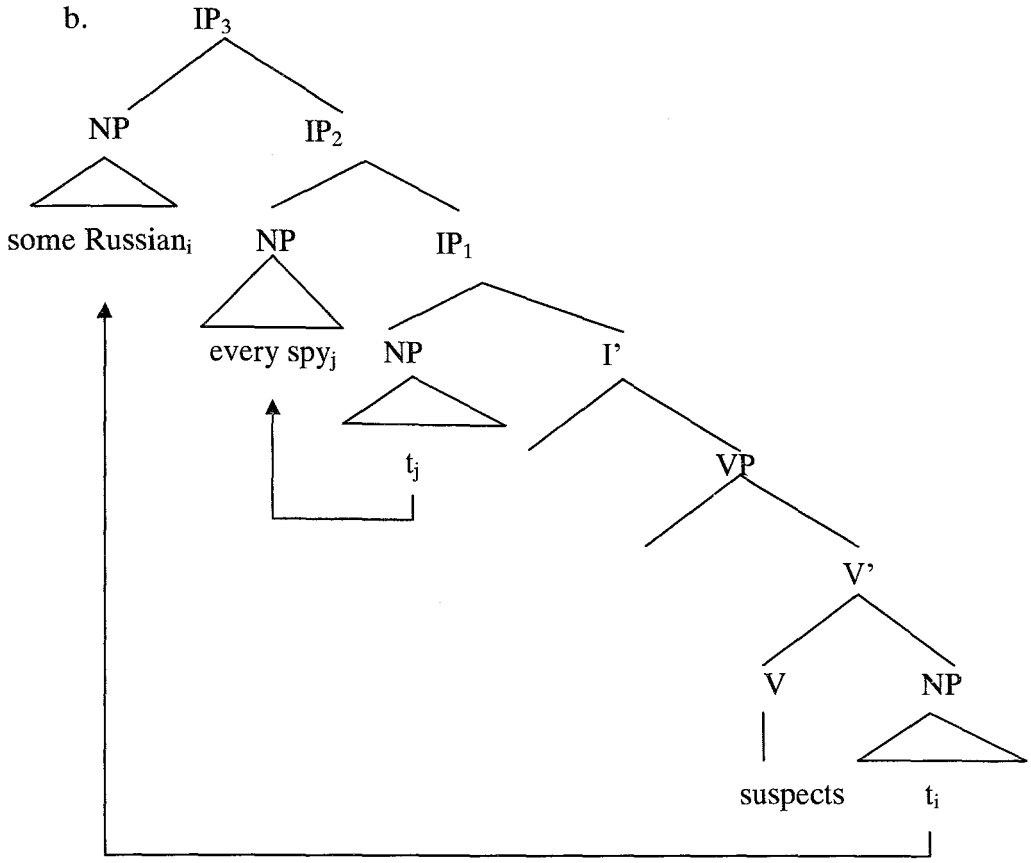
(2) a. $[_S\ [_{NP}$ every spy$]_2$ $[_S\ [_{NP}$ some Russian$]_3$ $[_S\ e_2$ suspects $e_3\ ]]]$

b. $[_S\ [_{NP}$ some Russian$]_3$ $[_S\ [_{NP}$ every spy$]_2$ $[_S\ e_2$ suspects $e_3\ ]]$

(May (1985) (28))

(3) a.





(3a) illustrates the applications of QRs observed in (2a), wheras (3b) illustrates the applications of QRs observed in (2b). Note that (3a) and (3b) have three IPs, which are represented as S by May (1985). May (1985) describes the abundance of S through Chomsky-adjunction[1] process. As demonstrated in (3a), the quantifier which moves first is the existential one. It moves and adjoins to IP creating a new IP (IP_2). Then the universal quantifier moves and adjoins to IP_2 creating a mother IP (IP_3). These two QRs yield (3a) in which the universal quantifier takes scope over the existential one. In (3b), on the other hand, we have the reverse order. The quantifier which moves first and adjoins to IP is the universal one.

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[1] Chomsky-adjunction of a constituent β to a node α yields structures either of the form "[$_{\alpha}$ β [$_{\alpha}$ .....]]" (left Chomsky-adjunction) or of the form "[$_{\alpha}$ [$_{\alpha}$ .....] β]" (right Chomsky-adjunction). May (1985) adheres to the convention of representing QR as affecting a left adjunction.

Then the existential one moves and adjoins to IP_2. These two QRs yield (3b) in which the existential quantifier, this time, takes scope over the universal one. So, as is clear from the tree representations and explanations above, the quantifier that QRs first has narrow scope.

To sum up, (3a) and (3b) represent the ambiguity of *Every spy suspects some Russian* as a matter of quantifier scope. Since in (3a) *every spy* c-commands *some Russian*, but not vice versa, the former has broader scope. The opposite holds in (3b), in which *some Russian* has been adjoined at a higher position from which it has broader scope over *every spy*. Thus simply given the free application of QR, it is possible to represent certain ambiguities of multiple quantification, so that an S-Structure representation such as (1) will count as grammatically disambiguated with respect to its logical form (May , 1985).

4.2.1. The Turkish Data

Regarding the Turkish data containing multiple quantifiers, Kural (1997) argues that the scope of simple quantifiers like *her* "every", *bir* or *bazı* "some", and numerals is determined mostly by their S-Structure c-command relations, and they do not yield ambiguity under neutral intonation. The absence of ambiguity is illustrated by the following examples:

(4) a. Herkes [üç kişi]-yi dün ara-mış. (Kural (1997) (16a))
everyone-nom three person-acc yesterday call-past-3sg
"Everyone called three people yesterday"
($\forall$x3y [x called y yesterday] ; * 3y$\forall$x [x called y yesterday]

b. [Üç kişi]-yi herkes dün ara-mış. (Kural (1997) (16b))
three person-acc everyone-nom yesterday call-past-3sg
"Everyone called three people yesterday"
(3y$\forall$x [x called y yesterday] ; *$\forall$x3y [x called y yesterday]

c. Herkes dün ara-mış [üç kişi]-yi (Kural (1997) (18a))
everyone-nom yesterday call-past-3sg three person-acc
"Everyone called three people yesterday"
(3y$\forall$x [x called y yesterday] ; *$\forall$x3y [x called y yesterday]

(4a) represents the base structure of the sentence having the verb complement in a preverbal position and the subject in a sentence initial position. It yields distributive interpretation, that is, with *herkes* having wide scope. (4b) and (4c), on the other hand, represent the derived structures. Depending on (4a), Kural (1997) states that quantifier scope relations are represented at S-Structure in Turkish. This is supported by (4b) and (4c) as well. In (4b), the verb complement *üç kişiyi* is scrambled, occupying the sentence initial position in the S-structure where it precedes the subject NP of the clause. This is an unambiguous sentence with only one interpretation (collective), that is, with *üç kişiyi* having wide scope. Note that (4b) is derived by an IP adjunction process which indicates that *üç kişiyi* can take scope over *herkes*. In (4c), the verbal complement is in sentence final position, still with a collective interpretation, that is, with *üç kişiyi* having wide scope indicating that the

postverbal constituents in Turkish are in a higher position than the subject, e.g. *herkes* in (4c), again through an adjunction process (Kural, 1997).

Kelepir (2001) also discusses the scope relations of multiple quantifiers and notes that structures with multiple quantifiers have rigid scope in Turkish in that scope relations seem to be read off the surface order of the quantifiers. Consider the following sentences:

(5) a. Öğrenciler – in çoğ – u her kitab – ı okudu.
students-gen most-poss every book-acc read (Kelepir, 2001: 72a)
"Most of the students read every book."

b. Her kitab – ı öğrenciler – in çoğ – u okudu.
every book-acc students-gen most-poss read (Kelepir, 2001: 72b)
"Every book, most of the students read."

(5a) represents the canonical order whereas (5b) represents the derived one in which the two quantifiers switched their positions. Kelepir (2001) argues that the sentence in (5a) is true only in a scenario like the following one: let us suppose that there are ten students and 5 books. There is a group / set of students the number of which is more than half of the total number of the students in the class, i.e. the number of students who read all the books is more than 5, half of the total number of students. Each member of this set read all the five books. The sentence in (5b), on the other hand, is true in another scenario like the following one: each book is read by a different set of students. However, the number of the students in each set still represents the majority of the sudents because it is more than half, i.e. more than 5. These two different scenarios for two different readings indicate that the surface order of quantifiers feflect their relative scope, and that scrambling does not create

ambiguity. The examples we have looked at consisted of universal quantifier and most. The next set of examples Kelepir (2001) analyzes contain a universal quantifier and an indefinite. Consider the following examples:

(6) a. Bir öğrenci her kitab - ı okumuş.
A student every book-acc read Kelepir (2001: 78)
"A student read every book"

b. Her öğrenci bir kitap okudu.
every student a book read Kelepir (2001: 81)
"Every student read a book"

The structure in (6a) in which the subject is an indefinite and the object is a universal quantifier is unambiguous. The indefinite subject takes scope over the universal quantifier object, and the universal quantifier object cannot take scope over the indefinite subject. As (6b) demonstrates, when the subject is a universal quantifier and the object is a zero-marked indefinite, the structure is again unambiguous[2]. The universal quantifier subject takes scope over the indefinite object. These examples also support the generalization that scope relations on the surface remain identical at LF. (Kelepir, 2001)

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[2] However, acc-marked indefinites seem to create a counterexample to the generalization made above (Kelepir, 2001). Consider the following:

(i) Her öğrenci bir kitab –ı okudu.
every student a book-acc read (Kelepir, 2001: 82)
"Every student read a book"

This sentence can be uttered in the following situations:
(i) There is a list of boks and every student x read a book y from that list
(ii) There is one book s.t. every student read that book

4.3. Negation and quantifier interaction

Scope rigidity (in the sense of Kural (1997) and Kelepir (2001)) observed in structures with multiple quantifiers does not hold for the scopal interaction of quantifiers with negation. That is, in a negation-quantifier interaction, scope appears to be free. If this is correct, then we might expect a number of ambiguities whenever negation occurs. Indeed, this is the case, as will be seen in section (4.3.2 – 4.3.5)

4.3.1. Negation in Turkish: some background

As discussed by Taylan (1984), different types of predicates have distinct surface markers for negation in Turkish [3]. (i) Verbal predicates use the suffix *–mA* after the verb base, (ii) substantive predicates are negated by *değil* which then receives the predicate inflectional suffixes and (iii) existential predicates have their own negative predicate *yok.* The following sentences exemplify each type of predicates, respectively:

(7) a. Erol iş – e başla – dı.
work-dat start-past
"Erol started work"

(Taylan (1984) (2))

b. Erol iş – e başla – *ma* – dı.
work-dat start-neg-past
"Erol didn't start work"

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[3] Taylan (1984) in her study on some aspects of negation in Turkish discusses in detail two different negative structures (namely, one where a verbal sentence is embedded under the higher predicate *değil*, and the other where negation is marked on the main verb with the suffix –mA in terms of their structural, semantic and pragmatic differences.

(8) a. Erol başarılı bir iş adam – ı – ydı.
successful one work man-poss3-past
"Erol was a successful business man"

(Taylan (1984) (3))

b. Erol başarılı bir iş adam – ı *değil – di.*
successful one work man-poss3 not-past
"Erol was not a successful business man"

(9) a. Bahçe – de köpek var.
garden-loc dog exist
"There is a dog in the garden"

(Taylan (1984) (4))

b. Bahçe – de köpek *yok.*
garden-loc dog exist-not
"There isn't a dog in the garden"

Among the various surface markers of negation illustrated above, *değil* is noted to have functions other than merely negating substantive predicates (Taylan, 1984). Consider the following sentences:

(10) O ben–den iyi İngilizce bil – iyor diye başvuru – m – dan
he I-abl good English know-prog part application-1sg-abl
vazgeç – *me* – dim.
withdraw- neg-past-1sg
"I didn't withdraw my application because he knows better English than I do"

a. Ben de şans – ım - ı dene – yeceğ – im (Taylan (1984) (20))
I too luck-poss-1-acc try-fut-1sg
"I'm going to try my luck, too"

b. Daha iyi bir iş bul – duğ – um için vazgeç – ti – m.
more good one job find-nom-poss1 postp. withdraw-past-1sg
"I withdrew because I found a better job"

(11) O ben –den iyi İngilizce bil – iyor diye başvuru – m – dan
he I-abl good English know-prog part application-1sg-abl
vazgeç-miş *değil – im.*
withdraw-past not-1sg
" I haven't withdrawn my application because he knows better English than I do ".

a. Ben de şans – ım - ı dene – yeceğ – im (Taylan (1984) (21))
I too luck-poss-1-acc try-fut-1sg
"I'm going to try my luck, too"

b. # Daha iyi bir iş bul – duğ – um için vazgeç – ti – m.
more good one job find-nom-poss1 postp. withdraw-past-1sg
"I withdrew because I found a better job"

(10) is ambiguous with respect to the scope of negation. In one interpretation the whole sentence is negated, in which case the (a) sentence would be a possible statement to follow this reading. In the other interpretation, only part of the sentence is negated, namely the reason for this withdrawal. In this case, (b) would be a possible statement to follow such a reading. (11), on the other hand, is not ambiguous. The scope of negation is the whole sentence. The speaker is denying the fact that he has withdrawn his application for a certain reason. Therefore, a statement such as in (11a) but not as in (11b) can follow (11) (Taylan, 1984).

To sum up, negation expressed by the suffix *-mA* is analyzed as the internal negation operator marking verbal negation, whereas negation expressed by *değil* - when it is the higher predicate of an embedded sentence - is analyzed as the external negation operator, marking sentential negation.

4.3.2. *Her* and negation

In this section, the scopal interaction between universal quantifier *her* and negation will be investigated. Before starting with the Turkish data, consider first the following English example:

(12) Everybody didn't come today. (Kelepir (2001) (207))

a. "It is not the case that everybody came"
neg > everybody

b. "It is true for every x such that x did not come" (logically nobody came)
everybody > neg

As Kelepir (2001) states it has been reported that in English the universal quantifier *every* can take scope below or above negation. Therefore, the interpretation of sentence (12) leads to ambiguity. It may either have the (a) reading in which negation takes scope over the quantifier or the (b) reading in which quantifier takes scope over the negation.

Similar facts involving the scope of negation have been noted by other researchers such as Jackendoff (1972). To take an example, consider his following sentence:

(13) All the men didn't go

a. 'No man went' (ALL > NOT)

b. 'Some men went' (NOT > ALL)

The sentence in (13) has been widely reported to have at least two interpretations (the most frequently cited early reference for such examples is Jackendoff 1972), given in (13a) and (13b).

Each of these interpretations is realized with a different intonation of the sentence, what Jackendoff (1972) called contour A for (13a) and contour B for (13b). The meaning difference in (13a) and (13b) is attributed to different scope relations between *all* and *not*. These facts about the disambiguating effect of prosody in utterances involving scope as in (13) have been discussed in the literature (Jackendoff (1972), Büring (1997), among others).

After discussing the English sentences, let us turn to Turkish data. To Kelepir (2001), for example, the Turkish counterpart of (12) is unambiguous. She exemplifies this by (14) (her 208):

(14) Bugün herkes gel-me-di-ø.
Today everybody come-neg-past-3sg

(i) It is not the case that everybody came today.

(ii) *It is true for every x such that x didn't come today. = Nobody came.

Kelepir (2001) claims that the unavailable reading of (14ii) indicates that the sentence (14) can only be interpreted in a way in which negation takes scope over the universal quantifier. The reverse is not allowed. Thus she concludes that it is a property of the universal quantifier in Turkish that it cannot be interpreted immediately outside the scope of negation.[4]

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[4] She acknowledges that "This is not completely true. It turns out that if there is an indefinite intervening between the universal quantifier and negation, the universal quantifier can take scope outside negation."(Kelepir 2001: 144)

(i) Her öğrenci bir ödev-i yapmadı
every student one homework-acc do-neg-past
"It is true for every student x such that x didn't do one of the homeworks"

Unlike Kelepir who claims that the sole interpretation for (14) is the reading (14i) in which neg takes scope over the universal quantifier, I claim that (14) is, in fact, ambiguous and its representation is modified as follows:[5]

(15) Bugün herkes gel-me-di-ø.
Today everybody come-neg-past-3sg

(i) It is not the case that everybody came today.
neg > everybody

(ii) It is true for every x such that x didn't come today. = Nobody came.
everybody > neg

The most salient reading for the sentence in (15) may be the one in which negation takes scope over the universal quantifier. So, for instance, (15i) can be uttered in a context like the following: Imagine you, as a host, are waiting for ten guests for your party. Accordingly, you order meal for ten people. But in your party you see that seven of your guests came, but three of them didn't. So you call the catering service and say that:

(16) Herkes gel-me-di. O yüzden sadece yedi kişilik yemek isti-yor-um.
everybody come-neg-pst So only seven persons meal want-prog-1sg
"Everybody didn't come. Therefore I want meal for seven people"

In addition to this, what I claim is, negation can also take scope below the universal quantifier. One can, for instance, paraphrase (15) like the version in (15ii) in a context like the following one:

---

[5] Some Turkish speakers, according to whom the sentence (4) in Chapter 1 is ungrammatical, do not get the interpretation (15ii)

suppose your neighbour heard from someone that only two people came to your party, which is in fact false because nobody came to your invitation. S/he, with a surprise, says that:

(17) A: Davet-e sadece iki kişi gel-miş.
invitation-dat only two people come-pst
"Only two people have come to your invitation"

But you reply (with a heavy stress on *herkes*) as :

B: Hayır, iki kişi değil, herkes gel-me-di.
no two people not everybody come-neg-pst
"No, not two people but everybody didn't come"

Thus, two different situations serve as evidence that negation takes scope above as well as below universal quantifier in Turkish.

4.3.3. *Bazı* and negation

Having discussed the scopal interaction of the universal quantifier *her* "every" with the negation, let us now consider a negative clause with *bazı* "some". The relevant examples of Kelepir are repeated here:

(18) Hasan bazı müşteri-ler-i ara-ma-dı.
Hasan some customer-pl-acc call-neg-past (Kelepir, 2001, 145: 209)
"Hasan didn't call some customers"

(i) There are some people x such that Hasan didn't call x.
(ii) *ıt is not the case that Hasan called some customers.

Like (12), (18) is unambiguous as well (Kelepir, 2001) [6]. But, (18) differs from (12) in one respect: *bazı* can only scope over negation, it cannot be interpreted the other way around.

As we argue for the sentence in (12) the sentence in (18) can also be interpreted in two ways. Here are the two scenarios:

Imagine you, as a boss, have ten customers. You wanted your secretary Hasan to call all of them for a product presentation. After an hour, you checked whether your secretary called them or not. You asked the supervisor of the department in which Hasan works:

(19) Hasan tüm müşteri-ler-i aradı-mı?
Hasan all customer-pl-acc call-pst-Q
"Did Hasan call all the customers"

The supervisor knowing that Hasan only called seven of the customers and didn't three of them, replies:

---

[6] Kelepir (2001) states that some speakers may get clausal scope for negation in structures with the so-called Positive Polarity Items (PPIs). This is possible when one thinks of a conversation in which the speaker repeats an utterance including the PPI and negates it in invisible quotation marks, as in the following sentence containing the adverbial *already*, which has also been considered a PPI.

(i) A: I have already done my homework.
B: No, you haven't "already done your homework" (Kelepir, 2001:145)

(20) Hasan bazı müşteri-ler-i ara-ma-dı.
Hasan some customer-pl-acc call-neg-pst
"Hasan didn't call some of the customers"

So the interpretation we get is the one in (18i) in which negation takes scope below *bazı* and which is repeated here for convenience:

(21) Hasan bazı müşteri-ler-i ara-ma-dı.
Hasan some customer-pl-acc call-neg-past
"Hasan didn't call some customers"

(i) There are some people x such that Hasan didn't call x.
bazı > neg

Contrary to Kelepir's claim, the negative can also take scope above *bazı* in a context like the following second scenario:

Suppose you, as a boss, heard that Hasan called some of the customers but not all. You asked for the supervisor of Hasan to check whether it is right or not. You say to supervisor:

(22) Hasan bazı müşteri-ler-i ara-mış.
Hasan some customer-pl-acc call-pst
"Hasan has called some customers"

The supervisor, knowing that it is wrong (or in fact a lie), since he is sure that Hasan called all of the customers, replies:

(23) Hayır, Hasan bazı müşteri-ler-i ara-ma-dı. Hepsi-ni ara-dı.
No Hasan some customer-pl-acc call-neg-pst all-acc call-pst
"No Hasan didn't call some of the customers. He called all of them"

So the interpretation we get is the starred one in Kelepir's (18ii). In this version negation now takes scope above *bazı* and is modified as (24):

(24) Hasan bazı müşteri-ler-i ara-ma-dı.
Hasan some customer-pl-acc call-neg-past
"Hasan didn't call some customers"

(ii) it is not the case that Hasan called some customers.
neg > bazı

So, these two different scenarios yielding two different interpretations serve as evidence to the fact that negation takes scope above as well as below *bazı* "some" in Turkish.

4.3.4. Numerals and negation

Another piece of evidence for scope ambiguities presents itself, when we consider the interaction of numerals with negation. Like the universal quantifier and indefinite *bazı* the numerals take both wide and narrow scope with respect to negation. Here is an example:

(25) Bir öğrenci gel-me-di.
a student come-neg-past
"A student didn't come"

(i) It is not the case that a student came.
Neg > numeral

(ii) There is a student x, x didn't come.
Numeral > neg

(25) is ambiguous: the indefinite numeral can be interpreted above or below negation as the readings in (i) and (ii) clearly designate. (25) may be uttered in a denial context which negates the speaker's whole proposition. Thus as is illustrated in (25i), negation takes clausal scope. (25) may also be uttered in a context in which only one student did not come, not two or three. Thus as is demonstrated in (25ii), numeral takes scope over negation.

The question to be raised and discussed, then, is how do the readings in (i) and (ii) of each example including a quantificational element and negation get their respective interpretations? We propose that the factor responsible for the proper interpretation receiving is phonological in nature. Since our proposal is phonological in nature, instead of stating that the sentences in question above are ambiguous, we would rather claim that the two different interpretations in fact belong to two distinct sentences with two distinct phonological features. If the quantificational element has focal accent it has wide scope interpretation and if the sentence is uttered with sentential stress (which is called focus by default) attracted by negation and then

assigned to the immediately preceding syllable, then, negation has wide scope interpretation. The followings are the two distinct pair of sentences with their particular phonological features and particular meanings[7]:

(31) a. Bugün [HERKES $_F$] gel-me-di-ǿ.
It is true for every x such that x didn't come today. = Nobody came.
everybody > neg

b. Bugün herkes GEL- me -di-ǿ.
It is not the case that everybody came today.
neg > everybody

(32) a. Hasan [BAZI $_F$] müşteri-ler-i ara-ma-dı.
There are some people x such that Hasan didn't call x.
Bazı > neg

b. Hasan bazı müşteri-ler-i aRA - ma –dı.
it is not the case that Hasan called some customers.
neg > bazı

---

[7] Throughout the chapter I adopt the claim that negation in the verb attracts stress and then assigns it to the immediately preceding syllable which is the verb root. This fact is discussed in Göksel and Özsoy (2000) who claim that the negative clitic attracts stress and then assigns it to the immediately preceding syllable in Turkish. This is illustrated by the following in which the intention is to negate the whole proposition:

(i) Ev – e GİT – me – dim (Göksel and Özsoy (2000: 23))
home-dat go-neg-past-1
"I didn't go home"

(33) a. [BİR$_F$] öğrenci gel-me-di.
There is a student x, x didn't come.
Numeral > neg

b. Bir öğrenci GEL - me - di.
It is not the case that a student came.
Neg > numeral

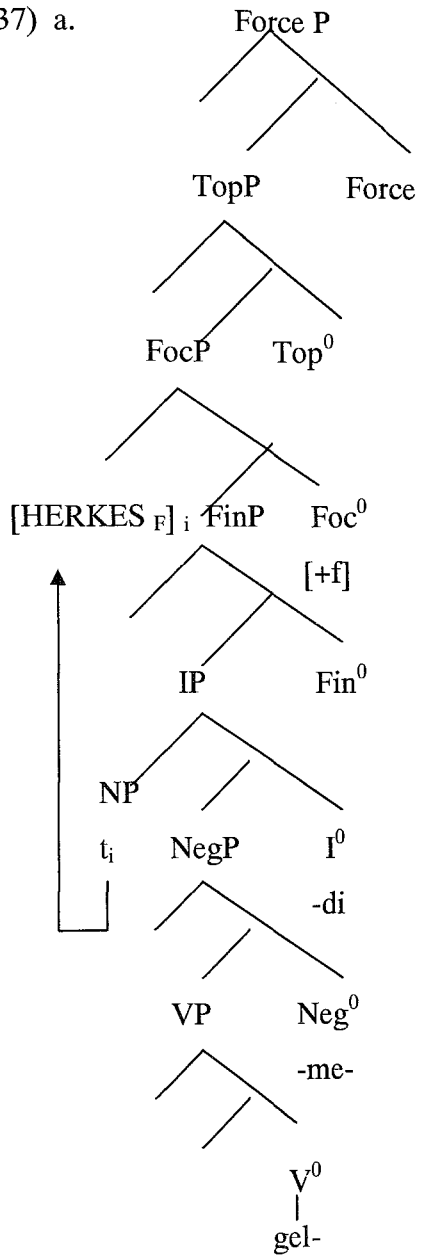
The question to be raised next is how focus assignment enables the quantificational element to take wide scope. Following Rizzi (1997), which is discussed in detail in Chapter 2, I assume that the CP domain contains a Focus Projection FocP whose specifier hosts the focalized constituent and whose head hosts an abstract Focus-feature. The quantificational element which is the focused constituent moves to [Spec FOCP] at LF in the sense of Rizzi's (1997) Split-CP hypothesis to satisfy the focus criterion (Brody, 1995) which is repeated here for convenience:

(35) Focus Criterion
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.

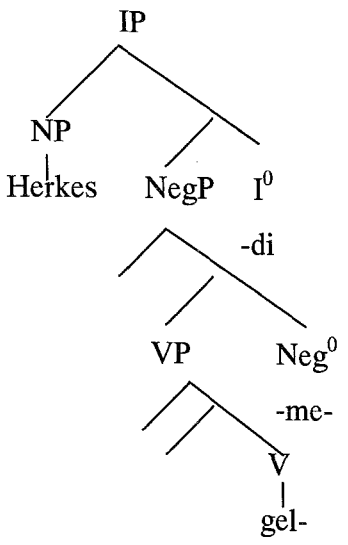
Once it moves to [Spec FOCP], it c-commands and thus takes scope over the other elements. The relevance of c-command for relative scope readings is noted as (36) and the two tree representations of (31a) and (31b) as a sample may be given as (37a) and (37b) respectively:

(36) QP1 takes scope over QP2 only if QP1 c-commands QP2 at the relevant (syntactic) level, where scope is established. (Kural 1997: 504)

(37) a.


Force P
TopP
Force
FocP
Top^0
[HERKES $_F$] $_i$
FinP
Foc^0
[+f]
IP
Fin^0
NP
t_i
NegP
I^0
-di
VP
Neg^0
-me-
V^0
gel-

b.



In (37a) , the universal quantifier *herkes* being focused undergoes focus movement leaving behind a trace coindexed with the moved *herkes* and lands in [Spec FocP] in order to check [+F] feature of head F through Spec-head agreement. The universal quantifier c-commands the negative, and it has scope over negation, yielding the interpretation of (31a) and LF configuration (37a). In (37b), on the other hand, since there is no focused constituent, no FocP is projected. (37b) is problematic in two respects: (i) it does not convey the interpretation of (31b) since the negative does not c-command and thus does not take scope over the universal quantifier and (ii) the negative c-commands and thus negates the verb *gel* "come", indicating that the action of coming is not carried out. But this interpretation is inconsistent with the interpretation of (16) noted in section (4.3.2) which indicates that some guests came to the party. These are the problems we noted on the discussion of the scopal relation between negation and argument quantifiers. These problems, in fact, require further investigation and thus I leave this issue for future research.

4.3.5. Reason clauses and negation

This section concerns the interaction of focus with the negative sentences including adverbial clauses of reason as one of their constituents. Before taking a stand on the effect of focus on scope readings between negation and reason clauses, let us first provide some background on the formation of reason clauses in Turkish.

Turkish adverbial clauses denoting reason are formed by the following:

(38) a. [.... -DIğ / -(y)AcAğ - I] için

b. [-DIğ - I -] ndAn (dolayı)

c. [..... - DI / -(y)AcAK / mIŞ / - Iyor / - Ar] diye (Özsoy (1999) (256)

d. çünkü

e. – mAk – tAn

Below are some sentences exemplifying the structures above:

(39) a. Ayşe [yüz - me bil – me – **diğ – i]** **için** denize girmiyor.

Ayşe swim-nom know-neg-nom-dat for sea swim

"Ayşe is not going swimming, because she doesn't know to swim"

b. Ayşe [yüz - me bil – me – **diğ – i-] nden** denize girmiyor

"Ayşe is not going swimming, because she doesn't know to swim"

c. [Yüzme **bilmiyor] diye** Ayşe denize girmiyor.(Özsoy (1999) (257)

"Ayşe is not going swimming, because she doesn't know to swim"

d. Ayşe denize girmiyor, **çünkü** yüzme bilmiyor.

"Ayşe is not going swimming, because she doesn't know to swim"

e. Ayşe, [denize gir – **mek –] ten**, başka iş yap-a-mı-yor-du.

Ayşe swim-nom-abl anything else do-abil-neg-prog-past

"Ayşe could not do anything else, because she was in the water(the whole time)

The structures in bold in sentences (39a – 39e) are all identical in meaning and link a causal relation between their matrix verbs and embedded verbs.[8,9] As all the structures illustrate, when the subjects of the embedded clauses and the embedded clauses are co-referential, the subjects of the embedded clauses are not expressed (Özsoy, 1999).

After providing a brief background on the type of reason clauses in Turkish, let us now see whether we have the same effect we observed in the scopal interaction of *her*, *bazı* and numerals with negation.

---

[8] However, some structural and semantic differences are noted between *için* and *diye* structures in Turkish. (Özsoy and Taylan, 1998). In their work, *"Türkçe'nin Neden Gösteren İlgeç Yantümceleri"* Özsoy & Taylan (1998) focus on some properties which could determine the differences of use of *için* and *diye* structures used to express reason. They note that *için* structure is more widely used than *diye* structure in expressing reason and there are some restrictions on this function of *diye* structure on its subject and tense choice.

[9] For more structures denoting reason such as; *-dAn ötürü, sebebiyle, yüzünden* see Banguoğlu, (1976).

As Kelepir (2001) states, the interaction of negation with reason clauses yields ambiguous sentences. Consider the example (her (227)) including a reason clause embedded under a negated clause:

(40) Hasan bugün Pazar olduğu için ara-ma-dı.
Hasan [because it is Sunday] call-neg-past
"Hasan didn't call because it is Sunday today"

(i) Because it is Sunday today, Hasan didn't call
(Hasan never calls me on Sundays)
because > neg

(ii) Hasan called but not because it is Sunday today
(He called because he had something important to say.)
neg > because

As the two different interpretations in (i) and (ii) above show, the sentence in (40) is ambiguous: In (i) negation takes scope below the because-clause whereas in (ii) it takes scope above the because-clause. (40i) designates that Hasan never calls me on Sundays. (40ii), on the other hand, implies that Hasan called me but not just because it is Sunday today, but for another reason, for example he had something important to say. Further examples below which substitute *için* structure by the other structures hold the generalization that interaction of reason clauses with negation yields ambiguous readings:

(41) a. Hasan bugün Pazar **olduğundan (dolayı)** ara-ma-dı.

b. Hasan bugün Pazar **olması sebebiyle** ara-ma-dı.

c. Hasan bugün Pazar **olması yüzünden** ara-ma-dı.

d. Hasan bugün Pazar **diye** ara-ma-dı.

(i) Because it is Sunday today, Hasan didn't call
(Hasan never calls me on Sundays)
because > neg

(ii) Hasan called but not because it is Sunday today
(He called because he had something important to say.)
neg > because

We repeat our question raised in the discussion of the scopal relations of other quantificational elements with negation i.e: How do the readings in (i) and (ii) readings of the examples above get their respective interpretations? Since our proposal is phonological in nature, and since there is no sentence without suprasegmental feature, instead of stating that the sentences in question are ambiguous we, again, would rather state that there are two distinct sentences uttered with two different phonological features. Just as we did for the other quantificational elements in the preceding sections, we claim that if the reason clause has the focal accent it has wide scope interpretation and if the sentence is uttered with a sentential stress attracted by negation which then assigns it to the immediately preceding syllable, negation has wide scope interpretation. The sentence in (40) is repeated here as two distinct sentences with their focus and stress patterns indicated:

(42) Hasan bugün [PAZAR OLDUĞU İÇİN $_F$] ara-ma-dı.
Hasan [because it is Sunday] call-neg-past
"Hasan didn't call because it is Sunday today"

(i) Because it is Sunday today, Hasan didn't call
(Hasan never calls me on Sundays)
because > neg

(43) Hasan bugün Pazar olduğu için aRA-ma-dı.
Hasan [because it is Sunday] call-neg-past
"Hasan didn't call because it is Sunday today

(i) Hasan called but not because it is Sunday today
(He called because he had something important to say.)
neg > because

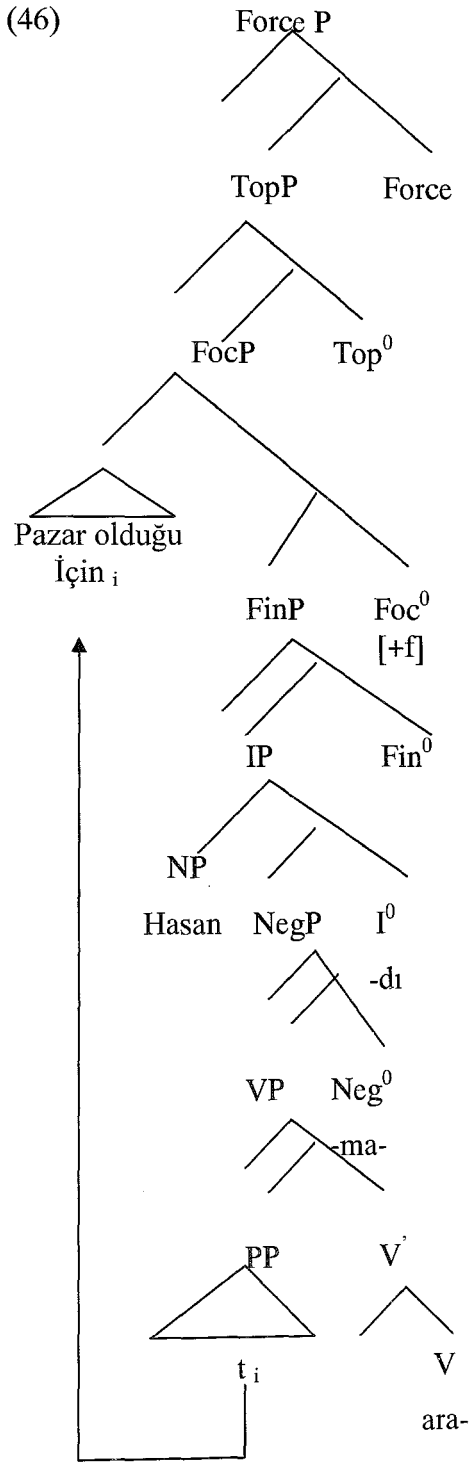
The question to be raised next is how focus assignment enables the quantificational element i.e. the reason clause to take wide scope. Following Rizzi (1997), which is discussed in Chapter 2, I assume that the CP domain contains a Focus Projection FocP whose specifier hosts the focalized constituent and whose head hosts an abstract Focus-feature. The quantificational element which is the focused item in sentences containing quantificational elements and negation moves to [Spec FOCP] at LF in the sense of Rizzi's (1997) Split-CP hypothesis to satisfy the focus criterion (Brody, 1995), repeated here for convenience:

(44) Focus Criterion
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.

Once it moves to [Spec FOCP], it c-commands and thus takes scope over negation. The relevance of c-command for relative scope readings is noted as (45) and the LF representations of (42) is represented as (46):

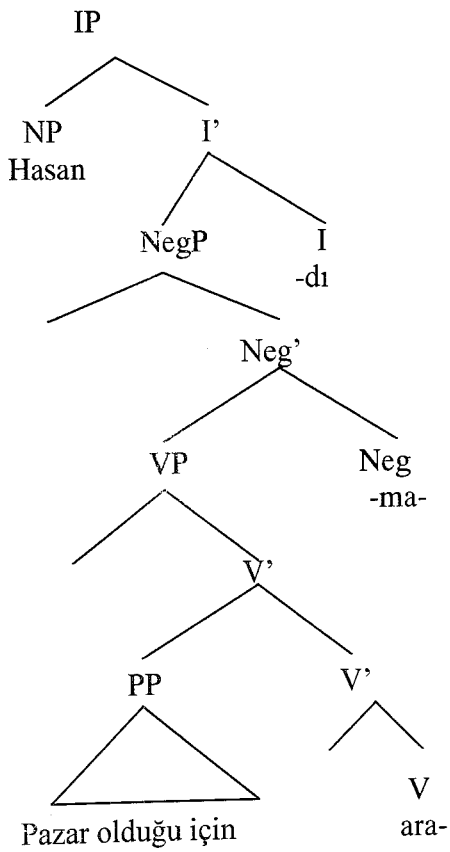
(45) QP1 takes scope over QP2 only if QP1 c-commands QP2 at the relevant (syntactic) level, where scope is established. (Kural 1997: 504)

(46)



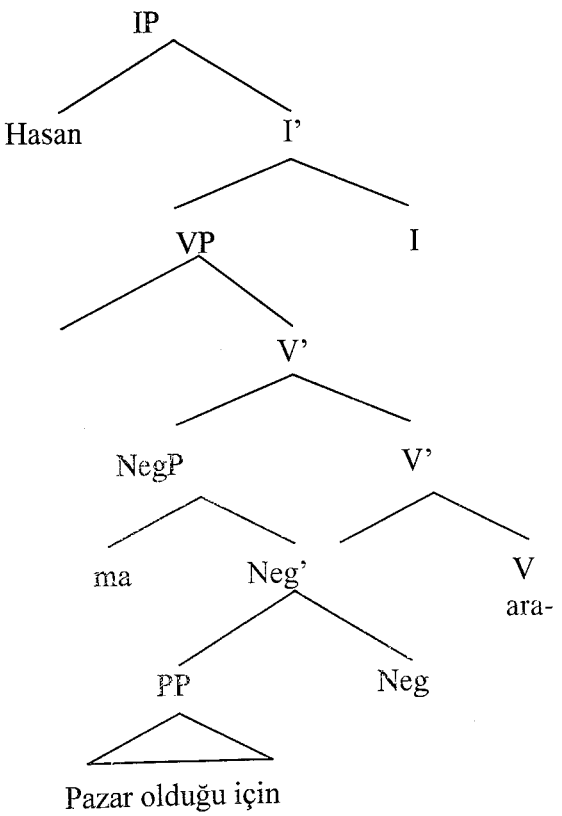
In (46) , the PP being focused undergoes focus movement leaving behind a trace coindexed with the moved constituent and lands in [Spec FocP] in order to check [+F] feature of head F through Spec-head agreement. The PP c-commands the negative, and it takes scope over negation, yielding the interpretation of (42) and LF configuration of (46). In (47) below, on the other hand, which illustrates the interpretation of (43), since there is no focused constituent, the projection of the FocP is not motivated. So one proposal for the interpretation of (43), in which negation takes scope over the PP, may be like the following, which seems that the scope reation on the surface structure remains identical at LF:

(47)



In (47) above, the negative c-commands and thus takes scope over the the PP yielding the interpretation in (43). However, the representation in (47) poses a problem since the negative also c-commands the verb *ara* "to call". That is, the negative by taking scope over the verb negates the verb, as well. The structure is interpreted in a way that the action of calling is not carried out, whereas the interpretation of (43) expresses otherwise. Thus, the interpretation in the structure (47) is inconsistent with the interpretation of (43) which signals that the action of calling is carried out. One possible explanation for the structure in question would be to assume that NegP is base-generated immediately above the PP. Thus the relevant representation would be the following:

(48)



In (48) above, the negative only c-commands and thus only negates the PP, not the verb; hence the affirmative interpretation of (43). One question to be raised here is

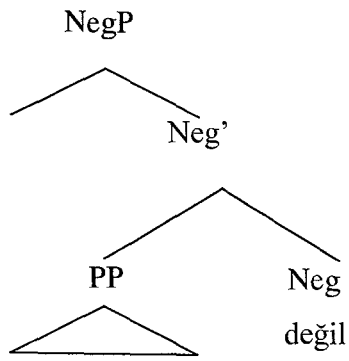
why the negative morphology in (48) occupies the [Spec NegP] instead of the head Neg. Data from Turkish indicate that the Neg head, which takes a PP as its complement, is of two kinds: one being occupied by a free morpheme *değil* and the other being occupied by an empty head. To take an example consider the following:

(49) Hasan Pazar olduğu için değil, özle – diğ - i için ara – dı
Hasan because it is sunday not miss-nom-3sg bec. call-past-3sg
"Hasan called not because it is Sunday but because he missed"

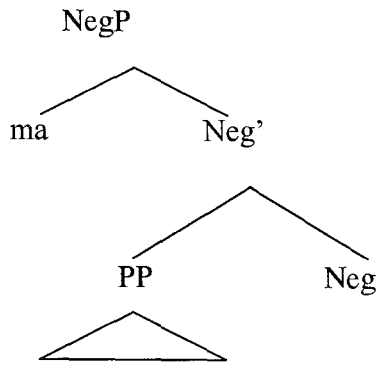
(50) Hasan Pazar olduğu için ara – ma - dı, özle – diğ - i için ara – dı
Hasan because it is sunday call-neg-pastmiss-nom-3sg bec.call-neg-3sg
"Hasan called not because it is Sunday but because he missed"

As discussed by Taylan (1984), different types of predicates have distinct surface markers for negation in Turkish. As (49) illustrates, the PP is dominated by a NegP whose head is *değil* whereas as (50) illustrates, the verbal predicate is dominated by a NegP whose head is *–mA*. Thus in (49), negation is expressed by *değil* while in (50) it is expressed by the negative affix *–ma*. As for the positions these two negative markers occupy, we claim that the head of NegP taking a PP complement is either occupied by the negative marker *değil* or it can be a phonologically null head. In those cases in which the head of NegP is empty, we claim that the negative marker *-mA* generates at [Spec NegP]. These two instances are demonstrated as (51) and (52) below:

(51)



(52)

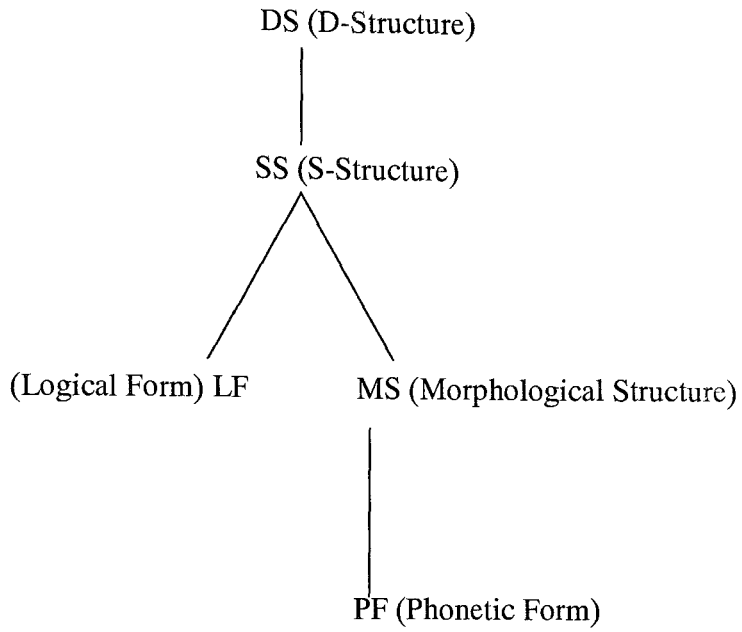


(51) illustrates the sentence (49) where the neg head is overtly realized by *değil*. (52), on the other hand, illustrates the sentence (50) where the neg head is empty yet negation is overtly realized at [Spec NegP]. We propose the representation in (52) for the interpretation in (48). The negative marker c-commands and thus takes scope over the PP. Consequently as (48) clearly demonstrates, the negative marker only negates the PP. Since it cannot c-command the verb *ara*, the negative marker does not negate the verb thus yielding the interpretation that the action of calling is carried out.

To account for the surface realization of the negative *–mA* on the verbs, we accept the model of distributive morphology (DM) as proposed by Halle and Marantz (1993). The model adopts the basic organization of a "principles and parameters"

grammar with an additional level of Morphological Structure (MS) which is regarded as the interface between syntax and phonology.

(53)



Within their approach the terminal nodes at LF, D-Structure and S-Structure lack phonological features which are obtained only after vocabulary insertion (the assignment of phonological form to morphosyntactic features) which takes place at the level of MS. Thus, by analyzing the MS as a level of grammatical representation within its own principles and properties, Halle and Marantz present an explanation for the instances where there is no one-to-one relation between terminal elements in syntax and phonology (Halle and Marantz 1993: 114).

In accordance with the model proposed by Halle and Marantz, Öztürk (1999) proposes for Turkish that at the syntactic level of LF, DS and SS the agreement morphology, which is claimed by her to be the VP-internal subject in Turkish, would occur in the relevant subject position but after vocabulary insertion, which takes

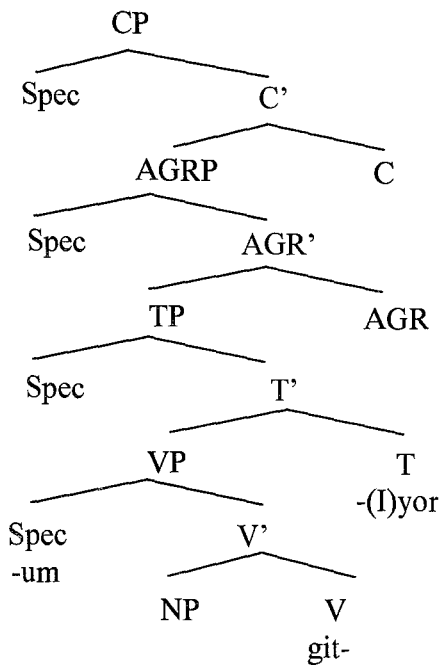
place at MS, it appears as incorporated into the inflected verb at PF [10]. She illustrates both DS and SS of the sentence in (54) as (55) and (56), respectively:

(54) Ben gid – iyor – um.

I go-prog-1sg

"I am going"

(55)



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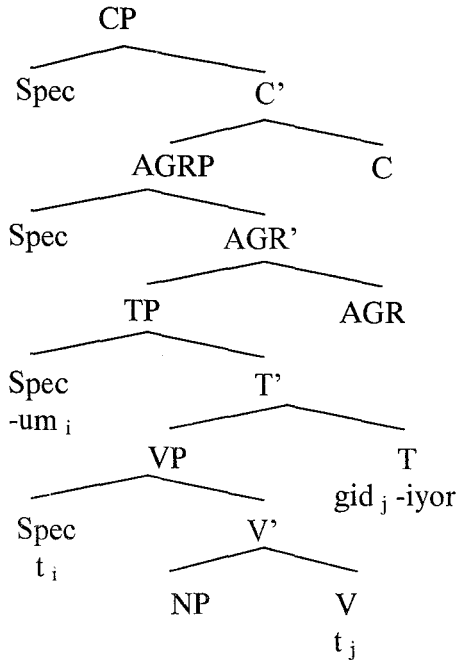
[10] Öztürk (1999), in her study on Turkish as a non-pro-drop language, basically claims that overt pronouns, revealing topic (or possibly focus) properties, are base-generated in a higher position within the C system i.e. [Spec TopP] and that the agreement morphology is a pronominal category which is base-generated in [Spec VP] as the VP-internal subject.

(56)



In (56), the agreement morphology is base generated as the VP-internal subject and it moves to [Spec, TP]. Then, before the PF level, vocabulary insertion takes place at MS and the Agr bearing a [+clitic] feature appears in a cliticized form to the verbal complex at PF (Öztürk, 1999).

Following Öztürk (1999), I assume that the negative morphology is base generated in [Spec NegP]. Before spell-out, vocabulary insertion takes place at MS, which is the only level phonological features are supplied to morphemes, and the negative morphology *–mA* bearing a [+clitic] feature appears in an attached form to the verb stem at PF.

4.4. ne...ne phrases in Turkish

4.4.1. ne...ne phrases in simple clauses

In the preceding section we noted that when the quantificational element is focused, it takes wide scope. Şener & İşsever (2003) also discusses the role of focus giving rise to wide scope interpretation. Their findings constitute one piece of evidence for the fact that the focused constituent takes wide scope. Consider their analysis of the strict relation between the *ne...ne* phrases, focus and negation by comparing the sentence in (57a) with (57b) and (57c):

(57) a. [$_F$ NE ANNE-M NE BABA-M] ev-e gel-di.
neither mother-1sg nor father-1sg home-dat come-pst-3sg
"Neither my mother nor my father came home"

b. *Ne annem ne babam [$_F$ EVE] geldi.

c. *Ne annem ne babam eve [$_F$ GELDİ]

(Şener & İşsever 2003: (11a), (11b) and (11c))

In (57a), the subject *ne...ne* phrase receives heavy stress and thus is focused. Here, it is the *ne...ne* phrase which has the function of expressing sentential negation. Focusing any other constituent than the *ne...ne* phrase results in ungrammaticality, as (57b-c) indicate. In contrast, in (58) the only constituent to be focused is the verb:

(58) a. Ne anne-m ne baba-m ev-e [$_F$ GEL-ME-Dİ].
Neither mother-1sg nor father-1sg home-dat comeneg-past-3sg
"Neither my mother nor my father came home"

b. *[$_F$ NE ANNE-M NE BABA-M] ev-e gel-me-di.
Neither mother-1sg nor father-1sg home-dat comeneg-past-3sg

In (58a), it is not the *ne...ne* phrase, but the morphological marking on the verb that renders the sentence negative. The assignment of heavy stress to any other element including the *ne...ne* phrase leads to unacceptability, as (58b) illustrates.

The sentences in (57) and (58) clearly show that a *ne...ne* phrase can negate a sentence only when it is focused. In other words, it is not the *ne...ne* phrase itself but the combination of the *ne...ne* phrase and focus which exhibits the ability to negate a sentence. Şener & İşsever (2003) formulate their observations on the relation between *ne...ne* phrases, focus and negation in (59) (their 13):

(59) Focusing conditions on [*ne...ne*] phrases

a. If a *ne...ne* phrase is focused, the predicate must be morphologically affirmative; [if the predicate is morphologically affirmative no element other than a *ne...ne* phrase can be focused]
[$_F$ NE...NE] _ V_{aff}

b. If the predicate is morphologically marked for negation, the *ne...ne* phrase cannot be focused.
ne...ne_ [$_F$ V_{neg}]

Ne...ne phrases inherit the function to negate sentences through the association with focal properties. When *ne...ne* is not associated with [+foc], sentential negation can

only be fulfilled by the negative morphology on the predicate. (Şener & İşsever, 2003)

4.4.2. ne...ne phrases within embedded clauses

In this section we will briefly review the behavior of *ne...ne* phrases in embedded clauses as discussed in Şener & İşsever (2003). We will show that consideration of *ne...ne* phrases within embedded clauses provides another piece of evidence to our claim that prosodic focus takes wide scope. As Şener & İşsever (2003), indicate subject or object *ne...ne* phrases in embedded clauses can render a matrix predicate negative only if they are associated with focal properties. Consider the following sentences (their 34):

(60) a. Osman [NE ALİ-NİN NE AYŞE-NİN okul-a git-tiğ-i]-ni duy-du
O.Nom neither A.-gen nor A.-gen school-dat go-noml-poss-acc hear-past-3sg

b. *Osman [NE ALİ-NİN NE AYŞE-NİN okul-a git-tiğ-i]-ni duy-ma-dı
O.Nom neither A.-gen nor A.-gen school-dat go-noml-poss-acc hear-neg-past-3s

c. Osman [ne Ali'nin ne Ayşe'nin okul-a git-tiğ-i]-ni DUYMADI.
O.Nom neither A.-gen nor A.-gen school-dat go-noml-poss-acc hear-neg-past-3s

In (60a), the focus is on the *ne...ne* phrase in the embedded clause and the matrix verb is morphologically affirmative. In (60b), the focus is still on the *ne...ne* phrase in the embedded clause, but the matrix verb is morphologically marked for negation. This combination – focus on *ne...ne* phrase and negative morphology on the matrix verb- renders the sentence ungrammatical. Focusing just the matrix verb marked for negation, on the other hand, yields a grammatical sentence as (60c) illustrates. The

sentences in (60) show that a *ne...ne* phrase with focal properties negates the matrix predicate rather than the predicate of its own clause and no such relation with the matrix predicate is observed when it is not associated with focus. So, in complex sentences a *ne...ne* phrase can take matrix scope when focused, but when not focused, it cannot extend its scope over the main sentence and the matrix predicate should necessarily reflect morphological negation.

4.5. Wh-Constructions

This section will discuss wh-constructions in Turkish which can supply additional piece of evidence shedding light on the association of prosodic focus with wide scope.

4.5.1. English

As Arslan (1999) argues, wh-constructions in languages like English have been argued to involve the general rule Move-Alpha which involves the movement of a maximal projection marked [+wh] to [Spec, CP] at S-Structure allowing it to have scope over the matrix clause. The examples are given below:

(61) a. $[_{CP}$ *What*$_i$ did $[_{IP}$ Murat read t_i]]?
b. $[_{CP}$ *Who*$_i$ did $[_{IP}$ Murat see t_i]]?

In (61a) and (61b), the internal arguments *what* and *who* undergo movement from their base positions within the IP to [Spec, CP]. In both cases, the wh-movement takes place at S-Structure and leaves behind a trace coindexed with the wh-element.

4.5.2. Turkish

The wh-elements in Turkish are listed as follows:

(62) a. kim "who"
b. ne "what"
c. nere-de "where"
d. nasıl "how"
e. ne zaman "when" (Arslan (1999) (2))
f. neden "why"
g. niye "why"
h. niçin "why"
i. hangi "which"

(62a) and (62b) are the canonical argument wh-forms, (43c-43h) adjuncts. (62i) is the wh-element that occupies the Spec position. (Arslan, 1999)

As Arslan (1999) notes, studies in Turkish reveal the fact that a wh-phrase-in situ can take scope over the matrix structure and this led to the assumption that these structures undergo a wh-movement rule not at S-Structure but at the level of LF. [11]

Consider now the following structures (63a) and (63b) which are the counterparts of (61a) and (61b) which illustrate the behavior of the canonical wh-elements that occur in argument position *ne* and *kim*:

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[11] Arslan (1999) further presents evidence for wh-movement at LF from a number of different phenomena such as (i) selectional restrictions of the verb, (ii) locality conditions and (iii) scope interaction. She argues that these phenomena are operative in the case of Turkish wh-structures

(63) a. Murat *ne* oku - du?
Murat what read-past
"What did Murat read?"

b. Murat *kim – i* gör – dü?
Murat who-acc see-past
"Who did Murat see?"

As seen in (63a) and (63b), the wh-constituents do not move to the sentence initial position but remain in their base positions. Contrary to the wh-constructions in English, there is no obligatory S-Structure movement rule that places the wh-element in a scope position in Turkish.

The following examples illustrate that the generalization that there is no overt movement of the wh-element in surface structure in Turkish holds for non-argument wh-elements as well:

(64) a. Murat para - yı *ne zaman* ver – ecek?
Murat money-acc when give-fut
"When will Murat give the money?"

b. Murat problem - i *nasıl* çöz – dü?
Murat problem-acc how solve-past
"How did Murat solve the problem?"

c. Murat Ankara'-ya *neden* git – me – di?
Murat Ankara-dat why go-neg-past
"Why didn't Murat go to Ankara?"

In (64a), the wh-element *ne zaman* is the temporal adjunct, in (64b), *nasıl* is the manner adjunct, and in (64c) *neden* is the reason adjunct. These examples illustrate that Turkish does not have a overt wh-movement at S-Structure but has a covert wh-movement at LF.

The interpretation of wh-element in embedded clauses is significant in that it can take scope over a matrix clause. Consider the following sentences:

(65) a. Murat [Fatma-nın kim-i ara-yacağ-ın]-ı bil-iyor-du.
Murat Fatma-gen who-acc call-nom.-poss-3sg know-prog-past
"Murat knew who Fatma would call"

b. Murat [Fatma-nın [KİM – İ $_F$] ara-yacağ-ın]-ı bil-iyor-du?.
Murat Fatma-gen who-acc call-nom.-poss-3sg know-prog-past
"Who did Murat know Fatma would call?"

In (65a), the wh-element *kim* who is in the embedded clause functioning as the internal argument of the matrix verb *bil-* "know". The scope of the wh-element is, thus, the embedded clause. The interpretation of (65b) as a matrix wh-question, on the other hand, indicates that the wh-element has scope over the whole sentence although it remains within the embedded clause. The different scope behaviour of wh-elements in (65a) and (65b) can be explained if we assume that the matrix [C] in (65a) has no [Q] feature whereas the matrix [C] in (65b), being a matrix wh-question, has [+Q] feature. Once (65b) has [+Q] feature, it must take stress just like a focused constituent must. It is this [+Q] feature at the matrix [C] that attracts the wh-element so that wh-element moves from its position in embedded clause and lands in matrix [Spec CP] in order to check the [+Q] feature through Spec – head agreement. But since the matrix [C] in (65a) does not have such a feature, it does not take stress and

it does not have any motivation to move. Thus, wh-element in (65a) cannot extend its scope, but wh-element in (65b) can extend its scope and can take matrix scope.

4.6. Conclusion

In this chapter I analyzed the scopal relationship of universal quantifier *her* indefinite *bazı*, numerals and reason clause with negation. I illustrated that the effect of focus on quantificational elements yields a distinct sentence with a distinct interpretation. That is, quantificational elements may have scope below as well as above negation. In some cases where we have the derivation of inverse scope what is in fact problematic for c-command relationship, we proposed syntactic movement mechanism in which the focalized quantificational element moves up to [Spec FocP] in the sense of Rizzi's split CP hypothesis on the discussion of the *Fine Structure of Left Periphery.* On the discussion of negation taking scope over the reason clause, but not the verb I assumed that NegP is base generated immediately above the reason clause hence negating just it but not the verb. The discussion of negation taking scope over only the quantificational arguments *her*, *bazı* and numerals like *bir,* but not the verb, on the other hand, needs further investigation. To support my claim on the association of prosodic focus with wide scope, I also presented evidence from the interaction of *ne...ne* phrases, focus and negation and also from the scope of wh-word in embedded clauses.

CHAPTER 5

CONCLUSION

This study investigated the interaction of focus with binding and scope phenomena in Turkish. The analysis of focus and binding is specifically about pronominal binding in which the effect of focus on coindexation between the pronoun and its antecedent is sought. The analysis of focus and scope phenomena, on the other hand, is about the influence of focus on relative scope order of some quantificational elements and negation. The following questions have been raised and discussed: What kind of influence does focus exhibit on coreferential reading between a pronoun and its antecedent? And what kind of influence does focus have on the relative scope order between the quantificational elements in question and negation?

In Chapter 2, the theoretical background and previous studies were introduced. Phonological and semantic theories of Focus were discussed and different views of Focus were summarized. The relation of Focus with syntax was also be covered in this chapter. In particular, some cross-linguistic facts about the interaction of Focus with binding and scope phenomena were investigated.

With respect to the first question stated above, in Chapter 3, it was argued that focus on either pronoun or its antecedent precludes coreferentiality. Some explanations were sought in order to account for this fact. For example, Chomsky's (1981) *Leftness Condition* was tested and noted that it accounts for some ungrammatical

sentences in which the antecedent of the pronoun is focused. However, it was pointed out that in some cases, it could not explain the other ill-formed sentences in which the pronoun is focused. In order to reach a unified account, it was claimed that Lujan's (1989) *Accessibility Principle* and *Bound-Variable Constraint* can predict both the well-formed and ill-formed sentences in which focusing either antecedent or pronoun crosses out coindexed reading between these elements. As another solution for the ill-formed sentences which have focused pronouns, we proposed that such sentences violate Condition C of Binding Principles, if we assume that the focused pronoun moves to [Spec FocP] from where it can c-command its antecedent thereby yielding Condition C violation which states that an R-expression must be free. Blocking effect of focus on coreferentiality was further supported by discourse considerations according to which coindexation of a new entity (given as an information status by focus) with an old entity results in a contradiction.

Chapter 4 raised the second question of this study and discussed the role of focus on the scope order of quantificational elements and negation. First, it was noted that the interaction of focus with the quantificational elements yields two distinct sentences which have two distinct interpretations in which quantificational elements have either wide (when focused) or narrow scope. The mechanism which enables the focused quantificational element taking wide scope is raising and the motivation for the focused element to raise is feature checking. The [+f] feature of the head [F^0] of [FocP] attracts the focused element so that the focused element moves to [Spec FocP] to check the [+f] feature through Spec – head agreement, thereby satisfying Focus Criterion. The facts observed in the interaction of *ne....ne* phrases, negation

and focus and also the facts observed in [wh-] elements in embedded constructions provided supportive evidence to our claim that focus takes wide scope.

To conclude, the analysis of the interplay of focus with binding and scope phenomena provided two pieces of evidence for phonology – syntax interface in Turkish. The discussion of the influence of focus on pronominal binding concluded that focus blocks coreference and the discussion of the effect of focus on scope order concluded that a string read with a focus on quantificational elements or read with a sentential stress yield two different sentences with their own particular phonological features and their own particular meanings.

The investigation of the interaction of Focus with Binding and Scope phenomena is a very new area in Turkish linguistics and need further investigation. Besides the evidence from Binding and Scope phenomena on phonology – syntax interplay, further phenomena may be investigated to provide further evidence on phonology – syntax interface in Turkish. Even in Binding and Scope phenomena analysis, further interactions such as the influence of focus on anaphor binding or the influence of focus on sentences including multiple quantifiers may be investigated. This thesis left these issues for future research.

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